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Current issues in the NZ shipping industry

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A Paper prepared for the
N.Z. Rural Leadership Programme

Course VIII - 1988

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Wellington

CONTENTS

A. INTRODUCTION

The author was a participant on Course VIII of the N.Z. Rural Leadership Programme in 1988. This paper was prepared in the latter part of 1988 as the project which formed a part of the Course.

The author is an employee of P&O Containers (NZ) Ltd, and gratefully acknowledges the assistance of the Company in this project paper. The views expressed in the paper are, however, those of the author and not necessarily those of P&O Containers (NZ) Ltd.

B. SUMMARY

This paper is a broad overview of the current shipping industry in New Zealand, aimed at a readership not directly involved in the sector itself.

The paper starts with a section setting out historical developments in New Zealand shipping, in order to put the current scene into context.

Various issues are then discussed. The topics covered are not exhaustive, and in a paper of this length must necessarily only outline many of the areas which are causing intense debate within the industry at this time. The paper does not pretend to offer solutions : many of issues are being negotiated both in private and in public, and economic, commercial, political or social solutions will evolve over time.

On the world scene, the 1980's have been a decade of over-supply of tonnage, and consequent battles in most trading areas to maintain market shares. Price cutting has been a significant part of this competition. New Zealand shippers have enjoyed some benefits from this, although because of New Zealand's position as a major exporter of refrigerated primary produce there remains a real necessity for the export sector to continue to support those shipping companies which are prepared to make long-term capital commitments to the New Zealand trades and ensure New Zealand's future as a trading nation.

Within New Zealand recent years have seen major restructuring in many areas, and the philosophies such as aggregation established in the 1970's have been challenged in the current "more market" and "user pays" atmosphere. These challenges have considerable implications for the future shape of the industry, which ports will or will not survive, and the fundamental economics of exporting, and have flowed through into the industrial areas of employment on the waterfront and at sea.

C. HISTORICAL DEVELOPMENTS

One of the early landmarks in shipping history in New Zealand was the sailing of the vessel "Dunedin" from Port Chalmers in February 1882 with the first shipment of frozen lamb to the United Kingdom. The advent of on-board refrigeration transformed New Zealand from a relatively unimportant part of the British Empire to a major provider of food to the mother country over subsequent years.

Following the "Dunedin's" successful voyage, a number of shipping companies invested in refrigerated ships, and regular liner services to the United Kingdom were further expanded to meet the growing demand for frozen meat. The meat industry also expanded very rapidly at this time, with freezing works usually established close to ports to limit the risk and cost of transporting the frozen meat to the ship's side for loading.

By the time of the First World War, New Zealand was an integral part of the British economy, supplying meat, butter and wool so necessary for the war effort.

The situation remained substantially the same in the inter-war years in spite of the Depression, and when the Second World War broke out New Zealand was again a vital part of the wartime economy.

In the late 1940's the shipping companies involved in the New Zealand trade had to re-build their fleets which had been decimated by losses in the war. However, although ships were now larger and faster than their pre-war predecessors, the essential concepts had not changed The new generations of vessels built in the 40's, 50's and 60's were all designed around the need to transport large quantities of carcase lamb, cartons of butter, fruit, and bales of wool to the United Kingdom and to a lesser extent newer markets in continental Europe, America and Canada. Towards the end of this period a liner service to Japan also started with similar but smaller vessels.

The decade of the 1970's saw the **"Container revolution"**, which changed the way in which a substantial proportion of New Zealand's exports were shipped. Between 1968 and 1972 there was an intense national debate about how many container ports would be needed in New Zealand, and where these should be located. The whole concept of containerisation represented a fundamental change to the pattern of shipping serving New Zealand : in place of the large number of conventional refrigerated ships calling at a number of ports around the coast on each voyage, the new containerships would be much larger and would call at only a small number of ports. The products for export would be packed into containers at the meat-works, dairy factory or wool facility and the containers would be moved to the container port, rather than a ship calling at the local port to load as previously.

