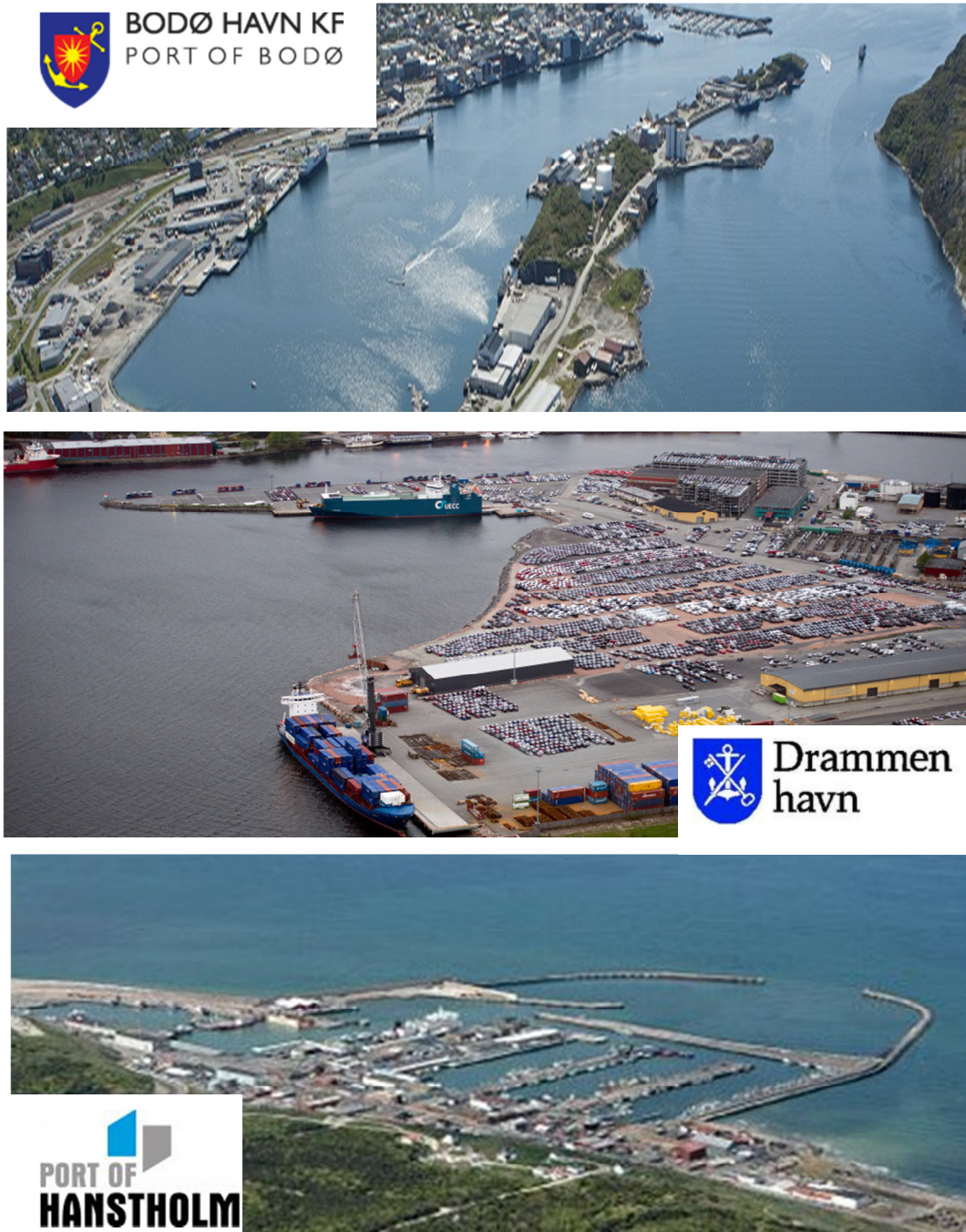


Economic Impact Assessment of the ports in context of the LO-PINOD



August 2014

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Preface:

The Economic Impact Assessment analysis (EIA-analysis) of the three ports was done as a part of the LO-PINOD project:

Port of Hanstholm / Denmark
November 2011



Port of Drammen / Norway
May 2013



Port of Bodø / Norway
June 2013



*The EIA-analyses are based on a scientific economic model; that visualize the effects from ports on the economic activity of the municipality as well as the hinterland.
The EIA- analyses were done in cooperation with the University of Southern Denmark and GEMBA Seafood Consulting A/S.*

Summary

The aim of the LO-PINOD project is to build an efficient, balanced, and sustainable transport network.

