Arkadiusz **MALKOWSKI** • Beata **BIESZK-STOLORZ** •
Dawid **DAWIDOWICZ** • Wojciech **ZBARASZEWSKI** • Martin **BALAS**

SUSTAINABLE TOURISM AS A FACTOR IN THE DEVELOPMENT OF PROTECTED AREAS IN THE POMERANIA EUROREGION

Arkadiusz **Malkowski** (ORCID: 0000-0003-2769-245X)
Dawid **Dawidowicz** (ORCID: 0000-0002-8218-8662)
Wojciech **Zbaraszewski** (ORCID: 0000-0002-1373-1895)
Faculty of Economics, West Pomeranian University of Technology Szczecin, Szczecin

Beata **Bieszk-Stolorz** (ORCID: 0000-0001-8086-9037)
Institute of Economics and Finance, University of Szczecin, Szczecin

Martin **Balas** (ORCID: 0000-0001-9971-5775)
Biosphere Reserves Institute, Eberswalde University for Sustainable Development, Eberswalde

Correspondence address:
ul. Mickiewicza 64, 71-101 Szczecin, Poland
e-mail: beata.bieszk-stolorz@usz.edu.pl

ABSTRACT: This study aimed to assess the opinion of the inhabitants of protected areas in the Polish-German borderland on the development of tourism using the concept of sustainable tourism. It was examined whether the type of protected area and the country of residence were determinants of sustainable tourism development. In 2019-2020, a questionnaire survey was conducted among residents near 14 protected areas in the Pomerania Euroregion. Multinomial and ordinal logit models were used in the data analysis. The main limitations of the survey were the inability to refer to similar surveys from previous years and for other protected areas in Poland and Germany. This prevented a complete spatial-temporal analysis. The study carried out on the acceptance by inhabitants of the neighbourhood of protected areas in the Pomerania Euroregion is unique. The Polish protected regions of the Pomerania Euroregion were shown to have more significant potential for sustainable tourism development than the German ones. The results also show some differences in the perception of tourism by the Poles and the Germans.

KEYWORDS: sustainable tourism, protected areas, peripheral areas, sustainable development, Pomerania Euroregion

Introduction

Peripheral areas are usually characterised by highly unfavourable socio-economic factors, as numerous studies show worldwide (Flynn, 1997; Malkowski et al., 2020; Havlíček, 2007). Border, borderland, and peripheral regions. This has led to increased efforts in the last decades to stimulate the socio-economic processes in border regions. Thanks to these dynamic and general functional changes of borders, especially in Europe, many border areas have developed high potential for rapid overall development. The economic potentials mainly include increased border traffic and growing tourism attractiveness (Stoffelen & Vanneste, 2017; Ianioglo & Rissanen, 2020). Cross-border tourism has become particularly attractive for border regions, as it comes in multiple mutually complementary forms, such as shopping tourism, ecotourism or medical tourism, etc. (Prokkola, 2010).

Discussions about developing tourism in border areas have increasingly involved calls for sustainable development principles with rising demands for developing competitive, sustainable tourism products (Bianchi, 2004; Zurick, 1992; Sharpley, 2000). Furthermore, sustainable tourism is considered an opportunity to increase the competitiveness of a region by leveraging its unique social, cultural, and natural potentials (Kauppila et al., 2009; Stoffelen & Vanneste, 2017). In particular, peripheral areas with high natural values are perceived as ideal for overall sustainable development.

The Polish-German borderland has long-standing and extensive experience in implementing cross-border cooperation. It has bolstered the area's development in terms of, e.g., ensuring closer contacts between people and the expansion of tourism, solving environmental problems, and improving the infrastructure. At the same time, however, this area is faced with several socio-economic challenges due to its peripheral characteristic. It is, therefore, crucial to seek new opportunities for supporting its further development. In particular, growing cross-border cooperation could contribute to a stronger social and economic integration of the overall area that is divided by the border. Euroregions are one of the European Union's initiatives to intensify cooperation between communities living in such border areas and overcoming barriers to border permeability (Kurowska-Pysz et al., 2018). One of the four Euroregions currently in operation on the Polish-German border is the Pomerania Euroregion, and whose protected areas are analysed in this paper.

This study aimed to evaluate the opinions of inhabitants living in protected areas in the Polish-German borderland areas regarding sustainable tourism development. The hypothesis was as follows:

H: Polish and German inhabitants of protected areas in the Euroregion Pomerania, despite social, cultural and economic differences, highly appreciate the importance of protected areas as a factor in the development of sustainable tourism.

A survey among the local population in protected areas was conducted to verify the hypothesis. The results were analysed using multinomial and ordinal logit models.

Literature Review

Geopolitical changes in Europe have directly affected border areas – previously considered as underdeveloped and requiring incentives, but presently identified as areas with a potential for rapid economic growth. Therefore, the rationale of the recent years was to accelerate integration processes and foster development due to changing border functions.

The opening of the borders to free European border traffic and the revival of contacts between communities living on both sides of the border have created new opportunities for the development of the formerly divided region. Our review of the literature devoted to the issues of peripheral areas shows that contemporary research worldwide aims to determine the role of external (exogenous) and internal (endogenous) factors in the socio-economic development of border areas. In order to determine this role, regional policy-making also needs to be taken into account, apart from the strictly scientific interests of researchers. Regional political decisions mark a crucial factor in managing the development of these areas. Ongoing globalisation processes also influence these regions' socio-economic development, as they keep changing the weights assigned to the exo- and endogenous factors in the shaping of border region competitiveness. For many researchers, the endogenous factors and the decisions made locally have the most significant impact on the development of peripheral areas, with the external factors being less important. The significance of local research is therefore increasing. Such research is a precious source of information for local and regional authorities, which shape the development of these areas through their decisions.

The removal of borders and the opening-up of economies to contacts with foreign partners have enabled peripheral areas to be actively involved in social and economic globalisation processes. This has been made possible by taking advantage of the local circumstances to create global competitiveness. One such example is the U.S.-Mexico borderland and its success in fostering economic development, which was highly associated with the maquiladora project in its first phase of implementation (Bair, 2002; Waldkirch, 2010; Gruben & Kiser, 2001).

Globalisation often leads to a polarised economic development and may become a factor in deepening the peripherality of border areas (Marada et al., 2006; Gezici & Hewings, 2004). This risk can be avoided through a responsible regional policy supporting those functions that will build the peripheral region's competitiveness both now and in the future (Pezzi & Urso, 2016; Dvoryadkina & Kaibicheva, 2017).

Over the last decade, every discussion concerning development on any scale has emphasised its sustainability. According to the Brundtland Report, sustainable development "meets the needs of today without compromising the ability of future generations to meet their own needs" (Pearce & Atkinson, 1998; Sneddon et al., 2006).

The concept of sustainable development emphasises the avoidance and reduction of adverse environmental impacts of business activities and the overall socio-economic consequences of environmental degradation. According to the principles of sustainable development, the most crucial objective is to create a balance of economic, social and ecological components of human activities to create thriving social-ecological systems. Discussions on the definition and scope of sustainable development have led to the development of several guidelines for its implementation. The following are considered as key elements (Van den Bergh & Nijkamp, 1991):

- comprehensive and long-term planning of socio-economic development accounting for the productive and non-productive functions of the environment,
- taking into account and anticipating the environmental impact of human economic activities,
- accounting for feedback in both ecology and economics, on the one hand, and at the interface between the two areas, on the other,
- accounting for and measuring the tangible and intangible assets and features of the environment,
- accounting for the qualitative changes taking place in the environment, including in particular irreversible changes,
- accounting for and implementing development models that will not conflict with the factors in such development, including environmental conditions, substitution between factors of production, and technical and technological progress.

These sustainable development guidelines clearly emphasise the need to strive for a fair distribution of benefits in terms of inter-and intragenerational responsibility and overall social justice. Moreover, as a model solution for the modern economy, it proposes a viable long-term shaping of the relationship between economic growth, protection of the (both natural and human-made) environment, and a high quality of life (Zurick, 1992; Kauppila et al., 2009).

Understanding the aims of sustainable development calls for a definition of modern humans' needs in the context of existing planetary boundaries and the limited possibilities of exploiting the global ecological system (Bjorklund & Harnishfeger, 1990; Hunt, 1999). The claim of humans living within the ecological limits was already clearly pointed out by the "Limits to Growth" report by the Club of Rome (Meadows et al., 2013). The therein stated necessity to ensure the sustainable development of all fields of life and human activity has been reaffirmed by many other institutions and reports. A central critical aspect of conceptualising sustainable development in modern societies is mass economic consumption at the expense of the natural environment (Arrow et al., 2004; Daily et al., 2009). According to Adam Smith, over-consumption is the most potent enemy of stable economic growth (Smith, 1954; 1987). The volume-growth driven development of international tourism is one of the manifestations of modern consumerism in contemporary global lifestyles (Reddy & Wilkes, 2015).

