

ADSTEAM MARINE LIMITED

Submission to the

Productivity Commission Inquiry Into The Economic Regulation Of Harbour Towage And Related Services



PART B - ECONOMIC INDUSTRY REPORTS

Report 3

International Survey of Harbour Towage Arrangements
Charles River Associates (Asia Pacific) Pty Ltd
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All queries and correspondence regarding
this report should be directed to Peter Macmillan
by telephone on (03) 9504 5888 or 0417 239 115
or by email at pmacmillan@adsteam.com.au



FINAL REPORT

International Survey of Harbour Towage Arrangements

Submitted to:

Adsteam Marine Limited

Level 22, Plaza 2
22 Oxford Street
Bondi Junction, NSW 2022, Australia

Prepared by:

Charles River Associates (Asia Pacific) Pty Ltd

Level 31, Marland House, 570 Bourke Street
Melbourne, VIC 3000, Australia
Tel: + 61 3 9606 2800 Fax: + 61 3 9606 2899

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TABLE OF CONTENTS

1. INTRODUCTION.....	1
2. METHODOLOGY.....	2
3. BACKGROUND	3
3.1. PORT SERVICES AND VERTICAL INTEGRATION	3
3.2. PRICE REGULATION VERSUS COMMERCIAL DISCIPLINE	6
4. HARBOUR TOWAGE ARRANGEMENTS	7
4.1. NORTH AMERICAN PORTS	8
4.1.1. United States	8
4.1.2. Canada.....	8
4.2. EUROPEAN PORTS.....	9
4.3. ASIA PACIFIC PORTS	11
4.3.1. Malaysia	11
4.3.2. Sri Lanka	11
4.3.3. Singapore	12
4.3.4. New Zealand	13
5. HARBOUR TOWAGE REGULATION	14
5.1. NORTH AMERICAN PORTS	14
5.1.1. United States	14
5.1.2. Canada.....	18
5.2. EUROPEAN PORTS.....	19
5.3. ASIA PACIFIC PORTS	23
5.3.1. Malaysia	23
5.3.2. Sri Lanka	24
5.3.3. Singapore	24
5.3.4. New Zealand	25
6. CONCLUSIONS	27
APPENDIX A – OVERVIEW OF INDIVIDUAL PORTS SURVEYED	29

APPENDIX B – BROAD OVERVIEW OF TUG UTILISATION IN INDIVIDUAL PORTS SURVEYED	32
APPENDIX C – SPECIFIC DETAIL ON HARBOUR TOWAGE SERVICES IN NORTH AMERICAN PORTS	34
VANCOUVER, BC	34
HOUSTON, TX.....	35
NEW ORLEANS, LA	36
PORTLAND, OR.....	38
BOSTON, MA	39
APPENDIX D – SPECIFIC DETAIL ON HARBOUR TOWAGE SERVICES AT EUROPEAN PORTS.....	40
ROTTERDAM	40
HAMBURG	43
ANTWERP	46
AMSTERDAM.....	47
MARSEILLES	48
APPENDIX E – SPECIFIC DETAIL ON HARBOUR TOWAGE SERVICES AT ASIA PACIFIC PORTS.....	49
SINGAPORE.....	49
PORT KLANG.....	51
COLOMBO	52
AUCKLAND	53
PORT NELSON.....	54
APPENDIX F: OVERVIEW OF INTERNATIONAL REGULATORY ARRANGEMENTS OF HARBOUR TOWAGE.....	55

1. INTRODUCTION

Charles River Associates (Asia Pacific) Pty Ltd (“CRA”) has been retained by Adsteam Marine Limited (“Adsteam”) to provide research in support of the Adsteam submission to the Productivity Commission (“PC”) inquiry into harbour towage.

CRA is an economics, finance and business consulting firm with extensive experience in providing litigation and regulatory support in areas such as competition law, finance and intellectual property. CRA was founded in Boston in 1965 and established its Asia Pacific practice in late 2000, with offices in Melbourne and Wellington.

Throughout its history, CRA has been a leader and innovator in the application of economic tools and concepts to the solution of complex transportation problems. CRA’s work has touched all transport modes, and clients have included shippers, equipment manufacturers, operators, regulators, law firms involved in transportation-related disputes, and public agencies. CRA has a specialist transportation group located in its Boston office.

CRA has been asked to review the structural arrangements for harbour towage internationally, with particular emphasis on the regulatory constraints impacting on those operations. It was agreed that CRA would adopt a targeted approach to this task, using a sample of five ports in each of North America, Europe and the Asia Pacific.

The CRA study will form one component of the Adsteam submission to the PC, which we understand will include information and analysis from a number of other consultancy reports and from internal Adsteam sources.

The CRA report is structured as follows:

- Chapter 2 of the report outlines the methodology employed to select the ports included in our survey. It also provides an overview of the various matrix tables used to present the information on harbour towage arrangements in the selected ports. The matrix tables are attached as Appendices A-E to the report.
- Chapter 3 provides background information on the economics of the ports industry and the regulation of harbour towage.
- Chapter 4 provides commentary on the arrangements for the provision of harbour towage services in the various ports surveyed. It discusses the number of providers of towage services, their relationship to other port activities, their ownership characteristics, and any specific commercial arrangements for towage services imposed by the individual port.

- Commentary on the government regulation of harbour towing for the various ports surveyed is presented in Chapter 5. This includes a discussion of relevant price and competition regulation of harbour towing services and any relevant court cases involving harbour towing providers. Industry-specific regulation applying to the harbour towing industry is also examined. A summary of our findings on international regulatory arrangements is presented as Appendix F.
- Brief conclusions are then provided in Chapter 6.

2. METHODOLOGY

This report is intended to provide an overview of the international experience with the operation and regulation of harbour towing services. Given constraints on time and data availability, it was decided to use a selected sample of ports for this survey – five in North America, five in Europe (exclusive of the UK) and five in the Asia Pacific region (including two New Zealand ports) – and report in detail on harbour towing at those ports.

The ports chosen are as follows:

- North America (the ports of Houston, New Orleans, Portland and Boston in the United States, and Vancouver in Canada).
- Europe (the ports of Rotterdam, Hamburg, Antwerp, Amsterdam and Marseilles).
- Asia Pacific (Port Klang in Malaysia, Port of Singapore, Port of Colombo in Sri Lanka, and the ports of Auckland and Nelson in New Zealand).

The sample of ports was chosen to cover various sizes and types of port. The sample was also intended to select ports with different approaches to the provision of towing services (e.g. exclusive port provision versus periodic competitive tender versus open entry with multiple tug operators) to highlight differing regulatory and commercial arrangements. It must also be acknowledged that the final selection of ports also owed a considerable amount to the ease with which data could be accessed and contacts established with the relevant port bodies within the limited time available, especially for those ports selected in the Asia Pacific region. Due to these constraints we were not able to provide a full information set for every port included in our study. Where there are specific gaps in our information set, we have noted this.

The detailed information collected on harbour towing in each of the overseas ports has been presented in a series of matrix tables that are attached as appendices to this report.

- Appendix A contains broad overview information on the different dimensions, operations and structure of the five ports selected for each region.
- Appendix B contains some raw statistics on tug utilisation for each port surveyed (e.g. number of tugs, annual number of ship calls, average ship calls per tug).
- Appendices C, D and E – one for each of North America, Europe and Asia Pacific – contain specific details on harbour towing services for each port surveyed (e.g. a list of tug service providers, number and types of tugs, basis for towing charges).
- Appendix F provides a summary of the international regulatory arrangements applying to harbour towing in the countries surveyed.

3. BACKGROUND

This chapter provides some brief background on the ports industry and on the levels of regulation impacting on harbour towing, so as to help frame the analysis and discussion that follows.

The chapter is organised in two sections. The first outlines the industrial organisation of the ports industry and discusses how harbour towing services can be thought of as one of a number of interlinked yet distinct activities taking place within ports. The second section discusses the multiple layers of regulation that can apply to harbour towing and explains that a proper analysis can only be undertaken by examining their collective impact on the level of competition and service.

3.1. PORT SERVICES AND VERTICAL INTEGRATION

Ports are complex commercial and logistical entities that, fundamentally, are the interface between sea and land transport.

There is an array of functions carried out within ports, and to some extent, the economic structure of each port is unique in terms of its mix of activities, cargoes handled, location, scale, and accessibility to land transport infrastructure. Ports also differ in terms of their ownership, the extent of vertical integration, and the degree of contestability in the provision of various port services, including harbour towing services.

As a starting point it is worth considering the range of activities that take place at ports and to consider their relationship to each other. These include but are not limited to:

- Infrastructure provision (the provision of the physical infrastructure necessary for port operations – e.g. channels, breakwaters, locks, navigation aids, quays, berths, terminals, and superstructure, such as storage sheds, cranes and other equipment, etc.);
- Stevedoring (the loading and unloading of cargoes from ships to the wharf);
- Marshalling (moving of cargo from storage and assembly areas to the wharf ready for stevedoring and tracking via specialised IT applications);
- Receiving, delivery and unloading (encompassing the receiving, assembly and storage of export cargoes in warehouses or holding yards prior to marshalling, and the unpacking of container imports);
- Harbour towing (the provision of tug services for vessels entering, moving within, and departing from the port);
- Pilotage (the provision of pilotage services for vessels entering, moving within, and departing from the port); and
- Support services (e.g. ship servicing, container cleaning, etc.).

Harbour towing and pilotage are often referred to as **marine services**, which can also encompass other services such as mooring, salvage and ocean towing. Taken together, stevedoring, marshalling and receiving are often referred to jointly as **cargo handling services**. The provision of physical assets (e.g. berths, channels, equipment, etc.) is at the core of port operations and known collectively as the provision of **infrastructure services**.

In one sense each of these activities (except perhaps support services) can be thought of as representing different vertical levels in the interlocking chain of activities required to handle shipping cargoes. In another sense, each of these activities can be viewed as complementary horizontal products, which are all required in order to provide a full range of port services. In either case, it is important to recognise that each of these activities represent a distinct product or service that ports could provide to customers individually.

It is not germane to this study to provide a detailed discussion of market definition issues as applied to the ports industry, but it should at least be noted that each of these distinct port activities could be seen by a competition regulator or the courts as a separate antitrust market.¹ Harbour towage is a port service that can be provided either by the port itself or by independent third party operators contracting with the port or with key customers of the port.

The extent to which port companies choose to provide all or only some of the different port services listed above internally varies considerably. There are a number of reasons for ports to choose different degrees of vertical integration. The rationale for vertical integration may be anti-competitive (e.g. to foreclose the opportunity of competing downstream firms, say stevedores, to purchase inputs from the upstream firm, say access to cranes at a container terminal). However, vertical integration and long-term contracting arrangements can also be efficient responses by firms to the difficulties of organising production and distribution through spot markets (e.g. where incumbent operators of a particular port service, say marshalling, are failing to deliver adequate levels of pricing and service to key port customers, the port company itself may decide to provide this service in competition with other operators, so as to improve performance).²

Conceptually, port companies can be divided into three broad categories according to the extent of their vertical integration – landlord ports, mixed ports, and (full) service ports. Each of these is discussed briefly below.

Landlord ports, as the name implies, simply own the core port infrastructure, while port superstructure and equipment (cranes, forklifts etc.), marine services (towage, pilotage, etc.) and cargo handling services are provided by privately owned, independent operators. In most cases a landlord port company's role will extend into port development and planning and marketing functions. Most major Australian ports now operate under this model.