Through improvements such as short sea routes, local ports and their hinterland connections, LO-PINOD encourages a wider use of waterborne transport across the North Sea Region.

In context of the LO-PINOD project, the Port of Hanstholm, the Port of Drammen and the Port of Norway initiated an Economic Impact Assessment (EIA-analysis) of the ports' economic effects on the hinterland.

The purpose of the EIA-analyses was to show and measure the economic importance of regional port in connection with employment, production value, income generation and tax generation in the hinterland.

Hereby the EIA-analyses also underline and measure the role and the function of the regional ports as economic clusters from both a business point and a socio economic point of view.

The function as port and economic cluster is fully documented by the results found in this project.

Results of the EIA-analyses

(a) Identification of business profile in EIA-analyses

Each of the three ports Hanstholm, Drammen and Bodø have a distinct business and economic profile.

The **Port of Bodø**, located north of Norway, is equipped with an intermodal logistic structure and acts as a hub for Northern Norway. The port is highly effective when it comes to logistics. Many companies based in Bodø utilize this advantage and use all the different types of transportation such as sea, road, train, and air. Moreover, the port of Bodø is one of the most environmentally conscious ports within Norway.

The industrial activities at the Port of Bodø can be arranged in three main groups or value chains; logistics, industry and trade. Furthermore, there is a service industry which caters for these industry groups.

The **Port of Drammen**, located south of Norway and less than 50 km from Oslo. Drammen is Norway's largest port for car import and handling of goods via container, ro/ro and bulk is increasing. The port has been pivotal for the development of Drammen, and the port is still showing progress. The port has set new records both regarding handled tones as well as income. The port seeks a close collaboration with the city and plans a beautification through greening.

The core sectors/value chains at the Port of Drammen are car import, industry/service industry, and logistics.

The **Port of Hanstholm** is located at the north end of Denmark's peninsula Jutland and is one of the largest clusters in the fishing, seafood and service sector. The port's service potentials are large, and the cluster possesses professional skills that can be of advantage in the global competition. At the moment the Port of Hanstholm is working on a major development of the port infrastructure.

The core sectors/value chains at the Port of Hanstholm are fishery, fish processing industry, trade, service industry, and logistics.

(b) Economic outcome of the EIA-analysis

For each EIA-analysis the following is examined:

- the employment induced by the port, usually in full-time equivalents (FTE)
- the total production value
- the total income generation
- the total tax generation,

In the EIA-analysis the values on each dimension are subdivided into direct, indirect and induced, table 1 shows the main results of three analysis.

Table 1: The total economic impact of the ports of Bodø, Drammen, and Hanstholm rounded. More detailed results from the EIA-analysis can be found in Appendix 1.

	Bodø	Drammen	Hanstholm
Employment [FTE]	1,103	2,160	1,605
Production value [million €]	262	498	343
Income generation [million €]	103	194	124
Tax generation [million €]	13	24	37

Source: GEMBA Seafood Consulting/SDU

Based on the results of the EIA it could be concluded that the Port of Bodø has a total employment effect of 1,103 FTE in June 2013. The total production value was calculated to 262 million Euros and the income generation to 103 million Euros. The total effect of tax from the activities in the Port of Bodø was calculated to 13 million Euros.

The Port of Drammen has great impact on the city and hinterland. The employment effect was calculated to 2,160 FTE, while the port created a total production value of 498 million Euros. The income generation added up to 194 million Euros in total, which corresponds to a total tax generation of 24 million Euros.

Also the Port of Hanstholm in Denmark has a high economic impact on the municipality and region. According to the EIA analysis, 1,605 people were employed due to activities of the port. The total production value was 343 million Euros, and a total of 124 million Euros were paid as income. The total tax generation was calculated to 37 million Euros.

Objectives

The objective of those analysis are to define and asses the impacts of the economic activities and employment of the port. Furthermore, they outline of the port's business profile, illustrate the industrial structure, and highlight its strengths.

The analyses underline the port as facilitator of frames for business and economic activity in the region. Moreover they help the port administration in decision making regarding the port's future expansion and development.

Method

The scientific economic EIA-model is customized to national conditions in this case Denmark and Norway. It calculates the multiplier effects and thus facilitates a measurement of the port's employment structure and economic importance to the hinterland.

