



WP5

Activity 5.2

Funding and opportunities for a short sea shipping service from Mid-Norway to the Continent

Opportunities and changes since the StratMoS DP2 project

Minute

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Introduction

This case study is a part of the Ex-TEN-TaNS project. In short a project that will look into the core and comprehensive TEN-T network, and how the development of these networks can be supplied by public authorities and infrastructure providers at a regional level.

This case study covers the changes on EU and national level since the StratMoS DP2 project, a direct cargo route from Kristiansund to Zeebrugge. During the StratMoS project it turned out to focus on a service on purely commercial basis, mainly because of three rejected applications for Marco Polo funding. It also turned out that the service had possibilities for sufficient freight volumes from Mid-Norway to Zeebrugge, and the initiative to establish a food port in the area was made.

Further, this case study includes a description of the StratMoS DP2 project, freight volumes and changes and comments to what has happened since the end of the StratMoS project. An interview with relevant persons at Port of Kristiansund and Nordmøre were made, and we made a short description of the latest news from the Coastal Port of Hitra – an important factor for this direct cargo route to succeed. In the second part we look at the actors in the StratMoS project and their role in the following projects to get this service in traffic. The third part covers existing projects and/or relevant project for this case study since the end of StratMoS project, and we also take a look at relevant recent research. The remaining core parts cover national legislation and funding, before a short discussion and some conclusions.

Description

This case study will be based on DP2 (Demonstration project 2), NORSHUKON - Establishing a new short sea shipping service from Norway to Belgium, from the StratMoS(Motorways of the Seas Strategic Demonstration Project) project. The StratMos project was one of the first projects to be approved in the new Interreg IVB programme 2007-2013. The initiative to develop StratMoS was taken by partners that previously have been involved in the NMC (Northern Maritime Corridor) initiative (StratMoS Final report, 2011).

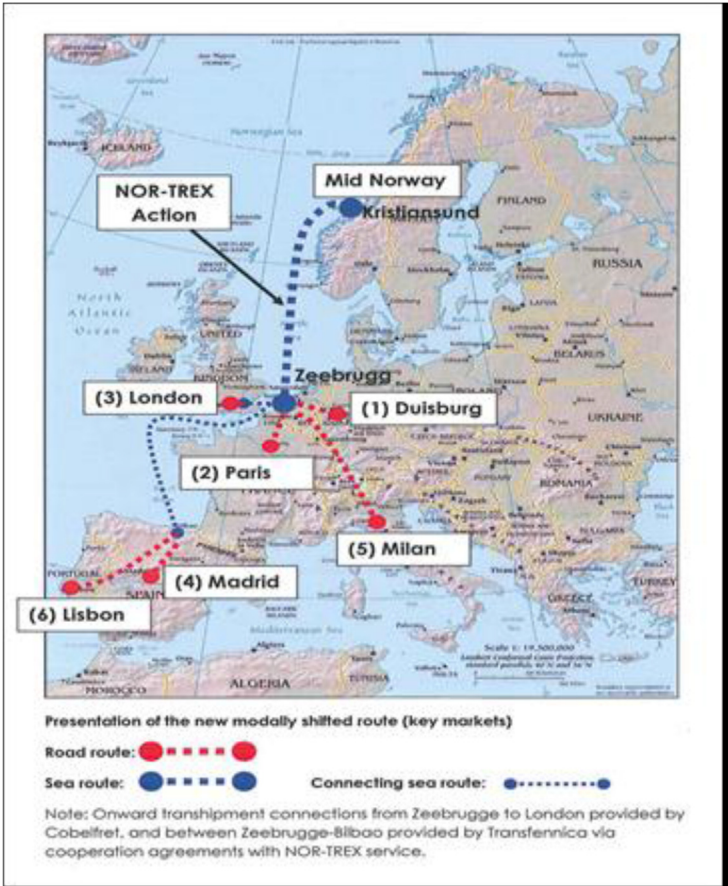


Figure 1: Map illustrating the StratMoS DP2 project (Source StratMoS, DP2)

The Mid-Norway freight and passenger market has been seeking a competitive and environmental friendly alternative to road transport.

