SHORT SEA SHIPPING & MOTORWAYS OF THE SEAS: DEVELOPMENT AND PERSPECTIVES

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Technical Director
SPC - SPAIN
- Set up in 2002
- Member of the European Shortsea Network (ESN)
- Members: 29
  - Associations of shipowners, shipping agents and stevedore companies, pilots, mooring services, road transport, freight forwarders, ...
  - Port Authorities, State Ports, organisations and regional ports directorates
  - Port foundations, ...
AIM

Facilitating the development of competitive multimodal transport chains with significant participation of the maritime mode.

Objectives and main activities:

• To make shippers, road hauliers and logistic operators aware of the SSS possibilities.
• To gather and provide information about available services and SSS’s potential for with Spain.
• To identify and analyze problems or obstacles that can affect the competitive position of SSS.
• To develop report and analysis to the Administration and the industry.
• To promote strategic alliances among transport chain operators with a multimodal perspective of short sea shipping.
• 72 regular services from 12 Spanish ports
• 57 shipping companies (30 services offered by more than one shipping company)
• Average frequency: 1.3 exits/week
• Ports: 53 with direct link + 38 with no direct link

<table>
<thead>
<tr>
<th>Side coast</th>
<th>Services</th>
<th>Shipping companies</th>
<th>Ships</th>
<th>Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlantic</td>
<td>34</td>
<td>33</td>
<td>68 Cont + 24 Ro-Ro</td>
<td>27 D (+20 ind)</td>
</tr>
<tr>
<td>Mediterranean</td>
<td>46</td>
<td>37</td>
<td>132 Cont + 39 Ro-Ro</td>
<td>36 D (+32 ind)</td>
</tr>
</tbody>
</table>
Road es the transport mode that has gained more share in intra-european transport of goods

<table>
<thead>
<tr>
<th>Mode</th>
<th>Incr. 1995 - 2008</th>
<th>2007-08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road</td>
<td>45,7%</td>
<td>-1,9%</td>
</tr>
<tr>
<td>Sea</td>
<td>30,7%</td>
<td>-2,2%</td>
</tr>
<tr>
<td>Rail</td>
<td>14,7%</td>
<td>-2,3%</td>
</tr>
<tr>
<td>I. Waterways</td>
<td>19,0%</td>
<td>-1,2%</td>
</tr>
<tr>
<td>Pipelines</td>
<td>8,0%</td>
<td>-2,2%</td>
</tr>
<tr>
<td>Air</td>
<td>35,0%</td>
<td>-1,8%</td>
</tr>
<tr>
<td>Total</td>
<td>33,7%</td>
<td>-2,1%</td>
</tr>
</tbody>
</table>

Source: EUROSTAT
The road increase has been **above** than the maritime.

Freight transport between Iberian P. and other EU-15 countries.

Modal split evolution (Mill. t)

Source: Observatorio hispano-francés de tráfico en los Pirineos. Junio 2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Sea</th>
<th>Rail</th>
<th>Road</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>144.4</td>
<td>63.0</td>
<td>4.4</td>
<td>77.0</td>
</tr>
<tr>
<td>2001</td>
<td>161.9</td>
<td>70.7</td>
<td>4.1</td>
<td>87.1</td>
</tr>
<tr>
<td>2002</td>
<td>170.1</td>
<td>73.0</td>
<td>4.1</td>
<td>93.0</td>
</tr>
<tr>
<td>2003</td>
<td>174.7</td>
<td>73.9</td>
<td>4.2</td>
<td>96.6</td>
</tr>
<tr>
<td>2004</td>
<td>175.2</td>
<td>70.3</td>
<td>4.4</td>
<td>100.5</td>
</tr>
<tr>
<td>2005</td>
<td>177.8</td>
<td>74.0</td>
<td>4.4</td>
<td>99.3</td>
</tr>
<tr>
<td>2006</td>
<td>181.1</td>
<td>73.1</td>
<td>4.4</td>
<td>103.6</td>
</tr>
<tr>
<td>2007</td>
<td>188.7</td>
<td>79.5</td>
<td>3.7</td>
<td>105.5</td>
</tr>
<tr>
<td>2008</td>
<td>183.5</td>
<td>78.8</td>
<td>3.1</td>
<td>101.6</td>
</tr>
</tbody>
</table>