Table 2: *The different economic levels in the EIA-model*

Direct activities: Direct activities are the activities that take place in companies which rely on the port, either because they are located on the port or because they have a significant amount of traffic in and out of the port. E.g. through purchase of goods through the port. These companies are part of the list used to create this analysis.

Indirect activities: When the numbers for the direct activities are available, numbers for the impact on other production sectors that can be expected to have connection to the direct activities can be calculated - i.e. the indirect activities. This impact includes partly the activities created in delivering goods and services to the companies that are part of the direct port activities, partly by other activities in the local and regional where contractors and subcontractors are used. The model considerate that not all goods and services can be delivered from within the region.

Induced activities: The induced activities are calculated based on an assumption that a part of the income created through direct and indirect activities are used for other spending in the region. When income is spend in buying regionally produced consumer goods and services there is further revenue brought into the region. These induced activities lead to further spending and hence revenue in the region as the people producing these goods can use their income to buy local consumer goods and services.

Moreover, data is collected from companies with port activities and depend on ports. This includes:

- Companies that are located (rents) on the port area
- Companies that are located nearby and have a strong linkage to the port
- Companies that may not be in close proximity but are dependent on the services provided by the port.

Appendix: Total economic impact of the ports

(a) Port of Bodø

Table 1a: Employment in full-time equivalents related to the business activities at the Port of Bodø, 2012.

	Port activities	Households consumption	Total
Direct	684		684
Indirect	239		239
Induced		180	180
Total	923	180	1,103

Source: SDU/GEMBA Seafood Consulting

Table 2a: Production value in million Euros at the Port of Bodø (rounded), 2012.

	Port activities	Households consumption	Total
Direct	179		179
Indirect	55		55
Induced		28	28
Total	234	28	262

Source: SDU/GEMBA Seafood Consulting

Table 3a: Income generation in million Euros at the Port of Bodø (rounded), 2012.

	Port activities	Households consumption	Total
Direct	66		66
Indirect	23		23
Induced		14	14
Total	89	14	103

Source: SDU/GEMBA Seafood Consulting

Table 4a: Tax generation in million Euros at the Port of Bodø (rounded), 2012.

	Port activities	Households consumption	Total
Direct	8		8
Indirect	3		3
Induced		2	2
Total	11	2	13

Source: SDU/GEMBA Seafood Consulting

(b) Port of Drammen

Table 1b: Employment in full-time equivalents related to the business activities at the Port of Drammen, 2012.

	Port activities	Households consumption	Total
Direct	1,226		1,226
Indirect	653		653
Induced		281	281
Total	1,879	281	2,160

Source: SDU/GEMBA Seafood Consulting

Table 2b: Production value in million Euros at the Port of Drammen (rounded), 2012.

	Port activities	Households consumption	Total
Direct	317		317
Indirect	133		133
Induced		48	48
Total	450	48	498

Source: SDU/GEMBA Seafood Consulting

Table 3b: Income generation in million Euros at the Port of Drammen (rounded), 2012.

	Port activities	Households consumption	Total
Direct	112		112
Indirect	58		58
Induced		24	24
Total	170	24	194

Source: SDU/GEMBA Seafood Consulting

Table 4b: Tax generation in million Euros at the Port of Drammen (rounded), 2012.

	Port activities	Households consumption	Total
Direct	12		12
Indirect	8		8
Induced		4	4
Total	20	4	24

Source: SDU/GEMBA Seafood Consulting

(c) Port of Hanstholm

Table 1c: Employment in full-time equivalents related to the business activities at the Port of Hanstholm, 2010.

	Port activities	Households consumption	Total
Direct	969		969
Indirect	308		308
Induced		328	328
Total	1,277	328	1,103

Source: SDU/GEMBA Seafood Consulting

Table 2c: Production value in million Euros at the Port of Hanstholm (rounded), 2010.

	Port activities	Households consumption	Total
Direct	231		231
Indirect	62		62
Induced		50	50
Total	293	50	343

Source: SDU/GEMBA Seafood Consulting

Table 3c: Income generation in million Euros at the Port of Hanstholm (rounded), 2010.

	Port activities	Households consumption	Total
Direct	74		74
Indirect	24		24
Induced		26	26
Total	98	26	124

Source: SDU/GEMBA Seafood Consulting

Table 4c: Tax generation in million Euros at the Port of Hanstholm (rounded), 2010.

	Port activities	Households consumption	Total
Direct	21		21
Indirect	7		7
Induced		8	8
Total	28	8	37

Source: SDU/GEMBA Seafood Consulting