DP2 in the StratMoS project

The initiative to a short sea shipping service between Mid-Norway and the Continent has been developed over many years. The initiative to NORSHUKON LINK was derived through combining the two NMC-projects MINORO (Mid-Norway-Rosyth) and RoRo-Relay (serving markets in Norway, Denmark, Scotland/UK, Continent). This project initiative has been through three stages, described in the figure below (Sætre and Netter, 2011)):

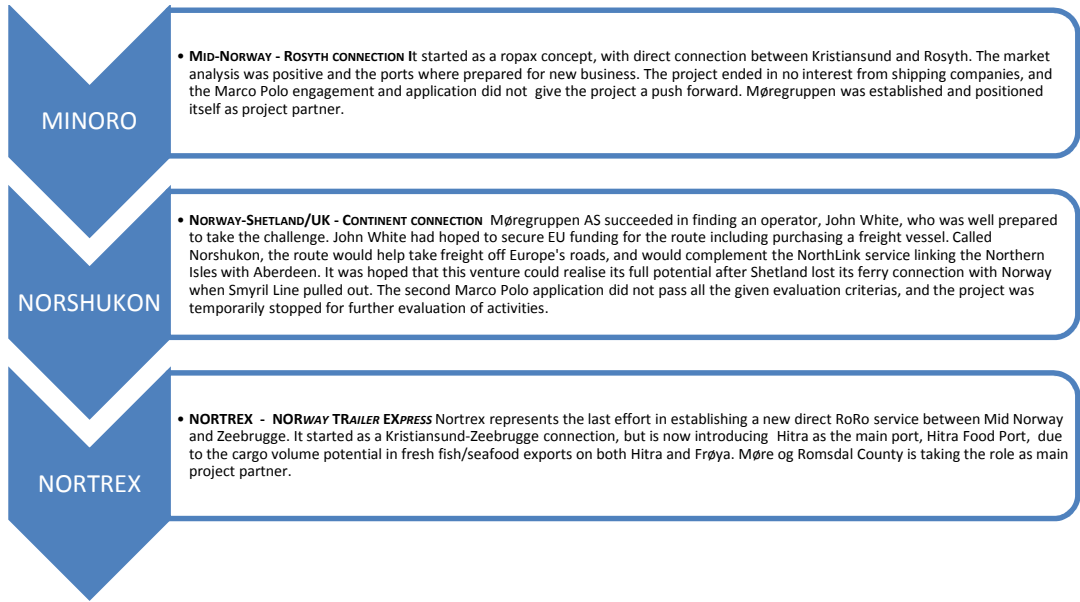


Figure 2: The development of a direct cargo route from Mid-Norway to the Continent.

During the project period, three applications for Marco Polo funding were sent. All were denied. This led to a report discussing that the Marco Polo funding had too many applications and too little funds. The same report also discusses that there is a tendency that the evaluators favor larger operators over smaller operators, and this does not help the smaller innovative operators that in some cases could move more freight ton kilometers from road to sea than a larger operator on another route (Baird, 2010). This report concludes that the application process with no funding as result, has delayed the process for this direct cargo route from Mid-Norway to the Continent. As a consequence of no EU-funding, the project turned out to focus on a purely commercial service.

The project had focus on export of fish from Mid-Norway to the Continent. Fruits/vegetables were identified as possible return cargo. This is further developed in the Food Port Project, where the development of a food hub in the region was one of the ideas.

In the project period a lot of market research was prepared. This research included a broad network of stakeholders like potential users of the route, operators, logistic companies and national and local authorities. The project also resulted in a procedure for establishing a short sea shipping service. The final report also highlights that a result of the StratMoS DP2 project is the planned development of a food hub in the region. A key result of the project is the identification of key partners in a PPP (Private Public Partnership), and the importance of the port's ownership of the project.

Freight volumes

The Norwegian market is characterized by directional imbalance. The import of manufactured goods is concentrated in the Oslo area, while export of raw materials to a great extent has its origin in North-, Mid- and West-Norway.

The motivation for use of sea transport is primarily economies of scale. There is high capacity in sea transport and rail transport as compared with the capacity in one truck. The challenge is how to utilize these economies of scale in Norwegian companies. One company alone will not have the freight volumes to utilize the loading capacity in a train or in a ship. The solution for this is consolidation of freight volumes (Hovi, 2014).

This report also states that the public authorities have an important role as "moderator" when it comes to coordinating activities to get the freight volumes on a sufficient level. The moderators work could be to reduce risk by doing some of the preparatory work such as analysis of markets, economy and infrastructure (Bråthen et al., 2012).

Export of fish

The statistics of fish export in Norway is presented as number of tons exported and value of goods exported. The statistics for value of goods shows the export value in the county where there is most value added. Figure 3 shows the counties in Norway with highest value of fish export in 2014.

