

Greening Motorways

Stockholm, 21-22 April 2005



Prepared by: Jakub Piotrowicz

Maritime Institute in Gdańsk , Poland



Maritime Institute in Gdańsk 1950 - 2005

The Institute has over 55 years of scientific experience in research and development of maritime science and economy.

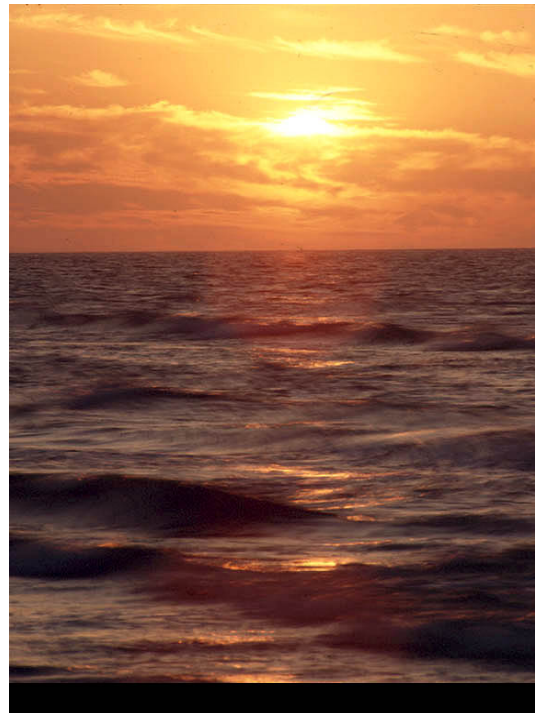
| | |
|--------------------------|--|
| Establishment date : | 1950 |
| By : | Ministry of Maritime Transport and Economy (now Ministry of Infrastructure) |
| Localization : | Poland, Gdańsk (located on the southern coast of the Baltic sea) |
| Head office : | Golden House, Gdańsk (in the centre of old town) |
| Branch Office: | Szczecin (south Baltic seaside city on the German border) |
| Number of employees : | 110 people |
| Organization structure : | 8 Scientific Departments Scientific Library Publishing Company |





MISSION

Our mission is to preserve the maritime environment and provide the Polish Maritime Economy with sustainable development.





Fields of Activity

Maritime Hydrotechnics
Water Economy and Maritime Engineering
Operational Oceanography

Ecology
Environment Protection

Ports, Economics and Law

Marine Corrosion
Marine Electronics





Department of Operational Oceanography

THE MAIN TASKS :

monitoring and **supporting** the rescue actions
monitoring and **combating** chemical and oil spills
collecting and **processing data** on the currently measured physical, chemical and other parameters of the Baltic Sea



Preinvestment surveys (before construction of harbours, pipelines, cables, **wind farms**)

Development of databases; data handling systems (incl. GIS); hydrodynamic, wave, sediment transport modelling for operational oceanography purposes

forecasting of the direction and speed of drift of an object and oil spills

*finding and making **inventory** of the **wrecks** (hydroacoustic systems integrated with satellite positioning DGPS system, **ROV** equipped with a TV camera)*



Department of Economics and Law

In Particular it deals with:

Forecasting of maritime economy development trends

Modernization and development of port and transport infrastructure

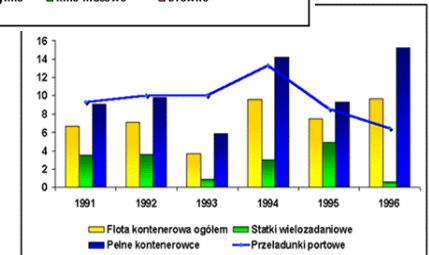
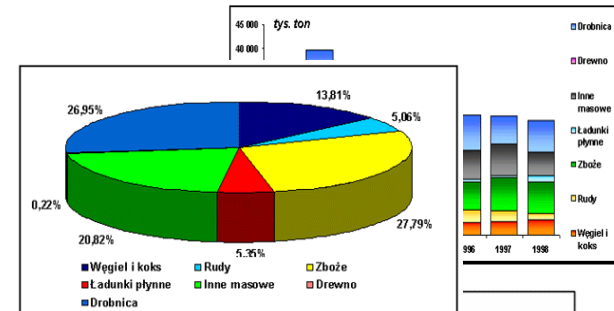
Logistics of the land-sea transport