¹ A market is an analytical device that is used in antitrust economics to assess the level of competition between suppliers of the same, or closely substitutable, products and to determine the presence or absence of market power. It is usual to define markets in terms of four characteristics or dimensions: the characteristics of goods or services supplied and purchased (the product dimension); the level in the production or distribution chain (the functional or vertical level); the geographic area from which the goods or services are obtained, or within which the goods or services are supplied (the geographic extent); and the temporal dimension of the market, if relevant (the timeframe over which substitution to other options could take place or the effects of inter-temporal breaks). In defining the relevant geographic, product and functional markets, the test is one of substitutability on both the demand and supply sides. More detail on market definition is provided in Australian Competition and Consumer Commission, *Merger Guidelines*, ACCC (Procedural Guide Series), Canberra, 1999, June.

² In respect of vertical integration, there are broadly three potential sources of efficiencies – reducing production costs, reducing transactions costs and mitigating market imperfections. See Perry, M K (1989) "Vertical Integration: Determinants and Effects", in R Schmalensee and R D Willig (eds) *Handbook of Industrial Organization, Volume I*, Elsevier Science Publishers B.V.; Tirole, J (1988) *The Theory of Industrial Organization*, The MIT Press; and Holmstrom, B and J Roberts (1998) "The Boundaries of the Firm Revisited", *Journal of Economic Perspectives*, 12(4), pp. 73-94.

Mixed ports are those where the port company goes beyond the provision of infrastructure and is vertically integrated into the provision of operational port services, often in competition with private service providers, and port superstructure.

Service ports occur where the port company owns and operates the full spectrum of port activities including the provision of port infrastructure, superstructure and equipment, and operational port services. The port company directly hires all labour to perform the port activities. This model is common under publicly owned ports.

Australian ports are predominantly landlord ports with marine services and cargo handling being performed by independent commercial companies. Stevedores exclusively lease port terminals from the port company and provide their own superstructure and equipment. There are two private national-level providers of container stevedoring at Australian ports, while two or three competing firms at the individual port level usually provide general cargo stevedoring. Private, independent operators generally provide towage and pilotage services at individual Australian ports. Adsteam is the major private provider of towage services at Australian ports.

The first matrix table contained in Appendix A has been constructed to provide an understanding of the operations and organisation of the individual ports surveyed, including the extent of vertical integration, in order to place the information collected on harbour towage in context with regard to the economic organisation of the port in question.

3.2. PRICE REGULATION VERSUS COMMERCIAL DISCIPLINE

The key focus of the PC inquiry into the harbour towage industry is on the adequacy of existing regulatory arrangements, especially price monitoring by the ACCC.

When viewed at the broad level, four levels of regulation and pricing discipline can impact on providers of tug services in ports. These are:

1. General competition laws that apply across the entire economy (in Australia the *Trade Practices Act 1974* is the primary piece of competition and consumer protection legislation).
2. Price control or review legislation that can be applied to specific industries (in Australia the *Prices Surveillance Act 1983* allows for price monitoring in declared industries, including harbour towage at present).
3. Industry-specific regulation focussed on such operational attributes as licensing, standards and safety. While the primary purpose of this type of regulation is non-economic, it can impact on levels of competition within an industry (e.g. where licensing requirements are so onerous as to become a barrier to entry they can impact adversely on competition and pricing).

4. Competition, contracting and performance requirements at the level of the individual port or by other key customers of harbour towing providers (e.g. major international shipping lines).

This final layer of pricing discipline should be present regardless of general competition or pricing laws. If this is working well, some other forms of economic regulation such as price control may not be necessary.

For example, intra-port competition between multiple providers of towing services, especially at larger ports, or from potential entrants, if entry and exit conditions are reasonably free, would be expected to discipline pricing behaviour and improve performance.

Entry of rival suppliers of towing services may be more limited at smaller ports, where fixed costs of providing towing infrastructure (tug boats) are substantial relative to the level of demand for harbour towing services (number of ship visits). Because of low volumes and indivisibilities of capital, it is often argued that a single operator best provides towing services at these ports. Tendering for contracts of finite length for provision of such services is a competitive mechanism used by some ports in these circumstances.

Even where, as is often the case in New Zealand ports, the port company is vertically integrated into the ownership and operation of marine services itself, key port customers can be expected to put pressure on the port company to deliver competitive towing services. This is especially the case where those customers have some countervailing power and inter-port competition is strong. In these circumstances, ports have sought to benchmark the pricing and service performance of their towing operations through customer surveys and other studies in order to ensure they remain competitive with rival ports.

The information gathering exercise was designed to gain an understanding of the varying levels of regulation applying to the ports surveyed and how the port companies themselves ensure that price and performance of tug operators is adequate.

4. HARBOUR TOWAGE ARRANGEMENTS

This section discusses the different structures and approaches to the provision of harbour towing at the sample ports surveyed.

4.1. NORTH AMERICAN PORTS

4.1.1. United States

The major United States ocean ports are generally publicly-owned landlord ports with private firms operating port terminals and providing operational port services. Consistent with this model, harbour towage provision is the domain of privately-owned companies.

In each of the US ports surveyed there are multiple competing providers of harbour towage services. The number of towage firms in most ports is relatively low with all but one of the four ports surveyed in the US having only two competing providers, while in the Port of New Orleans there are four independent towage providers. It is interesting to note that in two of the ports with two competing towage firms, Houston and Portland, each firm holds approximately 50 per cent of total market share.

The presence of multiple competing harbour towage firms in the US ports reflects in part the relatively large size of the ports included in our survey but also the lack of restrictions to entry into harbour towage services. At each port surveyed there were no restrictions on entry imposed at the individual port level. Nor did we observe any other arrangements that have the effect of excluding entry or reducing the level of contestability.³ In each of the ports surveyed private towage operators contract directly with shipping lines rather than with the individual port company.

The port companies surveyed do not attempt to regulate for minimum standards of service or price, instead leaving these factors to be disciplined by market forces. Specific operational requirements such as tug specifications and crew training standards are the responsibility of the United States Coast Guard rather than the individual port company.

4.1.2. Canada

Harbour towage services in Canada are owned and operated by private companies that contract directly with the shipping companies rather than with the ports, as in the United States. A key difference between Canada and the US, however, is that with the exception of the Port of Vancouver, all ports in Canada have only a single provider of harbour towage services.

³ Regulation at the national level that excludes foreign towage operators is discussed in Chapter 5.

There are no regulatory or legal barriers to entry, and the most likely explanation for this situation is that Canadian ports are generally quite small by world standards, such that even at larger Canadian ports the number of tugs required to handle total port traffic is relatively low. The port of Halifax, for example, a major east coast port, has only four tugs based at the port on a full-time basis. It is therefore plausible that most Canadian ports cannot support more than one operator given the current volume of ship calls. Tugs are sometimes moved between ports in response to relative demand (such as in the Halifax/Nova Scotia area, where ports are very close together), and some companies provide tugboat services at more than one port.

The *Port of Vancouver* has a public port authority, the Vancouver Port Authority, and operates under the landlord model. It is the largest port in Canada, both in terms of total cargo and container throughput. By cargo volume, it is the largest port on the west coast of North America, and the biggest foreign export port in North America.⁴ It is not surprising therefore that it is an exceptional case in having multiple towage operators.

Competition in the provision of harbour towage services at Vancouver is a relatively recent phenomenon and is limited to a certain segment of the port. For more than a century prior to 1993, the main Burrard Inlet area of the port had only a single provider of harbour towage services. In that year, a competing towage company, Seaspan International, entered the market. Seaspan historically served as the main provider of towage services in the smaller Roberts Bank portion of the port, and since 1995 has had an exclusive contract with the terminal authority for towage provision in that port area. The exclusive contract was awarded to Seaspan through a competitive tendering process.

There are currently two providers of harbour towage services within the Burrard Inlet portion of the port. Since its entry in 1993, Seaspan has been able to capture 75 per cent of the towage market within the Burrard Inlet area.⁵

4.2. EUROPEAN PORTS

Significant consolidation has occurred in recent years amongst European towage providers in the form of acquisitions and the formation of joint ventures and alliances.

⁴ http://www.portvancouver.com/media/port_facts.html.

⁵ Personal Communication, Doug Towill, Marine Operations Manager, Seaspan International Towing Company, April 10, 2002.

Among the largest towage firms are the two Dutch companies Smit International and Wijsmuller. Wijsmuller was acquired by the marine services subsidiary of the A.P. Moller Group, the operator of the Maersk shipping group, in August 2001 and is now known as Svitzer Wijsmuller. Svitzer Wijsmuller now provides harbour towage services in over 50 ports, operating over 100 tugs. Smit International has made several large acquisitions in recent years and has entered into a number of significant joint ventures with towage providers.

At the *Port of Rotterdam* there are four towage providers: Fairplay, Smit, Kotug, and Rederij T Muller BV. In 1999, Smit acquired Sleepdienst Jan Kooren BV one of the last remaining major independent towage companies at Rotterdam.⁶ Smit has also formed an alliance with German towage provider Fairplay where Smit charts two tugs from Fairplay and manages Fairplay's tugs within Port Rotterdam. Each of the three major towage providers at Rotterdam have operations in other European ports.

There are no restrictions on entry into the Port of Rotterdam to provide towage services. There are no limits on the number of firms that may operate. However, there has been a tendency towards consolidation rather than new entry in recent years with the acquisition by Smit and the joint venture formed with Fairplay.

At the *Port of Hamburg*, a group of five German towage providers have had a long-standing joint venture in the provision of towage services. The combined venture operates a fleet of 14 tugs on a 24-hour basis and up to 20 tugs during peak times. Outside the joint venture, there are two operators, Kotug and Smit, collectively operating 3 tugs through a joint service arrangement.

In order to provide towage services at the Port of Hamburg an operator must hold a license issued by the City of Hamburg. Certain requirements must be met to obtain a license including technical, safety and quality standards.

At the *Port of Antwerp*, the public port company is the sole provider of towage services, owning and operating the port's entire fleet of tugs. The Antwerp Port Authority also provides many of the operational port services. Competing providers of towage services are not allowed within the locks. URS, an independent towage provider, operates on the river Scheldt outside the port. URS is part-owned by Smit International.

At the *Port of Amsterdam*, Wijsmuller is the sole supplier of harbour towage services. Wijsmuller also provides salvage, offshore towage, and other maritime services.

⁶ Gaston, J and H Ware (2001) *One World, One Tug Company?*, Marcon International Inc., October. http://www.marcon.com/main/marcon_st1.cfm?Archive=430&StoryID=236

New entrants into harbour towage at the Port of Amsterdam must be approved by the public port authority. Prices for towage services are regulated at the individual port level by the Amsterdam Port Authority, which also sets regulations for vessels requiring towage within the port.

At the *Port of Marseille*, harbour towage services are provided by a single provider under an exclusive contract. The port company solicits competitive bids for the provision of harbour towage services on an annual basis. An exclusive contract is awarded to the lowest bidder who also satisfies certain criteria relating to the level of service. Under the contract, fees for towage services are charged to the shipping companies directly by the port company who then pays the towage provider the contracted amount. The port company conducts periodic reviews of towage providers in order to ensure that they are complying with their service contracts. Competitive tendering for harbour towage services is commonplace in French ports.

The Marine Marchande is the primary regulator of harbour towage services in French ports. It regulates for factors such as vessel requirements, minimum crew size, crew training, and safety standards. The wages of tug crews are negotiated between the towage operator and the various maritime syndicates and unions.

