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Eastern European Shipbuilding Industry Study for Applicant Countries

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Latvia Final Country Report

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Appledore International Limited
42 Jesmond Road
Jesmond
Newcastle upon Tyne NE2 4PQ
England

Tel: +44 (0)191 281 9097
Fax: +44 (0)191 281 9057
E-mail: enquiries@appledoreint.com

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EXECUTIVE SUMMARY

APPROACH

Our research for Latvia has been based upon a mix of desk research, data collection (utilising information from our own and public sources) and shipyard visits. We have visited all of the main shipyards in the sector and we also met with the government official concerned with the privatisation of the Shipyards. In terms of desk research and data sources, we have used the Fairplay WSE proprietary database and other publications to provide additional information regarding on-going deliveries of completed vessels and new orders won. We have also used archive searches on Lloyds List and other internet based sources (Latvian and international) to provide both background and detailed information for the study.

During our visit to the yards we discussed the current situation in each enterprise and in the sector generally and we visited the facilities and observed work in practice. Additionally each shipyard we visited was also provided with details of the information we had already collated for the period of study from internal and public sources. We requested that they correct and complete the information to the best of their ability and then return it to us in time to complete our country report. To overcome yard concerns we agreed with the Commission that detailed data collected from the shipyards in this manner was provided to us in confidence. The level of yard details to be included in the tables of the country report was explained and each yard was given the opportunity to view the structure of information to be included. We had a mixed response in terms to our request with two out of the five yards providing written responses to supplement that obtained or verified verbally during the visit.

Our discussions with the Latvian Privatisation Agency provided us with the details of the Shipyard privatisation and they were also able to provide us with some financial information for two of the shipyards.

SECTOR OVERVIEW

The Latvian sector comprises five enterprises, predominantly active in the shiprepair sector only, although a limited amount of shipbuilding work has recently re-commenced at one of the enterprises. Significant progress has been made with privatisation, with three of the enterprises having been privatised since 1995 and one recently privatised in 2000. The remaining yard is wholly owned by the Latvian Shipping Company, which is itself state owned.

For the period under review (1996-1997) the sector is estimated to comprise:

- Yards : 5 (1 for afloat repair only)
- Employment : 3,400 approximately
- Turnover : US$ 27.5 million pa (approx) average 1996-1998
- Sectors : Predominantly shiprepair
- Ships Built : 1 hull in 1998
- CGT Output : 2,376 in 1998 only

In terms of the overall importance of the sector to the Latvian economy, we have considered this in terms of employment and GDP. We have compared the 3 year average figures above with the latest available statistics for the country (GDP for 1999 from World Bank Development Indicators and employment figures for 1998 from the ILO database).

- Shipyard turnover at US$ 27.5 million pa represents 0.4% of the GDP for 1999
- Shipyard employment at 3,400 represents approximately 3.3% of total employment and 18.6% of manufacturing employment.

It can be seen therefore that the sector is more significant in employment terms than in financial terms and that it represents a major element of manufacturing industry employment. Our comparison has been made against manufacturing employment on the basis that this is the most relevant sector, however it should be recognised that shiprepair activity whilst an engineering activity is however a service rather than manufacturing activity. In geographical terms the industry is primarily concentrated in Riga where four out of the five enterprises are located. Following the recent reduction in employment at the Tosmare yard, most of the sector employment is located in the capital Riga, however this is also the centre of much of the country's population, which may offset any regional effect of the sector concentration.

The sector appears relatively stable, following the major privatisation initiative, with only one enterprise remaining in the public sector. However there has been considerable reduction in employment at both of the former naval repair bases. Privatisation of the yards has been predominantly to domestic investors although the process included international tenders. One of the yards, Tosmare, has in fact been acquired by the Riga yard and it may well be that there is an increase in activity following the development of the facilities at Tosmare under the new ownership.

The shipbuilding activity is solely at the Riga yard, where the company appears to be having some success with shipbuilding orders for small ships and hulls for Scandinavian owners or shipyards. The remainder of the activity relates to shiprepair and other activities.

Within the sector, the activities currently relate to merchant vessels, with little or no activity in the military/naval sub-sector. Two of the enterprises, which previously operated as naval repair bases, are now operating in the commercial vessel sector, following the collapse of the former Soviet Union.

SECTOR COMPETITIVENESS

We have looked at the sector competitiveness in relation to future membership of the EU against a variety of factors in the main body of this report. We have summarised the major points here under the following categories:

- Ownership and Privatisation
- Financial Performance and Subsidy
- Labour Costs, Productivity and Capacity
- Customer Base and Orderbook
- Technological and Product Related
- Environmental and Health & Safety

The sector is predominantly privatised with only one of the five enterprises remaining under state ownership. Further progress will be dependent upon the progress of privatisation of the parent company of this enterprise, which is the national shipping line. The enterprise does however operate as a separate business unit and serves external customers. Ownership of the private sector yards is now in the hands of domestic investors rather than foreign investors.

For the period under review (1996 to 1998) three of the five shipyards have been profitable. The remaining two yards, which were former naval repair bases, were unable to provide us with financial information. We know in the case of one (Tosmare) that it had significant financial difficulties from the

mid 90's and may have made losses, however the enterprise has subsequently been acquired by the Riga Shipyard but has not yet traded for a full year under the new ownership. The yards have advised us that they do not have access to operational subsidies from government and this has been confirmed by the Latvian Privatisation Agency. We did not identify any other forms of state support or aid to the shipyards.

Labour costs are very low in comparison with Western European yards which provides a cost advantage, although this is defrayed in part by higher levels of overhead costs and lower productivity. Shipyard prime labour costs appear to be at the level of US$ 1.40/hour from information provided by the shipyards. Productivity is extremely difficult to measure in shiprepair and no simple and universally accepted measure exists. The shipbuilding volume was limited to the delivery of a single vessel during the reference period and as such cannot be seen as a reliable trend. In terms of capacity in both shiprepair and shipbuilding there is clearly physical scope for increased throughputs, either through improvement in productivity or increase in employment. All the yards in the sector are working below their full capacity.

The customer base is dominated by the shiprepair activity rather than shipbuilding activity. At three of the yards, the customer base is still predominantly domestic, Eastern European and Former Soviet Union, reflecting in part the historical relationships prior to the political changes. Two of these yards, however are former naval repair bases whose customer base has developed into the commercial vessel sector of these trading alliances. At the remaining two yards, Riga and LSC Shiprepair Base, 30 – 60% of the customer base is domestic and Eastern European, however there is an increasing element of work from Western European, Scandinavian and international customers. The national shipping line represents a significant element of the domestic customer base of both these yards. The forward orderbook for shipbuilding work indicates a significant increase in shipbuilding activity, comprising both hulls and completed vessels for Scandinavian vessels.

