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SOCIAL CONFLICTS RELATED TO NATURE CONSERVATION IN POLISH MARINE AREAS

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ABSTRACT

Motives: The concept of nature conservation is central to all discussions about the state of the environment and the identified ecological problems and conflicts. Man's attitude towards nature has changed over the decades. At present, the protection of natural values is one of the challenges facing every society, and protected areas are becoming a field of complex social conflicts. The issue of ecological conflicts has been discussed in the literature for several decades. However, the number of studies based on empirical research concerning Polish marine areas (PMAs) is limited.
Aim: The aim of this study was to characterize social conflicts related to selected marine protected areas (MPAs) located in the internal waters and Polish exclusive economic zone (EEZ). The fundamental research questions were: (i) what types of conflicts were identified during public consultations in selected, legally protected marine areas, (ii) what was the nature of these conflicts, who were the participants, and finally (iii) what solutions to these conflicts were proposed by the surveyed participants during the consultations? The study relied on Moore's concept, which identifies five main sources of conflict: relationships, data, interests, values, and structure.
Results: Social conflicts concerning selected PMAs were recognized and characterized. Four areas of conflict were identified: conflicts over protected area boundaries, conflicts over authority, conflicts over the principles of protected area management, and conflicts over the development of new forms of protection. Conflicts in marine areas have spatial, economic, scientific, cultural, and ideological dimensions, reflecting diverse interests, environmental concerns, and human-nature relationships. Effective conflict mitigation strategies include environmental education and effective communication.

Keywords: social conflicts, protected areas, conservation plans, public consultations, Polish marine areas (PMAs)

INTRODUCTION

The concept of nature conservation is of decisive importance in all discussions about the state of the environment and identified ecological problems and conflicts. It involves theoretical issues, such as protection concepts, its motives, goals and principles. In 1922, Jan Gwalbert Pawlikowski put forward the thesis that "no legislation, no state organization will be able to effectively fulfill the tasks of nature conservation without a broad social basis" (Pawlikowski, 1922).

The issue of ecological conflicts has been discussed by many authors (e.g. Baynham-Herd et al., 2018;

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De Pourcq et al., 2017; Dutkowski, 1995; Dutkowski, 2021; Eskjær & Horsbøl, 2023; Kassenberg & Marek, 1986; Kołodziejski, 1988; Libiszewski, 1992; Matczak, 2000; Marzano et al., 2013; Raik et al., 2008; Redpath et al., 2015). Most concepts are based on the claim that these conflicts are a specific type of social conflicts (Dutkowski, 1995; Dutkowski, 2021; Matczak, 2000).

For the purpose of this work "social conflict in protected areas" based on the analysis of the literature on ecological conflicts was formulated. It is understood as: the disclosure of discrepancies between individuals or groups, in terms of the preferred way of utilizing the resources and components of nature, area-associated with various forms of nature conservation. Included in this definition is the attitude of the individual/group towards nature conservation as one of the uses of space. Contradictions between nature conservation goals (including sub-regional and long-term) and development goals can be taken as the main background of these conflicts. Social conflict in protected areas is most often spatial in nature. It is a form of direct interaction between parties, which is characterized by manifestations of competition or struggle. The parties involved in the dispute (individuals or institutions) take concrete and direct action in relation to one another (e.g., exchange of letters, arguments during consultation meetings, and referral to court).

In Poland, the scope and dynamics of conflicts have expanded to include protected areas, as the process of political transformation progressed after 1989. The conflicts have been described in literature concerning: national parks (e.g. Królikowska, 2007; Niedziałkowski et al., 2012; Olko et al., 2011), landscape parks (e.g. Grochowska, 2015; Kistowski, 2005; Raszka, 2010; Rechciński, 2012), as well as Natura 2000 areas (e.g. Bołtromiuk, 2012; Dubel et al., 2013; Głogowska et al., 2013). However, there is a very limited number of studies based on empirical research on conflicts related to Polish marine areas (PMAs) (Michałek & Kruk-Dowgiałło, 2015; Piwowarczyk & Wróbel, 2016; Węsławski et al., 2010). In 2012–2023, a number of projects were carried out to develop management plans for protected areas located partially or entirely in PMAs. Public consultation processes were significant elements of each of them. During their course, numerous conflicts emerged, which inspired the author to present in this paper some reflections and conclusions.

The prerequisite for social conflicts in protected areas is the accumulation and diversity of resources and high natural values. Controversy is an integral part of nature conservation and its intensity increases as a result of, on the one hand, greater pressure on natural resources and, on the other hand, pressure to increase the protection of these resources (Young et al., 2016).