A report commissioned for The New Zealand Transport Commission, published in April 1969, recommended that a container service should be provided from either Wellington only, or Auckland and Wellington together in New Zealand. The bulk of exports and imports could be centralised to and from these one or two ports to achieve economies of scale. Eventually, however, it was decided that there should be four container ports, with two in each island : Auckland, Wellington, Port Chalmers and Lyttelton. The solution to the problem of additional costs that some shippers would have by supplying product from an area which did not have a container port was to establish "Aggregation". This concept was to ensure that no shippers were disadvantaged by being located away from a container port, and mechanisms were set up to ensure that a shipper paid no more in transport costs than would have previously been paid to take the product to the traditional conventional port of loading.

The Columbus Line first started calls at Port Chalmers and Wellington with their full containership "Columbus New Zealand" in 1971. Because container cranes at the terminals had not at that stage been commissioned, Columbus vessels were "self-sustaining" and carried their own on-board gantries or cranes to handle the containers. As the new container ports became operational the major trades moved more and more towards

containerisation. By the end of 1977, for example, virtually all the massive U.K./Europe trade tonnages were being carried in container vessels, apart from a very small number of "residual" conventional vessels. Other trades were or would shortly be containerised, and by the end of the 70's the "revolution" was virtually complete.

The years since then have been ones of continuing evolution in the New Zealand shipping industry, and the issues facing the industry today both within and from without are every bit as important as those of the container revolution which was being foreshadowed just twenty years ago.

D. THE ISSUES

1. TRADING PATTERNS

The move away from reliance on the British market.

Since the Second World War New Zealand has gradually been diversifying its trade, with the entry of United Kingdom to the European Economic Community in 1973 being the major catalyst in this trend. The British Government, supported by intensive lobbying from New Zealand Ministers, particularly John Marshall, negotiated continued access for New Zealand's butter and sheepmeat products to the U.K. market (with conspicuously more success than the Australians managed).

While the European Community as a group is still New Zealand's largest trading partner, the overall pattern of trade has shifted to the Pacific, with Australia, Japan and the United States now New Zealand's three major individual trading partners on the basis of imports and exports combined.

This shift in trade has of course been accompanied by changing shipping patterns, and regular services, provided both by Conferences and non-Conference operators, now operate to and from these markets.

2. CONFERENCES and OUTSIDERS

What is a Conference?
How the various Conferences serving New Zealand developed.
The role of Outsiders.

During the earlier years of this century it became apparent to shipowners serving the New Zealand trade that the nature of the specialised refrigerated ships needed to carry New Zealand's major exports required some co-operation between lines in order to make most effective use of the large number of vessels engaged in the trade. The features of the Conference serving the New Zealand to United Kingdom trade were essentially no different from the Conferences which developed all over the world at about the same time - the provision of liner (i.e. regular) services covering a wide range of ports; co-ordination of schedules; establishment of common freight rates offered to all shippers.

A classic definition of the shipping Conference was provided by a past chairman of P&O, Sir Donald Anderson, about thirty years ago:-

> "Shippers want to be able to buy or sell large or small quantities at short notice with knowledge that shipping space will be available. They want their goods to be carried in large or small lots, regularly or irregularly, in season or out of season, at ordinary temperatures, or chilled, or frozen, or deep frozen.
>
> Their shipments may be dry or liquid, dirty or clean, safe or dangerous, animal, vegetable or mineral...The essence of the liner Conference system is that it constitutes a real service, as essential to trade and commerce on the route that it serves as rail and bus services combined are to an isolated community."

Over a number of years, the Conference, called the Overseas Shipowners Committee (O.S.C.) at that stage, entered into

contracts or Freight Agreements with the N.Z. Meat Producers Board and the N.Z. Dairy Board to carry all those Boards' cargoes to their principal markets. This essentially meant to the United Kingdom, and the Conference was in fact made up of British shipping companies : The New Zealand Shipping Company and Federal Shipping Company (both owned by P&O); Port Line; Blue Star Line:and Shaw Savill and Albion (whose predecessors had owned the "Dunedin" which carried the historic first cargo of frozen meat).