Our assessment of shipbuilding technology in terms of facilities and management processes rates it at 2 on a 5 point scale of technology levels. The repair element rates at 2 on a similar 5 point scale. We believe there is potential for improvement dependant on strengthening managerial and organisational skills and developing a stronger base of substantive experience on a wider and more complex shiprepair/conversion workload. However it seems clear that the main yards operate competently, using their current facilities and management capability to service the needs of their client base at very competitive price levels. As further improvements occur they are likely to consolidate and improve the competitive position. In terms of repair work, the yards cover a broad range of ship types including more sophisticated specialist cargo vessels and passenger vessels, however at the present time little or no conversion work is undertaken.

In terms of environmental and health and safety aspects, it is believed that there is room for significant improvement and that this will be required to meet the existing EU environmental legislation. Some of these reflect common issues with other shipyards both world-wide and within the EU, however its is believed that the level of both environmental control and health and safety practice is lower than in the larger EU shipyards.

In summary we see that the industry has overcome significant transitional changes to move into the market economy and international customer base. Current levels of activity demonstrate that they can successfully operate within a commercial economy and that there is significant potential for improvement to maintain or build on their apparent cost advantage. Some form of assistance may be required to assist with improving environmental and health and safety environments. Additionally the move into greater levels of shipbuilding activity, in particular for finished vessels, may be limited by availability and cost of finance.

1. INTRODUCTION

Our research for Latvia has been based upon a mix of desk research, data collection (utilising information from our own and public sources) and shipyard visits. We have visited all of the main shipyards in the sector.

The Latvian sector comprises five enterprises, predominantly active in the shiprepair sector only, although a limited amount of shipbuilding work has recently re-commenced at one of the enterprises. Significant progress has been made with privatisation, with three of the enterprises having been privatised since 1995 and one recently privatised in 2000. The remaining yard is wholly owned by the Latvian Shipping Company, which is itself state owned.

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The shipbuilding activity is solely at the Riga yard, where the company appears to be having some success with shipbuilding orders for small ships and hulls for Scandinavian owners or shipyards.

The shiprepair sector has managed to broaden its customer base beyond the traditional and still predominant domestic, former Soviet Union and Eastern European markets. It is securing work increasingly from Scandinavian and Western European markets. We believe there is scope to broaden the customer base further.

Labour costs are very low in comparison with Western European yards which provides a cost advantage, which is however defrayed by higher levels of overhead costs and lower productivity. Productivity is extremely difficult to measure in shiprepair and no simple and universally accepted measure exists. Shipbuilding productivity levels are considerably lower than Western European yards as measured by Compensated Gross Tons per employee year. Employment levels have reduced over the period 1996-98. The principal reductions have come at Tosmare which was a naval base up to 1994 and which saw its customer base collapse.

We believe there is scope either to reduce the sector levels further and/or to increase output. There is the physical scope to give opportunity for increased throughputs. All the yards in the sector are working below their full capacity.

Our assessment of shipbuilding technology in terms of facilities and management processes rates it at 2 on a 5 point scale of technology levels. The repair element rates at 2. We believe there is potential for improvement dependant on strengthening managerial and organisational skills and developing a stronger base of substantive experience on a wider and more complex shiprepair/conversion workload.

For the period under review (1996 to 1998) three of the five shipyards have been profitable. The remaining two yards which were former naval repair bases were unable to provide us with financial information. We know in the case of one (Tosmare) that it had significant financial difficulties from the mid 90's and may have made losses.

2. OVERVIEW

2.1 SHIPBUILDING SECTOR

Publicly available statistics for shipbuilding output are available from a variety of sources. In many cases the statistics show different pictures. We have used the following statistics to obtain country wide data for this study.

- Lloyd's Register World Fleet Statistics
- Fairplay WSE
- AWES

Lloyd's Register World Fleet Statistics show no shipbuilding output from the Latvian yards over the period 1996-1999. Analysis of Fairplay database information has identified one hull from the Latvian Shipyards, which was delivered to Norway for completion. The AWES statistics for world shipbuilding for the period 1996-1998 do not show the output of Latvia individually. However using information from Lloyd's Register and other sources the following picture can be presented for Latvian Shipbuilding output.

Table 2.1 : Shipbuilding Sector Market Share in CGT

Year	*Latvia No of Completions*	*Latvia CGT (000)*	*World Output CGT (000)*	*EU Output CGT (000)*	*% World CGT*	*% EU CGT*
1996	-	-	16,550.4	3,555.4	-	-
1997	-	-	16,936.8	3,225.0	-	-
1998	1 Hull	2.4	18,003.9	3,585.5	0.01	0.07
3 year Ave 1996-1998	0.3 Hull	0.8	17,163.7	3,455.3	0.00	0.02
1999	13 Hulls	n/a	17,509	3,363	n/a	n/a

Notes: 1999 delivery output verbally advised by Riga yard but without supporting details or CGT information

Following a visit to the shipyards, the building of a steel hull for a fishing vessel for completion in Norway, was confirmed at the Romars Riga Shiprepair Yard. The table below summarises published and shipyard figures.

Table 2.2 : Shipbuilding Sector Size – Ai Analysis

Year	*No. of Completions*		*CGT (000)*		*GT (000)*		*CGT (000)*	*GT (000)*
	Ship	*Hull*	*Ship*	*Hull*	*Ship*	*Hull*	*Total*	*Total*
1996	-	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-	-
1998	-	1	-	2,376	-	1,292	2,376	1,292
3 Year Ave	-	0.33	-	792	-	431	792	431
1999	-	13	-	n/a	-	n/a	n/a	n/a

Notes: 1999 delivery output verbally advised by Riga yard but without supporting details or CGT information

2.2 SHIPREPAIR SECTOR

There are no comprehensive sources of publicly available shiprepair statistics. The sector is predominantly comprised of shiprepair enterprises with activity focusing on this. From the data

supplied from the shipyards we visited, we have estimated shiprepair production in the table below. The remaining percentage of production represents other activities which include shipbuilding in 1998.

Table 2.3 : Shiprepair Sector Size

Year	***% of Total Production***	***Turnover US $ m***
1996	92	20.8
1997	74	19.2
1998	82	28.4

Source: Ai Analysis

Based on this analysis there is a significant shiprepair activity with approximately a US $23 million average annual turnover over the period 1996 - 1998. It should be noted turnover figures are based principally on Riga and Mangali, with figures for LSC for 1998 only. Tosmare and Bolderaya yards could not provide us with figures (see comment at Section 6.1).

