The Baltic Sea region is one of the most developed and well-formed regions of international cooperation. It is a place for promoting collaboration between businesses, non-profits, public authorities, and municipalities of the countries located on the Baltic Sea coast and its adjacent territories. The Baltic Sea region has both unresolved problems and potential for development. This necessitates the identification of the Baltic Sea region territory having a capacity for the efficient development of mutually beneficial intergovernmental and international ties. A thorough overview of research literature, the implementation of international programmes and initiatives of international and intergovernmental organisations, and the application of the method of cartographic analysis have contributed to defining the territory of the Baltic region. The analysis shows three spaces that differ in the effect of the Baltic Sea on their territorial development. This approach proposes three definitions of the Baltic Sea region — a narrow, an extended, and a broad one, each serving a different purpose and being characterised by a different density of internal connections. According to the narrow definition, the region comprises the whole territories of Sweden, Denmark, Finland, Lithuanian, Latvia, and Estonia and the coastal parts of Russia, Germany, and Poland. The extended definition adds the remaining part of Poland, most Russian and German regions, and Belarus and Norway. The broad definition of the Baltic region incorporates Iceland, some territories of Russia, Germany, the Czech Republic, Slovakia, and Ukraine.

**Key words**: Baltic Sea region, Baltic sea, catchment area, coastal zones, zones of attraction, international cooperation

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1 Immanuel Kant Baltic Federal University.  
14 A. Nevski St., Kaliningrad, 236041, Russia  
2 Gdańsk University  
4 Bażyńskiego st., Gdańsk, 80—952, Poland  
3 Gdynia Maritime University  
81—87 Morska st., Gdynia, 81—225, Poland

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1. The scope of the concept of the Baltic Sea

The term “the Baltic Sea” was probably first used in the 11th century by German chronicler Adam of Bremen for describing a part of today's Baltic Sea [39]. Over time, the meaning of the term "Baltika" has changed, and many new terms denoting the Baltic Sea have emerged (see Table 1).

**Table 1**

The Term "Baltic Sea" in Selected Languages

<table>
<thead>
<tr>
<th>No.</th>
<th>Language</th>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>English</td>
<td>Baltic Sea</td>
<td>Baltic Sea (&quot;the sea of the Balts&quot;)</td>
</tr>
<tr>
<td>2</td>
<td>Belorussian</td>
<td>Baltyjskaje Mora</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Latvian</td>
<td>Baltijas jūra</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Lithuanian</td>
<td>Baltijos jūra</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>French</td>
<td>Mer Baltique</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Spanish</td>
<td>Mar Baltico</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Polish</td>
<td>Morze Baltyskie</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Russian</td>
<td>Baltiyskoye More</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>German</td>
<td>Ostsee</td>
<td>Eastern Sea</td>
</tr>
<tr>
<td>10</td>
<td>Danish</td>
<td>Østersoene</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Norwegian</td>
<td>Østersjøen</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Swedish</td>
<td>Östersjön</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Finnish</td>
<td>Itämeri</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Icelandic</td>
<td>Eystrasalt</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Estonian</td>
<td>Läänemerri</td>
<td>Western Sea</td>
</tr>
</tbody>
</table>

Source: own research.

The Baltic Sea is an inland one, as it is connected to the North Sea and then to the Atlantic Ocean not directly but by narrow straits of Öresund, the Great Belt, the Little Belt, the Kattegat, and the Skagerrak. However, no clear consensus exists on the subject of the maritime boundaries of the Baltic Sea. It can be seen as such — without any straits (Variant 1, Fig. 1). However, for practical purposes, straits are often considered to be a part of this sea. Therefore, it is widely believed that the North Sea includes Skagerrak, while the Baltic Sea includes all the other Danish straits. Nevertheless, there are different opinions on the placement of the demarcation line between the Skagerrak and the Kattegat (Variants 2 and 3, Fig. 1). Sometimes the Baltic Sea even includes the Skagerrak (Variant 4, Fig. 1).

From the perspective of the BSR composition, it is expedient to draw its boundary between the Kattegat and the Skagerrak. This way, the rivers flowing into the Kattegat Strait can be considered the rivers of the Baltic Sea basin. Variants 3 and 4 in the legend to Figure 1 reflect this idea. In alternative 5 the Baltic Sea includes the Skagerrak.
2. Physiographic definitions of the Baltic Sea Region

2.1. Delimitation of the Baltic Sea Catchment Area

From the physiographic point of view, the Baltic Sea Catchment Area is a starting point for defining the BSR [55; 74; 82].