Modern tourism is characterised by a high rate of growth, which for many destinations is an opportunity for creating new economic markets and gaining additional economic benefits (Du et al., 2016). A growing volume of tourism activities in areas with low tourism intensities results in an upturn in economic prosperity and improved living standards of its inhabitants. A continuously increasing number of tourists requires the expansion (modernisation or construction) of tourism infrastructure (hotels, boarding houses) and the accompanying local infrastructure that is also used by residents (roads, restaurants, shops, communication networks, etc.). In addition, the development of the tourism sector contributes to vocational options for the local population and increases the demand for labour.

In 2016, one in ten companies operating in the European non-financial corporate sector were in the tourism industry. It is estimated that these 2.4 million businesses employed approximately 13.6 million people. Companies in tourism-related industries employed 9.5% of all labour force in the non-financial corporate sector and 21.7 % of those employed in the services sector (Eurostat, 2021).

At the same time, tourism intensification might develop at the expense of environmental, health, and social cohesion, which also fuels conflicts between tourists and host communities (Getz & Timur, 2004; Zeppel, 2010). The primary motivation for travelling is to experience natural sceneries and thriving livelihoods, which causes direct consequences, mainly increased pressure on the environment, if visitor numbers grow continuously without being managed by local authorities. Negative environmental impacts include increased energy consumption, greenhouse gas emissions, land use and biodiversity loss caused by tourism infrastructures, higher levels of waste, water consumption and contamination, and noise pollution (Balas & Strasdas, 2019).

Critical social impacts are mainly connected to unstable conditions of employment, low wages, poor social security, commercialisation, and a rise of artificial attractions. A high volume of visitors can also cause destabilisation and acculturation of the resident population. As the quality of the natural and social environment is a critical component of the tourism product, it can be claimed that the tourism sector is highly dependent on the conditions of the local environment. Tourism activities rely on the destination being fully functional, both ecologically and socially. In turn, this also implies a vulnerability to environmental damage, climate change, security, and regional authenticity. Literature on the subject highlights a clear correlation between the condition of the environment and the development of the regional tourism economy (Moscardo & Murphy, 2014; Strickland-Munro & Moore, 2013).

Krippendorf called this ambivalent relationship between tourism and its environment a "snake eating its own tail" (Krippendorf, 1987), with tourism growth becoming a threat to itself, apart from a sociocultural vividness of the regions, it requires ecosystems that are intact and environmentally valuable. This implies that wherever tourism destinations are constantly evolving, a responsible approach in preserving natural resources and social livelihoods must be adopted, with the interests of the local communities being at the core of any tourism development strategy.

This is the initial idea of sustainable tourism, developed and implemented in theoretical and practical terms in the 1980s and is still being widely discussed and defined (Bianchi, 2004; Kauppila et al., 2009). The United Nations World Tourism Organization (UNWTO) defines sustainable tourism as tourism that manages all needs in a manner that economic, social, and esthetic needs are met while respecting the cultural integrity, biological diversity, and life support systems, and without disturbing vital ecological processes (UNWTO/UNEP, 2005). The main objective of sustainable tourism is to carefully manage the economic and social benefits of growth in tourism while reducing or mitigating adverse environmental, historical, cultural, or social impacts. This is achieved by balancing the needs of both the tourists and the populations of tourism destinations.

Sustainable tourism is highly converged with the concept of sustainable development (Clarke, 1997). Moreover, the characteristic of tourism, as being a cross-sectoral industry with many indirect economic and social effects, provides the opportunity of connecting economic aims with overall regional development but maintaining an awareness of the need to respect the natural resources and the sociocultural authenticity of the community (Mathew & Sreejesh, 2017).

In recent years, international institutions such as the Global Sustainable Tourism Council (GSTC), the UNWTO, or the European Commission, have established several guidelines, standards, and recommendations for inte-

grating sustainable tourism principles into economic practice and monitoring overall sustainability efforts (Bricker & Schultz, 2011; Tudorache et al., 2017; UNWTO, 2018). In addition, calls are growing louder for paying greater attention to the Agenda 2030 for sustainable development with its Sustainable Development Goals, as this has not yet been the case with sustainability schemes for tourism (Rasoolimanesh et al., 2020).

The diverse conceptual approaches, and the complexity of tourism activities, have led to significant criticism regarding the clarity and applicability of sustainability in tourism (Saarinen, 2014; McCool et al., 2013). As Wheeler states, sustainable tourism often remains declaratory. He compares it to the mythical "white elephant". He points out that sustainable tourism will remain a theoretical concept without a broad push against greed, hypocrisy, racism, and short-term economic gains (Wheeller, 2007). Sharpley argues that due to the industry-centric approach of sustainable tourism, it has become impossible to link it with the global concept of sustainable development (Sharpley, 2000). Other authors have similarly spoken about the need for further research regarding the implementation of sustainable tourism (Müller, 1994; Hall & Richards, 2003). Saarinen (2014) differs between three academic traditions with divergent views on sustainable tourism. He concludes that although a conceptual plurality and different research contexts are unavoidable, the need for reframing sustainability in tourism remains. This applies to the local-global nexus, meaning that the different spatial scales must be better interlinked. These demands consider an instead repositioned perspective of tourism on the local scale. The overall aim of sustainable development is at the centre of discussions and tourism, serving as a potential tool for achieving a good quality of life (Moscardo & Murphy, 2014).

Tourism as a tool for sustainable development also implies highly individualised approaches by tourism destinations. Consequently, the practical implementation of sustainable tourism planning will vary from one area to another, despite the universality of general sustainable tourism principles.

Peripheral areas particularly welcome a stronger evolvement of tourism linked to sustainability, as there are hopes for new decent jobs and, thus, increased employment rates within the host community. Furthermore, peripheral areas are often not urbanised because of their location, and their landscapes are still pristine with high natural values. Thus, they often serve as suitable locations for new protected areas (Pool, 2006), especially in the densely populated central European regions.

This goes hand in hand with global concerns of increasing environmental degradation worldwide. Economic leaders and researchers alike are pointing out hazards associated with extreme weather events, loss of biodiversity, and natural disasters. According to the World Economic Forum (WEC), four out of the five most significant global threats are related to the environment (The

Global Risks Report World Economic Forum 2020, 2020). These concerns have also resulted in a new strategy by the UN Convention on Biological Diversity (CBD) to create further protected areas aiming to cover 30% of all land and sea areas, with at least 10% under strict protection (United Nations Convention in Biological Diversity, 2020). Protected areas aim to conserve biodiversity and preserve natural assets for future generations. In addition, such areas offer favourable conditions for tourism, education, and research. In recent years, there has already been a significant increase in the size and number of protected areas globally (Protected Planet Report 2018, 2018).

Since the need for further economic development is perceived as high in peripheral areas, researchers and local stakeholders call for planning decisions that are in line with sustainable tourism development, with a particular account of the risks which may be caused by overexploitation of natural sites.

Studies of the interrelations between tourism, the environment, and the local population are increasing research on sustainable tourism in protected areas (Ap, 1992; Holden et al., 2011; Liu et al., 1987). As Nepal (2000) pointed out, good park management and a sensible park concept are inevitable to harmonise residents' economic demands with natural protection aims. In addition, community participation is perceived as a critical element for successful overall tourism planning (Cole, 2006).

Nevertheless, due to contradictory aims regarding the economic development of protected areas in peripheral or transboundary regions, opposing perceptions of socio-economic growth amongst the local population often remain (Bramwell et al., 2017). This may lead to conflicts of interest at local and regional levels, particularly in areas with different forms of nature protection. This underlines the importance of reducing negative attitudes arising from the population's concerns about any economic intensification, such as a growth in tourism activities.

Sustainable tourism principles provide solutions for combining the interests of nature conservation with those of the economic development of a region (Walpole & Goodwin, 2001; Sekhar, 2003; Ormsby & Mannle, 2006; Carr et al., 2016). Protected areas that foster environmentally friendly tourism products and provide an umbrella for the attractiveness of a tourism destination serve as critical economic factors, whereby nature conservation efforts are being perceived as essential assets aimed at attracting tourists (Krippendorf, 1987; Puppim de Oliveira, 2005). Therefore, the development of tourism in such a setting can positively impact the local population's attitudes towards protected areas (Walpole & Goodwin, 2001; Sekhar, 2003; Scherl & Edwards, 2007). However, any positive response of the inhabitants towards protected areas depends on how they perceive the benefits and costs and on their knowledge about initiatives being carried out in pursuit of tourism and conservation goals. As Puntscher et al. (2017) state, positive

overall economic development due to tourism activities might not directly affect the positive attitude of inhabitants regarding their support of protected areas if the induced benefits are not perceived as results from this development. On the contrary, a shortage of knowledge about activities of the park management might lead to negative attitudes such as beliefs that main benefits are flowing outwards. At the same time, locals need to cope with restrictions of nature protection, or it might even lead to the suspension of protected areas.

