GEOGRAPHY AND TOURISM, Vol. 5, No. 2 (2017), 123-131, Semi-Annual Journal
eISSN 2449-9706, ISSN 2353-4524, DOI: 10.5281/zenodo.1118198


**Barbara Osóch**
University of Szczecin, Faculty of Earth Science, e-mail: barbara.osoch@usz.edu.pl

# Diversity of social and environmental problems in the Szczecin Lagoon region

**Abstract**: Szczecin Lagoon and the surrounding lands are diverse in terms of physiography and the extent of resource use. A multitude of these factors causes inevitable conflicts related to the management of this limited space. The conflict of interest usually concerns the issues related to environmental aspects of the Lagoon and human activity. These problems are often caused by the infrastructure providing access to the port of Szczecin, urbanization of floodplains, construction of quays, water pollution, economic activity, i.e. fishing, seasonal mass tourism, reed harvesting. Natural processes have been subjected to strong human impact, resulting in the disappearance of the poorest forest communities, plant species of nature conservation value, decline of animal populations associated with the extensive use of wetlands as well as brackish and dry habitats.

Selected components of the geographical space of the basin were evaluated from the perspective of experience, emotions, needs and habits of its users – sailors. The objective of the research was to identify the problems of the aforementioned social groups in the Szczecin Lagoon, as well as to discuss the conflicts related to sailing in the waters of both the Small and Great Lagoon. The conducted analyses are based on the assumption that one and the same place may be a source of different types of experience for people. The perception and valorisation of the space by its users is the result of several factors, e.g. shared personal experience gained in similar material, social and cultural conditions.

**Keywords**: natural environment, social environment, transboundary area, Szczecin Lagoon, sailing.

## 1. Introduction

The Szczecin Lagoon is located in the West Pomerania Province and in Mecklenburg-Vorpommern. It covers a similar surface area on the Polish and German side (Hermach et al., 1994; Kilarski, 2009), but the two parts differ significantly in terms of physiography (Majewski, 1980; Osadczuk, 2004) and the extent of resource use (Radziejewska, 2008). It is the largest inland water body in Poland and one of the two cross-border water reservoirs in Poland, however, due to its location within the European Union, it is the only one where free international traffic takes place. The location on the border of two countries results in separate legal regulations governing sailors' licences and classification of vessels. It allows for various forms of water activity: passenger ferry navigation, cargo ferry shipping, sailing, motor boating, kayaking, windsurfing, kitesurfing and other disciplines. Administratively, the Polish waters of the Szczecin Lagoon are classified as internal sea waters [Ustawa z dnia 21 marca 1991 roku o obszarach morskich Rzeczypospolitej Polskiej i administracji morskiej (Act of March 21, 1991 on Maritime Areas of the Republic of Poland and Maritime Administration) (Dz. U. of 2003, No. 153, item 1502 with further amendments), while German waters – as inland waters. Significant diversity of natural (Wojciechowski, 1986; Torbe and Rabski, 2008) and cultural values (Łęcki, 2005) is observed on the Polish and German side.

A variety of nautical conditions results from the unique combination of sea and inland waters, which along with the structure and shape of reservoirs create favourable conditions for sailing by people with varying experience (Dąbrowski et al., 1998; Kolaszewski and Świdwiński, 2008; Kuliński, 2012).

The Lagoon is also a place where interests of different social groups meet – groups involved in cargo shipping (Marszałek, 2010) and passenger transport, fishing, angling, agriculture, urban development, environment protection (Kostrzewski et al., 1995) and tourism (P*rogram turystycznego rozwoju akwenów*, Pawlicz, 2014). All of these areas coexist with each other in the reservoir. The aforementioned social conflicts are demonstrated in this paper through the eyes of one of the social groups using the Szczecin Lagoon waters – sailors. Environmental problems are presented on the basis of environmental inventory, interviews with sailors as well as collected and selected factual bibliographic material corresponding to this issue.