4.3. ASIA PACIFIC PORTS

4.3.1. Malaysia

There are two main competing port terminals at Port Klang – Northport and Westport. Both are service ports, providing the port terminal infrastructure, marine services and port operational services without competition from independent providers.

The publicly listed port company, Northport Corporation Berhad, owns and operates Northport's container and conventional cargo terminals. Northport offers a fully-integrated service to its customers which includes terminal infrastructure, stevedoring, marine services and support services. Northport is the exclusive provider of harbour towage services for ships calling at its terminals through its wholly owned subsidiary, Northport Marine Services. Northport Marine also provides tug services to vessels calling at other smaller private terminals within Port Klang. Similarly, Westport provides its own tug services to ships calling at its terminal without competition from independent providers. Northport Corporation and Westport are the sole providers of harbour towage services at Port Klang. Overall, Northport handles around 70% of all vessels visiting Port Klang.

4.3.2. Sri Lanka

The Port of Colombo is organised as a mixed port, with a public port authority providing the port infrastructure and some operational port services, and private firms operating port terminals and providing stevedoring services.

Harbour towing services at the Port of Colombo are provided exclusively by the public port authority, the Sri Lanka Ports Authority, who is also the sole provider of pilotage services. This is the position in each of the ports in Sri Lanka that the Ports Authority manages. Private operators are not permitted to provide towing services in competition with the Ports Authority by law.

There are nine tugs stationed at the Port of Colombo with only four tugs being operated on a normal traffic day. As a result, tug utilisation measured by annual ship calls per tug is in the low range at approximately 400 calls per tug. The port authority is able to transfer tugs between the various ports it manages in response to relative demand changes. Crewing levels are high compared to international standards with most tugs requiring a crew of up to 18 persons.

The Sri Lanka Port Authority sets and publishes the tariff for towing services on an annual basis. There are no departures from this standard rate, and no rebates are available for high-volume customers of the port.

4.3.3. Singapore

Up until 1997, the public port authority was the sole provider of harbour towing services at the Port of Singapore. Coinciding with the privatisation of the port authority in 1997, the newly formed Maritime and Port Authority of Singapore (MPA) decided to introduce competition into the provision of tug services by issuing public licenses to new operators. This decision was driven by the increasing volumes at the port and by efforts to introduce improved service levels and more competitive towing rates now that the provision of towing services was in private hands. Prior to liberalisation, new entrants into the provision of tug services were prohibited and tug provision was subject to very prescriptive regulation.

There are currently six competing private providers of harbour towing services operating at the Port of Singapore. The largest of these operators is PSA Corporation Limited, which also operates the main container terminal at the port. PSA Corp is a private company that was formerly a government statutory body which ran the port. PSA operates its marine services through a wholly owned subsidiary, PSA Marine Services Pte Ltd. The second largest provider of towing services is Keppel Smit Towing which is a joint venture between Keppel Hitachi Zosen Limited and Smit International Singapore Pte Ltd.

Competition was introduced over three phases, with new operators initially licensed only to operate at non-PSA port facilities. In 1999 the liberalisation process was completed with licensed operators being able to service all sectors within the port, including ships calling at the container, conventional and cruise passenger terminals of PSA Corporation.

4.3.4. New Zealand

Harbour towing in New Zealand ports is in most cases provided by port companies rather than independent third party operators. The small scale of port operations in New Zealand makes its ports distinct from the larger international ports included in our survey. New Zealand, with a population of four million people, has thirteen commercial ports, eleven of which have container terminals. The total annual container volume passing through New Zealand ports is less than that for a single medium sized container terminal overseas and is just 81 per cent of that of the Port of Melbourne.⁷

New Zealand ports are highly vertically integrated. In addition to providing port infrastructure, to which the landlord ports of Australia are largely confined, New Zealand port companies generally participate to varying degrees in the full suite of operational port services, including the provision of marine services.

Periodic tendering for harbour towing services has occurred in some New Zealand ports. Port Gisborne contracts out the provision of harbour towing services to Adsteam Marine Ltd. Port Northland's largest shipping customer, oil transporter Silver Fern Shipping, put out a tender for towing services in 1998 and awarded the contract to North Tugz, owned by Ports of Auckland, displacing the local port company as the provider of harbour towing services. However, these are exceptions to the general practice of integration by New Zealand port companies in towing operations.

At the *Port of Auckland* the sole provider of harbour towing services is the publicly listed port company, Ports of Auckland Ltd (PoA). In addition to providing port infrastructure, PoA is the sole supplier of marine services (harbour towing, pilotage services) and is the exclusive operator of the international container terminal, including cargo-handling operations.

PoA owns and operates three tugs at Auckland, which includes a back-up tug. Both primary tugs are state of the art two crew tugs with 50 tonne BP. Port of Auckland's total ship calls in 2001 totalled 1,805, averaging just over 600 visits per tug. This indicates a reasonable level of utilisation in international terms, however, taking into account PoA's total marine operations, which span across three ports in total, utilisation falls away. The PoA marine services division, North Tugz, has the contract for harbour towing at the Marsden Point oil refinery, which engages three tugs (including one backup tug) but handled only an additional 167 ship calls in 2001. PoA also operates tug services at the Port of Onehunga (serving largely coastal shipping) involving one tug and an additional 200 ship calls.

⁷ Tull, M and J Reveley (2000) *Microeconomic Reform and the Economic Performance of Ports: A Comparative Study of Australian and New Zealand Seaports*, International Business Research Institute (IBRI) Working Paper No. 6, University of Wollongong, March, pp. 28-29. Cargo data for 1997-98 and AUS-NZ exchange rate set to 0.8230 (rate as of 8 April 2002) (www.rbnz.govt.nz).

Overall, average utilisation across the marine services group for the three operations totals 310 calls per tug boat. The PoA does move tugs between these operations depending on the relative levels of demand and where there is tug breakdown or servicing. Occasionally PoA leases or charters backup tugs to other ports where they are experiencing problems with their tugs.

Entry into towage services at the Port of Auckland is free, provided that the new entrant complies with the relevant Maritime Safety Authority regulation and any government and local council regulations discussed in Chapter 5 below. The entrant must follow the individual port specifications for the number of tugs required for a specific ship movement based on ship size.

At *Port Nelson* the Port Nelson port company, Port Nelson Limited, is the sole provider of harbour towage services, owning and operating a two tug fleet. Independent third-party operators have entered Port Nelson to provide harbour towage services in the past but have since exited, we understand due largely to the high level of fixed costs relative to the level of demand. Total ship calls to the port in 2001 were approximately 1,369 with an average of 685 ship calls per tug.

The port company, Port Nelson Limited, sets out towage guidelines to ensure port facilities are safeguarded. New entrants must agree to comply with these guidelines including minimum tug requirements for different ship sizes. There are no other restrictions on entry imposed at the individual port level.

5. HARBOUR TOWAGE REGULATION

This section discusses the different approaches to both the economic and industry regulation of harbour towage operators in each of the jurisdictions surveyed.

5.1. NORTH AMERICAN PORTS

5.1.1. United States

At the industry-specific level, there are two primary regulators of harbour towage services in the United States – the United States Coast Guard and the Federal Maritime Commission (FMC). The key role of the Coast Guard is to regulate commercial vessels for maritime safety. The FMC is responsible for industry-specific regulation under the *Shipping Act 1984* where it has a role that extends to economic regulation of harbour towage services. In addition, harbour towage is subject to general competition laws. There is no price regulation or disclosure regime applying to harbour towage provision in the United States.

All commercial vessels, including tugboats, must be certified by the Coast Guard. In order to obtain certification the tug must meet certain minimum safety requirements. Once issued, the certificate specifies the minimum crew size to operate the tug.⁸ All key crew members (e.g. captain, engineer, etc.) must be licensed by the Coast Guard as authorised to operate a commercial vessel. The Coast Guard has the power to conduct regular inspections of all vessels to ensure that safety regulations are met (e.g. provision of navigation lighting, adequate whistles, life preservers, ring buoys, fire extinguishers, adequate emergency training, etc.).⁹

The Coast Guard also ensures that vessel construction and operation comply with existing environmental regulations. A similar mandate is given to the US Environmental Protection Agency.¹⁰ The key environmental regulation that impacts on towage providers is the *Oil Pollution Act 1990*, which proscribes a minimum number of tugs depending on the size of the tanker vessel.

Towage operators are subject to the provisions of the *Shipping Act 1984*. The Act prohibits maritime operations having an adverse effect on trade. The FMC is responsible for regulating the activities of “marine terminal operators” under the Act, giving the Commission a key role in the competition regulation of the maritime industry. This role complements that of the US Department of Justice (Antitrust Division) and the Federal Trade Commission (FTC) under general competition laws.¹¹

The FMC serves as an initial forum for complaints brought by carriers, much in the manner of the FTC, but only in matters specific to the maritime industry. The FMC is responsible for investigating cases of anti-competitive practices in the maritime industry, including unfair practices and unreasonably high tariffs.¹² The FTC also has standing in cases alleging anticompetitive conduct, though cases involving “marine terminal operators” have historically been left to the jurisdiction of the FMC.¹³ The FMC also has an important role concerning (under the Bureau of Trade Analysis, an agency of the FMC) the protection of US vessels engaged in foreign commerce.¹⁴

⁸ Minimum crew size is also influenced by labour union work rules.

⁹ See US Coast Guard Fact File major statutory authorities, <http://www.uscg.mil/hq/g-cp/comrel/factfile>. See safety requirements in 46 CFR, 33 CFR and 33 USC.

¹⁰ See National Environmental Policy Act of 1969 (NEPA), 42 USC 4321 to 4347 and The Oil Pollution Act of 1990 (OPA), 33 USC 2702 to 2761. The Oil Pollution Act includes a provision requiring that tugboats be equally liable for spills and/or dumping by any scows or boats while in tow. See Section 33, Chapter 9, Subchapter III, Section 444.

¹¹ For example, the Sherman Antitrust Act of 1890 and the Clayton Act of 1914.

¹² See US Shipping Act of 1984, Sections 10(d)(1) and 10(d)(4).

¹³ See Docket No. 01-06 Exclusive Tug Franchises – Marine Terminal Operators Serving the Lower Mississippi River, Order to Show Cause; and Petchem Inc. v. Port Canaveral Authority 1997 U.S. App. LEXIS 38146.

¹⁴ See authorization of the Commission under United States Shipping Act of 1984, Title 46 and Title 46AUSC.

17 April 2002

The FMC has recently been involved in the investigation of exclusive franchises for tug services in Port Canaveral, Port Everglades and Mississippi River port terminals. It has been seeking to determine whether these arrangements constitute a violation of the *Shipping Act*.

The FMC recently instituted an investigation into the practices of the Canaveral Port Authority in refusing to grant a franchise to Petcham Inc and refusing to hear the application of Tugz International to provide competing towage services at the Port of Canaveral.¹⁵ Since 1958, a single firm, Seabulk Towing Inc, has held a non-exclusive franchise to provide towage services in the port. In April 2001, the Port Authority and Seabulk entered into an extended franchise agreement which extends Seabulk's franchise for a further ten years. Under the terms of the agreement, the Port Authority is obliged not to grant another non-exclusive franchise "without first having a public hearing showing a convenience and necessity therefore."¹⁶ The Port Authority claims that it was justified in denying the application of Petcham on the basis that "the demand for tug services in Port Canaveral would not support more than one tug company ..."¹⁷ The object of the investigation is to determine whether the Port Authority is in violation of the *Shipping Act* in refusing to grant franchises to competing towage providers wishing to enter the market. A final decision on the matter is to be issued in June 2003.

