TransBaltic

Towards an integrated transport system in the Baltic Sea Region

Analysis of flows between Poland and Scandinavia in the context of European Transport Corridors

PKP cargo
GRUPA PKP

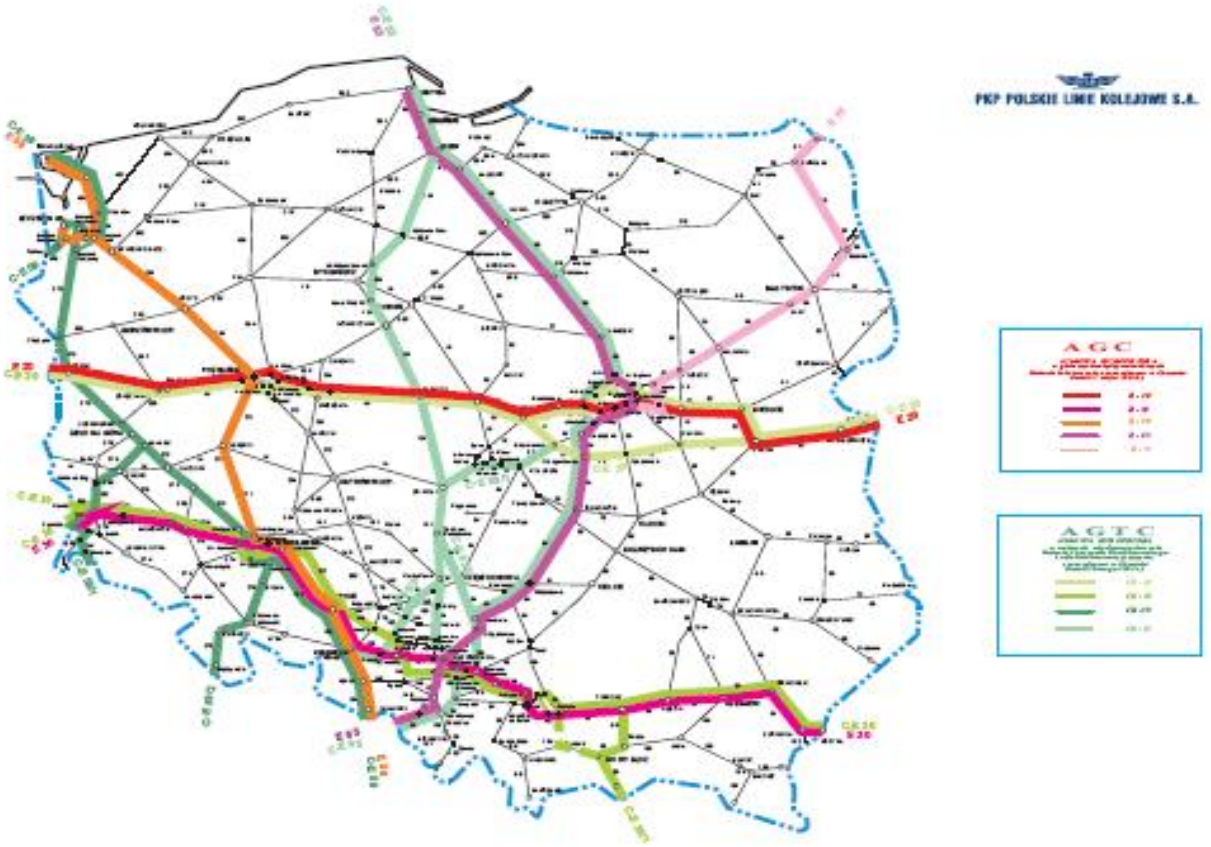
TransBaltic simposium ,10 June 2010

Transport Corridors

Pan-European Transport Corridors were established at the conferences of Transport Ministers from the EU and associated countries, in Crete (1994) and Helsinki (1997). Four out of ten Corridors run across the territory of Poland:

- **Corridor I: Warsaw- Biağystok - Suwağki - Trakiszki**
- **Corridor II: Kunowice - PoznaŒ- Warsaw- Terespol;**
- **Corridor III: Zgorzelec - Wrocğaw - Opole - Katowice - Krakow - Rzeszów - PrzemyŠl - Medyka;**
- **Corridor VI: GdaŒsk/Gdynia ï GrudziŃdz/Warsaw - Katowice ï ZwardoŒZebrzydowice**

Transport Corridors in Poland



Transport Corridors in Poland

Transport Corridor I

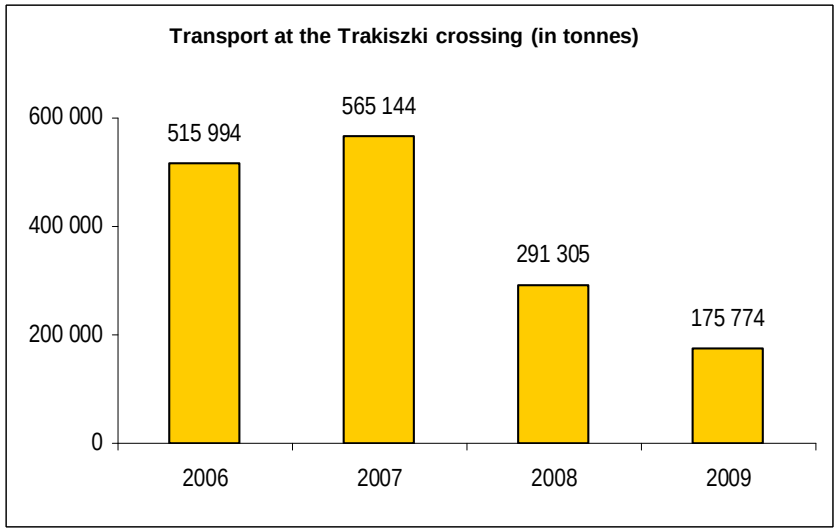
- Rail Baltica ï Pan-European Transport Corridor I is one of the priority rail projects announced in Van the Miertôs report in June 2003. This project is also included in the group of 30 priority projects within the TEN network announced in the 884/2004/EC decision of 29 April 2004 relating to the community directives concerning the development of a Trans-European transport network.
- Rail Baltica is to connect Tallinn with Warsaw, via Riga and Kaunas. The existing line connecting the two cities is about 1200 km long. The whole line is planned to be of normal track gauge (1435 mm).
- Rail Baltica is a project of significant importance to the European Union. It is the only railaway line that connects Lithuania, Latvia and Estonia with the whole EU territory.
- The Rail Baltica route in Poland comprises 341 km of railway including 172 km of double-track line and 169 km of single-track line.

Transport Corridor I

- The E 75 Warsaw - Białystok – Sokółka - Suwałki - Trakiszki – country border railway line is part of Corridor I, called Rail Baltica, which connects Helsinki with Warsaw, via Tallinn, Riga and Kauas. It is the only rail connection between the Baltic states and Poland offering connections with other capital cities such as Prague, Berlin or Vienna. In Warsaw the Corridor meets Corridor II (line E 20) and Corridor VI (line E 65).
- Line E 75 is included in the European Agreement on Main International Railway Lines (AGC) but for now it does not comply with the technical parametres of this agreement. Namely, the line's current technical condition and geometric parameters do not allow for the use of trains with the speed of 160 km/h in passenger traffic and 120 km/h in freight traffic, with the axle load of 225kN. The line has been electrified from Warsaw to Sokółka. From Sokółka to Trakiszki motor traction is used.
- Currently planned modernisation aims at fulfilling the European standards mentioned above.

Transport Corridor I

- Within Transport Corridor I Poland is a transit coutry for Baltic cargo flows to and from the EU member states

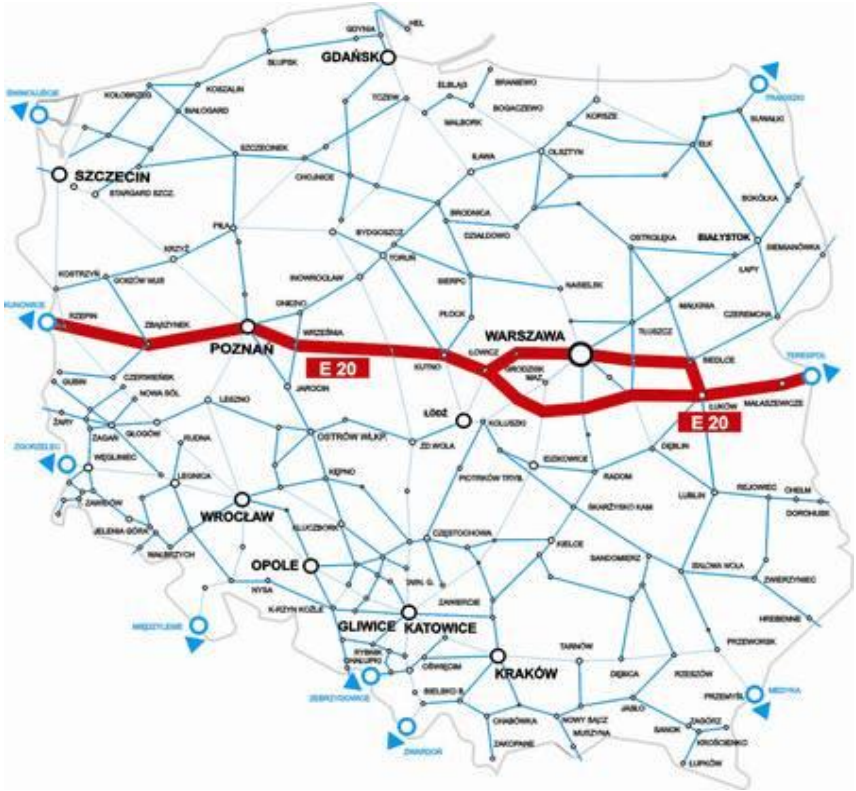


- Cargo flows between the Baltic states and Western Europe (especially Germany) are serviced mainly by road transport. This results in a considerable traffic load within the Corridor I road network and constitutes a burden for the inhabitants.
- The Rail Baltica project will make it possible to handle freight traffic in Corridor I via rail transport which will stimulate trade with other European countries.
- Rail freight transport at the Trakiszki ï Ġeġtokai border crossing has been showing a downward trend in recent years. Import and transit shippments constitute the largest share of the transported goods which means that freight traffic in the Corridor is likely to increase considering the expected growth of trade between the Baltic states and Western Europe
- There is a possibility of transferring part of sea shippments carried out by ferries on the Mukran ï Klaipäda route to rail transport

Transport Corridor II

- Corridor II connects Berlin with Nizhny Novgorod, via Warsaw, Minsk and Moscow. It is one of the most important international transport routes in Europe. It consists of a double-track electrified E 20 railway line and the E 30 road. In Poland, the road component of Corridor II comprises the A-2 motorway, which is now under construction. Overall road length of Corridor II equals approx. 2200 km including the Polish section of 680 km.
- Within Corridor II a quadrilateral cooperation between Germany, Poland, Belarus and Russia takes place under the management of the European Commisssion. *Memorandum of Understanding* of 1995, signed by ministers of transport in the four countries, constitutes the legal basis of the cooperation.
- Currently, Pan-European Corridor II is included in the EUôs Nothern Dimension initiative which covers the Baltic Sea states and the area of North-East Europe, where the borders of the EU, Russia and other CIS countries meet.
- One of the key technical problems with Corridor II is the presence of bottle necks and the border of two different rail systems with track gauges of 1435 mm and 1520 mm. As a result, transit transport flow and rail transport competitivness are reduced. The problem of long waiting time at the Polish-Belarussian border appears in road transport as well. However, the Corridor has an enormous and yet not fully explored transport potential for Europe-Asia transit traffic.