Evolución 1998/2008

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Annual Average</th>
<th>(2008/2007)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>27%</td>
<td>2.4%</td>
<td>-2.8%</td>
</tr>
<tr>
<td>Road</td>
<td>32%</td>
<td>2.8%</td>
<td>-3.7%</td>
</tr>
<tr>
<td>Rail</td>
<td>-29%</td>
<td>-3.4%</td>
<td>-15.1%</td>
</tr>
<tr>
<td>Sea</td>
<td>25%</td>
<td>2.3%</td>
<td>-0.9%</td>
</tr>
</tbody>
</table>

**43%**

**55%**
Freight flows between Iberian P. and Europe.

Modal split (million T.)

International transport flows

Source: Observatorio hispano-francés de tráfico en los Pirineos. Junio 2010

Península Ibérica/Resto de Europa (incluyendo Francia y la UE-15)

Total: 237,3 Mt

Península Ibérica/UE-15 (sin Francia)

Total: 117,6 Mt

Península Ibérica/Francia

Total: 65,9 Mt

España / Portugal

Total: 237,3 Mt
Almost 50% of international road freight transport takes place at the appropriate distances for Shortsea Shipping.
Threats to the road freight

Taxation Increase
- I.E.H.
- Infrastructure taxation. Eurovignette

Work and employment regulations
Driving and rest times. REGULATION (EC) No 561/2006

WHITE PAPER 2011
Reduction of at least 60% of GHGs by 2050

Fuel prices growth

Work and employment regulations
Working time - Real Decreto 902/2007, de 6 de julio

Greater restrictions on the lorries movement and traffic
Weekends, local holidays, ....

Increased insecurity of the vehicle, its cargo and driver

Shift of road freight to other modes
- 2030: 30 %
- 2050: + 50%

WHITE PAPER 2011
Shift of road freight to other modes

Bilbao, 6 October 2011
Benefits of the Short Sea Shipping as compared to a unimodal road:

- Reduces dependence on land transport infrastructure
- Lower transport costs
- Lower fuel costs influence
- Shortest transit time (minimizes impact of driving and rest times regulation)
- Avoids congestion and bottlenecks
- Avoids traffic restrictions
- Increases security reduces risk of theft
- Increases load per unit
- Improves drivers' quality of life
Obstacles to the development of SSS

- Difficulties for concentrating the necessary volume of cargo to give the required frequency
- Difficulties for implementing new services due to the high economic risk in the period until reaching the breakeven
- Need of higher capacity of organization & planning
- Misgivings about the risk of losing customers (in favour of the shipping company, of larger business size)
- Perception of loss of control of the chain
- Difficulty for resolving the destination drayage
- Risk of damages to transportation equipment (semitrailers). Quick and simple system of claim
- Recruitment difficulties return
Obstacles to the development of SSS

- **Accessibility difficulties:**
  - By interferences with urban areas
  - By congestions in certain time slots
  - By terminals schedules

- **Modal interchange extracosts:**
  - By paralizationes
  - By stowage schedules rigidities
  - By high stowage costs
External costs of freight transport by sea are the lowest of all modes of transport.
Maritime Transport is the most energy efficient and lower CO2 emissions mode of transport.

Source: Friend of the Earth
### Transport chains: Comparison of emissions

<table>
<thead>
<tr>
<th>Modality</th>
<th>Distance</th>
<th>Emission</th>
</tr>
</thead>
<tbody>
<tr>
<td>precarriage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Road</td>
<td>307</td>
<td>982.40 kg</td>
</tr>
<tr>
<td>maincarriage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Road</td>
<td>1273</td>
<td>4.07 Ton</td>
</tr>
<tr>
<td>oncarriage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Road</td>
<td>294</td>
<td>940.80 kg</td>
</tr>
</tbody>
</table>

