MPA FACT SHEET

WWF BALTIC ECOREGION PROGRAMME

Pomeranian Bay

Location

The proposed area “Pomeranian Bay” is located in the Arkona Sea in the Southwest of the Baltic Sea and covers the marine area between the Islands of Rügen (Ger), Bornholm (Dk) and Poland mainly in the Exclusive Economic Zone.

Reasons for Selection

The Pomeranian Bay is one of the most important ecological areas in the Baltic Sea. Sandbanks, banks of blue mussels and reefs are sensitive habitats with their adapted species-rich communities. These habitats are important feeding grounds for diving seabirds - over a million seabirds winter in the area - and as nursery grounds for several fish species. The area is also of likely importance as feeding area and stepping stone for the eastern population of the endangered Harbour porpoise (*Phocoena phocoena*).

Area Description

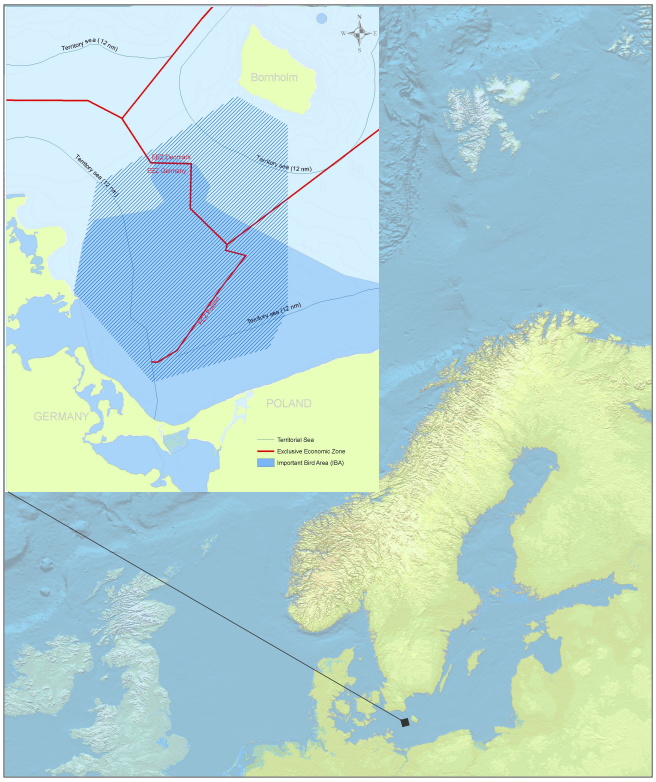
The reef and sandbank complexes of the Pomeranian Bay are highly representative for the Baltic Sea. The central morphological structure of the bay, north of the Oder estuary, is a 7-8 m shallow fine grained sandbank, the “Oderbank”. It extends into the German and Polish EEZs. To the north of the area lies the Rønnebank, a post ice age compressed moraine landscape which extends from Bornholm to the west.

Habitats and Biological Features

The Pomeranian Bay comprises a diversity of sensible habitats and adapted communities of the sublittoral euphotic zone. The area provides important ecological and functional processes for the Baltic Sea. It is a stepping stone for migrating mammal, bird and fish populations and a main wintering area for seabirds. The biodiversity of the area depends on different habitat complexes:

Sandbanks

The sandbanks of the area are continuously slightly covered with water and include a species rich benthic community with high productivity. The Oderbank



The proposed offshore site Pomeraniean Bay covers areas form Germany, Poland and Denmark

is a large sandbank of ideal characteristic and a representative habitat for the Baltic Sea as a whole.
As a sublittoral sandbank, the Oderbank is non-vegetated because water dynamics restrict macrophytes. But organisms are well adapted to their dynamic environment and live in the sandy bottom or on drifting algae and agglomerations of mussels. The community mainly consists of polychaete and crustacean species in high abundances. Therefore the Oderbank is of great importance as a feeding ground for wintering seabirds and for economically important fish species e.g. Cod, Herring and flat-fish. It is also

Feature	Value
Area size	app. 6000 km²
Mean depth	30 m
Depth range	40 – 7 m
Salinity	7 - 8 ‰

of high significance as a habitat of regeneration and refuge and for the recolonization of naturally degraded or artificially damaged areas.

