Taylor & Francis
Taylor & Francis Group

Impact Assessment and Project Appraisal

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/tiap20

Landscape, EIA and decision-making. A case study of the Vistula Spit Canal, Poland

Aleksandra Sas-Bojarska, Iwona Orzechowska-Szajda, Krystian Puzdrakiewicz & Magdalena Kiejzik-Głowińska

To cite this article: Aleksandra Sas-Bojarska, Iwona Orzechowska-Szajda, Krystian Puzdrakiewicz & Magdalena Kiejzik-Głowińska (05 Nov 2023): Landscape, EIA and decision-making. A case study of the Vistula Spit Canal, Poland, Impact Assessment and Project Appraisal, DOI: 10.1080/14615517.2023.2273612

To link to this article: https://doi.org/10.1080/14615517.2023.2273612

© 2023 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.

Published online: 05 Nov 2023.

Submit your article to this journal

Article views: 493

View related articles

View Crossmark data

Full Terms & Conditions of access and use can be found at
https://www.tandfonline.com/action/journalInformation?journalCode=tiap20

IMPACT ASSESSMENT AND PROJECT APPRAISAL
https://doi.org/10.1080/14615517.2023.2273612

OPEN ACCESS Check for updates

Landscape, EIA and decision-making. A case study of the Vistula Spit Canal, Poland

Aleksandra Sas-Bojarska[a], Iwona Orzechowska-Szajda[b], Krystian Puzdrakiewicz[c] and Magdalena Kiejzik-Głowińska[d]

[a]Department of Urban and Regional Planning, Gdańsk University of Technology, Gdańsk, Poland; [b]Department of Landscape Architecture, Wrocław University of Environmental and Life Sciences, Wrocław, Poland; [c]Division of Regional Development, University of Gdańsk, Gdańsk, Poland; [d]EKO-KONSULT Sp. z o.o, Gdańsk, Poland

ABSTRACT

Although landscapes are often considered public goods, they frequently receive inadequate attention in Environmental Impact Assessments (EIAs), particularly in Poland. This neglect often leads to visible degradation during investment processes. This article examines the case of the Vistula Spit Canal, currently the largest engineering project under construction in Poland. We analysed whether the conclusions drawn in the EIA report, particularly those concerning landscape changes, influenced the decision to proceed with the construction. Although the EIA report described potential landscape changes as both significant and irreversible, the authorities nonetheless approved the project, citing moderate environmental impacts in other areas. This case underscores the tendency to overlook landscape considerations when greenlighting large-scale investments.

ARTICLE HISTORY
Received 19 October 2022
Accepted 17 October 2023

KEYWORDS
EIA; landscape threats; the Vistula Spit canal; range of the landscape in decision-making

1. Introduction

Landscape is a public good with social, cultural, ecological, and environmental significance. It is of key importance to the emergence of local cultures, and contributes to human well-being (Mészáros and Antonson 2020). The European Landscape Convention (ELC) ([CE] Council of Europe 2000) mandates that signatory European states integrate landscape-related considerations into their policies and engage in proactive landscape management and protection. However, the ELC is proving difficult to implement due to the complex meaning of the term 'landscape' (Mikusiński et al. 2013), in which it combines, along with ecological functions, social, cultural and visual quality aspects of the landscape (The ELC defines 'landscape' as 'an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors' ([CE] Council of Europe 2000).

Within the context of landscape protection, the EIA is the primary instrument facilitating decision-making, although it is not used to its fullest potential. The importance and achievements of the EIA over the decades of its existence are unquestionable. The latest EIA research focuses on assessing the effectiveness of the EIA (Retief et al. 2020; Alberts et al. 2021), others – uncertainties regarding the appropriateness of using the EIA (Getty and Morrison-Saunders 2020; Soria-Lara et al. 2020). Some authors indicate that more effective and efficient landscape protection should take place at the regional level in the Strategic Impact Assessment (SIA) (Hanusch and Fischer 2011).

Very little modern research focuses on landscape assessment as part of the EIA (Antonson 2011; De Montis 2014; Antonson and Åkerskog 2015; Pavlickova and Vyskupova 2015; Pereira et al. 2021). The subject of landscape assessment is analysed by Niță et al. (2015), who conducted a comparative analysis of the knowledge on landscape indicators. A topic widely covered is the inclusion of social participation and local awareness of the value of landscapes and their protection in planning processes (Santé et al. 2020). Other studies pertain to practical methods for assessing the 'invisible' aspects of landscapes such as smell, sound, naturalness or place identity and historical transformations that have shaped the forms of environments (Antonson 2011; Guerrini et al. 2018). Ioannidis et al. (2022) developed a method of analysing the impact renewable energy projects have on landscape. The latest research on assessing visual impact focuses on instruments and techniques that increase the accuracy and precision of estimating the scale of visual effects (Palmer 2019, 2022). Within the context of landscapes, the effectiveness of EIA is contingent upon a great many factors. These include not only the legal system and the role it assigns to the landscape, or the characteristics of construction

CONTACT Iwona Orzechowska-Szajda iwona.orzechowska-szajda@upwr.edu.pl Department of Landscape Architecture, Wrocław University of Environmental and Life Sciences, Grunwaldzka 55, Wrocław 50-357, Poland

© 2023 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.
This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (http://creativecommons.org/licenses/by-nc-nd/4.0/), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

MOST WIEDZY Downloaded from mostwiedzy.pl

projects and the landscape that is at risk, but also social awareness, including the awareness of the decision-makers, investor pressure, as well as the funds allocated to particular studies and their deadlines.

Technical infrastructure is among the factors which have a direct or indirect, short- or long-term, reversible or irreversible impact on the landscape, especially if it affects valuable environmental and landscape ecosystems (Mészáros and Antonson 2020). This article presents a case of a great engineering project, which proves that the possibility of a negative landscape impact does not prevent decision-makers from approving projects, even those seen as controversial and causing public protests. The article describes a case where an engineering investment led to serious long-term and irreversible impact on the landscape. Due to this specificity, comparison with other engineering investments is not included. First of all, the decision-making process was complex and highly political with strong pressure from the current authorities (2005–2007 and 2015–2022). Moreover, potential serious environmental and landscape threats to the outstanding resources of Vistula Spit and Lagoon caused strong social controversy that has begun as early as the project's planning stage. The case is unique, because it clearly shows the extent to which the outstanding beauty of the exceptional in Poland landscape, protected in many forms, is overlooked in investment processes in Poland, especially in those investments with political background.

Initially, two research questions were formulated: Is the EIA procedure in Poland sufficient to protect the landscape threatened by investments? Is the role of the landscape in investment processes the same as that of other elements of the environment, or smaller?

The aim of this article is to determine how the relationship between the size and significance of investment's impact on the landscape and on other elements of the environment translate into decisions about the implementation of controversial investments, and to provide some valuable contribution to the development of good practices.

This article is a discussion of the effectiveness of landscape impact assessments in EIA in the Polish legal system. An example of poor practices related to the landscape protection is a large engineering investment described here – a canal running through the Vistula Spit, which is a region covered by numerous forms of nature and landscape protection, including Natura 2000.

2. Materials and methods

2.1. Research object

The Vistula Spit Canal is part of a waterway connecting the Vistula Lagoon with the Gulf of Gdańsk and the Baltic Sea (Figure 1). It is a large-scale, strategic government project. Its purpose is to stimulate the economy of the Vistula Lagoon area, including the Port of Elbląg, by developing the river transport, via independent access to the open sea without the need to enter the Russian-controlled Strait of Baltiysk.

This engineering project encompasses a range of large technical structures: a breakwater complex in the Gulf of Gdańsk (length 1050 m and 620 m), a canal with a length of 1350 m, width of 120 m, a system of locks that bisects the Vistula Lagoon, waiting berths, two swing bridges, an artificial island in the Vistula Lagoon, and a waterway in the Lagoon leading to Elbląg. The total area of the project is approximately 560 ha ([EKO–KONSULT] EKO-KONSULT Sp z o.o. 2018 Polish law classifies the project as having the potential to significantly impact the environment, and the project is thus subject to the EIA procedure. The research described here focuses on the part of the project that is of the highest importance from the perspective of the landscape – the Vistula Spit Canal (Figure 2).

2.2. Research methods

This article constitutes a qualitative case study utilising the VIA (Visual Impact Assessment) method (Palmer 2016). This method is considered a valid technique for assessing relations, behaviours, attitudes, motivations and stress factors (Berg 2007). Visual impacts are changes to the scenic attributes of the landscape brought about by the introduction of visual contrasts (e.g. development) and the associated changes in the human visual experience of the landscape. VIA is the analysis of the potential visual impacts to the landscape and landscape views resulting from a proposed development or land management action. The document that contains a visual impact analysis is also often referred to as a VIA. VIA is based mainly on the assessment of the contrast created by a new investment in the landscape (Bureau of Land Management).

The case study involved a review of an EIA report ([EKO–KONSULT] EKO-KONSULT Sp z o.o. 2018) concerning the Vistula Spit. The assessment of the impact on the landscape was made on the basis of the review of EIA report, especially the chapter Landscape impact assessment, and supplemented with the ratings for potential visual exposure, conducted by the authors.

2.2.1. Review of the landscape impact assessment

The planned project was described from the perspective of its landscape impact.

A site visit was conducted; the local landscape was examined, including such criteria as rarity, high visual quality, charm of the place, unspoilt character, 'spirit of the place', intensive tourist use, authenticity, wildness, originality, picturesque views, beauty of unspoilt vast space, unique character of the landscape, uniqueness,

MOST WIEDZY Downloaded from mostwiedzy.pl

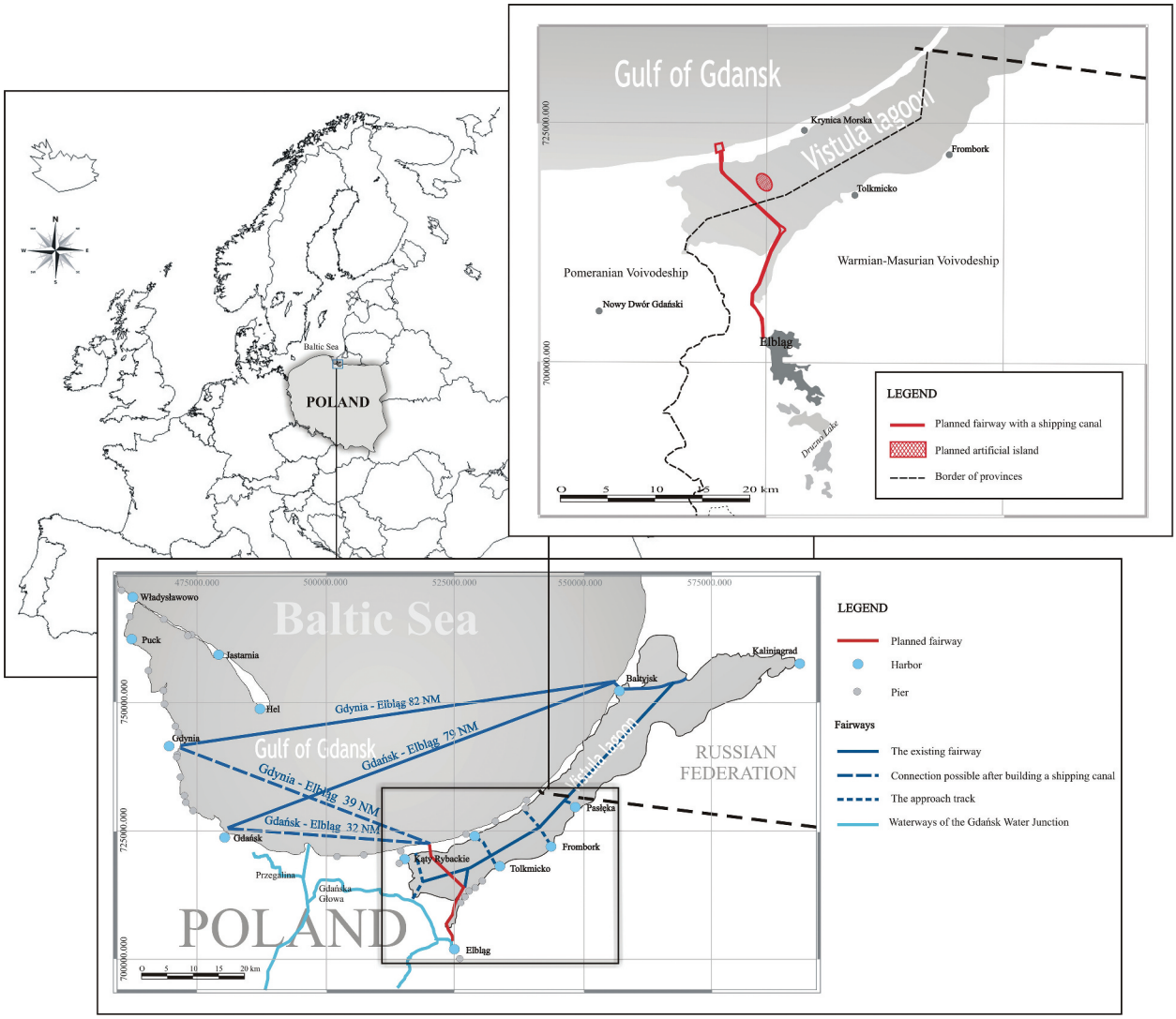

Figure 1. Location of the research object (author study, by Orzechowska-Szajda).

outstanding in scale country's resources and values; its vulnerability to changes was determined, and photographic documentation was compiled.

