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## REVITALISATION OF RESKO PRZYMORSKIE LAKESHORE AS A PART OF THE COASTAL DEVELOPMENT PLAN

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#### Abstract

Lake Resko Przymorskie is one of Poland's Baltic coastal lagoons located in an unusually attractive area for tourism. Due to low quality waters as well as its high vulnerability to degradation, the lake has been poorly used by tourists and fishers alike. Hence, it is necessary to urgently undertake actions leading to revitalisation of the lake and its surrounding.

A concept has been proposed for this purpose. The plan of development and revitalisation of the lakeshore area includes an outline of tourism-activity zone located along the southern banks of the lake. The zone is aimed to support local tourism-based economic growth without additional burdening of the attractive though fragile peninsula which encloses the lake from the north.

Key words lakeshore, revitalisation, development, lake, planning

Lake Resko Przymorskie is one of coastal lagoons located along Poland's Baltic coastline. There are nine such lakes within the Polish coastal zone, which are separated from the sea only by a narrow sandy peninsula. Such bodies of water are referred to as coastal or estuarine lakes, since their waters are permanently or periodically affected by brackish inflows through some channels connecting them with the Baltic Sea.

Poland's estuarine lakes are located in the marine coastal areas which are particularly attractive for tourists (Szwichtenberg 1997). Coastal lakes are shallow (mean depth 2 m), have muddy bottoms and considerably eutrophicated water. Due to low quality of the water and their high vulnerability to degradation, these lakes are poorly utilised by both tourism and fishery.

Anthropogenic impact to a large extent accelerates the natural process of ecological succession, which finally turns lakes – those shallow in particular – into a dry land. This can be seen from examples of shallow coastal lakes which have already intensively shallowed and overgrown with vegetation (e.g. Liwia Łuża Lake) and which may disappear within the next 50 years (Picsik 1998). Low quality of water caused by pollution, as well as its eutrophication resulting in algal blooms and lead-

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ing eventually to ecological balance disturbance, represent typical negative outcomes of anthropogenic activity.

Under such circumstances, it is critical to undertake actions that would lead to restoration (revitalisation) of the coastal lakes, also through restoring their recreational and fishery functions. Due to their environmental protection status, only those coastal lakes can be included in revitalisation plans which do not constitute nature reserves or do not belong to national parks, such as lakes Resko, Jamno, Bukowo, Kopań, Wicko, Sarbsko (the protected lakes Liwia Łuża, Gardno, and Łebsko have been excluded).

Resko Przymorskie is an estuarine lake of area 577 ha, length 3.8 km, maximal width 2.3 km, mean depth 1.3 m (max. depth 2.5 m) and water volume 7700 m<sup>3</sup>.

Revitalisation of Resko Przymorskie lake is a compound mission which may be very difficult to accomplish. Before proceeding with the revitalisation plan using engineering and biological methods, water and waste management within the lake's catchment area should be re-arranged. The river Blotnica requires special attention in this respect, since it is exposed to anthropogenic impact of the villages Dorgocice, Unieradz, Noworódek, and Głowaczewo. Also, pollution pressure should be precisely established in relation to the villages located immediately within the shore zone of the lake, i.e. Dźwirzyno, Rogowo, and Karcino. Furthermore, agrarian utilisation of land (arable land and its fertilisation scheme, meadows, pastures, ecological agriculture, etc.) within the immediate vicinity of the lakeshore should be analysed. Forestation of the banks, which could protect the lake against direct run-off of nutrients from the shore zone, is very low, except for its north shore which is covered with dune woods. A dense growth of trees can be hardly found in places around the entire catchment area of Resko Przymorskie Lake, which additionally demonstrates that the landscape here has been substantially modified and requires partial restoration

Revitalisation of the lakeshore in terms of landscape transformation is related with long-term land and economic policy of the region and sea coast. The area surrounding Resko Lake requires to be developed in accordance with land development policy of the state.

In Poland's land development planning, the coastal zone is ranked in the category I as an area of special protection for tourism. Tourism growth at the sea-side is a priority for land development planning. Planning of the coastal zone is heavily dependent on the requirements of the natural environmental, and ecological issues should be considered leading for the coastal zone development policy, according to the national plan (Kołodziejski 1994).

The natural environment and the present state of land development determine a possible direction of development, which is associated with promotion of tourism in the area on one hand and the necessity to take restoration measures on the other (Kozlowski 1995, Piesik 2001). The key factor for development planning of the area is improvement of water purity in the lake.

Considering all these factors, the lakeshore area was subjected to functionalspatial analysis. An outline of the lakeshore landscape development and modification is a result of these studies. Development of Resko Przymorskie lakeshores, especially at its southern banks, is chiefly aimed at discharging too intensive and dangerous for environment tourism activity which occurs during summer on the narrow peninsula that runs between the sea and the lake.