The size of the Catchment Area can vary considerably depending on which (if any) of the Danish straits the author includes into the Baltic Sea (Fig. 2). According to Brogmul, it has an area of 1,634,000 km² [80], Mikulski claims it is 1,721,000 km² [26], and S. V. Korotkova's estimation is 1,721,233 km² [9]. In HELCOM publications it is both 1,740,000 km² [36] and 1,720,270km² [35]. The latter is the most frequently used figure. [45; 59; 63; 76].
Fig. 2. The Baltic Sea Catchment Area
A — the Baltic Sea without the Danish straits according to [1]
B — with the Kattegat strait according to [3; 74]
C — with the Kattegat strait according to [16]
G — with the Skagerrak strait according to [57; 73]
The Baltic Sea Catchment Area includes the territory of 14 countries. Nine of them border the Baltic Sea (Russia, Germany, Poland, Sweden, Denmark, Finland, Lithuania, Latvia, Estonia), Norway borders only the Danish straits, while four others (Belarus, Czech Republic, Slovakia and Ukraine) are not situated on the Baltic coast. The largest part of the Catchment Area (93.2%) is located in the countries adjacent to the Baltic Sea. Figure 3 shows the size of the Baltic Sea Catchment Area in each of these countries. The largest share is in Sweden (26.6%), the smallest is in Slovakia (0.1%). Germany has the smallest share of the Catchment Area among the countries bordering the Baltic sea (14.3%).

![Fig. 3. The Baltic Sea Catchment Area broken down by countries](image)

Source: [45].

### 2.2. Definition of 50- and 200-km zones of attraction of the Baltic Sea

The proximity of the sea is one of the major factors determining population distribution and influencing territorial development. Most authors identify two zones of attraction of the sea. One is a 50-km coastal zone directly and thus strongly affected by the sea, and a 200-km zone with indirect impact dominating outside the 50-km zone [2; 3; 12; 17; 18; 20; 44; 51].

Figure 4 shows both of these zones of the Baltic Sea (with its water boundary being the borderline between the Kattegat and the Skagerrak straits according to Helcom, the Baltic Sea Programme 2007—2013, see Fig. 3).
It can be observed that although the 50-km zone covers only a part of the territory of the countries bordering the Baltic Sea, five out of nine capitals of the respective countries (Copenhagen, Stockholm, Helsinki, Tallinn, Riga) and one former capital (St. Petersburg) are located within it.

The 200-km zone is comprised of the entire territory of Denmark and the Baltic countries (Lithuania, Latvia, and Estonia), most of the territory of Sweden and Finland, but only parts of the territory of Russia, Germany, and Poland. It is clear that the first six countries are significantly affected by the Baltic Sea, while only some parts of the other three countries are under its strong influence.

3. Criteria for the delimitation of the socio-economic Baltic region

The authors agree with Hakanson [34], who argues that the borders of the BSR can sometimes be widened and sometimes narrowed depending on the subject and the objects of a particular study. As Mączak and Sam-
sonowicz put it, when determining the boundaries of the region, one should use not a clear line, but rather a fading colour [47]. Theoretically, that may be correct, since the basis for the identification of a coherent (connected) socio-economic region is the study of internal relations between its elements (economic entities, settlements, etc.). "Clots" of such links are the nuclei of these regions with no clear boundaries. Yet for practical purposes, it is always helpful to denote the boundaries of a region as clearly as possible.

The BSR includes territories located on or in close proximity to the coast. They are strongly linked to the sea by economic relations, cultural ties, regular leisure trips of residents, etc. The borders of the region determined on such basis are vague, and thus its composition may be open to interpretation.

The BSR itself can be considered as the core of a broader socio-economic community consisting of the states of the Baltic region. There are 9 countries adjacent to the Baltic sea: Russia, Germany, Poland, Sweden, Denmark, Finland, Lithuania, Latvia, and Estonia. They form the core of a number of international organizations, such as the Council of the Baltic Sea States (CBSS). The latter also includes Norway and Iceland, with some neighbouring countries having observer status.

Figure 5 shows the ratio between the territories of the Baltic Sea Catchment Area, as well as the 50- and 200-km coastal zones, on the one hand, and the BSR and the states of the Baltic region, on the other hand.