The potential negative effects of the planned project on the landscape were analysed; Expert judgment was used in the landscape impact assessment. Analyses were centred around those parts of the environment that were at most risk. Detailed landscape studies were conducted on the beaches from the Gulf of Gdańsk side, which are the areas offering the highest accessibility, are utilised to the highest degree, and provide an unobscured view of the project.

Computer visualisations (Appendix 1 a-d) were created in the EIA report for the planned project for the purpose of determining its visual impact zones, which in turn served as the basis for estimating the scale of potential landscape and visual conflicts. A simplified model was constructed which accounted for the actual dimensions of the designed breakwaters, the width of the beach, as seen on a topographic map maps.google, 2017, and fundamental data regarding the terrain. The height of the trees was averaged and allocated randomly. The visualisations were created from the point of view of the beach entrances on both sides of the canal (from a distance of 8000 m, 5600 m, 2900 m, 2000 m and 750 m from the east, and 920 m, 1270 m, 3000 m, 4800 m and 8000 m from the west, i.e. in particularly visually vulnerable locations with the highest number of users), from a height of 170 cm (average standing human eye-level) and 50 cm (average eye-level of a person sitting on a beach).

The landscape impact at the canal's construction/operation stage was assessed, in addition to an assessment of the direct/indirect, permanent/temporary effects of various scales and intensities, as well as the impact on tourism.

Heuristic methods were employed to determine the significance of the landscape and visual impact; in particular, it was determined that the harmony of the landscape and its perception may be affected.

MOST WIEDZY Downloaded from mostwiedzy.pl

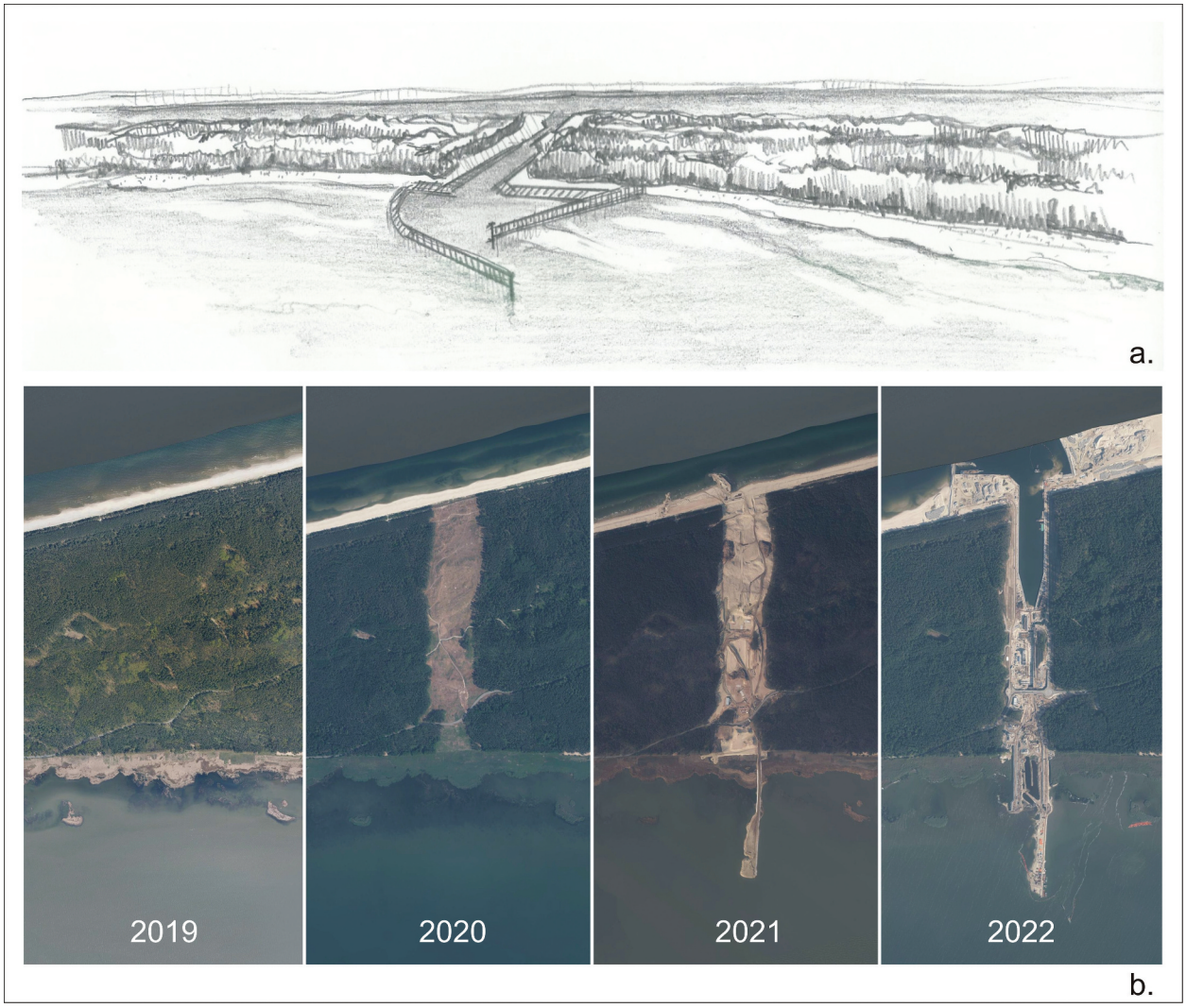

Figure 2. a) visualisation of the Vistula Spit canal, b) project completion stages (author study a) by Orzechowska-Szajda b) based on www.geoportal.gov.pl by Puzdrakiewicz).

The landscape impact assessment process was based on expert's evaluation who took into account the following criteria:

- the nature, type, scale and spatial scope of landscape changes,
- the vulnerability of the environment to the threats and the importance assigned to the landscape,
- the social conflicts associated with the change in the perception of the altered landscape.

The assessment of the significance of the impact of the construction and operation stages on particular parts of the environment, including the landscape, was done in the EIA report. The assessment has been based on the template which was followed by all experts preparing the report (Appendix 2). The significance result was the sum total of the weights of the impact on particular elements of the environment, divided by features, where a result of 7–11 represents a minor impact, 12–16 represents a moderate impact, and a result of 17–21 represented a major impact.

2.2.2. The ratings for potential visual exposure

Apart from the review of EIA report, an expanded assessment of the impact on the landscape was done for the purpose of this article. The ratings for potential visual exposure, determined on the estimated number of landscape observers, were defined by Palmer (2016) as: Very high (5,000–700,000), High (1,000–5,000), Moderate (500–1,000), Low (10–500), Very low (above 0–10) and None (0). The estimated number of viewers was calculated based on the data acquired in the course of a population activity and potential analysis (Birr et al. 2021), based on the behaviours of mobile phone users in 2019. The spatial data acquired as a result pertained to mobile phone users, and

MOST WIEDZY Downloaded from mostwiedzy.pl

constituted aggregate results sorted by location, time and frequency of visits, as well as their flows, i.e. location changes. The results of the research, based on data acquired from a single carrier, were extrapolated to the area's entire population. The total market share of the carrier was estimated and made it possible to identify what is referred to as the SIM multiplier, which indicates the number of people in the country per carrier's SIM card. The indices were ultimately set at 8.1 by taking into account population data published by the Central Statistical Office of Poland, and the domestic market share was estimated at 16.9% (Birr et al. 2021). Data specific to the gminas (the smallest unit of territorial division in Poland) of Sztutowo and Krynica Morska were isolated, taking into account the residents of the gminas and tourists. The number of tourists was also estimated within an 8 km zone on both sides of the canal, i.e. in the entire beachside visual impact area of the project, by calculating the availability of holiday lodgings in the area in relation to all lodgings available in both gminas, based on listings published by Google Travel. Following that, the total number of gmina users on an average summer holiday day and in the off season was corrected for the estimated share of the available lodgings in the analysed area (40.4% for the Gmina of Krynica Morska, 38.8% for the Gmina of Sztutowo). The estimates do not account for increased visual exposure due to higher boat traffic after the opening of the canal.

To assess the impact of investments on tourism, an analysis of existing studies was conducted, in order to identify the landscape protection goals resulting from country, regional and local spatial policy and from strategic documents.

3. Results – analysed case

3.1. Landscape factors

The Vistula Spit landscape is characterised by a diversity and richness of forms and features, strong visual contrasts, and exposure properties which result from being situated on the border of land and two bodies of seawater. This gives rise to visual openings in both directions – offering a view of the Gulf of Gdańsk and the Vistula Lagoon. The landscape stands out for its

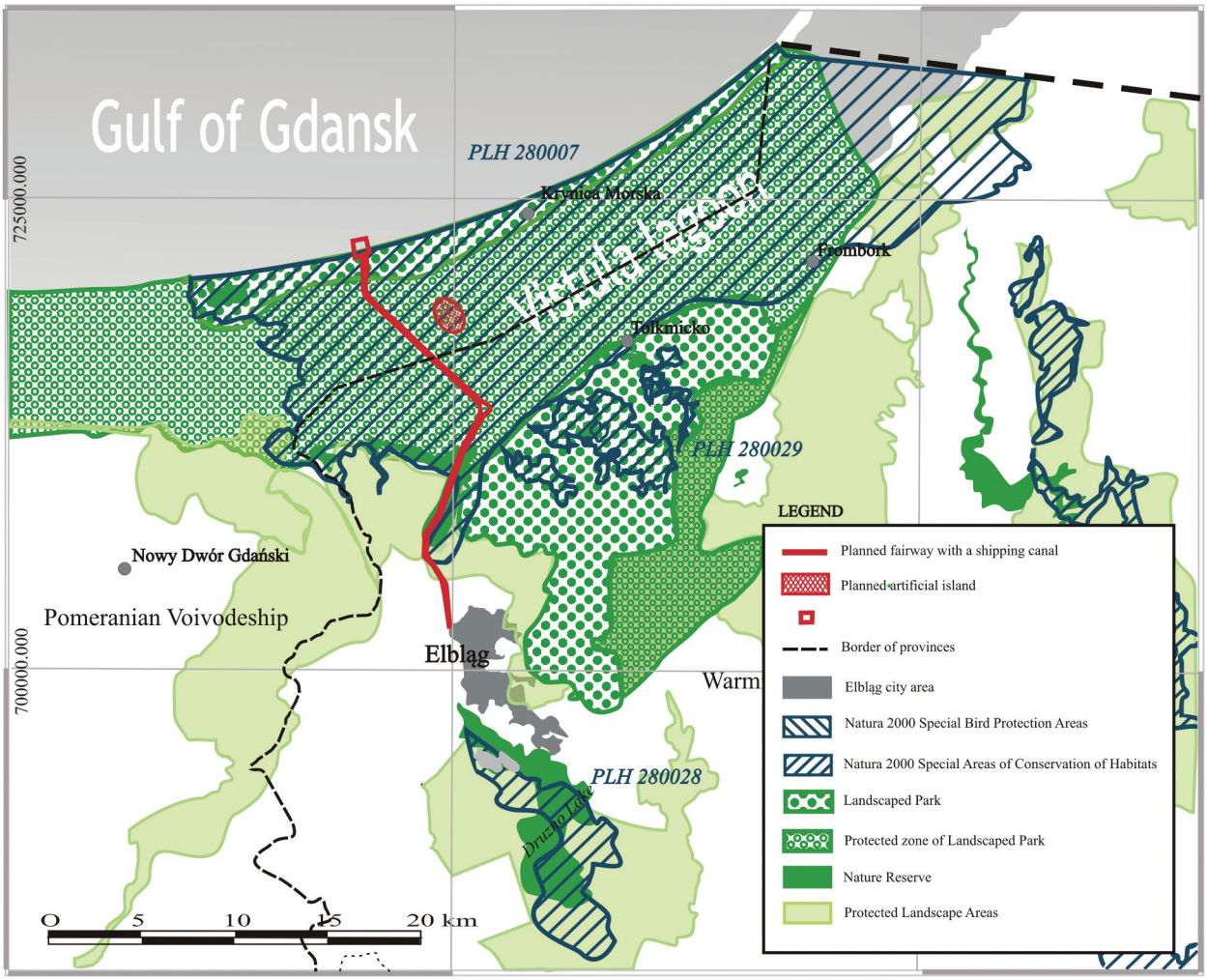

Figure 3. Environmental and landscape factors (author study by Orzechowska-Szajda, based on EKO-KONSULT 2018).

MOST WIEDZY Downloaded from mostwiedzy.pl

Table 1. Assessment of the visual impact/visibility of the construction elements of the project (author study, by Orzechowska-Szajda, Sas-Bojarska).

	Distance from the project from the west [m]					Distance from the project from the east [m]				
	8000	4800	3000	1270	920	750	2000	2900	5600	8000
At a height of 170 cm	1	2	3	3	3	3	3	3	2	1
At a height of 50 cm	1	1	2	3	3	3	3	2	1	1

where.
0 - no visual impact or project/construction elements not visible;
1 - minor visual impact/construction elements clearly visible in their entirety, but without details, the project obscures approx. 10–20% of the view;
2 - moderate visual impact/some construction details visible, the project obscures approx. 21–40% of the view;
3 - major visual impact/all construction elements visible, details clearly visible, the project obscures a major (more than 41%) part of the view

Table 2. Number of potential viewers of the canal within the visual impact range (author study, by Puzdrakiewicz).