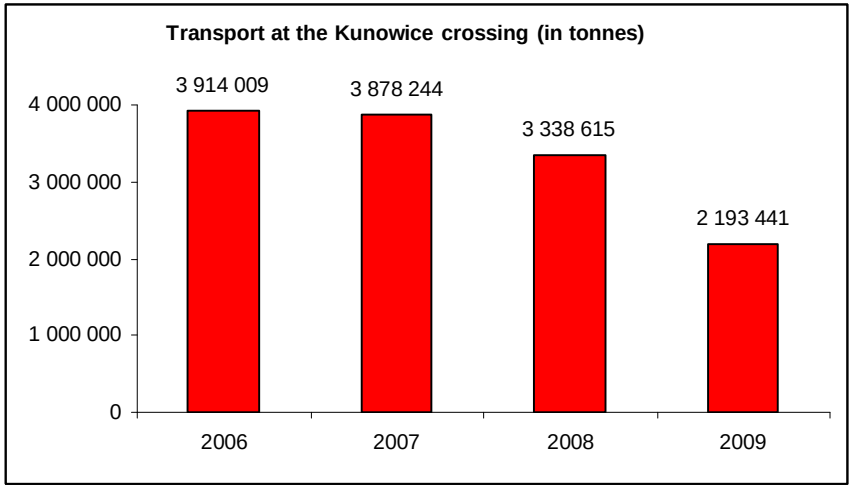
Transport Corridor II

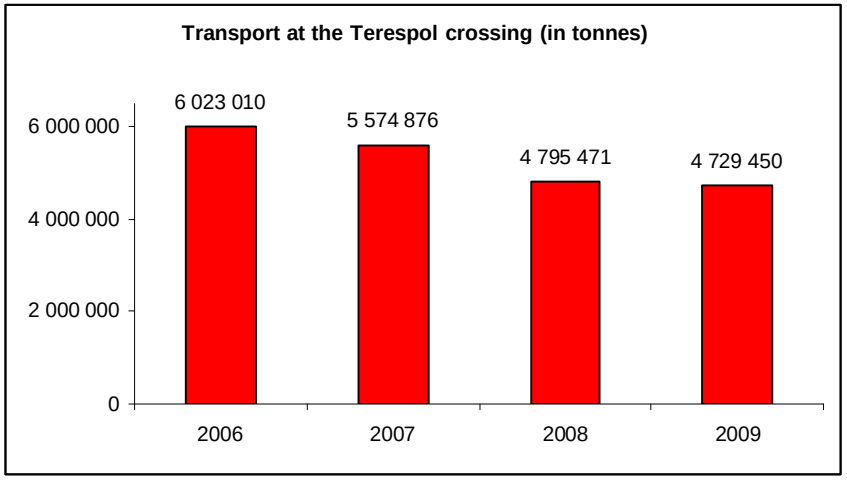


- E 20 line - Kunowice– Poznań– Warsaw- Terespol is 690 km long and runs across the Wielkopolska, Mazowsze and Podlasie regions.
- The aim of the modernisation is to adapt line parameters to the union standards and AGC and AGTC requirements which allow for 160 km/h of maximum speed for passenger trains and 120 km/h for fraight trains with the allowable axle load of 22.5 tonnes.
- **Line modernisation includes:**
- Modernisation of the track structure and railway bed as well as route and station drainage
- Modernisation of overhead lines and power supply
- Modernisation of automatic crossing signalling devices and the road surface at grade crossings as well as building parallel roads, where necessary
- Modernisation of engineering facilities
- Modernisation of telecommunications devices and railway traffic control devices
- Building environment-friendly devices

Transport Corridor II

- The E20 line is the main transit route for rail transport accross Poland. It services over 90% of transit shippments.
- At the Polish-German border, the Kunowice/Rzepin ï Frankfurt (Oder) hub has the greatest importance to transit transport.
- Trasit transport from west to east, out of Poland, is directed mainly to the Terespol - Mağaszewicze border station.

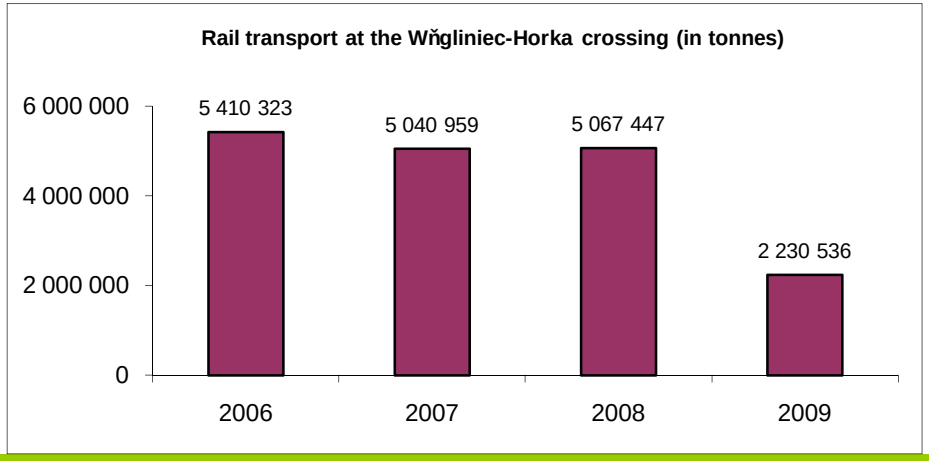




Transport Corridor III

- European Transport Corridor (ETC III) runs from Dresden and Berlin to Kiev, via Wrocław, Katowice, Krakow, Rzeszów and Lviv as a 1640 km-long rail and road route. Corridor III connects regions and conurbations with high population density and significant potential for economic development.
- The Corridor is chatracterised by high intensity of manufacturing processes and dynamic development of freight transport. As a result of the ongoing economic and social integration, passenger transport is also gaining in importance.
- European Transport Corridor III is one of the major European transport connections between the EU and neighbouring countries along the east-west line. The Corridor is also the main component of the so called Central Axis within the Transnational Transport Axes concept developed by the European Commission. The concept is the key element of the EC directives issued in 2007 which refer to transport policy in Europe and the neighbouring regions.

Transport Corridor III



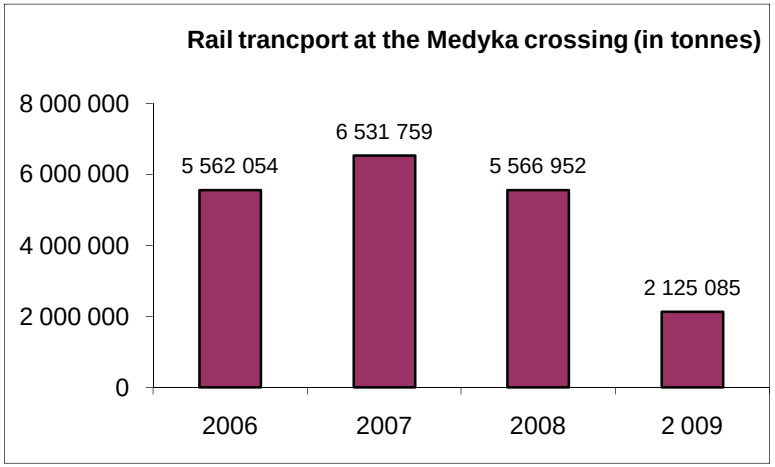
- E 30 railway line is part of the Pan-European Transport Corridor III, which connects, for example, Dresden (Germany), Wrocǧaw, Katowice and Krakow (Poland) with Lviv (Ukraine). The Polish section of this line is 677 km long and connects major economic centres and regions in southern Poland: Lower ad Upper Silesia, Maǧopolska and Podkarpacie.
- The purpose of modernisation is to adapt line parameters to new standards and requirments of international agreements: AGC (on main international railway lines) and AGTC (on main international railway lines in combined transport)
- **Line modernisation includes:**
- Route and station works, involving track, sleeper and railway bed replacement and drainage
- Modernisation of overhead lines and non-traction power lines
- Modernisation of the road surface at grade crossings and building parallel roads, where necessary
- Modernisation of engineering facilities
- Modernisation of communication devices and railway traffic control devices, so that remote control of railway sections is possible

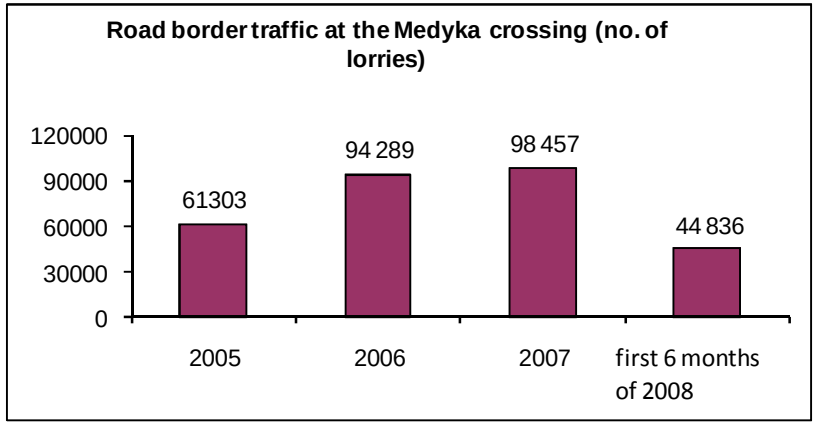
Transport Corridor III

The Medyka-Mostyska border crossing was most heavily loaded in the 70s and 80s. Later, transport increased at the beginning of the 90s, in 1994-95 and in 1997. Transport executed at the Medyka-Mostyska crossing is largely dependent on the economic situation on the European market ï especailly in the metallurgical industry.

The significance of the Medyka-Mostyska border crossing is likely to increase because of its convenient location on one of the main transportation routes of international importance (E-30 / C-E 30). What is going to be helpful in this respect is the ongoing modernisation of the railway line and its adaptation to the speed of 160 km/h for passenger traffic nad 120 km/h for freight traffic, so that the line complies with the requirements of the AGC and AGTC agreements which it is included in.

The policy of concentrating freight transport at the Wňgliniec - Horka border crossing and dericting it further to the E 30 line, implemented by German railways (DB), will also be conducive to the increase of transport at the Medyka-Mostyska border crossing.

