Preparation of the GIS layers for the ARTWEI WebGIS for the Russian part of the Curonian and Vistula lagoons

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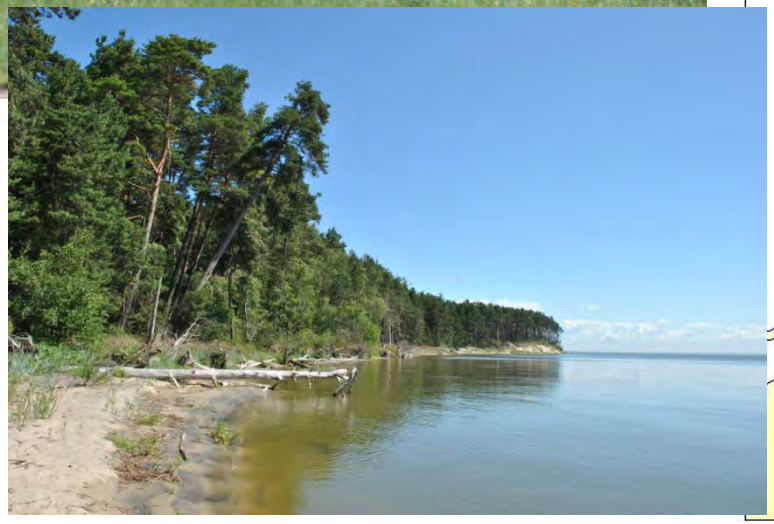
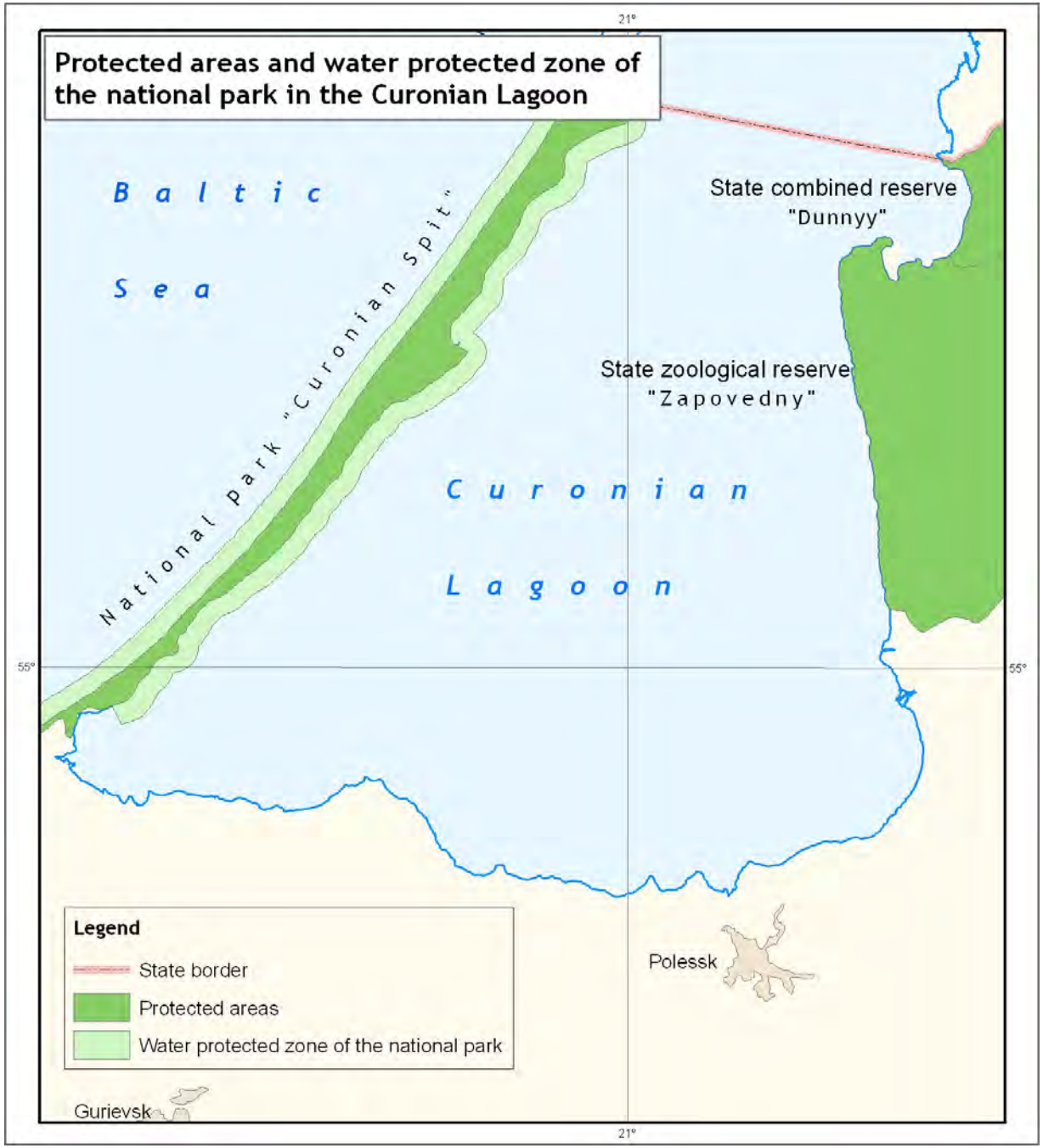


Planed layers for Vistula lagoon

Name of the layer	Year
Bottom sediments	2002
Type of shore, rate of erosion	
Physical properties (salinity, temperature, SD, SS …)	?
Chemical properties (nutrients, BOD, COD, pH, Eh…)	?
Biological properties (Chl, PP, phyto-, zooplankton, macrozoobenthos…)	?
Satellite data …	
Rock areas	1998
Water protected zones	2004
Algae areas	1998
Reed areas	2004
Fishing zones	2002
Fishing net areas	1998, 2002
Spawning areas	2002
Navigation routes	1998, 2005
Wrecks	1998
Dumping sites	1998
Cables	1998

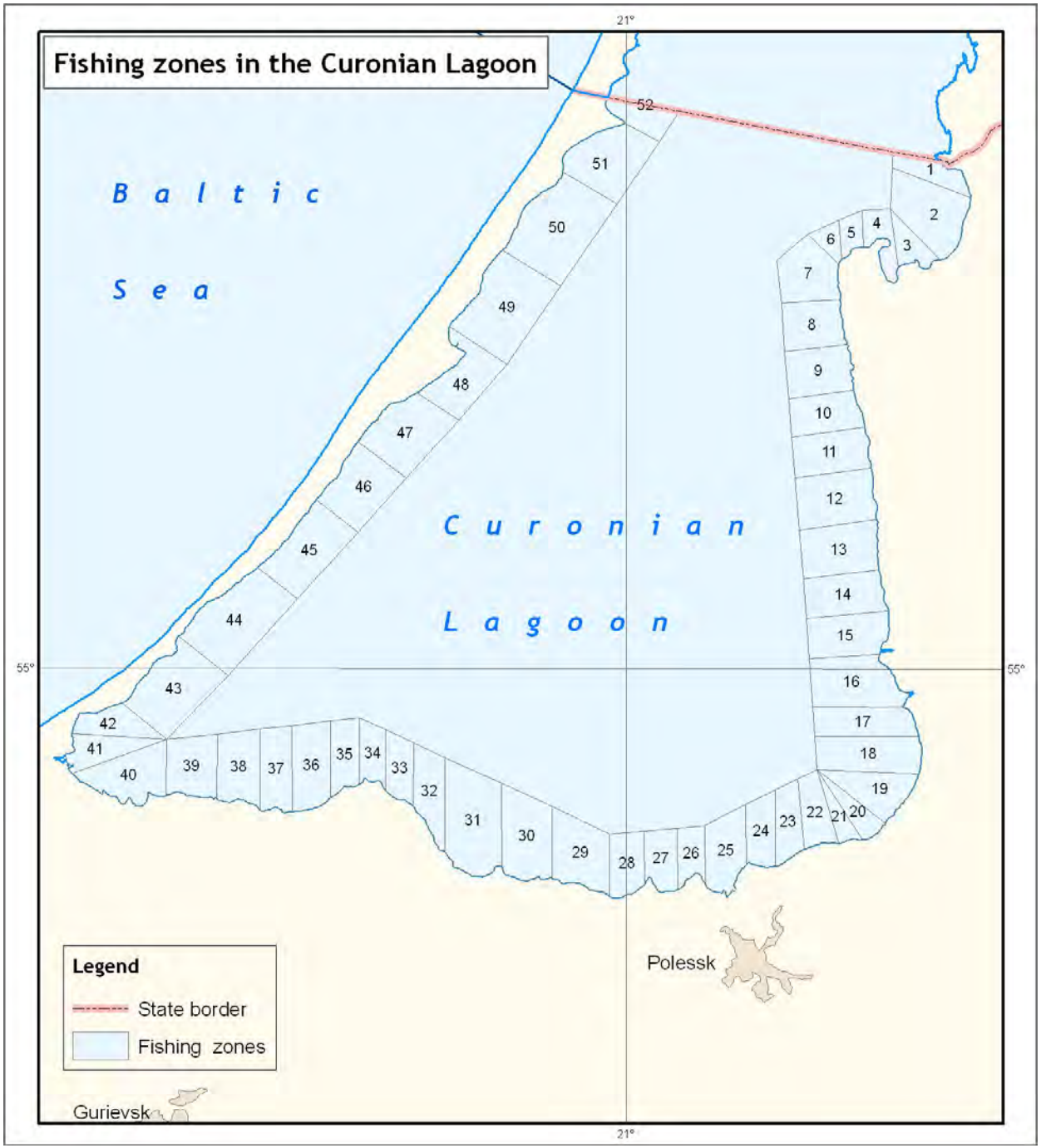
2. Layers for Curonian lagoon

Name of the layer`	Type of the layer	Year
Water protected zone	polygon	2004
Fishing net areas	polygon	2000
Fishing zones	polygon	1993
Bottom sediments	polygon	1985
Spawning areas	polygon	2000
Location of algae areas	polygon	1993
Reed areas	polygon	1993
Rock areas	point	1993