Ongoing discussions about tourism and the sustainable development of peripheral areas emphasise existing shortcomings in practical applications and research (Hall, 2011; Moscardo & Murphy, 2014). A question that remains unanswered is how to practically balance the interests of tourists, businesses, and the local population regarding sustainable tourism management. One frequent and significant weakness of the research is the necessity of including local needs and circumstances in the planning and implementation processes of tourism development (Walpole & Goodwin, 2001; Ormsby & Mannle, 2006).

As protected areas are mainly outlined based on ecological criteria, community participation often remains passive, rhetoric, and interpretative. This may lead to a low acceptance of protected areas among their inhabitants, leading to conflicts caused by the restrictions imposed in the protected areas (Mayer et al., 2019). Therefore, to ensure a balanced local economic development, it is crucial to first engage the local community in a discussion on the possible opportunities and risks associated with the existence of the protected area.

Materials and methods

In the present study, a survey on the local acceptance of protected areas was conducted to obtain an insight into the personal opinions of inhabitants living in the neighbourhood of protected sites. Since the management of protected areas aspires that socio-economic development needs to go hand in hand with nature conservation, the neighbourhood survey was carried out as part of much more comprehensive research into the socio-economic aspects of running protected areas within the REGE project (INT107). The neighbourhood survey was conducted in the Polish-German borderland, particularly the Pomerania Euroregion. Being able to carry out a neighbourhood survey in an area developing thanks to tourism primarily appeared to be an exciting task from a researcher's point of view. The neighbourhood survey was conducted in 2019 and the first half of 2020 by CATI method among 5547 inhabitants of the surroundings of the 14 protected areas of the Euroregion Pomerania. The survey covered 6 national parks: 3 Polish (Drawa

Table 1. Structure of respondents in protected areas by gender and age groups

Name of the protected area	Number of respondents	Gender		Age						
		Women	Men	18-24	25-34	35-44	45-54	55-64	65 +
Drawieński Park Narodowy	400	51%	49%	9%	16%	20%	16%	18%	21%
Iński Park Krajobrazowy	400	60%	40%	4%	5%	9%	17%	23%	41%
Szczeciński Park Krajobrazowy "Puszcza Bukowa"	400	51%	49%	2%	15%	32%	21%	19%	11%
Biosphärenreservat Südost-Rügen	385	48%	52%	11%	18%	19%	15%	16%	21%
Nationalpark Jasmund	385	51%	49%	9%	18%	18%	15%	18%	22%
Nationalpark Vorpommersche Boddenlandschaft	370	50%	50%	10%	19%	18%	15%	19%	19%
Nationalpark Unteres Odertal	402	62%	38%	2%	4%	12%	15%	23%	44%
Cedyński Park Krajobrazowy	402	60%	40%	1%	2%	4%	8%	21%	64%
Park Krajobrazowy "Dolina Dolnej Odry"	403	55%	45%	3%	5%	10%	15%	28%	39%
Park Krajobrazowy "Ujście Warty"	400	50%	50%	3%	14%	23%	17%	18%	25%
Park Narodowy "Ujście Warty"	400	50%	50%	10%	18%	20%	16%	17%	19%
Woliński Park Narodowy	400	50%	50%	9%	19%	20%	16%	17%	19%
Barlinecko-Gorzowski Park Krajobrazowy	400	51%	49%	8%	16%	21%	14%	17%	24%
Drawski Park Krajobrazowy	400	51%	49%	8%	15%	19%	15%	19%	24%
Total	5547	53%	47%	6%	13%	19%	15%	19%	28%

Source: author's work.

National Park, National Park "Ujście Warty", Wolin National Park) and 3 German (Nationalpark Jasmund, Nationalpark Vorpommersche Boddenlandschaft, Nationalpark Unteres Odertal), 7 Polish landscape parks (Iński Landscape Park, Szczeciński Park Krajobrazowy "Puszcza Bukowa", Cedyński Park Krajobrazowy, Park Krajobrazowy "Dolina Dolnej Odry", Park Krajobrazowy "Ujście Warty", Barlinecko-Gorzowski Park Krajobrazowy, Drawski Park Krajobrazowy) and one German biosphere reserve (Biosphärenreservat Südost-Rügen). Due to the similar specificities in the further analysis, it was decided to combine landscape parks and biosphere reserves into one subgroup of areas – further discussed as landscape parks. There were between 370 and 403 respondents in each protected area, which guaranteed a significance level of 0.05 and a relative precision of the estimate of 5%. Table 1 shows the structure of respondents according to gender and age.

Logit models were used to analyse the respondents' responses (qualitative variable). The questions were multiple-choice ones and, therefore, the parameters of ordinal and multinomial logit models were estimated.

In the case of a dependent variable that is not dichotomous but nominal and takes values from a set of a multinomial logistic model can be used (Kleinbaum & Hedeker, 2010; Hosmer et al., 2000), which has the following form:

$$P(Y = 0|X) = \frac{1}{1+\sum_{j=1}^{g-1} exp(\alpha_{j0}+\sum_{i=1}^{m} \alpha_{ji}X_i)}, \qquad (1)$$

$$P(Y = j|X) = \frac{exp(\alpha_{j0}+\sum_{i=1}^{m} \alpha_{ji}X_i)}{1+\sum_{j=1}^{g-1} exp(\alpha_{j0}+\sum_{i=1}^{m} \alpha_{ji}X_i)}, \qquad (2)$$

where:
j – variant number of the explained variable; $j = 1, \ldots, g-1$,
i – number of the independent variable; $i = 1, 2, \ldots, m$,
α_{ji} – model coefficients; $j = 1, \ldots, g-1, i = 0,1,2,\ldots,m$,
$Y \in \{0, 1, \ldots, g-1\}$,
$X = [X_1, X_2, \ldots, X_m]$.

In the case of a dependent variable that is ordinal and takes values from the set we can apply an ordinal logistic model (Kleinbaum & Klein, 2010; Hosmer et al., 2000). In contrast to polynomial regression, the ordering of the independent variable levels is considered in this model. It has the following form:

$$P(Y \geq j|X) = \frac{exp(\alpha_{j0}+\sum_{i=1}^{m} \alpha_i X_i)}{1+exp(\alpha_{j0}+\sum_{i=1}^{m} \alpha_i X_i)} , \qquad (3)$$

where:
j – variant number of the explained variable; $j = 1, \ldots, g - 1$,
i – number of the independent variable; $i = 1, 2, \ldots, m$,
α_{j0}, α_i – model coefficients; $j = 1, \ldots, g - 1, i = 1, 2, \ldots, m$,
$X = [X_1, X_2, \ldots, X_m]$.

Whereby $P(Y \geq 0|X) = 1$.

For both models, the odds ratio, or expression, is used to interpret the results:

$$OR = \exp(\alpha_i). \tag{4}$$

The presented models will be used to determine the influence of the country of residence and the category of the neighbouring protected area on residents' responses regarding tourism. The independent variables (X_i) in this case are the country (Country) and the category of the protected area (Category). In the first stage of model estimation, the respondent's gender and age were additionally included as independent variables. It turned out that these variables were not statistically significant. Finally, two independent variables were used in the model: Country and Category. The explained variables (Y) are the residents' opinions on tourism. All models were estimated in the Statistica software. The author should indicate and describe the research methods applied to solve the research problem in the chapter.

Results of the research

There has been an increased interest in domestic and international tourism worldwide. Rising environmental awareness of societies due to increased ecological challenges leads to growing numbers of sustainable tourism enthusiasts. Because of their characteristics, border areas are beautiful for developing this type of tourism. Cross-border tourists can visit unknown destinations located just a short distance from their places of residence but have not yet discovered because they are located in another country. Sustainable tourism enables travellers to get to know the neighbouring country's culture, buy regional products, or take advantage of unique services. In addition, it helps evolve cross-border contacts between communities divided by borders.

Our analysis of the border traffic in Poland indicates that the potential for sustainable tourism has increased markedly in recent years. In 2019, the number of border crossings was 3.2% higher than in 2018. Compared to 2014, the traffic across the Polish border had increased by more than 20%.