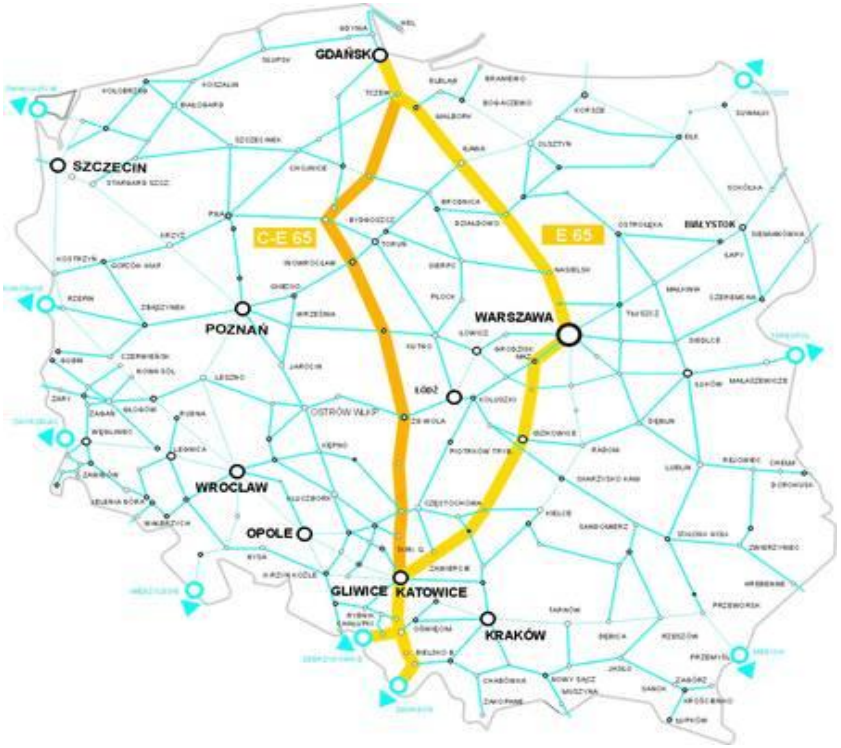




Transport Corridor VI

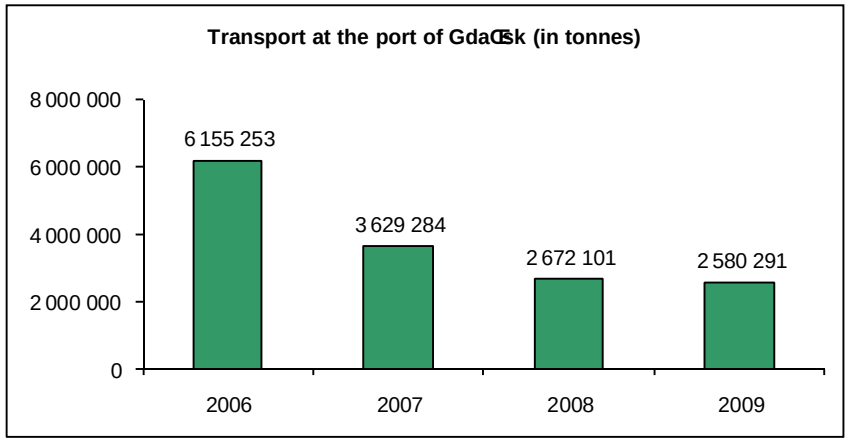
- Corridor VI, a transit axis in the meridional system, conveniently located regarding both Central- and South-European transit base (the Czech Republic, Slovakia, Hungary) and East-European base, including Belarus, West Ukraine (VIA corridor) as well as the Baltic states ï Lithuania, Latvia and Estonia, creates a potential for transit transport.
- Within the territory of Poland, the main elements of Corridor VI are: two large sea ports in GdaŒsk and Gdynia, with ferry and container terminals, the system of Baltic liner connections from those ports (container, ferry and ro-ro), two main railway connections ï the E 65 line and the 131 coal main line Silesia ï sea ports, and finally, international route 1 known otherwise as E 75.
- The E 65 Gdynia/GdaŒsk ï Warsaw - Katowice - Zebrzydowice line is part of the international E 65 Gdynia ï Warsaw ï Vienna ï Rijeka railway route. The whole line within this corridor is included in the AGC and AGTC agreements.
- In the South of Poland, there are two lines within Corridor VI: /1/ Katowice - Zebrzydowice and further to Vienna, Budapest and Prague, and /2/ Katowice - Wisğa Most - Bielsko Biağa - ZwardoŒ and further to do Çilina, Bratislava and Budapest.
- The 131 Tczew - Chorzów Batory line, the so called coal main line, is currently the main connection between the GdaŒsk conurbation, including the future CLT, and GdaŒsk and Gdynia sea ports with the national base for domestic and transit transport.

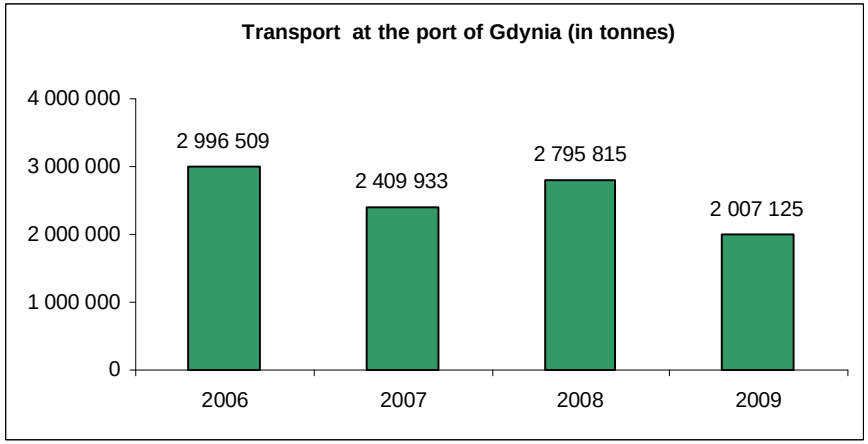
Transport Corridor VI



- **Lines E 65 and CE 65** are part of the Pan-European Transport Corridor, which connects the Baltic region with the Adriatic region and Balkan territories. In Poland, 1 355 km of railway lines within Corridor VI connect GdaCsk and Gdynia, via Warsaw, with Katowice and the sothern border of the country.
- **The aim of modernisation** is to adapt line parametres to the union standards and the AGC and AGTC requirements.
- **Line modrnisation includes:**
- Route, railway stop and station works, involving track, sleeper and junction replacement
- Building or modernising overpasses, tunnels and culverts
- Rebuilding the existing crossings and building parallel roads, where necessary
- Rebuilding communication devices and railway traffic control devices, so that remote control of railway sections is possible
- Improving railway bends, which would allow for the increase of train speed, and adapting the Grodzisk Mazowiecki ï ZwardoCŒZebrzydowice ï border of the country section for high speeds (250-300 km/h).

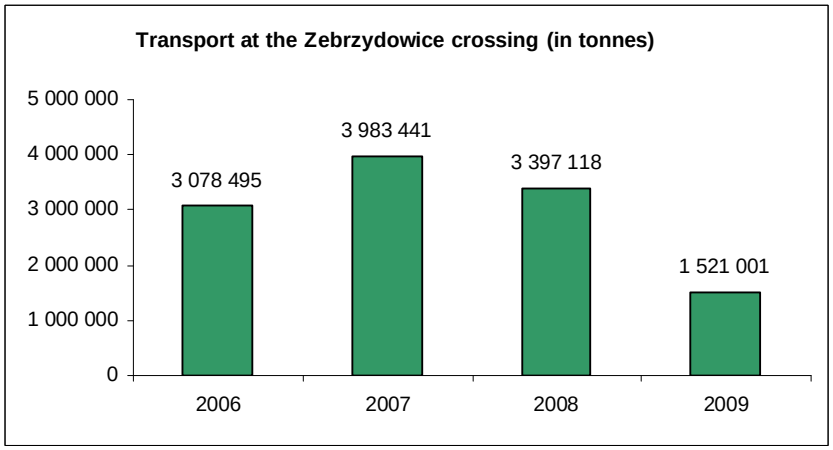
Transport Corridor VI

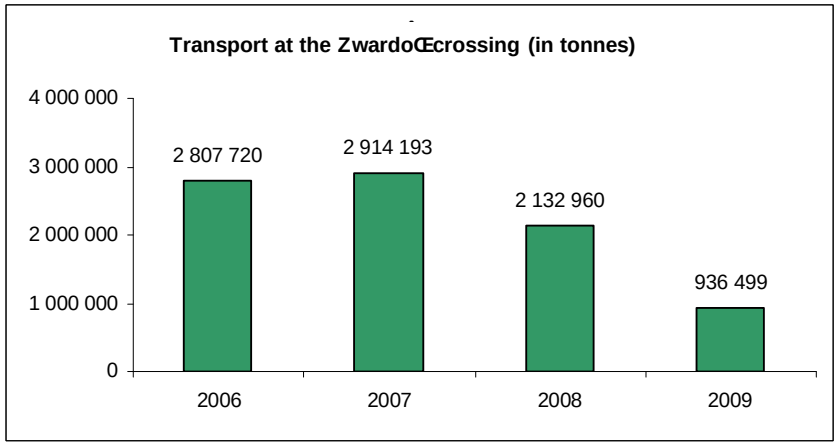




- Future demand for rail freight transport in Corridor VI will undoubtly be influenced by the rate of transshipment turnover at the GdaCsk and Gdynia sea ports
- It is expected that container turnover dynamics will be exceptionally high. It is likely that in 2020 the turnover will reach about 1.3ï 1.5 million units (including 800ï 900 thousand in Gdynia and 500ï 600 thousand in GdaCsk). When compared to the demand for road transport, the forecast shows that 12-15 million tonnes of sea shippments will be transported by road.
- In 2006-2009, PKP CARGO S.A. saw a decrease of transport volume at the GdaCsk and Gdynia ports. In GdaCsk, the drop equalled approx. 58%, while in Gdynia ï 33%. In 2006, transport in GdaCsk comprised mostly exports (94.3%) but their share decreased to about 80.0% in 2009. Import and transit share, on the other hand, increased, compared to 2006.
- In Gdynia, transport comprised 75.2% of exports, 20.5% of imports and 4.3% of transit in 2006. In 2009, import share increased to 42.0%, while export share dropped to 56.7%, compared to 2006.

Transport Corridor VI



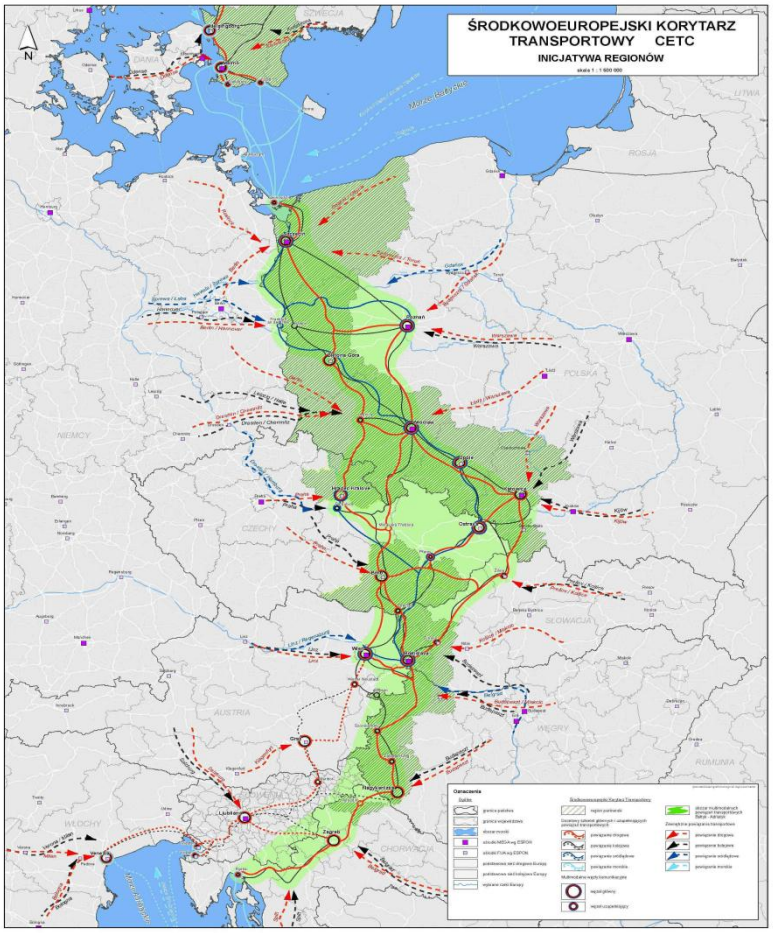


- Transport volume at two border crossings handling traffic in Corridor VI has been showing a downward trend in recent years.
- In 2009, at the Zebrzydowice ï Petrowice u Karviné border crossing with the Czech Republic, transport decreased by more than 50%, compared to 2006. The ZwardoŒ Skalite border crossing with Slovakia saw even a greater drop. In 2009, transport amounted to 936 499 tonnes which is almost 67% less than in 2006. In Zebrzydowice, export comprised the biggest share in transport (54.9%) while in ZwardoŒit was import that dominated (47.4%). In 2009, both in Zebrzydowice and ZwardoŒ transit share grew compared to 2006. It amounted to 15.4% (5.7% in 2006) and 20.5% (9.3% in 2006) respectively.

