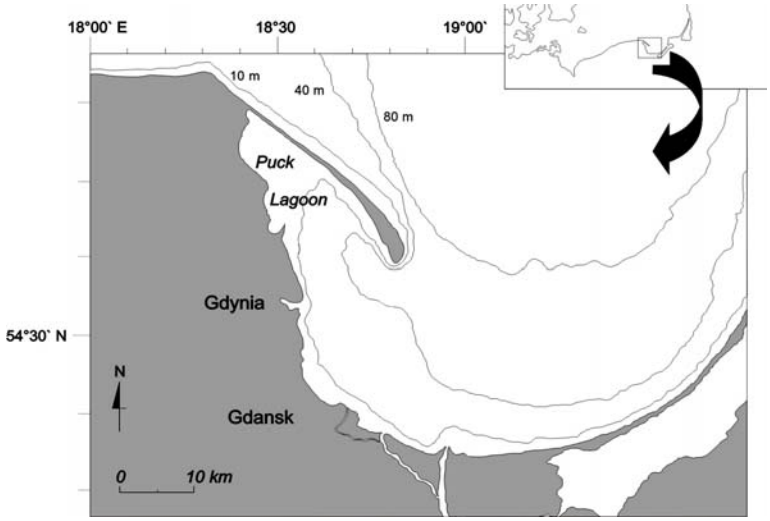
WT 7.2 GULF OF GDANSK

1. Host Institution: **Maritime Institute in Gdańsk** **Contact:** **Juliusz Gajewski**

2. Gulf of Gdansk, Poland.



3. Characteristics

Marine System	The Gulf of Gdansk is a south-east part of the Baltic Sea enclosed by a large curve of the shores of Gdansk Pomerania in Poland (Rozewie Cape, Hel Peninsula), and Kaliningrad Oblast of Russia (Sambian Peninsula). Western part of the Gulf of Gdansk is the shallow waters of the Puck Bay and the south-east part is the Vistula Lagoon separated by the Vistula Spit and connected by the Strait of Baltiysk. Gulf of Gdańsk has different hydro-geomorphological regimes and consists of different units: lagoons, river mouths, sheltered and open coastal areas. This area is under strong anthropogenic pressure. Maximal depth is 120 meters, salinity: 7 PSU. Total surface area of the Gulf of Gdansk is 5134 km^2 and volume is 840,2 km^3. Major ports: Gdańsk, Gdynia, Kaliningrad, Hel, Puck (ca. 2 millions inhabitants).Sandy bottom biotopes are dominated by macrophyte vegetation only occur in the sheltered Puck Bay. Some small areas of stony bottom covered with macrophytes occur in the Gulf of Gdansk as well. The degree of naturalness and degradation of biotopes varies, with the greatest changes being observed below the halocline in the Gdansk Deep. Long-lasting periods of oxygen deficiency have caused the disappearance of almost all macroscopic life on the bottom and the impoverished plankton has limited fish reproduction.
Watershed	The Pomorskie region covers almost half of the Polish coastline (Eastern part), with two different types of settlements - westerly one being populated after II World War by immigrants from the Polish territories passed to Soviet Union and easterly one being populated by Kaszubian's – people living there already for hundreds years. Westerly part was dominated before 90-ties by intensive collective farming and industrial fishing. On the other hand the easterly part was mainly consisting of small private farms and small boat fisheries. The coastal zone of the study site is mostly low sand beaches – an excellent place for tourism development. Additionally Hel Peninsula being itself attractive creates a very good place for windsurfing in the Puck Bay.
Human Activities	Tourism, Agriculture, Fishing and Shipping
Impact Responses	Eutrophication, Trophic web changes, Diversity loss, Coastal erosion

4. Policy

Policy issues	Impact of changes in land use and agriculture in the coastal area and Vistula river catchment area on coastal water quality, consequences for coastal water management, Possibilities of environmentally-friendly reduction of unemployment and/or conversion from fishery/shipbuilding including reduction of "social exclusion" Harmonization of the management approaches of Natura 2000, EU-ICZM recommendations and the Water framework directive.
Policy changes	Changes in the settlement type after the II World War in Gdańsk area and west part of the region – immigration and nationalization of agriculture Evolution from environmentally negative (70's & 80's) to environmentally-friendly policies (concerning overexploitation of natural resources, including biological ones) Changes in urban and waste polices Changes in agriculture – bankruptcy of nationalized farms, economical and industrial crisis Changes in industry – bankruptcy of national industry and rebuilding under new regulations Changes in property ownership – privatization Demilitarization (e.g. free access to the beaches from 1989)

5. Stakeholders and Institutional Governance

Major organisations	Pomorskie Region Authorities Maritime Office in Gdynia Local Authorities around Gulf of Gdansk
Other leading organisations	Union of Coastal Cities Fishermen Association

6. Partner Collaboration

SPICOSA Partner Collaborations.	Partner – Institute of Oceanography of University of Gdańsk

7. Systems Studies

Long time series	long-term (more than 20 years) data on: salinity, temperature, radiance, H_2S, oxygen, chlorophyll a, statistical data on economical, social and industrial issues (statistical information for 50 to 100 years), aerial photos of the coastal zone, various and large amounts of additional data e.g. meteorological, hydrodynamic, water quality, heavy metal, biological data
Research Projects *Socio-economic study*	A model of matter exchange and flow of energy in the Gulf of Gdańsk ecosystem, State Committee for Scientific Research, No 6PO4E 036 09 EUROCAT: European Catchments Changes and their Impact on the Coast Case Study VISCAT: The Vistula River Catchment and the Baltic Sea Coastal Zone**,** No. EVK1-CT-2000-00044 HIPOCAS, 40 Years Hindcast of the sea level, waves and circulation in the Baltic Sea, EU Project Nº.: EVK2-CT-1999-00038, 1-90 Maritime Institute in Gdańsk is preparing yearly assessment – "Maritime Economy – statistic review". DEDUCE: The Interreg III C project aiming on production of indicators of implementation of ICZM management.