3. SECTOR COMPOSITION

3.1 SHIPYARDS

Five main shipyards or shiprepair enterprises have been identified that have been active within Latvia during the period and scope covered by this study. These are listed in the following table and are essentially concerned with shiprepair activity rather than shipbuilding, although one of them has recently recommenced a limited amount of shipbuilding work on small vessels.

Table 3.1 : Shipyards Comprising the Sector

Shipyard Reference	*Company Name*	*Location*	*Ship Building*	*Ship Repair*
Riga [1]	Romars Riga Shiprepair Yard	Riga	✓	✓
Mangali	Mangali Shiprepairing Yard	Riga	-	✓
Tosmare	Tosmare Shiprepair Plant	Liepaja	-	✓
LSC	Latvian Shipping Co – Shiprepair Base	Riga & Ventspils	-	✓
Bolderaya	Bolderaya Shiprepair Yard	Riga	-	✓

Notes: 1 Some shipbuilding work completed in 1998 and on order for future

Additionally there are some small enterprises, largely associated with in-house servicing of fishing or small river vessels, however these do not constitute significant activity and are believed to fall outside the scope of this study.

The Bolderaya and Tosmare yards are former naval repair and support basis supporting the former Soviet Union fleets whereas the other yards have operated in the commercial vessel sector for some time.

4. GEOGRAPHY

Four of the facilities are located in the Riga on the River Daugava at or close to the river mouth where it flows in to the Gulf of Riga. The other one is located in the Baltic Sea port of Liepaja. The LSC previously had an operation in the Baltic Sea port of Ventspils however this is no longer in operation.

Latvian Shipyards: **(1) Riga Shiprepair** **(2) Mangali** **(3) Latvian Shipping Co (LSC)** **(4) Bolderaya** **(5) Tosmare**

5. OWNERSHIP

Significant progress has been made in transferring the shipyard enterprises from the State to the private sector. Four of the enterprises have been privatised to domestic investors and/or employees. The remaining enterprise comprising the afloat repair base of the nationalised Latvian Shipping Company, was formed into a separate company in 1998. We understand there may be plans to privatise this company in 2000/2001.

5.1 PRIVATISATION PROGRAMME DETAILS

Although the privatisation of the shipyards has been by international tender and public offer, the resultant shareholding has been exclusively domestic for the four yards already privatised. We gained the impression that the privatisations had been carried out professionally and efficiently.

The **Riga Shipyard** was privatised in December 1995 by the Latvian Privatisation Agency, with 45% shareholding being sold to the purposely-created Romars-Riga entity representing the local investment group Baltijas Holding and the workforce. 25% of the shareholding was reserved for public offer, 22% went to employees and 8% remained in state ownership. The remaining state shareholding has gone to public offer since 1995.

The smaller **Mangali Shipyard** was also privatised in December 1995, with 52% of the shareholding being sold to purposely-founded Reders Ltd (owned by six individual investors). A further 20% shareholding was reserved for present and past employees and 28% for public offer. The company is a public stock company with Reders Ltd, we believe, now owning 72.5%, the employees have 0.5% and other share holders 27%.

The **Tosmare Shiprepair Yard**, a former naval repair base, was privatised in April 2000, with a 51% shareholding sold to Riga Shiprepair Yard. The remaining shareholding is held by employees and other investors, through the Riga Stock Exchange. It is understood that Riga bid in competition with a Norwegian company for its shareholdings in Tosmare Yard.

In 1998, the Shiprepair Base of the **Latvian Shipping Company** (LSC) was formed into an independent company, 100% owned by the nationalised flag carrier (LSC). The intention was to demonstrate whether the stand-alone enterprise was profitable and to allow them to broaden their client base by attracting external clients. The government has announced its intention to sell the LSC and we are advised it may be offered for privatisation in 2000/2001.

The **Bolderaya Shipyard**, a former naval repair facility, was privatised in 1995 and we understand that the majority of the shares were sold to a management buy-out team.

5.2 CURRENT OWNERSHIP STATUS

The following table shows the status of ownership of the Latvian Shipyards as at July 2000, showing which have been through the privatisation process and the remaining state ownership.

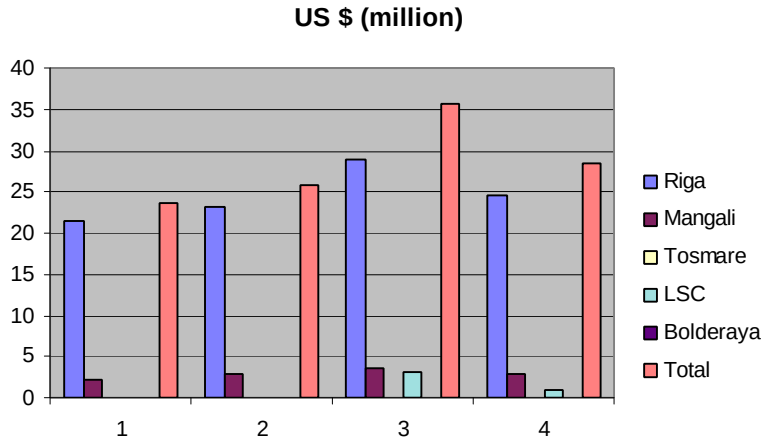
Table 5.1 : Shipyard Ownership Status

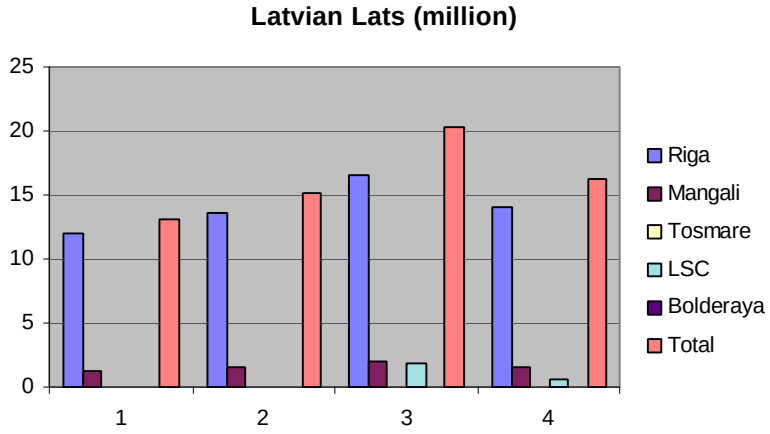
Shipyard	***Status***	***Date of Privatisation***	***State Holding***	***Domestic Investor %***	***Foreign Investor***
Riga	Privatised	1995	Nil	Remars-Riga 45% Employees 22% Public Offer 33%	None
Mangali	Privatised	1995	Nil	Reders Ltd 72.5% Employees 0.5% Public Offer 27%	None
Tosmare	Privatised	April 1000	Nil	RigaShipyard 51% Employees/Public Offer 49%	None
Ship Repair Base - LSC	State owned	-	100%	-	None
Bolderaya	Privatised	1995	Nil	Management Team Employees Public Offer	None

6. OUTPUT AND ECONOMIC ACTIVITY DETAILS

6.1 TURNOVER

The turnover of the Latvian Shipyard Sector is shown on the graphs below, in both US dollars and Latvian Lats.