Gmina	Holiday lodgings within 8 km	Total holiday lodgings	Percentage of holiday lodgings within 8 km	Total users/ day August	Users in the area/ day August	Total users/ day October	Users in the area/ day October	Total tourists/ day August	Tourists in the area/ day August	Total tourists/ day October	Tourists in the area/ day October
Krynica Morska	38	94	40.4%	48.076	19.423	4.562	1.843	18.582	7.507	1.189	480
Sztutowo	38	98	38.8%	29.681	11.516	8.210	3.185	9.024	3.501	1.030	400
Total				77.757	30.939	12.772	5.028	27.606	11.008	2.219	880

broad, sandy beach in the Gulf of Gdańsk, the length of which is 30 kilometres.

The landscape's resources and qualities are unique and qualities that are unique and unequalled in the country – a fact that led to the establishment of various forms of legal protection (Figure 3).

In addition, natural and semi-natural landscapes, visual unity, the exceptional seaside panoramas, and the beauty of the intact space resulted in the significance of the landscape being high in the opinion of the viewers (Data 2).

3.2. Threats to the landscape

Detailed landscape studies included in the EIA report were conducted on those parts of the environment that were at most risk – the beaches of the Gulf of Gdańsk, which are utilised to the highest degree during the summer season, and provide the perfect and unobscured view of the two breakwaters dividing the sandy beach and extending into the waters of the Gulf ([EKO–KONSULT] EKO-KONSULT Sp z o.o. 2018).

The visualisations and site inspection demonstrate that the breakwaters will constitute a distinctive, technological, horizontal element that will dominate the area, and which will be visible from a distance of approx. 3–5 km from each side of the port, depending on the weather conditions and lighting. The area of significant loss of landscape values is estimated at 6–10 km of the beach strip, i.e. at approx. 1/4 to 1/3 of the entire Polish section of the Vistula Spit (Table 1).

In the landscape impact assessment included in the EIA report ([EKO–KONSULT] EKO-KONSULT Sp z o.o. 2018), it was determined that the new breakwaters, alien in form and visible from a significant distance, will obscure the landscape and completely alter the perception of a large portion of the area. On both sides of the Vistula Spit, significant sections of the landscape will transform from semi-natural to technological. These effects will be permanent, irreversible and unacceptable.

The main qualities of the Vistula Spit – its continuity and picturesqueness – will be permanently fragmented and irreversibly affected. This area will suffer from significant negative effects which cannot be compensated for ([EKO–KONSULT] EKO-KONSULT Sp z o.o. 2018).

3.3. The ratings for potential visual exposure

For the purpose of this article and in order to conduct a holistic assessment of the visual impact, the calculations of the visibility range of the project were expanded to include its ratings for potential visual exposure. Table 2 contains data on the average number of people across several days in the Gminas of Sztutowo and Krynica Morska, as well as in a buffer zone of 8 km from the project. It is estimated that, at the peak of the summer season, when only tourists are considered, the average number of people per kilometre of beach in the area where the visual impact of the project is strongest may reach 688, and when other users are also taken into consideration, e.g. local residents, the number may be as high as 1934 people/km of beach. Taking the above into account, and assuming the Palmer intervals (2016) described in section 2.2., the research demonstrated that the level of visual exposure for the area is high.

MOST WIEDZY Downloaded from mostwiedzy.pl

This proves that the negative assessment of the impact on the landscape and visual aspects included in the EIA report is justified and objective. A large area of the Vistula Spit, extremely attractive for tourists and used by thousands of vacationers every year, will be exposed to significant visual disturbances. This will significantly reduce the quality of recreation for thousands of tourists. Despite these conclusions from the EIA report, they were not taken into account when making the decision to dig through the Vistula Spit.

3.4. Impact on tourism

The aforementioned features, picturesque tourist trails and relatively low development of the area resulted in the Vistula Spit and its surroundings becoming a highly popular place for recreation and sports. Tourists visiting the analysed area consisted in 2.5% of inhabitants of the Pomeranian Voivodeship, in 88.6% of tourists from other regions of Poland, with foreign visitors accounting for 8.9% (Birr et al. 2021) of all visitors.

The main objectives of the efforts in the Vistula Spit and Lagoon area, according to the strategic and planning documents (Data 1), are to preserve the unique landscape while ensuring socio-economic development in the form of the shipping channel (Puzdrakiewicz and Połom 2021). These goals are contradictory. Many of the analysed documents identify the landscape as an important resource, but the related objectives appear too indeterminate to offer a sufficient degree of protection. Many stipulations pertaining to the landscape are combined with environmental protection and preserving the integrity of natural structures. The main indicator of the achievement of landscape protection objectives is the number/area of environmental protection forms. However, despite the fact that legal forms of protecting the analysed area have been established, and that the project contradicts the objectives of several planning and strategic documents, the project was approved by way of a special act (Act of 24 February 2017 on investments in the construction of a waterway connecting the Vistula Lagoon with the Bay of Gdańsk), which in practice offers an easier and more expedient route to completing the project. Therefore, the stipulations, recommendations and concerns included in the planning and strategy documents were of little significance.

Moreover, the project is a source of strong social controversy creating a conflict between the investor (and supporting them authorities) and the residents of Krynica Morska, who are at risk of losing income from tourism, authorities of Gdansk, experts (ecologists, lawyers, economists, associations related to nature and landscape protection), NGOs, fishermen, individual citizens, visitors interested in the local nature, and tourists (Data 2).

Although public consultations on the investment took place in accordance with Polish and EU law, it was done to a minimal extent. The EIA report was made available to the public and over 100 comments, objections and written requests were collected. Despite that, the investor did not take the opportunity to carry out extended consultations open to the public.

No test related to the landscape impact assessment nor to tourism threats with the participation of stakeholders has been performed as part of the EIA procedure, although in this case a large negative influence on the unique landscape has been predicted in EIA report. The loss of the main qualities of the Vistula Spit, may lower the tourist attractiveness of the area, although some claim that the canal and its locks can themselves serve as a tourist attraction, a view that is even expressed in several of the planning documents. Nonetheless, the expert opinion included in the EIA report assessed the impact on tourism as negative and permanent ([EKO–KONSULT] EKO-KONSULT Sp z o.o. 2018). Even though the environmental decision states that the investment aroused great public interest and the opinions are divided, the decision was positive for the implementation of the investment ([RDEP] Regional Directorate for Environmental Protection 2018).

3.5. Mitigation measures pertaining to the landscape

The research demonstrated that there are no measures which could help to avoid, or mitigate the significant negative impact of the canal on the landscape and its visual aspects. Nor is it possible to compensate for the damage to the landscape of the Gulf-side beach strip, or the perception of the landscape.

The effects on the beach as a pedestrian, bicycle, skiing and running route for tourists, which will involve a permanent disruption of its continuity, can be mitigated by creating a pedestrian and bicycle route along the canal, leading from the beach to the lifting bridge. However, as stated in the EIA report, the above-mentioned tourist amenity will not serve as a replacement for the lost visual experiences ([EKO–KONSULT] EKO-KONSULT Sp z o.o. 2018).

3.6. The significance of the landscape impacts and its impact on the decision

The results (Appendix 3) indicate that the negative effects may only apply to the landscape – the sum total of the weights of the identified effects on the landscape was 19, where a result of 17–21 is treated by the methodology as significant. The studies demonstrated that the project, both in the construction and operation stages, will have negative, direct and permanent effects on the Vistula Spit Landscape Park. These

MOST WIEDZY Downloaded from mostwiedzy.pl

will apply to areas of high environmental vulnerability. Significant negative effects cannot be compensated for.

However, this did not prevent the authorities from approving the project, despite the fact that Poland ratified the ELC. This stems primarily from Polish and EU law, which does not rank landscape protection as highly as it does aspects such as plant, animal, and habitat protection. The fact that the analysed area is situated in Natura 2000 area does not protect the landscape itself, but only selected species and habitats. The impact on other parts of the environment was assessed to be insignificant to moderate, or no impact was identified ([EKO–KONSULT] EKO-KONSULT Sp z o.o. 2018). Therefore, the Regional Directorate for Environmental Protection in Olsztyn, responsible for approving the project, had no formal grounds to reject it due to a lack of appropriate laws ([RDEP] Regional Directorate for Environmental Protection 2018).

4 Discussion

The case presented in this article shows several problems of landscape assessments in the EIA in Poland. First, it is politicisation. Of particular significance in this context was country-level politics, as the Vistula Spit Canal has for many years been a flagship project of the ruling party and the current government. Since its inception, the project has been a source of conflicts and debates among politicians, local authorities, experts and non-governmental organisations concerning its purpose, economic viability and environmental impacts (Data 2).

A similar problem in the context of Spanish EIAs was also identified by Enríquez-de-Salamanca (2021) – projects where impact on the environment was significant, economic viability was low and public utility was dubious at best have been assessed very positively in EIA reports in the past. Moreover, he believes that, should a government department decide that a project is necessary, an EIA agency can be forced to approve it and certify that it is sustainable.

Many researchers share a critical view of the actual role of EIAs in development processes. EIAs incorporate environmental aspects into the decision-making process but can be ineffective at rejecting projects where justification is weak, impact is significant, and public utility is minor, especially if such projects have political support. Enríquez-de-Salamanca (2021) states that, although EIAs are political in nature, their politicisation as a part of the decision-making process must be limited to prevent them from becoming nothing more than an 'environmental front' for development. Kolhoff et al. (2013) note that laws pertaining to EIAs are shaped by environmental authorities, who support them, and by other sector authorities, who hinder their implementation; the same can at times be extrapolated to the EIA process itself. Bond et al. (2020) claim that EIAs support neoliberal programmes, facilitating economic development; EIAs can only render decision-making more responsible if strategies are implemented to depoliticise them.

Secondly, Poland lacks adequate legal protection of the landscape and clearly defined objectives of its protection, and the importance of landscape in relation to other elements of the environment is low. The fact that no significant impact on other elements of the environment were identified was a predominant reason for the approval of the project, despite the fact that the affected landscape is a part of the environment. However, this was not taken into consideration when issuing the decision and public interest was cited instead – an explanation that was questioned by many opponents of the canal. In the case analysed, the EIA procedure was used to demonstrate that, since the environmental impacts (apart from landscape impacts) would be insignificant, this should not prevent the project from commencing. This decision demonstrated that the landscape is a insignificant concern during construction processes in Poland. Forms of protection, such as Natura 2000 areas, occupy a high rank in environmental protection, but they do not protect the landscape as such, which automatically puts landscape values in the background. Research conducted by Mészáros and Antonson (2020) demonstrates that in the two motorway construction cases they analysed, the main hindrance to protect landscape and cultural values was a lack of clear environmental protection goals. Similar to the case presented in this article, they demonstrated that the most important objectives in the EIA were traditional transport objectives, including increased accessibility (Antonson 2009), while those environmental objectives that pertained to the landscape and Natura 2000 areas were viewed as significantly less important. As a result, road planning was prioritised over landscape planning. Löfgren et al. (2018) also identified conflicts of objectives at the regional administrative level between the objectives of transport infrastructure and environmental objectives – they draw attention to the exclusion of various landscape-related issues from strategic environmental assessment reports which assess the results of such changes.

Thirdly, the methodologies used in the EIA landscape assessments have their shortcomings. The low priority of the landscape may come from the difficulty of defining aesthetic values and their measurability, and as a result translates to only general recommendations on landscape protection being included in planning documents, most frequently without any detailed

MOST WIEDZY Downloaded from mostwiedzy.pl

stipulations or definitions of specific areas or methods of their implementation. The fact that the law lacks proper landscape protection instruments may be related to the nature of landscape assessment, which is partially based on factors that are difficult to measure. Visual Impact Assessment (VIA) is a key aspect of EIA (Mouflis et al. 2008; Falconer et al. 2013). Unfortunately, in Poland there are no guidelines implemented in EIA procedures regarding the use of VIA, and this results in the use of subjective analysis techniques that are difficult to interpret and apply by decision-makers (Mouflis et al. 2008; Depellegrin 2016). Therefore, we have estimated the ratings for potential visual exposure. Another problem is decision-makers' lack of awareness and knowledge of the value of the landscape. An opportunity in this aspect may be the landscape audit ([ASP] Act on Spatial Planning 2003), which is starting to be used in Poland. This document, drawn up for the area of the voivodship, identifies, characterises and valorises landscapes, indicating the priority ones, which is the first step in a reliable assessment of the impact of investments on the landscape in the procedures used around the world (e.g.: Ross 1979; Palmer 2016). Poland should learn from international experiences in this field.

This article presents only one, but very unique case study. It is difficult to find another example of such a large interference in the coastal landscape, which, as scientific research shows (Ogawa 2007; Depellegrin 2016), is a rare landscape, with great values, large view ranges, and taking into account the tourist use – is also a subject to a large view exposure. The presented case study clearly shows how poorly the beauty of the landscape is treated in Poland in investment processes, especially those of a political nature.