The motives for crossing the Polish-German border are interesting from the point of view of evaluating the potential for sustainable tourism development in the Polish-German borderland – Figure 1.
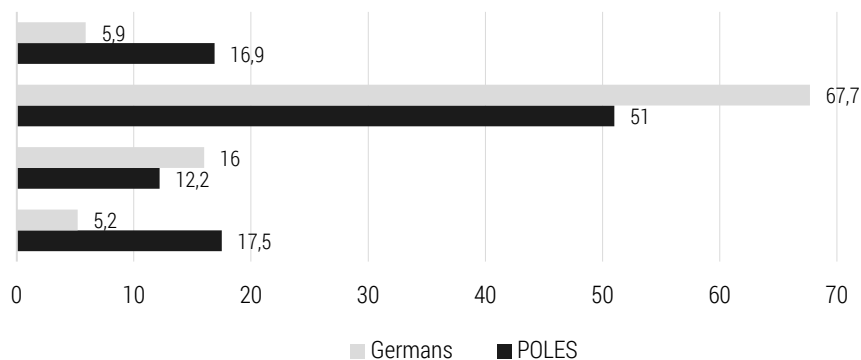

Figure 1. Motives of Poles leaving for Germany and Germans for Poland in 2019 [in %]
Source: author's work based on GUS data.

Those who crossed the Polish-German border most frequently claimed they did so for shopping purposes. This mainly applied to the Germans arriving in Poland (67.7% of the responses). Only 5.2 % of the Germans coming to Poland across the border came as tourists. As for the Poles, more than 17% of the respondents claimed they were coming for tourism purposes. Judging by the volume of border traffic in 2019, more than 3.8 million Germans visited Poland as tourists in that year. The value of German tourists' expenditure in Poland amounted to over PLN 900 million. More than 8 million Poles entered Germany as tourists in the same year, spending more than PLN 1,307 million. In addition, it should be noted that for 16% of the Germans, their arrivals in Poland were linked to their plans to visit family and friends. The exact purpose was declared by only 12.2% of the Poles crossing the border with Germany. These arrivals were often accompanied by visiting tourism destinations. It means that this area has a high potential for developing cross-border – including sustainable – tourism. This is reflected in the strategic assumptions of Zachodniopomorskie Voivodeship's tourism policy which, although still in a declaratory manner, indicate that the strategic long-term tourism-related activities of the local authority are aimed at ensuring the sustainable development of the tourism economy as a key element of local and sub-regional development in the border region. The objective is to create new jobs and a positive environment for new investments, as well as trans-regional and international links (Serwis Regionalnego Programu Operacyjnego Województwa Zachodniopomorskiego, 2021). The development of sustainable tourism is also called for in the Waterside Tourism Development Program for

Szczecin (Biuletyn Informacji Publicznej. Urząd Miasta Szczecin, 2021). The area covered by this study also benefits from a project on sustainable tourism in the one-of-its-kind Dolina Dolnej Odry (Lower Odra Valley). The European Union supports it under the structural and investment policy from 3/11/2016 to 31/05/2021. The project partners are Park Narodowy Dolina Dolnej Odry, Poland, Zespół Parków Krajobrazowych Województwa Zachodniopomorskiego, Poland, and the city of Schwedt/Oder, Germany. Water sports association PCK Schwedt e.V., MomentUM – Tourismus und Citymanagement der Region Schwedt – Nationalpark Unteres Odertal are associated partners. The project envisages the establishment of tourism infrastructure in the form of special observation platforms and viewing towers, allowing for the non-invasive observation of wildlife in the cross-border area. In addition, the project will train local tourist guides to promote the idea of sustainable tourism.

This is because the development of this form of tourism requires special support from the local community. The community must recognise the potential that protected areas have, as it can support the local economy. Consequently, our survey of the local community's acceptance of the existence of protected areas included questions related to the development of tourism.

Among the questions asked to respondents, six were related to the issue of tourism. The answers: do not know and no answer was coded respectively: 96 and 99. Two characteristics were compared in the survey. The first was the respondent's country of residence. It was called "Country." The answers of the Poles were coded as one and the answers of the Germans as 0 (reference group). This allowed for a comparison of how respondents in Poland responded about respondents in Germany. 72% of respondents were Polish and 28% German. This feature was called "Category." In the case of respondents in landscape parks, they were coded as 1, and respondents in national parks as 0 (reference group). This made it possible to compare the answers given by respondents in landscape parks with those provided by respondents in national parks. 58% of respondents lived in the neighbourhood of landscape parks, and 42% were national parks. This resulted in ordinal and polynomial logit models with two dichotomous independent variables: Country and Region. The explained variables were the answers to the questions asked to the respondents. Answers that expressed an opinion were selected for modelling.

Responses to two questions (Q1 and Q2) were coded as a variable measured on a nominal scale. In this case, a multinomial logit model was used to analyse the responses. The structure of the respondents' answers to the questions is shown in Figure 4. The estimation results of both models are presented in Table 2. The presented measures of the models' fit prove their high quality.

Q1 How would you rate the number of tourists in the protected area?

Respondents had a choice of three answers: code 0 marked the answer as "appropriate", 1 – "too much", 2 – "too little".

The respondents most often answered that the number of visitors to a conservation area was appropriate (Figure 2a). The number of answers with too many or too few visitors was similar and ranged from about 780 to about 800. A relatively large number of respondents, nearly 1,300, could not answer this question. Based on odds ratios, it can be concluded that the chance that the Poles indicate that the number of tourists is too low was more than twice as high (112%) as in the case of the Germans. On the other hand, the chance that Poles indicate that the number of tourists is too high was 87% lower than in the case of Germans. Inhabitants of the surroundings of landscape and national parks were equally likely to say that the number of tourists is too low (no significance of the parameter). The chance that residents of landscape parks indicated that the number of tourists is too high was 80% higher than in the case of residents of national parks.

Q2 Who do you think benefits most from the protected area?

Respondents could provide the following answers: "nature" this answer was coded 0 and was the reference answer providing a benchmark for the other answers. The next possible solutions were: "residents and tourists to the same extent" answer coded 1, "tourists" answer coded 2, "residents" answer coded 3, "no advantages" answer coded 4. The most frequent response was that residents and tourists benefit most from the advantages of a protected area to the same extent (Figure 2b). However, almost equally often, respondents answered that nature benefits most from the advantages of the protected area. Differences in opinions are evident when considering the country and category of protected areas (Table 1). The chance that Poles would indicate residents and tourists was 50% higher, tourists – more than twice as high (122% higher), residents – 365% higher, lack of advantages – 76% lower than in the case of Germans. The chance that residents of the surroundings of landscape parks would indicate residents and tourists was 18% lower, tourists – 50% lower, no advantages – 46% lower than residents of the surroundings of national parks. The parameter for the category residents was statistically insignificant, proving that residents of the surroundings of landscape parks and national parks evaluated the benefits for residents to the same extent.
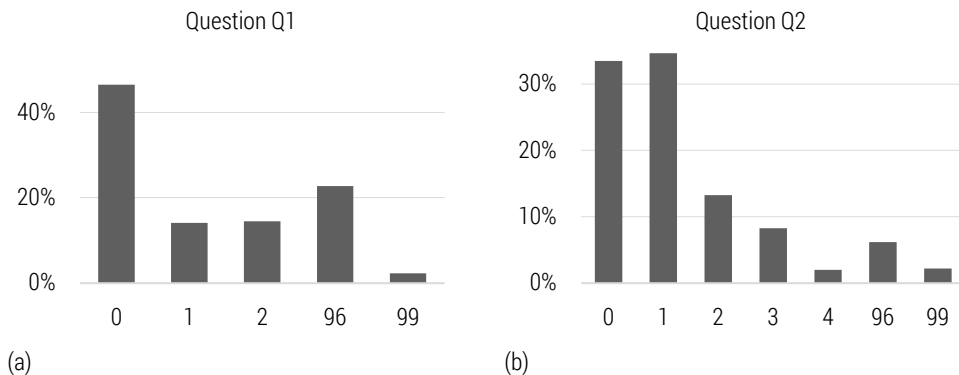
Figure 2. Structure of respondents' answers to questions Q1 and Q2

Source: author's work.