These Agreements with the Boards saw the development of a co-operative arrangement between shipper interests and shipowners that was really unique in world shipping - because of the specialised nature of the refrigerated trade and also the particular "peaking" nature of the shipping season, the Boards required a very large number of ships to lift their produce over the main months of November to May, but had relatively little cargo to offer in the remaining months of the year. The collective resources of the Conference Lines were the answer to this, and a system of very close liaison between the Lines and the Boards evolved to ensure that enough ships were available at the right times. In return the shipping companies had a long term commitment from the Boards, and this enabled them to have the confidence to invest in new ships for the trade and also to sustain the several off-peak months of each year when a considerable number of the ships had to be laid up because there was simply not enough cargo for them to carry.

In the 1950's the Dutch challenged the pre-eminent position of the British companies, and gradually established themselves in the trade to Europe, building their service around the very substantial wool trade to the North Continent. Other Continental Lines also entered the trade, and like the Dutch moved from a position of being "outsiders" to becoming members of the Conferences serving Europe alongside the British Lines.

The significant aspect, therefore, was that New Zealand producer and shipper interests still required the reliability and range of services that the Conferences could provide, rather than having an "open-slather" shipping system. The one exception was the N.Z.

Apple and Pear Marketing Board, which ended its contracts with the European Conference Lines after the 1970 season, and has since 1971 made its own arrangements with various refrigerated ship operators for the shipment of the bulk of its product over the March-June months. The requirements for shipment of apples have been relatively straight-forward, in that there are few load ports, a limited range of destinations, and a very short shipping season - all of which are not traditional strengths of a Conference which serves a wide range of ports over the full year. At the time the Lines were not too worried by the loss of the apple contracts, as the season came on top of the then traditional peak lamb shipping period, and the shipping companies virtually had to have additional ships in their fleets to cope with the demands over the three month period, and then had no employment for the ships until the following year.(Nowadays, the Apple and Pear Marketing Board does utilise the container services of the European Conference Lines for limited volumes of product out of the apple-growing areas close to the container ports, such as Otago and Auckland).

In many ways New Zealand is still a major stronghold of the Conference system, in spite of many "outside" lines entering various trades over the last decade or so. A.B.C. containerline has operated for some eight or nine years in various sectors of the trades into and out of New Zealand, and is now the most "established" of the outsiders. A.B.C. pioneered the "con-bulk" system, whereby the core business is contracts to ship large parcels of bulk cargoes, and container shipments of general, and possibly also refrigerated, cargo are carried by the ships on a more marginal cost basis, with the bulk cargo providing the break-even or basic profit for the voyage. The bulk ships are generally much slower than modern containerships, so the lower freight rates are offset by longer transit times.

Most shipping companies tend to fall into either the Conference camp or the non-Conference / outsider group, but it is possible for a company to be a Conference member in some trades, and an outsider in others. The New Zealand Line was an example of this when it entered the Pacific trade to U.S.A. as an outsider, even

though it was an established member of the Conferences in the trades to U.K./Europe and to Japan/Korea.

It is now accepted in New Zealand and around the world that the days of the "exclusive" Conference are gone, and that an element of competition in all trades is a good thing to ensure that rates and service remain competitive.The role of outsiders is therefore a valid one, to provide a yardstick against which the overall service and rates of a Conference can be measured.

What Conferences are concerned about is the possibility of unfair commercial practices by other lines which are sudsidised by their Governments for political purposes, or the "fly-by-nighters" who take advantage of temporarily low vessel charter rates to enter a particular trade, slash freight rates on an especially lucrative sector, and then disappear when the going gets tougher : this only leaves the established lines to pick up the pieces, but with great difficulty where freight rates have been driven down to uneconomic levels. The effect of the worldwide oversupply of tonnage and the activities of some of these outsiders on freight rates is discussed in the next section.