5. Conclusions and recommendations

The examined EIA report demonstrates that the environmental effects, caused by the canal, are moderate or insignificant, and therefore acceptable, as they do not affect fundamental natural qualities or values. However, the landscape effects were assessed as irreversible, and affecting fundamental landscape qualities. This statement, contained in the EIA report, was reinforced by additional studies in the form of the ratings for potential visual exposure. The study demonstrated that the possibility of mitigating the impacts on other parts of the environment does not go hand in hand with the possibility of mitigating the impact on the landscape, as no such possibility exists. Unfortunately, this did not stop the implementation of the planned investment.

The decision to dredge the Vistula Spit demonstrates that effects on the landscape come second to spatial development, particularly in Poland, where the law does not offer sufficient protection to the landscape.

Thus, all possible measures should be employed to emphasise the importance of the landscape in spatial management and in decision-making. It is necessary to not only enact relevant laws (at national and regional level), but also to develop standards for landscape assessment in the EIA (by education, training, workshops, developing and adopting the methods that will be repeatable, based on objective parameters), use landscape audit, which is a new instrument in Poland and not yet well used, and train decision-making authorities. But most importantly is to devise effective protection strategies (from country to local levels) and offer wide-ranging education on the role of the landscape in society. The role of landscape in space management should be strengthened and activities that destroy the landscape should be limited, mainly by educating decision-making officials, local government and government authorities – so that they are not subject to investor pressure.

In this sense the paper describes a poor practice in relation to the landscape, which might be of interest to the international community, and may offer additional value for practitioners. Further research and scientific discussion may help to overcome this problem.

Disclosure statement

No potential conflict of interest was reported by the author(s).

ORCID

Aleksandra Sas-Bojarska http://orcid.org/0000-0001-6558-5888
Iwona Orzechowska-Szajda http://orcid.org/0000-0001-9291-4210
Krystian Puzdrakiewicz http://orcid.org/0000-0003-2681-9092

Explanation

M. Kiejzik-Głowińska is the main author, A. Sas-Bojarska and K. Puzdrakiewicz are co-authors of the EIA report on the environmental impact of the construction of a waterway connecting the Vistula Lagoon with the Gulf of Gdańsk.

References

Alberts RC, Retief FP, Cilliers DP, Roos C, Hauptfleisch M. 2021. Environmental impact assessment (EIA) effectiveness in protected area. Impact Assess Proj Apprais. 39(4):290–303. doi:10.1080/14615517.2021.1904377.
Antonson H. 2009. Landscapes with history: addressing shortcomings in Swedish EIAs. Land Use Policy. 26 (3):704–714. doi:10.1016/j.landusepol.2008.09.005

MOST WIEDZY Downloaded from mostwiedzy.pl

Antonson H. 2011. The treatment of landscape in a Swedish EIA process. Environ Impact Assess Rev. 31(3):195–205. doi:10.1016/j.eiar.2010.12.006.

Antonson H, Åkerskog A. 2015. This is what we did last time. Uncertainty over landscape analysis and its procurement in the Swedish road planning process. Land Use Policy. 42:48–57. doi: 10.1016/j.landusepol.2014.07.001.

[ASP] Act on Spatial Planning 2003. Dz.U. 2003 27 March 2003 On Planning An Spatial. Original Language Title: USTAWA z dnia 27 marca 2003 r. o planowaniu i zagospodarowaniu przestrzennym. Dz.U. 2003 nr 80, 717. https://www.global-regulation.com/translation/poland/2986009/act-of-27-march-2003-on-planning-and-spatial.html# .

Berg BL. 2007. Qualitative research methods for the social sciences. Boston: Pearson.

Birr K, Budziszewski T, Hrynkiewicz M, Przeworska J, Turzyński M 2021. Analysis of the activity and population potential of the Pomeranian Voivodeship, the metropolitan area and the Tri-city based on the behavior of users of mobile telephony networks in 2019. Gdańsk – Gdynia. Polish [accessed10.07.2022]. https://pbpr.pomorskie.pl/wp-content/uploads/MENU/Biblioteka-opracowan/OSADNICTWO/Analiza-aktywnosci-potencjaluludnosciowego/Analiza_aktywnosci_i_potencjalu_ludnosciowego_wojewodztwa_pomorskiego_2021.pdf

Bond A, Pope J, Fundingsland M, Morrison-Saunders A, Retief F, Hauptfleisch M. 2020. Explaining the political nature of environmental impact assessment (EIA): a neo-Gramscian perspective. J Clean Prod. 244:118694. doi: 10.1016/j.jclepro.2019.118694.

[CE] Council of Europe. 2000 . Council of Europe landscape Convention (ETS No. 176). Florence. https://rm.coe.int/16807b6bc7.

De Montis A. 2014. Impacts of the European landscape Convention on national planning systems: a comparative investigation of six case studies. Landsc Urban Plan. 124:53–65. doi: 10.1016/j.landurbplan.2014.01.005.

Depellegrin D. 2016. Assessing cumulative visual impacts in coastal areas of the Baltic Sea. Ocean Coast Manag. 119:184–198. doi: 10.1016/j.ocecoaman.2015.10.012.

[EKO–KONSULT] EKO-KONSULT Sp. z o.o. 2018. The construction of a waterway connecting the Vistula Lagoon with the Gulf of Gdańsk. Report on the environmental impact of the project. Olsztyn: Regional Directorate for Environmental Protection. Polish

Enríquez-de-Salamanca A. 2021. Project justification and EIA: anything goes? Environ Impact Assess Rev. 87:106540. doi: 10.1016/j.eiar.2020.106540.

Falconer L, Hunter D-C, Telfer TC, Ross LG. 2013. Visual, seascape and landscape analysis to support coastal aquaculture site selection. Land Use Policy. 34:1–10. doi:10.1016/j.landusepol.2013.02.002

Getty R, Morrison-Saunders A. 2020. Evaluating the effectiveness of integrating the environmental impact assessment and mine closure planning processes. Environ Impact Assess Rev. 82:106366. doi:10.1016/j.eiar.2020.106366

Guerrini A, Burnette DR, Dugan JE. 2018. Invisible landscapes: perception, heritage, and coastal change in Southern California. In: Price L Narchi N, editors. Coastal heritage and cultural resilience. Ethnobiology. Cham: Springer. doi:10.1007/978-3-319-99025-5_2.

Hanusch M, Fischer TB. 2011. SEA and landscape planning. In: Sadler B, Aschemann R, Dusik J, Fischer T, Partidário M, and Verheem R, editors. Handbook of SEA. Earthscan, London: Earthscan. pp. 257–173.

Ioannidis R, Mamassis N, Efstratiadis A, Koutsoyiannis D. 2022. Reversing visibility analysis: towards an accelerated a priori assessment of landscape impacts of renewable energy projects. Renewable Sustainable Energy Rev. 161:112389. doi: 10.1016/j.rser.2022.112389.

Kolhoff AJ, Driessen PPJ, Runhaar HAC. 2013. Ananalys is framework for characterizing and explaining development of EIA legislation in developing countries - illustrated for Georgia Ghana and Yemen. Environ Impact Assess Rev. 38:1–15. doi: 10.1016/j.eiar.2012.04.004.

Löfgren S, Nilsson KL, Johansson Ch M. 2018. Considering landscape in strategic transport planning. Transp Res D Transp Environ. 65:396–408. doi: 10.1016/j.trd.2018.09.001.

Mészáros S, Antonson H. 2020. Struggling, settling, solutions: a qualitative study of landscape protection in motorway planning. Transp Res D Transp Environ. 82:102321. doi: 10.1016/j.trd.2020.102321.

Mikusiński G, Blicharska M, Antonson H, Henningsson M, Göransson G, Angelstam P, Seiler A. 2013. Integrating ecological, social and cultural dimensions in the implementation of the landscape Convention. Lands Res. 38 (3):384–393. doi:10.1080/01426397.2011.650629.

Mouflis GD, Gitas IZ, Iliadou S, Mitri GH. 2008. Assessment of the visual impact of marble quarry expansion (1984–2000) on the landscape of Thasos island, NE Greece. Landsc Urban Plan. 86:92–102. doi: 10.1016/j.landurbplan.2007.12.009.

Niță A, Buttler A, Rozylowicz L, Pătru-Stupariu H. 2015. Perception and use of landscape concepts in the procedure of environmental impact assessment: case study —Switzerland and Romania. Land Use Policy. 44:145–152. doi: 10.1016/j.landusepol.2014.12.006.

Ogawa TY 2007. Visual impact assessment of coastal development: creating a management methodology. Proceedings of Coastal Zone. 7:1–5. http://nsgl.gso.uri.edu/tcs/tcsc06001/pdffiles/papers/76908.pdf

Palmer JF. 2016. A landscape assessment framework for visual impact assessment in the USA. Research Gate. doi: 10.14627/537612002.

Palmer JF. 2019. The contribution of key observation point evaluation to a scientifically rigorous approach to visual impact assessment. Landsc Urban Plan. 183:1–110. doi: 10.1016/j.landurbplan.2018.11.001.

Palmer JF. 2022. Deconstructing viewshed analysis makes it possible to construct a useful visual impact map for wind projects. Landsc Urban Plan. 225:104423. doi: 10.1016/j.landurbplan.2022.104423.

Pavlickova K, Vyskupova M. 2015. A method proposal for cumulative environmental impact assessment based on the landscape vulnerability evaluation. Environ Impact Assess Rev. 50:74–84. doi: 10.1016/j.eiar.2014.08.011.

Pereira SR, Fernández J, Herrera J, Olea J. 2021. Assessment of landscape transformation in protected areas. Environ Impact Assess Rev. 86:106472. doi: 10.1016/j.eiar.2020.106472.

Puzdrakiewicz K, Połom M. 2021. Development prospects of tourist passenger shipping in the Polish part of the Vistula Lagoon. Sustainability. 13(10):5343. doi:10.3390/su13105343.

[RDEP] Regional Directorate for Environmental Protection. 2018 . Decision on environmental conditions WOOŚ.4211.1.2017.AZ.67. https://www.umgdy.gov.pl/wp-content/uploads/2019/08/ZP_zalacznik_10_decyzja.pdf.

MOST WIEDZY Downloaded from mostwiedzy.pl

Retief FP, Fischer TB, Alberts RC, Roos C, Cilliers DP. 2020. An administrative justice perspective on improving EIA effectiveness. Impact Assess Proj Apprais. 38(2):151–155. doi:10.1080/14615517.2019.1680042.

Santé I, Tubío JM, Miranda D. 2020. Public participation in defining landscape planning scenarios and landscape quality objectives (LQO): landscape guidelines for Galicia (NW Spain) case study. Land Use Policy. 94:104559. doi:10.1016/j.landusepol.2020.104559

Soria-Lara JA, Batista L, Le Pira M, Arranz-López A, Arce-Ruiz RM, Inturri G, Pinho P. 2020. Revealing EIA process-related barriers in transport projects: the cases of Italy, Portugal, and Spain. Environ Impact Assess Rev. 83:106402. doi:10.1016/j.eiar.2020.106402

MOST WIEDZY Downloaded from mostwiedzy.pl

APPENDIX

Appendix 1a

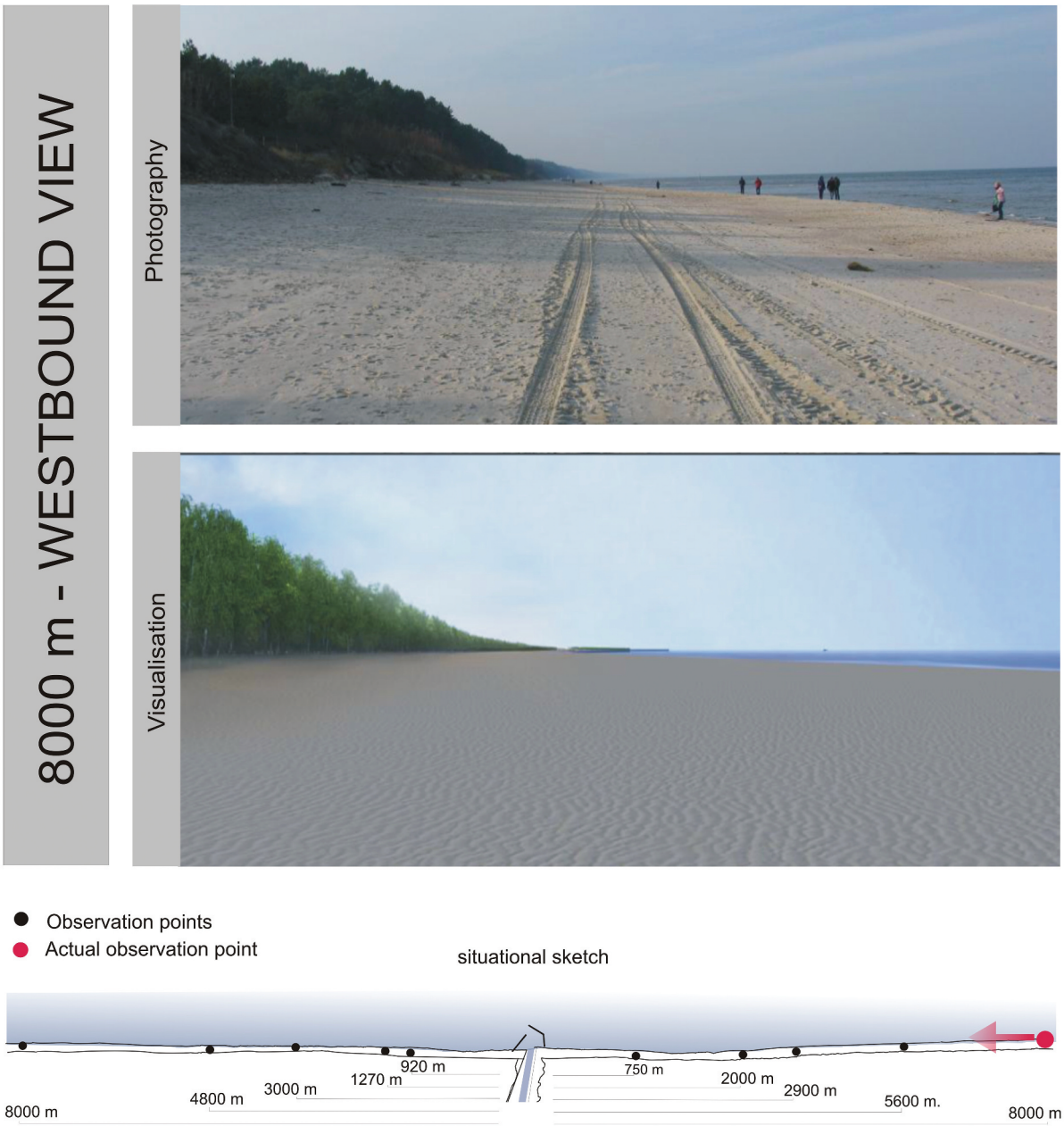

Figure A1. Computer visualizations of planned breakwaters - most visible element of project - westbound view, 8000 m. (The photos were taken by A. Sas-Bojarska as part of the (EKO-KONSULT 2018) report concerning the landscape. computer visualizations were made by M. Mielewczyk as part of his work the EIA report, the situational sketch was made by I. Orzechowska-Szajda. Descriptions and interpretation - A. Sas-Bojarska.