Central European Transport Corridor CETC-ROUTE65

- The corridor runs from Sweden to Chroatia, accross Poland, Slovakia, the Czech Republic and Hungary.
- Polish section of CETC-ROUTE65 comprises the S-3 highway which is now under construction, the E-59 i CE-59 rail routes, the Szczecin ï ś winoujŜcie port complex and the Odra River as the E-30 water-way.
- The main aim of the CETC initiative, carried out with the support of the Polish government, is to develop interregional cooperation which may enhance territorial cohesion of Poland, economic integrity of the neighbouring provinces and economic revival in those areas. Another aim is to ensure transport infrastructure compatibility in the whole Central European Transport Corridor as well as to promote and develop different transport connections. It is also important to stimulate activities whose aim is to transfer road shippments into sea-land connections which are more environment- and human-friendly. All actions taken within the CETC initiative are intended to improve the condition of natural environment and living conditions of local communities.

Central European Transport Corridor CETC-ROUTE65



E-59 and CE-59 lines

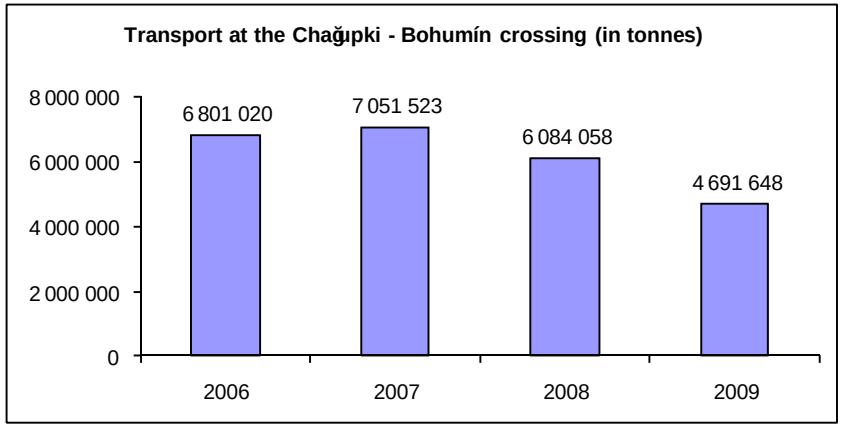
LINE E-59

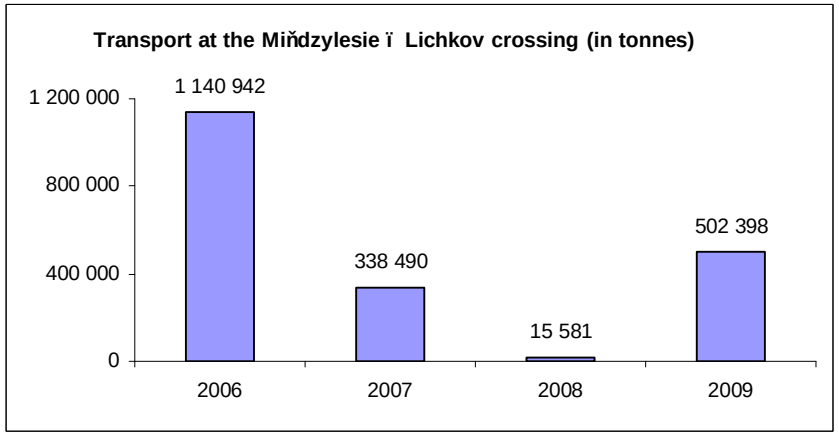
- The E 59 świnoujŜcie - Szczecin ï PoznaŒ ï Wrocğaw - Chağupki railway line is a part of the international transport route from Malmö ï Ystad to Vienna, Budapest and Prague. It is the shortest and the most convenient connection between Scandinavia, Central-East Europe and the Balkans.
- Line modernisation includes:
- Improving access, adapting line parameters to the AGC and AGTC requirements
- Increasing speed and axle load up to 221 kN/axle
- Increasing flow capacity
- Improving security, introducing interoperability rules with the implementation of ERTMS/ETCS
- Improving environment protection

LINE CE-59

- The 492 km-long Miňdzylesie ï Wrocğaw ï Kostrzyn ï Szczecin railway line is a freight traffic branch line of the the E-59 Wrocğaw ï PoznaŒï Szczecin passenger traffic line. The C-E 59 line is part of the international transport route from Malmö ï Ystad to Ostrava. It connects Scandinavia with Central-Eastern Europe.
- The purpose of modernisation is to adapt line parameters to the technical standards defined in the agreement on the main international combined transport lines. This necessitates speed increase ï up to 160 km/h for passenger trains and 120 km/h for freight trains, with the allowable axle load of 22.5 tonnes.

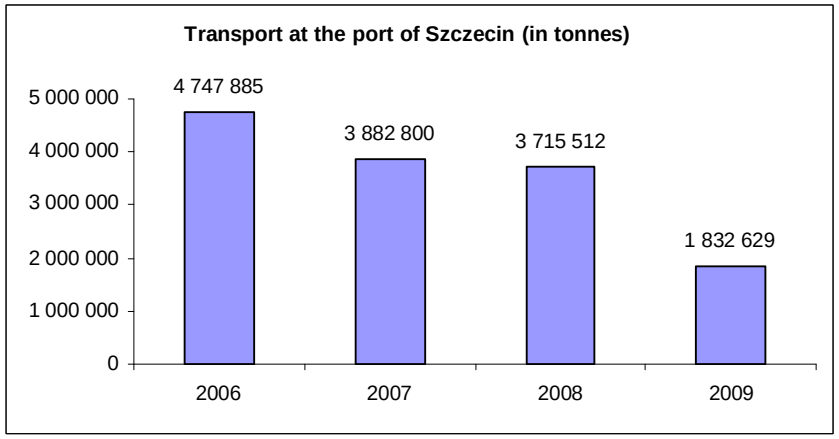
E-59 and CE-59 lines

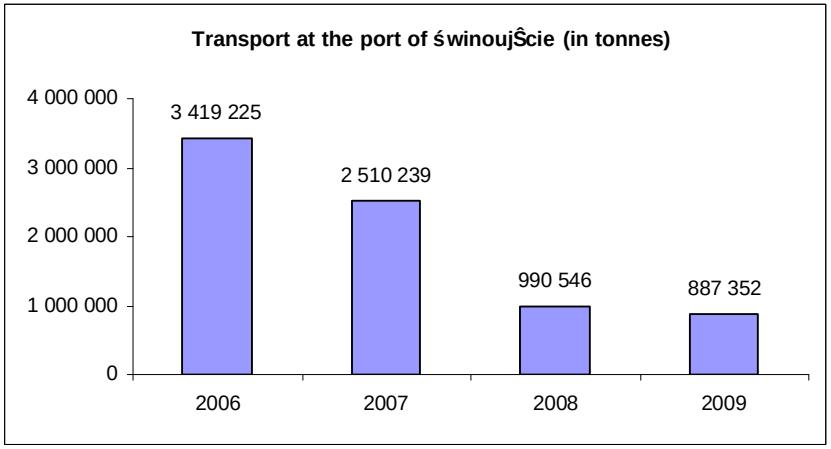




- Data relating to transport volume at border crossings located on the E 59 Chağupki ï Bohumín line and the CE-59 Miňdzylesie - Lichkov line clearly show transport fluctuations.
- In 2006-2009, at the Miňdzylesie ï Lichkov border crossing, transport decreased by more than 55 %. In 2006, export comprised 50.5% of transport volume while transit ï 29.2%. But in 2009, transit share increased to more than 40% while export fell down to 40.5%.
- At the Chağupki - Bohumin border crossing, transport volume equalled approx. 4.7 million tonnes in 2009 (a 30% drop, compared to 2006). Export share dropped from 69.6% in 2006 down to 58% in 2009. Transit share also decreased while import grew from 23.9% in 2006 up to 36.2% in 2009.