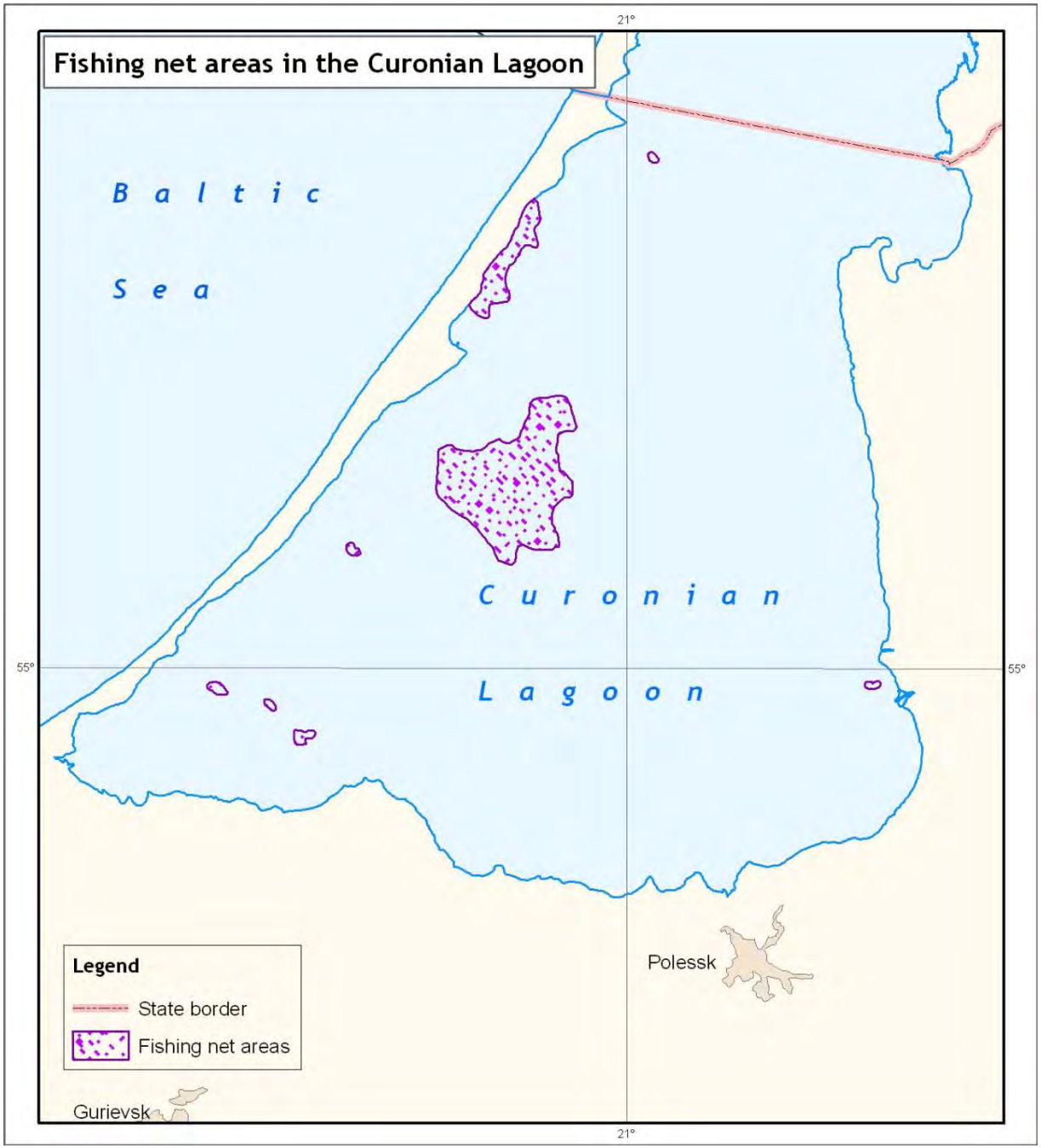
Source:

The scheme of conservation of the Kaliningrad region / ed. J.A. Tsybina. – Kaliningrad ,TENAX MEDIA, 2004. - 136



Source:

Osadchy V.M. Regulation of fishing and fisheries management strategy in the Curonian Lagoon. Thesis for PhD degree., Kaliningrad, 2000, 175 p.



Source:

1. The northern part of the Curonian Lagoon (sheet number 22045), Head Department of Navigation and Oceanography RF Ministry of Defense, 1:50000, 1993;

2. The southen part of the Curonian Lagoon (leaf number 22044), Head Department of Navigation and Oceanography RF Ministry of Defense, 1:50000, 1993

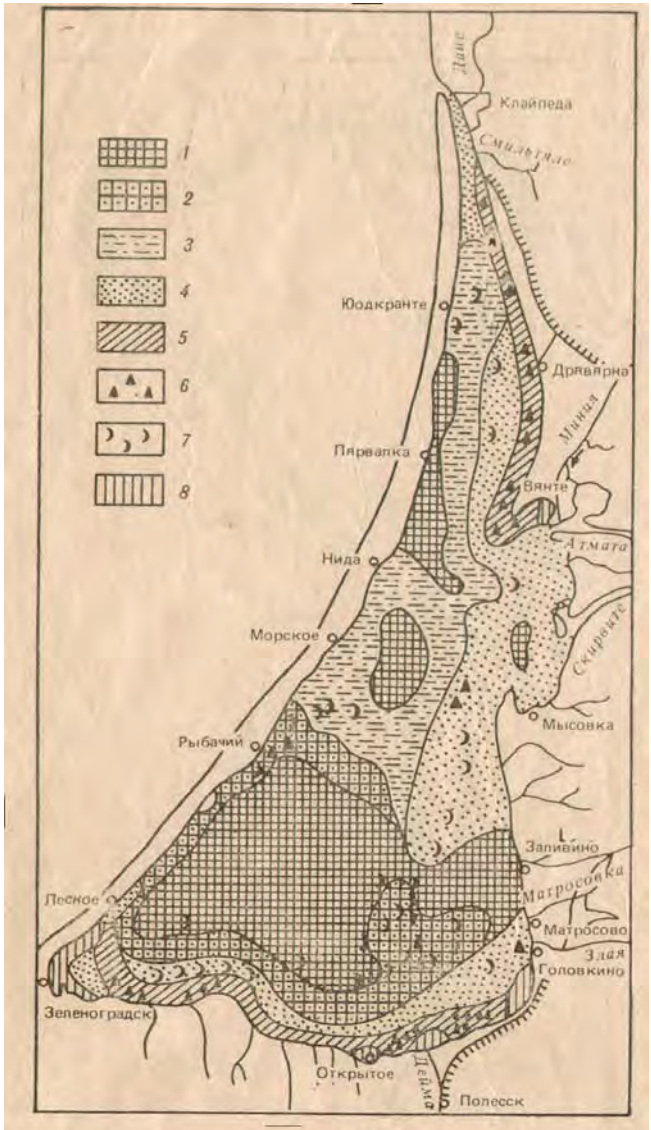
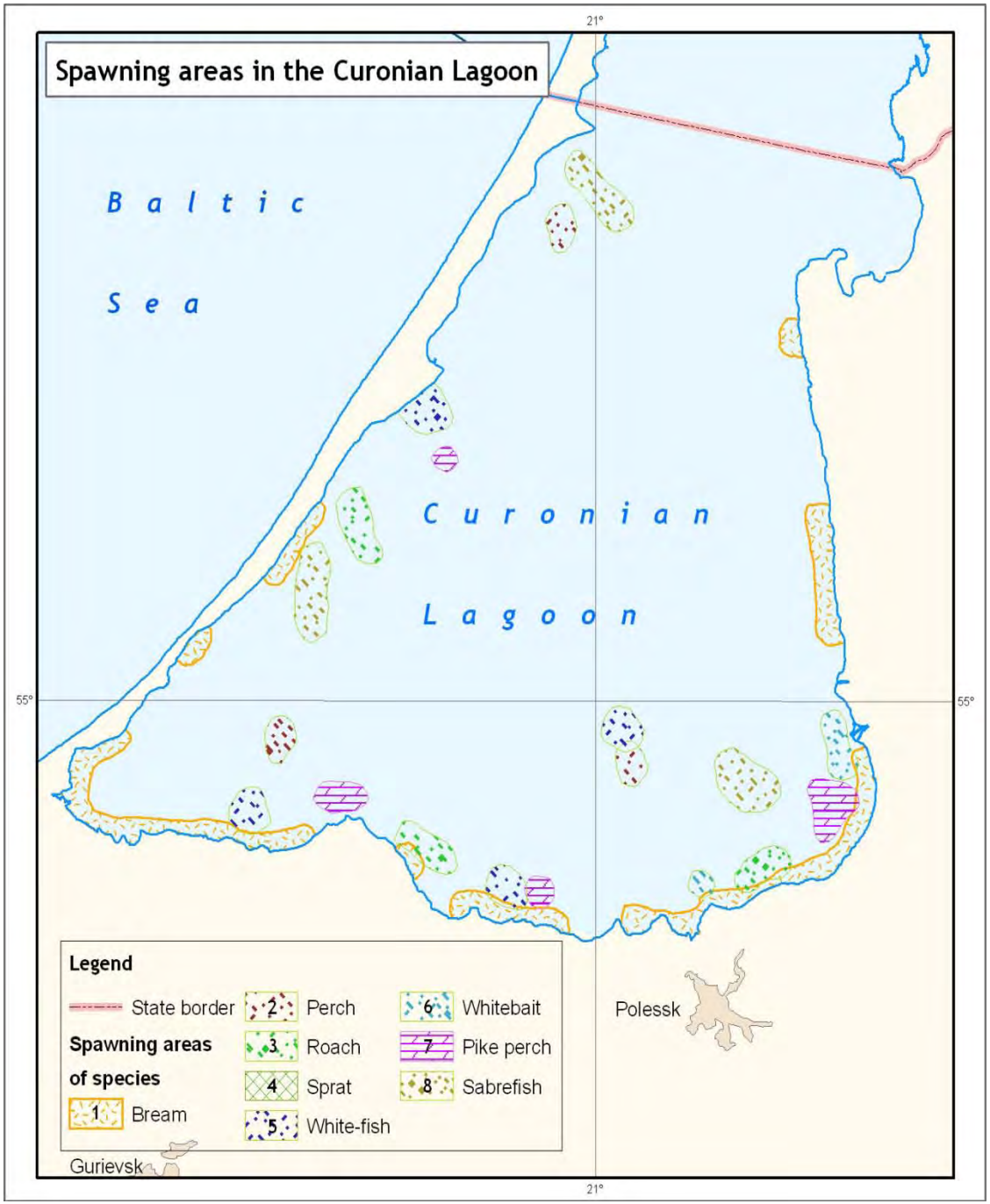


Рис. 2. Донные отложения Куршского залива

1 — ил;
2 — песчанистый ил;
3 — илистый песок;
4 — песок;
5 — валунный суглинок с остаточными отложениями;
6 — гравийно-галечные места;
7 — ракушник;
8 — торф.