## 2. Methodology, territorial and temporal scope of the study

The research involved the use of all available primary and secondary data sources. The secondary information used for the purpose of this study includes, inter alia, reports, audits, studies, land development and land use projects of the Maritime Office, the Regional Water Management Authority, the Institute of Tourism of the city of Szczecin, the Regional Directorate for Environmental Protection, the Regional Fund for Environmental Protection, nature conservation forms, statistical data of national and regional sailing associations and organizations, unpublished quantitative reports of Polish and German marinas. To collect the primary data, selected methods and techniques of social research (triangulation method) were


**Figure 1**. Study area

Source: www.boote-magazin.de/reviere/deutschland/stettiner-haff-peenestrom-und-peene/a40487/fotostrecke/1203323/1148581.html

used (Denzin, 2006; Smith, 2010): overt and covert, participatory, organized and spontaneous observations (Sztumski, 2005), surveys using questionnaires, direct interviews and interviews with experts (Trochim, 2002; Punch, 2005). The questionnaire used consists of 39 questions, of which 10 are sociodemographic questions. They are mostly closed single and multiple choice questions, including a matrix with a specific number of columns and answers, a semantic matrix for which answers may lie on two opposite poles (depicting emotions, feelings and evaluation) and open questions. For the purpose of this study, the analysis covers only some of the questions from the questionnaire. Along with the inventory of tourist-sailing infrastructure, the study was conducted in several Polish and German marinas during three consecutive sailing seasons 2010–2012 (Fig. 1). The text of the paper corresponds to the published monograph (Osóch, 2015) and its supplement. A group of 800 respondents were sailors navigating the Szczecin Lagoon and Lake Dąbie. It was assumed that one and the same location can be a source of different types of experience for different people. The perception and evaluation of the space by its users is a resultant of a series of factors, e.g. shared personal experience gained in similar financial, social and cultural conditions, or shared experience gained as a result of the exploration of the same terrain. A seemingly homogeneous water body with similar parameters, with balancing elements of the natural and cultural environment, was evaluated differently by Polish and German sailors.

## 3. Results

Selected characteristics of the sociodemographic structure of respondents are presented in Table 1. The evaluation concerned the attractiveness of the Szczecin Lagoon (Tables 2 and 3). According to 48% of Poles and 54% of Germans, the attractiveness was largely owed to nature surrounding the Polish part of the Lagoon (Fig. 2). The second factor determining the attractiveness of this part of the reservoir is good preparation and navigation signage on the water. For the Germans, the size of the Lagoon was significant, because it allows cruises lasting many days. The Poles appreciated the high attractiveness of the land zone more.

Negative opinions about the Polish part of the Lagoon expressed by Poles referred to the insufficient number of marinas, and consequently to large distances between marinas. The existing marinas do not meet the expectations of sailors, when making comparisons with the high standard of marinas abroad (as many as 46% of the responses from Polish sailors). Water contamination is also an issue that is not conducive to spending leisure time on the water. The Germans noticed the excessive number of fishing

**Table 1**. Sociodemographic structure of respondents

| | | |
|---|---|---|
| Nationality | Poles 64% | |
| | Germans 34% | |
| Sex | man 79% | |
| | woman 21% | |
| Age: | Poles | Germans |
| under 19 | 19% | 0 |
| 19–25 | 22% | 2% |
| 26–35 | 23% | 3% |
| 36–45 | 14% | 15% |
| 46–55 | 10% | 26% |
| 56–65 | 11% | 30% |
| over 65 | 1% | 24% |

**Table 2**. Sailing attractiveness of the Polish part of the Szczecin Lagoon according to sailors (%)

| | attractive | undecided | unattractive |
|---|---|---|---|
| Poles | 74.5 | 9.5 | 16.0 |
| Germans | 71.4 | 14.3 | 14.3 |

**Table 3**. Sailing attractiveness of the German part of the Szczecin Lagoon according to sailors (%)

| | attractive | undecided | unattractive |
|---|---|---|---|
| Germans | 90.0 | 0.65 | 9.35 |
| Poles | 65.2 | 28.30 | 6.50 |

nets and the insufficient depth of the reservoir, which make it difficult to manoeuvre and navigate by a keel boat (as many as 48% of the respondents).

According to the Germans, the attractiveness of the Lagoon is primarily due to surrounding nature, proper infrastructure of the coast, marinas as well as their multitude and diversity (cosy, large, natural, municipal, private) (Fig. 3).