![Fig. 5. Physiographic approaches to the delimitation of the Baltic region](image)

Regions are usually defined and delimited from the perspective and for the needs of a specific field of research or the economy, so the criteria for their definition and delimitation can vary significantly. In some cases, criteria used in different approaches can merge, and we can speak about an interdisciplinary approach to the delimitation of regions (Fig. 6).
Some criteria for the delimitation of the Baltic Sea Region specific to different disciplines but applied within the general interdisciplinary approach and used individually or in various combinations in a number of works [4—8; 10; 11; 13—15; 19; 22—25; 29—33; 40—43; 46—50; 52—54; 56; 58; 60—62; 64; 65; 67—72; 77—79; 82], include:

— location at the Baltic Sea or near it;
— shared natural environment;
— joint environmental management;
— shared history;
— relations between a specific territory and the Baltic Sea;
— operational areas of international organizations and eligible areas of international programmes;
— joint pieces of legislation;
— close economic ties;
— cultural ties, cultural identity;
— transnational character;
— military security cooperation;
— counterterrorism cooperation;
— shared "Baltic" brand.

4. International cooperation as a factor in the formation of the Baltic Sea Region

A number of bilateral treaties between countries, the Union of the Baltic cities, and various trade associations (Baltic Ports Organization, Baltic Sea Tourism Commission, the Helsinki Commission — HELCOM — aimed at environment protection, Baltic Sea Chambers of Commerce Association, etc.) contribute significantly to the consolidation of the region. Links between neighbouring countries are fostered by Euroregions, the associations of municipalities and administrative-territorial units.
A great many organizations have the word "Baltic" in their names. The studies conducted in 2016 by Belgian institute "The Union of International Associations" identified 218 such entities (Tab. 2). 95 of them can be classified as "Baltic", i.e. involving entities located in the BSR.

Table 2
Organizations with the word "Baltic" in their names in the UIA database (Union of International Associations) in 2016

<table>
<thead>
<tr>
<th>Status</th>
<th>Criterion</th>
<th>Number</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-classified organizations</td>
<td>Organizations which have ceased or suspended their activity</td>
<td>59</td>
<td>123</td>
</tr>
<tr>
<td></td>
<td>National organizations</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Organizations not classified due to other reasons</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Classified organizations</td>
<td>Organizations gathering entities from all the countries situated around the Baltic Sea</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Organizations with members only from selected countries situated around the Baltic Sea</td>
<td>51</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td>Other organizations</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Organizations with members from all the countries situated around the Baltic Sea and other countries</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>218</td>
<td>218</td>
</tr>
</tbody>
</table>

Source: own work based on [75] and the websites of the organizations.

The key role in defining the BSR is played by two programmes: VASAB, "Visions and Strategies around the Baltic Sea", and Interreg, "Trans-European co-operation intended to encourage harmonious and balanced development".

VASAB unites 11 countries cooperating in the area of spatial planning and development (Fig. 7). It is steered by the Committee on Spatial Planning and Development of the Baltic Sea Region (CSPD/BSR), with representatives of relevant ministries of cooperating countries as well as regional authorities of the countries whose territory is not fully covered by VASAB (Germany, Russia).

Interreg is a programme of the European Union. Non-EU countries (Russia, Belarus, Norway) participate in some of its projects by co-financing activities with their own resources. Geographically it covers larger territory than VASAB programme as it includes the entire North-West Federal District of the Russian Federation, while VASAB does not cover the Republic of Komi, the Vologda and the Arkhangelsk regions, and the Nenets Autonomous District.
5. The Baltic Sea region in the narrow, extended and broad sense

With the distance from the sea growing, its influence on the socio-economic development of the regions is decreasing, thus it is possible to identify several zones of its influence on the economy and population distribution. Figure 8 shows three circles of influence of different sizes (Fig. 8, tab. 3).

