



**Ensuring economic growth of regional ports,  
diversifying port service and encouraging  
sustainable movement of goods**







*Globalisation and an increasing demand for goods has led to a growing requirement for freight transport in Europe. EU carbon emissions originating from transport are 70.9% from road, 15.3% from maritime, 12.4% from aviation, 0.7% from rail and 0.7% from other transport sources (European Environment Agency – EEA). Freight movement by road causes congestion on the main transport routes, prompting a need to review how freight can be moved more efficiently and sustainably.*

# Project overview

**LO-PINOD (Logistics Optimisation for Ports Intermodality: Network, Opportunities, Development) challenges traditional practices of freight distribution and offers a more sustainable alternative. Through improvements to shortsea routes, multi-modal connectivity between regional ports and their hinterland, and diversified port land use and operational models, LO-PINOD will help deliver social and economic benefits to communities and businesses across the North Sea Region (NSR).**

Led by the Institute for Sustainability, LO-PINOD is funded by the EU Interreg IVB NSR programme and comprises 15 partners from Belgium, Denmark, Germany, The Netherlands, Norway, Sweden and the UK. With an emphasis on optimising the functionality, capacity and potential of regional ports, the project enables co-operation and knowledge sharing, and focuses on the following key areas:

## **Improving multi-modal landside links**

Optimising rail, road and inland shipping links to enhance access to and from regional ports. Partners are also promoting policy change nationally and at EU level to encourage greater use of regional ports, shortsea shipping and multi-modal transport chains.

## **Exploring access to commercial markets by sea**

Developing maritime connections between large transport hubs and regional ports to help provide a more efficient and robust transport network. Partners are exploring new shortsea services to encourage the shift of freight, including fresh produce and bulk cargoes, from road onto more sustainable modes of transport.

## **Sustaining regional ports and developing local jobs**

Creating efficient and diversified ports and freight handling facilities makes ports more attractive and gives greater choice for freight movement. Activity includes benchmarking and implementing best practice in areas such as port security, safety, operational procedures and general management, as well as developing new markets and business opportunities to increase port traffic.

## **Port diversification into the maritime energy sector**

Using ports' locations and connectivity to explore new opportunities to diversify their activity and apply their operational and management experience to emerging sectors such as maritime renewables. This includes developing the skills and networks to fully maximise opportunities to benefit the local economy and secure jobs.

## **Enabling ports to lobby with one voice**

Bringing regional ports together to identify issues and assessing impact of key policies and regulation. This includes enabling ports to co-operate and lobby both at national and EU level to raise the profile of regional ports and access innovative funding mechanisms.

## **Improving linkages with towns**

Partners are exploring ways in which ports can regain a more prominent place in their local community. This includes using their heritage status to encourage better engagement with their local community and attract visitors.

For more information on the project, visit [www.lopinod.eu](http://www.lopinod.eu).



# Project activities: case studies

## Improving multi-modal landside links

Ports rely on effective links with their local and regional markets. Enhancing sustainable connections between the port and surrounding area will help regional ports offer an attractive and viable service to the freight transport sector.

The Port of Oostende



## Exploring access to commercial markets by sea

The development of new and innovative shortsea routes will take freight off the congested road network and onto the more sustainable mode of maritime transport. As well as environmental benefits for the local area, these new routes will enable more throughput for the regional port network, generating economic benefits for the port.

Fresh fish at the market



## Case study: Rail connections to ports

The combination of rail and shortsea shipping within a supply chain delivers an efficient and cost effective option that minimises impact on the environment, particularly for large volumes of freight.

The Port of Esbjerg has plans underway for an upgraded rail line to link the port with the main rail network in Denmark. The line will be fully electrified and is likely to become operational in 2015. The port also plans to enlarge the port estate to include a new multi-modal terminal that will comprise sea, rail and road facilities. The creation of the new rail connected terminal will enable roll-on, roll-off (Ro-Ro) cargo to be handled, increasing freight capacity to service Ro-Ro and lift-on, lift-off (Lo-Lo) vessels, as well as specialised cargo items such as wind turbines. The rail link will also give the port much better connections with neighbouring countries, Germany and Sweden.

The Port of Oostende will develop its rail connectivity through preparatory works to extend the existing rail network into the port to enable direct transit of freight to rail.

Kilbride will lead investment works to develop a rail terminal at Ridham Docks in the UK that will enable the direct transfer of freight to rail. Work to date has focused on agreements with local commercial operators to ensure that the new rail terminus and connecting rail line will meet local requirements. Kilbride are sharing their expertise with partners, including Drammen.

## Case study: Reducing road miles

Currently, fish from northern Norway is transported by rail to the south of the country before being taken by truck and ferry to the fish markets of London and Paris. At the same time, fresh vegetables are moved by road from mainland Europe to Denmark and Norway. The ports of Bodø, Drammen, Hantsholm, Harlingen and Oostende are working together to develop a new shortsea-based supply chain for fresh produce. As a viable alternative to road, this will help remove a significant number of lorry loads from the road network.