Poles appreciated the German side of the Lagoon primarily (as many as 30% of the Polish respondents and only 14% of the Germans) due to the quality of services provided in ports, high-end development of wharfs and multitude of marinas within the basin.

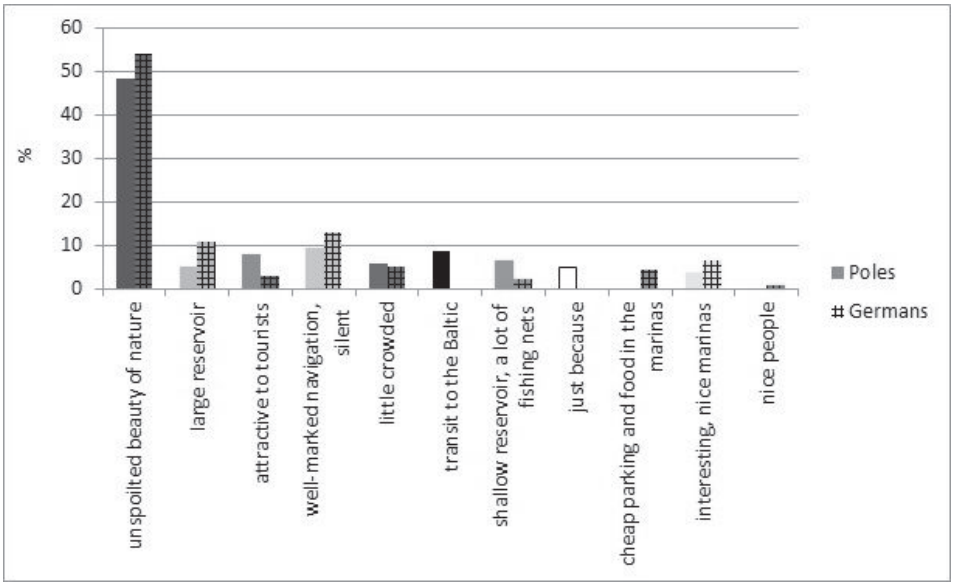


**Figure 2**. Attractiveness of the Polish part of the Szczecin Lagoon according to nationality

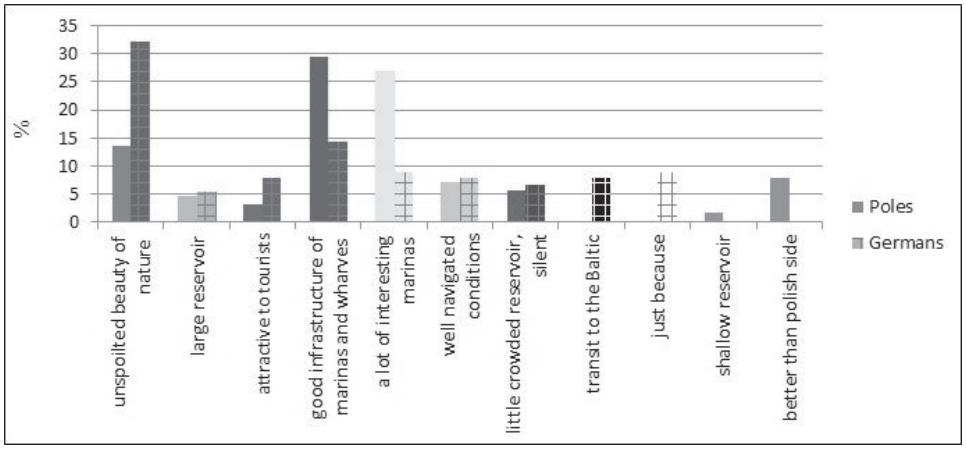


**Figure 3**. Attractiveness of the German part of the Szczecin Lagoon according to nationality

## Environmental conflicts in the Szczecin Lagoon

Despite certain signalled landscape and cultural differences between the Polish and German parts of the Lagoon, the region has some common characteristics, inter alia, a similar surface area constituting the national system of protected areas, amounting to nearly 20% of the total area of the West Pomerania Province and Mecklenburg-Vorpommern (Ustawa o ochronie przyrody z 16 kwietnia 2004). On the basis of the conducted analyses, conflicts between man and environment as well as between man and man were identified. Some of them arise from natural causes, independent from humans, but a substantial proportion of them results from human activity and its interference in the natural envi-

ronment, not accounting for the cross-border location.