The issue of exclusive towage franchises was considered by the FMC in 1986 in the case of *Petcham Inc v Canaveral Port Authority*.¹⁸ Based on specific facts at the time, the FMC held that the Authority was justified in its refusal to grant a franchise to Petcham. However, the FMC made a number of observations in relation to exclusive arrangements and whether they are likely to violate provisions of the *Shipping Act*. The FMC found that the exclusive arrangement for tug services was "... prima facie unreasonable because it is contrary to the general policies of the United States favouring competition ..."¹⁹ In respect of the *Shipping Act*, the FMC observed that "such [exclusive] arrangements are generally undesirable and, in the absence of justification by their proponents, may be unlawful under the *Shipping Acts*. However, in certain circumstances, such arrangements may be necessary to provide adequate and consistent service to a port's carriers or shippers, to ensure attractive prices for such services and generally to advance the port's economic well-being."²⁰ As a general rule, however, the FMC stated that "the Shipping Acts do not favour exclusive arrangements except in special circumstances."²¹ The FMC also made the

¹⁵ Tugz International is part of the Great Lakes Group, which also consists of Admiral Barge and Towing Company, The Great Lakes Towing Company, and Puerto Rico Towing & Barge Co.

¹⁶ Federal Maritime Commission, Docket No. 02-03, Exclusive Tug Arrangements in Port Canaveral, Florida: Order of Investigation and Hearing, 25 February, 2002, p. 2.

¹⁷ *Ibid*, p. 3.

¹⁸ 23 SRR 974 (1986)

¹⁹ *Ibid*, at p. 988.

²⁰ *Ibid*, at p. 990.

²¹ See note 15, p. 4.

observation that periodic competitive bidding for the franchise may be preferable to the current arrangements.

Port Everglades was also investigated in relation to exclusive tug arrangements in 2001. However, during the course of the investigation, the port authority granted a second franchise to a competing tug company, breaking a monopoly which had existed since 1958. The port is no longer being investigated by the FMC.

There are also ongoing proceedings in relation to exclusive tug franchises between marine terminal operators and towage providers serving the lower Mississippi River. Complainants have alleged that the exclusive arrangements result in higher costs to vessel operators and stifle competition for tug services in the dry bulk trades.²² The FMC has issued an Order to Show Cause why these arrangements do not violate sections 10(d)(1) and 10(d)(4) of the *Shipping Act*.²³ Under the exclusive arrangements, the port terminal operator contracts directly with a single towage provider to service all of the vessels calling at its terminal. Ships calling at the port terminal are obliged to use the towage company nominated by the terminal operator who also sets and collects the towage tariff from the ship owner.

Other relevant cases relating to harbour towage services include:

Murphy Tugboat Company v. Crowley concerned the pricing behaviour of harbour towage providers in relation to published rates. A tug provider took action against a competing provider alleging that the company's practice of collecting fees from shipping lines above its published rates was prohibited under the *Shipping Act*. The court found that towage companies are not bound by published pricing schedules and that towage charges can be determined at will between carriers and tug companies.²⁴

In *United States v Great Lakes Towing Company*,²⁵ a Federal District Court found that the Great Lakes Towing Company had, through "abnormal and unfair means", created a monopoly for harbour towage and salvage wrecking (salvage) services in 14 ports along all Great Lakes with the exception of Lake Ontario. These was a multitude of anticompetitive conduct identified by the court including a "system of exclusive contracts by which vessel owners who employ throughout the entire season the towing company's tug and wrecking service, at all the ports covered by its tariffs ... receive a large discount from tariff rates, which is denied to all others"; "the giving of special concessions, rebates, and discriminations to customers"; "the restraint of competition by means of operating contracts, by unnecessary conditions imposed upon sellers of towing properties to buyers of tugs from the towing company"; and "unfair rate wars, all adopted or engaged in for the purpose of obtaining and effectuating monopolistic control."

²² Federal Maritime Commission, *Ocean Common Carriers Serving the Lower Mississippi River: Section 15 Order on Exclusive Tug Franchises*, August 21, 2000.

²³ Ibid, page 1.

²⁴ *Murphy Tugboat Company v. Crowley*, 1981 U.S. App. LEXIS 13441.

²⁵ *United States v. Great Lakes Towing Co.* 208 F. 733.

The government had sought to have the company dissolved completely, but the court ruled that the “continued operation by the towing company under proper and stringent injunctive regulations will ... give better assurance of free competition and better public service than is promised by a division of the towing company’s properties among several new ownerships.”

5.1.2. Canada

Transport Canada is Canada’s maritime regulator having the responsibility for regulating commercial vessels for safety and environmental purposes. Transport Canada issues licenses to commercial ships, including tugboats, and conducts periodic inspections of vessels. Transport Canada also administers the *Canada Marine Act 1998*, which established independent port authorities for Canada’s 19 principal ports. These port authorities are run as non-profit Crown Corporations. Each port authority has its own local representation through a board of directors and has considerable discretion in choosing terms under which towage services will be provided.²⁶

Each major region in Canada is subject to a particular set of pilotage rules, which in turn determine towage requirements. The Pacific Pilotage Regulations apply to the coastal British Columbia area including the Port of Vancouver. Under standard practice, pilots require the use of one or more tugboats to berth at ports in British Columbia. There are also industry-specific laws requiring ships to receive a tug escort if they are carrying hazardous materials.

Economic regulation of the maritime industry is the responsibility of the Canadian Transportation Agency, under the *Canada Transportation Act 1996*. The Canadian Transportation Agency serves both as a rule-making body and judicial authority in matters relating to customs and revenue, foreign ships, associations representing ship interests, and competition.²⁷

General competition laws under the *Competition Act 1986* apply to the harbour towage industry in Canada. The Competition Bureau is the competition regulator and has jurisdiction to hear antitrust cases across all industries, including those relating to maritime issues.²⁸ In 1997 a merger between Washington, the owner of a ship berthing company, and Seaspan, a large tug and barge company operating in Canada, was examined by the Canadian Competition Tribunal with Washington being forced to make certain divestments. The Competition Bureau brought the action under the Competition Act alleging that the merger resulted in a substantial lessening of competition in the ship berthing (towage) markets of Burrard Inlet and Roberts Bank in British Columbia. At that time, Washington was also the

²⁶ Personal communication, Danielle Pilon, Canadian Transportation Agency, April 16, 2002.

²⁷ http://www.cta-otc.gc.ca/marine/mandat/index_e.html

²⁸ Personal Communication, Doug Towill, Marine Operations Manager, Seaspan International Towing Company, April 10, 2002. The Federal Court Act states that jurisdiction for disputes involving towage operators should fall with the Federal Court, Trial Division.

owner of Cates, another ship berthing company operating in Burrard Inlet. The Tribunal gave a consent order requiring that Washington divest certain assets in order to allow the purchasers of those assets to compete in the relevant market.²⁹

In Canada, neither the federal government nor individual provinces set limits on rates that may be charged for towage services. Towage rates are determined solely by negotiation between towage providers and shipping lines. While all ports other than Vancouver have only one towage provider, there is at least anecdotal evidence that the de facto monopoly towage providers do not attempt to exercise market power and extract monopoly profits from shipping companies. A likely explanation for such conduct is that the incumbent providers are to some degree constrained by the threat of potential entry.

5.2. EUROPEAN PORTS

Industry-specific regulation of the ports industry – including harbour towage – is undertaken at the level of individual member states in the European Community (EC). This includes regulation of standards for training and qualifications of personnel, safety and environmental rules, and decisions on competent authorities (e.g. licensing or approval of port service operators). There is also great diversity in the ownership, organization and administration of ports both between and within member states.³⁰

In terms of economic regulation, there is no price regulation of harbour towage at the EC or member-state level. EC level competition rules and the competition laws at the member state level apply to port services – including harbour towage – and are relevant in particular to monopoly situations. Additionally, the functioning of port services regimes have to be in conformity with the four major freedoms guaranteed by the EC Treaty (freedom of establishment, and the free movement of workers, goods and services).

While there have been a small number of cases before the EC involving shipping, shipping related services, or port services, we have found no cases specifically involving competition or pricing in the harbour towage industry. Likewise, we have found no towage-specific cases at the member state level.

Perhaps the most relevant case we have identified dealt with an allegation that two mooring services companies operating under exclusive contracts at two Italian ports were charging fees incompatible with competition goals.³¹ A French carrier made allegations that it was forced by the compulsory nature of the mooring service to pay excessive tariffs to Gruppo Antichi Ormeggiatori del Porto di Genova

²⁹ Competition Tribunal, Reasons for Consent Order (dated 29 January 1997), p. 2.

³⁰ It has proved beyond the scope of our investigation to provide specific detail on the regulation of towage operations and other port services at the member state level, although the information collected for individual European ports contains some reference to this.

³¹ *Corsica Ferries France SA v Gruppo Antichi Ormeggiatori del Porto di Genova Coop. a r.l., Gruppo Ormeggiatori del Golfo di La Spezia Coop. a r.l., and Ministero dei Trasporti e della Navigazione.*

Coop and Gruppo Ormeggiatori del Golfo di La Spezia Coop, the two sole providers of mooring services at their respective ports. “Furthermore, it contended that the port authorities [at the Ports of Genoa and La Spezia], by approving tariffs agreed by the mooring groups themselves, facilitated the abuse by those groups of their exclusive rights at the ports in question and, thus, were responsible for breaches of Articles 85 and 86 of the Treaty.”³²

The court found that it was not illegal under EC law for a member state to impose “a requirement on all shipping companies, regardless of their Member State of establishment, whose ships call at its ports to use mooring services provided by holders of exclusive concessions at those ports.”³³ However, it appears that pricing did not end up being a key part of this case.

The diversity of industry-specific legislation and practices between member states has led to disparities in the procedures applied to the ports industry in the EC and has created legal uncertainty regarding the rights of providers of port services and the duties of competent authorities. This diversity has spawned a need to introduce some clear rules within the EC on access to port services and to promote competition in the ports sector. The outcome is the recent 2001 proposal for an EC Directive on market access to port services.³⁴

Proposed 2001 Directive – Improving Industry Regulation

The proposed EC Directive on port market access has sought to impose a degree of consistency on the regulation of the ports industry and to drive that regulation in a pro-competitive direction. It will establish an EC-wide legal framework which lays down basic rules on access to port services markets, the rights and obligations of current and prospective service providers and of the managing bodies of the ports, as well as on the procedures accompanying the authorizations and selection processes.

The key principles are as follows:

- Member states shall take the necessary measures to ensure that providers of port services have access to the market for the provision of port services.
- Member states may require that a provider of port services obtain prior authorization. The Commission believes that the conditions for granting of authorization must be transparent, non-discriminatory, objective, relevant and proportional, and may relate only to the provider’s professional quali-

³² Opinion of Advocate General Fennelly, 22 January 1998. III. Corsica Ferries France SA v Gruppo Antichi Ormeggiatori del Porto di Genova Coop. a r.l., Gruppo Ormeggiatori del Golfo di La Spezia Coop. a r.l., and Ministero dei Trasporti e della Navigazione.

³³ Opinion of Advocate General Fennelly, 22 January 1998. III. Corsica Ferries France SA v Gruppo Antichi Ormeggiatori del Porto di Genova Coop. a r.l., Gruppo Ormeggiatori del Golfo di La Spezia Coop. a r.l., and Ministero dei Trasporti e della Navigazione.