The other major concern in New Zealand is the specialised technology and capital investment required over the long term to cater for New Zealand's primarily refrigerated exports. The requirements of the country demand that these products are transported to as wide a variety of destinations as exporters can sell effectively. This means that inevitably there will be small markets where volumes are small and possibly irregular, but which require a shipping service to be developed or even maintained. The role of the various groupings of Conference Lines, therefore, is to provide these services, but this cannot be done at an economic price if some of the least-cost parts of the trade are given away to outside operators who offer apparently attracive rates for that segment of the business only. A long-term investment to the refrigerated trades out of New Zealand requires in return a commitment from exporters, be they Producer Boards or industry associations, to use the full range of services offered.

3. FREIGHT RATES

The effects of excess tonnage on freight rates
The impact of increased competition on rates.

In general terms, the 1980's have been a period where there has been a world-wide oversupply of ships on the world scene. This has been particularly marked in the tanker and bulk sectors, but also to a leeser extent in the containership, refrigerated and general cargo vessel sectors.

In container trades, the advent of United States Lines with its grandiose round the world service using giant "Econships" caused major freight rate fluctuations in the East/West trades, which have only really settled into some sort of stability since U.S. Lines went bankrupt.

Excess capacity meant that shipowners were willing to accept low freight rates that did little more than provide cash flow to cover direct operating costs.

In the New Zealand context, increasing containerisation made it more attractive for operators of relatively small geared vessels to start up services, particularly using the regional non-container terminal ports.

The new services combined in many trades to bring about sharp falls in freight rates. In some trades these new services did not last for very long - not unnaturally, the lines already in the trades did not just sit back and accept the position but fought back with freight redutions of their own. The nett effect for the shipper was dramatic savings, but several lines who started these services pulled out of the trade very quickly.

Lines and services which have come and gone over the last ten years or so include :-

Armada Line, Croisdale Line and Sin Wha - all in the NZ/Japan and Korea area.
Jebsen Line - South East Asia.
A.E.S. - USA/NZ southbound, and NZ/Mediterranean northbound.

In some cases cargo was stranded at intermediate ports when the Line went into liquidation. After the disappearance of these companies, shippers still looked to the established Conference Lines in the various trades to continue providing their usual comprehensive services, but at the much lower rate levels that the other lines had introduced.

In general the established lines have continued to do this, reflecting the very substantial increases in operational efficiencies that they have managed to carry out in all areas. One notable company, Scancarriers, was in fact forced to radically alter its service pattern, pulling its ships out of the northbound trade from NZ to Europe because of the low freight rates, and covering its commitments in that trade by buying space (slot-chartering) from other lines. Most shipping companies have trimmed their operational costs in very many ways : reduced manning on ships; slashing administration costs and shore jobs; greater efficiencies in operating fleets of containers; and joining other lines in consortia and rationalised services are only a few of the major areas which have been addressed.

An illustration of the real reductions in freight rates on the NZ/Europe trade is shown in Table 3.1.

An effect of the lower freight rates has been that employment in the shipping companies' agency offices has also declined. Usually agents are remunerated on the basis of a percentage commission on freight earned : thus declining freight rates mean lower commission levels and general belt tightening even when general costs are increasing. In the case of the author's company, P&O Containers (NZ) Ltd staff numbers throughout the country have

reduced from 234 in 1984 to 170 currently - a 27% decrease. Efficiencies have been effected particularly through the use of new technology, such as the direct input to computer systems of messages (obviating the need to write out messages and have them transmitted by a specialist operator), and increased use of personal computers.