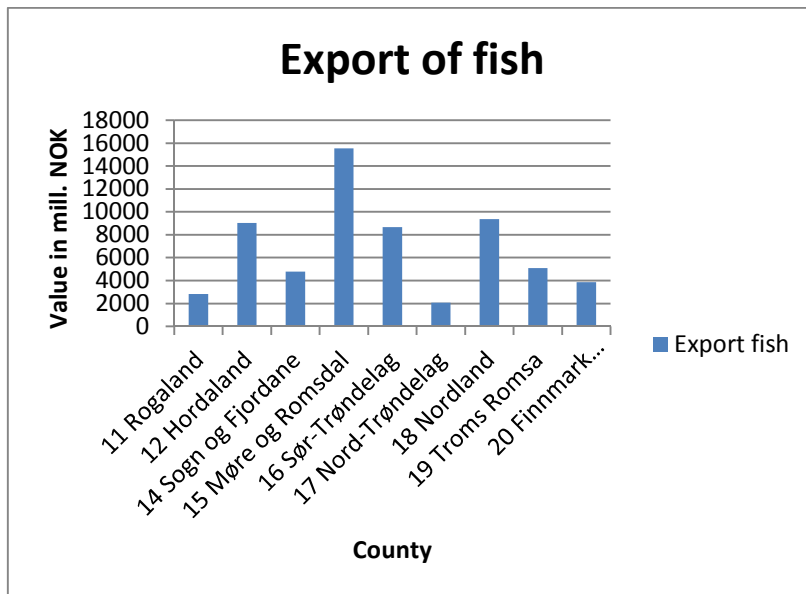


Figure 3: Export of fish from Norway 2014 by value (Source: Statistics Norway)

The figure below, figure 4, shows the value of fish export from Møre og Romsdal from 2009 to 2014.

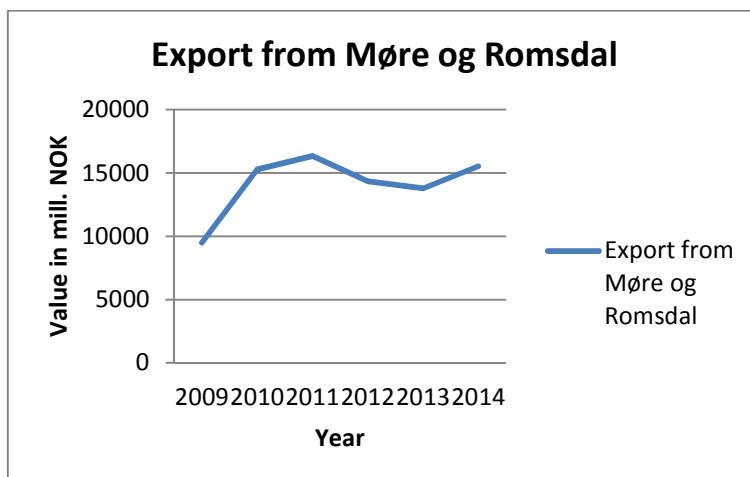


Figure 4: Export of fish from Møre and Romsdal by value (Source: Statistics Norway)

It is difficult to find statistics for the total export of fish by transport mode from each Norwegian county. From Statistics Norway we find the distribution of transport mode for the category "fish, crustaceans and mollusk." The distribution for the years 2012-2014 is shown in figure 5 below.