Source:

Hydrometeorological conditions of the shelf zone of the seas of the USSR. Handbook. V.1. The Baltic Sea, vol. 3. Curonian and Vistula Lagoon. A: Gidrometeoizdat, 1985 - 72.



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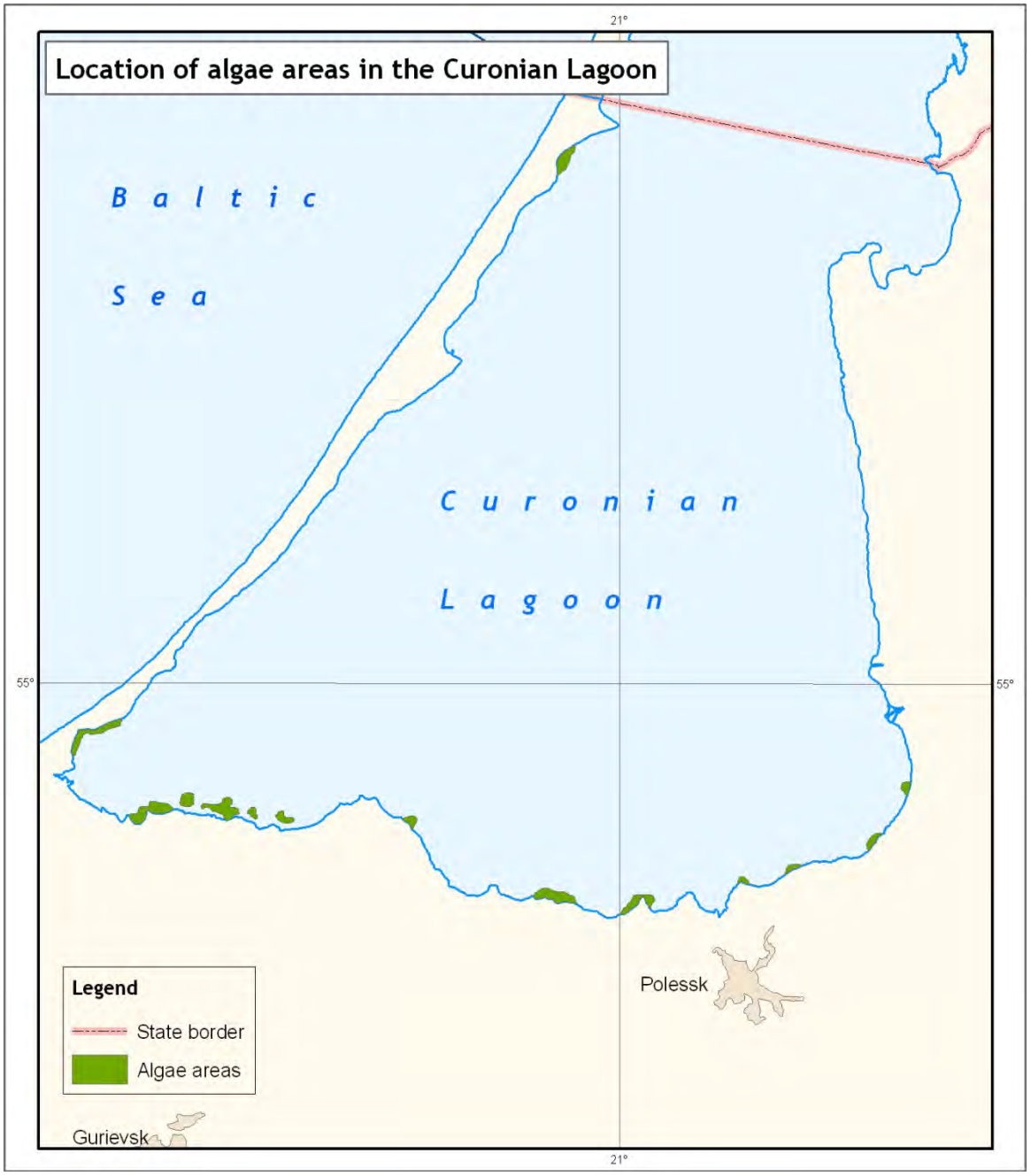

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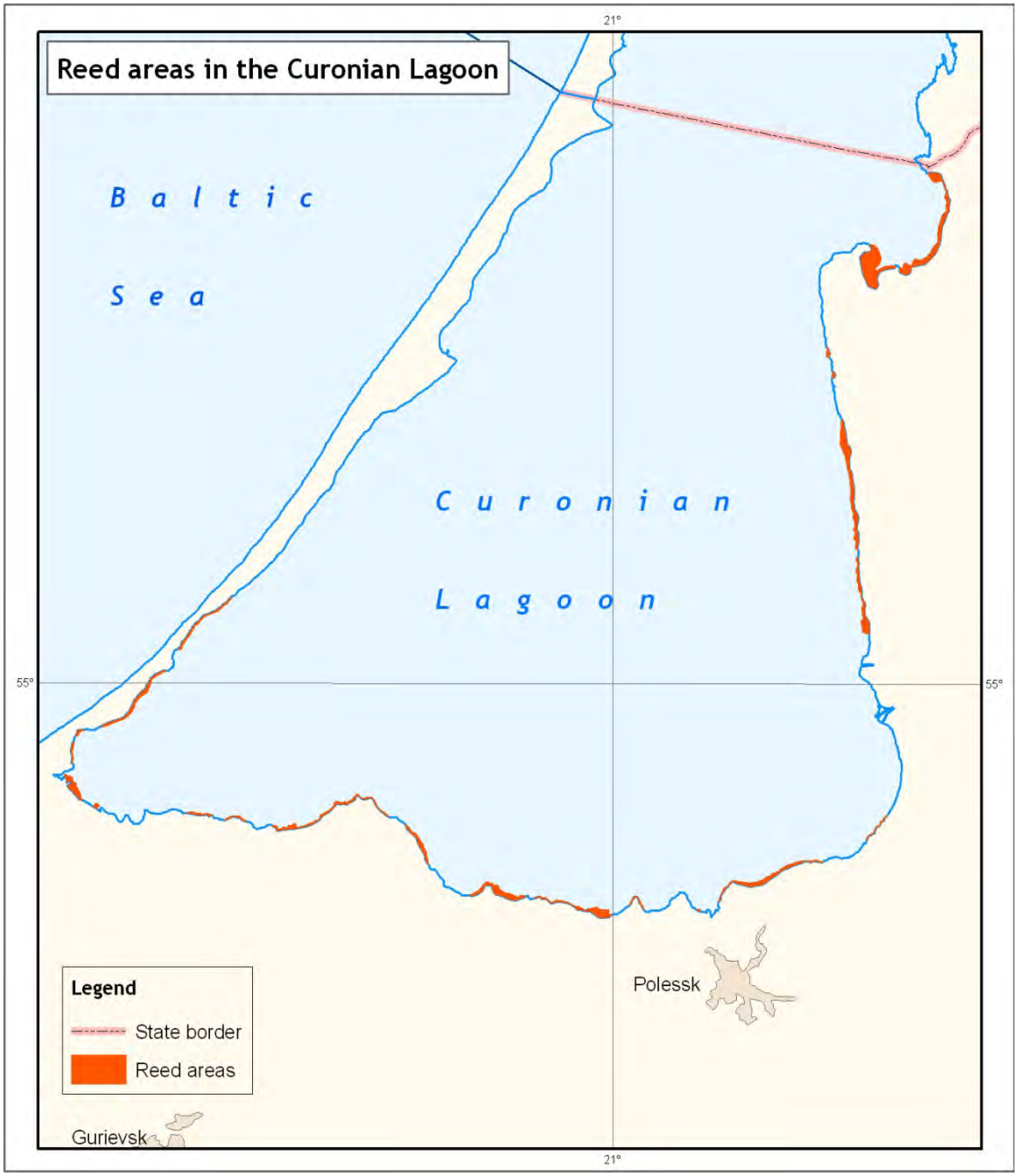
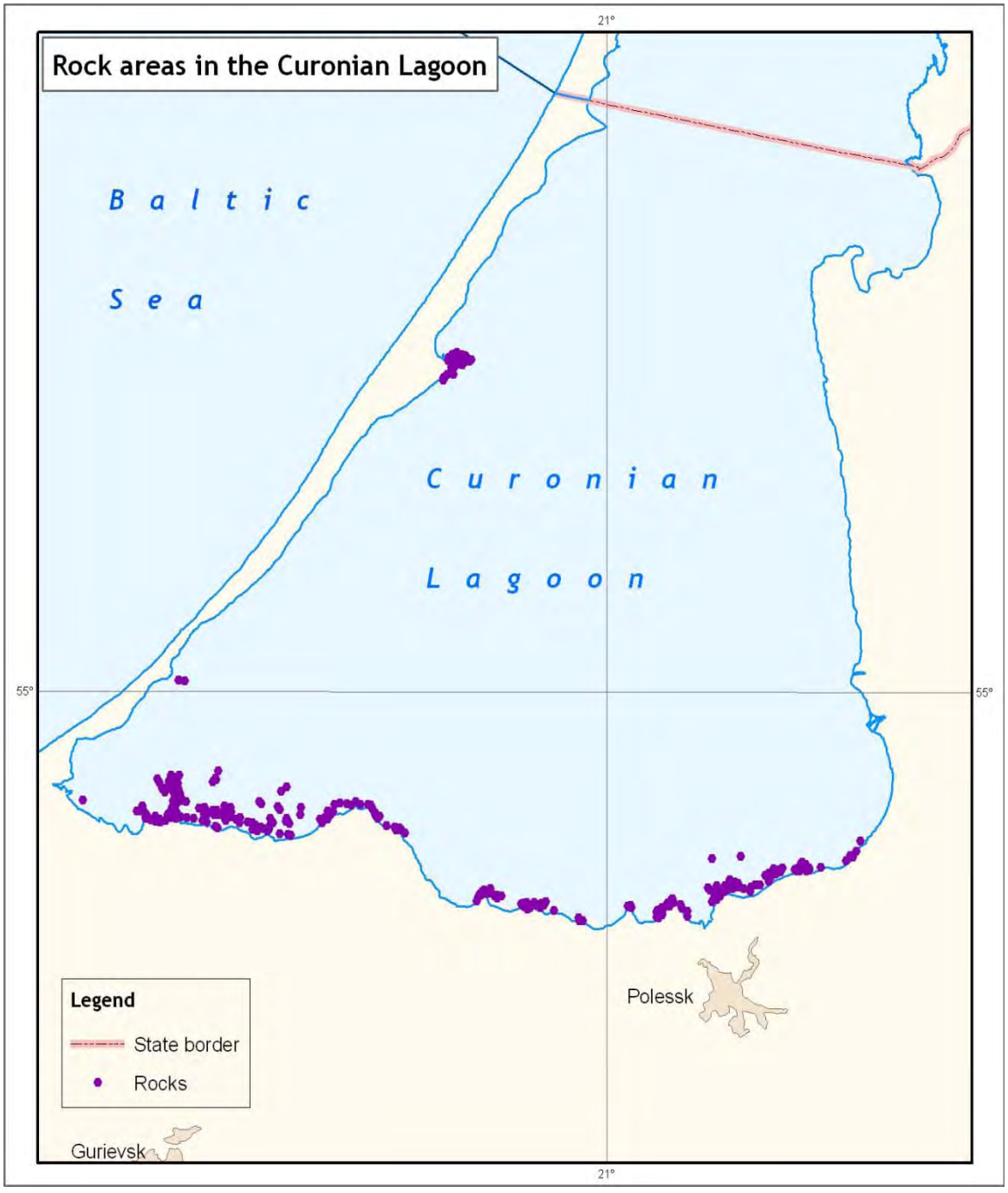