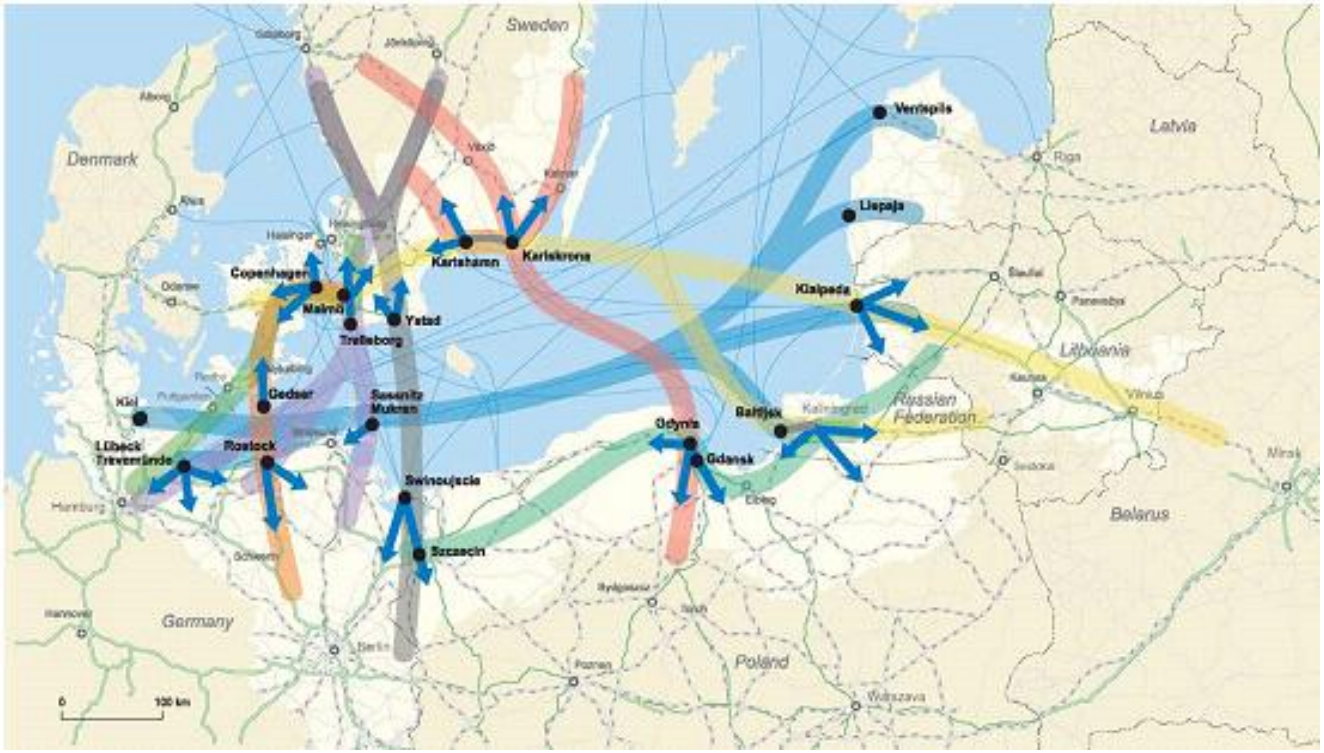
E-59 and CE-59 lines



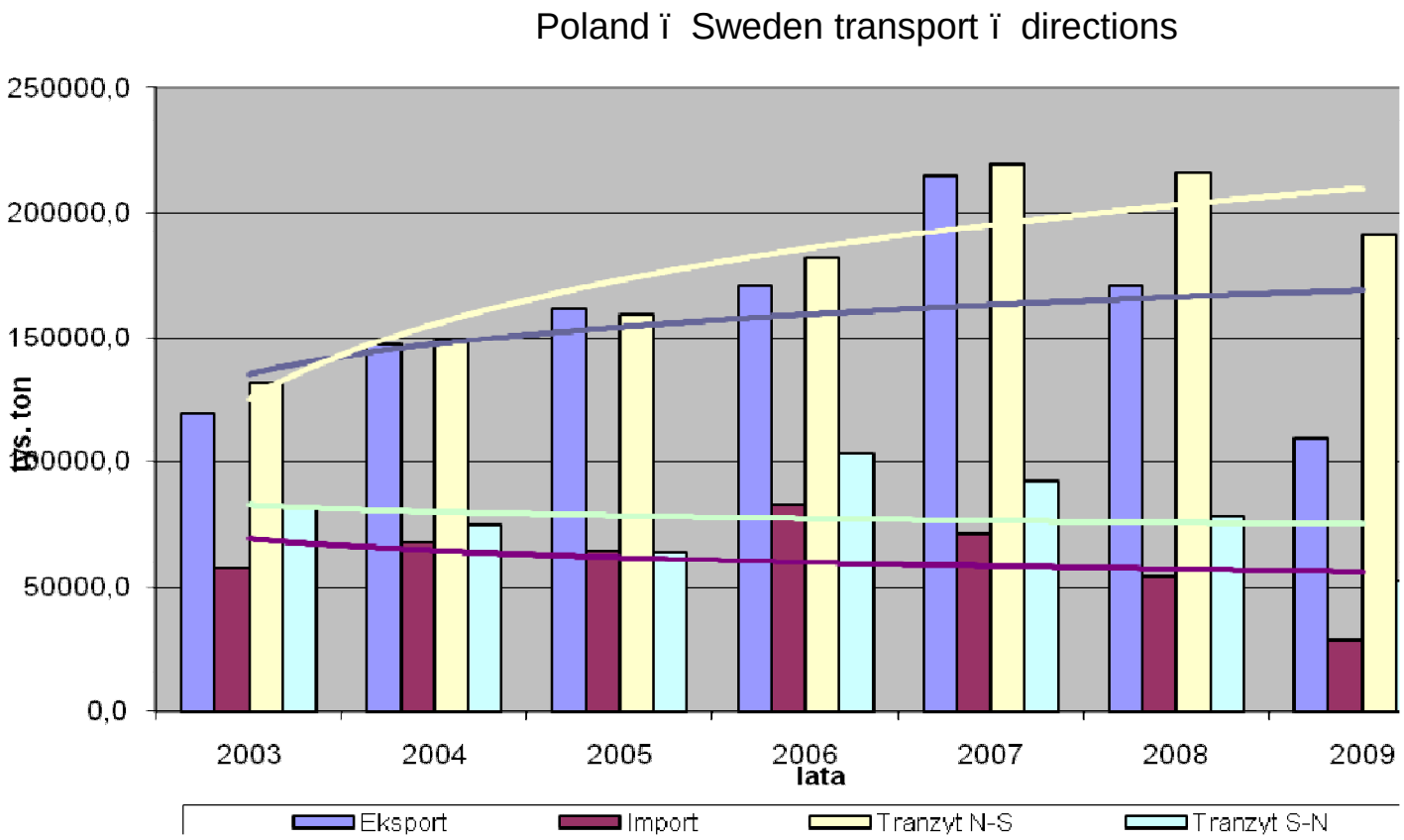


- Every consecutive year (2006-2009), PKP CARGO S.A. recorded a decrease in transport volume at the Szczecin and świnoujŜcie ports. The Szczecin port witnessed the most serious drop in 2009, when transport volume fell by 50.6% compared to 2008. świnoujŜcie recorded the biggest decrease in 2008 ï it was a 60.5% drop compared to 2007. It was earlier then that the port in świnoujŜcie was hit by the consequences of the global economic crisis.
- In 2009 ferry transport through the świnoujŜcie ï Ystad crossing decreased by 31.3% compared to 2006. Transit transport comprised the largest share in total transport volume: 65.5% compared to 58.6% in 2006.

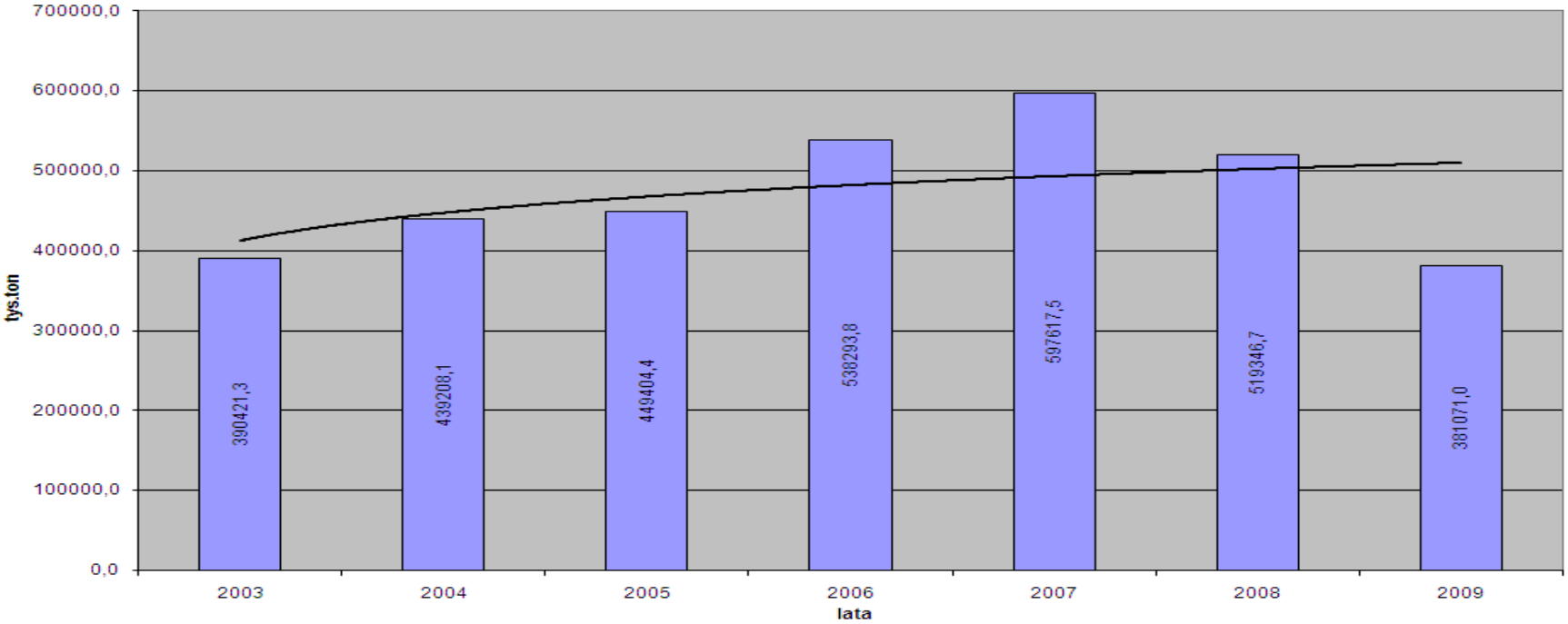
Connections between ferry navigation routes and transport corridors



Ferry train transport between świnoujŜcie and Ystat



Ferry train transport - total



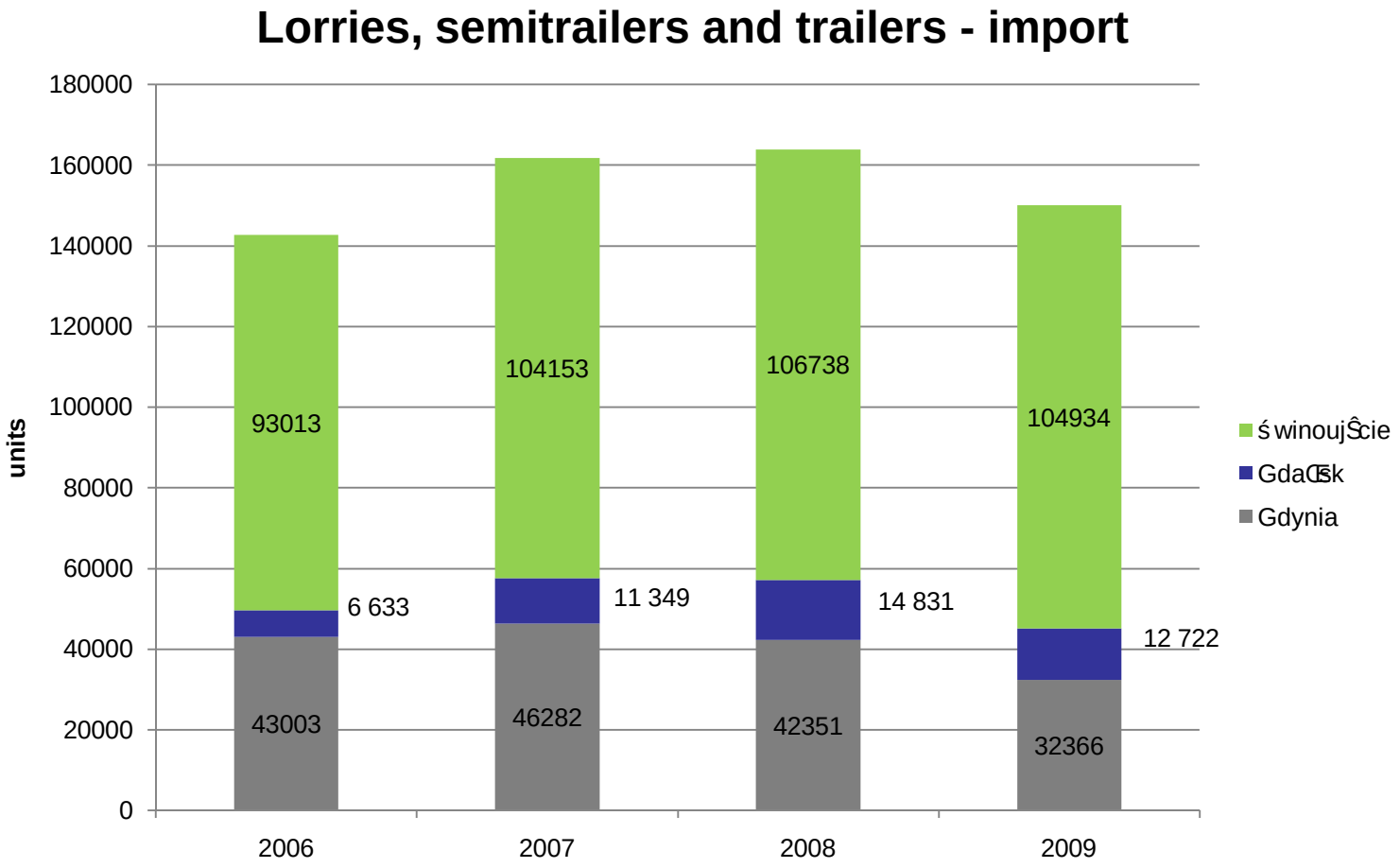
PKP Cargo S.A. trains:

