Cross-border freight transport between Scania and West Pomerania

Executive Summary

TENTacle WP 2.2

Authors: Kristoffer Levin, Anna Clark (Trivector Traffic)

Lead Partner

Executive summary

This study is written within the context of the TENTacle project. The project brings together 9 countries in the Baltic Sea Region, and covers seven pilot cases in the regions. One of the seven case studies focuses on the freight transport link between Scania and West Pomerania, along the Baltic-Adriatic corridor. For the Polish side of the connection, the case study analyses how the Odra can develop into a modern inland waterway and how logistics centres in Germany and Poland can be linked to the Baltic-Adriatic corridor.

The aim of this report is to describe the possibilities and challenges, as well as identify what measures would be required, to develop the Scanian – West Pomeranian freight transport link, more specifically the sea connections from the ports of Ystad and Trelleborg in Scania to the port of Swinoujscie in West Pomerania (see Figure 1). Therefore, the focus of this study is particularly the Swedish side of the connection, but where relevant, details of the Polish side are included. A similar study focusing on the Polish side of the connection is being performed as part of the TENTacle project.

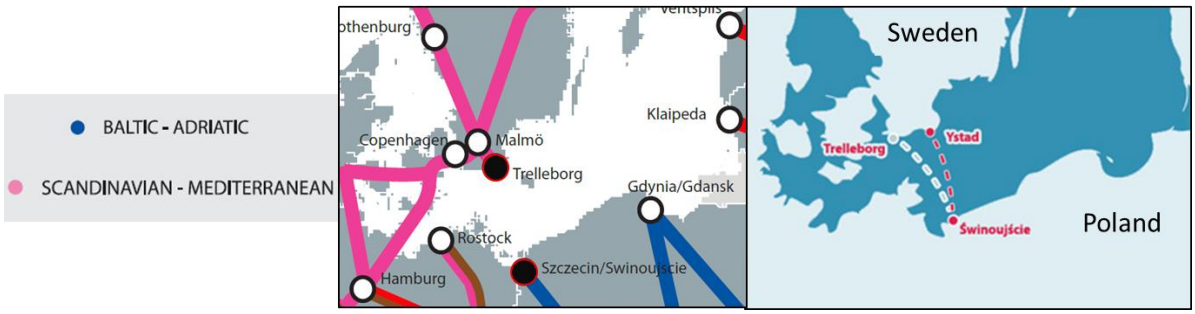

Figure 1 Area of study for project.

Concerning transport infrastructure and logistic solutions the focus is on Ystad/Trelleborg – Swinoujscie. However, the report covers a vaster geography concerning trade, economic development and transport that affects the Scanian – West Pomeranian link. To describe possibilities and challenges, the following areas were focal points throughout the study and in this report:

- **Commerce**
  Trade development in the transport connection. What are the main markets that are served by this transport connection, and what are the projections for development in the future?
- **Transport logistics**
  Development of transport logistical solutions (how the freight is transported) for the transport connection. What are the main ways that the freight is transported today, both across the sea, and in the ports? How can/will this be developed in the future?
- **Environment**
  How can challenges with regards to reducing the environmental impact of the transport system (with a focus on CO_2 emission) be addressed?

This report builds on the work of several previous projects and reports which look at mapping the freight transport flows and future scenarios in the Scania region. The focus of this report has been to synthesise the main findings from these reports, complement with interviews and then analyse what the findings mean for the development for the Scanian-West Pomeranian freight transport link. A

literature review was performed, and complemented with interviews with Swedish stakeholders as well as two workshops – the first with only Swedish stakeholders, and the second with both Swedish and Polish stakeholders.

The primary target group of the report is partners of the TENTacle project, particularly those involved on the pilot showcase studying the West Pomerania-Scania freight transport link. The secondary target group of the report is primarily the public authorities in direct connection to this transport link (on local, but especially regional levels) as well as the European Commission.

