

SUMMARY OF FINDINGS

Introduction

Within the logistics chains of fuels, chemical products and other dangerous liquid bulk goods, the sector of inland tank shipping plays an important role. Now and in future this sector is confronted with requirements for quality, safety and the environment. Shippers ask for high quality service, European policy organisations sharpen their rules concerning safety and environment. The sector itself aims at development of a good sustainable performance.

In order to be able to start taking the right actions to develop into a sustainable performing sector, insight is needed in the future requirements for quality, safety and environment and what effects these requirements will have on the economic and social performance of the inland tank shipping sector.

Supporting this, CBRB has initiated a project aiming to start actions for a sustainable development of the sector of inland tank shipping. CBRB has asked Stichting Projecten Binnenvaart in cooperation with the Erasmus University Rotterdam to execute this study.

Goal of study

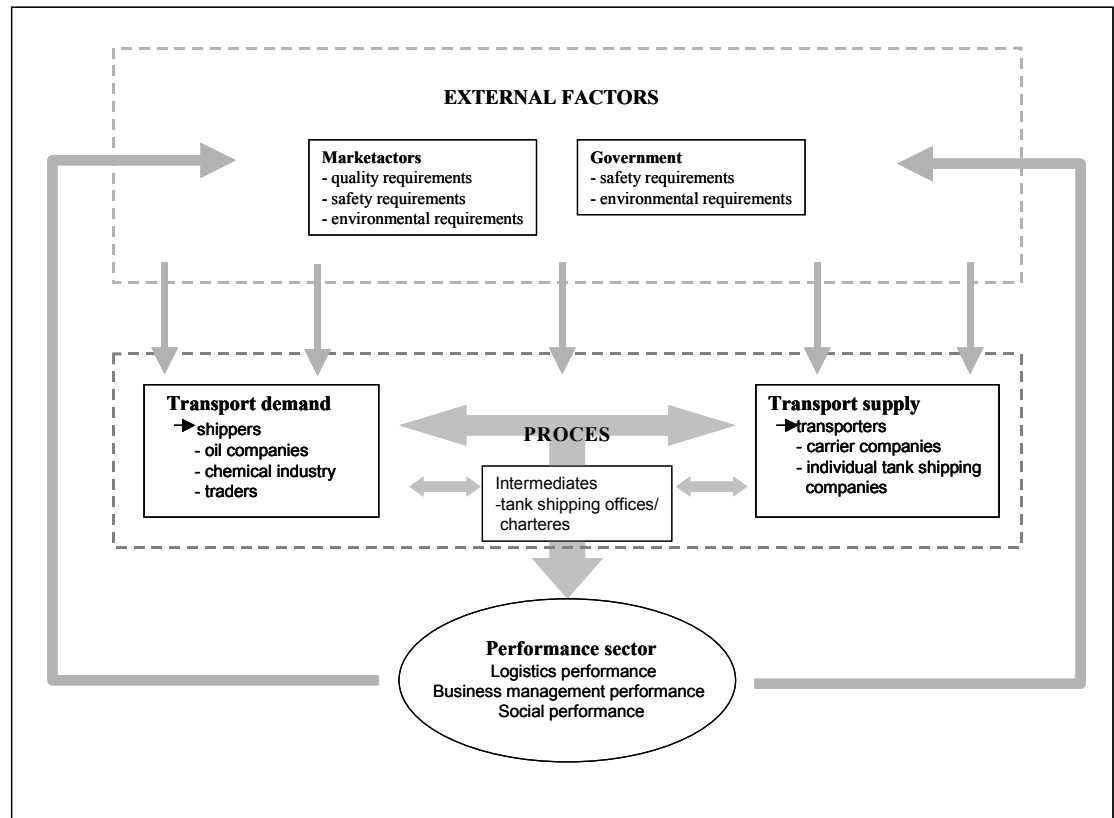
The goal of the study is to develop insight in which influence the external factors quality, safety and environment will have on the development of the inland tank shipping sector. Underlying question is: what actions should the sector take in order to realise a sustainable performance.

Questions that should be answered within the study:

- What is the structure and working of the market and how does sustainability result from this?
 - supply, demand, intermediates
 - market imperfections
 - transparency of the market
- Which external factors influence shippers, carriers and the market process?
 - quality requirements
 - safety requirements
 - environmental requirements

- How will these factors develop in future and how will they influence shippers, carriers and the market process?
- What will the consequences be in economic and social terms for the sector of inland tank shipping and what should they focus actions on to realise a sustainable sector?

The following figure illustrates the structure of the approach.