MOST WIEDZY Downloaded from mostwiedzy.pl

Appendix 1b

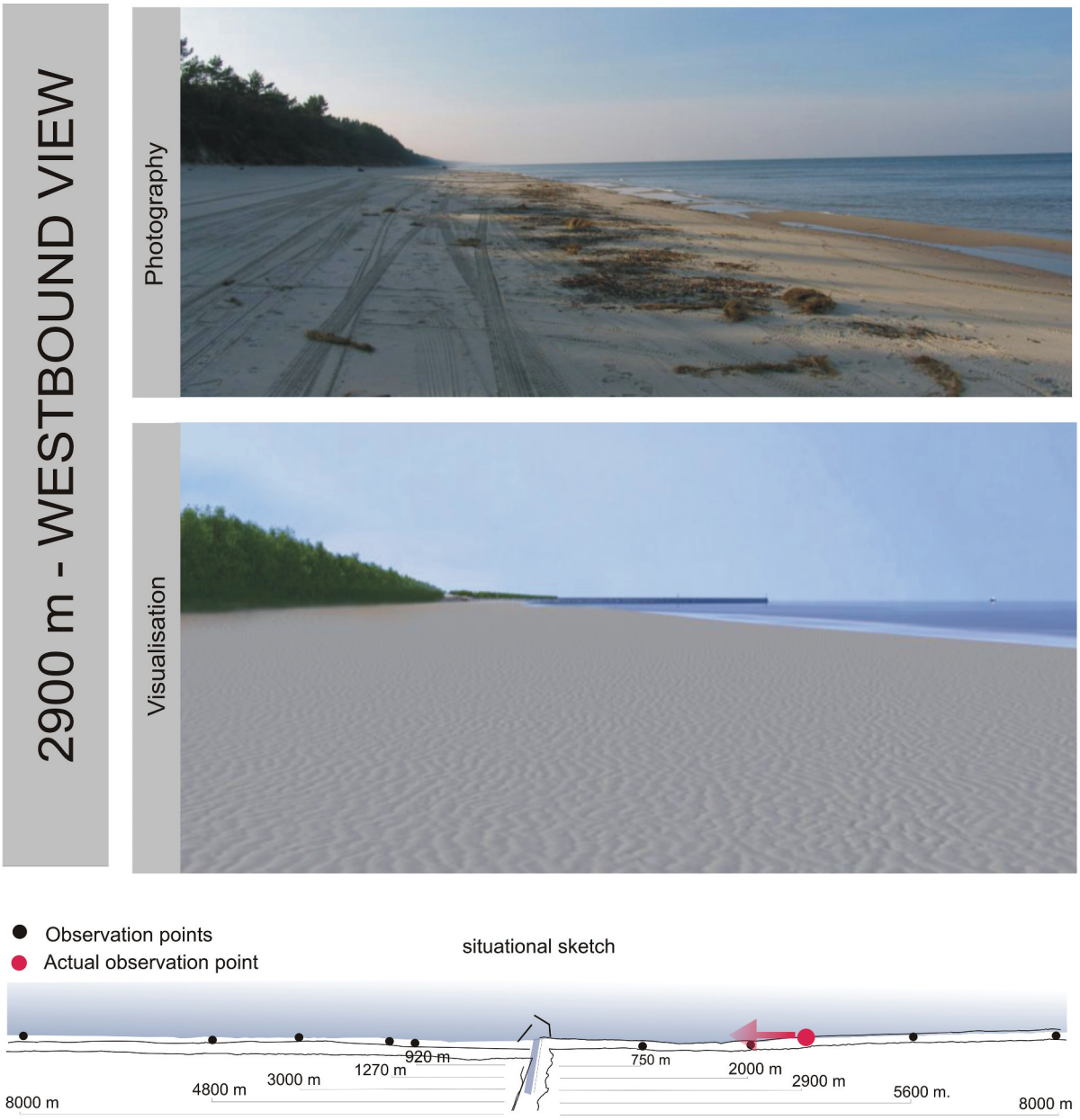

Photo and visualisation from the perspective of the beach in Przebrno, facing west, 2,900 m from the canal, from a height of 1.7 m. The breakwater is visible as a distinct, straight line. Its form is contrasting with the current landscape. It forms a distinctive, technological landscape boundary along a significant portion of the horizon, affecting the most important, currently intact western view.

Figure b1. Computer visualization of planned breakwaters - most visible element of project - westbound view, 2900 m. (The photos were taken by A. Sas-Bojarska as part of the (EKO-KONSULT, 2018) report concerning the landscape. computer visualizations were made by M. Mielewczyk as part of his work the EIA report, the situational sketch was made by I. Orzechowska-Szajda. Descriptions and interpretation - A. Sas-Bojarska.

MOST WIEDZY Downloaded from mostwiedzy.pl

Appendix 1c

Photo and visualisation from the perspective of the beach near Przebrno, facing west, 2,000 m from the canal, from a height of 1.7 m. The breakwater is visible as a distinct, straight line, whose form is alien to the surrounding landscape. It forms a distinctive, technological landscape boundary along a significant portion of the horizon, affecting the most important, currently intact western view.

Figure c1. Computer visualizations of planned breakwaters - most visible element of project - westbound view, 2000 m. (The photos were taken by A. Sas-Bojarska as part of the (EKO-KONSULT 2018) report concerning the landscape. computer visualizations were made by M. Mielewczyk as part of his work the EIA report, the situational sketch was made by I. Orzechowska-Szajda. Descriptions and interpretation - A. Sas-Bojarska.

MOST WIEDZY Downloaded from mostwiedzy.pl

Appendix 1d

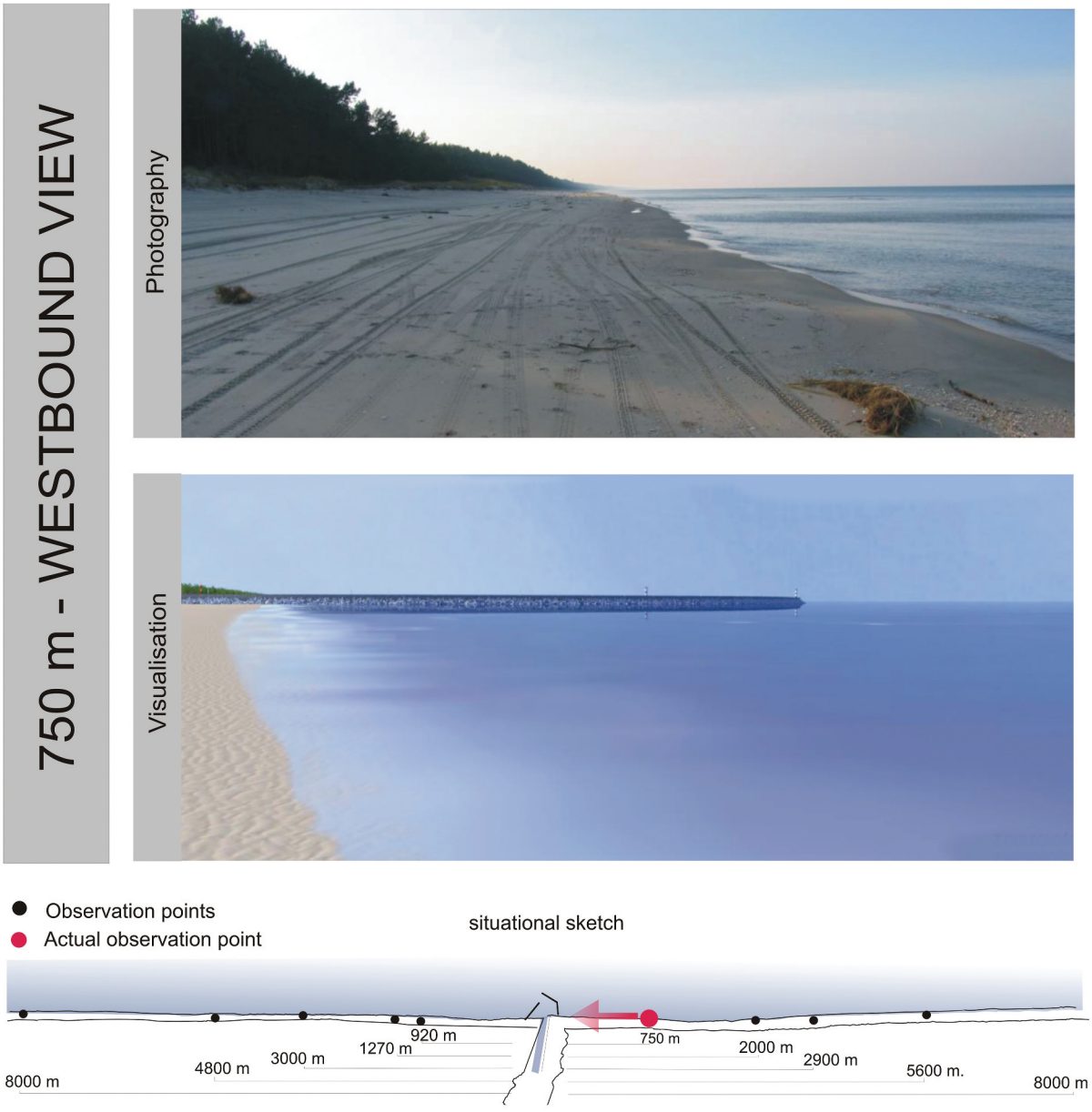

Photo and visualisation from the perspective of the beach in Nowy Świat, facing west, 750 m from the canal, from a height of 1.7 m. The breakwater appears as a very distinct, flat engineering structure with a simple outside appearance, whose form is alien to the surrounding landscape, and which draws a sharp, technological landscape boundary along a large section of the horizon, reaching deep into the sea, affecting the most important, currently intact western view.

Figure d1. Computer visualizations of planned breakwaters - most visible element of project - westbound view, 750 m. (The photos were taken by A. Sas-Bojarska as part of the (EKO-KONSULT 2018) report concerning the landscape, computer visualizations were made by M. Mielewczyk as part of his work the EIA report, the situational sketch was made by I. Orzechowska-Szajda. Descriptions and interpretation - A. Sas-Bojarska.

MOST WIEDZY Downloaded from mostwiedzy.pl

Appendix 2. Method used in the EIA report to assess the significance of the impact on specific parts of the environment (EKO-KONSULT 2018.)

Type of impact and its significance	
Neutral/Negative	(0)/(1)
Direct/Indirect	(3)/(1)
Synergistic/Secondary/Simple	(3)/(2)/(1)
Long-term/Medium-term/Short-term	(3)/(2)/(1)
Permanent/Renewable/Reversible	(3)/(2)/(1)
Area of effect	
Regional/Supraregional/Local	(3)/(2)/(1)
Environment vulnerability	
High/Moderate/Low	(5)/(3)/(1)

MOST WIEDZY Downloaded from mostwiedzy.pl

Appendix 3. Assessment of the significance of selected environmental effects with the highest impact on the landscape (EKO-KONSULT 2018.)