Destruction of fish schools by flocks of grey herons and cormorants – even though a single bird is able to satisfy its daily needs with a small amount of approximately 0.5 kg of fish, frogs, molluscs, insects, bird eggs, the entire flocks of birds, on the other hand, severely ravage fish schools, which is a constant concern for fishermen. Moreover, they plunder tree crowns, using leaves as a material to build their platform nests and cause further destruction with nitric compounds in their droppings, making their colonies look like "a conflagration site" (Torbe, 2005). Paradoxically, the sights offers exceptional scenic and educational values for sailors.

Eutrophication of the coastal zone, i.e. overfertilization of waters is a consequence of unregulated sewage management, improper use of fertilizers, intensive animal production (Stan środowiska w województwie zachodniopomorskim, 2014). The discharge of pollutants into the aquatic environment results in the blooming of blue-green algae. The phenomenon is caused by persistent high temperature. The blooming causes poisoning in cattle, aquatic birds and fish, hindering the development of spawn and preventing tourists from bathing.

Excessive crowding of frequently illegal fishing tackle – poaching, leads to excessive exploitation of fish populations (pike, pikeperch). The decline of those shoals contributes to, inter alia, further growth of the above-described algae, whose only natural enemy are daphnia, eaten by those predatory fish. They pose a navigational risk for "water sports enthusiasts". The uncontrolled growth of blue-green algae reduces the bathing values of the surveyed reservoirs.

Wind farms – wind turbines of wind power plants, e.g. in the vicinity of Wolin, constitute a threat to passing birds. During the day and night, they offer an excellent navigational mark, but also a tourist attraction on land and water.

Mass tourism on land – thanks to the fact that a larger part of the Szczecin Lagoon is far from business centres, the cultural landscape close to nature has been preserved. There are many seaside resorts here, along with picturesque villages integrated into the rich landscape of the region, which is conducive to intense seasonal tourist traffic, of which both the West Pomerania Province and the land of Mecklenburg-Vorpommern are famous. Mass tourism chiefly translates into the impact on the coast and beaches, cliffs, dunes and certain parts of forests, littering, and coast development. The growing number of holidaymakers leads to increasing pressure of recreational infrastructure, often at park borders, e.g. in the vicinity of Wisełka and Lubin. Similarly to other regions exploited by tourism, the impact of mass tourism does not contribute to proper conditions of the coastal zone ecosystem. An example of such pedestrian and bicycle traffic channelling for the purpose of protecting natural resources (coastal dunes overgrown with thickets) was the construction of a cross-border promenade between Świnoujście and the municipality of Heringsdorf, fitted with nature information boards, vantage points and observation platforms, sanitary facilities as well as fortified entryways onto the beach (http://www.swinoujscie.pl/pl/contents/content/563/7847).

Mass tourism on water – mass tourism is not practiced on the waters of the Szczecin Lagoon, therefore the problem of its impact on the environment does not exist yet. Intensive vessel traffic on sailing routes running across the Świna delta may potentially constitute a threat to fauna and flora of protected habitats that occur there. The entire above-specified area is covered by the quiet zone. No motorboating sports and no diesel-engine driven boats are allowed in the area. It is also a zone inaccessible to aviation sports (mainly powered hang gliders and hang gliders). Unfortunately, the ban is frequently violated.