Source:
SLandSAT 7 ETM



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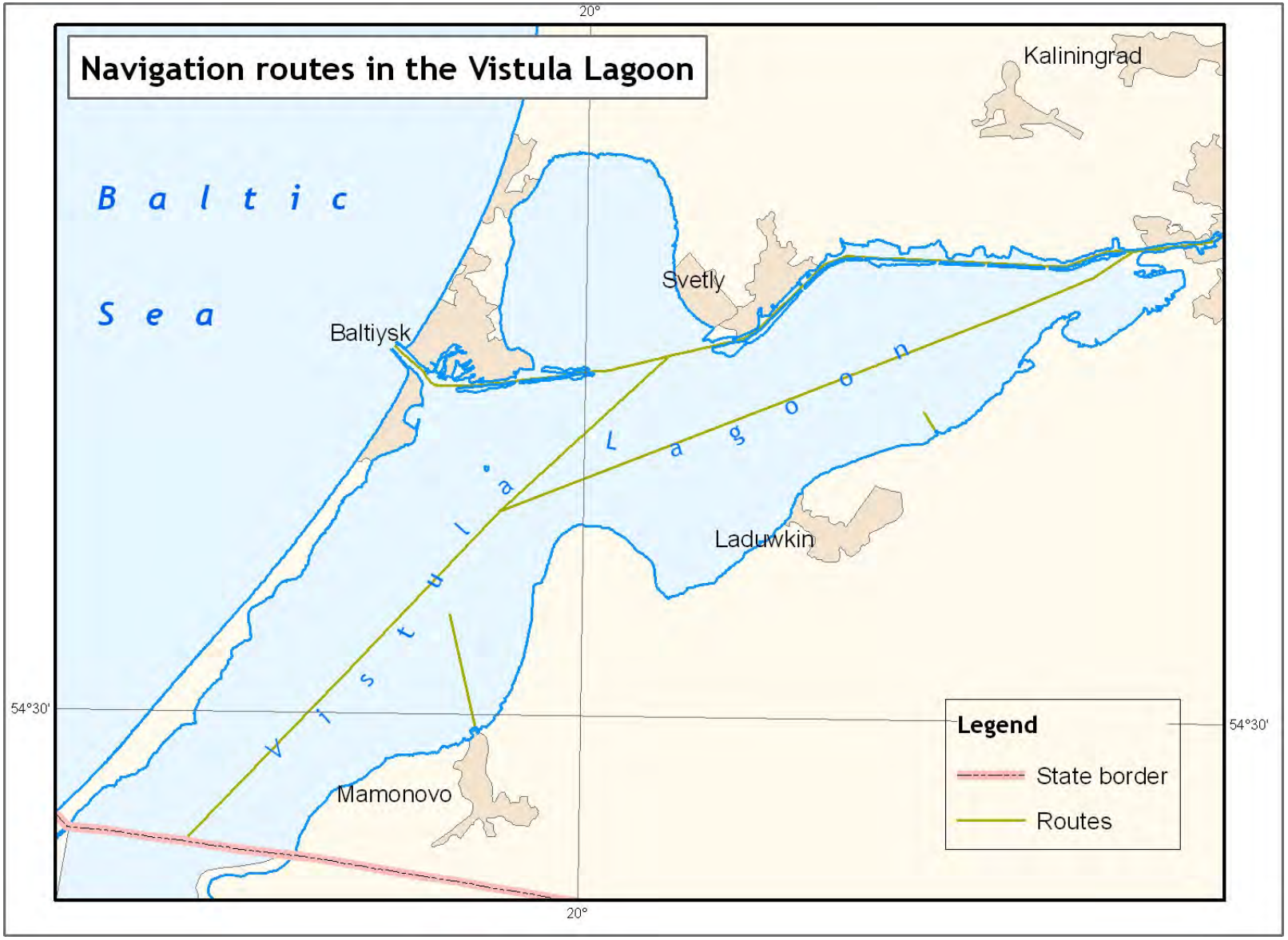
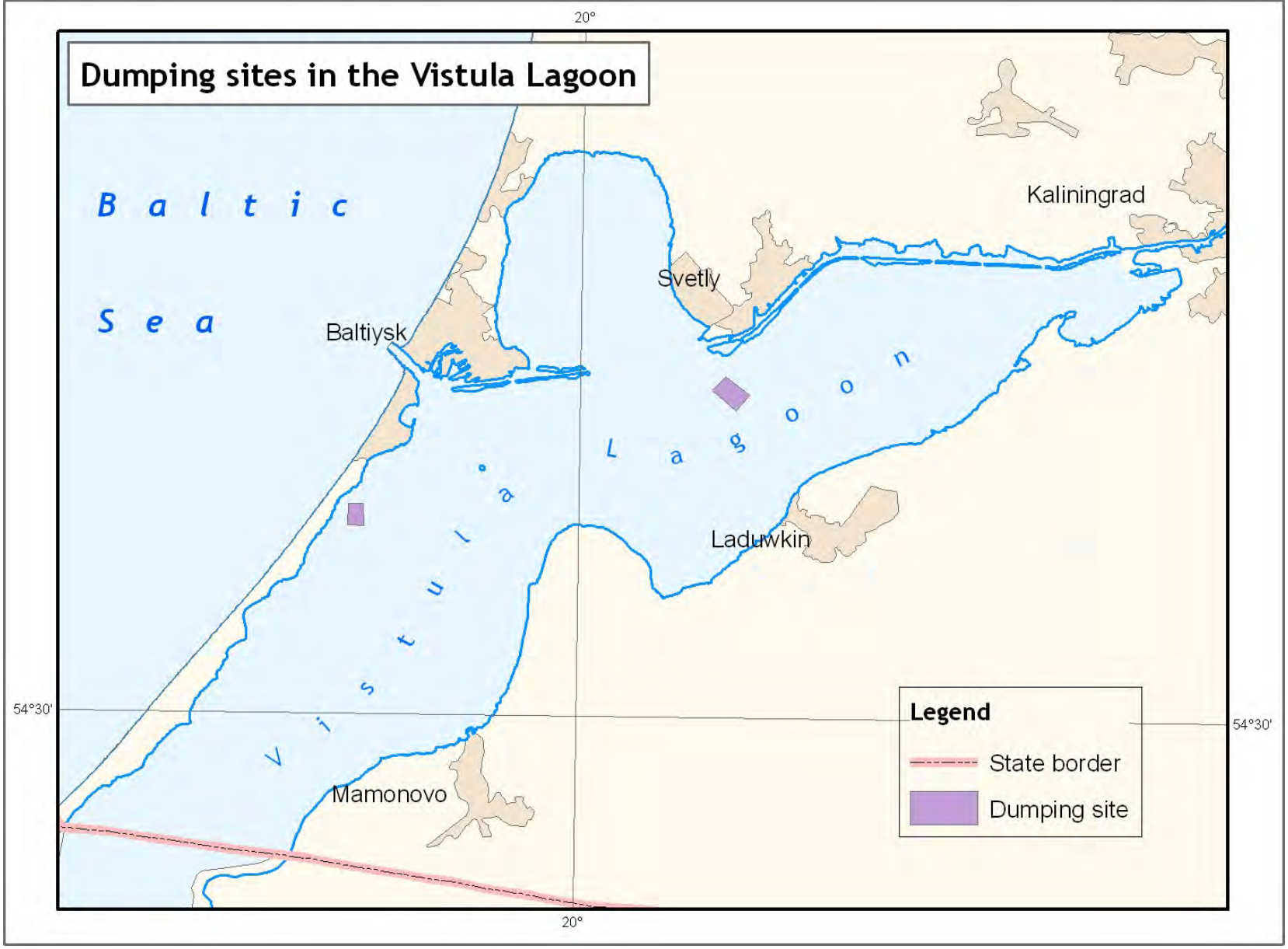
3. Layers for Vistula lagoon

Name of the layer	Type of the layer	Year
Navigation routes	line	1998, 2005
Dumping sites	polygon	1998
Cables	line	1998
Fishing zones	polygon	2002
Fishing net areas	polygon	1998, 2002
Water protected zones	polygon	2004
Bottom sediments	polygon	2002
Algae areas	polygon	1998
Reed areas	polygon	2004
Spawning areas	polygon	2002
Rock areas	point	1998
Wrecks	point	1998
water profiles of the monitoring station (C°, s)	point	1994-2011



Source: Approaches to the Baltic and Kaliningrad (sheet number 25051), 1:50,000, Head Department of Navigation and Oceanography RF Ministry of Defense, 1998;

Mode of navigation in the Baltic Sea and Lake Ladoga (Consolidated description). Hydrographic Service of the Baltic Fleet - St. Petersburg, 2005, 62