Part of the environment	Construction stage – Type of impact								Operation stage – Type of impact							
	Neutral / negative	Direct / indirect	Synergistic / secondary / simple	Lasting /medium-term / short-term	Permanent / renewable / reversible	Regional, supra-local, local impact	Environment vulnerability low / medium / high	Total	Neutral / negative	Direct / indirect	Synergistic / secondary / simple	Lasting / medium-term / short-term	Permanent / renewable / reversible	Regional, supra-local, local impact	Environment vulnerability low / medium / high	Total
Impact on the coastline of the Gulf of Gdańsk	1	3	1	1	3	1	1	11	1	1	1	1	1	1	1	7
Impact on the coastline of the Vistula Lagoon	1	3	1	1	2	2	3	13	1	1	2	3	2	2	3	14
Impact on the groundwater of the Vistula Spit	1	3	1	1	2	1	3	12	1	1	1	3	2	1	1	10
Impact on the waters of the Vistula Lagoon	1	3	3	1	1	2	5	16	1	3	2	2	1	2	5	16
Impact on Natura 2000 habitats (*1150-1) and the vegetation	1	3	1	3	3	1	3	16	1	1	2	2	2	1	3	12
Impact on fish protected under Natura 2000	1	3	2	3	3	1	3	16								
Impact on the ornithofauna – nesting species – Vistula Lagoon	1	3	1	3	3	1	1	13	1	3	1	3	2	1	1	12
Impact on the ornithofauna – migrations – Vistula Spit, Gulf of Gdańsk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Impact on the ornithofauna – wintering – Gulf of Gdańsk	1	3	1	3	3	1	1	13	1	3	1	3	1	1	1	11
Impact on the ornithofauna – migrating accipitriformes – Vistula Spit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Impact on nesting bird species protected as part of Natura 2000 area PLB280010	1	3	2	3	3	1	1	14	1	1	2	2	2	1	1	10
Impact on non-nesting bird species protected as part of Natura 2000 area PLB280010	1	3	2	3	3	1	3	16	1	3	2	3	3	1	3	16
Impact on the ichthyofauna	1	3	3	2	2	2	3	16	1	1	2	2	1	1	3	11
Impact on marine mammals	1	1	1	1	1	1	1	7	1	1	1	2	1	1	1	8
Impact on terrestrial mammals	1	3	1	1	1	1	1	9	1	3	1	3	1	1	1	11
Impact on bats	1	3	2	1	2	1	3	13	1	3	1	2	2	1	1	11
Impact on the macrozoobenthos	1	3	1	2	1	1	3	12	1	1	1	2	1	1	1	8
Impact on biodiversity and migration corridors	1	3	2	1	2	1	3	13	1	3	2	3	3	1	3	16
Impact on historic buildings	1	3	1	3	3	1	3	1	1	1	1	1	1	1	3	9 P
Impact on the landscape	1	3	1	3	3	3	5	19	1	3	1	3	3	3	5	19

Where:
0 – no impact P – positive impact

Maximum impact areas:
Vistula Spit Gulf of Gdańsk Vistula Lagoon

MOST WIEDZY Downloaded from mostwiedzy.pl

Data 1. Strategic and planning documents related to the Vistula Spit and Lagoon area (author study, by Puzdrakiewicz)

Original document name	Document name in English	Year	Conclusions	Context
Koncepcja Przestrzennego Zagospodarowania Kraju 2030	The 2030 National Spatial Management Concept	2011	Goal 2.2.3, 'The spatial and functional integration of rural areas', states that the harmonious development of rural areas requires sufficient protection measures and the utilisation of their natural, landscape and cultural potential for development purposes, improving the quality and accessibility of public services, and providing the conditions required for the development of economic activity, which will facilitate the emergence of sources of income other than agriculture. This will lead to an increase in the attractiveness of rural areas as places to live, spend leisure time and work. [95]	socio-economic development
			As part of the coherent national ecological network, goal 4, 'The shaping of spatial structures facilitating the achievement and maintenance of Poland's high-quality natural environment and landscape qualities', involves the establishment of the Polish-Russian Vistula Spit and Vistula Lagoon park, which will serve as a protected cross-border area, though one without set boundaries, a specified level of protection or functional-spatial programme.	organisational/ administrative
			Poland's spatial management policy must increase the degree to which it focuses on combatting habitat fragmentation and creating solutions which enable the achievement of the best possible spatial ecological connections to facilitate migrations and provide protected species with the conditions they need to survive. The preservation of Poland's enormous environmental potential requires long-term actions aimed at mitigating and resolving conflicts between the goals of technological environmental protection and landscape protection on the one hand, and the pressure exerted by the development of settlements, transport and tourism on the other, by way of managing planned functional and landscape structures.	environmental
			Integrating actions pertaining to the operation of a coherent national ecological network as the foundation for protecting the most valuable natural and landscape resources.	organisational/ administrative
			Planned action 4.3, 'The implementation of landscape management in accordance with the stipulations of the European Landscape Convention'.	organisational/ administrative
			Due to the fact that landscape perception involves assessing its visual aspects, a requirement will be implemented to conduct a landscape study in preparation for construction projects planned in locations subject to the landscape protection of areas or landmarks, and methodological guidelines will be developed for the purpose of increasing the quality of such environmental impact assessments.	organisational/ administrative
Strategia rozwoju kraju 2020. Aktywne społeczeństwo, konkurencyjna gospodarka, sprawne państwo	The 2020 Strategy of National Development. Active society, competitive economy, effective state	2012	Actions to be implemented include those aimed at preventing environmental fragmentation and preserving the continuity of and protecting ecological corridors. These actions will take place alongside the integration of active cultural and environmental landscape protection measures as drivers of development potential.	environmental
Długookresowa Strategia Rozwoju Kraju. Polska 2030. Trzecia Fala Nowoczesności	Long-term Strategy of National Development. Poland 2030. Third Wave of Modernity	2013	Poland will be a country that preserves its biodiversity and unique landscape. This is made possible thanks to more effective identification and assessment of Poland's natural environment qualities, as well as an increase in the ecological awareness of the Polish people.	landscape

(*Continued*)

MOST WIEDZY Downloaded from mostwiedzy.pl

(Continued).

			As part of Goal 7, 'Ensuring energy security and protecting and improving the state of the environment', the scope of the intervention 'Increasing the level of environmental protection via the introduction of biodiversity monitoring and protection and counteracting ecosystem fragmentation' has been planned.	environmental
Strategia Na Rzecz Odpowiedzialnego Rozwoju do roku 2020 (z perspektywą do 2030r.)	The 2020 Strategy for Responsible Development (with an outlook to the year 2030)	2017	The construction of a waterway connecting the Vistula Lagoon with the Gulf of Gdańsk, which grants access to the Port of Elbląg via the Vistula Spit Canal, is classified as a strategic project.	transport
			As part of Goal 3, 'Managing environmental legacy resources', actions to be carried out by 2020 are defined, which include 'Objectively assessing and verifying protected areas and their assets for the purpose of increasing the effectiveness of the protection of spaces which are of particular natural and landscape value; Identifying and protecting the most valuable (priority) landscapes in Poland', and the long-term action 'Implementing the European Landscape Convention'.	organisational/ administrative
			The 'Landscape audits' strategic project, the purpose of which is to use uniform methods to identify and assess landscape resources, and for voivodeship authorities to develop recommendations and draw conclusions facilitating the management of landscapes and various forms of environmental protection, strategic planning, spatial planning and management, as well as an environmental impact assessment system, including impact on the landscape and quality of life (carried out for projects which significantly affect the environment), and to create strategic documents. The uniform methodology will be specified in a future regulation of the Council of Ministers. The audits will lead to the identification of priority landscapes, i.e. those with the highest value to society, and the preservation of Poland's natural and cultural heritage.	organisational/ administrative
			The summary of the strategic environmental impact assessment of the project 'Responsible Development Strategy' lists threats arising from the cumulative impacts on certain elements of the natural environment, including biodiversity, water, land surface and the landscape – related to construction projects, including in relation to the restoration (or construction – as in the case of the Vistula Spit Canal) of inland waterways of higher international classes, and the increase in the prominence of inland water transport.	landscape
Polityka ekologiczna państwa 2030	The 2030 National Environmental Policy	2019	As part of specific objective II: 'Environment and the economy. The sustainable management of natural resources', the direction for the intervention 'Managing natural and cultural heritage resources, including the protection and improvement of biodiversity and the diversity of landscapes' is planned.	landscape
Strategia zrównoważonego rozwoju wsi, rolnictwa i rybactwa na lata 2012–2020	Sustainable rural area, agriculture and fishing development strategy for the years 2012–2020	2012	According to the project description, 'In 2020, rural areas will be viewed as attractive places to work, live and rest, as well as for agriculture and other business activities, which will complement economic development. These areas will provide public and market goods, while preserving their unique natural, landscape and cultural assets for future generations'.	landscape
			As part of priority 5.2, 'Shaping rural spaces while accounting for landscape protection and spatial order', the direction for intervention 5.2.1, 'Preserving unique agricultural landscape forms', is planned.	landscape

(*Continued*)

MOST WIEDZY Downloaded from mostwiedzy.pl

(Continued).

Strategia Rozwoju Kapitału Społecznego 2020	2020 Strategy of Social Capital Development	2013	As part of specific objective 4, 'The development and effective utilisation of cultural and creative potential', the priority for Strategy 4.1, 'Increasing the importance of culture in building social cohesion', was planned, in addition to a direction for Action 4.1.2, 'The protection of cultural and natural heritage and the landscape'.	landscape
Plan zagospodarowania przestrzennego województwa pomorskiego 2030	The 2030 Pomeranian Voivodeship spatial management plan	2016	The document recommends preserving the natural state of the intact sections of the coastline, as prescribed by the Helsinki Convention. The Vistula Spit is an ecological corridor which will be bisected by the construction of the canal. This will affect the ability of certain species to travel, which contradicts objective 3 of the document 'Preservation and restoration of natural environment assets', as well as its direction 3.2, 'Maintaining and restoring biodiversity and environmental cohesion'.	environmental
Regionalny Program Strategicznyw zakresie bezpieczeństwaśrodowiskowego i energetycznego	Regional Strategic Programmefor environmental and energysecurity	2021	The programme will involve efforts aimed at protecting biodiversity and the environmental and landscape qualities of the Pomeranian Voivodeship, as well as maintaining and improving the state and properties of various elements of the environment. Of key importance in this context is supporting efforts to ensure the cohesion of the ecological structure of the voivodeship and the ecological systems at the interregional and international levels – including via supporting analytical and planning efforts aimed at protecting zones which are part of landscape parks and protected landscape areas, analysing and improving environmental protection measures at various levels, as well as participating in international expert meetings and study visits. In addition, due to the nature of the region, projects directly related to protecting the ecosystems of the Baltic Sea coast will be supported.	organisational/ administrative
			Action 1.2.3., 'Protecting environmental and landscape qualities, in particular in areas subject to environmental protection, and preventing natural space fragmentation'.	landscape
			The plan involves the optimisation of the network of protected landscape areas in the Pomeranian Voivodeship. The goal of the project is to verify our current knowledge of the diversity of the ecosystems and the degree of spatial development, the preservation of environmental and landscape assets, satisfying the needs of the tourism and recreation sector, as well as the possibility of protected landscape areas serving as ecological corridors.	organisational/ administrative
Program Ochrony Środowiska województwa pomorskiego na lata 2013–2016 z perspektywą do roku 2020	Pomeranian Voivodeship's Environmental Protection Programme for 2013–2016, with an outlook to the year 2020	2012	The document identifies the possibility of the residents of Krynica Morska being unable to access the environment as a result of the dredging of the Vistula Spit Canal. At the same time, the voivodeship's participation in the project requires that documentation be drawn up, which provides a comprehensive and reliable overview of the project's impact on the environment.	organisational/ administrative
			The project is in violation of medium-term goal 7, 'Landscape and biodiversity protection, stopping degradation processes and improving the cohesion of the system of protected areas', whose areas of focus include such issues as preventing habitat fragmentation and ensuring the ecological continuity of landscapes. The Vistula Spit Canal will constitute a barrier dividing the spit, which will conflict with the achievement of the above environmental protection goal.	environmental

(*Continued*)

MOST WIEDZY Downloaded from mostwiedzy.pl

(Continued).

			Objective 8, 'Adapting forest ecosystems to climate changes and habitat conditions; restoring and preserving ecological qualities to agricultural areas', pertains to restricting the amounts of forest areas being allocated for non-forestry purposes and the logging of entire areas of ancient trees in protected forests. The planned service and protective strips of the canal are located in a forested area, which also features surface-level forms of environmental protection, which may indicate that the construction of the canal stands in opposition to the aforementioned objective.	environmental
Strategia Rozwoju Województwa Pomorskiego 2020	The 2020 Development Strategy of Pomeranian Voivodeship	2012	Operational objective 3.3, 'Good state of the environment', involves preserving the environment and increasing ecological cohesion.	environmental
Strategia Rozwoju Województwa Pomorskiego 2030	The 2030 Development Strategy of the Pomeranian Voivodeship	2021	The diagnostic part identifies the state of the landscape in various areas of the voivodeship to be poor. This gives rise to new challenges and encourages the implementation of wide-ranging ecological education and a policy aimed at mitigating the effects of anthropopressure and developing a comprehensive approach to environmental and landscape protection, including in particular those protected areas which are of key importance from the perspective of ecosystem services and tourism development.	landscape
			The development plan views unique environmental and landscape qualities as the foundations of long-term development.	landscape
			Among the main priority principles was the 'Principle of rational space management', which involves shaping the spatial order while respecting and effectively utilising spatial resources, including halting chaotic urbanisation and investment pressure in areas of high natural and landscape value.	landscape
Regionalny Program Operacyjny Województwa Pomorskiego na lata 2014–2020	Regional Operational Programme for the Pomeranian Voivodeship for 2014–2020	2015	As part of investment priority 6d, 'Protecting and restoring biodiversity, protecting and recultivating soil and supporting ecosystem services, including via the "Natura 2000" programme and green infrastructure', the detailed objective 'Secured resources and natural and landscape qualities' was defined. An increase in anthropopressure was identified, which necessitates efforts to protect the uniquely valuable natural and landscape qualities of the region. The challenge consists in implementing environmental protection measures in a way which secures the valuable areas from excessive penetration by humans, while rendering it possible for society to interface with their nature. The completion of this priority objective will result in the preservation of the region's biodiversity, as well as its natural and landscape qualities. The anthropopressure, particularly in relation to increases in tourist traffic and ongoing projects, will be reduced.	landscape
Program Ochrony Środowiska Województwa Pomorskiego na lata 2018–2021 z perspektywą do roku 2025	Pomeranian Voivodeship's Environmental Protection Programme for 2018–2021, with an outlook to the year 2025	2018	Objective IX, 'Landscape and biodiversity protection'.	environmental
Strategia Rozwoju Elbląskiego Obszaru Funkcjonalnego/ Zintegrowanych Inwestycji Terytorialnych	Development Strategy for the Elbląg Functional Area/ Integrated Territorial Investments	2020	A SWOT analysis identified the following opportunities for the gmina: 'Obtaining direct access to the Gulf of Gdańsk thanks to the construction of the Vistula Spit Canal'.	transport

(*Continued*)

MOST WIEDZY Downloaded from mostwiedzy.pl

(Continued).