Water lane dredging – the Szczecin–Świnoujście water lane is completely artificial, which due to its location runs across a highly diversified area of great nature conservation value. It runs through artificial canals and cross-cuts, dredged waterways and sections formed in the Oder River bed. Almost the entire fairway is located within the Natura 2000 area. Its deepening up to 12.5 m will provide opportunities for economic and social development, including economic and social mobilization in the regions of Central and Southern Europe, reducing the time and distance for cargo and passenger transport across Western Europe along its shores, increasing the speed and volume of

trade between the Baltic Sea and the Mediterranean Sea, restoring the Oder waterway status by improving its navigability and implementing the Oder–Danube canal, implementing the logistics operations and construction of new infrastructure at CETC (Central European Transport Corridor) logistics hubs, increasing the demand for the workforce, not only in the area of port transhipments, but also in areas of economic activity related to the operation of sea ports. In terms of terrestrial environment protection, it will be an alternative to intensive road transport. Whereas it may constitute a burden for the aquatic environment (benthic flora and fauna), due to the exposure of deeper deposit formations (Studium przyszłych społeczno-ekonomicznych efektów pogłębiania toru wodnego Szczecin-Świnoujście do 12,5 m). Dredging also involves widening of the water lane, thus increasing the surface transformed by man and reducing the natural habitats on the bottom of the reservoir. For sailors, it will be another advantage of travelling in the Polish part of the Szczecin Lagoon. The element of uncertainty regarding the draught of all tourist vessels unadjusted to the water lane depth will be eliminated.

## 4. Discussion

The problem of tourist behaviour has been widely reflected in the achievements of Polish researchers, geographers dealing with tourism. This topic was addressed by, among others, J. Latosińska (2006), A. Krzymowska-Kostrowicka (1995), J. Kostrzewa (1991), R. Wiluś (1991). The issue of tourism space and tourist behaviour has become the domain of many authors (Miossec, 1977). The best known Polish author dealing with this issue is S. Liszewski (1995). According to this author, space is the basis of tourism:

- geographic: "measurable space covering the natural elements of the Earth's crust, for example the atmosphere, the hydrosphere, the biosphere and the lithosphere, and the permanent investment of this crust as a result of human activity", or "qualitatively differentiated surface of the Earth";
- economic, socio-economic, social, geodetic.

Sailor's responses correspond to the factual state and natural conditions existing in the Szczecin Lagoon. Each of the identified shortcomings constitutes a separate point of view of individual groups of stakeholders. On the one hand, it may create a difficulty or even a barrier to those navigating the Lagoon, on the other hand, it may be a source of unique landscape values, and from the point of view of environmental conservation, it may actually be an asset.

There is a consensus among the authors that sailing activity is one of the most popular forms of tourism and recreation. For many participants, this form of spending time is a unique opportunity to experience extraordinary emotions. It is one of the most pleasant ways to relax and get to know the landscape – a great way to learn resourcefulness and ingenuity in organizing life in a natural setting (Błacha and Klementowski, 2002; Łobożewicz, 1999; Tomsia 1991).

Despite the large number of vessels sailing in the Lagoon, their movement does not disturb the peace and quiet of the surroundings, due to the large surface area of the reservoir. On the Polish side, contrary to the German side, which according to the regulations is a lake area, we encounter heavy traffic of boats of various sizes, mass, draught and purpose. The sailing traffic is carried along the water lane and its presence is most perceptible in the naturally rich, exposed estuary region of the Oder in the vicinity of the Świna Regressive Delta, protected as a Natura 2000 site (http://obszary.natura2000.org.pl; www.natura2000ums.eu/servlet/grafika/file/materialy/materialy_wyniki_zalew_szczecinski/inwenraryzacja_Zalewy_3_obszary_na_www.pdf).

It should be remembered that the promotion of knowledge about places of nature conservation interest, such as the natural refuge, repeatedly rewarded by e.g. BirdLife International for the European Birds Refuge (IBA), the International Friends of Nature (Naturfreunde Internationale NFI) and "Landscape of the Year 1993-94", may cause tourism to intensify in

those areas that were previously included in the silence zone. And consequently, this may result in the exposure of protected areas to various threats, as P. Jabłoński (2013) has repeatedly warned in his work.

The greatest shortcoming of the Polish section of the water body is its insufficient depth, preventing the unobstructed movement of vessels. The investment in dredging of the water lane corresponds to the vision of "the Harnessed Oder", regulated, engineered, equipped with storage reservoirs, tight and high levees and other hydrotechnical structures, featuring numerous inland harbours, used for regular cargo transport, constituting part of the E30 International Waterway connecting the Baltic Sea with Bratislava on the Danube (Strategy of Maritime Economy Development).