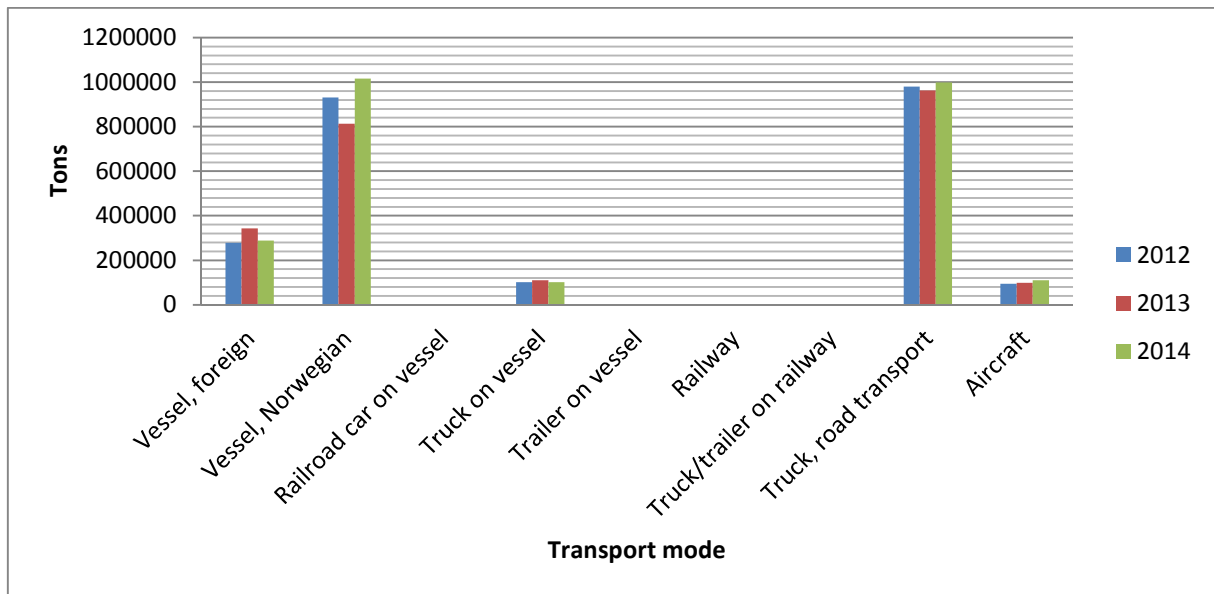


Figure 5: Transport mode for export of fish, crustaceans and mollusk (Source: SSB)

Changes since the end of the project

This part will describe some changes since the end of the StratMoS DP2 project.

Port of Kristiansund and Nordmøre

A short interview with Port of Kristiansund and Nordmøre informs that the initiative for a direct cargo route is still realistic. The project is continued through the Food Port project described later in this case study. There is still a ro-ro-service that is relevant, and this short sea shipping (SSS) service will start in Port of Rørvik and then continue to Coastal Port of Hitra before ending up in Zeebrugge. The SSS service is planned on a purely commercial foundation. The analysis made by Port of Kristiansund and Nordmøre and their partners indicates that the cargo volumes in both directions in sum will make this service sustainable. The area connected to the Coastal Port of Hitra is in constant development, and some of the plans include processing of fresh salmon, cold store and packaging. The SSS service is planned to have two departures per week, and their calculations indicates a potential of 10 000 trucks removed from road traffic each year (Port of Kristiansund and Nordmøre).

The Coastal Port of Hitra

As the StratMoS project progressed, the most attractive alternative for a hub port for the fish transport was localized at Hitra and the planned new Coastal Port of Hitra. Some of the port facilities are finished, and the extension of the port area is planned. The Coastal Port of Hitra opened on 16th of October 2014. The picture below shows the port area.



Figure 6: Opening of the Costal Port of Hitra (KS-Bedrift, 2014)

At the opening day it was the Costal Express` first call in Hitra in 50 years. The Port of Kristiansund and Nordmøre have stated that since the opening day there have been 2000 TEUs handled.

What is important to the fish owners?

This section will be based on the essay "A direct cargo route from Møre and Romsdal to the European Continent. A realistic project? – An economic and environmental study" (Svendsen, 2011).

There have been projects concerning the same issue earlier. In Hervik and Rekdal (2001), the authors conclude with some main quality challenges:

- “Renewal of the fleet to modern ships with a length of 100 meters, which will reduce the injuries in bad weather.
- Modern ships which can sail with a speed of 20 knots and then use 35 hours to the Continent.
- Daily departures so the flexibility could be the same as for road transport.
- Cheaper to transport by sea than by road.
- A center of logistics at the Continent which has an effective and cheap port/stock/distribution.
- More efficient concentrated port in Ålesund.”

Critical factors

There are several critical factors concerning this direct cargo route from Mid-Norway to Zeebrugge. From the fish owners' point of view some of the factors will be described. A short description of critical factors will follow.

Lead time

The product with main focus for a direct cargo route from Møre and Romsdal to the European Continent is fresh fish. The maturation time for this product is three days. The ships that might be used are stipulated to have a speed of 16-20 knots and use about 42 hours. There could be no deviation in such a regular route.

Risk

Today the fish-exporters could send the fish whenever they want, because they do not need to follow a time schedule when they use trucks for road transport. The company's risk will increase when all trucks are on the same ship – at the same time.

Efficiency

Consolidation in other industries gives a pressure on price. To meet these new requirements it is important to have the most efficient value chains regarding production, logistics and transport.

Cost

The main factor for this project to become successful is the unit transport cost. The market requires a good price, especially if the buyers are industry giants. If the transport and logistic costs in companies are getting too high, then the receiver wants to pick up the fish themselves. Most producers/fish-exporters want to control the logistics and transport themselves. The two last sentences might be contradictory, but this is one of the challenges with a high cost level.

Environment

The increasing focus on environmental issues makes this point number two in assumptions for choice of transport mode. The focus on the environment is idealistic, so even if this is an important factor – the transport costs are crucial for their choice.