Management plans can become sources or sites for conflicts itself (Peltola et al., 2022). Valve et al. (2013) suggest that plans are, in fact, bound to raise tensions because they bring together different interests and social practices.

The Rights & Resources Initiative (2020) estimates that about 363 million people live in existing protected areas worldwide. Marine protected areas (MPAs) face numerous conflicts associated with the implementation of conservation measures, as in terrestrial ones. Conflicts regarding the marine environment, particularly where multiple stakeholders are involved, are many and varied (Alexander, 2020; Dahlet et al., 2023). Growing interest in the marine environment and a new focus on the blue economy creates increasingly more complex governance issues (Voyer et al., 2018.

The subjects of conflicts in MPAs are in part common with those noted on land, i.e. boundaries of protected areas, the establishment of new areas and forms of nature conservation, poor communication with and between particular stakeholders. The differences concern provisions of detailed management plans linked to the forms of use, which are specific for marine areas: fisheries (EC, 2020; Grip & Blomqvist, 2020), coastal protection (Łabuz, 2013), some forms of recreation and tourism (and the infrastructure connected with them) (Durydiwka & Duda-Gromada, 2014).

With the development of marine area use, new types of conflicts over the environment emerge,

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sometimes reshaping or amplifying ones that already exist (Bax et al., 2021; Silver et al., 2015). Distinct for conflicts in our time is that they are all influenced by climate change (Saunders et al., 2024). Climate change and changes in socio-marine conditions can be seen as a contributing or even necessary factor to the emergence and/or exacerbation of conflicts (Saunders et al., 2024). This variously occurs through the effects of climate change policy mitigation projects, such as developing offshore wind energy capacity (Tafon et al., 2023) and seabed mineral extraction (van Putten et al., 2023).

In light of past experience, transforming marine governance regimes to enable the mitigation of the negative effects of conflicts on social justice and sustainability and to reorient relations towards more sustainable trajectories requires insights into (1) the different types of conflict that exist and how these relate to social and environmental sustainability; (2) the social, historical, and environmental conditions in which they originate and persist; (3) the heterogeneous stakeholders and institutions that are implicated in how the problem is being experienced, represented, and perpetuated; and (4) the options for anticipation, mediation (Saunders et al., 2024). Due to publication limitations, not all of these elements can be discussed in depth, however the fundamental questions posed in this paper are: (i) what types of conflicts were identified during public consultation processes in selected, legally protected marine areas, (ii) what was their essence, genesis, and who were the participants, and finally (iii) what ways of solving them were indicated by the surveyed participants of the studied consultations? It was assumed that the goal of this work isn't to acquire information on all communities potentially affected by the consulted documents but to reach a conclusion concerning the stakeholders involved in selected participation processes and underpinning reasons for the conflicts.

MATERIAL AND METHODS

For the purposes of this study, the course of social consultation processes conducted as part of the development of conservation plans for selected marine areas was examined. Material collected during the implementation of three projects relating to the four following protected areas: Zatoka Pucka i Półwysep Helski (PLH220032), Zatoka Pucka (PLB220005) (referred to as the Puck Bay area), Ławica Słupska (PLC990001) (referred to as Słupsk Bank area) and the Seaside Landscape Park was used (Tab. 1, Fig. 1).

Observations were conducted during 15 consultation meetings within 3 Projects indicated in Table 1. The product of the observations was a written protocol that included notes on the behavior and

Table 1. Characteristics of the Projects analyzed as part of this work and the research methods used

No.	Project title	Objective area under protection	Research methods
1	Development of draft plans for the protection of Natura 2000 areas in the Bay of Gdańsk and the Vistula Lagoon regions (2011–2014)	Natura 2000 areas: Puck Bay PLH220032, Zatoka Pucka PLB220005 (referred to as the Puck Bay area)	Observation; Analysis of the material from the consultation meetings
2	Development of a draft conservation plan along with public consultations for the Natura 2000 marine area Ławica Słupska PLC990001 (2018–2022)	Natura 2000 area Ławica Słupska PLC990001 (referred to as the Słupsk Bank area)	Observation; Analysis of the material from the consultation meetings; Survey among participants of the consultation meetings
3	Development of a draft protection plan for the Seaside Landscape Park, including conducting legally obligatory public consultations, arrangements and opinions (2018–2021)	The Seaside Landscape Park	Observation; Analysis of the material from the consultation meetings; Survey among participants of the consultation meetings

Source: own study.