The challenge will be to balance transport quality including frequency, appropriate prices for transportation and consider the environmental impact, whilst at the same time ensure product quality. The concept will be regularly reviewed and used to develop new routes to fresh fish markets and increase supply into the port.

The Port of Hantsholm has also launched a major development plan to focus on enlarging the port to accommodate bigger (bulk) fishing vessels, which are the cornerstone in the port's business.

SEStran in the UK will undertake research into the movement of bulk cargoes within the UK and between North Sea ports to identify opportunities to reduce the movement of these materials by road freight transport and develop shortsea shipping and rail freight options.

## Port diversification into maritime energy sector

Diversifying into new business areas is essential if regional ports are to remain competitive and relevant. The growing offshore and renewable energy sector provides a valuable opportunity for the ports involved in LO-PINOD. This, along with investing in upgrading port infrastructure, is crucial to help increase maritime and logistics activities in the NSR.

Ports will service and supply offshore wind farms



## Improving linkages with towns

Due to their long history, many ports find themselves the custodians of ancient and architecturally important buildings and structures. A number of LO-PINOD port partners have heritage buildings within their estates and are currently working together to identify how they can be utilised in a modern context and community facilities.

Exterior of the new maritime museum in Drammen



## Case study: Port development and co-operation

The LO-PINOD project encourages ports to work together to offer a spread of services. An initiative is being spearheaded by Brunsbüttel Ports to enable a group of small and medium-sized ports in northern Germany to provide a comprehensive service to the growing offshore wind-energy sector. Through co-operation, the group will capitalise on the individual strengths of each port. The ports that benefit from sizeable estates located further away from the wind farms will be used for storing large components and as future turbine manufacturing bases. Smaller ports closer to the farms will offer immediate response facilities. To ensure efficient and sustainable connections, a shortsea shuttle service will operate between the ports. This example provides some valuable insights to the Ports of Oostende, Harlingen and Ramsgate, who are orientating their services, land and operations to accommodate offshore wind farm operations and maintenance facilities in the southern North Sea and in the Wadden Sea.

The Port of Karlshamn is investing substantially in expanding logistics services for different types of renewable energy, and the Port of Oostende has built a heavy-load quay to operate as a base for wave and tidal energy. The port is also developing a maritime renewable training centre. Working with the Port of Ramsgate, this will enable staff to develop skills necessary to pursue opportunities in the emerging offshore wind sector. The centre will involve the sustainable refurbishment of an existing port building.

## Case study: Embracing the local community

The Norwegian port of Drammen has used its rich heritage to forge stronger links with the town and has managed to successfully marry this with modern commercial operations. Drammen has been a trading port for many centuries but in recent years has transformed itself from an industrial base into a clean, modern, and high-tech city. The port authority, established in 1735, is the custodian of a preserved port environment unique to Norway, including buildings and quay fronts of national importance. The port felt a duty to use these to demonstrate the continuing link between the port and city and so worked on identifying a modern purpose for the buildings.

The port has now created a maritime museum and conference area in one of its historic warehouses. A programme is underway with local schools to organise class visits; during the year approximately 750 pupils will learn about Drammen's maritime heritage and the port's modern operations. This transformation demonstrated how to retain and find appropriate new uses for historic structures at other ports.

Sheerness has completed a heritage survey of its port buildings to explore scope for the buildings' reuse as part of a port wide diversification masterplanning exercise. Other ports are also looking at their links with local communities and the wider hinterland, including opportunities to develop niche cruise tourism through regional ports. The ports of Oostende and Harlingen have been working within the industry to promote opportunities directly with cruise operators.

# Project partners

## 1 Institute for Sustainability (UK)

The Institute for Sustainability is an independent charity established to support cross sector collaboration and innovation. Its mission is to significantly accelerate the delivery of economically, environmentally and socially sustainable cities and communities. Its activity is in the areas they believe present the greatest challenge – and opportunity – to creating sustainable cities and communities. This includes transport, which is responsible for a quarter of the CO<sub>2</sub> emissions produced in the UK each year.

The Institute is lead partner of the LO-PINOD project.

## 2 AG Port of Oostende (Belgium)

The Port of Oostende is a multi-functional shortsea green port that bridges the UK with the Benelux, Germany and France. Ro-Ro passenger ferries and green energy are core business, as is the on-going building and maintenance of offshore wind parks, including wave technology.

Co-operation with Oostende's university brings start-up energy companies into the inner port. Inter-European bulk transportation, cargo, and storage are organised within the port for international clients, and cruises and fisheries make the port and the city of Oostende even livelier.

## 3 Brunsbüttel Ports GmbH (Germany)

The Brunsbüttel group of ports – Elbehafen, Oilport and Port of Ostermoor – offer direct access to the North and Baltic Seas as well as to European inland waterways. An extensive range of maritime services make the ports an attractive cargo handling centre for Northern Germany. Brunsbüttel Ports serves regional, national and international customers and specialises in cargo handling, storage and transport logistics.