The outline of development and restoration of the lakeshore includes a plan to create the tourism-activity zone "Karcino 2" (Fig. 1). The tourism-activity zone is supposed to promote further development of accommodation services, catering, and entertainment, without burdening the peninsula, which is susceptible to overcrowding by tourists every summer. The type of housing on the area of Karcino 2 will be functionally created entirely to meet tourist needs. The facilities will include bathing beaches and solaria and will serve hikers, cyclers, and motorists. Other tourism-related facilities will include a services and shopping centre, camping site, hotel, seasonally and all-year-round active caravanning & bungalow sites, and family holiday centres. On the bank, a jetty is planned with a boating harbour and a beach.

The lake's surrounding land is planned for large-scale re-forestation. A park is planned to be located on the peninsula, about 1 km to the east from the village of Rogowo, as well as tourist facilities designed to protect natural environment. Appropriate arrangement of tourist services will allow directing the intensive traffic of tourists onto appropriate pathways and routes. Guarded beach is planned in the northern part of the area, on the Baltic shore.

Accommodation facilities located mainly within the tourism-activity zone Karcino 2 has been communicated with a water tram which ferries between the park and Karcino 2, as well as between Rogowo, Karcino, and Dźwirzyno. A bicycle path is planned around the lake to run along adapted existing flooding dikes and bridges specially built across numerous brooks and drainage channels which are found to the southern bank of the lake. The bicycle path Resko is planned to be included into the international bicycle route around the Baltic.

Areas of wetland meadows inhabited by flora and fauna, especially by water fowl, will be of special importance for the development of the Resko Przymorskie lakeshore. In the south-eastern part of the lake, on the peninsula near the old mouth of the Rega River, a protected area of ecological arable land is planned. In the north-western part, on the other hand, a protected area is planned on the peninsula near the passage connecting the lake with the Baltic (Fig. 1). These areas will require human action in the form of mowing the wetland meadows or introducing cattle breeds that do not require housing even during winter and which create a real tourist attraction. Studies in this area have been conducted by the Agricultural University of Szczecin. Pasturing (or mowing) is aimed to control vegetation in favour of short grasses and to stop the progress of common reed, which quickly invades the fallow lands of presently neglected melioration. Tall grasses, cattail, or reed evidently limit nesting space for a range of water- and marshland avian species, which will be the main object of protection in these areas.

The proposed comprehensive programme of revitalisation and development of the lakeshore of Resko Przymorskie Lake is supposed to be run over a longer period. The main objective of the authors of the project is economic activation of the region in the natural environment favourable for this purpose. This objective conforms to the most recent social and economic strategies involving local communities.

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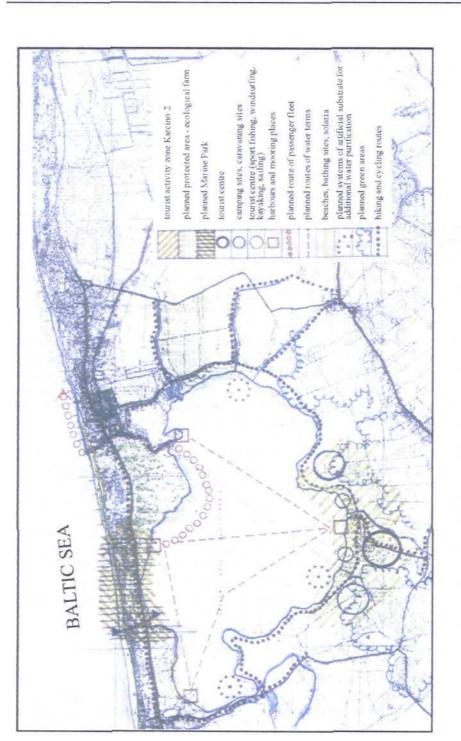


Fig. 1. Plan of revitalisation and development of lakeshore and lake Resko Przymorskie

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# REWITALIZACJA STREFY BRZEGOWEJ JEZIORA RESKO PRZYMORSKIE JAKO FRAGMENT PLANU ROZWOJU WYBRZEŻA

### Streszczenie

Resko Przymorskie jest jednym z polskich jezior położonych w strefie przybrzeżnej Bałtyku, na terenie niezwykle atrakcyjnym turystycznie. Ze względu na niską jakość wody jak również wysoką podatność na degradację, jezioro rzadko odwiedzane jest przez turystów i wędkarzy. Z tego też względu konieczne jest jak najszybsze podjęcie działań prowadzących do rewitalizacji jeziora i jego otoczenia.

Plan rozwoju i rewitalizacji strefy brzegowej obejmuje otulinę obszaru przeznaczonego dla turystyki, usytuowaną wzdluż południowego brzegu jeziora. Obszar ten ma na celu zapewnienie rozwoju bazy turystycznej bez dodatkowego obciążenia półwyspu znajdującego się w północnej części jeziora.