Frequency

How flexible could this kind of sea transport be? Some fish-exporters deliver fish every day of the week, and they say that frequency is important. Other fish-exporters have their delivery period Sunday evening or Monday, and in these cases one departure could be sufficient.

Flexibility

The flexibility could be observed as a summary of many of the factors described in this section. The fish owners want flexibility, which could mean that they want sea transport as an option which they may or may not prefer in their daily practice. The fish owners are more likely to use a short sea shipping service if several conditions are fulfilled. Such conditions could be like lower costs than alternative transport, departure on the right weekdays, and that the demand for adequate lead times must be met.

Have the situation changed since 2001 and the case in Ålesund?

There is no new known research on this subject with respect to the cargo owners' point of view. That makes the answer for this question difficult. The costs will depend on many of the factors mentioned, and the utilization is an important one. To get economies of scale we need a high degree of utilization of the ship. The utilization depends on frequency, and the frequency depends on the demand. The demand is influenced by time of departure. These relationships make this a similar case as the one from 2001.

The increasing environmental focuses on Norwegian and foreign industry will force companies to find more environmental friendly modes of transporting their cargo. When competitors in the industry are willing to cooperate, we might have an important change in their attitude with respect to information exchange.

Challenges for the project NORTREX

If we consider the conclusions from the earlier study of a similar case (Hervik and Rekdal 2001), we see that these challenges are still present. The challenges they found in their research is quoted in the beginning of this section. The critical factors discussed in this chapter are lead time, risk, efficiency, cost, environment and frequency.

The realistic transport volume for the NORTREX-project is a crucial factor. The coming steps in the process of getting this cargo route realized will be important. It is necessary to discuss what transport volumes each company in the aquaculture industry could add to sea transport.

The number of ports of call is also a factor that has not been discussed in this report. The reason is that to be able to fulfill the promised lead time, it is not possible for the ships to visit a large number of ports at the coast of Norway. Some companies in the aquaculture have factories at different places along the coast. Collecting from all of them could give a higher degree of utilization, but this is not possible without consolidation because the lead time increases.

Frequency is one important factor, and as mentioned earlier some producers deliver their fresh fish in Europe at Sundays and Monday morning which will make a departure from Mid-Norway on Fridays a good solution. Others comment on delivery in Europe at different weekdays.

A large ship which can operate under bad weather, and can keep the speed necessary to reach the European Continent in time is a prerequisite.

The logistic in the port of Zeebrugge is not discussed in this report. A good logistics delivered by the Port of Zeebrugge or other partners is essential for this project. An efficient goods flow from producer to end customer is needed.

The logistic challenges of establishing a food hub in Mid-Norway is further analyzed in the Food Port project, and are also an important factor to succeed.

Actors/Stakeholders

In the table below the actors in the StratMoS DP2 project are listed, and a short description of what role they had in the StratMoS project and what role they have today in the Food Port project. Their role in Food Port is added because Port of Kristiansund and Nordmøre tells that the StratMoS DP2 project idea is still going forward through the Food Port project.

Actor	StratMoS	Food Port	Transnova
Port of Kristiansund and Nordmøre	Project partner	Project partner.	Project partner
Port of Zeebrugge	Project partner	Project partner	
Potential users of the route	Not partner in the project, but included as an interested party	Not partner in the project, but included as an interested party	Not partner in the project, but included as an interested party
The operators	Not partner in the project, but included as an interested party	Not partner in the project, but included as an interested party	Not partner in the project, but included as an interested party
Logistics companies	Not partner in the project, but included as an interested party	Not partner in the project, but included as an interested party	Not partner in the project, but included as an interested party
National and regional authorities	Møre og Romsdal County council was partner	No authorities in the project. The service is based on a commercial alternative.	The Municipality of Hitra (Host of Costal Port of Hitra)

Table 1: Actors in the StratMoS DP2 Project

Existing projects/project ideas

Since the end of the StratMoS project, Port of Kristiansund and Nordmøre has continued the work with the sea transport route through their participation in the Food Port project.

Food Port

This project concludes that the work in the StratMoS project and the Food Port project has shown that efforts for ports and sea transport must be addressed to the authorities and to the shipper/consignee. The last years of the Food Port project have had its focus on communication of project information through dissemination such as presentations, media and magazines.

The transport volumes from Hitra in 2013 were calculated to approximately 250 000 tons, and the fish companies suggest that these volumes could be twice as big in ten years. The concentration of actors and experts in sea food production could make it possible to establish an international Seafood Logistics Center in Hitra. The network from the Food Port project covers production of food and drinks, as well as transport and logistics. This network will be important in the follow-up on this project.