³⁴ EC, *Explanatory Memorandum to the Proposal for a Directive of the European Parliament and of the Council on Market Access to Port Services*, Brussels, 13 February 2001.

fications, their sound financial situation and sufficient insurance coverage, to maritime safety or the safety of installations, equipment and persons as well as to environmental protection.

- The number of authorizations can only be limited for reasons of constraints relating to available space or capacity or, for maritime services, traffic related safety. These constraints must be justified and member states must carry out a transparent, objective and non-discriminatory selection process.
- Ports, in which no authorizations (e.g. entry or access limitations) exist, are not bound by the rules on limitations, selection procedure, duration of authorizations or by transitional measures.
- Member states shall take the necessary measures to allow self-handling (e.g. shipping lines stevedoring their own cargoes). Conditions and criteria for self-handlers must not be stricter than those set for providers of port services for the same or a comparable kind of service.
- Where the managing body of the port provides, or wishes to provide, port services in competition with other service providers, it must be treated like any other competitor.
- Member states will have to ensure full transparency of all procedures in relation to access to the provision of port services, as well as the availability of appeal procedures, including a judicial review.
- Where a selection of service providers is made, the period during which the chosen provider may operate will be limited in time.
- Transitional measures can be put in place to take account of legitimate expectations of current service providers but, at the same time, they require that, within a reasonable time frame, existing authorizations which were not granted in conformity with the Directive's rules be reviewed.
- The Directive and its implementation by member states must not jeopardize safety in ports.
- The Directive and its implementation by member states must not jeopardize environmental protection rules in ports.³⁵

The proposal does not contain rules on institutional structures of the ports and does not prevent member states from deciding which bodies should act as competent authorities. The proposal does not contain harmonized, or minimum standards for training and qualifications of the personnel and the equipment involved. The proposal does not include harmonized safety and environmental rules but re-

³⁵ See *ibid*, pp. 3-4 for a summary of the key principles.

lies on existing rules which may take appropriate account of national, regional and local specificities.

In summary, the Directive proposes a pro-competitive framework for the application of industry-specific legislation and seeks to open up access to the provision of port services across the EC. It does not diminish the role of member states in terms of industry regulation or of favouring different forms of port ownership structure. It does, however, seek to provide a level playing field for port service providers, including those of towage services, and to provide a means for all member jurisdictions to move toward a more competitive ports industry over time.

1997 EC Green Paper on Sea Ports and Maritime Infrastructure

The impetus for the legal framework embodied in the proposed 2001 Directive came originally from the 1997 EC Green Paper on Sea Ports and Maritime Infrastructure.³⁶

The purpose of the Green Paper had been to launch a “wide ranging debate” on the economic and industry regulation of the ports industry, especially with regard to port charging and market access. The Green Paper noted that current practices at EC ports had given rise to “complaints” by users and potential suppliers of ports services.

The EC was examining these complaints on two fronts:

1. on a case-by-case basis (for appropriate action under the EC competition rules); and
2. to consider the development of a regulatory framework (for more systematic liberalisation of port services markets).

In examining market issues related to port services, the Green Paper distinguished between cargo services (e.g. cargo-handling and storage) and technical nautical services (e.g. pilotage, towage and mooring).

It noted that, in response to new technological requirements and increasing competition, the markets for cargo services had become more “commercially orientated” but in markets for nautical services “restrictions often still prevail”.³⁷ Against this, the EC noted that a diversity of organizational structures seem to apply to towage and mooring. More specifically:

In the case of towage, public sector provision may involve the port authority or licensed operators under exclusive rights where rates are fixed and controlled by the competent port authority. Where the service is provided by private operators, no formal restrictions to market access exist and public sector involvement is

³⁶ EC, *Green Paper on Sea Ports and Maritime Infrastructure*, Brussels, 10 December 1997 – COM(97) 678 final.

³⁷ *Ibid*, p. 23.

*generally limited to ensuring compliance with safety and environmental standards. Rates are, in principle, freely negotiated.*³⁸

The Green Paper noted that there had been a number of decisions of the European Court of Justice and the European Commission in relation to ports, particularly in the field of competition rules. None of these had related to harbour towage specifically. Key decisions related to the following conduct (with port services in brackets):

- abuse of a dominant position (by a dual monopoly of port operators and dock work companies);
- discriminatory tariffs (charged by pilotage corporations); and
- port undertakings refusing competitors access to essential port facilities (port authorities and shipping companies, mostly ferry operators).³⁹

The EC Green Paper concluded that case-by-case action by the European Court of Justice and the European Commission on competition rules should be supplemented by a regulatory framework aimed at more systemic liberalization of access to port services markets – leading ultimately to the proposed 2001 EC Directive.

5.3. ASIA PACIFIC PORTS

5.3.1. Malaysia

In terms of economic regulation, the provision of harbour towage services in Malaysian ports is price controlled by the Malaysian Government. The Government sets the maximum tariff for towage services which applies to all ports in Malaysia, including Port Klang. Malaysia is the only country in our survey that imposes a system of price control for harbour towage services.

Harbour towage is also governed by industry-specific regulations under the *Port Authorities Act 1963* and the *Port Klang Authority By-Laws 1966*. These laws regulate for safety and training and are administered by the public Klang Port Authority. We have not been able to gather further information about the specific requirements under these laws.

There is no general competition law framework in Malaysia.

³⁸ *Ibid*, p. 24.

³⁹ *Ibid*, p. 25.

5.3.2. Sri Lanka

Under Sri Lankan government regulations no private operators are permitted to offer towage services at ports operated by the Sri Lanka Ports Authority. In these ports, the provision of towage services is a state protected monopoly. The government does not set the price for towage services, leaving this to be determined by the Ports Authority.

Industry-specific regulation applies to harbour towage services in Sri Lanka. Specifically, tug masters and mates must comply with the International Convention on Standards for Training, Certification, and Watchkeeping for seafarers which came into force in 1995 (STCW 95). The Convention regulates for minimum training requirements for seafarers, including towage providers. In addition to meeting the requirements of STCW 95, tug engineers are required to have a certificate issued by the Ministry of Shipping of their competency to handle engines of over 1000 BHP.

All recruitment decisions for towage operations are made by the Board of Directors of the Ports Authority based on recommendations from the Harbour Master. Tug crew wages are determined by the management of the Ports Authority and must be in line with State approved salary scales.

5.3.3. Singapore

Harbour towage services at the Port of Singapore are regulated by the Maritime and Port Authority of Singapore (MPA). A licensing regime operates under section 81 of the *Maritime and Port Authority of Singapore Act* (Cap 170A) which states that “no person shall provide any port or marine service and facility unless he is authorised to do so by public license or an exemption granted by the authority.” The licensing regime covers minimum standards for tug master and crew training, tug boat specifications and marine safety.

Factors which are taken into account by the MPA in determining whether to grant a public towage license include:⁴⁰

- (a) the company’s experience in tug operations to assist berthing and unberthing of vessels and quality of service;
- (b) the tug fleet and its operational capabilities;
- (c) training and safety standards;
- (d) the company’s business plan to operate in the tug business; and
- (e) the financial sustainability of the company.

The licensing regime for towage provision is periodic in that applications can only be made when invited from the MPA. The MPA issued five new licenses during 1998 to private operators. The MPA holds a discretion in issuing further licenses and the timing of the issue. It has stated that it will consider factors such as market conditions. The MPA has not issued any additional licenses since 1998.

⁴⁰ Maritime and Port Authority of Singapore, *Liberalisation of Tug Services*, Press Release, 26 August 1997.

The Director of Marine at the MPA also regulates for the safety of towage operations by issuing binding marine circulars on a periodic basis.

There is no price regulation of harbour towage services in Singapore with towage charges being determined solely by negotiation between the towage provider and shipping lines.

In a December 1998 press release the MPA reported that the introduction of competition had immediately improved the quality of towage services in the Port of Singapore. They reported that between January and August 1998 the service levels of tugs improved to 97.9% of the tug orders being serviced within 15 minutes of the service-required time, up from 96.3% for the same period in 1997. Certain sectors of the port that had previously received a lower priority and lower quality service also reported an increase in response times from 94.6% to 97.3%.⁴¹

5.3.4. New Zealand

Towage services are not specifically regulated in New Zealand, but fall under the regulations imposed by the Maritime Safety Authority (MSA) on ships operating in New Zealand waters. The MSA is empowered under the Maritime Transport Act 1994 to make Maritime Rules. Regulation 21 of the Rules establishes a Safe Ship Management System that is administered by the MSA. It specifies requirements for shipping vessels and minimum training for crews, and other safety guidelines. The MSA has the power to make inspections to ensure that towage providers are complying with the minimum requirements.

There are no legal or regulatory barriers to entry into the provision of harbour towage services in New Zealand ports, other than those specified under maritime safety regulations. Tug operators are free to negotiate towage charges with their customers, with no form of price control being imposed by the government. There is no obligation on towage providers to disclose the basis for charges and, unlike the position in Australia, there is no notification procedure for the imposition of price increases of towage services.

The provision of harbour towage services is subject to the general competition law in New Zealand under the *Commerce Act 1986*. The competition regulator is the Commerce Commission. Two key provisions relevant to harbour towage services are section 36 which prohibits a person having a substantial degree of power in a market from taking advantage of that power for certain anti-competitive purposes (up until 2001 the test had been to prohibit the use of a 'dominant' position for the same anti-competitive purposes) and section 27 which prohibits contracts, arrangements, or understandings which substantially lessening competition.

In the landmark case of *Commerce Commission v Port Nelson*, the High Court found Port Nelson in breach of section 36 in using its dominant position to restrict

⁴¹ Maritime and Port Authority of Singapore, *Liberalisation of Towage Services in Port – Implementation of Phase 3*, Press Release, 3 December 1998.

competition in the provision of pilotage and harbour towing services.⁴² The anti-competitive conduct identified by the Commission involved Port Nelson refusing to hire its tugs to a new entrant unless its own pilots were also hired, offering a 5% discount on its services to customers who used all of its services, and at the same time setting a minimum price for hiring out its own pilots that was below cost.⁴³ The court found that the combination of the discount and charging pilot hire below cost had the potential to eliminate the new entrant and that the purpose of the arrangement was to substantially lessen competition.

The High Court's decision in *Port Nelson* demonstrates the successful application of general economy-wide competition law to harbour towing services. Anti-competitive conduct, such as refusing access to berth facilities to ships towed by competing providers, is deemed illegal conduct under the *Port Nelson* decision. Towing market share must be won competitively, rather than through the use of market power. During our survey we observed examples of competitive pressures in towing markets in Auckland and Nelson. Ports of Auckland, faced with the threat of entry by Adsteam Marine and Howard Smith tug companies in the late 1990s, responded by upgrading to tugs requiring only two crew members and, according to Ports of Auckland, achieved efficiencies that kept these providers out of the market.⁴⁴ The port has seen a 24 per cent rise in productivity on a staff-per-ship-call basis as a result.⁴⁵ Port Nelson has also trained its staff to be multi-skilled in terms of port services, being able to shift between different operational port services to increase labour efficiency. An additional initiative has been to use an engineer and a deck hand for towing jobs reducing the number of tug crew from four to three.

Given the level of inter-port competition between New Zealand ports, port companies face incentives to attract business from other ports through efficient provision of the entire package of port services, including harbour towing. Both ports surveyed reported frequently conducting benchmarking exercises in relation to the price and quality of port services, including marine services, in order to ensure that their service offerings were in line with that offered by other ports. The price and performance of harbour towing in New Zealand has reflected these competitive pressures.