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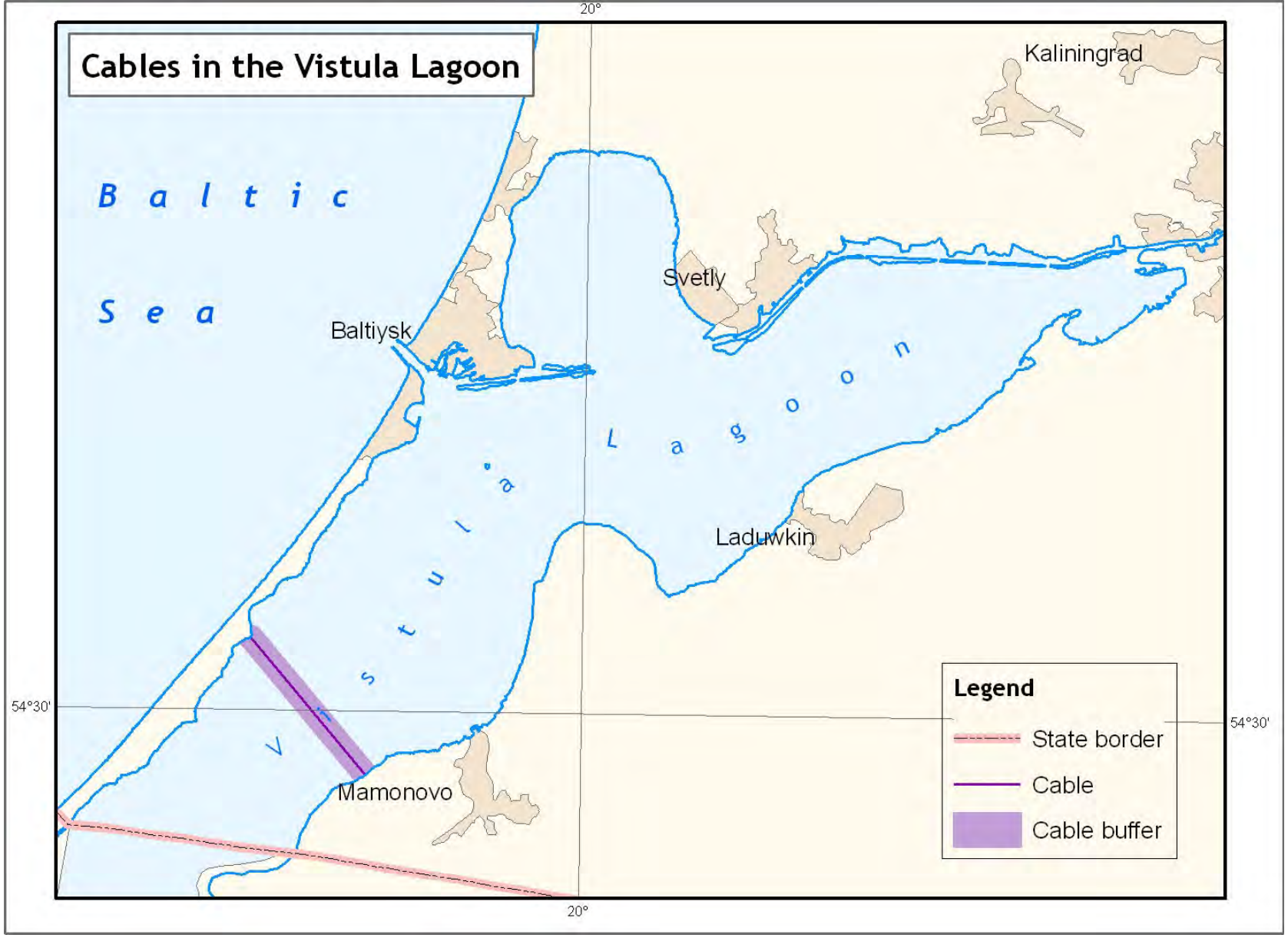

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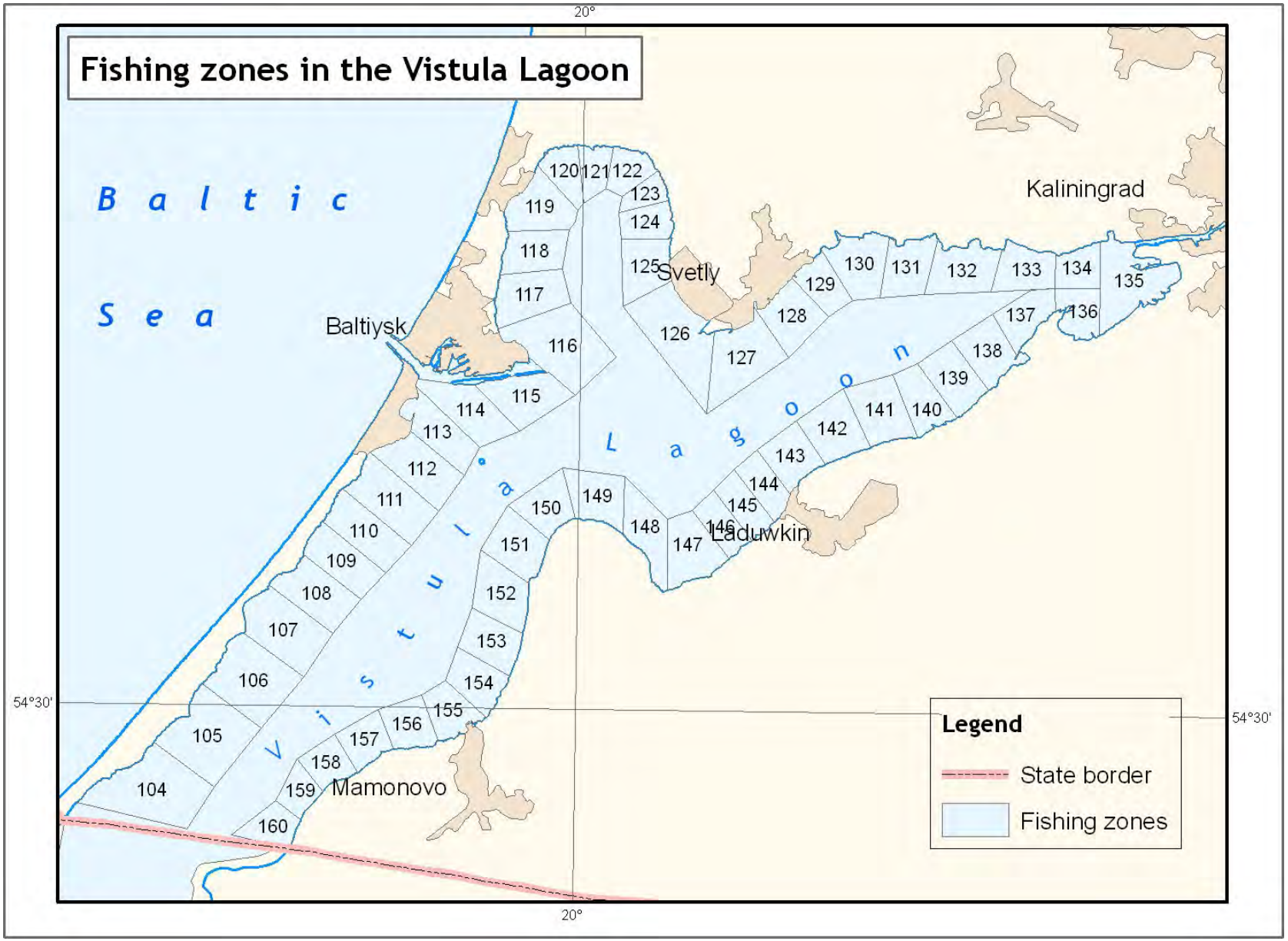