Techniques of **electronic data interchange EDI** in the international transport and trade

Statistical analyses published annually in the Statistical Review of Maritime Economy

Maritime and coastal **tourism**

Adjusting the Polish maritime law to make it **compatible with the European Union legal system**



tedim



Department of Operational Oceanography

other sea bottom investigations (hydrographic, geophysical and geological)

laying subsea pipelines and cables

hydrographic service of water courses and reservoirs

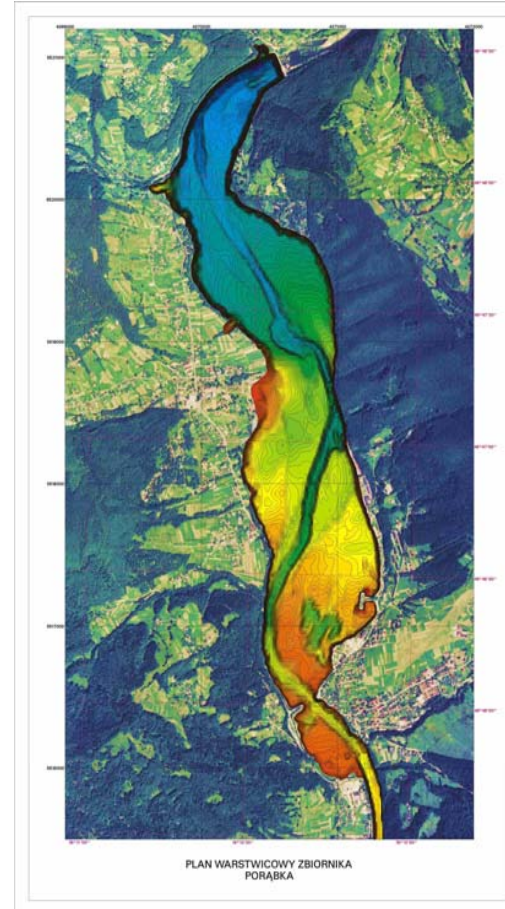
cross sections of river



m/s **Imor II** the new ship that is being build

numerical models of the reservoir bottom are created, the current capacity of a reservoir is determined and **contour map is plotted**

we use the **GIS** system (ArcInfo, TNTMips) and **aerial photography**





Baltic Sea Information Motorways



Maritime Institute in Gdańsk – BaSiM WORK PACKAGE 4 LEADER

BALTIC SEA MOTORWAY SUPPORTING INFORMATION SERVICES

Responsible partner

Maritime Institute in Gdańsk, Poland

Involved partners of the WP 4

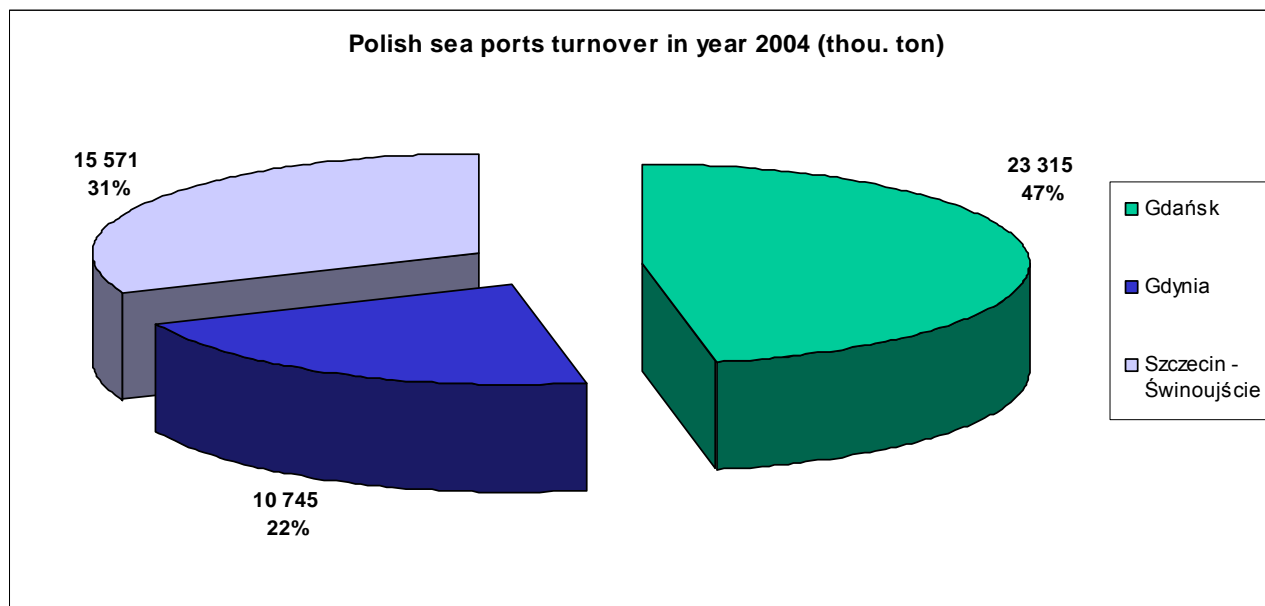
- Institute of Logistics and Warehousing, Poznan, Poland
- University of Gdańsk, Poland
- Ministry of Infrastructure, Warsaw, Poland
- Technikzentrum, Luebeck, Germany
- Lapperanta University of Technology, Finland