FERRY TRAIN - PoznaŒ Franowo - Malmö

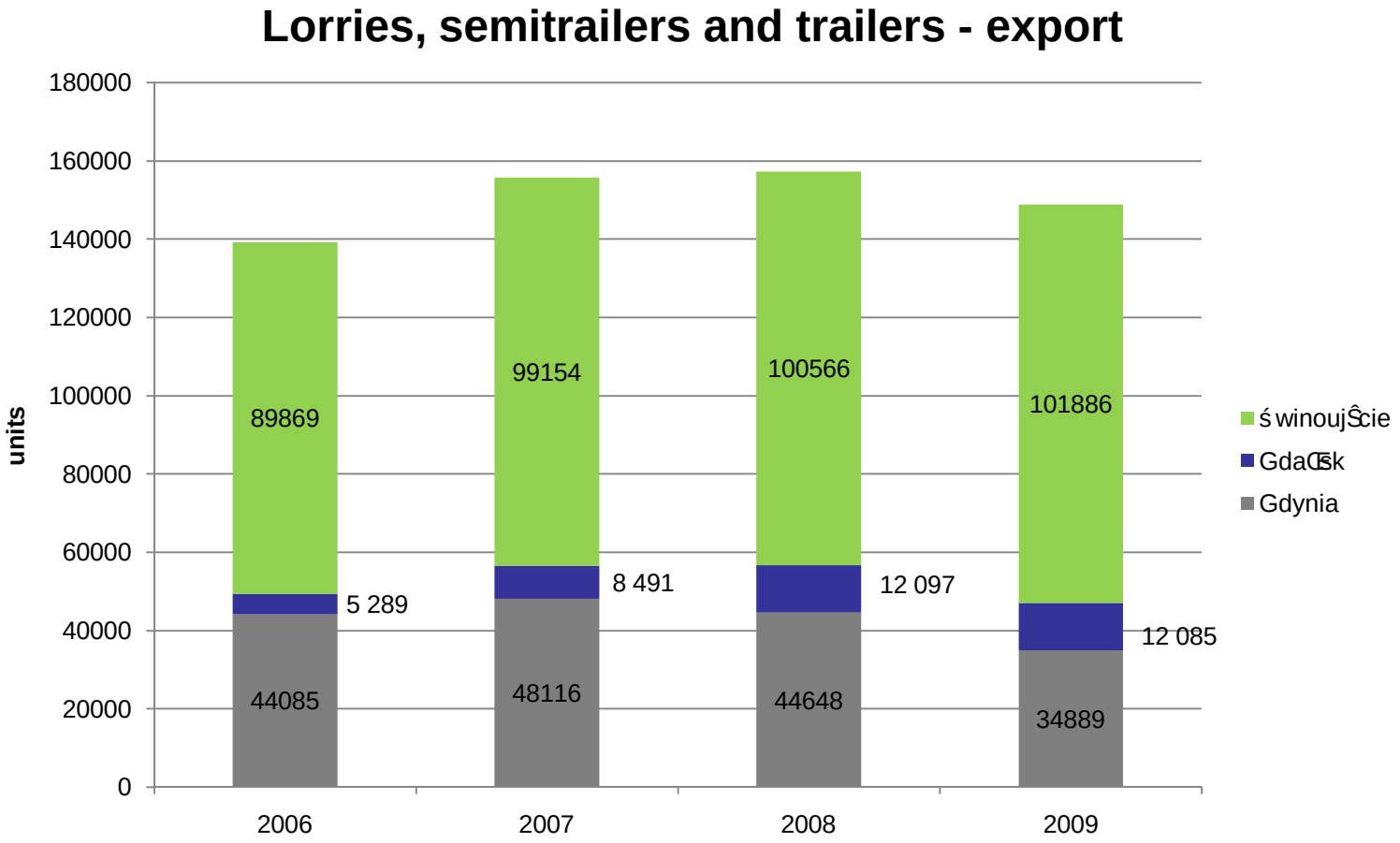
BALTIC TRAIN - Wrocğaw Brochów - ś winoujŝcie

SKANDVIKING - Malmö - Vienna

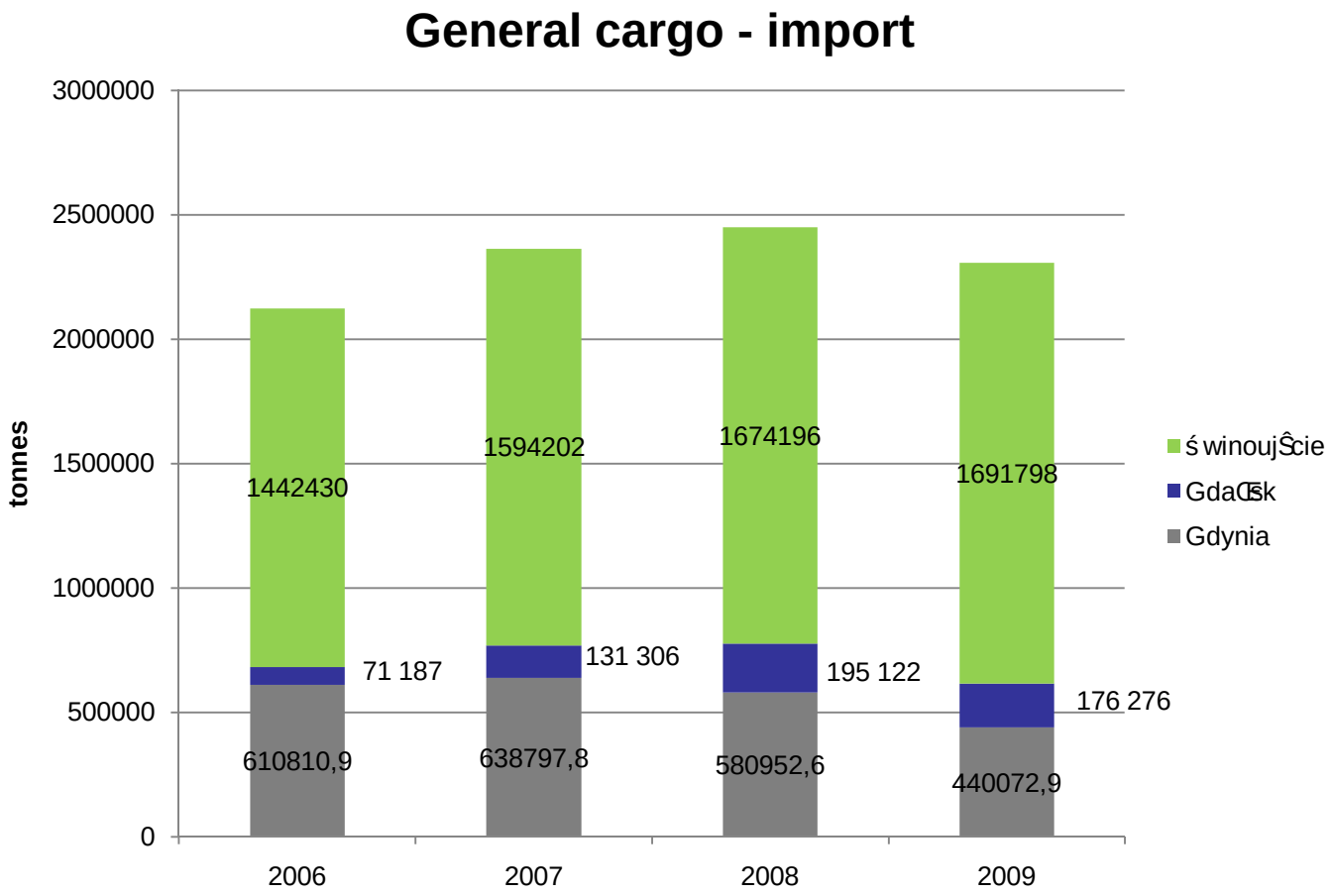
Transshipments at Polish ports ï import from Sweden



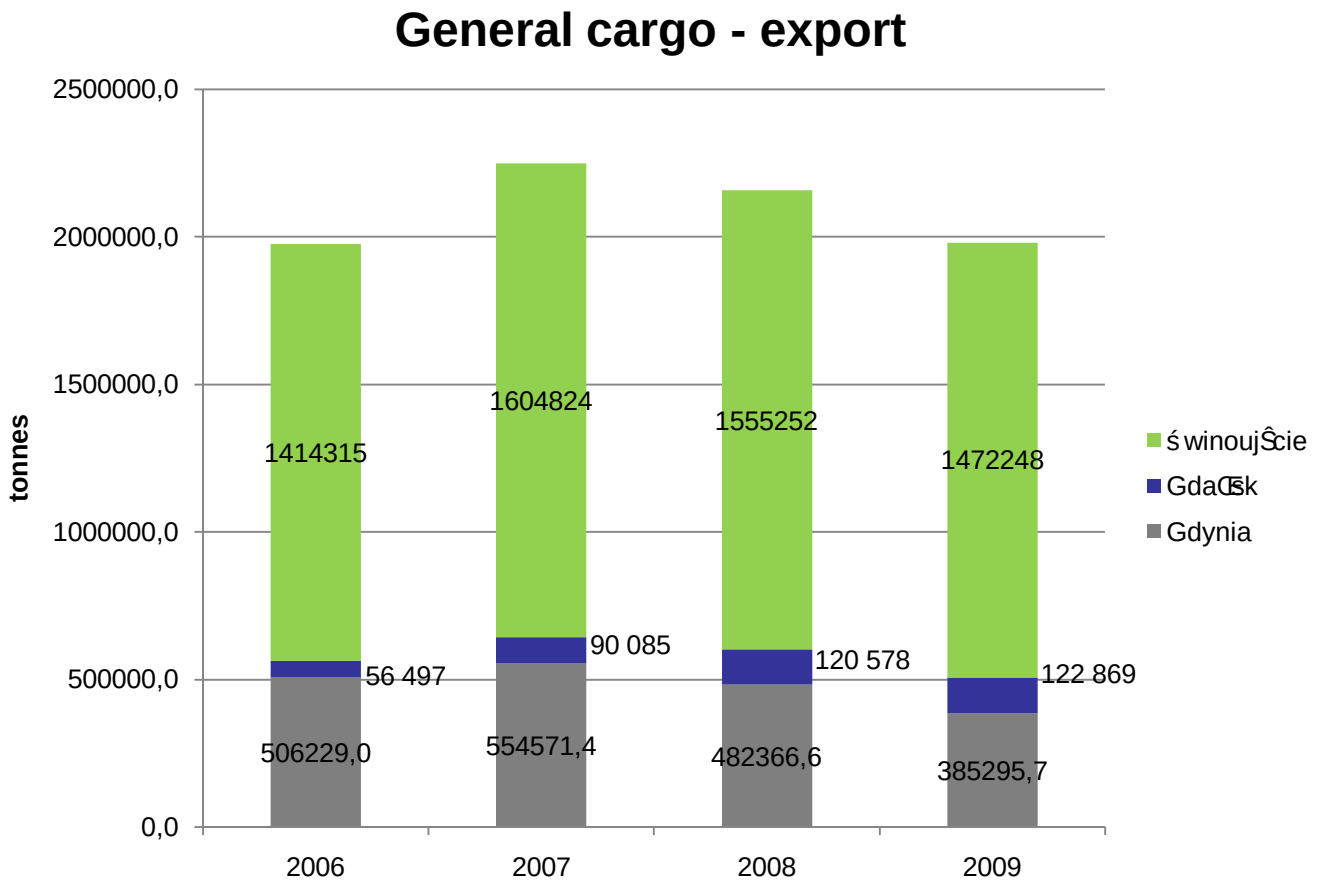
Transshipments at Polish ports ï import from Sweden