We were unable to obtain turnover and profit information from two of the yards in the sector. Bolderaya stated that the information was confidential, and because the Tosmere management was new, they said that they did not have the information for1999 and prior years. The turnover figures are therefore principally based on reliable figures for Riga and Mangali Yards and 1998 figures for LSC. From our observations on the visits to the yards, Riga, Mangali and LSC appeared to be the more active yards and will represent we believe, the major portion of total activity. Tosmare and Bolderaya are former naval repair bases and suffered major workload reductions when this activity ceased.

The yards in the sector are essentially shiprepair facilities, although there is evidence that some shipbuilding activity recommenced in 1998 at the Riga Shipyard.

The Mangali yard also has cargo handling and storage facilities which generate income for the enterprise. These other activities represent approximately 40% of its turnover in the period 1996-1998.

The following table highlights the importance of shiprepair as the primary activity of individual yards during the period under review.

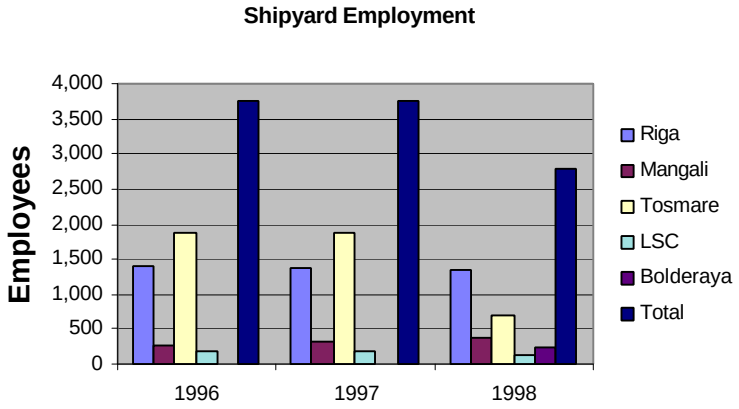
Table 6.1 : Shiprepair Sub-Sector

	Shiprepair	
Shipyard	***Activity***	***Facilities***
Riga	**Majority activity**	**Repair yard**
Mangali	**Majority activity**	**Repair yard and cargo handling**
Tosmare	**Majority activity**	**Repair Yard**
LSC	**Majority activity**	**Afloat Repair Yard**
Bolderaya	**Majority activity**	**Repair Yard**

6.2 EMPLOYMENT

Shipyard employment has been calculated to have averaged approximately 3,440 during the three year period 1996-1998, as shown in the graph below. However it can be seen overall employment for the sector dropped by approximately 1,000 from 1997 to 1998. The reduction is principally at Tosmare Yard which saw a dramatic drop in its market as a naval base in the middle 90's. The yard however appears to have delayed reduction in employment numbers beyond the point that its market collapsed.

The employment level of the sector at 1998 is estimated to be approximately 2,800 and we believe may have reduced further to 2,500 or below by 1999.



The employment figures for Riga, Mangali and LSC Yards are reasonably accurate and based on information from the yards. The Tosmare yards figures are based on published data and estimates from the yards information. The 1998 figure for Bolderaya is that provided by the shipyard for July

2000, and in the absence of any other information from the yard is also believed to be reasonably accurate for 1998.

6.3 OUTPUT

The shipbuilding output of the Shipyards, in terms of ships delivered/completed during the period 1996-1998 consisted solely of one 'fishing vessel' hull delivered from Riga Yard in 1998 for completion at a shipyard in Norway.

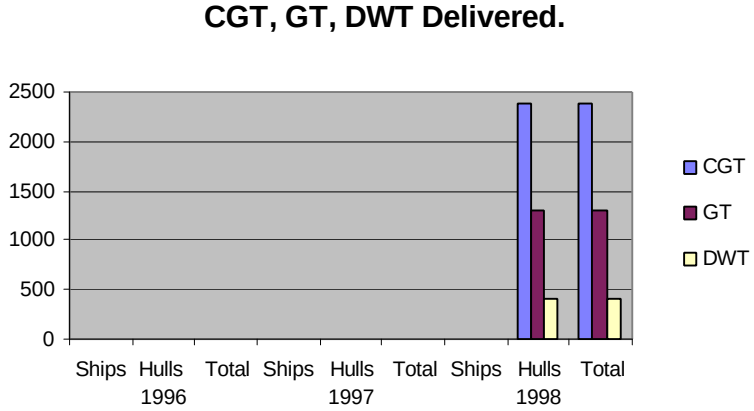
In terms of shiprepair activities little or no reliable information is available in the public domain regarding the number of vessels repaired and unfortunately we have had only limited success in obtaining this information from the yards despite constant efforts. The full information is shown in Table 13.7 so far as they are available. In summary the ships stemmed for docking and repair afloat, from information provided, are;

Table 6.2 : Vessels repaired			
Yard	***1996***	***1997***	***1998***
Riga	85	110	125
Mangali	n/a	34	n/a

Riga, we believe, represents the majority of the sector turnover and it could be expected that it also represents the majority of the ships repaired in the sector.

6.4 WORKLOAD

The shipbuilding output of the Shipyards, in terms of CGT, Gross Tons and Deadweight Tonnage delivered/completed during the period 1996 – 1998, is shown in the following graph. This shipbuilding workload is solely concentrated at the Riga Yard and represents 1 hull delivery for completion at another shipyard in Norway.



We have not been able to obtain any detailed or comprehensive quantification of shiprepair output in terms of dockdays or total yard days for the main shiprepair yards for the reference period. The information that was available is shown in Table 13.10 but is substantially incomplete.