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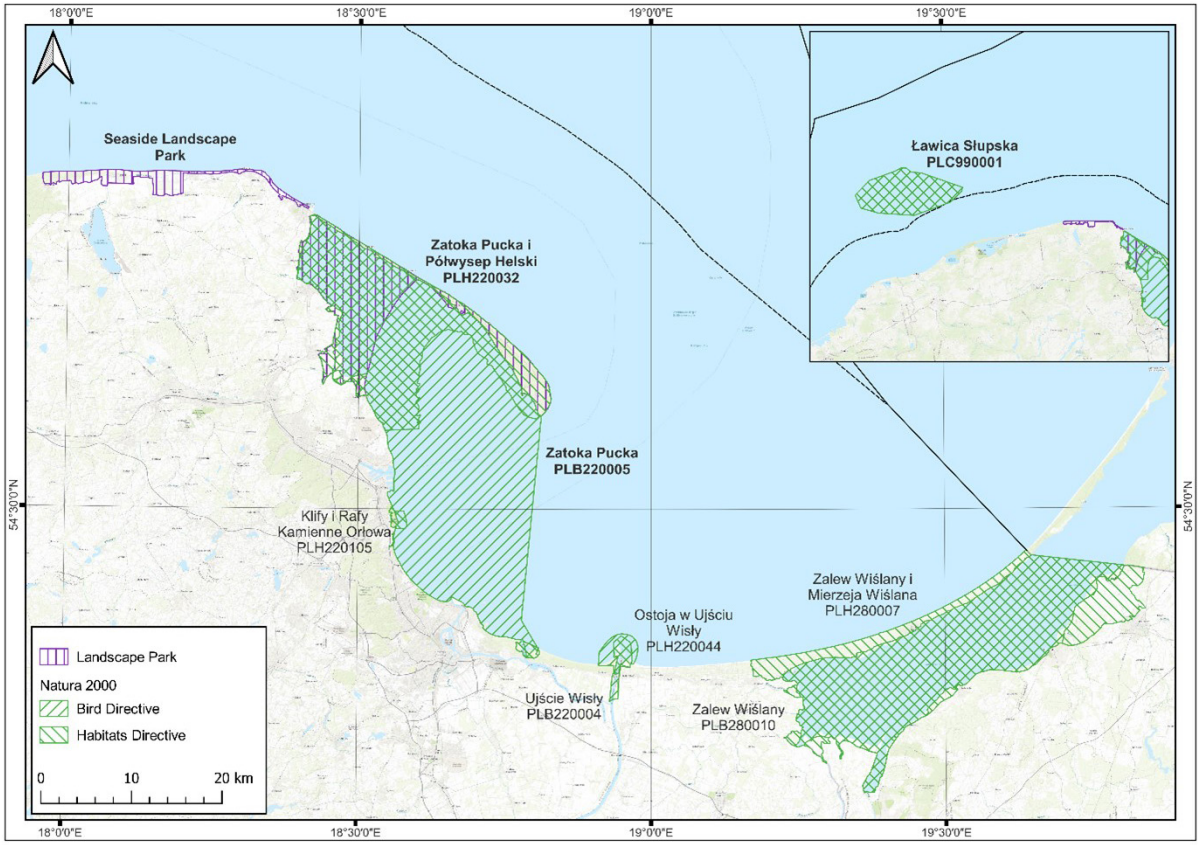

Fig. 1. Location of the analysed areas (in bold)
Source: own study.

interactions of the consultation participants. These were then interpreted and used in answering the research questions posed.

Minutes of consultation meetings, recordings, transcriptions, press articles, websites and correspondence conducted during the consultations were also used in the analysis. Selected content of the material has been quoted in this work in compliance with the principles of personal data protection.

Due to the limitations of the observation method, survey research was conducted. The survey was addressed to stakeholders who participated in social consultations carried out for the needs of two projects: regarding the Słupsk Bank area and the Seaside Landscape Park (Tab. 1).

The questionnaire was prepared using the Google Forms tool. It contained 5 open-ended questions, 14 closed-ended questions and 5 metrics (standard) questions including: gender, age range, education, sector represented, residence. The surveys were conducted at recent consultation meetings held within the Projects listed in Tab. 1. Moreover, survey questionnaires were sent via e-mail to those who did not attend the final meeting, but had previously participated in at least one meeting conducted within the Projects. The instruction at the beginning of the survey provided information on the general purpose of the investigation and anonymity of the participant. The survey took about 15 minutes to complete. Participation in it was voluntary. During the meetings, 54 questionnaires were handed out, while 94 surveys were distributed via e-mail. In return, 66 surveys were obtained and subjected to analysis.