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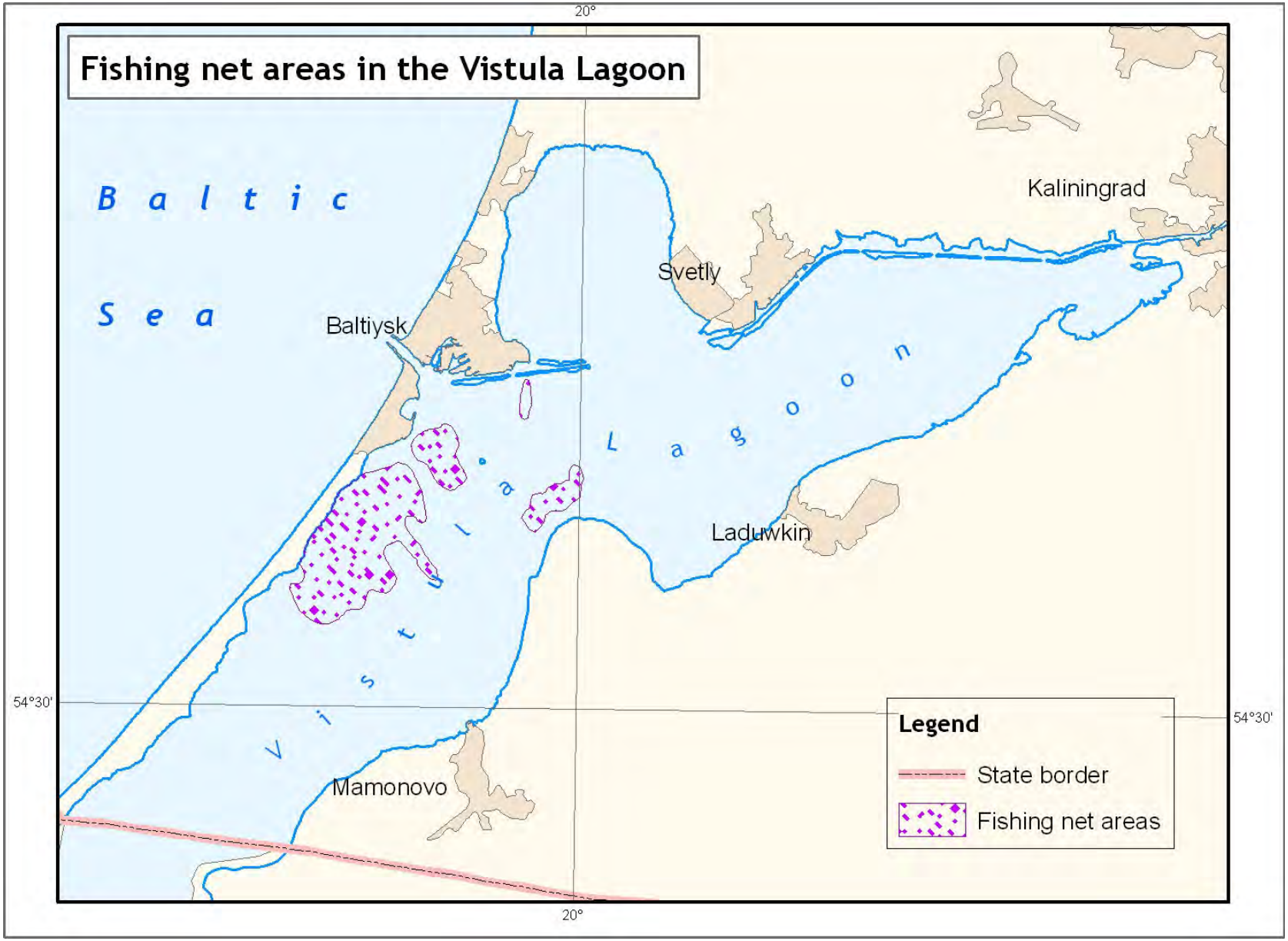
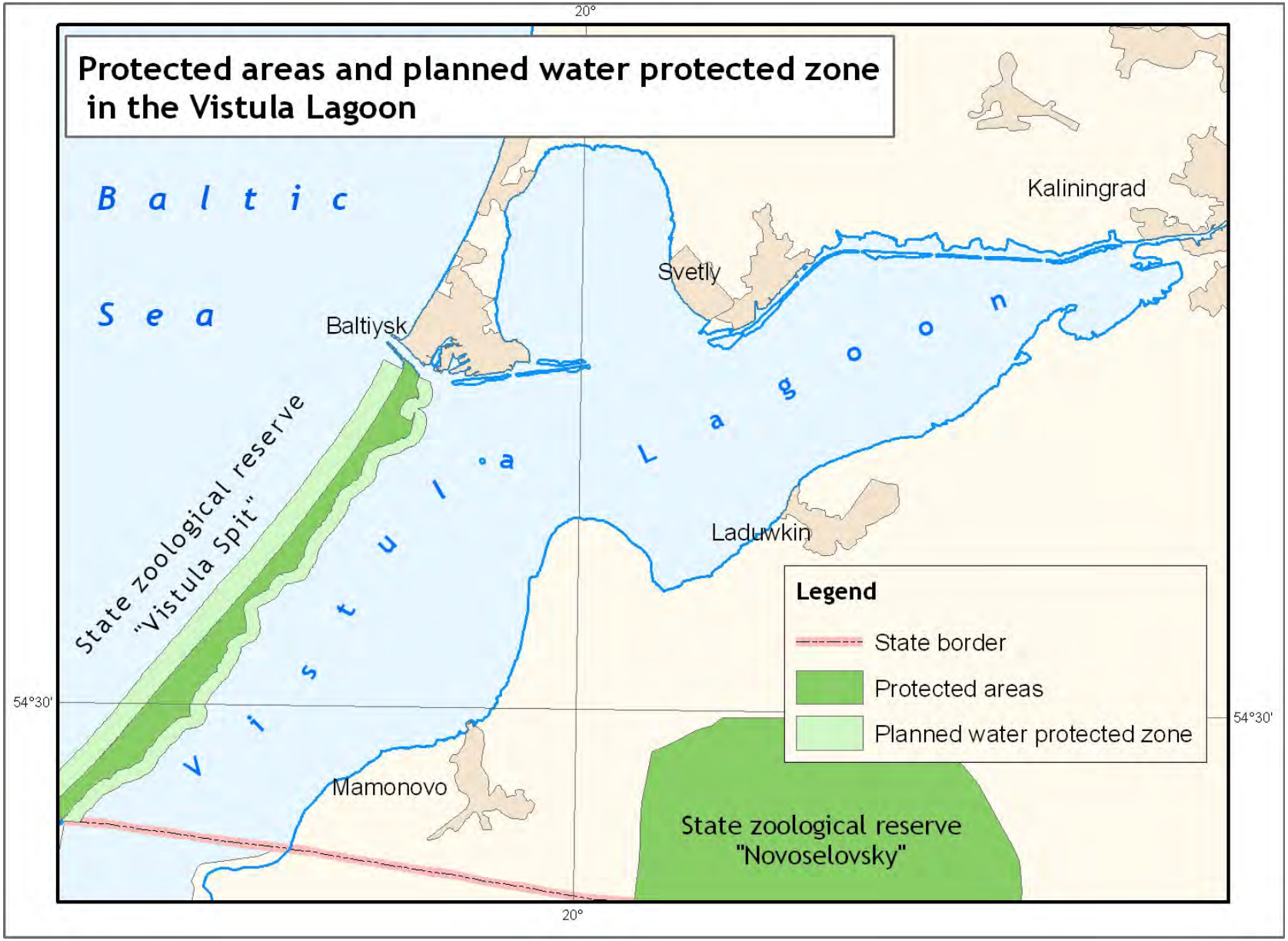


Source: Approaches to the Kaliningrad sea chanel (page 25050), 1:50,000, Head Department of Navigation and Oceanography RF Ministry of Defense, 2002;
Approaches to the Baltic and Kaliningrad (leaf number 25051), 1:50,000, Head Department of Navigation and Oceanography RF Ministry of Defense, 1998



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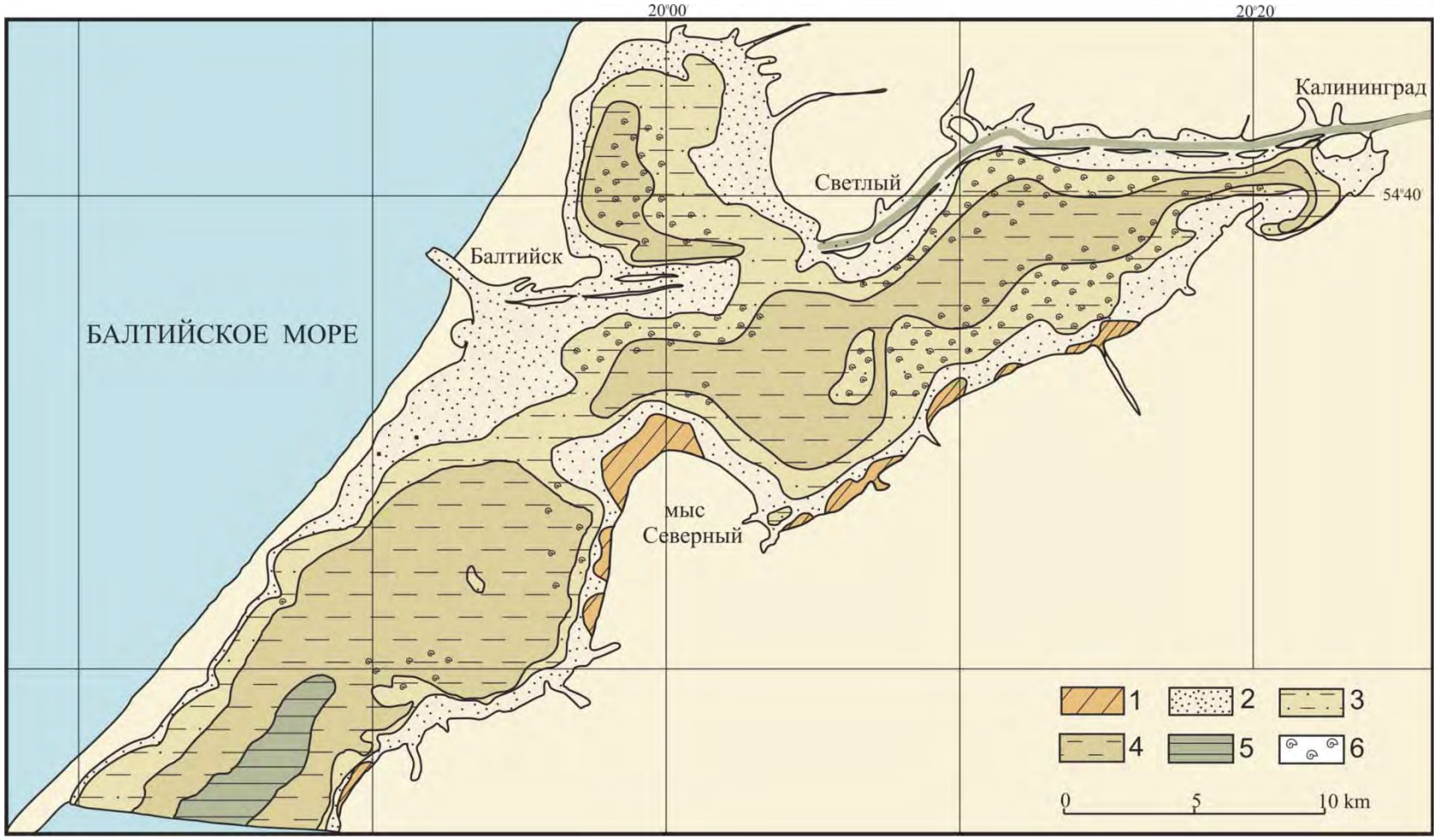
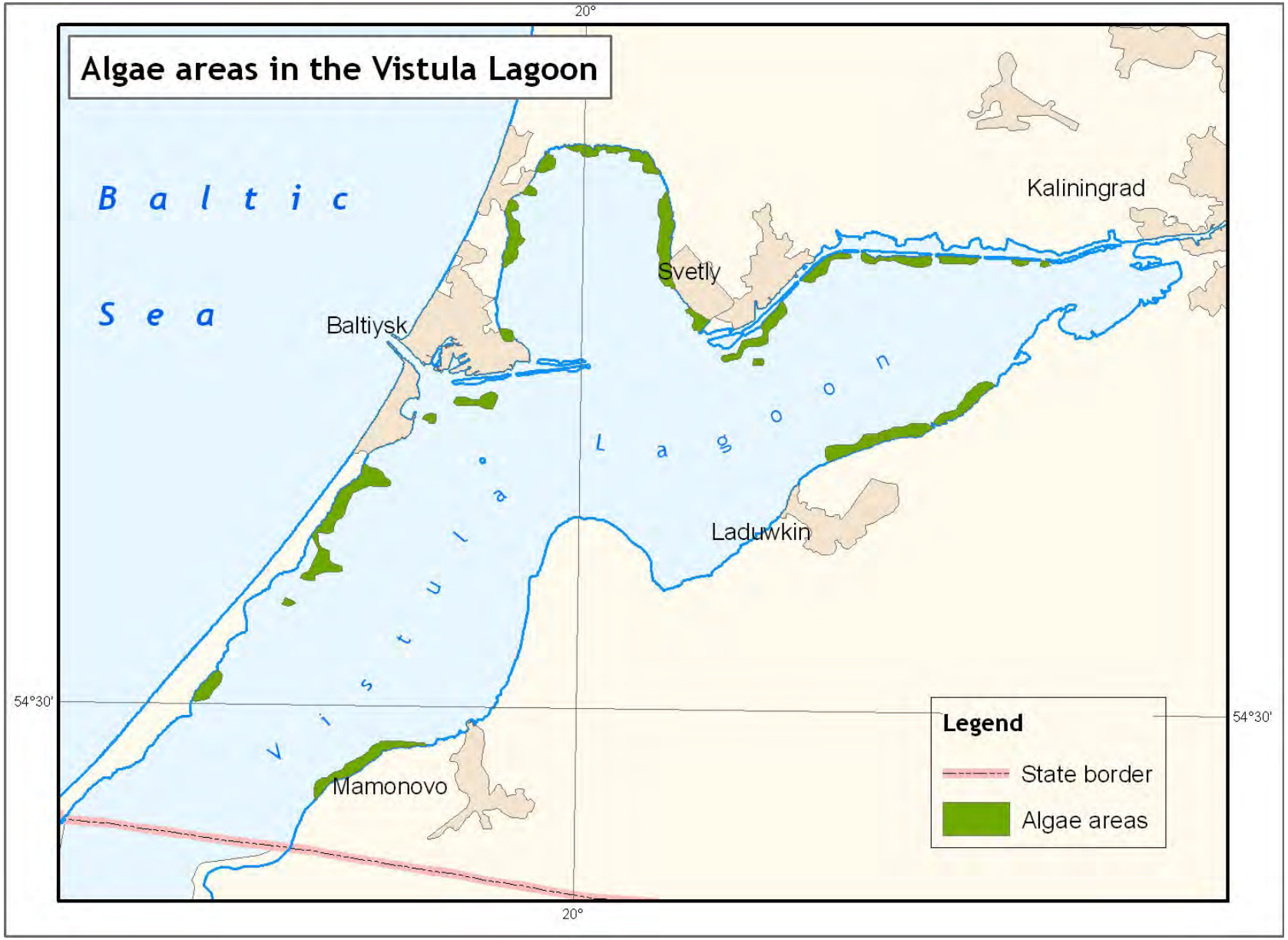