Reef complexes

The reefs consist of submarine rocky substrates and

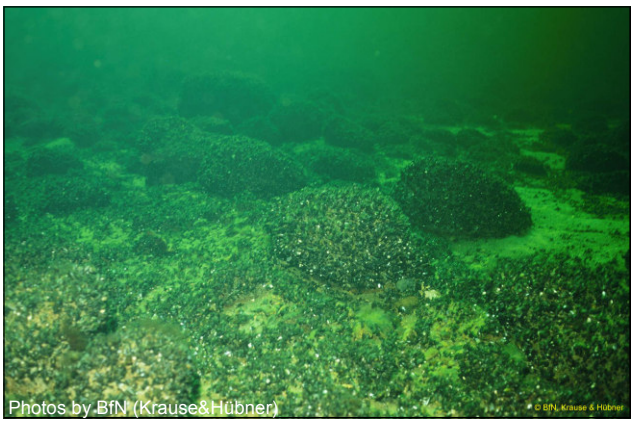


Fig. 2 Beds of Blue Mussels cover large parts of the Adlerground

biogenic concretions which arise from the sea-floor in the sublittoral zone. They comprise diverse habitats and structures and support a zonation of benthic community of algae and animal species.
Reef complexes of stones, mearl and mussels in various depths, meadows of macrophytes, stone fields and sandbanks are found on the Rønnebank. They provide favourable habitats for a high diversity of species.
The Adlerground covers sandbanks as well as stone and marl reefs partially covered with thick mead-ows of the brown algae *Chorda tomentosa* and blue mussel (*Mytilus edulis*) in a depth of 20 – 7 meters. Typical algae in the shallow zone are *Fucus serratus* and *Furcellaria lumbricina*. The habitats comprise about 45 species of makrozoobenthos.
The ridge of the Western Rønnebank reaches depths of about 40 meters. It consists of unspoilt stone fields forming reefs that provide habitats for a remarkable number of macrozoobenthos, in total 68 taxa were proven, e.g. *Halitholus yoldia-arcticae* (Hydrozoa), *Tridonta borealis* (Bivalvia) and *Theodoxus fluviatilis* (Gastropoda).

Harbour porpoise

The Harbour porpoise is internationally recognised as endangered and is the object of many protection efforts. There is strong evidence that there is a central Baltic Sea subpopulation of about a few 100 individuals, which is genetically different from the Western Baltic population. Especially high concentrations of porpoises have been observed in Pomeranian Bay (2002). Scientists assume that the Bay is used as a migration and resting site and is therefore of high significance for the population. It can also be an important stepping stone for its distribution in the Eastern Baltic Sea.

Birds

The Pomeranian bay is the second most important wintering area in the Baltic Sea. Over 1 million seabirds can be seasonally found. Especially significant is the area for the Velvet Scooter (*Melanitta fusca*), Red-necked Grebe (*Podiceps grisegena*) and Slavonian Grebe (*Podiceps autitus*). Ten species occur in numbers of international importance, including the Long-tailed Duck (*Clangula hyemalis*) and the Common and Velvet Scooter (*Melanitta nigra and fusca*). There is an isolated eastern population of about 25.000 individuals of the Black Guillemot (*Cepphus grylle*) in the Baltic Sea. About 1000 individuals of the possible subspecies are found in the area of the Adlerground.
When the southern and central Pomeranian Bay freezes up in cold winters the Adlerground is an important place of refuge for the seabirds.