7. SECTOR DETAILS

7.1 SECTOR SUB-DIVISION

The Latvian Shipyard sector is principally concerned with commercial shiprepair with some shipbuilding commencing at one shipyard in 1988. The sector included river, short sea and ocean going vessels. The table below summarises the activity of individual yards.

Table 7.1 : Shipyard Activity

	Shipbuilding			Shiprepair/Conversion		
		Commercial			Commercial	
Shipyard	**Military**	**River**	**Ocean**	**Military**	**River**	**Ocean**
Riga			✓		✓	✓
Mangali					✓	✓
Tosmare					✓	✓
LSC					✓	✓
Bolderaya					✓	✓

7.2 YARD CAPACITY

The prime shipyard facilities comprise dry and floating docks, repair quays and building berths. A total of two dry docks and seven floating docks were identified. Floating docks are available to LSC on a rental basis from the other yards subject to availability. There are two shipbuilding berths at Riga Yard.

Table 7.2 : Shipyard Capacity

	Docks /Berths			Max Ship Dwt		Throughput	
Shipyard	**Dry Docks**	**Floating Docks**	**Berths**	**Build**	**Repair**	**Steel tonnes**	**CGT**
Riga	-	3	2	-	80,000	-	-
Mangali	-	2	-	-	6,500	-	-
Tosmare	2	1	-	-	12,500	-	-
LSC	-	-	-	-	-	-	-
Bolderaya	-	1	-	-	4,500	-	-

7.3 DELIVERIES BY VESSEL TYPE

Shipbuilding production during the three year reference period has comprised the delivery in 1998 of one fishing vessel hull from Riga for completion in Norway.

8. MARKET AND COMMERCIAL ENVIRONMENT

8.1 SUPPLIER PROFILES

As far as shipbuilding activity is concerned equipment is generally sourced from the international market in accordance with the specification requirements of owners, or they receive owner supplied items. The level of manufacturing self-sufficiency is generally higher than in Western Europe with small items such as outfit steel, joinery and small engineering items being made in-house. It is normal for such functions as sheet metal, pipework, joinery and outfit steel manufacture to be undertaken in-house. There is also a network of domestic/local supply companies for a range of components.

In terms of raw materials steel is generally bought from the former Soviet Union States (including Ukraine) or on the international market. Paints are bought in accordance with the owners requirements from internationally recognised paint manufacturers. Pipes are sourced in Latvia.

The Shiprepair Yards appear to procure equipment on the international or domestic market according to the owners specification.

8.2 CUSTOMER PROFILES

In terms of shipbuilding activity the Riga Yard completed a fishing vessel hull in 1998 for completion in a Norwegian shipyard for a Norwegian owner. We understand that Riga has an ongoing workload of hulls and completed ships for Norwegian and Swedish owners.

In terms of shiprepair, the customer base is of course much more diverse given the predominance in the sector. All the yards in the sector have historically had a customer base which has been predominantly domestic or from the former Soviet Union. In the case of two yards they had until 1994 been active naval ship repair bases working for the former Soviet Union navy.

The majority of shiprepair activity at the Mangali, Tosmare and Bolderaya yards is still for domestic Eastern European and former Soviet Union owners, with an increasing number of customers from Western Europe and Scandinavia.

At Riga Yard and the Shiprepair Base of LSC, 30-60% of customers come from the domestic and Eastern European market, with the Latvian Shipping Company providing a significant work load to both these yards. An increasing number of Western European, Scandinavian and International customer are now being won.

8.3 ORDERBOOK

Beyond the reference period 1996-1998 we are aware, from published data, of the following shipbuilding order book for Riga Yard running through to 2002.

Table 8.1 : Shipbuilding Orderbook

Ship Type	*No of Vessels*
Fishing vessels	5
Hulls	5
Total	**10**

The hulls are for completion at other shipyards and we believe the customers are Norwegian and Swedish.

However during our visit, the Shipyard informed us that they had completed 13 hulls during 1999 and anticipated completing 12 in 2000, this information is far greater than that shown in public sources. The order information summarised above (from public sources) would appear therefore to understate the situation as advised by the yard.

8.4 SHIP PRICES

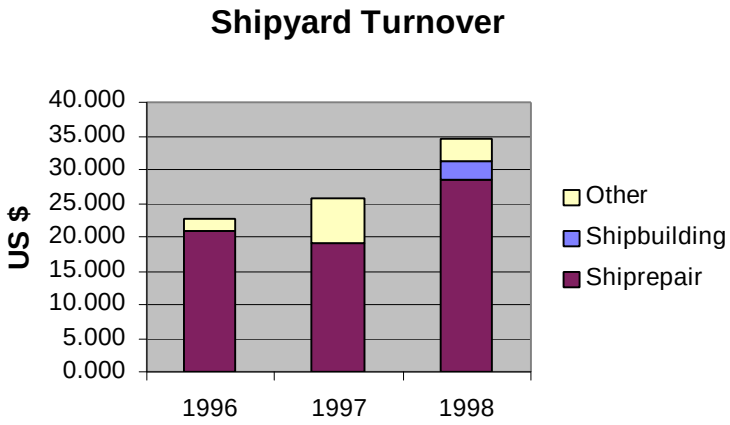
We have no ship prices provided to us by Riga shipyard and there is no information available from public sources. We do, however, know that the cost base in Latvia is low and we believe that competitive prices can be offered.

9. FINANCIAL PERFORMANCE

The following information is as provided to us by the shipyards, the Latvian Privatisation Agency and other sources, and we believe it to be reasonably accurate. We comment in Section 6.1 regarding incomplete information on turnover and profitability from some of the yards.

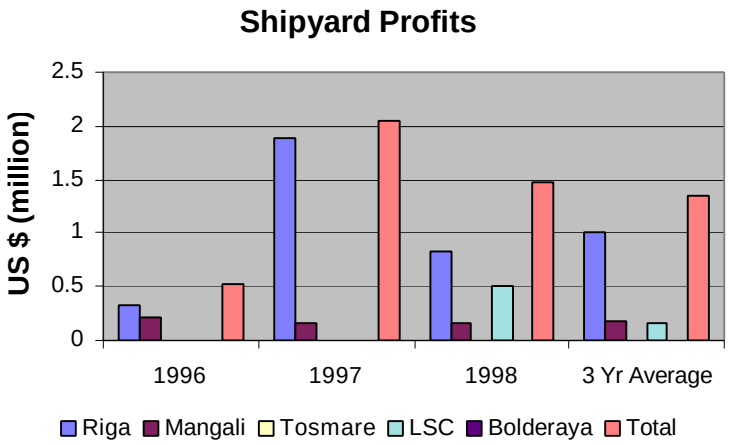
9.1 TURNOVER

The turnover of the shipyards in Latvia has been estimated at around an average of US$ 27.5 million over the three year reference period. The following graph shows the split between shipbuilding, repair and other activities across the sector.