The New Zealand government has recently commissioned a study of the market power of New Zealand's ports industry as a whole, which will include an examination of harbour towing arrangements. Some port users, such as coastal shippers, ferry operators and exporters of low value bulk products, have raised concerns in a number of forums. The study is intended to provide the Government

42 *Commerce Commission v Port Nelson Ltd* (1995) 6 TCLR 406. The former section 36 of the Commerce Act referred to the use of a dominant position in a market: (1) No person who has a dominant position in a market shall use that position for the purpose of – (a) Restricting the entry of any person into that or any other market; or (b) Preventing or deterring any person from engaging in competitive conduct in that or in any other market; or (c) Eliminating any person from that or any other market.

43 *Commerce Commission wins \$500,000 penalties against Port Nelson Limited*, Media Release, 1995/27.

44 Information provided in interview with Ports of Auckland, 9 April 2002.

45 Port of Auckland, 2001 Annual Report, page 12.

with the information necessary to make an informed decision about the merits of a Commerce Commission inquiry into the ports industry or other possible courses of policy action.⁴⁶

6. CONCLUSIONS

This report has attempted to provide an overview of the harbour towage industry and its regulation internationally, through reference to a small sample of ports in North America, Europe and the Asia Pacific.

The exercise has provided a considerable pool of information for comparative purposes, especially as regards regulation and pricing issues. The information collected covers port company control of towage (e.g. access conditions and performance requirements), industry-specific (e.g. safety and training) and economic (e.g. competition or antitrust) government regulation of the industry, and price monitoring or controls imposed either by governments or ports.

Key observations are that:

- The ports industry is a complex industry with several interlocking components (markets) of which harbour towage is just one, with the extent of vertical integration by port companies varying from port to port.
- There are a variety of approaches to providing harbour towage services at the port level – ranging from the open, multi-provider model common in US ports, where competition and market forces are the key drivers of pricing and service discipline, to the closed, single operator models in place at some full service ports in Europe (Antwerp) and Asia (Port Klang), where price controls and/or vertical integration by ports are employed to achieve performance targets.
- Industry regulation of harbour towage operators exists in most jurisdictions, with the trend in the US, Europe and New Zealand toward a transparent and flexible approach to meeting entry requirements.
- General competition laws apply to the harbour towage industry in the US, Canada, Europe and New Zealand, albeit that in some of these jurisdictions this is overlaid with other economic regulation (as with the Shipping Act and the role of the FMC in the United States).
- Explicit price monitoring or regulation by governments (as opposed to the requirements of a port company) was very much the exception rather than

⁴⁶ The study was commissioned by the Ministry of Economic Development and the Ministry of Transport in January 2002. Charles River Associates (Asia Pacific) Ltd was engaged to undertake the study and will report to the Ministries by the end of April 2002.

17 April 2002

the rule – in our sample, only Malaysia has price regulation of harbour towage.

The above suggests that forces acting on harbour towage providers are manifold and multi-layered. Consequently, before forming a view on the adequacy of one level or type of regulation, consideration of all elements of competition, port company organisation and control, and government regulation (including both general competition laws and industry-specific regulation) impacting on harbour towage providers needs to be taken into account.

In other western economies surveyed, it appears that general competition laws are relied on to address concerns about competition and market power in the industry (where they arise) rather than price control or monitoring by governments.

APPENDIX A – OVERVIEW OF INDIVIDUAL PORTS SURVEYED⁴⁷

PORT	Nature of port administration and ownership	Type of port (e.g. landlord, mixed, service)	2001 Annual total tonnage handled (million tonnes) ⁴⁸	Annual Container trade (million TEUs)	Broad overview of key cargo types (e.g. export, import, transshipment cargoes, etc.)
NORTH AMERICAN PORTS					
Vancouver, BC	Public, non-corporate	Landlord	72.8	1.2	Import: food products, metal ores, iron, steel, and alloys, fuel oil, salt. Exports: coal, grain, sulphur, wood pulp, potash.
Houston Authority, TX⁴⁹	Public, non-corporate	Landlord	175	1.1	Import: Petroleum products, iron/steel, natural gas, organic chemicals, and crude fertilisers. Export: Cereals/grains, petroleum products, organic chemicals, polymer plastics and inorganic chemicals.
New Orleans, LA	Public, non-corporate	Landlord	33.6	0.3	Imports: Iron and steel, forest products, rubber, copper, coffee. Exports: Iron and steel, forest products, poultry, synthetic resins, rice.
Portland, OR	Public, non-corporate	Landlord	11.1	0.3	Import: Automobiles, petroleum products, steel, limestone. Export: Wheat, soda ash, potash, hay.
Boston, MA	Public	Landlord	16.3 ⁵⁰	0.07	Import: petroleum and its products, cement, salt, gypsum, rubber, hides, fish, fruits, coffee, molasses and lumber. Export: chemicals, lumber and logs, iron and steel, leather, flour, cotton, woollen goods, wood, cordage and machinery. The chief coastal trade is in bulk gypsum, liquid sulphur, cement and petroleum.

⁴⁷ The information used to compile this table was obtained from various sources including: Lloyds/Fairplay online service, individual port websites and communications.

⁴⁸ Unless otherwise stated, cargo volumes are expressed in metric tonnes, with the exception of North America which are expressed in short tons.

⁴⁹ Houston cargo and container volumes are for 2000.

17 April 2002

PORT	Nature of port administration and ownership	Type of port (e.g. landlord, mixed, service)	2001 Annual total tonnage handled (million tonnes) ⁴⁸	Annual Container trade (million TEUs)	Broad overview of key cargo types (e.g. export, import, transshipment cargoes, etc.)
EUROPEAN PORTS					
Rotterdam	A public company, the Rotterdam Municipal Port Management (RMPM) is authorized by the Municipality of Rotterdam to manage the port and industrial zone.	Landlord	315	6.1	As one of the largest ports in the world, Rotterdam handles all cargo types.
Hamburg	Public – City of Hamburg.	Landlord	85.1	4.7	Wide variety – esp. petroleum and container movements.
Antwerp	Public – The Antwerp Port Authority. ⁵¹	Service	214	4.2	Petroleum, ores, coal, steel, crude oil, cereals, fertilizers, paper and cellulose, sugar and fruit.
Amsterdam	Public – The Port Authority is owned by the City of Amsterdam.	Landlord	68.4	0.05	The world's largest cocoa port, handling 20% of the world's cocoa.
Marseilles	Public	Landlord	94.1	0.7	Fruits and vegetables, sugar, metals, chemicals.

⁵⁰ Measured in metric tonnes.

⁵¹ The Antwerp Port Authority owns the docks and the sites on the Right Bank of the Scheldt. It is the owner of part of the port equipment. The Port Authority likewise manages the Left Bank port, ensuring uniform policies on both sides of the river.

17 April 2002

PORT	Nature of port administration and ownership	Type of port (e.g. landlord, mixed, service)	2001 Annual total tonnage handled (million tonnes) ⁴⁸	Annual Container trade (million TEUs)	Broad overview of key cargo types (e.g. export, import, transshipment cargoes, etc.)
ASIA PACIFIC PORTS					
Auckland	Private, publicly listed (80% owned by statutory authority)	Mixed	4.2	0.6	Motor vehicle imports, dairy and meat exports, general imports (containerized and conventional).
Nelson	Public (owned by local authorities) - corporatised	Mixed	2.4	0.04	Forestry exports, fruit exports, petroleum products, fish exports.
Singapore	Public, corporatised	Mixed	313 ⁵²	15.5	Oil (third largest oil refinery center in the world). General range of containerized and conventional cargoes.
Port Colombo	Public	Mixed	25.1	1.7	Handles all conventional cargoes and containers. Large volume of petroleum products, transshipment container traffic.
Port Klang	Private, publicly listed	Service	70 ⁵³	3.7	Containerized cargoes, dry bulk, breakbulk, liquid bulk.

⁵² Freight tonnes⁵³ Freight tonnes.

APPENDIX B – BROAD OVERVIEW OF TUG UTILISATION IN INDIVIDUAL PORTS SURVEYED

PORT	Total number (no.) of tugs in use at port	Ship visits per year (no.)	Ship visits per tug (average)
North American ports			
Vancouver, BC	Approx. 15	2,820	188
Houston, TX	Approx. 14	6,801 (2000)	486
New Orleans, LA	53 ⁵⁴	2,020	38
Portland, OR	Approx. 10 to 20	864	Approx. 58
Boston, MA	15	1,238	83
European ports			
Rotterdam	Approx. 35	30,202	863
Hamburg	23	11,900	517
Antwerp	18	15,885	883
Amsterdam	Approx. 9	9,133	1,015
Marseilles	16	9,539	596

⁵⁴ This likely overstates the numbers of tugs in use at the Port of New Orleans since a number of the operators appear to use their tugs based in New Orleans for operations up the Mississippi River and for ocean towage and salvage outside of the Port. See Appendix C for more information.

17 April 2002

PORT	Total number (no.) of tugs in use at port	Ship visits per year (no.)	Ship visits per tug (average)
Asia Pacific ports			
Auckland	3 (2 primary and 1 backup)	1,805	602
Nelson	2	1,369	685
Singapore	Approx. 85 to 100	146,265	Approx. 1581
Port Klang	13	14,207	1,093
Colombo	9	3,590	400

17 April 2002

APPENDIX C – SPECIFIC DETAIL ON HARBOUR TOWAGE SERVICES IN NORTH AMERICAN PORTS

VANCOUVER, BC

Providers of harbour towage services (including the port company if applicable)	No. and types of tugs of each provider	Market share of each provider	Separation between tug ownership and operation	Charging of towage services ⁵⁵	Involvement in the provision of other port services ⁵⁶	Ownership or joint venture relationships between shipping lines and towage providers ⁵⁷	Tug provision at other ports ⁵⁸	Cooperative agreements between tug providers ⁵⁹
Rictow Marine Co. (Tiger Tugs Inc.)	2 conventional, 2 tractor	Approx 25%	None	Based on the type of tug and hours in use.	Coastal & deep-sea towing, ship-repair, and salvage.	None	Provides occasional service to ports in the immediate vicinity.	Tugs from each company will sometimes work together when demand is very high.
Seaspan International Inc.	6 conventional, 5 tractor	Approx 75%	None	Based on the type of tug and hours in use.	Coastal & deep-sea towing, ship-repair, salvage.	None	Provides occasional service to ports in the immediate vicinity.	Tugs from each company will sometimes work together when demand is very high.

⁵⁵ Provide the basis and units for towage charges (e.g. by ship size (GRT), time (hours), etc.). Are volume-based rebates provided to customers?

⁵⁶ Are tugs used for purposes other than harbour towage (e.g. salvage, ocean towage, emergency services, etc.)? Are there other vertical issues?

⁵⁷ Are there ownership arrangements with any other port users or service providers?

⁵⁸ Are tugs utilized across multiple ports? Are there other horizontal issues?

⁵⁹ For example, pooling of tugboats within the port, sharing of tugs or other infrastructure, etc.