Conclusions

The conclusions are based on the analysis of the performance of the sector, the influence on this performance of the external factors quality, safety and environment and the implications of this influence for the whole sector of inland tank shipping.

- The sector of inland tank shipping, with its flexible and technically high quality tank fleet, plays a very important role in the logistics of fuels and chemical products, needed for the production of a variety of semi-final and final products.
- The supply side of the sector is highly fragmented, especially in the largest market segment, the mineral oil market. This is even worsened by the trend of changing ownership from the larger carrier companies to the individual tank shipping companies. On the other side, the demand side of the sector is highly concentrated. In the resulting market process, the confrontation of supply and demand, the position

and role of the shipping offices (or charterers) is very important and has a strong influence on the performance of the market process. A potential risk exists if this role is not filled in properly and the market process does not work in the direction of a sustainable inland tank shipping.

- A large share of the shipping companies realizes profits that are too frequently and sustained on a too lower level. Reasons for this can be found in the sharp fluctuations in tariffs, the strong competition and the sometimes bad performance of the companies (limited strategical thinking, limited insight in own cost and yield structures, limited insight in needs of shippers). In the current situation the individual companies calculate profits and income based on the market value of their vessel, which is relatively high at the moment. The paper profit that they can realise with the sale of the vessel is calculated as additional future income. This brings with it the risk that if the market value of tank vessels decrease, which is not unlikely with the increasing technical requirements for vessels and equipments, the calculated additional income disappears.
- The market of inland tank shipping is characterised by external effects: pressure on the environment and affection of external and internal safety. Although compared to other modalities the sector of inland tank shipping is relatively safe and environmental friendly, this sector is confronted with increasing requirements for quality, safety and environment.

From policy side:

- at EU level
- at national level
- at international level of CCR

Shippers are increasingly influenced by pressure from the society to produce and sell in a sustainable way. Shippers translate this pressure to the requirements that they impose on their logistics service providers, under which the inland tank sector. Consequences are:

- higher investment costs per ton
- higher risk per ton

This asks for a larger scale at the supply side, which can limit the freedom of the individual tank shipping company

- Shippers make a trade-off between fulfillment of customer satisfaction and legal requirements on one hand and cost control on the other hand. This trade-off is not always clear and unequivocal and sometimes depends on the market situation. This results in an unclear situation for the tank shipping companies, a situation in which it is difficult to provide the right services against the right costs.
- Within the sector of inland tank shipping, differences in level of sustainable development are present. We can distinguish:

- forerunners (10%)
- companies that respect the legal requirements and act according to them (70%)
- companies that sometimes neglect legal requirements (20%)
- The increasing focus on sustainable inland tank shipping results in the following consequences:
 - strong signals from market side and policy side indicate that within a relative short time frame a shift is foreseen to double hull vessels for a large share of the market volume
 - the ban on degassing and the more strict product specifications will lead to dedicated use of the inland tank vessels
 - the requirements for educational level of personnel will increase. Both the owner and the crew should have the capabilities to:
 - provide the shipper with the right logistics solution
 - be an equal partner for the shipping office
 - realize a high level of quality, safety, technology and environment in the performance of the company
 - establish a profitable operation, also in the long run
- The development towards sustainable inland tank shipping and the requirements that come with it have an influence on market volume, cost-ratios, capacity in the market and profits:
 - the impact on market volume is limited
 - cost structure and cost levels will change: the average cost of the tank shipping could increase significantly
 - there will be a pressure on capacity in certain market segments due to the requirements of shippers for double hull vessels and also due to certain expected policy developments (ban on degassing, change of the classification for dangerous goods). If goods like gasoil and fuel oil will not be allowed to be transported in single hull vessels, this will result in a decrease of available

vessels for these goods with 76 % (from 585 to 139, based on current fleet data)⁴⁴. Consequence of this is twofold:

- a large overcapacity will emerge in market segments where single hull vessels are still allowed
- in those market segments where double hull is required first a large undercapacity will emerge. Result of this is that not all demand can be fulfilled. The effect of this will more or less strongly depend on the time horizon for implementation and on the investment pattern.

Recommendations

The sector of inland tank shipping continuously has to develop itself into a sustainable sector. To realise this for the longer term means on one hand compliance with legal and social requirements for quality, safety and environment and on the other hand a good balance between investment risk, costs and yields. This forms the base for the recommendations.