9.2 PROFITABILITY

The profitability of the Latvian Shipyard sector is shown in the following graph.



9.3 SOURCES OF FUNDING

We were not able to obtain the necessary detailed financial information to comment on sources of funding. Specific funding for shipbuilding projects can be problematic, but as shipbuilding content over the review period is very small, and confined to a hull for delivery to another shipyard, it is not considered to be a significant factor.

9.4 INVESTMENT

The shipyards in the sector have generally adequate primary facilities based on previous investments and development programmes, requiring some maintenance and repair spend but with, we believe, still useful working life capability.

From our visits to the shipyards the priority seemed to be rationalisation of the facilities, improvements in productivity and management/ administration restructuring. A limited investment in equipment seems to have a higher priority than significant capital investment proposals. In an environment of low labour costs, the economic case for capital investment in new equipment is quite tough and payback in terms of improved performance against capital outlay may be difficult to justify.

Riga Shipyard, however, have made a notable investment in obtaining a 60% shareholding in the Tosmare Yard . It was reported to us that the Tosmare Yard were planning some upgrading and development of its facilities and hopes to move into shipbuilding whilst continuing shiprepair activities. The size and detail of this planned development is not known.

We understand from the Latvian Privatisation Agency that on privatisation of the shipyards no guarantees on future capital investments was given by the yards.

Guarantees on employment levels were however secured from the yards with financial penalties applying for non compliance.

10. GOVERNMENT SUPPORT

10.1 OPERATING SUBSIDY

In general terms the Latvian Shipyards do not appear to have access to subsidies for shipbuilding or shiprepair activities. Most of the yards stated that they receive no government or other subsidies. The Latvian Privatisation Agency confirmed that government provide no subsidies to the shipbuilding and repair industry.

10.2 SUPPORT OF LOSSES

For enterprises under state ownership, government support can exist in the form of supporting loss making industries. It is a difficult area to access, in so far as losses per se do not indicate government support, if the balance sheet and general commercial status of the enterprise can support these losses. If however, creditors or banks allow an unprofitable enterprise to continue trading (that otherwise they would not) on the grounds that the state is the owner or majority owner, then it can be construed that the enterprise is being supported by government.

The shiprepair base of the Latvian Shipping Company was formed (in 1988) into an independent company which is 100% owned by the Latvian Shipping Company (LSC). The LSC is itself state owned. The formation of the Shiprepair Base into an independent company was in part intended to demonstrate the stand-alone profitability of the company. We have only been supplied with financial figures for this company for 1998, in which year a reasonable profit was recorded. We are not aware of previous years profitability.

Because the management at Tosmare was new they were unable to give us financial information prior to privatisation in 2000. We are therefore unaware of the profitability of Tosmare over the reference period. We are aware that the company went through a very difficult period from the mid 90's when its naval market collapsed and employment levels seemed to far exceed the workload requirements. It was privatised in April 2000.

10.3 DEBT RESCHEDULING AND WRITE-OFF

We understand from the Latvian Privatisation Agency that the state do not write-off debts for companies being privatised and there was no financial restructuring prior to the privatisations.

10.4 OTHER SUPPORT AND USE OF AID

We believe that the shipyards in the sector receive no other support or aid.

10.5 PROTECTED CUSTOMER BASE

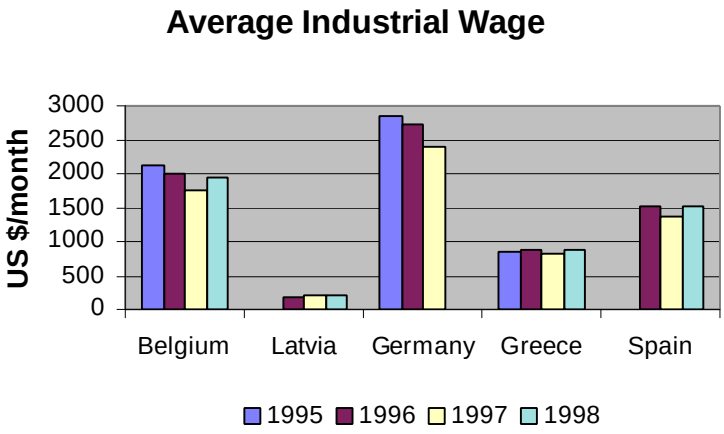
The Shiprepair Base which is 100% owned by the Latvian Shipping Company carries out a significant amount of shiprepair work for its parent company. However the shiprepair work from LSC is not exclusive to the Shiprepair Base, and we know that Riga Yard also undertakes significant amounts of shiprepair work for LSC. We believe it reasonable to assume that both these yards compete for work from LSC.

11. COMPETITIVENESS

11.1 COSTS

From the limited information we have been able to obtain from the shipyards, the prime labour costs of the shipyards appears to be low at around US$ 1.40/hour. At this level it is highly cost competitive on a simple time-based comparison with Western European and other developed shipbuilding economies. In general this reflects the lower level of wages in the country, although shipyard wages are higher than in some other industries.

To demonstrate the general level of wages we have shown below the average monthly industrial wage (in US $) for Latvia in comparison with four other western and southern European countries for the period 1995-1996.



However this prime labour cost advantage is offset by lower productivity in the yards and higher indirect manning levels and overheads. Since privatisation we believe the productivity, manning levels and overheads have and are being gradually addressed. Where guarantees may have been given to maintain employment levels, this can be achieved cost effectively through real increases in workload over and above direct productivity improvement.

In summary, the prime labour cost is low and provides cost advantage, however it is defrayed by higher levels of indirect workers and overhead costs, and lower productivity.

11.2 TECHNOLOGICAL

The technology of the shipbuilding facilities has been assessed against the Appledore technology audit datum, which is expressed in terms of Shipyard development 'generations'. This 5 point scale grades yards according to their facilities and management processes and has been widely accepted as a simple measure of technological advancement. The scale comprises:

Table 11.1 : Shipbuilding Technology

Level	***Description***
1	Reflects typical practice of the early 1960s – small cranage, multiple open berths, post launch outfitting, little mechanisation. Manual operating systems
2	Reflects yard modernisation of the late 1960s/ early 1970s. Fewer berths or dock, larger cranes, some mechanisation. Some computerised systems
3	Good practice of the late 1970s, new/fully redeveloped yards, large capacity cranes, some weather protection at dock or single construction area. High degree of mechanisation and use of computers.
4	Technology advances of the 1980s. Generally single dock, good weather protection, extensive early outfitting and fully developed operating systems.
5	State of the art of the 1990s, with automation, integration of operating systems by CAD. Computer aided material control and Quality Assurance.