Barriers to navigation include signage and unmarked fishing equipment including fishing nets, which frequently form an unexpected trap for keel sailing boats. They are most often used on the shallow waters of the bays (Szczecin Lagoon, Rügen island, Dąbie Lake). Their presence is indicated in the majority of tour guides and sailing portals (www.sailing-guide.eu).

The insufficient number of marinas within the Polish part of the Szczecin Lagoon is connected with the impossibility of developing the coasts, which results from the existing regulations on environmental protection. Another reason could be the fact that the unregulated, wild shores of the Lagoon do not meet the requirements that would enable their development for the purpose of sailing traffic with all the infrastructure, telecommunication, accommodation and tourist facilities. To disburden the penetrated shore of the Lagoon and in an attempt to make temporary arrangements for tourist purposes, the city of Szczecin completed an investment consisting of four "water corner spots" on Lake Dąbie, i.e. berthing spots for yachts and small recreational vessels (http://www.zagle.com.pl/wydarzenia/powstaly-pierwsze-szczecinskie-zakatki-wodne,1_15307.html).

Sailors pay a lot of attention to safety on the Lagoon waters. Although the signage on the water or when approaching the harbours is adequate, orientation assisted by a nautical chart is also of great importance, since it marks various navigational risks: depths, shape of the reservoir bottom or shoreline. In the case of the Szczecin Lagoon, this is very important because there are many shallow spots and shoals stretching around the shores. In such spots, mooring at the shore is difficult. The accumulation of a thick layer of organic deposits in the form of thick mud, into which one sinks knee-deep while wading through the water, discourages sunbathing on designated sunbathing beaches or outside them. This is the result of contamination with municipal and industrial sewage, characterised by increased content of nitrogen and phosphorous, discharged into the Oder along its entire course. Remaining away from the sources of pollution, with undisturbed water, in secluded coves, in wild, multi-coloured, diverse nature, one would wish to swim in the Lagoon waters that evoke the sense of security and pleasure.

The last of the identified shortcomings of the German part of the Szczecin Lagoon is the inability to communicate with marina staff in a language other than German. This is troublesome for foreign travellers. Polish marinas are more favourable in this respect. Providing the possibility of communicating with foreign-speaking guests is one of the main objectives of the Polish marinas. This is not just an official regulatory requirement, but a compliment towards visitors. Moreover, many marina leaflets, instructions and information guides are provided by Tourist Information Centres to arriving guests (including tourist guides) in two- or three-language versions.

## 5. Summary and conclusions

On the basis of the comparative characteristics of the expressed opinions, a variety of sailors' behaviour was found, which results from the diversified social and demographic structure. Depending on the nationality and age, the perception of the environment changes, along with the expectations and requirements regarding the areas where we spend our leisure time intentionally and willingly. The sailors found both the Polish and German part of the Szc-

zecin Lagoon interesting in terms of tourist and sailing aspects, but each nationality for different reasons. Certain impediments to free sailing were noted. German sailors remarked on the conflict of depth limitations. Polish sailors clearly emphasise the problem in the relationship between sailors and fishermen. Although the improved development and maintenance of marinas themselves may change in the nearest future, the sailors' expectations and needs related to the development of wild shores surrounding the Szczecin Lagoon will not have a satisfactory resolution in the future. This is due to the fact that most of the reservoirs and adjacent areas are covered by various forms of nature conservation, which frequently reduce any construction interventions. The water body and its surroundings are intensively used by social groups involved in transport, commercial, agricultural, industrial, construction, scientific and tourist activities. It is worth mentioning that despite different priorities and completely different specifics of the above-listed specialisations, they all function within the limited space of the water reservoir, mutually modifying their behaviour with regard to the priorities declared by stakeholders. Any emerging conflict situations lead to consequences enforced through mediation and, as a result, standards of conduct for the future are developed. It should be emphasised that all these forms of activity coexist and overlap with each other. Everything is bound together by the regulations governing the rights and obligations of all those who use the Szczecin Lagoon.