			According to the environmental impact predictions, the strategy will create favourable conditions for construction projects, and may give rise to conflicts revolving around the space between areas rich in biodiversity and areas of high landscape and cultural value. Negative effects are possible if the construction areas are selected improperly, with no regard for the environment.	landscape
Program Ochrony Środowiska dla Powiatu Nowodworskiego na lata 2017–2020 z perspektywą na lata 2021 – 2024	Environmental Protection Programme for Nowy Dwór Gdański County for the years 2017–2020, with an outlook to the years 2021–2024	2018	The intervention 'Environmental resources' includes the objective 'Protecting the landscape and biodiversity, stopping degradation processes and improving area system cohesion'.	environmental
			The intervention direction 'Preserving or restoring the proper state of habitats and species' includes the task 'Preserving and restoring the proper state of habitats, valuable species and inanimate nature and landscape elements in protected landscape areas, ecological and documentation sites and nature and landscape complexes, as well as outside of protected areas'.	landscape
			The intervention direction 'Green infrastructure' involves the task 'Ensuring the sufficient protection of biodiversity, vegetation and landscapes as part of spatial planning, particularly with regard to ecological corridors by way of relevant stipulations in spatial management plans and/or decisions on land development and management conditions.	landscape
			As part of the intervention direction 'Improving the cohesion of the system of protected areas and counteracting natural space fragmentation', the task 'Marking the boundaries of natural areas classified as protected and setting up bulletin boards' was planned.	organisational/ administrative
Program ochrony środowiska dla Gminy Sztutowo na lata 2013–2016 z perspektywą do roku 2020	Environmental protection programme for Sztutowo Gmina for the years 2013–2016, with an outlook to the year 2020	2013	The planned project contradicts the main objective 'Environmental protection', as well as the specific objective 'Preserving a strip of coastal vegetation – restriction on the space occupied by tourism, transport and commercial infrastructure'.	environmental
Program Ochrony Środowiska dla Gminy Sztutowo na lata 2020–2023 wraz z perspektywą na lata 2024–2026	Environmental protection programme for Sztutowo Gmina for the years 2020–2023, with an outlook to the years 2024–2026	2020	As part of specific objective II, 'Environment and the economy. The sustainable management of natural resources', the direction for the intervention 'Managing natural and cultural heritage resources, including the protection and improvement of biodiversity and the diversity of landscapes' was planned.	landscape
			The most important landscape assets of the Vistula Spit Landscape Park include its beautiful sandy beaches and the neighbouring foredune, as well as a mosaic of highly varied terrain types. Particularly noteworthy is the presence of tall dune ridges and wet depressions between them.	landscape
			The objective 'Protect the landscape and biodiversity' includes the task 'Preserve and restore the proper state of habitats, valuable species and inanimate natural and landscape elements in protected landscape areas, ecological and documentation sites and nature and landscape complexes, as well as outside of protected areas'.	landscape
			The objective 'Protecting the landscape and biodiversity' includes the task 'Ensuring the appropriate protection of biodiversity, vegetation and the landscape as part of spatial planning, with a particular focus on ecological corridors, via relevant stipulations in spatial management plans and/or land development and management conditions.	organisational/ administrative

(*Continued*)

MOST WIEDZY Downloaded from mostwiedzy.pl

(Continued).

Strategia Rozwoju Gminy Sztutowo na lata 2014–2020	The development strategy of Sztutowo Gmina for the years 2014–2020	2014	The fundamental quality and primary development factor of the Vistula Spit area are its unique natural landscape features and small amounts of urbanised areas. Anything that disrupts the harmonious proportions between the natural and cultural landscapes is a threat to the sustainable development and spatial order of the entirety of the Vistula Spit. At the same time, it is assessed that without functional infrastructure, it will be impossible to develop a tourism industry and utilise the gmina's tourism potential.	landscape
Studium uwarunkowań i kierunków zagospodarowania przestrzennego gminy Miasta Krynica Morska	A Study of the Conditions and Directions of Spatial Development in the Gmina of Krynica Morska	2002	The priority tasks related to protecting natural, cultural and landscape qualities involve protecting the distinctive features of the seaside landscape of the spit, including its dunes and forests. It is recommended to refrain from interfering in the natural coastal processes and floral succession, and to leave as much of the coastline intact for the purpose of preserving the value of the coastal ecosystems.	landscape
Strategia rozwoju społeczno – gospodarczego Gminy Miasta Krynica Morska na lata 2015–2025	The Strategy for the Socio-Economic Development of the Gmina of Krynica Morska for the years 2015–2025	2016	The dredging of the Vistula Spit is viewed as detrimental to the development of the western parts of the gmina.	socio-economic
			A SWOT analysis identified the construction work related to the dredging of the Vistula Spit Canal, as well as the state of the environment after its completion, as a hazard.	socio-economic
Prognoza oddziaływania na środowisko projektu Krajowego programu ochrony wód morskich	Predicted environmental impact of the 'National seawater protection programme' project	2016	The dredging of the Vistula Spit Canal is considered to be a project exerting what is among the highest pressures on the marine environment, including via tourism and recreation (esp. mass tourism).	environmental
Prognoza oddziaływania na środowisko projektu aktualizacji Planu gospodarowania wodami na obszarze dorzecza Wisły	Predicted environmental impact of the project 'Updating the water management plan for the Vistula drainage basin area'	2016	The planned dredging of a waterway connecting the Vistula Lagoon with the Gulf of Gdańsk will have an indirect, long-term and positive impact on human life. […] On the other hand, the project may negatively impact the quality of life and safety of those who inhabit areas of the Vistula Spit located east of the location selected for dredging. Upon completion, these areas will lose land access, and their inhabitants may be unable to evacuate in emergency situations, leading to a decrease in their sense of security.	socio-economic
Prognoza oddziaływania na środowisko projektu Planu zagospodarowania przestrzennego województwa pomorskiego 2030 oraz stanowiącego jego część projektu Planu zagospodarowania przestrzennego obszaru metropolitalnego Gdańsk-Gdynia-Sopot 2030	Predicted environmental impact of the project 'The 2030 spatial management plan of the Pomeranian Voivodeship' and its subproject 'The 2030 Gdańsk-Gdynia-Sopot Metropolitan Area Spatial Management Plan'	2016	The construction of the waterway leading to the Vistula Lagoon will have a direct and significantly negative impact on the environment. The development of infrastructural and non-infrastructural tourism amenities may negatively affect the biotic environment.	environmental
			The repurposing of the space to serve as a shipping channel will result in the fragmentation of natural habitats, which is particularly dangerous to protected areas. This will disrupt the spatial integrity of the Spit, which may hinder its function as a supraregional, Lagoon-adjacent ecological corridor.	environmental
			Some of the activities carried out as part of the construction of the waterway connecting the Vistula Lagoon with the Gulf of Gdańsk will result in permanent terrain changes. In addition, the construction of the shipping channel will result in wide-ranging morpho- and geological transformations of the Vistula Spit as a result of its division, and the necessity to store the sand dredged as part of the construction effort and the deepening of the approach fairway. The project will have a significantly negative impact on the environment, including the damaging and disruption of natural landscape structures in the Vistula Lagoon Landscape Park.	landscape

(*Continued*)

MOST WIEDZY Downloaded from mostwiedzy.pl

(Continued).

Prognoza oddziaływania na środowisko projektu Regionalnego Programu Strategicznego w zakresie bezpieczeństwa środowiskowego i energetycznego	Predicted environmental impact of the project 'Regional Strategic Programme for environmental and energy security'	2021	The areas of high landscape value included significant portions of the gminas of Sztutowo and Krynica Morska, located in the Gulf of Gdańsk.	landscape
			Currently, as stipulated in the Act on spatial planning and management, a landscape audit is being conducted for the Pomeranian Voivodeship, its completion planned for 2023. In line with the methodology specified in the Regulation of the Council of Ministers of 11 January 2019 on landscape audits (Journal of Laws item 394), the landscape qualities of the entire voivodeship will be identified and assessed, and their assessment will lead to the identification of priority landscapes for which it will be possible to enact a separate resolution specifying the planning tools which can be used to protect their space and resources. In addition, the results of the landscape audit should be taken into consideration in the process of designing local spatial management plans.	organisational/ administrative
			Protecting the valuable species, habitats and ecosystems of the coastal areas of the Baltic Sea, bodies of water and water-reliant ecosystems, including reducing surface runoff and anthropopressure and protecting natural and landscape assets, particularly in areas under protection, and altering the species makeup of forest habitats will have a positive direct and indirect impact on the landscape – its state and the facilitation of environmentally friendly changes. This is particularly relevant to the coastal areas of the Baltic Sea, where the sustainable management of space and its careful transformation by humans is of great importance, particularly in seaside tourist resorts. Mitigating natural space fragmentation and improving the flow capacity of ecological corridors is also important to increasing the value of the Pomeranian landscape. It is necessary to employ a comprehensive approach to preventing landscape degradation.	landscape
Prognoza oddziaływania na środowisko dla projektu Strategii Rozwoju Województwa Pomorskiego 2020	Predicted environmental impact of the project 'The 2020 Development Strategy of the Pomeranian Voivodeship'	2012	Linear projects will result in habitat fragmentation, disrupt natural continuity and interfere with protected areas, resulting in spatial conflicts.	environmental
Prognoza oddziaływania na środowisko projektu Strategii Rozwoju Województwa Pomorskiego 2030	Predicted environmental impact of the project 'The 2030 Development Strategy of the Pomeranian Voivodeship'	2020	In the case of the vulnerable, most heavily utilised tourism and recreation areas, the expansion of the range of leisure activities on offer may impact the landscape.	landscape
			Developing the Pomeranian Voivodeship's transport infrastructure in line with European standards, as well as the development of effective multimodal access to ports, will lead to an increase in area coverage and a reduction in the amount of vegetation to make room for transport infrastructure, resulting in space fragmentation and landscape changes, as well as various effects on the environment at the operation stage (gaseous emissions, noise, rainwater drainage and more). These will be long-term, permanent effects.	landscape

(*Continued*)

MOST WIEDZY Downloaded from mostwiedzy.pl

(Continued).