The public consultations analyzed in this study brought together specific social groups linked to the area by formal commitments, use of the area

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or interest in future use, but their formula was open (no participant selection procedure was used). The issue was to find out the opinions of stakeholders regarding the functioning of marine protected areas, and identified conflicts. Part of the questions concerned the evaluation of the consultation processes, but this topic is not be developed in this work.

Conflicts were studied separately in the three areas: the Puck Bay area, the Słupsk Bank area, and the Seaside Landscape Park.

The characteristics of the conflicts included the following elements: subject-location-category.

Moore's concept of the five main conflict categories was used to characterize the identified conflicts (Moore, 2003) (Tab. 2).

Table 2. Conflict categories

Conflict categories	The causes of conflicts
Interests	Different needs, competing interests
Information	Lack of information, different ways of interpreting and assessing data
Relationship	Negative attitude toward other side; repetitive negative conduct, weak communication
Structural matters	Time or procedures limits, hierarchy, misidentification of roles
Values	Different values; different ethical system

Source: own studies based on Moore (2003).

Based on the literature review, the author's classification of parties participating in planning processes in the areas under discussion was developed and applied. The following stakeholders have been identified: government administration (including maritime administration), but also local government authorities, entrepreneurs and commercial companies, representatives of fishing and the fish processing sector, scientific and research institutions such as universities, representatives of the security and national defense sector, as well as private individuals and non-governmental organizations (NGOs). A separate group were the authors and reviewers of the documents under procedure (conservation plans).

Examples of the statements of the consultation processes participants were taken into account in the study, as well as quotes from the press, magazines, and websites.

RESULTS

Observation and analysis of the material from the consultation meetings

Within this study, four fields of conflict were identified: those concerning the boundaries of the protected areas, the conflict of authority, conflicts concerning the principles of the management of the protected area and finally, the development of new forms of protection (Tab. 3).

Borders of protected areas

The essence of this conflict was contesting the legally designated boundaries of Natura 2000 sites in the Puck Bay area. The parties involved in the conflicts were on the one hand the authors of the conservation plans, on the other hand: individuals, local government authorities, entrepreneurs, commercial companies. Examples of statements highlight specific cases such as the distribution of protected bird species within the port area. Investors and local port authorities aim to expand port infrastructure but face difficulties related to the protection of bird species that have chosen this location for nesting.

Important elements of the discussion also concern the relationship between industry and nature conservation, and whether the boundaries of protected areas should be flexible in the context of human activities.

Examples of statements illustrating the conflict

"I believe that residents, especially, and not officials or professors, should decide how the borders should be drawn. This means that residents should also have the greatest influence on what happens in their areas. They take care of nature themselves, no one helps them, they plant trees and bushes" (Private individual).

"We talk about the coexistence of industry and nature. For us, the situation in the port is incompre-

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Table 3. Typology and characteristics of conflict within the studied areas

No.	Identified conflict (by subject)		Location	Conflict category
1.	Borders of protected areas		The Puck Bay area	Information Interests
2.	Authority	The institution of public consultations	The Puck Bay area	Relationship Structural matters
		Reviewers	The Puck Bay area	Relationship Structural matters
3.	Management principles in the protected area	Area protection objectives *versus* coastal protection	The Puck Bay area The Seaside Landscape Park	Information Interests
		Area protection objectives *versus* fisheries management	The Puck Bay area The Seaside Landscape Park	Information Interests Values
		Area protection objectives *versus* tourism activities	The Puck Bay area	Information Interests Values
		Area protection objectives *versus* mining activities	The Słupsk Bank area	Information Interests Values
		Area protection objectives *versus* spatial development	The Seaside Landscape Park	Interests Values
4.	New forms of nature protection		The Seaside Landscape Park	Interests Values

Source: own studies.

hensible. Common terns have nested on one of the piers in our port that has not been used for years and there is a problem. The port is developing, and a plan has been made to expand the second part of the pier. The investor cannot start work because there are nests there that are considered a priceless phenomenon (…). We want to move the borders. These birds need to be moved to another area" (Entrepreneurs and commercial companies).

Conflict of authority

This type of conflict focuses on lack of trust in the team of authors of draft conservation plans, the mediator, the authority supervising the protected areas as well as the team assessing draft conservation plans (reviewers). Individuals, representatives of the fishing and fish processing sector raised suspicions of bias and lack of process transparency. In addition to the relationship aspect, the conflict of authority can also be characterized by a 'structural' background concerning hierarchy, dissatisfaction with one's position, the division of roles or powers of those involved in the drafting of the conservation plan, which is not accepted by the participants.