- A good balance between supply and demand in this sector asks for a restructuring of the market. The investment risk and costs per ton on the supply side of the market will increase due to the requirements for sustainability. A more sound position of the carrier-shipping offices can help in this, whereby:
 - individual tank shipping companies share investment risk and there will also be a shared investment risk between individual tank shipping company and carrier-shipping office
 - carrier-shipping offices and individual tank shipping companies have a good insight in the needs and requirements of the shipper, also with respect to quality, safety and environment. Based on this insight a fair price in which sustainability is incorporated can be agreed upon.

If the scale of both demand and supply side are in balance and a good relationship is established between transporter and carrier-shipping office the discussion with the shipper can be started to realise a chain wide sustainable performance. And as a result, chain responsibility will grow.

⁴⁴ In the past such regulation was always confronted with long implementation periods, sometimes even 10 to 15 years. However, this is not a rule for the future, especially when pressure from society is strong (f.e. when a severe accident happens)

- Individual tank shipping companies need sufficient knowledge or knowledge development in order to be able to realise the right position related to the shipping office:
 - this means development of a more strategical vision on business management, making good contracts that ban out the strong fluctuations in the market and development of a rational investment behavior. This can lead to combined investment, to share risks and to win room for quality, safety and environment
 - develop good insight in costs, yields and profit over a longer period
 - develop good insight in the specific demand: which logistics solution does the shipper need and how does the service supplied fit into that

Educational levels need to fit the knowledge requirements within the sector

- For those companies that cannot improve the performance to a higher level of quality, safety and environment, either because of financial or organisational reasons, ending of the business should be considered and facilitated. This can be done by introducing fiscal rules that stimulate change to another market sector or stimulate ending of business.
- Cost-augmenting effects of legal rules for safety and environment, like the Convention on wastes and the crew legislation of the ADNR, should be incorporated explicitly in the freight tariff. The amount and purpose of these costs should be made clear. Result of this is that the costs will not be part of the competition between the tank shipping companies. Together with this good control and enforcement is needed.
- Better insight is needed in the critical performance indicators of the tank shipping companies, with respect to both the economic performance as the performance on quality, safety and environment. Only then the sector will be able to react properly to changes coming from market forces and from policy. The insight can be developed if:
 - at sector level a well working infrastructure will be made available to develop and quantify the CPI's
 - sufficient openness is created within the sector: this means that individual companies are willing to share information.
- The government (both on European as national level) should by its policymaking and policy implementation, stimulate and facilitate above mentioned developments. This can be done by:
 - linking the appliance of available funds (for example the funds from the Old for New Regulation: it should be noted that hereby the conditions of the Regulation should be taken into account) to improvement of structure of the sector, improvement of educational level, increase of knowledge and insight in the sector;
 - good enforcement of rules;

- preventing the emergence of high levels of over- or undercapacity due to new policy. This can be done by introduction of transitional measures, a new design of the scrapping regulation based on the principles of sustainability, fiscal measures that promote ending of business and change to other sectors.

The government must take into account the fact that it is the sector itself that can best oversee the effects of new policy and new rules. Several different policy departments develop policy from different perspectives, with which the sector is confronted. This can result in unclear or unworkable situations. It is recommended to involve the sector in some stage of the policymaking and also to realise a better cooperation between the different policy departments.

Role of actors

The realization of a sustainable inland tank shipping sector is a joint responsibility of all participant involved. Only if all participants fulfill their role in the proper way, the step towards sustainability can be made in a smooth way. The following table describes per participant their most important possible role in working towards a sustainable inland tank shipping.

Shipper	<ul style="list-style-type: none"> - explicit and consistent about requirements for sustainability
Carrier – shipping office	<ul style="list-style-type: none"> - right position in relation to shipper - right position in relation to individual tank shipping company (share of investmentrisk) - further development of knowledge and insight - rational investment behavior
Individual tank shipping company	<ul style="list-style-type: none"> - further development of knowledge and insight - insight in own performance - insight in needs of shipper - rational investment behavior - right position in relation to tank shipping office
Government (European and national)	<ul style="list-style-type: none"> - integral assessment of measures to be taken by involvement of sector and other policy departments - fair enforcement of rules and legislation - to facilitate the restructuring of the sector, by linking appliance of funds and fiscal measures with this goal - stimulation of higher educational levels
Branche-organisation	<ul style="list-style-type: none"> - promotion and dissemination of knowledge and insight - stimulation of sustainable performance - stimulation of good educational facilities - influencing policy making
Bank	<ul style="list-style-type: none"> - stimulation of rational investment behavior - stimulation of a sound financial behaviour in the sector (combined investment, risk sharing between shipping companies and shipping offices)
Insurance company	<ul style="list-style-type: none"> - stimulation of quality, safety and environment via contributions