The Food Port project has shown that sea transport could be an important supplement to road transport, and in the longer term an alternative to sea transport. During the project the necessary network has been established, and Port of Kristiansund and Nordmøre and the Municipality of Hitra will follow up on the project. This includes meetings with the fish owners to coordinate the freight flows, and it includes contact with potential shipping companies.

As the Food Port project went through its last phase, the most realistic short sea shipping service has turned out to be Rørvik-Hitra-Esbjerg (Netter, 2014).

Transnova (Norwegian funding system); Sustainable transport for fresh fish from Mid-Norway to the Continent

The municipality of Hitra and port of Kristiansund and Nordmøre have, through this project, found that there is a potential for this short sea shipping service, presentations of this project must continue and the established network must be kept.

The next step is to describe two transport corridors (Netter, 2014²):

1. Hitra/Mid-Norway-Esbjerg (transport for Denmark, Northern Germany, Poland). Ro/ro-service for fresh fish, and mainly lo/lo for frozen fish.
 - a. Two departures each week

- b. Port of Risavika (Stavanger area) could be included
2. Hitra/Mid-Norway-Zeebrugge (transport for the Continent, Europe). Ro/ro-service.
 - a. Port of Rørvik and port of Risavika could be included. The challenge is the requirement of two vessels to get a frequency of two weekly departures.

Relevant research

In this part we will present some selected recent relevant research for this project.

A case study: Semi-trailer from Paris to Trondheim

This study shows three different ways of transporting a semi-trailer from Paris to Trondheim.

This study consists of both payable costs and period costs. This study has some prerequisites that are presented in the report referred to. The main marks are:

- This study presents the road alternative as a purely road case. This means no use of ferries. Transport companies might have chosen a route with ferry service e.g. Helsingør-Gøteborg or Fredrikshavn-Gøteborg.
- The ship service between Rotterdam and Oslo is based on no calls in between
- The road transport is based on a Scania R560 LA with Euro-V motor.
- The ship is a Ro-ro ship, 8000 DWT. Gross tonnage is 10 000 BT. 1500 lane meters. Cruising speed 15 knot. Length of 145 meters.
- The train is based on electric traction.
- All activity is on a weekday in opening hours
- We assume the ship is in regular trade, and the captain has a pilot exemption certificate
- We assume a load factor of 70% in the ship. A semi-trailer without tractor units uses 15 lm

The study presents some calculations based on the marks above, and the table below shows transport mode for the different legs and the cost for the alternative in total (Hovi, 2014):

Alternative no	Paris-Rotterdam	Rotterdam-Oslo	Oslo-Trondheim	Costs (NOK)
1	Road	Ship	Road	18 975
2	Road	Road	Road	40 703
3	Road	Ship	Train	15 959

Table 2: Alternatives for case study Paris-Trondheim

The main outcome is that the ship is performing well in this case, both when it comes to the total of payable costs and period costs. It is important to be aware of that the ship in the Paris-Trondheim

case has some advantages when it comes to distance. The ship could have a frequency of two times a week, and the costs of increased headway are not included neither for ship nor train services.

Ro-ro shipping

The cost level among types of ships is quite the same between different categories, but ro-ro ships have the highest cost both for capital- and fuel fee costs (Hovi, 2014).

Recent research addresses that by use of ro-ro-ships the challenge with the double load factor is present. The double load factor problem is present when vessels have half-full trailers on half-full decks (Hjelle, 2011).

This topic is not fully covered in this case study, but the subject is related to the "load factor" section in "What is important for the fish owners?"

Environmental effects

This topic is not covered in this case study. Recent research shows a strong relation between load, factor, speed and emissions.

Framework for sea transport

Changes in the framework conditions for Norwegian Sea transport and their practical consequences have been examined by Hovi et al (2014). The findings are summarized in Table 3.

Authorities	Receiver	Changes	Consequences
National	Norwegian Maritime Authority	No known changes	
National	NOR/NIS (The Norwegian International Ship register)	No known changes, except one organizational change	
National	The Norwegian Coastal Administration	The coastal fee is removed	No coastal fee along the Norwegian Coast
National	The Norwegian Coastal Administration	"Regulations on fees for inspections and supervision of ports and port terminals against terrorism etc" removed. Replaced by revised Norwegian legislation based	The minimum requirements are removed. «More focus on goals than means.»