Prognozie oddziaływania na środowisko Projektu regionalnej strategii rozwoju transportu w województwie pomorskim na lata 2007–2020	Predicted environmental impact of the project 'The regional transport development strategy of the Pomeranian Voivodeship for the years 2007–2020'	2008	The main issues in environmental protection related to transport include: the encroachment upon environmentally valuable areas and the disruption of the continuity of ecological corridors by modernised, expanded and new routes and transportation infrastructure; planned transport infrastructure (including seaports and airports) conflicting with areas protected under the Natura 2000 programme; the development of maritime transport exacerbates the potential hazard of contaminating the vulnerable waters of the Baltic Sea, which is undergoing eutrophication. Due to the adaptation of inland waterways to the needs of tourism traffic, the following types of environmental pressure were identified: alteration of riverbeds, coastline alterations, riverbed rock and silt movements, wastewater.	environmental
			In the case of the Vistula Spit Canal project announced by the Government of the Republic of Poland, the potential hazards caused by Poland may affect the waters of the Vistula Lagoon which are part of the territory of the Russian Federation. The project carries a risk of increasing the salinity of the water in the Lagoon, and thus altering the ecosystem, which should be analysed from a cross-border perspective.	environmental
Prognoza oddziaływania na środowisko Planu Zagospodarowania Przestrzennego Województwa Warmińsko – Mazurskiego	Predicted environmental impact of the Warmińsko-Mazurskie Voivodeship Spatial Management Plan	2018	The construction of the waterway connecting the Vistula Lagoon with the Gulf of Gdańsk is classified as particularly damaging to the environment, although a potentially positive impact has also been identified, i.e. the development of low-emission water transport.	environmental
			The development of the water transport sector will affect habitats and species which are subject to protection by domestic and European laws. It is predicted that natural or wildlife habitats will be indirectly destroyed or decrease in number, and their natural quality will deteriorate in the affected areas. This primarily applies to the areas of the Vistula Lagoon protected under the Natura 2000 programme. It is predicted that priority habitats and species will also be negatively affected to a significant degree.	environmental
Prognoza oddziaływania na środowisko dla Projektu Strategii Rozwoju Społeczno-Gospodarczego Województwa Warmińsko-Mazurskiego do Roku 2025	Predicted environmental impact of the project 'The 2025 Warmian-Masurian Voivodeship Strategy of Socio-Economic Development'	2013	Rendering the Vistula Lagoon accessible via the Vistula Spit Canal is a project which may negatively impact the environment at the construction and/or operation stage. In addition, the project may result in negative, long-term and irreversible changes to the environment. These include: damage to the environment which inevitably occurs as a result of the construction and expansion of ports and other tourism infrastructure, and an increase in noise emissions caused by the operation of the waterways in the spring/summer season.	environmental
Prognozie oddziaływania na środowisko projektu Strategii Rozwoju Elbląskiego Obszaru Funkcjonalnego	Predicted environmental impact of the project 'The Elbląg Functional Area Development Strategy'	2014	The Vistula Lagoon and Vistula Spit areas (PLH280007) are analysed with regard to threats, pressures and actions which impact Natura 2000 areas: the alteration of water flows (tides, sea currents), dams, embankments, artificial beaches, projects aimed at protecting areas from the sea and protecting coastlines, causeways, tampering and disruptions caused by human activity.	landscape
Prognoza oddziaływania na środowisko Miejscowego planu zagospodarowania przestrzennego wsi Kąty Rybackie	Predicted environmental impact of the Local spatial management plan for the village of Kąty Rybackie	2010	Does not deal with the issue of the planned shipping channel, despite the document including an easement for its construction. It was determined that the entire area in question is at risk of flooding due to its proximity to the sea and the Vistula Lagoon. It is necessary to organise tourism and recreation vessel traffic in the Vistula Lagoon for the purpose of protecting the natural habitat this body of water constitutes.	environmental

MOST WIEDZY Downloaded from mostwiedzy.pl

Data 2. Public participation context (author study by Sas-Bojarska, Orzechowska-Szajda)

All these letters are appendices to the environmental decision issued by RDEP in Olsztyn. This decision, together with its attachments, was publicly available in accordance with the law.

Author	Opinion	Source
The institutions connected with environmental protection		
Wiesław Nowicki, Society for the Protection of Nature (national rank), 2018, letter to RDOŚ Olsztyn	*Application for an administrative hearing open to the public, in order to mitigate extreme positions and enable real social participation in planning investments of national importance in an area of natural value, carrying out a cross-border EIA procedure, establishing two nature reserves and enlarging the existing one in the most endangered area of Vistula Lagoon, supplementing and extending the EIA report with a number of aspects, supplementing the chapter of the EIA report on social conflicts, because it omitted a number of important protests.*	*Appendix to the decision on environmental conditions WOOŚ.4211.1.2017.AZ.67*, Regional Directorate for Environmental Protection, Olsztyn
Authorities		
Mieczysław Struk, Marshal of the Pomeranian Voivodeship, Board of the Pomeranian Voivodeship (local authorities), 2018 (provincial rank)	Objections to the EIA report: e.g. *failure to demonstrate the overriding public interest of the investment, outdated and exaggerated, overestimated arguments about the expected socio-economic benefits, lack of a reliable analysis of alternatives (Szkarpawa-Wisła), contradiction of the construction of the ditch with the objectives of the Environmental Protection Program of the Pomeranian Voivodeship for the years 2018–2021 with the perspective of 2025(its purpose is, among others, to protect the landscape and natural diversity), lack of strategic foundations specified in the applicable strategic documents, lack of a reliable balance sheet of profits and losses, numerous substantive and methodological deficiencies. The report was found to be incomplete, unreliable and not giving grounds for a positive decision.*	*Appendix to the decision on environmental conditions WOOŚ.4211.1.2017.AZ.67*, Regional Directorate for Environmental Protection, Olsztyn
Mayor of the city of Krynica Morska, 2018, (commune = local rank)	Comments on the EIA report: *among others the need to supplement the report with an analysis of the impacts on all Natura 2000 areas within the influence of the planned activity, analysis of additional alternatives of the waterway (Szkarpawa-Wisła), lack of convincing demonstration of the overriding public interest of the investment, overestimated socio-economic benefits of the ditch.*	*Appendix to the decision on environmental conditions WOOŚ.4211.1.2017.AZ.67*, Regional Directorate for Environmental Protection, Olsztyn
Mayor of Frombork, Zbigniew Pietkiewicz (municipal=local rank)	*The opening of the canal through the Vistula Spit will probably be associated with increased tourist traffic. Therefore, we mainly count on a greater number of guests arriving on yachts, but at the same time on the fact that this investment will be followed by the construction of marinas, among others in Frombork.*	*Appendix to the decision on environmental conditions WOOŚ.4211.1.2017.AZ.67*, Regional Directorate for Environmental Protection, Olsztyn
NGO's		

(*Continued*)

MOST WIEDZY Downloaded from mostwiedzy.pl

(Continued).

Polish Ecological Club This statement was developed by experts: dr hab. of natural sciences Maciej Przewoźniak, head of the authors' team of the Strategic Impact Assessment related to Vistula Canal Spit (July 2012), Michał Skóra, PhD, Institute of Oceanography, University of Gdańsk, PhD hab. Eng. arch. Jacek Sołtys, Faculty of Architecture, Gdańsk University of Technology, prof. dr hab. eng. arch. Aleksandra Sas-Bojarska, Faculty of Architecture, Gdańsk University of Technology. Key environmental organizations supporting the statement of PKE: EKO-UNIA Ecological Association (additional report), GAJA Green Federation, Eko-Development Foundation, GREENPEACE, Institute for Sustainable Development Foundation, Klub Gaja, Water Birds Research Group KULING, MARE Foundation, National Society for the Protection of Birds, Social Ecological Institute, Eko Association -Initiative, Green Zone Foundation, Society for the Earth, Center for Ecological Activities 'Źródła', Green Institute Foundation.	PKE's statement: *lack of compliance of the EIA report with Polish and EU environmental protection regulations: with the Water Framework Directive, with the provisions of nature protection of Natura 2000 areas, the Resolution of the Pomeranian Voivodship Parliament of 2011 on the Vistula Spit Landscape Park, due to the devalorization of the nature and landscape of the Park, with the nature protection regulations of the Zatoka Elbląska reserve, lack of compliance with the principle of sustainable development (enshrined in the Constitution of the Republic of Poland), devalorization and devastation of the Vistula Spit, the Vistula Lagoon and the Gulf of Gdańsk, including significant negative impact on Natura 2000 areas PLB280010 Zalew Wiślany and PLH280007 Zalew Wiślany and Mierzeja Wiślana as well as on the Vistula Spit Landscape Park and the nature reserve Zatoka Elbląska, lack of overriding public interest, there are other options for achieving socio-economic benefits*. PKE's comments and conclusions to the EIA report: *e.g. incorrect methodology, numerous inaccuracies, gaps, errors and logical contradictions, lack of assessment of appropriate alternatives that do not harm the environment, incorrect justification of the overriding socio-economic interest, lack of consideration of the investment liquidation stage, lack of assessment of the effectiveness of mitigation measures, too general assessment of cross-border impacts, unreliable conclusions, too superficial description of social conflicts, no balance of profits and losses, no economic justification for the investment, permanent and irreversible loss of landscape values, significant negative impact on Natura 2000 areas, only local benefits, which do not justify the implementation of the investment.*	https://ekoagora.pl/stanowisko-ws-przekopu-mierzei-wislanej/ **Appendix to the decision on environmental conditions WOOŚ.4211.1.2017.AZ.67*, Regional Directorate for Environmental Protection, Olsztyn
WWF Poland, Paweł Średziński	*Ecologists emphasize that the investment, which would consist in digging the Vistula Spit, raises not only doubts and objections of naturalists, but above all protests of the inhabitants of the Spit, who do not want to be cut off from the rest of the country by the ditch. The legitimacy of the investment was already undermined by the Strategic Impact Assessment related to Vistula Canal Spit (July 2012). The appendix included the following information: 'The main stream of cargo weight in the international turnover of the port of Elblqg will be goods in relation to the Kaliningrad District'. No excavation is required to handle such traffic. What's more, the construction, as well as subsequent maintenance, will generate huge costs related to the need to deepen the fairway. All this will be financed from public funds.*	https://www.newsweek.pl/polska/czy-nalezy-przekopac-mierzeje-wislana-sondaz/7lxzny6
Experts		
Tomasz Żylicz, 2017, Cutting the Vistula Spit, Aura Ochrona Środowiska 01/17 (Aura Environmental Protection)	*Cost-benefit analysis would be required to determine whether the project is socially desirable, credible predictions of the project's impact on the local economy should be analysed.*	https://yadda.icm.edu.pl/yadda/element/bwmeta1.element.ekon-element-000171459063
Tomasz Żylicz, Cost-benefit Analysis in Environmental Protection – Dynamic Aspects aspekty dynamiczne, Aura Ochrona Środowiska 12/16	*In the case of projects that span over a long period of time, summing up benefits and costs that belong to different time periods would be inappropriate. These can be compared by applying a discount rate which reflects the social preferences with respect to the future.*	https://bazekon.uek.krakow.pl/rekord/171483570
Press		
i.PL	*Devastation of the forest on the planned digging of the spit in the Vistula Spit Landscape Park of the Natura 2000 area. Against the will of the inhabitants, against the recommendations of the European Commission and without an environmental decision, they destroy the unique Natura 2000 area and waste huge money.*	https://i.pl/tag/protest-przekop-mierzei

(*Continued*)

MOST WIEDZY Downloaded from mostwiedzy.pl

(Continued).

Research Agency SW Research, 24 February 2017, Piotr Zimolzak	*Nearly 40 percent of respondents believe that the Vistula Spit should not be dug up. This is probably due to the fact that dredging the fairways to Elbląg may cause degradation of the basin and an ecological disaster.*	https://www.newsweek.pl/polska/czy-nalezy-przekopac-mierzeje-wislana-sondaz/7lxzny6
Research Agency SW Research, 1 November 2017, Piotr Zimolzak	*45 percent of respondents support the construction of a shipping canal through the Vistula Spit. More than every fifth respondent is against this idea. Every third respondent has no opinion on this issue.*	https://www.rp.pl/spoleczenstwo/art10124141-sondaz-kto-chce-przekopu-przez-mierzeje-wislana
nam! Elbląg naszemiasto, statement by a member of the Camp for the Vistula Spit	*[…] the government wants to squeeze this election promises as much as possible.*	https://elblag.naszemiasto.pl/przekop-mierzei-wislanej-w-stylu-monty-pythona-zobaczcie/ar/c1–5135909
Individual residents		
Bartosz Biliński, social activist, 2018,	He undermines the desirability of the investment, although he is in favor of the development of the port in Elbląg, he indicates high investment costs and other variants of the development of the port in Elbląg, including connecting the Vistula Lagoon with the Gulf of Gdańsk through the Pilawska Strait.	**Appendix to the decision on environmental conditions WOOŚ.4211.1.2017.AZ.67*, Regional Directorate for Environmental Protection, Olsztyn
Andrzej Podlaszewski, 2018, letter to RDEP in Olsztyn	He proposes a different alternatives for the development of the port in Elbląg, directly on the Gulf of Gdańsk, without digging the Vistula Spit; he undermines the benefits of increasing the security of the country through the construction of the ditch, pointing to the associated risks.	**Appendix to the decision on environmental conditions WOOŚ.4211.1.2017.AZ.67*, Regional Directorate for Environmental Protection, Olsztyn
Grzegorz Kozakiewicz, 2018, letter to RDEP in Olsztyn	He shows rescaling of the breakwater, he undermines the construction of artificial islands, he indicates the need to remove obstacles (e.g. low bridges, power lines) along the entire waterway to Elbląg.	**Appendix to the decision on environmental conditions WOOŚ.4211.1.2017.AZ.67*, Regional Directorate for Environmental Protection, Olsztyn
Edmund Dobroliński, 2018, letter to RDEP in Olsztyn	He indicates the devastation of the extremely valuable natural and tourist resources of the Vistula Spit, he indicates other variants of the waterway to the Vistula Lagoon, e.g. through the Szkarpawa and the Vistula.	**Appendix to the decision on environmental conditions WOOŚ.4211.1.2017.AZ.67*, Regional Directorate for Environmental Protection, Olsztyn
Sławomir Sajkiewicz, Office of Environmental Protection and Hydrotechnical Projects, 2018, letter to RDEP in Olsztyn	He indicates other alternatives (land passage by ship through the Vistula Spit, without a ditch), which will not cause negative environmental effects or social protests.	**Appendix to the decision on environmental conditions WOOŚ.4211.1.2017.AZ.67*, Regional Directorate for Environmental Protection, Olsztyn
Stanisław Piwkowski, 2018, letter to RDEP in Olsztyn	Request for public consultations with the Russian Federation on reducing the transboundary impact.	**Appendix to the decision on environmental conditions WOOŚ.4211.1.2017.AZ.67*, Regional Directorate for Environmental Protection, Olsztyn

*Comments, conclusions and objections submitted by stakeholders to RDOŚ (Regional Directorate of Environmental Protection-RDEP) – the institution carrying out the EIA procedure, during the public participation process.

MOST WIEDZY Downloaded from mostwiedzy.pl