## 4 Harlingen Seaport (The Netherlands)

Situated between Amsterdam and Northern Germany, Harlingen provides an efficient and economical service to both traders and ship owners. Recent investment in Harlingen has led to commercial development to support links with Scandinavia, the Baltic States and other European countries. The handling of biomass for energy purposes is under development and freight barges from Amsterdam, Rotterdam or the Ussel River also use Harlingen Seaport.

## 5 Kilbride (UK)

Kilbride specialises in the development of property based infrastructure projects. Its core business is the procurement of transport based infrastructure, specialising in rail. Working with private and public sector clients, Kilbride delivers realistic, cost effective opportunities for transport and associated infrastructure needs. This may be through direct investment in land and facilities, in joint ventures with manufacturing or landowners or as a head consultant.

## 6 Municipality of Meppel (The Netherlands)

The municipality of Meppel is made up of Broekhuizen, Meppel, Nijeveen, Rogat and De Schiphorst. Meppel is a place where roads, railways and waterways link the north and east of the Netherlands, and Germany. Ships of up to 2,000 tonnes can access the docks. Nijeveen is a largely agricultural community, with 3,800 inhabitants.

## 7 Port of Bodø (Norway)

Bodø is the administrative centre of the Nordland County. Bodø has excellent travel connections, incorporating a seaport, railway station and airport. The Port of Bodø's strategic business areas are:

- logistics (transport of various types of cargo)
- passengers (coastal steamer, car and fast passenger ferries)
- fisheries (pelagic, coastal and fish farming)
- cruise
- industry (oil and gas).

## 8 Port of Drammen (Norway)

The Port of Drammen is a multi-purpose deep water port lying 40 km south-west of Oslo. Drammen is Norway's leading gateway for new cars and also handles containers and bulk cargo. Daily trains from Drammen to various destinations in Norway and beyond enforce Drammen's position as a major logistics junction in the transfer of cargo between different modes of transport.

## 9 Port of Esbjerg (Denmark)

The Port of Esbjerg's capability of attracting new liner services make it a dynamic hub for cargo flows between the Nordic countries, the Baltic area and the rest of Europe. With 80 per cent of the Danish offshore wind farm industry in Esbjerg, it is a leading port for the provision of offshore services and support.

## 10 Port of Hanstholm (Denmark)

The Port of Hanstholm has launched a major development plan to enlarge the port to accommodate bigger (bulk) ships. The port is involved in green energy activities including establishing a wind farm on the new breakwaters and implementing a wave energy system. In association with the University of Aalborg, the Dan Wec (Danish Wave Energy Center) in Hanstholm operates to encourage the development of wave-based energy projects in Denmark and overseas. Hanstholm is also an important port for the handling of fish in Denmark.

## 11 Port of Karlshamn (Sweden)

The Port of Karlshamn is one of the largest in Sweden. It is of increasing importance in the south-east Baltic region, especially for transport to and from the east. At present, the port handles mainly energy, Ro-Ro traffic, forestry and bulk products. Currently investing in increased quayside crane capacity and implementing a new intermodal rail terminal, Karlshamn is well-situated for onward transport, logistics, logistical development and cargo rail-links.

## 12 Port of Sheerness (Peel Ports Ltd) (UK)

The Port of Sheerness specialises in three main product areas – fresh produce, new vehicles and forest products. It is a deep water port, with no lock restrictions offering easy access for shipping. With its close proximity to the M2, M20 and London's M25 orbital motorway and connected by rail, Sheerness facilitates onward distribution to major markets in the south east of England and beyond.

## 13 Provincie Drenthe (The Netherlands)

Drenthe is one of the three northern provinces of the Netherlands and is located between the large centres of economic importance in the west-Netherlands, Germany and Scandinavia. Logistically, Drenthe is situated favourably – just a short distance from economic centres such as the Ruhr district in the west of the Netherlands, and Bremen and Hamburg in Germany.

## 14 SEStran (UK)

SEStran is a Regional Transport Partnership (RTP) comprising eight local councils in south east Scotland; Borders, East Lothian, West Lothian, Midlothian, Edinburgh, Fife, Falkirk and Clackmannanshire. Its aim is to develop a comprehensive, sustainable transportation system to help businesses function effectively, and provide residents with improved access to health care, education, public services and employment opportunities.

## 15 Thanet District Council – Port of Ramsgate (UK)

Thanet District Council owns and operates the Port of Ramsgate in east Kent. The port has direct access to the North Sea and English Channel, with short sea journey times. Ramsgate is also growing into the operations and maintenance supply facility for the wind energy farms off the coast. Ramsgate Port is an important employer for the east Kent hinterland and offers substantial, multi-modal access for freight by short sea, road and air (Manston Airport).



# *90% of Europe's freight passes through the 1,200 seaports of the European Union*

Source: European Sea Ports Organisation (ESPO)



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The Interreg IVB  
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