		onEU-725/2004 and EU-2005/65.	
National	Toll Customs	Environmental taxes; CO ₂ , NO _x , Sulphur fee and lubricating oil fee. No changes	
Local authorities	Locally defined fees (by local port authorities)	The possibilities to charge local port fees are removed. Replaced by compensation (Compensation (General pricing)) and tax for port of call (port fees).	The argument for change was to simplify. This new system gives a level of costs that is fairer. The new system will be based on the port gets paid for the services offered.
International (IMO)	MARPOL	Restrictions for Sulphur emissions	
International (IMO)	MARPOL	Pollution to air, stricter rules	
National	SO ₂ -fee for mineral oil for use in Norway	National preferences for vessels in port; SO ₂ fee for all mineral oils that contains more than 0,5 weight percentage sulphur	Limited use of heavy oil in domestic sea transport in Norway. The level of sulphur content in marine gas oil is below the requirements
International (IMO)	MARPOL	Energy efficiency for vessels above 400 gross ton at foreign trade. All vessels should have Ship energy Efficiency Management Plan.	Reduction in all fuel related pollution to air as (CO ₂ , NO _x , SO _x etc.). Both existing and new vessels are included. The EEDI (Energy efficiency design index) should be calculated for new vessels. The requirement would be gradually stricter in four steps. Most consequences for new vessels above 400 GT

Table 3: Changes in framework for sea transport (based on Hovi et al, 2014)

Hovi et al (2014) also states that sea transport has a more complicated system for fees. In addition to this the sea transport is more often financed by the customers than for other transport modes. It is also important to know that many of the fees for sea transport are more visible than for other transport modes. An example could be that the port is owned by a municipality and all services are priced. In road transport the consolidation in terminals is a part of the total fee, and could be considered as invisible. The same is valid for rail transport; the consolidation is a part of the total fee for the shipment/transport. A positive effect for sea transport is that international transports by air or sea are exempted from fuel fees.

National legislation

National Transport Plan 2014-2023

The Norwegian National Transport Plan 2014-2023 includes some actions to reach the goal of getting more freight transport by road to switch to sea transport. This plan includes measure for stimulating to more local shipping, establish a subsidy scheme for governmental support for investments in designated ports, establish a subsidy scheme for co-operation among ports and for consolidation (freight concentration), strengthen R&D for freight transport at sea and intermodal transport, and make a deep analysis of freight transport to find possibilities and instruments for strengthening of freight transport by sea and rail transport(NTP 2014-2023).

Freight transport analysis 2015

During the freight transport analysis, three suggestions for further analysis were made. These suggestions are (Marskar, 2015):

- The national authorities covers the pilotage readiness fee
- The national authorities covers the expenses for the traffic centrals (as they do for road and rail today)
- Environmental grant for each TEU by sea or rail transport

EU legislation

Not covered in this case study.

Funding

Funding from national authorities and/or EU funded programs for a direct cargo-route through the Motorways of the Sea (MoS) has been difficult to achieve. The experiences from the Marco polo applications describe the challenges for this Norwegian project.

Connecting European Facility (CEF)

Projects regarding TEN-T will be funded through the CEF program. Norway chose not to take part in this program, except for CEF Digital.

In EU regulation no 1315/2013, the European parliament and the Council of the European Union defined the difference between a neighboring country and a third country. There are different possibilities between those two. The definitions are:

- Neighboring country: A country falling within the scope of the European Neighborhood Policy including the Strategic Partnership, the Enlargement Policy, and the European Economic Area or the European Free Trade Association.
- Third Country: Any neighboring country or any other country with which the Union may cooperate to achieve the objectives pursued by this regulation.

In the TEN-TaNS project, several case studies have been made. One of them analyses the funding and inclusion opportunities for EU neighboring countries, with a case study of Norway. From this report we find:

"Article 8 of the above mentioned regulation describes the cases when a cooperation and financial support of projects in neighboring countries- such as Norway- is possible. The projects shall:

“ (a) connect the core network at border crossing points and concern infrastructure necessary to ensure seamless traffic flow, border checks, border surveillance and other border control procedures;

(b) Ensure the connection between the core network and the transport networks of the third countries, with a view to enhancing economic growth and competitiveness;

(c) Complete the transport infrastructure in third countries which serve as links between parts of the core network in the Union;

(d) Implement traffic management systems in those countries;

(e) Promote maritime transport and motorways of the sea, excluding financial support to third-country ports;

(f) Facilitate inland waterway transport with third countries.

Such projects shall enhance the capacity or utility of the trans-European transport network in one or more Member States.

Article 8 also describes a number of other cases when cooperation with third countries is possible, without providing financial support."

This information states that there will be no funding available for the port facilities in the Norwegian ports. Ports in the EU (in this case: Zeebrugge or Esbjerg) could apply for funding for their investments in infrastructure. Operators could also apply for funding for the short sea shipping service.