## References

Błacha R., Klementowski K., 2002. Stan i uwarunkowania rozwoju turystyki żeglarskiej w Polsce. AWF, Wrocław [In Polish].

Dąbrowski Z., Dziewulski J., Berkowski M., 1998. Vademecum żeglarstwa morskiego. Alma-Press sp. z o.o. [In Polish].

Denzin N., 2006. Sociological Methods: A Sourcebook. Aldine Transaction.

Hermach M., Lipok A., Kalita K., 1994. Jachtem po Zalewie Szczecińskim. Computer Originals, Szczecin [In Polish].

Jabłoński P., 2013. Delta Świny – między ochroną a gospodarką. [In:] Bożek G. (Eds.), Dzikie życie. Wydawnictwo Stowarzyszenie Pracownia na rzecz Wszystkich Istot, Bystra, 7-8, 229-230 [In Polish].

Kilarski Z., 2009. Szlak wodny Berlin-Szczecin-Bałtyk. Przewodnik dla żeglarzy i turystów wodnych. Wydawnictwo Artdeco, Szczecin [In Polish].

Kolaszewski A., Świdwiński P., 2008. Żeglarz jachtowy. Alma-Press sp. z o.o., Warszawa [In Polish].

Kostrzewa J., 1991. Wyjazdy wycieczkowe mieszkańców Łodzi jako forma wypoczynku poznawczego. Turyzm 1(2), 33-54 [In Polish with English abstract].

Kostrzewski A., Kolander R., Szpikowski J., 1995. Zintegrowany monitoring środowiska przyrodniczego. Raport o stanie środowiska w województwie zachodniopomorskim w latach 2006-2007. Wojewódzki Inspektorat Ochrony Środowiska w Szczecinie, http://bip.wios.szczecin.pl/bip/files/710848BABA094439892ABF4D2597C302/XI_Zintegrowany_Monitoring_%C5%9Arodowiska_Przyrodniczego.pdf [In Polish].

Krzymowska-Kostrowicka A., 1995. Z problematyki badawczej zachowań turystyczno-rekreacyjnych w środowisku przyrodniczym, The research of the tourist and recreation behaviors in the environment. Turyzm 5(2), 65-75 [In Polish with English abstract].

Kuliński J., 2012. Praktyka bałtycka na małym jachcie. Wydawnictwo Nowator, Kartuzy, [In Polish].

Latosińska J., 2006. Tourism Space – One Concept, Two Meanings: Reflections on Indyvidual Tourism Space. Turyzm 16(2), 93-98 [In Polish with English abstract].

Liszewski S., 1995. Przestrzeń turystyczna. Turyzm 5(2), 87-103 [In Polish].

Łęcki W., 2005. Kanon krajoznawczy Polski. Wydawnictwo PTTK Kraj, Warszawa.

Łobożewicz T., 1999. Miejsce turystyki kwalifikowanej i aktywnej w całokształcie ruchu turystycznego. [In:] Łobożewicz T., Kogut R. (Eds.), Turystyka aktywna-turystyka kwalifikowana. DRUK TUR, Warszawa [In Polish].

Majewski A., 1980. Ogólna charakterystyka Zalewu Szczecińskiego. [In:] Majewski A. (Eds.), Zalew Szczeciński. Wydawnictwa Komunikacji i Łączności, Warszawa, 17-25 [In Polish].

Marszałek E., 2010. Odra jako szlak komunikacyjno-transportowy oraz turystyczny. [In:] Plit J. (Eds.) Krajobrazy kulturowe dolin rzecznych. potencjał i wykorzystanie. Prace komisji krajobrazu kulturowego 13. Komisja krajobrazu kulturowego PTG, Sosnowiec, 204-216 [In Polish].

Miossec J.M., 1977. Un modele de l'espace touristique. L'Espace geographique 1, 41-48 [In French with English abstract].

Osadczuk A., 2004. Zalew Szczeciński. Środowiskowe warunki współczesnej sedymentacji lagunowej. Wydawnictwo Naukowe Uniwersytetu Szczecińskiego, Szczecin [In Polish].

Osóch B., 2015. Sailing infrastructure and components of natural environment in the transboundary area of the Szczecin Lagoon in sailors opinion. Wydawnictwo Volumina.pl, Szczecin.