Table 2. Results of estimation of parameters of the multinomial logit model – questions Q1 and Q2

Variable	Coefficients	Standard error	Wald statistics	p-value	Odds ratio
Question Q1: χ2 = 8443.8755, AIC = 7135.56917					
Intercept 1	-0.4089	0.0650	39.5610	0.0000	0.66
Country	-2.0061	0.1039	372.8765	0.0000	0.13
Category	0.5877	0.1026	32.8017	0.0000	1.80
Intercept 2	-1.7880	0.1039	296.3756	0.0000	0.17
Country	0.7533	0.1201	39.3471	0.0000	2.12
Category	0.0250	0.0906	0.0763	0.7824	1.03
Question Q2: χ2 = 20483.984, AIC = 13114.6706					
Intercept 1	-0.1360	0.0632	4.6361	0.0313	0.87
Country	0.4040	0.0796	25.7613	0.0000	1.50
Category	-0.1970	0.0735	7.1876	0.0073	0.82
Intercept 2	-1.1303	0.0891	160.7841	0.0000	0.32
Country	0.7969	0.1101	52.3656	0.0000	2.22
Category	-0.6879	0.0961	51.2604	0.0000	0.50
Intercept 3	-2.6501	0.1613	269.9844	0.0000	0.07
Country	1.5379	0.1767	75.7284	0.0000	4.65
Category	0.0162	0.1201	0.0181	0.8928	1.02
Intercept 4	0.1259	222.8119	-2.1252	0.0000	0.15
Country	0.2429	35.0842	-1.9146	0.0000	0.24
Category	0.2387	6.5438	-1.0784	0.0105	0.54

Source: author's work.

Responses to four further questions (Q3, Q4, Q5, Q6) were coded as a variable measured on an ordinal scale. In this case, an ordinal logit model was used to analyse the responses. The structure of the respondents' answers to the questions is shown in Figure 3, and the results of estimation of the models are presented in Table 3. The proposed measures of the models' fit prove their high quality.

Q3 How highly do you rate the importance of a protected area for tourism in your region?

Possible answers to this question were coded: 0 – 'very low', 1 – 'low', 2 – 'high', 3 – 'very high'.

The most frequent answer chosen by the respondents was that they highly appreciate the importance of the protection area for tourism (Figure 3a). Nearly 3,000 respondents answered in this way. However, the responses differed significantly whether Poles or Germans gave the answers and respondents gave them in landscape parks or national parks (Table 3). However, the positive assessment of Poles was 63% lower than that of Germans. This may result from the Germans much more often than Poles chose the answer that they highly evaluate the importance of the protected area for tourism in their region. On the other hand, the positive assessment level of landscape park residents was 35% lower than that of national park residents.

For the following questions: Q4, Q5 and Q6, the following answers were possible: code 0 – "I do not agree at all", 1 – "I rather disagree", 2 – "I am undecided", 3 – "I rather agree", 4 – "I completely agree".

Q4 Precious natural areas should be closed for recreation and leisure.

Based on the structure presented in Figure 3b, it can be concluded that the respondents most often chose the answers I agree with entirely, and I somewhat agree. However, significant differences could be observed between the responses of Poles and Germans (Table 3). Poles agreed with this statement much less (by 48%) than Germans. However, there were no significant differences in answers to this question between respondents in landscape parks and national parks (the model's parameter was not statistically significant).

Q5 The protected area has a positive impact on the region's image.

The structure of respondents' answers (Figure 3c) indicates that they most often ultimately agreed that parks positively impact the region's image. A relatively large number of solutions stated that the respondents somewhat agreed with this statement. Nearly 500 people did not answer this question. There were significant statistical differences between the responses of Polish

and German respondents and respondents in landscape parks and national parks (Table 3). To a lesser extent (by 46%) than Germans, Poles considered that protected areas positively affect the region's image. Respondents in landscape parks also believed less (by 32%) than respondents in national parks that protected areas positively affect the idea of the region.

Q6 The quality of tourism in the region has increased due to the protected area

In the case of question Q6, the most frequently selected answer was that the respondents somewhat agree that the quality of tourism has increased due to the existence of a protected area (Figure 3d). There were also a relatively large number of answers saying that I completely agree that the quality of tourism in the region increased due to a protected area (over 1,200 cases) and that I partly agree (over 1,000 cases). That Poles agreed less (by 52%) than Germans that the quality of tourism in the region increased due to a protected area. Moreover, respondents in landscape parks also agreed less (by 21%) than respondents in national parks with this opinion, i.e., that the quality of tourism in the region increased due to the existence of a protected area.
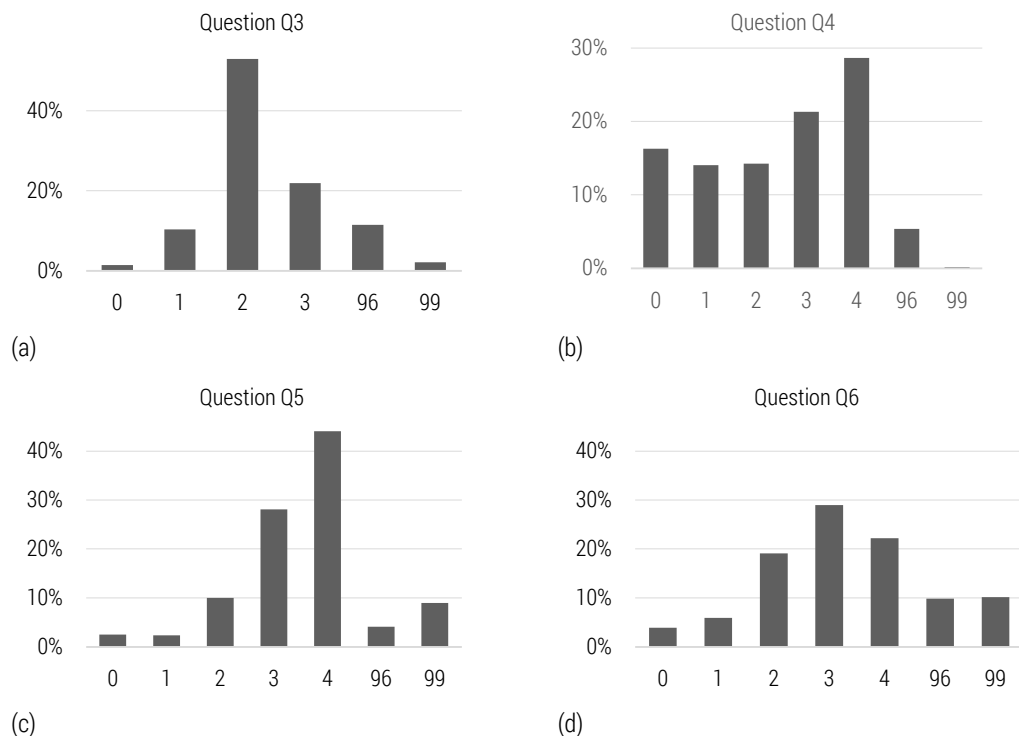

Figure 3. Structure of respondents' answers to questions Q3-Q6

Source: author's work.

Table 3. Results of estimating the parameters of the ordinal logit model – questions Q3-Q6

Variable	Coefficients	Standard error	Wald statistics	p-value	Odds ratio
Question Q3: χ2 = 15506.6857, AIC = 8931.00208					
Intercept 1	-0.2217	0.0539	16.8910	0.0000	0.80
Intercept 2	2.9028	0.0714	1652.9710	0.0000	18.23
Intercept 3	5.1593	0.1279	1627.7680	0.0000	174.04
Country	-0.9854	0.0712	191.4910	0.0000	0.37
Category	-0.4301	0.0659	42.6200	0.0000	0.65
Question Q4: χ2 = 21018.4766, AIC = 16332.6424					
Intercept 1	-0.4169	0.0501	69.1380	0.0000	0.66
Intercept 2	0.5517	0.0504	119.8150	0.0000	1.74
Intercept 3	1.2003	0.0525	523.6260	0.0000	3.32
Intercept 4	2.0280	0.0575	1244.0490	0.0000	7.60
Country	-0.6480	0.0606	114.3040	0.0000	0.52
Category	0.0576	0.0548	1.1030	0.2935	1.06
Question Q5: χ2 = 20081.507, AIC = 10976.8384					
Intercept 1	0.7278	0.0639	129.6460	0.0000	2.07
Intercept 2	2.3314	0.0716	1059.3900	0.0000	10.29
Intercept 3	3.5931	0.0879	1669.4490	0.0000	36.34
Intercept 4	4.2745	0.1057	1633.9450	0.0000	71.85
Country	-0.6208	0.0854	52.8090	0.0000	0.54
Category	-0.3905	0.0675	33.4910	0.0000	0.68
Question Q6: χ2 = 18530.5874, AIC = 12286.9858					
Intercept 1	-0.2904	0.0585	24.6650	0.0000	0.75
Intercept 2	1.3011	0.0619	442.0730	0.0000	3.67
Intercept 3	2.7253	0.0722	1423.8120	0.0000	15.26
Intercept 4	3.7282	0.0897	1728.0100	0.0000	41.61
Country	-0.7393	0.0815	82.3640	0.0000	0.48
Category	-0.2351	0.0681	11.9000	0.0006	0.79

Source: author's work.