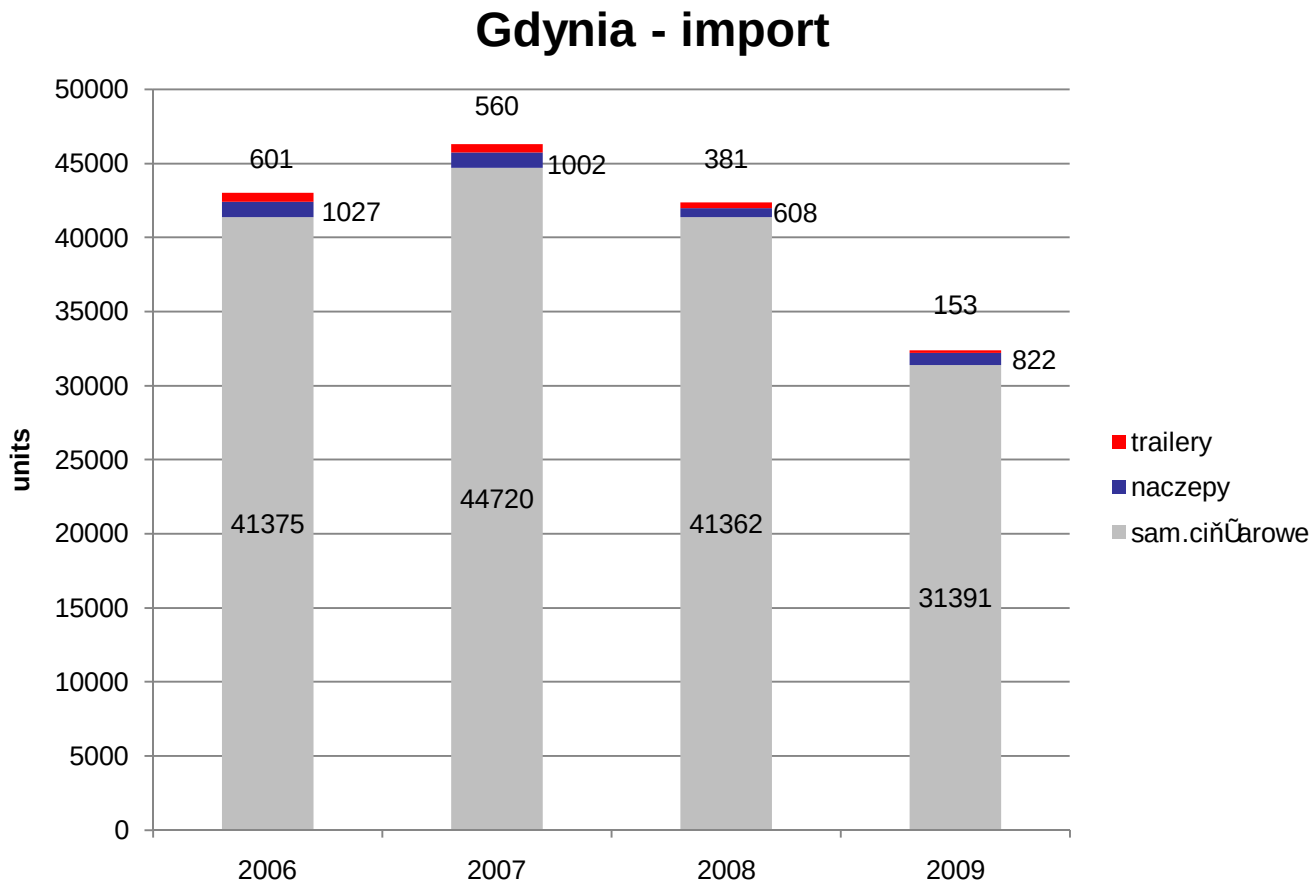
Transshipments between Poland and Sweden at Polish ports - import



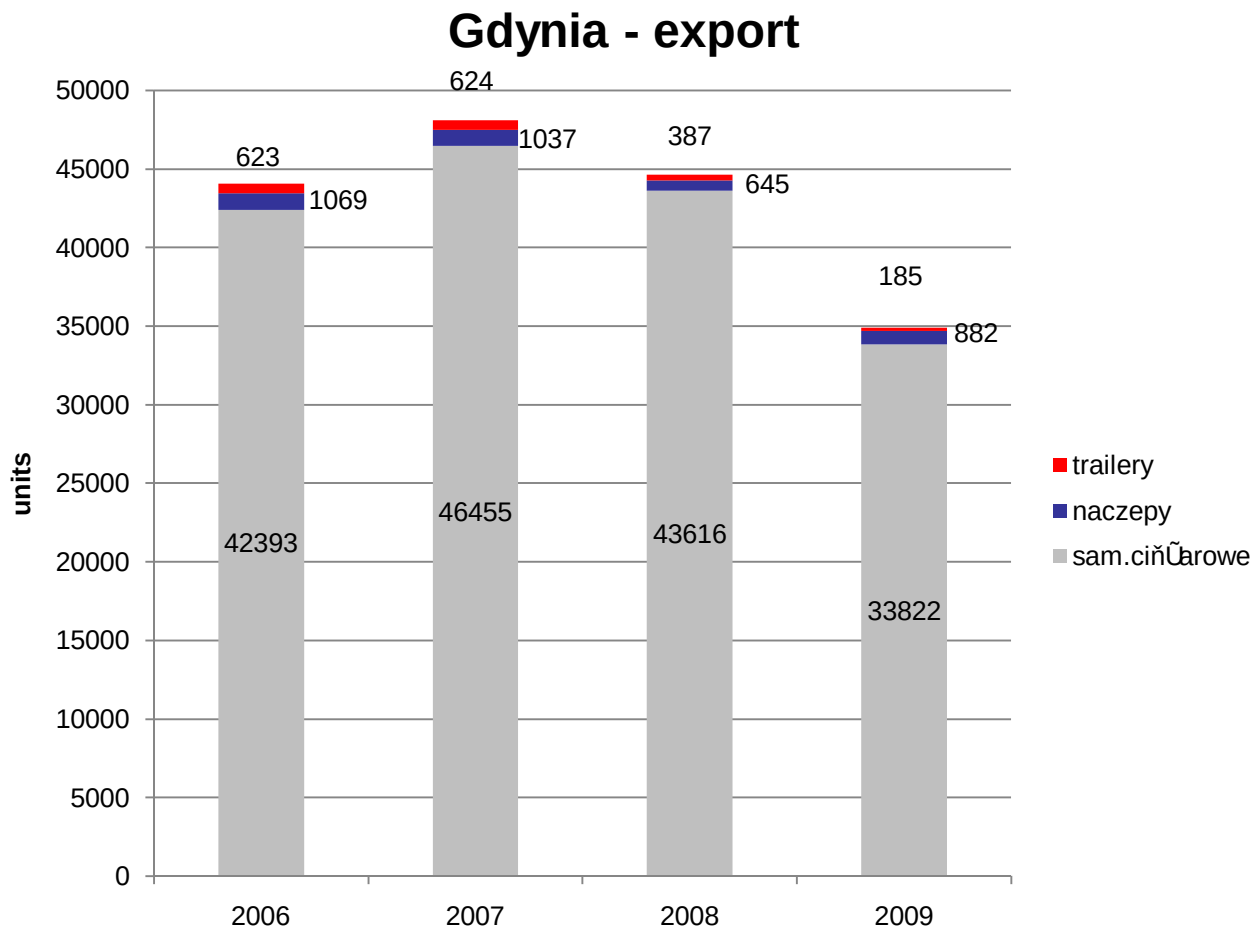
Transshipments between Poland and Sweden at Polish ports - export



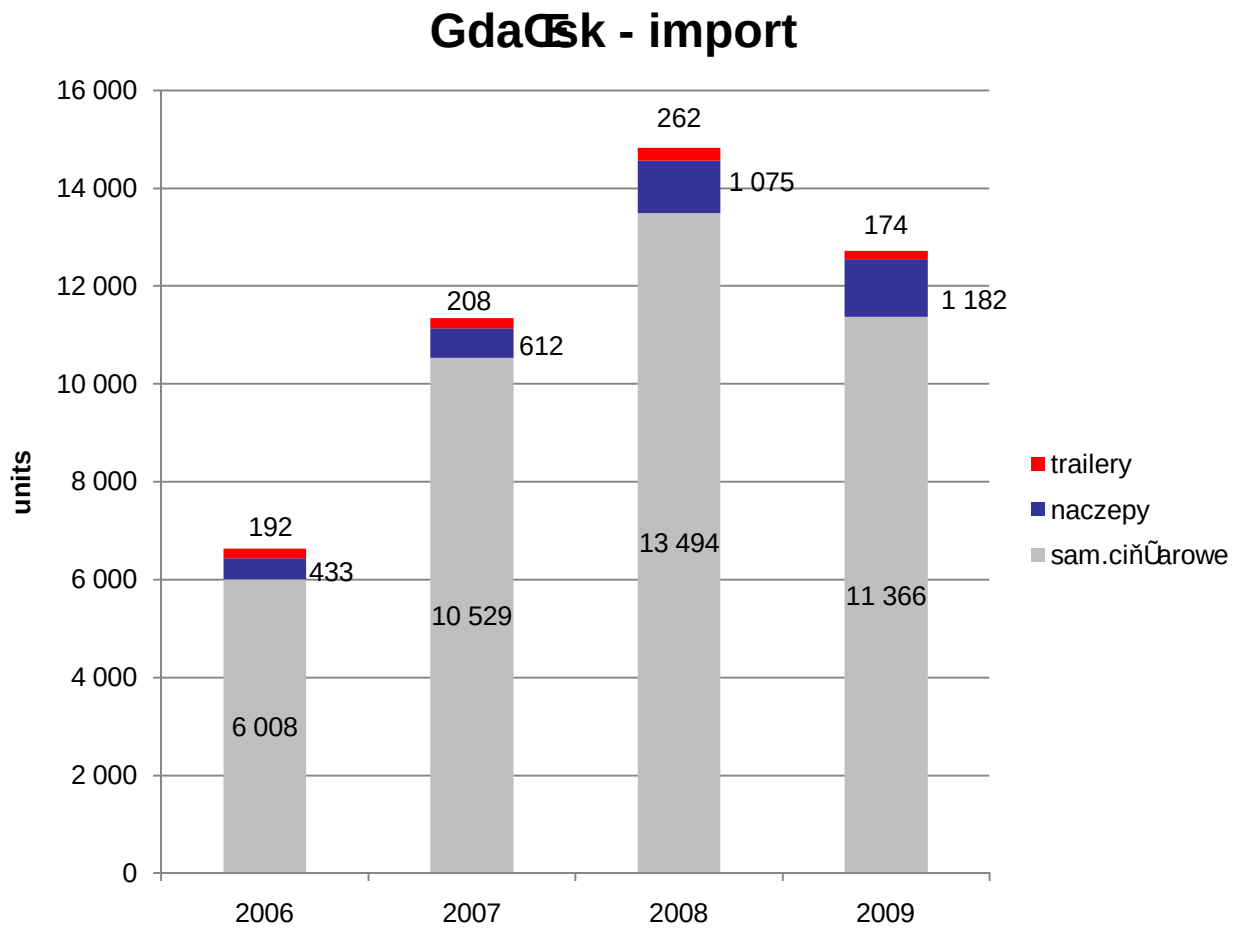
Transshipments between Poland and Sweden at the port of Gdynia - import