Pawlicz A., 2014. Szwedzki trakt jako przykład produktu turystyki kulturowej w obszarze Zalewu Szczecińskiego, http://www.academia.edu/17299473 [In Polish].

Program turystycznego rozwoju akwenów i terenów nadwodnych Szczecina w ramach projektu „Lepsze zarządzanie mariną, konsolidacja sieci portów i marketing turystyki wodnej w obszarze południowego Bałtyku – „MARRIAGE". Praca zbiorowa pod kierunkiem Tomasza Studzienieckiego, http://bip.um.szczecin.pl/konsultacje/files/ 2721C4BE756E4D9BAAA7022F64896815/Program_Szczecin_FINAL4_.pdf [In Polish].

Punch K., 2005. Introduction to social research, quantitative and qualitative approaches, second edition. SAGE Publication, London.

Radziejewska T., Schernewski G., 2008. The Szczecin (Oder-) Lagoon. [In:] Schiewer U. (Eds.), Ecology of Baltic Coastal Waters. Springer, Berlin Heidelberg.

Smith S., 2010. Practical Tourism Research. Wydawnictwo CABI, Oxfordshire, UK.

Stan środowiska w województwie zachodniopomorskim. Raport 2014. Praca zbiorowa. Wojewódzki Inspektorat Ochrony Środowiska w Szczecinie. Szczecin. Data publikacji 31.12.2014 r, [In Polish].

Studium przyszłych społeczno-ekonomicznych efektów pogłębiania toru wodnego Szczecin-Świnoujście do 12,5 m., 2010. Opracowanie zbiorowe. Instytut Analiz, Diagnoz i Prognoz Gospodarczych, Szczecin, http://port.szczecin.pl/files/port/do_pobrania/ 12,5_spoleczno-ekonoczne_I.pdf [In Polish].

Sztumski J., 2005. Wstęp do metod i technik społecznych. Wydawnictwo Naukowe „Śląsk". Katowice [In Polish].

Tomsia J., 1991. Turystyczne szlaki województwa szczecińskiego, Przewodnik. Wydawnictwo COIT - oddział Szczecin [In Polish].

Torbe M., 2005. Przyroda wokół Zalewu Szczecińskiego. Wydawnictwo Buchalter, Szczecin [In Polish].

Torbe M., Rabski K., 2008. Wokół Zalewu Szczecińskiego. Oficyna IN PLUS, Szczecin [In Polish].

Trochim W., 2002. Types of Surveys, Research Methods Knowledge Base. http://www.socialresearchmethods.net/kb/survtype.php.

Ustawa z dnia 16 kwietnia 2004 roku o ochronie przyrody, Dz. U. z 2004 r. nr 92, poz. 880, http://szczecin.rdos.gov.pl/formy-ochrony-przyrody [In Polish].

Ustawa z dnia 21 marca 1991 roku o obszarach morskich Rzeczypospolitej Polskiej i administracji morskiej, Dz. U. z 2003 r., nr 153, poz. 1502 wraz z późn. zm. [In Polish].

Ustawa z dnia 18 lipca 2001 roku Prawo wodne, Dz. U. z 2012 r. poz. 145 [In Polish].

Wiluś R., 1991. Wyjazdy na grzybobrania jako forma wypoczynku mieszkańców miast. Przykład Łodzi. Turyzm 1(1), 55-71 [In Polish].

Wojciechowski K., 1986. Problemy percepcji i oceny estetycznej krajobrazu. Uniwersytet Marii Curie-Skłodowskiej, Lublin [In Polish].

**Internet sources**:

http://obszary.natura2000.org.pl

www.natura2000ums.eu/servlet/grafika/file/materialy/materialy_wyniki_zalew_szczecinski/inwenraryzacja_Zalewy_3_obszary_na_www.pdf

http://www.swinoujscie.pl/pl/contents/content/563/7847 - inwestycje 2012

http://www.zagle.com.pl/wydarzenia/powstaly-pierwsze-szczecinskie-zakatki-wodne,1_15307.html

www.sailing-guide.eu