The first one comprises the territories located on the coast of the Baltic sea or in direct proximity to it. Their characteristic features are a developed maritime sector, the use of maritime transport for the needs of the economy, and the use of the seaside for recreational purposes. It has strong socio-economic, political and demographic internal ties, so we can talk about an established territorial system — the Baltic Sea Region in a narrow sense. At the same time, there are at least two ways of establishing its eastern borders. The first only includes the Russian territories of St. Petersburg, the Leningrad and the Kaliningrad regions (“Narrow A” in Table 3). The second adds Novgorod and the Pskov regions to the BSR, since these are tightly connected with Saint-Petersburg (“Narrow B” in Tab. 3).
Fig. 8. Triple delimitation of the Baltic Sea Region

<table>
<thead>
<tr>
<th>Sense</th>
<th>Composition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narrow A</td>
<td>Sweden, Denmark, Finland, Lithuania, Latvia, Estonia, the states of Germany: Mecklenburg-Vorpommern, Schleswig-Holstein, the Voivodships of Poland: West Pomeranian, Warmian-Masurian, Pomerania; the subjects of the Russian Federation: Saint Petersburg, the Leningrad and the Kaliningrad regions</td>
</tr>
<tr>
<td>Narrow B</td>
<td>The above, and: the Novgorod and the Pskov regions of the Russian Federation</td>
</tr>
<tr>
<td>Extended A (VASAB)</td>
<td>Poland, Belarus, Sweden, Denmark, Norway, Finland, Lithuania, Latvia, Estonia; the states of Germany: Mecklenburg-Vorpommern, Schleswig-Holstein, Berlin, Brandenburg, Bremen, Hamburg, Lüneburg; the subjects of the Russian Federation: St. Petersburg, the Leningrad, the Kaliningrad, the Novgorod, the Pskov, the Murmansk regions, the Republic of Karelia</td>
</tr>
<tr>
<td>Extended B (Interreg)</td>
<td>The above, and: the Republic of Komi, the Vologda and Arkhangelsk regions, the Nenets Autonomous District</td>
</tr>
<tr>
<td>Broad</td>
<td>All of the above, and Iceland and other territories of Russia, Germany, Czech Republic, Slovakia, Ukraine.</td>
</tr>
</tbody>
</table>
The second circle of influence of the Baltic Sea includes the territories where spatial planning is carried out within the framework of VASAB and Interreg programmes. This territory can be considered the extended Baltic Sea region. It incorporates the narrow Baltic Sea region, which in a way forms the core of the extended region. It can coincide either with VASAB or Interreg areas, thus its size can vary. These 2 alternatives are also stated under letters "A" and "B" respectively.

The third circle has no clear boundaries, it experiences only the indirect influence of the Baltic Sea. Its boundaries may be close to the boundaries of the Baltic Sea Catchment Area. And they can also go beyond these boundaries if Iceland, which is part of the Council of the Baltic Sea States, is included. This is the Baltic Sea region in its broad sense.

In addition, as indicated above, the region can be considered as a sum of its states, i.e. the member-countries of the Council of the Baltic Sea States.

Conclusion

It is difficult to give an unambiguous definition of the Baltic Sea region since it is heterogeneous in terms of language, religion, culture, and history, and is highly diversified in terms of the environment and the economy. Economic and cultural cooperation, joint measures of marine environment protection, spatial harmonization, and sustainable development provide a framework for international and interregional cooperation promoting the integration within the region. The Baltic Sea Region is an experimental platform for transnational and cross-border cooperation at many levels, allowing to develop new concepts and strategies and create a lot of opportunities for development. Since this view differs from the others in breadth, the proposal to delimit the BSR on the basis of the concept of three circles seems to be justified. However, due to the ambiguous definition of its boundaries, every time the term Baltic Sea region is used it is necessary to specify its territory.

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The authors

Prof Andrei P. Klemeshev, Rector, Immanuel Kant Baltic Federal University, Russia.
E-mail: AKlemeshev@kantiana.ru
Prof Valentin S. Korneevets, Director of the Institute of Recreation, Tourism and Sports, Immanuel Kant Baltic Federal University, Russia.
E-mail: IVKorneevets@kantiana.ru

Prof Tadeusz Palmowski, Head of Department of Regional Development Geography, University of Gdańsk, Poland.
E-mail: tadeusz.palmowski@ug.edu.pl

Prof Tomasz Studzieniecki, Senior Lecturer, Department of Hotel and Tourism Management, Gdynia Maritime University, Poland.
E-mail: toms@am.gdynia.pl

Prof Gennady M. Fedorov, Director of the Institute of Nature Management, Spatial Development, and Urban Planning, Immanuel Kant Baltic Federal University, Russia.
E-mail: Gfedorov@kantiana.ru

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