Examples of statements illustrating the conflict

"This speech is a consequence and an expression of categorical opposition to the provisions, but also to the manner of their implementation, which is characterized by disregard for the rights of the people living here and only appears to be consultations (…) In our opinion, the proposed changes to the law are initiated by people who can even be described as an unclear interest group" (Local government authority).

"I believe that the plans are being developed by people who do not know the specifics of this area" (Local government authority).

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"The position of ecologists is blatantly contrary to the public interest, and they are represented and paid by institutions" (Private individual).

Management principles in the protected area

The conflict revolves around the balance between area protection objectives and various human activities such as coastal protection, fisheries management, tourism, mining, and spatial development, each posing challenges to conservation efforts.

The essence of the problem is therefore contradiction. It can be concluded that there is contradiction both at the level of values and interests. The aspect of the different ways of interpreting and assessing data and information is also present.

The following threads raised during the consultation meetings illustrate the diverse perspectives of participants:

- Calls for the abolition of coastal protection systems within the protected habitats.
- Demands for inclusive decision-making processes regarding coastal flood management.
- Disputes over the protection status of species such as cormorants and seals and their impact on fisheries.
- Contradictory claims regarding the occurrence of bird bycatch in fishing nets and its implications for fishing practices.
- Opposition to reed bed restoration.
- Requests for regulatory changes to allow the exploitation of natural aggregates, disputing the environmental impact assessments.
- Arguments against restrictions on water access, emphasizing the economic importance of maritime activities.
- Prioritization of human safety over conservation efforts.
- Advocacy for coastal region development strategies despite potential environmental consequences.

Parties engaged in this conflict were local government authorities, NGOs, representatives of the fishing and fish processing sector and individuals. On the opposite side were the authors of the documents under procedure and representatives of scientific and research institutions.

Examples of statements illustrating the conflict

"There should be walking paths along the Bay, not wild reeds and shrubs – because this is how it is perceived by the average person. Why should a group of pseudo-ecologists decide what will happen in an area that does not really concern them – all the proposed changes are against people directly related to the Hel Peninsula – residents, entrepreneurs, fishermen, water sports enthusiasts – it is the voice of the residents and people directly related to the peninsula that should be the most important"! (Private individual).

"Limiting us on the water is death for the city" (Local government authority).

"You have to remember the hierarchy. Sorry, bats cannot be more important than the safety of residents" (Local government authority).

"There is a problem with both cormorants and seals. The effects of this increase in cormorants are terrible for the municipalities. There are fewer and fewer fish from which you can take eggs for restocking, because there are more and more seals that are faster and eat the nets immediately. We need to change the law here and determine their level in the environment" (Representative of the fishing and fish processing sector).

"It is requested to change the provisions of the draft regulation and allow the exploitation of natural aggregates, we will present a detailed study that will demonstrate the lack of impact of exploitation on the environment there" (Entrepreneurs and commercial companies).

New forms of nature protection

The essence of this problem is disagreement over the establishment of new ecological areas and nature reserves, particularly regarding their compatibility with existing development plans and activities. The main actors in this conflict were local government authorities and representatives of scientific and

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research institutions as well as the authors of the conservation plan. The arguments put on the table concerned "right of ownership" – i.e. the location of areas on private land, but also generally pointed to the lack of a need to duplicate forms of nature protection in a given place if the existing ones do not have a positive effect. It is a classic conflict of interests – competition for a specific good, space in this case, but one can also find the aspect of values in it. The statements highlight the tensions between conservation efforts and development priorities, emphasizing the need for balance and compromise in implementing new forms of nature protection.

Examples of statements illustrating the conflict

"We do not consent to the creation of the Popioły – Rewskie Błota ecological site (…). The development and tidying up of this area can be reconciled with the protection goals of the Park, and the creation of the site will exclude such a possibility" (Local government authority).

"There is no consent to expand the ecological use of Torfowe Kłyle in the area of Polna street – there is a conflict with the investment plans of the city – this is the only development area of Jastarnia covered by the local spatial plan and designated for the functions of residential and service development, sports and recreation, landscaped greenery, beaches, road transport facilities – parking lots, public roads (local streets, access streets, public pedestrian and driving routes, public pedestrian and pedestrian/bicycle routes)" (Local government authority).