It is important to mention that Norway chose not to take part in the CEF program (except for CEF Digital), so even if the funding were available there are limited possibilities for Norwegian actors.

Horizon2020

The Horizon 2020 program is a wide program described in the following statement from the Horizon2020 web page " *Horizon 2020 will provide funding for a resource efficient transport that respects the environment by making aircraft, vehicles and vessels cleaner and quieter to minimise transport system's impact on climate and the environment, **by developing** smart equipment, infrastructures and **services** and by improving transport and mobility in urban areas.*" The description of service in the quote above could indicate that the Horizon2020 would contribute to develop a new service rather than fund the service itself.

Interreg

The North Sea Interreg Program's pillar "Green transport and mobility" where funding is available for "*developing and providing environmentally-friendly and low-carbon transport system, including inland waterways and maritime transport, ports, multimodal links and airport infrastructure, in order*

to promote sustainable regional and local mobility." This indicates that funding will be available for the development of projects rather than funding for the particular short sea shipping service.

Summary

This case study shows that the StratMoS project has been continued first through the Food Port project and last through the Transnova project Sustainable transport for fresh fish from Mid-Norway to the Continent. The next step for the project is to be turned over to be a project for a commercial shipping company.

The project has not gone through essential changes since the StratMoS project. In the end of StratMoS period the short sea shipping service were pointed out to be Hitra-Kristiansund-Zeebrugge, and today the service has changed to be Rørvik-Hitra-Esbjerg. The return cargo was a challenge in the StratMoS project, and in the end of this project the Food Port idea and initiative was made. Through the Food Port project the potential for fruit and vegetables as return cargo has been analysed, and the freight flows are by Port of Kristiansund and Nordmøre considered being sufficient for the direct cargo route. The necessity of consolidating flows to get sufficient cargo volumes represents an important market uncertainty.

The actors in the StratMoS project also participated in the Food Port project. One of the most important actions for these projects was the established network of cargo owners, logistics companies, vendors to the fish industry and shipping companies.

The StratMoS project and following projects have led to network, statistics, the development of a seaport logistics center in Hitra and important lessons have been learnt. When it comes to funding the rejected Marco Polo applications and the analysis of the funding system is important to be wary of when similar projects are to be established.

Even if there are challenges when it comes to the establishing of the physical shipping service, recent research shows that sea transport is a more cost efficient alternative if the right assumptions are present and fulfilled. There are two important questions that are not addressed in this report, and those are load factor and the impact of the environment. The load factor is an important factor for the project to be realized.

The national legislation and funding opportunities has not changed considerable since the StratMoS initiative. The national authorities have started a process to simplify the system for fees in sea transport, and an overview of changes is shown in table 3. There is stated in the Norwegian National Transport Plan that a shift of freight volumes from road to sea and rail is a policy objective, and one

of the instruments to reach this was to do a national freight analysis. During the national freight analysis three topics for further research were discovered, and this includes the possibilities for an environmental grant for each TEU by sea and rail. Such remuneration could be a benefit for possible volumes for a short sea shipping service, as long as the green audit for the service shows a positive effect for the environment.

When looking into the funding possibilities in EU, we looked at CEF, Horizon2020 and Interreg. As Norway chose to not take part in the CEF funding system, this program is initially not available to Norwegian companies and authorities. The guidelines for applications differ between funding to infrastructure in port areas for port in third/ neighboring countries and to services attached to the port. When it comes to Horizon2020 the guidelines indicates that available funding will be given to development of projects and ideas rather than physical projects. For Interreg projects we see the same indications as for Horizon2020.

Conclusions

The initiator, Port of Kristiansund and Nordmøre, is still working with a short sea shipping service from Mid-Norway to the Continent. The next step is to get the project transferred to a shipping company. As the CEF program is formulated, a shipping service and/or ports in EU could apply for funding. If an application comes from a partner in EU, there might be possibilities for the service to get funding. The funding system for Interreg and Horizon2020 does not seem to be organized to support the establishing of a physical transport service.

The network for cargo owners, logistics companies, vendors to the fish industry and shipping services has a value for other similar projects in the future.

The system for fees in sea transport has not changed dramatically since 2011 and the end of the StratMoS project. The work with simplifying the system could in the future give better conditions and framework for sea transport. As further freight analyses are being performed, an eventual introduction of a reward for containers sent by sea transport might give the necessary incentives for the ones that will benefit from this kind of reward.

In-depth research work on the topic of load factor in ro-ro vessels and sea transport in general should be made. The environmental effects and effect on congestion in the TEN-T network, including both ports and roads, should also be calculated for this shipping service.

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