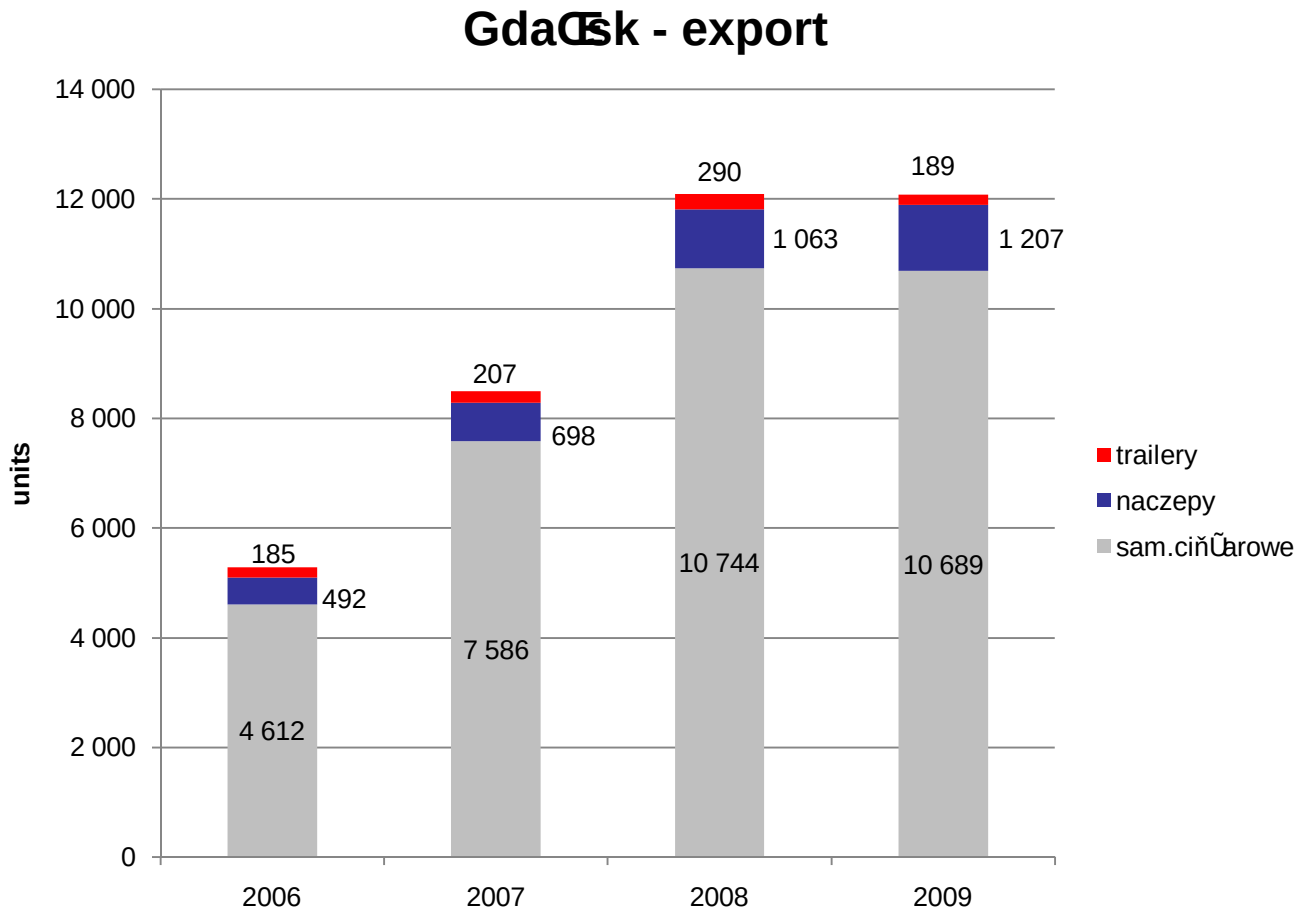
Transshipments between Poland and Sweden at the port of Gdynia - export



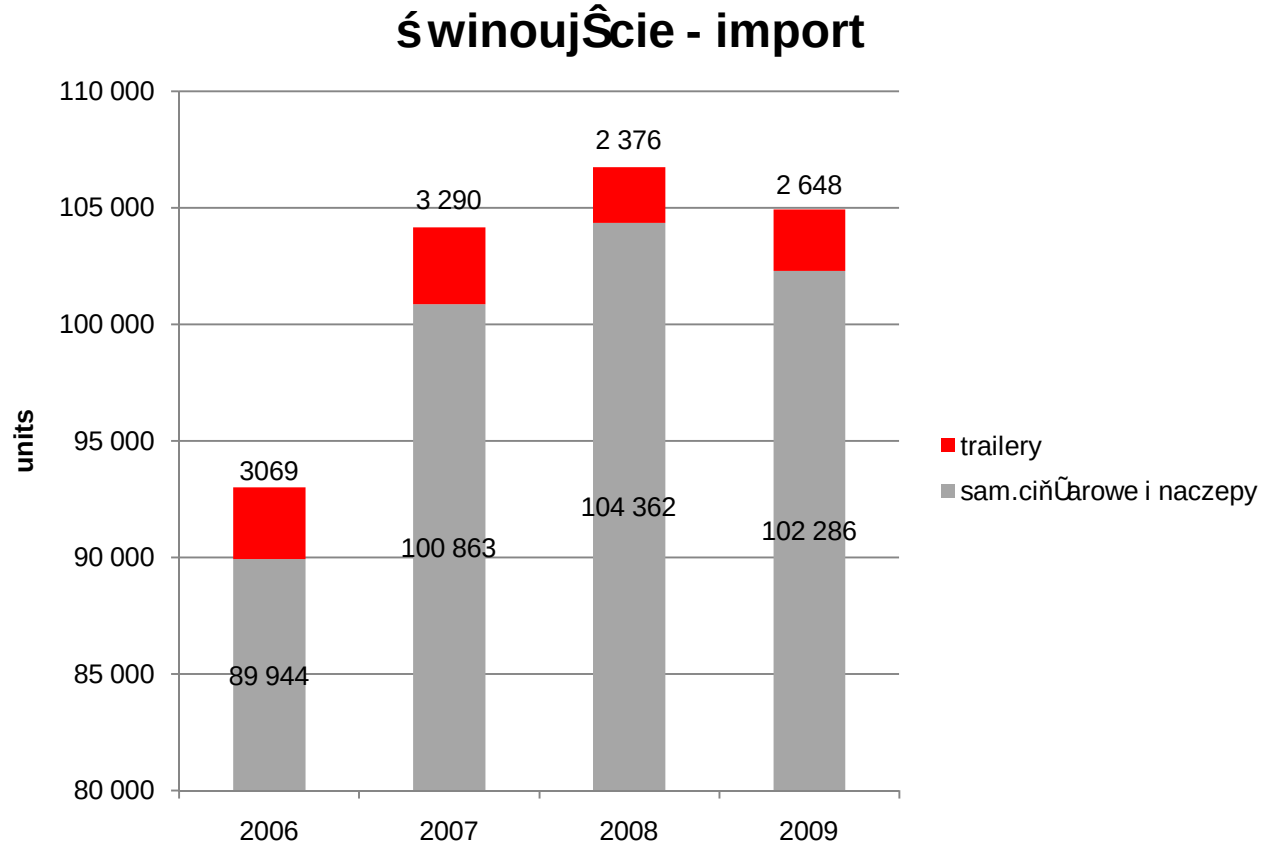
Transshipments between Poland and Sweden at the port of GdaŒsk - import



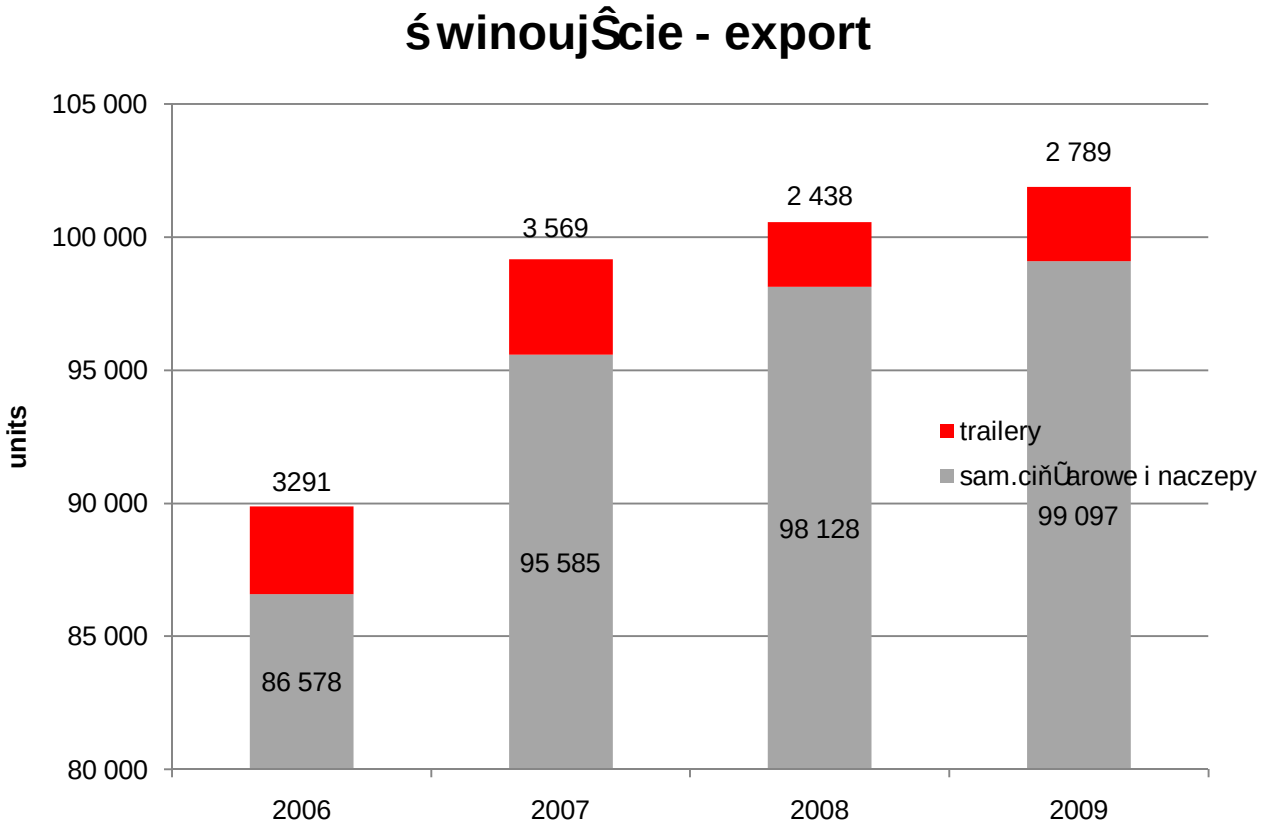
Transshipments between Poland and Sweden at the port of GdaŒsk - export



Transshipments between Poland and Sweden at the port of świnoujŜcie - import



Transshipments between Poland and Sweden at the port of świnoujŜcie - export



Thank you for your attention