Surveys

The majority of respondents (69%) taking part in consultations in the area of the Słupsk Bank indicated restrictions primarily on conducting business activities as the cause of conflicts in protected areas located at sea. 56% indicated unclear division of competences between the authorities managing the area, local government authorities and environmental protection authorities, and blurred responsibility. More than half (53%) – lack of conversations and debates with residents/users of the protected area or ineffectiveness of these debates. One of the respondents specified "Politics and society's incompetence, general negation of the role of science" as the determinant of conflicts.

Respondents from the area of the Seaside Landscape Park most often indicated: unclear division of competences between the authorities managing the area, local government authorities and environmental protection authorities, blurred responsibility (74%), urbanization pressure in the land part of the area affecting the state of the environment at sea (62%), tourism development (56%), and lack of conversations and debates with the inhabitants/users of the protected area or the ineffectiveness of these debates (53%). Restrictions on running a business were indicated by only 18% of respondents as the cause of conflicts.

According to 53% of respondents from the Słupsk Bank area and 56% from the Seaside Landscape Park area, all conflicts were identified during the development of the protection plans, while 6% and 26% of people, respectively, are of the opposite opinion. In the case of the Seaside Landscape Park, the following statement seems to be accurate: "For such a complex space, it is impossible to capture all conflicts". Respectively, 41% and 18% of respondents have no opinion on this subject.

In the opinion of stakeholders, the best way to resolve these conflicts is ongoing mediation between the conflicting parties, environmental education, and more effective flow of information between the protected area managers and residents/stakeholders. In the Seaside Landscape Park area, more than half of the respondents further indicated financial compensation for restrictions related to protected area (e.g., limits on fishing activities or damages caused by animals).

DISCUSSION

Causes and actors

The analysis notes from the participatory meetings that were held between 2010 to 2015 as part of the preparation of management plans for terrestrial

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Natura 2000 areas in Poland, taken by Maczka et al. (2021), lead to the conclusions that a clear source of conflict could be attributed to a particular groups of stakeholders. Plan managers and scientists were the groups most vocal in this regard. Relationships as a source of conflict dominated at meetings. The meetings, however, focused mostly on administrative arrangements and management plan details which was described as structure or data sources of conflicts. This included, for example, the discussion about the allocation of responsibility for particular actions within a Natura 2000 area or the provision of financial incentives for nature conservation. Sources of conflict pertaining to values (for example, disagreement on what is more important in a particular situation: human well-being or nature conservation), were the least numerous (Maczka et al., 2021). In the research conducted for the author of this work relationship and structural conflicts have also been noted, however conflicts of interest were dominant.

Actors are a key part of this holistic approach, having a significant role in the policy making process. A useful definition of actors in the context of protected areas is as follows: "individuals who use the area in diverse ways for sustenance, recreation, or commercial purposes". According to this definition, local residents who use the area for sustenance, recreation, or commercial purposes are key users affected by the designation. When reviewing existing studies, focusing on what determines the public support of local communities for environmental policies, six broad categories of explanatory factors were identified: social capital, values, norms and behavioral control, place attachment, social impacts and socioeconomic attributes (Jones et al., 2022).

Cánovas-Molina & García-Frapolli (2020) pointed out that 16 common factors or causes underlying the manifestations of conflict and their relative incidence were discerned through the literature review. Six common sources of conflict in MPAs can be identified, present in more than 20% of the areas: "feelings of exclusion from the process", "inequities in the distribution of MPAs benefits", "lack of trust, transparency or communication", "illegal fishing", "conflicts between fishers and conservationists" and "conflicts between fishers and tourism". The less frequent with less than 10% incidence were "communities displacement", "presence of violence", "food insecurity and impoverishment of local communities", "conflicts between recreational and commercial fishers", "large infrastructures", "inter-institutional conflict" and "other" (Cánovas-Molina & García-Frapolli, 2020). In the cases analyzed in the paper (local scale), we are not dealing with either displacement, violence or food insecurity, but rather with structural and relationship conflicts as well as conflicts arising from various interests represented by different stakeholder groups. The key message of conflicts is contradiction. Among the contradictions analyzed in this work different expectations for socioeconomic development including spatial planning of marine and coastal areas were identified. It is strictly connected with aspects of interest – pro-ecological goals may be an unquestionable value for people, but their discrepancy with particular interests does not allow for their implementation and acceptance (Śliwińska, 2001).

Principles of the management of the protected area

Fishery is the main competitor of protected areas, which reflects the situation in other regions in the Baltic and elsewhere (Grip & Blomquist, 2020; Jones, 2001; Pedersen et al., 2009; Węsławski et al., 2011). This problem is difficult to manage on spaces whose qualities have sentimental or cultural value, which are linked to tradition or even to the idea of a particular place (Dmochowska-Dudek, 2013). It was found that impacts perceived by fishers were an explanatory parameter for the level of support of marine protected areas in the Mediterranean Sea (Jones et al., 2022).