The shipbuilding facilities in Latvia have been assessed with reference to the Riga Yard, the only real shipbuilding facility. This facility is generally at a Level 2 technology level consistent with many yards developed during the late 1960's and 1970's in terms of physical facilities.

In terms of shiprepair, no similar widely accepted comparison scale exists, the production, facility and organisational related aspects of shiprepair being less definitive. In facilities terms shiprepair technology tends to be predominantly about the nature of docking facilities, the painting and blasting processes and the diversity of other tasks the yard is equipped to undertake. In management terms, the technological aspects of shiprepair relate to the scale and complexity of shiprepair tasks that can be undertaken, the contract management and invoicing control and the speed of turn-around achievable.

Table 11.2 : Shiprepair Facilities.

	Afloat	**Floating Dock**	**Dry Dock/ Ship Lift**	**Covered Repair Berth**
Riga	✓	✓		
Mangali	✓	✓		
Tosmare	✓	✓	✓	
LSC	✓			
Bolderaya	✓	✓		

Table 11.2, summarises the nature of the basic shiprepair facilities at each yard. Whilst this is by no means definitive, it dose represent a basic physical production platform against which the repair technology at each yard is developed.

In an attempt to offer a broader assessment of shiprepair technology we have assessed the yards against an equivalent 5 point scale to that used for shipbuilding. This scale is assumed to represent the full spectrum of shiprepair technology and practice, with Level 1 representing basic shiprepair operation and Level 5 representing current best practice. The following table indicates some of the key characteristics of these two extremes.

Table 11.3 : Shiprepair Technology

Level	*Description*
1	Typical practice of the early 1960s with limited ship docking or recovery capacity or a yard in which afloat work only is possible. Small capacity cranage and limited supporting workshops and services capability. Limited planning/project management and organisational skills resulting in longer repair durations. Poor general level of supporting industrial infrastructure. Not capable of undertaking more complex repair and conversion projects.
5	Multiple shipdocking/recovery capacity with adequate associated wet berths. Modern high performance cranage with good quality workshops and extensive services capability. Advanced planning/project management ability and high organisation and contractual skills resulting in short repair durations. Excellent general level of supporting industrial infrastructure. Capable of undertaking the most complex repair and conversion projects.

The operational technology employed within the Latvian shiprepair yards is considered to be Level 2. Potential for improvement would be dependent upon strengthening the management and organisational skills and in developing a stronger base in conversion work and substantive repair work on more complex vessel types.

11.3 PRODUCT RELATED

In shipbuilding terms the only ship type built during recent years has been a fishing vessel hull for completion at another yard. Future work load beyond the reference period includes fishing vessels and live fish carriers. In terms of ship repair, a greater diversity of ship types is covered.

For the purpose of summary, ship types have been divided into 4 categories for commercial vessel types reflecting varying levels of product complexity. Additionally naval/military vessels have been classed separately in a single category. The experience base of the Latvian shipyards in terms of vessel complexity and sophistication over recent years is summarised in the following table.

Table 11.4 : Product Experience

Activity	*Ship Types*				
	Small [1]	*Basic Cargo* [2]	*Specialist Cargo* [3]	*Passenger*	*Military*
Shipbuilding					
Hull building	✓				
Conversion					
Repair	✓	✓	✓	✓	

Notes: 1 Fishing vessels, tugs, river barges, dredgers, offshore patrol
2 General cargo, bulk carrier, oil tankers, container
3 Reefer. LNG, LPG, chemical tankers, RO-RO etc
4 Passenger ferries, cruise ships, leisure vessels

Size is a major contributor to complexity, especially in shipbuilding activity, where the hull form and the density of outfit and engineering installation may significantly increase the complexity of smaller vessels. This has been reflected in the weighting given to the compensation factors used to calculate the CGT work content measure for commercial vessels.

As an additional measure of product related technology, we have calculated the weighted average compensation factor for all vessels delivered within the three year reference period. For Latvia the average factor is 1.84 which is based on one fishing vessel hull built in one year of the three year reference period. Comparative factors for various other European shipbuilding countries are shown in the following table.

Table 11.5 : Shipbuilding Average CGT Compensation Factors

Country	*Ave CGT factor*	*Country*	*Ave CGT factor*
Latvia	**1.84**	Italy	0.95
Norway	1.76	United Kingdom	0.94
Slovakia	1.67	Sweden	0.93
Netherlands	1.45	Spain	0.87
Lithuania	1.25	Romania	0.84
France	1.19	Poland	0.82
Finland	1.03	Bulgaria	0.78
Ukraine	0.96	Croatia	0.77
Germany	0.95	Denmark	0.77

Source: Ai collated data for study countries, AWES data for other countries

11.4 PRODUCTIVITY

Productivity, measured crudely by CGT/employee year, has been calculated for the sector shipbuilding activity concentrated at the Riga Yard consisting of one fishing vessel hull. The result is approximately 17 CGT/employee year, but has to be seen as crude because activity is concentrated in one year, and the calculation does not have the benefit of averaging over a three year period.

Nevertheless, the shipbuilding productivity levels are therefore lower than those of the EU yards, where crude productivity averaged around 50 CGT/employee year. Inevitably these calculations are crude, however it can be assumed that productivity levels are an 'order of magnitude' lower in the Latvian yards.

Productivity is extremely difficult to measure in shiprepair and no simple and universally accepted measure exists.

11.5 ENVIRONMENTAL AND HEALTH & SAFETY

Like most shipyards around the world the Latvian yards will suffer from accumulated contamination of the site due to industrial processes undertaken over time. In terms of their on-going processes, there are a range of activities in use that are unlikely to comply fully with EU environmental legislation. The situation varies from yard to yard, however it is believed that the general environmental control is lower than in larger EU shipyards.

The levels of health and safety precautions are visibly lower than in most EU shipyards with only limited evidence of the use of personal protective equipment by employees and management.

12. STRUCTURAL ADJUSTMENTS AND ASSISTANCE INITIATIVES

12.1 EU ACCESSION REQUIREMENTS

Latvia does not operate a scheme to provide operational subsidies for shipbuilding and we have not identified any other forms of aid to shipyards over the period of 1996-1998 that conflicts with EU requirements.