Findings regarding commerce

The findings regarding transport, commerce and economic development, and what they mean for the Scania-West Pomerania link, are summarised in Table 1. An important conclusion is that economic development is, and will remain, strong in Poland, as well as in other eastern and central European countries. These countries are the ones that have the greatest impact on trade flows affecting the Scanian-West Pomeranian transport link and thus the GDP and trade growth most certainly will result in continued freight flows in this link. Today the connection between economic development and increased freight is being questioned. It is also important to try and actively break this relationship. It is preferable that economies can grow without increased freight flows, since freight is coupled with negative environmental impacts. In the data presented here, it seems that trade has however been coupled with increased freight transport, and particularly increased road freight transport in the link under question. At the same time, an increase in freight transport on the link can be seen as positive since it allows for larger volumes, and the possibility to invest in multi-modal transport solutions that are not warranted in cases with lower freight flows.

Although the overall conclusion is a continued increase in transport, the rate of growth rate may be affected by different factors. Among these can be mentioned competition, new logistics solutions and financial instruments for de-carbonisation.

Table 1 Summary of findings, and what they mean for freight transport in the link.

FINDING	WHAT DOES IT MEAN FOR SCANIA-WEST POMERANIA LINK?
Polish and eastern European economic development increasing	More commerce and therefore more freight transport from Poland to Sweden
Continued strong trade flows and Poland – Sweden	Increased freight transport from Poland to Sweden
Commerce with Sweden becoming stronger in eastern Europe	More commerce and therefore more freight transport from Poland to Sweden. Likely more freight flows through existing ports in the link Poland-Sweden
Increase in longer distance freight (Russia / China / Turkey)	More freight transport on the link

Findings regarding freight transport logistics

The findings relating to freight transport logistics, and what they mean for the Scania-West Pomerania link are summarised in Table 2. The findings show that there is a dominance of road freight on the link. Although there is an interest in rail freight (particularly from an environmental point of view), it is difficult to promote rail transport on the link. This is due to a number of factors including relatively cheap road freight and some logistical and technical hurdles (e.g. differing standards, lack of booking possibilities, etc) for railway transport.

It is difficult to estimate the current volume of combi-transport, the overall picture is that there is room to improve the use of combi-transport on the link. Again, this lack of exploitation of combi-transport is mainly due to the low cost of road transport, but also due to high transhipment costs between different freight carriers.

There are currently weaknesses in the existing infrastructure connecting to the ports for both road and rail. These should be addressed if full advantage is to be taken of the corridor.

Table 2 Summary of findings, and what they mean for freight transport in the link.

FINDING	WHAT DOES IT MEAN FOR SCANIA-WEST POMERANIA LINK?
Ystad does not have a combi-terminal	Difficult to promote rail transport from the port
Swinoujscie has an inland waterway connection	Good opportunity to promote waterway transport
Railway ferry transport decreasing	Problem for promoting rail transport in the link
There are problems with capacity on roads and rail connecting to the ports	Infrastructure improvements are required
Road is more competitive than rail	More road than rail transport
Railway transport is slow and perceived as unreliable & difficult to book	More road than rail transport
Railway transport less suited to smaller players	More road than rail transport
Freight is predominantly transported by trailers/units	Possibility to shift to more environmentally friendly modes
Intermodal transport solutions not fully exploited	Possibility to increase intermodality
Lack of truck drivers	Lack of drivers can force new solutions which promote rail / more environmentally friendly solutions
E-commerce is increasing	Uncertain. But changes type and weight of goods

Findings regarding reduction of CO_2 emissions

Regarding the topic of CO_2 emission reduction, and what can be done in the Scania-West Pomerania link, the most important conclusions are that:

- Rail needs to be made more competitive compared to road in terms of cost and time spent, and it should not be economically efficient to drive empty trucks.
- LNG (or preferably LBG) for ferries and bio diesel / LNG (LBG) for trucks seem to be the most promising fuels based on current market availability. However, there are other options.
- Other fuel types such as FCEV and battery electric are less developed, but could be taken advantage of in research projects.

There are strong policy drivers to support the shift to reduced CO_2 emissions from freight transport in the link, which has also on the European level resulted in requirements for alternative fuel recharging infrastructure. This means that there are many possibilities that can be taken advantage of regarding the TEN-T corridors for this link.