**Emission (gram per tonkm)**: 118.52

**Reduction emission vs road**: 0.00%

**Total emission CO2**: 6.00 Ton

**Total Transports**: 2

**Transport reduction**: 0

**Emission Air Pollution**:

- **CO2**:
  - precarriage
  - maincarriage
  - oncarriage

- **NOx**, **SO2**, **PM10**
Transport chains: Comparison of emissions

<table>
<thead>
<tr>
<th>Modality</th>
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<th>Emission</th>
<th>CO2</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>precarrage</td>
<td>307</td>
<td>491,20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>maincarrage</td>
<td>1273</td>
<td>566,49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>oncarrage</td>
<td>294</td>
<td>470,40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Emission (gram per tonkm): 30,20
- Reduction emission vs road: 74.52%
- Total emission CO2: 1.53 Ton
- Total Transports: 1
- Transport reduction: 1

Emission CO2:
- precarrage
- maincarrage
- oncarrage

Emission Air Pollution:
- precarrage
- maincarrage
- oncarrage

Total load (ton):
- 27
- Max cap. road: 25
- Max cap. internal: 27

Coastlink
In the period 2003-2010, 156 projects involving 624 companies (50% SMEs) have received funding under Marco Polo.

Since 1997, about 600 million euros in direct aids

Only in the period 2007-2009, an estimated external costs savings of 1 417 mill. € for the modal shift of 58 billion tkm, which extrapolated to the 1997-2010 period represents 5683 million € of savings.
Comparison of emissions

Equivalent exhaust gas emissions - heavy domestic road transport vs shipping

Source: Swedish Transport Research Board 1993

- Nitrogen Oxides
- Carbon Monoxide
- Hydrocarbons Dioxide
- Particulates
- Sulphur

grams/tonne-km
Directive 2005/33 establishes a ceiling of 1.5% for ferries or ro/pax ships and a maximum of 0.10% for vessels at berth in EU ports.
MARPOL Anexo VI amended
SPC – Spain Transport chains Simulator

http://simulador2.jbarcia.net/
<table>
<thead>
<tr>
<th>Trayecto</th>
<th>Coste (Eur)</th>
<th>Tiempo (Horas)</th>
<th>Distancia (Km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valladolid -&gt; Hannover</td>
<td>2.100</td>
<td>54.7</td>
<td>1.916</td>
</tr>
</tbody>
</table>

**Transporte maritimo**

<table>
<thead>
<tr>
<th>Trayecto</th>
<th>Coste (Eur)</th>
<th>Tiempo (Horas)</th>
<th>Distancia (Km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valladolid -&gt; Bilbao</td>
<td>300</td>
<td>4.3</td>
<td>200</td>
</tr>
<tr>
<td>Bilbao -&gt; Zeebrugge</td>
<td>587</td>
<td>4.0</td>
<td>1.306</td>
</tr>
<tr>
<td>Zeebrugge -&gt; Hannover</td>
<td>638</td>
<td>9.1</td>
<td>340</td>
</tr>
<tr>
<td>Total Valladolid -&gt; Hannover</td>
<td>1.942</td>
<td>77.4</td>
<td>2.125</td>
</tr>
</tbody>
</table>

El coste del transporte marítimo es orientativo; para mayor precisión por favor consulte a la naviera.

Información sobre el Puerto de Origen: Puerta de Bilbao
Información sobre la Naviera y el Servicio Marítimo
Información sobre el Puerto de Destino: Puerta de Zeebrugge

**Selecciona la línea marítima:**

-Bilbao-Zeebrugge a través de TRANSFENICA

Nueva Simulación: ComodalWeb
**Datos de contacto**

TRANSFENNNICA

Página Web: [www.transfennica.com](http://www.transfennica.com)
Agencias en España: Transfennica Iberia

**Información y reservas**

- Teléfono: 34 944 831 659
- E-mail: bilbao@transfennica.com

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**De Bilbao a Zeebrugge**

**Horario**

- Lunas 17:00 -> Miércoles 09:00
- Miércoles 17:00 -> Viernes 09:00
- Viernes 17:00 -> Lunas 06:00
- Lunas 17:00 <- Miércoles 09:00
- Miércoles 17:00 <- Viernes 09:00
- Viernes 21:00 <- Lunas 06:00