HOUSTON, TX

Providers of harbour towage services (including the port company if applicable)	No. and types of tugs of each provider	Market share of each provider	Separation between tug ownership and operation	Charging of towage services	Involvement in the provision of other port services	Ownership or joint venture relationships between shipping lines and towage providers	Tug provision at other ports	Cooperative agreements between tug providers
Suderman & Young Towing	6 twin-screw and 1 tractor.	Approx. 50%	None	Based on size of the vessel towed, the dock the vessel is towed to, the hours required, and whether the vessel can power itself part-way.	No	Some companies at other ports (unnamed) provide multiple services, but not in Houston.	Both companies own tugboats at multiple ports. The tugboats themselves will also occasionally move from port to port.	No cooperation.
Bay-Houston Towing Co.	6 twin-screw and 1 tractor.	Approx 50%	None					

NEW ORLEANS, LA

Providers of harbour towage services (including the port company if applicable)	No. and types of tugs of each provider	Market share of each provider	Separation between tug ownership and operation	Charging of towage services	Involvement in the provision of other port services	Ownership or joint venture relationships between shipping lines and towage providers	Tug provision at other ports	Cooperative agreements between tug providers
Bisso Towboat Co Inc.	2 triple-screw 5200HP boats; 8 twin-screw 3400 to 4600HP boats; 5 single and twin-screw 2200 to 2800HP boats	16% (imputed from other shares)	No	Rates vary based on type of boat, have contract rates and discounts with various customers.	Barges, water delivery, and lineman.	No	Operates from Baton Rouge, LA to mouth of Mississippi River.	No (not related to E.N. Bisso Co.)
Crescent Towing & Salvage Co.	17 conventional and Z-Type Tractor tugs (3,500-5,200 HP)	40%	No	Rates based on tariff. Do provide volume-based discounts which average	Emergency services provided on an "as needed" basis. This service is for existing customers in an emergency.	No	Mobile, AL and Savannah, GA	No

17 April 2002

Providers of harbour towage services (including the port company if applicable)	No. and types of tugs of each provider	Market share of each provider	Separation between tug ownership and operation	Charging of towage services	Involvement in the provision of other port services	Ownership or joint venture relationships between shipping lines and towage providers	Tug provision at other ports	Cooperative agreements between tug providers
				about 25%.				
E.N. Bisso & Sons, Inc.	15 conventional tugs; 2,000-4,200 HP	34%	No	Basic rate plus various surcharges including tonnages.	Heavy lift derricks.	No	Operates from Baton Rouge, LA to mouth of Mississippi River.	No (not related to Bisso Towboat Co.)
River Parishes Co.	8 conventional tugs; 2,400-4,200 HP	10%	No	Basic rate plus surcharge for ship size. Is a volume-based discount for customers which averages about a 35% discount.	Has a water barge which sells fresh water to customers.	No	Operates from Baton Rouge, LA to mouth of Mississippi River.	No

PORTLAND, OR

Providers of harbour towage services (including the port company if applicable) ⁶⁰	No. and types of tugs each provider	Market share of each provider	Separation between tug ownership and operation?	Charging of towage services	Involvement in the provision of other port services	Ownership or joint venture relationships between shipping lines and towage providers	Tug provision at other ports	Cooperative agreements between tug providers
Foss Maritime Co.	6 ship assist boats	Approx. 50%	None	Based on horsepower, tug type and service ⁶¹	Yes, tugs are used for ocean towing and salvage (occasionally) and river barging.	None known, but long-term contracts are common.	Yes, all along the Pacific Coast. Bug tugs stay local.	Importing of tugs from nearby ports possible, but very infrequent.
Shaber Transportation Co.	Approx. 9 ship assist boats	Approx. 50%	None	Based on horsepower, tug type and service ⁶²	Yes, tugs are used for ocean towing and salvage (occasionally) and river barging.	None known, but long-term contracts are common.	Yes, all along the Pacific Coast. Bug tugs stay local.	Importing of tugs from nearby ports possible, but very infrequent.

⁶⁰ The Port of Portland is located approximately 100 miles (160km) inland on the Columbia River. This river is a major US waterway that has significant barge traffic in addition to the ocean going vessels travelling to and from the port. A number of smaller towing companies also operate at the port to serve this barge traffic, but do not offer harbour towage services.

⁶¹ Primary harbour services include container barging, bunkering, barge shifting, ship assists, and grain barging.

⁶² Primary harbour services include container barging, bunkering, barge shifting, ship assists, and grain barging.

17 April 2002

BOSTON, MA

Providers of harbour towage services (including the port company if applicable)	No. and types of tugs of each provider	Market share of each provider	Separation between tug ownership and operation	Charging of towage services	Involve-ment in the provi-sion of other port services	Ownership or joint venture rela-tionships be-tween shipping lines and towage providers	Tug provision at other ports	Cooperative agreements be-tween tug provid-ers
Boston Towing & Transportation Co	10 high powered tractor and conventional tugs; 1,800-7,200 HP	80%	No	Function of ship size and distance tugs travel.	Salvage and emergency services.	No	Tugs stay in Massachusetts Bay area but do move between ports.	No formal agreements, but tug companies will sometimes call each other and ask for assistance when supply is short.
Bay State Towing	5 single & twin screw tugs; 1,500-3,400 HP	20%	No	Function of time of day, distance, size of ship.	Provides salvage and emergency services, but only rarely.	No	Tugs move between New York and Maine.	No formal agreements, but tug companies will sometimes call each other and ask for assistance when supply is short.

17 April 2002

APPENDIX D – SPECIFIC DETAIL ON HARBOUR TOWAGE SERVICES AT EUROPEAN PORTS

ROTTERDAM

Providers of harbour towage services (including the port company if applicable)	No. types and of tugs of each pro-vider	Market share of each pro-vider	Separation between tug ownership and operation	Charging of towage services	Involvement in the provision of other port services	Ownership or joint venture relationships between shipping lines and towage providers	Tug provision at other ports	Cooperative agreements between tug providers
Fairplay Towage BV	8	17%	None	Length of vessel, area (section of harbour), hours. ⁶³	Coastal towing, salvage services, deep sea towing.		Also operates in Hamburg, Stralsund, Wismar, and Rostock	Fairplay and Smit have an alliance. Under the agreement, two of Fairplay's tugs are chartered to Smit and "the entire operation of shiphandling vessels is now in the hands of the Smit towage control center." ⁶⁴

⁶³ "Port Tariffs 2002 Port of Rotterdam", Rotterdam Municipal Port Management.

⁶⁴ "One World, One Tug Company", Marcon International Inc., http://www.marcon.com/main/marcon_st1.cfm?Archive=430&StoryID=236.

17 April 2002

Providers of harbour towage services (including the port company if applicable)	No. and types of tugs of each provider	Market share of each provider	Separation between tug ownership and operation	Charging of towage services	Involvement in the provision of other port services	Ownership or joint venture relationships between shipping lines and towage providers	Tug provision at other ports	Cooperative agreements between tug providers
Smit Havensleepdienst BV	20 ⁶⁵	42% Smit acquired Sleepdienst Jan Kooren BV (one of the last remaining independent ship-towage companies in the Netherlands) in early 1999.		Length of vessel, area (section of harbour). ⁶⁶	Salvage, ocean towage.	Smit's subsidiary, Interriver, operates pusher tugs at the port.	Yes (ports unknown)	Smit has an alliance with Fairplay (see Fairplay).
Kotug	7	15%		Length of vessel, area (section of			Also operates at Hamburg and Bremerhaven	

⁶⁵ "Smit Harbour Towage Activities Expand in Europe and Other World Regions", <http://www.smit-international.com/news/news18.html>.

⁶⁶ "Port Tariffs 2002 Port of Rotterdam", Rotterdam Municipal Port Management.

⁶⁷ "Port Tariffs 2002 Port of Rotterdam", Rotterdam Municipal Port Management.

17 April 2002

Providers of harbour towage services (including the port company if applicable)	No. and types of tugs of each provider	Market share of each provider	Separation between tug ownership and operation	Charging of towage services	Involvement in the provision of other port services	Ownership or joint venture relationships between shipping lines and towage providers	Tug provision at other ports	Cooperative agreements between tug providers
				harbour). ⁶⁷				
Rederij T Muller BV	13	27%			Total of 17 tugs and pushboats in operation. Rederij also provides sea towing, salvage, ice-breaking, and firefighting.			

HAMBURG

Providers of harbour towage services (including the port company if applicable)	No. and types of tugs of each provider	Market share of each provider	Separation between tug ownership and operation	Charging of towage services	Involvement in the provision of other port services	Ownership or joint venture relationships between shipping lines and towage providers	Tug provision at other ports	Cooperative agreements between tug providers
5 firms provide a joint towage service under a joint venture arrangement called Hamburg Tugs. The five firms are listed below.	20 ⁶⁸ (BP 12-55 tonnes) They have a total of 14 tugs available at all times, and up to 20 for peak demand. ⁶⁹	Large majority of the total market share	None					
Bugsier, Reederei- und Bergungsges. MbH		Part of Hamburg Tugs (see above)					Also operates in Stade, Bützfleth, Brunsbüttel, Cuxhaven, Wilhelmshave, Rostock, and	Part of Hamburg Tugs joint venture.

⁶⁸ "Port of Hamburg Handbook 2001/2002", Marine Services Section.

⁶⁹ "Port of Hamburg Handbook 2001/2002", Marine Services Section.

17 April 2002

Providers of harbour towage services (including the port company if applicable)	No. and types of tugs of each provider	Market share of each provider	Separation between tug ownership and operation	Charging of towage services	Involvement in the provision of other port services	Ownership or joint venture relationships between shipping lines and towage providers	Tug provision at other ports	Cooperative agreements between tug providers
							Wismar.	
Fairplay Schleppdampfschiffs-Reederei		See above					Also operates in Rotterdam, Stralsund, Wismar, and Rostock	Part of Hamburg Tugs joint venture.
L & R Lütgens & Reimers GmbH & Co.		See above						Part of Hamburg Tugs joint venture.
Neue Schleppdampfschiffsreederei		See above						Part of Hamburg Tugs joint venture.
Petersen & Alpers		See above						Part of Hamburg Tugs joint ven-

17 April 2002

Providers of harbour towage services (including the port company if applicable)	No. and types of tugs of each provider	Market share of each provider	Separation between tug ownership and operation	Charging of towage services	Involvement in the provision of other port services	Ownership or joint venture relationships between shipping lines and towage providers	Tug provision at other ports	Cooperative agreements between tug providers
								ture.
Kotug GmbH and Smit International GmbH offer a joint towage service	3	Minority market share.			Ship weight (tons gross). ⁷⁰		Also operates at Rotterdam and Bremerhaven	Kotug and Smit (both Dutch companies) offer the competition to Hamburg Tugs, with a fleet of 3.

⁷⁰ "Towage Rates for the Port of Hamburg", Tugboat Company Kotug Europe BV (valid as from 1st January 2002).

ANTWERP

Providers of harbour towage services (including the port company if applicable)	No. and types of tugs of each provider	Market share of each provider	Separation between tug ownership and operation	Charging of towage services	Involvement in the provision of other port services	Ownership or joint venture relationships between shipping lines and towage providers	Tug provision at other ports	Cooperative agreements between tug providers
Antwerp Port Authority (sole provider of towage services within the port)	18	100% The Port Authority is the sole operator within the locks.	None	Gross tonnage and distance towed (distance is measured across "sectors" within the port). The port authority sets the towage prices.	The port towing department also provides: fire fighting, assistance to sinking vessels, pollution management (oil spill belts and spraying), and buoy laying.			
URS Services (Union de Remorquage et de Sauvetage s.a.)	Operates outside the port		Towage on the river Scheldt only.				Also at Gent, Vlissingen (Flushing), Terneuzen, Oostende and Zeebrugge	Smit has a stake in URS.