Source: Chechko A. Vladimir, Blazhchishin I. Alexander. Bottom sediments of the Vistula Lagoon of the Baltic Sea // Baltica, vol. 15., 2002. Vilnius. p. 13 – 22



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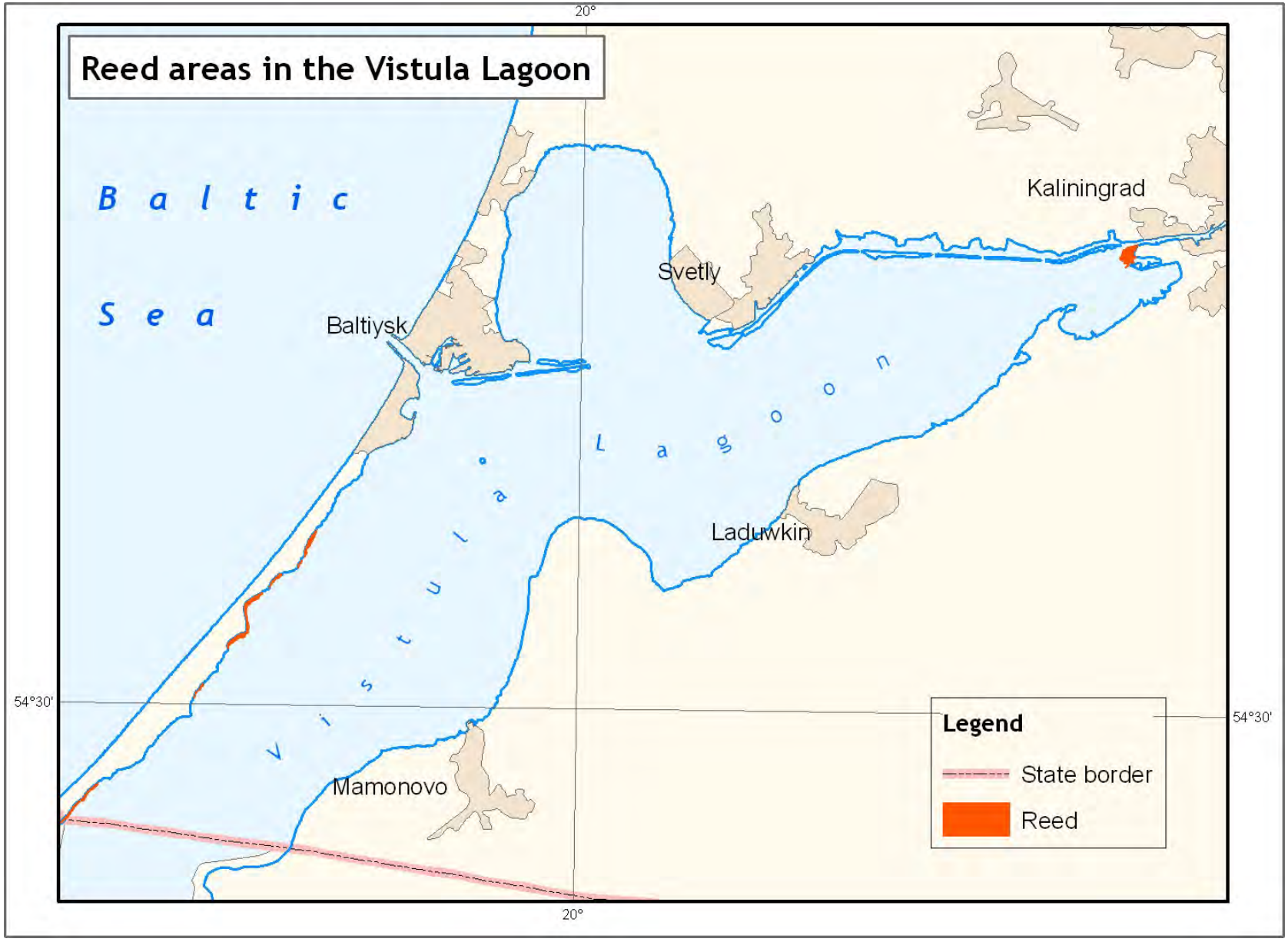
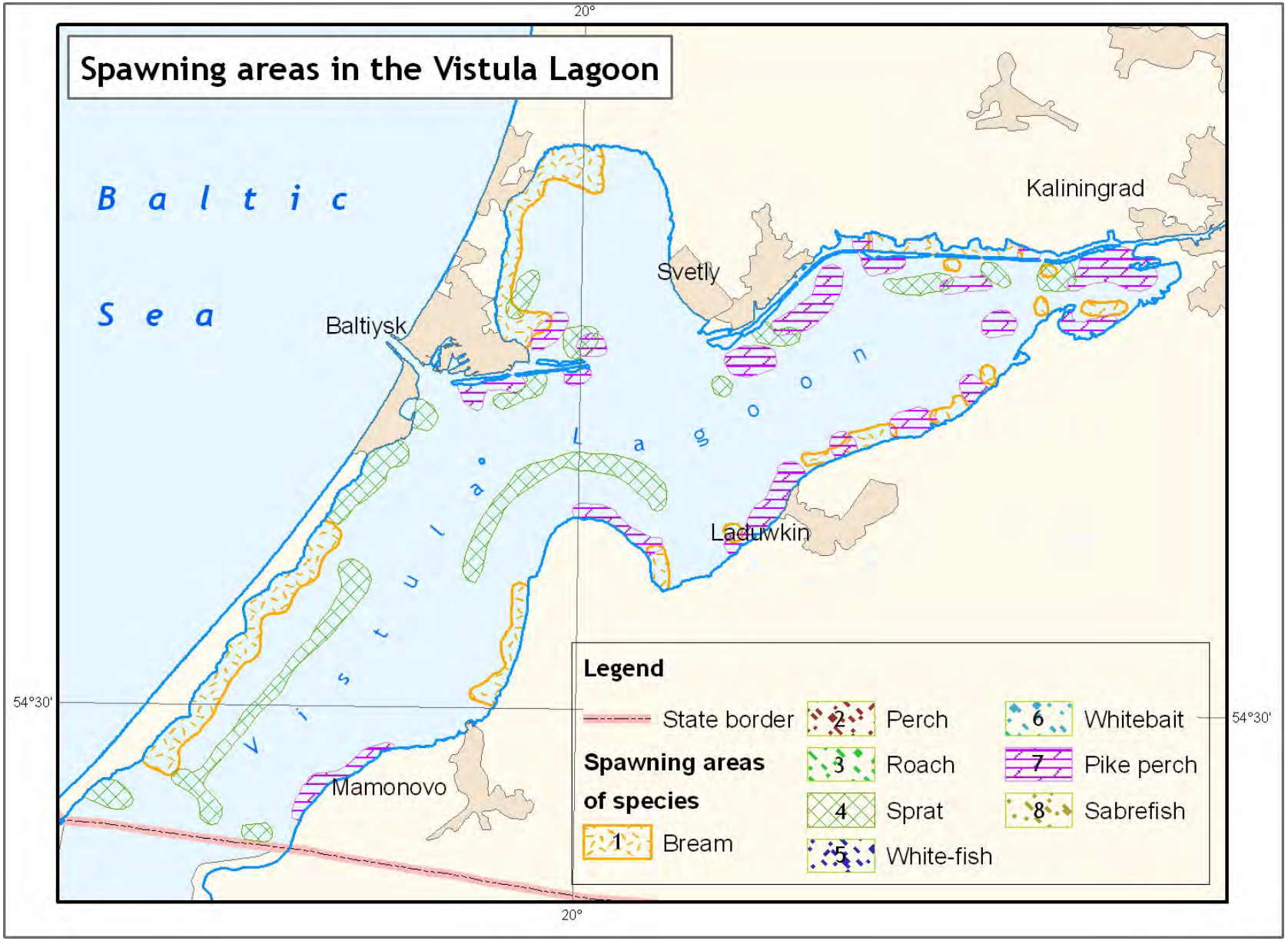