Although no financial figures were available to us, we are aware that the Tosmare Yard went through a very difficult period from the mid 90's when its naval market collapsed. Employment levels however seem to have been maintained beyond workload requirements and there may well have been significant financial losses. We have only been supplied with financial information for the LSC yard for 1998 when it made a profit. We are not aware of previous years profitability at LSC. The Latvian Privatisation Agency say that there was no financial restructuring of yards prior to their privatisation.

In terms of environmental and health and safety aspects, we believe there is a need for improvements in both areas in order to satisfy current regulations and standards. The situation does vary at individual yards. Assistance with environmental and safety audits would help facilitate and prioritise improvement, particularly at the domestically owned yards.

12.2 ASSISTANCE MEASURES

We believe that the yards in Latvia may suffer disadvantage and problems with the availability and cost of ship and other finance such that they operate at a disadvantage compared to Western European Yards. We have however not been able fully investigate this issue due to language difficulties and the limited feedback from some yards.

The problem is mainly one of transition, until such time as the yards have been able to establish their own financial 'track record' with international banks and until the Latvian banking sector is better able to service the needs of the industry. Although shipbuilding activity is presently predominately hulls for completion by other contractor shipyards, the long term opportunities for the sector would benefit significantly from a scheme to provide competitively priced shipbuilding finance, working capital and investment capital during an agreed transition period.

There is a need to improve environmental and health and safety conditions at most of the yards. It is considered that a programme of assistance to yards to audit their current position in relation to EU requirements, would help to clarify the extent and nature of the improvement required and provide a effective basis against which to plan and monitor improvements.

13. NUMERICAL DATA TABLES

13.1 FINANCIAL

Table 13.1 : Shipyard Turnover

Shipyard	1996		1997		1998	
	Lats mill	US $ mill	Lats mill	US $ mill	Lats mill	US $ mill
Riga [1]	12.0	21.4	13.6	23.1	16.5	28.9
Mangali [1]	1.2	2.2	1.6	2.8	2.0	3.5
Tosmare [2]						
LSC [1]					1.8	3.2
Bolderaya [2]						
Total	13.2	22.6	15.2	25.9	20.3	34.6

Notes: 1 Source- Privatisation Agency and Yards
2 No information provided by yard

Table 13.2 : Shipyard Profitability

Shipyard	1996		1997		1998	
	Lats mill	US $ mill	Lats mill	US $ mill	Lats mill	US $ mill
Riga [1]	0.18	0.32	1.11	1.88	0.47	0.82
Mangali [1]	0.12	0.21	0.10	0.17	0.09	0.16
Tosmare [2]						
LSC [1]					0.30	0.50
Bolderaya [2]						
Total	**0.30**	**0.53**	**1.21**	**2.05**	**0.86**	**1.48**

Notes: 1 Source – Privatisation Agency and Yards
2 No information provided by yard

13.2 EMPLOYMENT

Table 13.3 : Shipyard Employment

Shipyard	1996	1997	1998
	Employees	Employees	Employees
Riga [1]	1,400	1,380	1,350
Mangali [2]	279	309	375
Tosmare [2]	1,875	1,875	700
LSC	200[2]	200[4]	135[2]
Bolderaya [3]			200
Total	3754	3764	2,800

Notes 1 Source- Published
2 Source- Shipyard
3 Shipyard figure for 2000
4 Estimated

13.3 SHIPBUILDING OUTPUT

Table 13.4 : Shipbuilding Output- Number of Vessels

	1996			1997			1998		
Shipyard	**Ships**	**Hulls**	**Total**	**Ships**	**Hulls**	**Total**	**Ships**	**Hulls**	**Total**
Riga	-	-	-	-	-	-	-	1	1
Mangali	-	-	-	-	-	-	-	-	-
Tosmare	-	-	-	-	-	-	-	-	-
LSC	-	-	-	-	-	-	-	-	-
Bolderaya	-	-	-	-	-	-	-	-	-
Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1**	**1**

Notes: 1 Shipyard delivered two small 16/18m hulls for completion in Russia during 1995

Table 13.5 Shipbuilding Output

Output	1996			1997			1998		
	Ships	**Hulls**	**Total**	**Ships**	**Hulls**	**Total**	**Ships**	**Hulls**	**Total**
CGT	-	-	-	-	-	-	-	2,376	2,376
GT	-	-	-	-	-	-	-	1,292	1,292
DWT	-	-	-	-	-	-	-	400	400

Notes: 1 The output in this table is that of the Riga Yard, the only yard to be involved in shipbuilding activities over the reference period.
2 In absence of specific information hulls have been assumed at 60% of total vessel CGT.
3 Hulls are included at 'full' GT values.

Table 13.6 : Shipbuilding Output by Vessel Type

Ship Type	1996		1997		1998		1999	
	Ships	**Hulls**	**Ships**	**Hulls**	**Ships**	**Hulls**	**Ships**	**Hulls**
Fishing Vessels	-	-	-	-	-	1	-	-

13.4 SHIPREPAIR WORKLOAD

Table 13.7 : Shiprepair Workload – Ships Stemmed

	1996			1997			1998		
Shipyard	**Docked**	**Afloat**	**Total**	**Docked**	**Afloat**	**Total**	**Docked**	**Afloat**	**Total**
Riga			85			110			125
Mangali [1]						34			
Tosmare [1]									
LSC [1]									
Bolderaya [1]									
Total			85			144			125

Notes: 1 No information provided by these shipyards.

Table 13.8 : Shiprepair Workload in Days

	1996		*1997*		*1998*	
Shipyard	***Docked***	***Total***	***Docked***	***Total***	***Docked***	***Total***
Riga						
Mangali	309		428		535	
Tosmare						
LSC						774
Bolderaya						
Total	309		428		535	774

Notes: Limited information available from shipyards.

13.5 ECONOMIC INDICATORS

Table 13.9: Economic Indicators

Indicator		***1995***	***1996***	***1997***	***1998***	***1999***
Exchange Rate	Lats/$	0.54	0.56	0.59	0.57	0.58
Ave Industrial Wage	$/month		179	207	226	242
Unemployment Rate	%	6.6	7.2	6.7	9.2	9.1
Wage Inflation	% y-o-y	24.1	14.9	21.6	6.6	4.0
Consumer Prices	% y-o-y	25.0	17.6	8.0	4.7	2.4
Industrial Gross Output	% y-o-y	-5.0	7.0	17.0	0.0	
Productivity in Industry	% y-o-y	13.6	15.3	12.6	2.5	

Notes: % y-o-y denotes percentage yearly change.