Human uses and impacts

Fig. 3 For the Long tailed Duck the bay is an important wintering area

While the area is of high economic importance for the fishery of flatfish and cod, the fishery practices are also a main threat towards the ecosystem. Bottom-trawling is the most harmful practice to habitats like sandbanks and reefs. But high densities of bottom gillnets constitute a permanent risk for seabirds and mammals. The impact of fisheries includes the exploitation of stocks of commercial species as well as non-commercial species, seabirds and marine mammals through unintended by-catch. Sand and gravel extraction is another harmful practice that impairs the ecosystem and its biodiversity by destroying benthic biotopes.
Increasing shipping, especially ferry traffic, is an additional disturbance for resting birds in the bay. In the event of an accident, oil pollution would have a dev-

astating effect on sea birds and fishing grounds. The construction of offshore wind parks is already present; two applications were already rejected because of the high value for seabirds in the area. EIAs should be conducted to fully assess associated impacts. Impacts and threats from dumped World War II munitions need to be investigated.

Protection and Management

The primary objects for protection in the Pomeranian Bay are the wintering migratory birds, the harbour porpoise population and the reef and sandbank habitats. Those species need a disturbance-free natural environment to ensure their existence and recovery. Therefore the governments of Denmark, Germany and Poland should coordinate their protection efforts and establish a joint management scheme for the area.
Agreements on reduction of impacts within the fishery and extraction industries are urgently needed to avoid more destruction and ecosystem damage. Fishery techniques should be revised and sustainable methods applied. The establishment of windfarms should be coordinated and placed outside the main migratory routes for birds and the main wintering localities. Profound monitoring and research programmes should be enhanced and expanded.

Existing / Proposed Protection

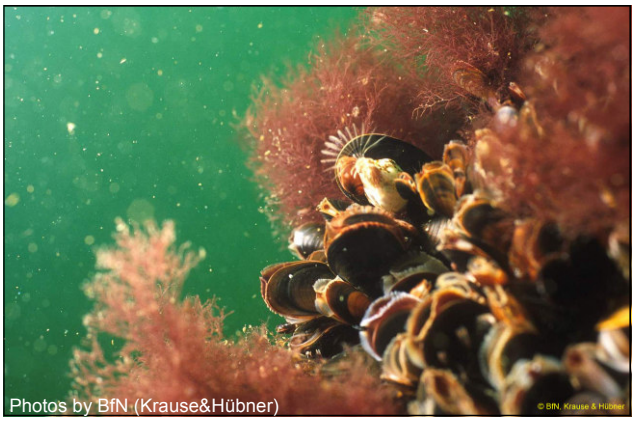


Fig. 4 Blue Mussels

There is no legal protection of the area yet, but Germany designated three Natura2000 sites (SAC) and one bird protection area (SPA) within the proposed "Pomeranian Bay" site. Recently Poland proposed a SPA in their territorial waters and EEZ, which is almost adjacent to the German SPA. The proposed area covers also a Baltic Sea Protection Area (BSPA), the Danish "Adlerground" and a large part of the important Bird Area of the Pomeranian Bay. The Baltic Sea States agreed, in the framework of ASCOBANS's Jastarnia plan, to safeguard the Baltic Harbour porpoise population. The Bay could be a potential site for implementing this plan.

References and further reading

Bundesamt für Naturschutz (1998): Wissenschaftliche Grundlagen zur Ausweisung und zum Management mariner off-shore Schutzgebiete im Bereich der Hoheitsgewässer und der Ausschließlichen Wirtschaftszone Deutschlands in der Ostsee und deren Integration in das System von Baltic Sea Protected Areas (BSPAs) – Untersuchung durch Institut für Angewandte Ökologie GmbH

Skov, H. et al (2000): Inventory of Coastal and Marine Important Bird Areas in the Baltic Sea. BirdLife International, Cambridge

Durinck et al (1994): Important Marine Areas for Wintering Birds in the Baltic Sea. Ornis Consult Report

HELCOM (1998): Red List of Marine and Coastal Biotopes and Biotope Complexes of the Baltic Sea, Belt Sea and Kattegatt – Baltic Sea Environment Proceedings No. 75

Scheidat et al (2003): Summer Distributions of harbour porpoises (Phocoena phocoena) in the German North and Baltic Sea – Ascoban working paper

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