17 April 2002

AMSTERDAM

Providers of harbour towage services (including the port company if applicable)	No. and types of tugs of each provider	Market share of each provider	Separation between tug ownership and operation	Charging of towage services	Involvement in the provision of other port services	Ownership or joint venture relationships between shipping lines and towage providers	Tug provision at other ports	Cooperative agreements between tug providers
Wijsmuller Holding BV	9	100%			Wijsmuller also provides salvage, offshore towage, terminal towage (oil, gas, etc.), and other maritime services.	Denmark's A.P. Moller, the parent company of the Maersk Shipping Line, acquired Wijsmuller in 2001.	Wijsmuller operates tugs in 21 countries, including Australia. In Amsterdam, the tugs operate in the water systems to the North Sea.	Smit and Wijsmuller have been engaged in joint ventures. For example, the Global Towing Alliance, which was originally composed of four Smit deep-sea and salvage tugs and two similar tugs from Wijsmuller.

MARSEILLES

Providers of harbour towage services (including the port company if applicable)	No. and types of tugs of each provider	Market share of each provider	Separation between tug ownership and operation	Charging of towage services	Involvement in the provision of other port services	Ownership or joint venture relationships between shipping lines and towage providers	Tug provision at other ports	Cooperative agreements between tug providers
Societe de Remorquage Portuaire et d'Assistance en Mediterranee (SRPAM)	16	100% (port contracts with one firm for service on a yearly basis through competitive bidding process)	None		Les Abeilles also provides harbour towage, fire-fighting, pollution control, coastal or deep-sea towage, and salvage & rescue operations.	SRPAM is a subsidiary of Les Abeilles in Marseilles. Les Abeilles is part of the Maritime Branch of The Bourbon Group.	Dunkerque, Calais, Boulogne, Dieppe, Le Havre, Auxport/Caen, Auxport/Cherbourg, Brest, Nantes/St. Nazaire, La Rochelle, Bordeaux, Bayonne, Sete, Ivory Coast, Senegal, Reunion Island, Mayotte, and New Caledonia.	N/A

17 April 2002

APPENDIX E – SPECIFIC DETAIL ON HARBOUR TOWAGE SERVICES AT ASIA PACIFIC PORTS

SINGAPORE

Providers of harbour towage services (including the port company if applicable)	No. and types of tugs of each provider	Market share of each provider	Separation between tug ownership and operation	Charging of towage services	Involvement in the provision of other port services	Ownership or joint venture relationships between shipping lines and towage providers	Tug provision at other ports	Cooperative agreements between tug providers
PSA Corporation Ltd	<p>Largest tug fleet in Singapore.</p> <p>Approx 44 tugs.</p> <p>Acquired another towage provider (SembCorp Logistics) in June 2001 (with 14 tugs).</p>	Majority of market share.	Both own and operate tugs. Fleet is supplemented by tugs on time charter.				Tugs are available for specific towage assignments or long-term charter, both locally and overseas.	PSA's tug fleet is supplemented by tugs on time charter.

17 April 2002

Providers of harbour towage services (including the port company if applicable)	No. and types of tugs of each provider	Market share of each provider	Separation between tug ownership and operation	Charging of towage services	Involvement in the provision of other port services	Ownership or joint venture relationships between shipping lines and towage providers	Tug provision at other ports	Cooperative agreements between tug providers
	Approx. 58 tugs in total fleet.							
Keppel Smit Towage Pte Ltd (joint venture between Keppel Hitachi Zosen Limited and Smit International Singapore Pte Ltd)						Long-term contracts exist between shipping lines and towage providers.		
Sealion Towage Pte Ltd								
Jurong Marine Services								
Marina Offshore Pte Ltd	15 tugs		Owned and operated					
Maju Maritime Pte Ltd	11 tugs		Owned and operated					

PORT KLANG

Providers of harbour towage services (including the port company if applicable)	No. and types of tugs of each provider	Market share of each provider	Separation between tug ownership and operation	Charging of towage services	Involvement in the provision of other port services	Ownership or joint venture relationships between shipping lines and towage providers	Tug provision at other ports	Cooperative agreements between tug providers
Northport Marine Services	8 tugs (max BP 45 tonnes)	Northport is the primary provider of towage at Port Klang handling 70% of all vessels calling at the port. (Northport towage services all vessels entering its terminal and also vessels entering other smaller private terminals within Port Klang.)	Northport owns 6 tugs and hires 2 tugs from an independent company.	Prices are based on ship size with three different band widths applying and on total usage time.	Northport is the operator of the largest container terminal at Port Klang. It offers an integrated service to its customers from cargo handling, all marine services and support services.	No	No	None
Westport	5 tugs (max BP 45 tonnes)	Westport provides towage to all ships calling at its terminal.	Westport owns 2 tugs and hires 3 tugs from an independent company.	Different band widths apply depending on ship size.	Westport is a private terminal operator handling container and conventional cargoes. It provides a fully integrated port service.	No	No	None

17 April 2002

COLOMBO

Providers of harbour towage services (including the port company if applicable)	No. and types of tugs of each provider	Market share of each provider	Separation between tug ownership and operation	Charging of towage services	Involvement in the provision of other port services	Ownership or joint venture relationships between shipping lines and towage providers	Tug provision at other ports	Cooperative agreements between tug providers
Sri Lanka Ports Authority (public port authority is sole provider)	Total fleet of nine tugs based at Colombo: 3 x 2900 BHP (30T BP) 3 x 4000 BHP (45T BP) 1 x 3600 BHP (40T BP) 1 x 2x720kw (20T BP) 1 x 2x2300kw (60T BP) Only 4 tugs are operated per day.	100%	Owned and operated by the port authority.	Charged on an hourly basis or part thereof. The rate is set at US\$160 per hour. No discounts are given.	Tugs are also used for emergency services where required.	No.	The Sri Lanka Port Authority provides towage at all ports that it operates in Sri Lanka.	The port authority transfers its tugs between various ports depending on the relative demand at each port.

17 April 2002

AUCKLAND

Providers of harbour towage services (including the port company if applicable)	No. and types of tugs of each provider	Market share of each provider	Separation between tug ownership and operation	Charging of towage services	Involvement in the provision of other port services	Ownership or joint venture relationships between shipping lines and towage providers	Tug provision at other ports	Cooperative agreements between tug providers
Port of Auckland – Marine Services (port company is sole provider).	Auckland: 2 main tugs each with 2 crew (50 tonne BP) and 1 backup tug. Total tug fleet of 7: 3 at Auckland, 3 at Marsden Point, and 1 at Port Onehunga.	100%	Tugs owned and operated by Ports of Auckland.	GRT based on formula rather than band widths. Volume-based discounts apply under individual contracts with shipping lines.	Tugs are used for towage within 12-mile radius of harbour for ships in difficulty. 1 tug has fire-fighting capabilities.	No, but long term contracts exist between shipping lines and port company for towage and stevedoring services.	Port of Auckland provides harbour towage at Marsden Point oil refinery and at the Port of Onehunga. Tugs are shifted between these ports if breakdown occurs or if volumes require additional tugs.	Port of Auckland has chartered out its tugs from time to time to other port companies whose tugs have broken down. This is done on commercial terms. Currently have backup tug from Auckland on charter to Port of Lyttelton.

17 April 2002

PORT NELSON

Providers of harbour towage services (including the port company if applicable)	No. and types of tugs of each provider	Market share of each provider	Separation between tug ownership and operation	Charging of towage services	Involvement in the provision of other port services	Ownership or joint venture relationships between shipping lines and towage providers	Tug provision at other ports	Cooperative agreements between tug providers
Port Nelson Ltd (port company is sole provider).	2 tugs in fleet: Shottel tug bollard pull 36 tonnes (3000 HP) Shottel tug bollard pull 20 tonnes (1400 HP)	100%	Tugs owned and operated by Port Nelson Ltd.	Tariffs are published: \$0.14/gross tonne. Discounts provided on published rate on the basis of level of use.	Tugs used only for harbour towage purposes.	No	No	No

APPENDIX F: OVERVIEW OF INTERNATIONAL REGULATORY ARRANGEMENTS OF HARBOUR TOWAGE

Jurisdiction	Does government price monitoring or regulation apply?	Do general competition laws apply?	Does industry-specific regulation apply? If so, in what form?	Are there entry restrictions imposed by government?	List any current or salient past competition cases	List recent reforms or reports
European Union	No, not at the EC level. At the member state level, price regulation of port services is not common.	Yes	Yes – largely at the member state level. 2001 EC Directive seeks to make the regulation of access to the provision of port services: transparent, non-discriminatory, objective, relevant and proportional.	Yes – these can exist at the member state or individual port level. 2001 EC Directive seeks to lower these and to impose requirements that any constraints on entry must be: transparent, objective and non-discriminatory.	1998 Case – French carrier alleged breaches of Articles 85 and 86 of the Treaty, claiming they were forced to pay excessive tariffs for mooring services in two Italian ports where exclusive contract arrangements applied.	1997 EU Green Paper on Seaports and Maritime Infrastructure. 2001 Proposed EC Directive on port market access (to promote competition, access and consistency).
United States	No	Yes	Yes – Coast Guard approval relating to crew training and vessel specifications. Federal Maritime Commission (FMC)	No – although the Jones Act restricts entry of foreign towage providers.	Current FMC investigations into exclusive towage franchises in the lower Mississippi and Port Canaveral. Former investigation in Port	

Jurisdiction	Does government price monitoring or regulation apply?	Do general competition laws apply?	Does industry-specific regulation apply? If so, in what form?	Are there entry restrictions imposed by government?	List any current or past competition cases	List recent reforms or reports
			plays a key role in both industry and economic regulation.		Everglades. <i>Great Lakes Towing Company</i> found by the Federal District Court to have created a monopoly for harbour towage and salvage services by engaging in anti-competitive practices.	
Canada	No	Yes	Yes – Transport Canada is the key maritime regulator with responsibility for regulating safety and environmental requirements. Economic regulation is the responsibility of the Canadian Transportation Agency.	No – although each Canadian port has considerable discretion in choosing terms under which towage services will be provided.	1997 Merger of Washington (ship berthing and towage) and Seaspan (towage) – examined by the Canadian Competition Tribunal with Washington being forced to make certain divestments.	
Singapore	No	Not in place – presently no general legislation	Yes – Maritime and Port Authority (MPA) issues regulations for safety.	Yes – granting of public licenses is at the discretion of the MPA		1997 liberalisation of harbour towage (move from state-sanctioned

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		or regulation which governs anti-competitive activities.	regulations for safety.	depending on market conditions.		monopoly to multiple competing providers).
Malaysia	Yes – the government sets ceiling price for harbour towage services.	Not in place – presently no general anti-competitive laws other than requirements placed on licensees in the communications industry.	Yes – Klang Port Authority administers legislation and by-laws for safety and training.	No		
Sri Lanka	No	Unclear – competition law has been in place since 1987 but applies only to private sector enterprises.	Yes – applies to crew training levels.	Yes – government prohibits entry by private operators.		
New Zealand	No	Yes	Yes – Maritime Safety Authority (MSA) regulations apply to	No	1996 Port Nelson Case – landmark case taken by the Commerce	2002 study of market power in the NZ ports industry – report

17 April 2002

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			ships operating in NZ waters (i.e. requirements for shipping vessels, minimum training for crews, and other safety guidelines)		Commission in regard to restrictive entry conditions and abuse of dominance for the supply of pilotage and towage services.	commissioned by government in January and is due to report in late April (CRA is conducting this study).