## **Summary**

With the increasing demand for transportation and the increasing congestion on roads and rail with all its negative effects on environment, Short sea shipping can be an alternative. Short sea shipping is the only mode of transport that can keep up with the growth of road transport and is the only mode that can easily increase its capacity. Additionally it can offer some extra services such as floating stock and value adding activities.

Largest volumes transported by SSS are liquid and dry bulk. Trucks and other road vehicles are transported by Roll on Roll off (RoRo) vessels and are often for small distances and combined with people transport (ferries). The container transport is the fastest growing and most developing short sea shipping branch. There are some special containers designed which are more suitable for the European market. Special vessels have been designed to avoid transhipment in sea ports (sea-river vessels), long turn-around times due to the removal of hatches (open-hatch vessels) and long travel times (High speed vessels)

Europe is the largest region in the world in terms of transported freight volumes for short sea shipping. In this area more than 40 % of the total transported freight within EU is overseas. Especially Northern Europe with many industrial activities near the coast and its large ports such as Rotterdam and big UK ports, large amounts of freight are transported overseas. In other regions SSS is not used much, however in America there are some idea's of starting some new lines.

Bottlenecks in ports are differences in freight rates, complicated and slow administrative procedures and slow handling. Improvements can be made by revising the economical structure and making it more competitive and free and automate the administrative and handling systems.

In general short sea shipping has long travel and transhipment times and transhipment determines a large part of the total transport time and costs. Therefore SSS is particularly suitable for high volume, low value goods which are not time sensitive and have to travel over long distances. It has the advantage that it is efficient in terms of energy, labour and equipment which makes it a cheap transport mode. It has got a high capacity and there is a great potential capacity. Unfortunately the branch suffers of a slow and unreliable image.

Short sea shipping is an environmentally friendly type of transport and it pollutes in an ecosystem that is less vulnerable than other transport modes such as road transport. SSS is also safe for people and cargo. There are very few incidents which injures people, damage of cargo or theft.

In table 1 all the disadvantages are presented and some measures have been suggested to improve these disadvantages.

Disadvantage	Measure to improve
Slow transport	High speed vessels
Slow transhipment	Automated dedicated SSS terminals
	Automated information systems (with RFID)
	Open hatch vessels
Bad image	Promotion centres
Different pricing	Free market
	Promotion centres
Inflexible	On-stop-shops offering door-to-door services
	Multipurpose vessels

Table 1 disadvantages of SSS and its measures to improve