Baltic Sea Motorways- Case Study of Port of Gdansk

Port of Gdansk - cargo turnover



| | | 2002 | 2003 | 2004 | Increase: year 2004 to 2003 |
|---------------|-----------------|---------------|---------------|---------------|--------------------------------|
| Total | 1000 ton | 17 371 | 21 293 | 23 315 | 9,5 % |
| Bulk | 1000 ton | 15 495 | 18 995 | 20 751 | 9,3 % |
| General cargo | 1000 ton | 1 876 | 2 298 | 2 564 | 11,5 % |
| Passengers | persons | 171 987 | 280 720 | 165 477 | -41,1 % |
| Ro-Ro | units | 6 289 | 13 318 | 8 959 | -32,7 % |
| Containers | TEU | 20 136 | 22 537 | 43 739 | 94,1 % |

Source: Port of Gdansk Authority

Position of the port of Gdansk

1. Challenges

- Changing customers requirements – port should be considered as an element of „door to door” transport & logistic chain and needs to assure efficient service to customer
- Intensified competition pressure
- Increasing rate of intermodal transport development - needs to assure appropriate facilities & good access to port infrastructure

2. Opportunities

- Development of sustainable trans European transport network (TEN-T) including Motorways of the Sea
- Possibilities to participate in common European hinterland market
- Increased possibilities to benefit from multiple EU programmes launched to support transport development

3. Basic bottlenecks

- Poor level of development of the motorway network in Poland
- Insufficient quality of railway transport services

Port of Gdansk view on Motorway of the Baltic Sea & TEN-T network



Some actions of the Port of Gdansk in view of MoS development

1. Development of the quality port infrastructure:

- Construction of the new Container Terminal facilities,
- Preparing of the logistic centre development.
- Modernisation of the ro-ro/ferry Terminal Westerplatte,
- Modernisation of the Container Terminal in Szczecinskie Quay,

2. Preparing projects to improve land link of the port facilities to the national road and railways network.

3. Commencing the work on formulation of the Motorways of the Sea project based upon undersigned agreement between ports of Gdansk and Helsinki.

4. Developing computerized information systems to facilitate logistic services and administrative procedures.



Transport infrastructure projects under development



1. Industrial Quay

2. Port Free Zone

3. Ro-ro/ Ferry Terminal
Westerplatte

4. Modernization of the
inner port entrance

Comments on Motorways of the Sea development from the Polish point of view

- **Realisation of the Motorways of the Sea initiative will have positive effect on sustainable transport network development.**
- **Large diversity of European port sector results in difficulties to obtain common agreement on some detailed solutions included in the Motorways of the Sea guidelines.**
- **Not adequate quality road/rail connections to the main national transport routes could easily become major bottlenecks restricting whole hinterland access to the port.**



**Thank you
for your attention**

Jakub Piotrowicz

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