The conflict occurring between Baltic Sea coastal fisheries and conservation of the grey seals, has been severe since the mid-1990s and continues despite attempts to find a more balanced situation (Svels et al., 2025). In the northern parts of the Baltic Sea, the viability and future of coastal small-scale fisheries are severely challenged by problems caused by fish-eating

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animals, mainly grey seals, and cormorants (Salmi et al., 2023) as was also pointed out in this work. Moreover, fishing is the sector most often displaced by off-shore energy investments (Kafas et al., 2018).

At the same time the declining importance of the fishing function in small ports implies the need to look for opportunities to fill the gap in the structure of port activities in, among other things, the tourism sector. This is reflected in documents developed by the local government of the Pomorskie Voivodeship (Pomorskie Biuro Planowania Regionalnego, 2021). The relationship between the landscape (including marine areas) and the tourists who use its values is complex: on the one hand, an appealing landscape attracts tourists and leads to favorable development, but on the other hand intensive tourist traffic contributes to the degradation of the visual qualities of the landscape, destroying one of the factors that is the cause of the formation of tourist functions (Kistowski & Śleszyński, 2010). Nature protection is in intense competition with recreation in shallow coastal bays (bathing, marinas, windsurfing). Moreover recreation is the most intensive in the short summer season (July and August), whereas it is also the most important period for seabird protection (Węsławski et al., 2010). Although during opinion polls, the expectation of communing with "unspoiled nature, and the opportunity to relax away from the crowd" appears in the declarations of most people, direct observations of the distribution of people on the beach, for example, do not confirm that tourists are ready to make an effort or give up something to realize these declarations (Węsławski et al., 2011). Often governments see conservation as a different way to enhance tourism and obtain revenue in their countries, and at the same time accomplish international conservation compromises having neither the will nor the resources to address their social aspects and implement efficient management (Cánovas-Molina & García-Frapolli, 2020).

Mineral deposits, including aggregates, can often be found in valuable natural areas. Regardless of the volume of mining and mineral extraction method, this type of activity has an adverse impact on the environment. Aggregates extraction disrupts the ecological balance of the area where it is performed as well as of the areas linked to it in ecological terms (Sobczyk et al., 2020). Geological exploitation (gravel and sand extraction) areas are in conflict with Natura 2000; this is obvious since shallow sand banks are a special habitat type (1110) that is protected by the EU Directive. These however, are also areas suitable for sea mining (Jegliński et al., 2009). In the case of offshore mining activities, the spatial aspect is crucial – it can be carried out exclusively in specific locations where resources are available, its allocation is impossible. Since minerals can only be excavated where their deposits are located, this poses a serious problem – especially where deposit sites overlap with Natura 2000 areas (Sobczyk et al., 2020).

Boundaries of the protected areas / new forms of protection

Already at the very beginning of the implementation of the Natura 2000 network in Poland, local communities were discouraged from the idea of this form of protection, due to the lack of basic information about the network and the failure of the decision-making process in the social aspect (Chmielewski & Głogowska, 2015; Falencka-Jabłońska, 2021; Piwowarczyk & Wróbel, 2016). This historical mistrust has transformed into conflict over the boundaries of protected areas and over the new forms of nature conservation identified in this work. The first stages of the implementation of the Habitats Directive were also marked by numerous conflicts in France, Germany, Finland, the UK and other European countries (e.g., Alphandéry & Fortier, 2001; Bogaert et al., 2009; Gibbs et al., 2007; Hiedanpää, 2002; Stoll-Kleeman, 2001). Currently, the borders of existing protected areas are not the problem in Poland, but disagreement about the establishment of new protected areas has been noted among some stakeholders. It is crucial in the context of the outlines of the "30 × 30" target which was recently agreed upon by the UN Biodiversity Conference (COP 15) (CBD, 2022). Therefore, it is important to gain a better understanding of the implications of such a policy for people and the environment, not only to ensure biodiversity conservation, but also to support and protect

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the rights and needs of people living within or close to protected areas (National Research Council, 1988).