Source: LandSAT 7 ETM



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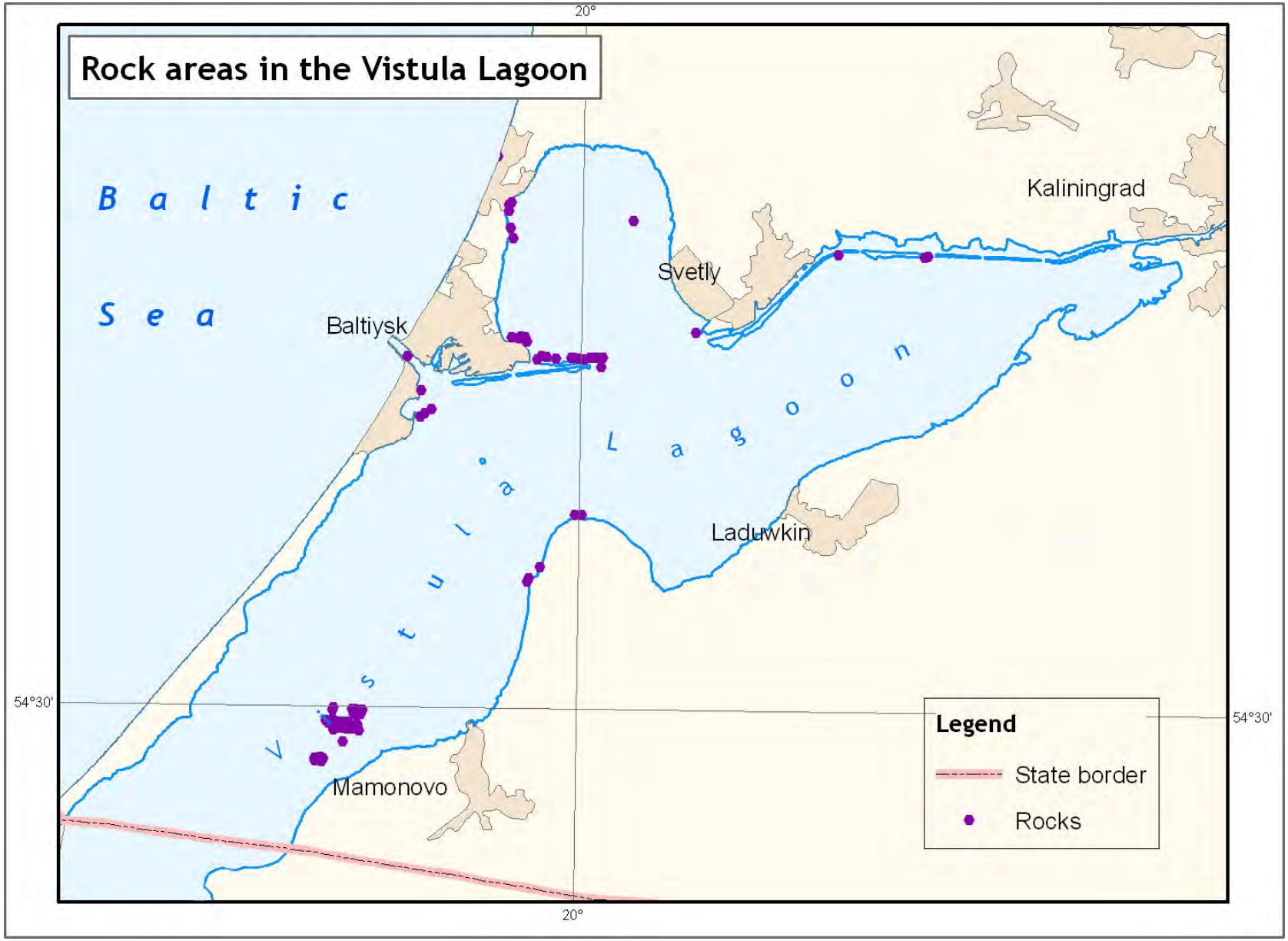

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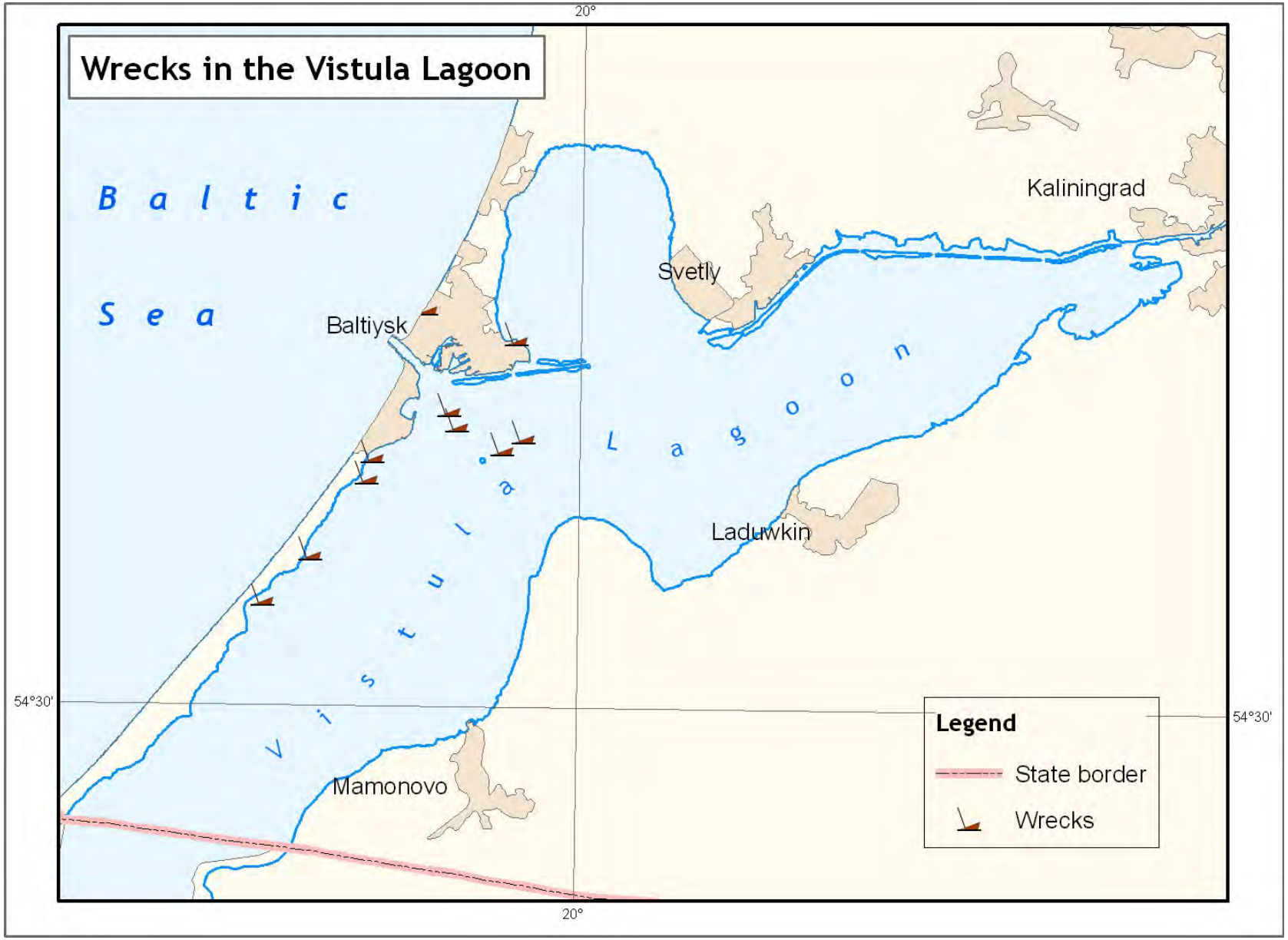

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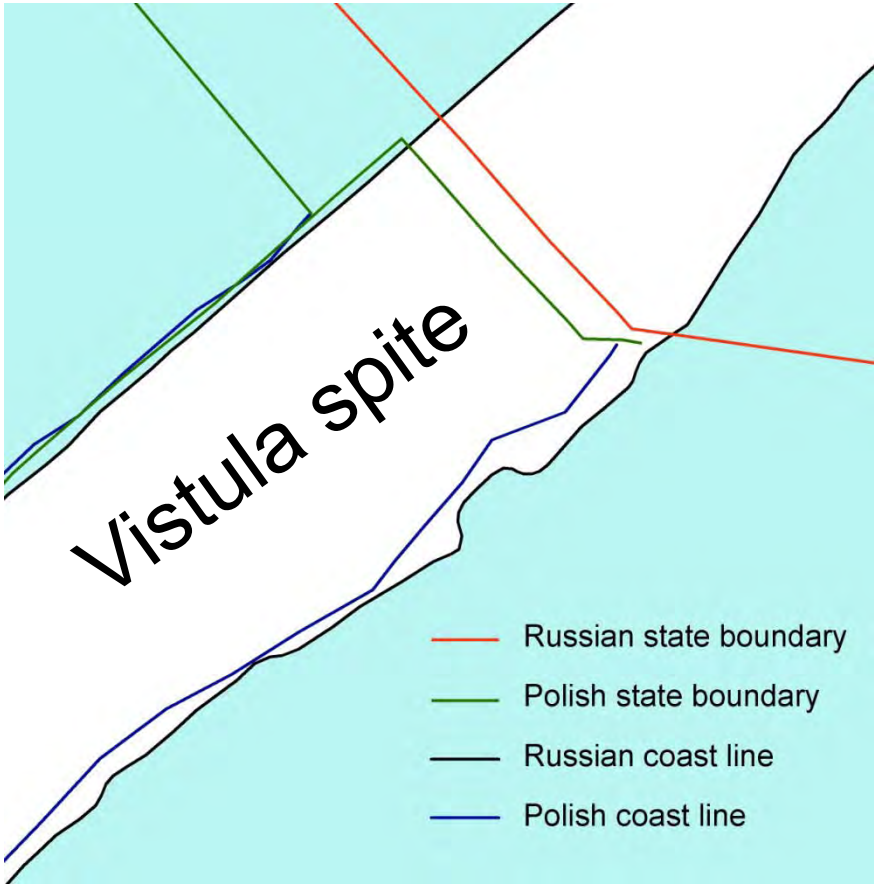
Transboundary harmonization of information and data



An example of mismatch between the state border and coastline between Poland and Russia found in the project TACIS SDI4SEB (2006-2008)

1. GIS representation of data from both sides with official reference.
2. Identification of mismatch events, reporting and attempt to explain (to reveal technical mistakes)
3. To harmonize information within united layer in GIS:
   - “official protocol” approach for political boundaries
   - GOOGLE for physical boundaries!

List of layers prepared for the Vistula and Curonian lagoons during the project TACIS SDI4SEB (2006-2008) useful for ARTWEY WebGIS

- **Average density of population in the South East Baltic coastal region, 2005-2006;**
- **Built-up land by distance from the South East Baltic coastline, 1999-2000;**
- **Undeveloped land in the South East Baltic, 2000**
- **Agricultural land farmed intensively in the South East Baltic**
- **Change in area of semi-natural habitat, Pomorskie Voivodeship, 1990-2000 and Klaipeda County, 1995-2000;**
- **Protected areas in the South East Baltic coastal zone, 2006;**
- **Berths and moorings for recreational boating in the South East Baltic, 2006;**
- **Number of overnight stays in tourist accommodation in both coastal and non-coastal districts (within Klaipeda County), 2000-2005;**
- **Passenger traffic in the South East Baltic;**
- **Volume of cargo handled in the South East Baltic;**
- **Rate of employment in the South East Baltic Region, 2006;**
- **Rate of unemployment in the South East Baltic;**
- **Average annual earnings, 2005;**
- **Percentage of the population with a higher education qualification**