This study is unique, as it concerns a specific area – the Pomerania Euroregion. It is therefore difficult to refer the survey results to other research. They are, after all, dependent on the socio-economic situation of the resident population and the geographical and natural circumstances of the protected areas. Acceptance analyses are often made for sites that are to be converted into protected areas or where existing parks are planned to be

expanded. However, it should be stressed that in most such studies, the populations have high opinions about the impact of tourism on the development of their regions and express their acceptance of such activities. Seridi and Djebar (2017) conducted a public acceptance study accompanying the creation of a marine protected area: Cap de Garde in Annaba, Algeria. 79.8% of the population consented to create the protected areas due to the planned expansion of sea-related commerce. 87% of the respondents believed it would positively impact tourism development in the region. However, there are concerns regarding the benefits derived from tourism in many other areas. Puntscher et al. (2017) studied the residents' views of Vietnam's Hoang Lien National Park.

The economic benefits derived from sustainable tourism were supposed to convince the local population that the restrictions and regulations on using the protected area were necessary and beneficial. However, although the locals did indeed note the economic advantages of sustainable tourism as a sector, they did not perceive themselves as the actual beneficiaries. They implicated that the greatest benefits generated by this industry would flow to external actors. Ayivor et al. (2020) arrived at similar conclusions in their study of the opinions held by local communities regarding the impact of protected areas on their lives. Their research covered selected protected areas within the main ecological zones of Ghana. Only 30% of the local population claimed they were benefiting from tourism. This means that people have positive attitudes toward expanding tourism in their protected areas in emerging economies. At the same time, however, they are aware that someone else will receive the better part of the benefits. Engen et al. (2019) questioned randomly selected residents of two mountainous regions of Norway to determine their preferences regarding how they lived in were used. Acceptance of the development of the industry and energy sectors and the popularity of private construction (summer houses) were lower in protected areas than elsewhere. However, the same level of acceptance was observed in developing tourist facilities. Brown et al. (2015) stress that the conservation policy for any protected areas must take account of the cultural context. Poles expressed greater attachment to the values and preferences focused on the environment and nature conservation than Norwegians, who emphasised resource exploitation. For Norway, biodiversity protection in protected areas consists of the sustainable use of such sites and not of strict nature conservation. The governance of such regions favours a model that involves local management control and active public participation. In Poland, any changes in how protected areas are managed to improve biodiversity conservation are less likely to happen due to the national values regarding the environment being often contrary to the values and preferences held locally.

The main reason for this is the persistent lack of confidence in the government and the low level of civic participation. Our study also helped highlight some cultural differences. These resulted from the different levels of civil participation between Poland and Germany. However, as the research area covered a single common region (the Pomerania Euroregion), the border was so close to the people's domicile, and crossing the border was so easy, the overall opinion about the significance of tourism in the development of the region was high, without any significant differences between the nations. Andries et al. (2021) explored the local population's views on the development of tourism in the Natural Protected Area Jaltepeque Estuary (El Salvador, Central America) and the establishment of a Biosphere Reserve. This region. The respondents welcomed a concept for tourism development. The local fishers were the only opposing stakeholder group, as they feared the negative economic consequences of such development. They highlighted inequalities in the distribution of the benefits and increased living costs. Their judgment was informed by similar effects of tourism development observed in the nearby Costa del Sol Boulevard. Although tourism expansion is desirable for local communities, it may be necessary to discuss how this process should be approached from socio-economic transformation.

Conclusions and recommendations

The present survey among the inhabitants of 14 protected areas in the Pomerania Euroregion, including 10 Polish and 4 German ones, proved helpful in learning their opinions on tourism. Based on the study results, particularly the logit models used therein, conclusions can be drawn on tourism in these sites. Despite the social, cultural and economic differences between them, the Polish and German local communities of the Pomerania euro region's protected areas expressed mostly similar high opinions regarding the significance of a protected area for tourism (Q3). At the same time, the residents of both countries most often indicated that the number of visitors to their protected site was appropriate (Q1). In the context of the essence of sustainable tourism, it is encouraging that most respondents from both the countries claimed that the benefits of the given protected area were most often shared equally by both the residents and the tourists (Q2) and that the protected area had a positive impact on the region's image (Q5).

The present study also showed that the inhabitants of the protected areas were aware of the assets that these sites had and did not give preference to the tourism benefits derived by the local communities over the overall benefits of operating a protected area, since the respondents most often fully or instead fully agreed with the statement that the precious natural areas should be closed to leisure and recreation (Q4). The survey on the acceptance by

inhabitants of protected regions of Euroregion Pomerania is unique. This results in some limitations. It is not possible to refer to similar surveys in earlier years. This would have made it possible to compare changes in residents' attitudes towards tourism over time. There is also a lack of large-scale studies for other protected areas in Poland and Germany. These two limitations make it impossible to complete spatial and temporal analysis. The authors plan to continue their research and extend it to other protected areas. They are interesting from a scientific point of view and are also crucial for managing protected areas. Conclusions from the conducted spatial and temporal analyses will help better assess sustainable tourism development in the Euroregion Pomerania.

The study results also show differences in how Poles and Germans living in the Pomerania euro region's protected areas perceive tourism. Although both the responding Poles and Germans mainly claimed that the number of visitors to their protected areas was appropriate, Poles were more than twice as likely to state that the number was too small. At the same time, the Poles were 87% less likely to state that the number of tourists was too large. Also, the Poles were 50% more likely to point to the inhabitants and tourists as the primary beneficiaries of the protected area, and 122% more likely to indicate the tourists alone. In the light of the study results, it can be concluded that the regions of the Polish protected areas in the Pomerania Euroregion have more significant potential for the development of sustainable tourism than the German regions, the development being defined as increased tourist traffic. The more excellent developmental opportunities offered by the Polish side of the Euroregion is also evidenced by the socio-economic circumstances observed in Poland, which favour Germans arriving in the country.

Along with the transformations taking place, including the changing border functions, the new directions for the evolution of the former development model for these areas should be accounted for. The model for the sustainable development of borderlands should become one of the key policy elements for Polish peripheral regions. The diversity of the region's natural potential and its cross-border location make it an ideal place for developing various forms of tourism and creating a diversified product offering targeted at specific market segments. However, increased tourism is accompanied by several adverse environmental effects. Therefore, to protect the environment and at the same time provide support to the local economy, alternative solutions to be incorporated into the regional policy must be sought. In this context, sustainable tourism appears to be one of the essential factors in ensuring the socio-economic development of the cross-border region. It enables the region's environmental, cultural, and human potential to be exploited. It also encourages the creation of new jobs and ensures the protection of particularly valuable areas. Tourism expansion requires, above all, a change

in how the local communities perceive the protected areas. The various forms of environmental protection are seen as an opportunity for the region's economy to develop and not as a threat. This calls for extensive cooperation between the local communities, nature conservation institutions, and local and regional authorities. Looking at the current conditions for the development of sustainable tourism in the cross-border area in question, the recommendations for future actions are:

- To build a platform for cooperation between the protected areas, local authorities, NGOs, tourism industry actors, educational institutions, and local leaders ensure a joint effort in deploying sustainable tourism principles in the borderland. Appointment of a cross-border working team to create opportunities for broader cooperation in the field of sustainable socio-economic development of the Euroregion Pomerania area.
- To create a cross-border tourism product based on sustainable tourism and drawing from the environmental potential of the region.
- To establish a regional system for training staff in sustainable tourism practices.
- To implement a training system for the tourism industry (catering and accommodation service providers, tour guide and leader service providers) to raise the awareness of sustainable tourism and provide skills in creating new and improving existing tourism services in the region.
- To develop an integrated tourist information system with uniform labelling and a wide range of materials promoting sustainable tourism on both local and cross-border levels.
- To conduct a series of promotional activities using various tools to promote sustainable tourism in the cross-border region.
- To account for the needs of sustainable tourism stakeholders and the tourism sector and to support the development of tourism infrastructure in previously undeveloped areas of high natural value.
- Promoting good practices in the area of creating services and products related to sustainable tourism.

The contribution of the authors

Arkadiusz **Malkowski**: conception 33%, literature review 33%, data analysis 34%,

Beata **Bieszk-Stolorz**: data collection 33%, data analysis 33%, interpretation of results 34%,

Dawid **Dawidowicz**: data collection 34%, data analysis 33%, interpretation of results 33%,

Wojciech **Zbaraszewski**: conception 34%, literature review 33%, interpretation of results 33%,

Martin **Balas**: conception 33%, literature review 34%, data collection 33%.