At the same time, there are strong policy drivers on the regional level, although it is more difficult to make requirements at the regional level, since freight transport crosses over borders (e.g. any changes that make it more expensive in a single region are likely to result in transport companies using other routes). Following the Avoid-Shift-Improve paradigm, there are different ways to move forward in greening this particular transport link.

FINDING	WHAT DOES IT MEAN FOR SCANIA-WEST POMERANIA LINK?
There are strong policy drivers to reduce CO_2 emissions	There are funding possibilities to support the policy, which can be taken advantage of.
There are requirements to provide charging infrastructure in CNC ports	There are funding possibilities to support this, and possible fines if not fulfilled.
We should make transport more efficient by increasing loads	More efficient road transport, together with other measures
We should shift transport from road to rail and inland waterway	Rail and inland waterway (only on Polish side) need to be made more competitive compared to road.
We should improve transport by improving the share of LNG/LBG but also promote other alternatives	LNG (or preferably LBG) for ferries and bio diesel or LNG /LBG for trucks are the most promising fuels in terms of market availability. Research projects could be used to try other fuels.

Main conclusions

Economic growth and environmental impacts

There are strong policy drivers both to improve the economic performance of the region, and to support the shift to reduced CO_2 emissions from freight transport in the link. These can be seen as opposing policies, but with the right measures and cooperation between stakeholders, a balance can be achieved.

Commerce continues (and is projected to continue) to grow in regions of relevance, and is most likely to result in increased freight transport on the link. The rate of growth is difficult to quantify, and depends on factors that are far beyond the control of the stakeholders involved in the Scania-West Pomerania transport link.

However, to green transport on the link, we cannot accept a constant growth in freight transport. Allowing for commerce and economies to grow, while at the same time reducing negative external impacts relating to freight transport serving these economies, requires a fine balance. Introducing measures to improve the environmental performance of freight on the link could result in reduced economic performance (e.g. measures increasing costs of road transport could result in hauliers choosing other routes, or increasing costs for end users resulting in reduced purchasing power in the region), while not introducing measures would result in harmful effects on the environment.

To support the greening of the transport while supporting economic competitivity, it is clear that cooperation is required between stakeholders. If one region imposes financial disincentives while another does not, freight transport is likely to find alternative routes. If one actor provides charging infrastructure while another does not, hauliers may not be willing to change their fleets. This cooperation is not only required on the regional level, but also on the international level.

Addressing the modal split

To support the greening of transport on the link, the modal split needs to be addressed. Today, freight transport on the link is dominated by road transport in the form of trucks with trailers or containers / cassettes. As freight volumes have increased on the link over time, the mode share has become increasingly dominated by trucks, with a decrease in rail transport.

From an environmental point of view, this is not a good position, and trends need to be reversed. To reduce CO_2 emissions, rail needs to be made more competitive compared to road. Today, it is difficult to promote rail transport in the link due to a range of infrastructural, logistical and technical barriers. Strengthening the railways requires a comprehensive view of economic incentives, infrastructure investments and technical solutions. It furthermore requires cooperation between stakeholders to create coherent solutions for rail across different regions.

Taking advantage of alternative fuels

There are technological solutions to improve CO_2 emissions from freight, relying primarily on switching to alternative fuels from the predominantly diesel fuels used today. LNG (or preferably LBG) for ferries and bio-diesel for trucks are the most promising fuels that should be taken advantage of, but other fuel types such as electricity, and hydrogen could be investigated. Since there are requirements in European legislation regarding recharging points for different fuel types, the ports can take advantage of this to support the greening of the transport link. Since there are significant costs associated with the establishment of refuelling points and renewal of fleets, it is

important that stakeholders cooperate to ensure that there is a market and sustainable business models for new fuel types.

Recommendations

Since stakeholder cooperation is a key ingredient in balancing the fine line between economic growth and environmental protection as well as supporting rail transport and the introduction of alternative fuels, the main recommendations from this report focus on supporting cooperation between stakeholders. At the same time, other recommendations are taken up to tackle hurdles in promoting multimodality in the link (and the greening of transport). Detailed recommendations are included in the report.