The conflict of authority

Trust is expected to influence both attitude and active support in protected areas (Stern, 2008; Young et al., 2016), and it is linked to issues of transparency in the management of protected areas (Engen et al., 2018). Statements of the participants in the consultation meetings and data from surveys analyzed in this article suggest that there was a lack of mutual trust in the work on the conservation plans. Maczka (2021) comes to similar conclusions, indicating that in managing the trade-offs and conflicts between different values of sites, relationship conflicts prevail. In that cases strong emotions are expressed, misinterpretations and stereotyping are revealed. The understanding of scientific arguments requires preparation; without even a minimal level of understanding of ecological relationships, effective communication is not possible (Dutkowski, 2021). Moreover, actors offered divergent interpretations of the same piece of research, emphasizing different findings and outcomes (Hodgson, 2019). This can result in a similar effect to what was observed in this work: whilst some may look to research-based knowledge as the bringer of truth, its interpretation by different actors may exacerbate existing rifts between stakeholders, and further polarize their opposing perspectives. Mitigation strategies should be sensitive to this, and aim to improve the inclusiveness and transparency of knowledge transfer and decisions processes (Hodgson, 2019).

Conflict resolution and mitigation strategies

Conflicts are an inevitable part of policy making (Bockstael et al., 2016). Participation in conflicts can play a key role i.e. exposing groups to different arguments and offering the potential to learn more about the interests of others (Schroeter et al., 2016).

Resolving social conflicts related to environmental issues requires multilateral interaction and stakeholder participation (Saarikoski et al., 2024). People anticipated the social benefits linked with protected areas. The perceived benefits and expected impacts are influenced by how often and in what ways people utilize natural resources from a protected area. Furthermore, risk perceptions can also be influenced by people's proximity to a protected area. An individual's occupation is also significant, as it typically determines the level of dependence on natural resources, which is another second-tier parameter in the socio-ecological systems framework (Jones et al., 2022). People involved in agricultural and fishing activities are often the ones whose livelihoods are more affected by changed governance arrangements, usually leading to negative perceptions and opposition towards the protected area (Bennett & Dearden, 2014). In the context of marine areas, financial support is considered an important tool in preventing and resolving conflicts. For example, in Estonia, fishers receive 80% reimbursement for investments in seal deterrents (Svels et al., 2022, Svels et al., 2025). Expectation regarding financial compensation also appears among some respondents alongside the need for proper communication during public consultation processes.

As van Putten et al. (2023) concluded, a lack of productive ways of dealing with latent and active conflicts may hamper or obstruct blue economy developments that are compatible with other interests, values, needs. Recognizing how central the role of relationship issues is in conflict generation and resolution could help Natura 2000 managers to anticipate the conflicts better and prepare acceptable solutions (Maczka et al., 2021).

CONCLUSIONS

Within this study, four fields of conflict were identified: those concerning the boundaries of the protected areas, the conflict of authority, conflicts concerning the principles of the management of the protected area and finally, the development of new forms of protection. It has been established that the source of the majority of the conflicts was the particular interest of individual stakeholders. Moreover, the conflicts of structural matters, information, relationship and values were specified.

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The attitude, belief and behavior of the public consultation's participants played a considerable role in the investigated conflicts. A long-standing crisis in their relationship contributed to the conflict's escalation. Some of the conflicts took the form of discussion or even struggle.

The conditions and contradictions underlying the conflicts vary from area to area and are spatial (boundaries), economic (human activities carried out versus conservation goals), scientific (dispute over environmental data) as well as cultural and ideological (the place of human beings in the natural system).

The conflicts relating to the analyzed marine areas are above all functional and arise from multiple, various uses of sea space (fishery, tourism and recreation, resource extraction, coastal protection), with obvious spatial restrictions, environmental conditions, and often, with lack of consistent legislation.

The course of the conflicts studied was influenced by differentiating access to knowledge and disparate evaluation of the data crucial for decision-making, but also by the opinion-forming participants of the public consultations.

It seems that there are greater chances for a compromise solution to the relationship or structural matters conflicts identified in the work than to the conflicts of values or interests. In the case of contradictions concerning the management of protected areas, the attitude of the stakeholders to nature or more precisely, the place of humans in the natural system is the key factor, and it is slowly evolving on a local scale.

Stakeholders' answers to the question concerning ways of mitigating conflicts indicate the important role of ecological education and proper communication in discussions on the topic of nature protection. Close cooperation at the stage of the development of protection plans or other documents regarding marine areas for which a public participation procedure is required (including EIA reports and forecasts, spatial development plans) can certainly minimize the intensity of conflicts, although it will not totally prevent them.

It should be expected that the nature of conflicts concerning marine protected areas will evolve alongside their socioeconomic development and following the implementation of new forms/conditions of spatial management within them.

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