Acknowledgements

References

Andries, D. M., Arnaiz-Schmitz, C., Díaz-Rodríguez, P., Herrero-Jáuregui, C., & Schmitz, M. F. (2021). Sustainable Tourism and Natural Protected Areas: Exploring Local Population Perceptions in a Post-Conflict Scenario. Land, 10(3), 331. https://doi.org/10.3390/land10030331

Ap, J. (1992). Residents' perceptions on tourism impacts. Annals of Tourism Research, 19(4), 665-690. https://doi.org/10.1016/0160-7383(92)90060-3

Arrow, K., Dasgupta, P., Goulder, L., Daily, G., Ehrlich, P., Heal, G., Levin, S., Mäler, K.-G., Schneider, S., Starrett, D., & Walker, B. (2004). Are we consuming too much? Journal of Economic Perspectives, 18(3), 147-172. https://doi.org/10.1257/0895330042162377

Ayivor, J. S., Nyametso, J. K., & Ayivor, S. (2020). Protected Area Governance and Its Influence on Local Perceptions, Attitudes and Collaboration. Land, 9(9), 310. https://doi.org/10.3390/land9090310

Bair, J. (2002). Beyond the maquila model? NAFTA and the Mexican apparel industry. Industry and Innovation, 9(3), 203-225. https://doi.org/10.1080/1366271022000034462

Balas, M., & Strasdas, W. (2019). Sustainability in tourism: developments, approaches and clarification of terms. Dessau-Roßlau: German Environmental Agency. https://www.umweltbundesamt.de/publikationen/sustainability-in-tourism-developments-approaches

Bianchi, R. V. (2004). Tourism restructuring and the politics of sustainability: A critical view from the European periphery (The Canary Islands). Journal of Sustainable Tourism, 12(6), 495-529. https://doi.org/10.1080/09669580408667251

Biuletyn Informacji Publicznej. Urząd Miasta Szczecin (2021, May 15). http://bip.um.szczecin.pl/konsultacje/files/2721C4BE756E4D9BAAA7022F64896815/Program_Szczecin_FINAL4_.pdf

Bjorklund, D. F., & Harnishfeger, K. K. (1990). The resources construct in cognitive development: Diverse sources of evidence and a theory of inefficient inhibition. Developmental Review, 10(1), 48-71.

Bramwell, B., Higham, J., Lane, B., & Miller, G. (2017). Twenty-five years of sustainable tourism and the Journal of Sustainable Tourism: looking back and moving forward. Journal of Sustainable Tourism, 25(1), 1-9. https://doi.org/10.1080/09669582.2017.1251689

Bricker, K. S., & Schultz, J. (2011). Sustainable tourism in the USA: A comparative look at the Global Sustainable Tourism Criteria. Tourism Recreation Research, 36(3), 215-229. https://doi.org/10.1080/02508281.2011.11081668

Brown, G., Hausner, V. H., Grodzińska-Jurczak, M., Pietrzyk-Kaszyńska, A., Olszańska, A., Peek, B., Rechciński, M., & Laegreid, E. (2015). Cross-cultural values and manage-

ment preferences in protected areas of Norway and Poland. Journal for Nature Conservation, 28, 89-104. https://doi.org/10.1016/j.jnc.2015.09.006

Carr, A., Ruhanen, L., & Whitford, M. (2016). Indigenous peoples and tourism: the challenges and opportunities for sustainable tourism. Journal of Sustainable Tourism, 24(8-9), 1067-1079. https://doi.org/10.1080/09669582.2016.1206112

Clarke, J. A. (1997). A framework of approaches to sustainable tourism. Journal of Sustainable Tourism, 5(3), 224-233. https://doi.org/10.1080/09669589708667287

Cole, S. (2006). Information and empowerment: The keys to achieving sustainable tourism. Journal of sustainable tourism, 14(6), 629-644. https://doi.org/10.2167/jost607.0

Daily, G. C., Polasky, S., Goldstein, J., Kareiva, P. M., Mooney, H. A., Pejchar, L., Ricketts, T. H., Salzman, J., & Shallenbergeri, R. (2009). Ecosystem services in decision making: time to deliver. Frontiers in Ecology and the Environment 7(1), 21-28. https://doi.org/10.1890/080025

Du, D., Lew, A. A., & Ng, P. T. (2016). Tourism and Economic Growth. Journal of Travel Research, 55(4), 454-464. https://doi.org/10.1177/0047287514563167

Dvoryadkina, E. B., & Kaibicheva, E. I. (2017). Trends of centre-periphery polarisation in Sverdlovsk region between 2008 and 2015. R-Economy, 3(2), 120-129. https://doi.org/10.15826/recon.2017.3.2.014

Engen, S., Fauchald, P., & Hausner, V. (2019). Stakeholders' perceptions of protected area management following a nationwide community based conservation reform. PLoS ONE 14(4): e0215437. https://doi.org/10.1371/journal.pone.0215437

Flynn, D. K. (1997). "We are the border": identity, exchange, and the state along the Bénin-Nigeria border. American Ethnologist, 24(2), 311-330. https://doi.org/10.1525/ae.1997.24.2.311

Getz, D., & Timur, S. (2004). Stakeholder involvement in sustainable tourism: balancing the voices. In W. F. Theobald (Ed.). *Global tourism* (pp. 247-264). London: Routledge.

Gezici, F., & Hewings, G. J. (2004). *Regional convergence and the economic performance of peripheral areas in Turkey*. Review of Urban & Regional Development Studies, 16(2), 113-132. https://doi.org/10.1111/j.1467-940X.2004.00082.x

Gruben, W., & Kiser, S. L. (2001, June). NAFTA and Maquiladoras. Is the Growth Connected? Federal Reserve Bank of Dallas. https://www.dallasfed.org/-/media/Documents/research/border/tbegruben.pdf?la=ens

Hall, C. M. (2011). Policy learning and policy failure in sustainable tourism governance: From first-and second-order to third-order change? Journal of Sustainable Tourism, 19(4-5), 649-671. https://doi.org/10.1080/09669582.2011.555555

Hall, D., & Richards G. (2003). *Tourism and sustainable community development*. London: Routledge.

Havlíček, T. (2007). Border, borderland and peripheral regions. Theoretical considerations in the framework of the process of transformation. In G. Jones, W. Leimgruber, & E. Nel (Eds.). *Issues in Geographical Marginality. Papers presented during the Commission Meetings 2001-2004.* (pp. 2-10). South Africa: Rhodes University.

Holden, A., Sonne, J., & Novelli, M. (2011). Tourism and poverty reduction: An interpretation by the poor of Elmina, Ghana. Tourism Planning & Development, 8(3), 317-334. https://doi.org/10.1080/21568316.2011.591160

Hosmer, D. W., Lemeshow S., & Sturdivant, R. X. (2013). *Applied logistic regression*. New York: Wiley.

Eurostat. (2021, December). https://ec.europa.eu/eurostat

Hunt, S. D. (1999). *A general theory of competition: Resources, competences, productivity, economic growth.* Thousand Oaks: Sage Publications.

Ianioglo, A., & Rissanen, M. (2020). Global trends and tourism development in peripheral areas. Scandinavian Journal of Hospitality and Tourism, 20(5), 520-539. https://doi.org/10.1080/15022250.2020.1848620

Kauppila, P., Saarinen, J., & Leinonen, R. (2009). Sustainable tourism planning and regional development in peripheries: A Nordic view. Scandinavian Journal of Hospitality and Tourism, 9(4), 424-435. https://doi.org/10.1080/15022250903175274

Kleinbaum, D. G., & Klein, M. (2010). *Logistic Regression A Self-Learning Text*. Third Edition. New York: Springer.

Krippendorf, J. (1987). *The Holiday Makers: Understanding the Impact of Leisure and Travel illustrate*. London: William Heinemann Ltd.

Kurowska-Pysz, J., Szczepańska-Woszczyna, K., Štverková, H., & Kašík, J. (2018). The catalysts of cross-border cooperation development in euroregions. Polish Journal of Management Studies, 18(1), 180-193. https://doi.org/10.17512/pjms.2018.18.1.14

Liu, J. C., Sheldon, P. J., & Var, T. (1987). Resident perception of the environmental impacts of tourism. Annals of Tourism Research, 14(1), 17-37. https://doi.org/10.1177/004728758702600151

Malkowski, A., Mickiewicz, B., & Malkowska, A. (2020). Shopping tourism as a factor in the development of peripheral areas: the case of the Polish-German borderland. European Research Studies Journal, 23(3), 238-248. https://doi.org/10.35808/ersj/1635

Marada, M., Chromỳ, P., Jančák, V., & Havlíček, T. (2006). Space polarization and peripheral regions in Czechia, Europa XXI, 15, 29-34.

Mathew, P. V., & Sreejesh, S. (2017). Impact of responsible tourism on destination sustainability and quality of life of the community in tourism destinations. Journal of Hospitality and Tourism Management, 31, 83-89. https://doi.org/10.1016/j.jhtm.2016.10.001

Mayer, M., Zbaraszewski, W., Pieńkowski, D., Gach, G., & Gernert, J. (2019). *Cross-Border Tourism in Protected Areas Potentials, Pitfalls and Perspectives*. Cham: Springer.

McCool, S., Butler, R., Buckley, R., Weaver, D., & Wheeller, B. (2013). Is the concept of sustainability utopian: Ideally perfect but impracticable? Tourism Recreation Research, 38(2), 213-242. https://doi.org/10.1080/02508281.2013.11081746

Meadows, D. H., Meadows, D. L., Randers, J. (2013). The limits to growth (1972). In R. Libby, S. Sörlin & P. Warde (Eds.). *The Future of Nature. Documents of Global Change.* (pp. 101-116), New Haven: Yale University Press. https://doi.org/10.12987/9780300188479-012

Moscardo, G., & Murphy, L. (2014). There is no such thing as sustainable tourism: Re-conceptualizing tourism as a tool for sustainability. Sustainability, 6(5), 2538-2561. https://doi.org/10.3390/su6052538

Müller, H. (1994). The thorny path to sustainable tourism development. Journal of Sustainable Tourism, 2(3), 131-136. https://doi.org/10.1080/09669589409510690

Nepal, S. K. (2000). Tourism in protected areas: the Nepalese Himalaya. Annals of Tourism Research, 27(3), 661-681. https://doi.org/10.1016/S0160-7383(99)00105-X

Ormsby, A., & Mannle, K. (2006). Ecotourism benefits and the role of local guides at Masoala National Park, Madagascar. Journal of Sustainable Tourism, 14(3), 271-287. https://doi.org/10.1080/09669580608669059

Pearce, D., & Atkinson, G. (1998). The concept of sustainable development: An evaluation of its usefulness ten years after Brundtland. Revue Suisse d Economie Politique et de Statistique, 134, 251-270.

Pezzi, M. G., & Urso, G. (2016). Peripheral areas: conceptualisations and policies. Introduction and editorial note. Italian Journal of Planning Practice, 6(1), 1-19.

Pool, C. (2006). Transboundary Protected Areas as a Solution to Border Issues. Nebraska Anthropologist, 23, 41-57.

Prokkola, E.-K. (2010). Borders in tourism: the transformation of the Swedish–Finnish border landscape. Current Issues in Tourism, 13(3), 223-238. https://doi.org/10.1080/13683500902990528

Protected Planet Report 2018. (2018). https://livereport.protectedplanet.net/pdf/Protected_Planet_Report_2018.pdf

Puntscher, S., Duc, T. H., Walde, J., Tappeiner, U., & Tappeiner, G. (2017). The acceptance of a protected area and the benefits of sustainable tourism: In search of the weak link in their relationship. Working Papers 2017-08, Faculty of Economics and Statistics, University of Innsbruck.

Puppim de Oliveira, J. A. (2005). Tourism as a force for establishing protected areas: The case of Bahia, Brazil. Journal of Sustainable Tourism, 13(1), 24-49. https://doi.org/10.1080/17501220508668471

Rasoolimanesh, S. M., Ramakrishna, S., Hall, C. M., Esfandiar, K., & Seyfi, S. (2020). A systematic scoping review of sustainable tourism indicators in relation to the sustainable development goals. Journal of Sustainable Tourism, 9582. https://doi.org/10.1080/09669582.2020.1775621

Reddy, M. V., & Wilkes, K. (Eds.). (2015). Tourism in the Green Economy. London: Routledge. https://doi.org/10.4324/9781315885681

Saarinen, J. (2014). Critical sustainability: Setting the limits to growth and responsibility in tourism. Sustainability, 6(1), 1-17. https://doi.org/10.3390/su6010001

Scherl, L. M., & Edwards, S. (2007). Tourism, indigenous and local communities and protected areas in developing nations. In R. Bushell & P. Eagles (Eds.). Tourism and protected areas: Benefits beyond boundaries. (pp. 71-88). The Vth IUCN World Parks Congress. CABI.

Sekhar, N. U. (2003). Local people's attitudes towards conservation and wildlife tourism around Sariska Tiger Reserve, India. Journal Of Environmental Management, 69(4), 339-347. https://doi.org/10.1016/j.jenvman.2003.09.002

Seridi, A., & Djebar, A. B. (2017). Proportions of social acceptance in the designation of a marine protected area: Cap de Garde in Annaba, Algeria (SW Mediterranean). Aquaculture, Aquarium, Conservation & Legislation, 10(3), 480-498.

Serwis Regionalnego Programu Operacyjnego Województwa Zachodniopomorskiego (2021, May 12). http://www.rpo.wzp.pl/sites/default/files/polityka_samorzadu_wojewodztwa_zachodniopomorskiego_w_sektorze_turystyki_0.pdf

Sharpley, R. (2000). Tourism and sustainable development: Exploring the theoretical divide. Journal of Sustainable Tourism, 8(1), 1-19. https://doi.org/10.1080/09669580008667346

Smith, A. (1954). *Bogactwo narodów*. Vol. 2. Warszawa: PWN.

Smith, A. (1987). *The Essential Adam Smith*. New York: WW Norton & Company.

Sneddon, C., Howarth, R. B., & Norgaard, R. B. (2006). Sustainable development in a post-Brundtland world. Ecological Economics, 57(2), 253-268. https://doi.org/10.1016/j.ecolecon.2005.04.013

Stoffelen, A., & Vanneste, D. (2017). Tourism and cross-border regional development: insights in European contexts. European Planning Studies, 25(6), 1013-1033. https://doi.org/10.1080/09654313.2017.1291585

Strickland-Munro, J., & Moore, S. (2013). Indigenous involvement and benefits from tourism in protected areas: a study of Purnululu National Park and Warmun Community, Journal of Sustainable Tourism, 21(1), 26-41. https://doi.org/10.1080/09669582.2012.680466

World Economic Forum. (2020). *The Global Risks Report 2020.* https://www3.weforum.org/docs/WEF_Global_Risk_Report_2020.pdf

Tudorache, D. M., Simon, T., Frenţ, C., & Musteaţă-Pavel, M. (2017). Difficulties and challenges in applying the European Tourism Indicators System (ETIS) for sustainable tourist destinations: The case of Braşov county in the Romanian Carpathians. Sustainability, 9,1879. https://doi.org/10.3390/su9101879

United Nations Convention in Biological Diversity (2020). Zero Draft of the post-2020 Global Biodiversity Framework. https://www.cbd.int/doc/c/efb0/1f84/a892b98d2982a829962b6371/wg2020-02-03-en.pdf

UNWTO. (2018). Sustainable Tourism for Development Guidebook – Enhancing capacities for Sustainable Tourism for development in developing countries. In *Sustainable Tourism for Development Guidebook – Enhancing capacities for Sustainable Tourism for development in developing countries*. https://doi.org/10.18111/9789284415496

UNWTO/UNEP. (2005). Making Tourism More Sustainable. A Guide for Policy Makers. http://www.unep.fr/shared/publications/pdf/DTIx0592xPA-TourismPolicyEN.pdf

Van den Bergh, J. C., & Nijkamp, P. (1991). Aggregate Dynamic Economic – Ecological Models for Sustainable Development. Environment and Planning A, 23(10), 1409-1428. https://doi.org/10.1068/a231409

Waldkirch, A. (2010). The effects of foreign direct investment in Mexico since NAFTA. World Economy, 33(5), 710-745. https://doi.org/10.1111/j.1467-9701.2009.01244.x

Walpole, M. J., Goodwin, H. J. (2001). Local attitudes towards conservation and tourism around Komodo National Park, Indonesia. Environmental Conservation, 28(2), 160-166. https://doi.org/10.1017/S0376892901000169

Wheeller, B. (2007). Sustainable mass tourism: More smudge than nudge the canard continues. Tourism Recreation Research, 32(3), 73-75. https://doi.org/10.1080/02508281.2007.11081543

Zeppel, H. (2010). Managing cultural values in sustainable tourism: Conflicts in protected areas. Tourism and Hospitality Research, 10(2), 93-115. https://doi.org/10.1057/thr.2009.28

Zurick, D. N. (1992). Adventure travel and sustainable tourism in the peripheral economy of Nepal. Annals of the Association of American geographers, 82(4), 608-628. https://doi.org/10.1111/j.1467-8306.1992.tb01720.x