Table 3.1. : FREIGHT RATES IN THE 1980's

Wool from New Zealand to Europe

Year	Tariff Rate	Equivalent $NZ
1981	Pds 5,594	$12,570
1982	$US 5,520	$ 7,742
1983	$US 4,531	$ 6,945
1984	$US 2,464	$ 5,114
1985	$US 2,055	$ 3,802
1986	$US 1,450	$ 3,002
1987	$US 2,055	$ 3,223
1988	$US 2,250	$ 3,358

Notes :

1. Rate for 16,000 kgs of scoured wool using vessels of the New Zealand European Shipping Association.

2. The N.Z. Wool Board has since 1982 designated carriers of wool in the European trade, and the conditions therefore have been governed by the Board. For example, "per container" rates were established in 1984 and now cover all types and weights of wool, whereas prior to that rates were on a "per kilo" basis and were different for scoured, greasy and slipe wools.

4. REGIONAL PORTS

The effects of containerisation on regional ports.

Early New Zealand development was characterised by the use of small ports all around the coasts of both islands to bring in much-needed supplies, and load valuable exports.This was necessitated by the difficult topography of the country, which made the building of all-weather roads and the railways into major construction projects. In the nineteenth century sailing ships, and later smaller steamships, would therefore use small ports which had very little in the way of permanent facilities - around the East Coast of the North Island, for example, vessels regularly called at places such as Hicks Bay, Tokomaru Bay, and Tolaga Bay to load wool, often having the bales of wool loaded onto rowing boats which braved the surf to take the cargoes out to the larger vessels anchored out in the bays in slightly deeper water.

Gradually as communications improved and ocean-going vessels became larger more export produce began to be moved overland to the larger ports, where the ocean-going vessels would load at properly developed ports. Even so, there were still large numbers of ports in operation : Opua, Whangarei, Auckland, Tauranga, Gisborne, Napier, Wellington, Wanganui, and New Plymouth all around the coast of the North Island. Most of these ports continue in operation today, albeit some with much more limited operations. The only two which are officially "closed" in terms of not having a register of Waterside labour are Opua and Wanganui.

The advent of containerisation in the early-mid 1970's meant a substantial shift of business away from regional ports as import and export cargoes were concentrated through the main container ports : Auckland, Wellington, Lyttelton, and Port Chalmers.

The regional ports had to specialise in order to survive, and most found a niche in the trading structure -

Whangarei	- largely petroleum products
Tauranga	- dairy products and kiwifruit
Napier	- apples, wood products and kiwifruit
New Plymouth	- petro-chemical by-products and dairy
Nelson	- apples, kiwifruit and wood products
Picton	- rail ferries
Timaru	- conventional meat and grains
Bluff	- aluminium, wood products and meat

In the 1980's some of the regional ports have taken on a new lease of life by catering for some of the non-Conference lines which have entered the scene. Many of these lines have not committed themselves to buying expensive fully-cellular containerships for the trade, but have based their operations on chartered tonnage which has been available at cheap rates because of a world surplus of shipping. This chartered tonnage has usually been of the smaller "self-sustaining" variety which enables it to use ports which do not have container cranes. The most notable newcomer with this sort of tonnage was the Norwegian operator Jebsen, which put together various services in conjunction with other interests both from within and outside New Zealand. However, Jebsen itself has withdrawn from all these services now, having found that it was losing substantial sums of money in its liner operations from New Zealand. It has sold out its services to the Far East to Tasman, and its service to and from Europe is now operated by a consortium of owners including the New Zealand company G.H.Scales and interests in Noumea and Tahiti.

The advent of these services has latterly co-incided with the Labour Government's "user pays" philosophies, and the regional ports have been at the forefront of the campaigns to see the aggregation system abolished.

5. AGGREGATION

What is "Aggregation"?

A fundamental concept of containerisation was that of moving cargo to the ship, rather than the traditional practice of moving the ship to the cargo. The major capital investment involved in containerships meant that it was essential to minimise the time the ships spent in port loading and discharging cargo, and the capital costs of the cranes and other infrastructure needed at the ports themselves dictated that only a few container ports would be required.

However, a large number of exporters and importers potentially stood to be disadvantaged by the introduction of containerisation if their local port was not one of the designated container ports, as they would then be faced with substantially increased inland transport costs to move their cargoes to and from the container ports.

The basic principle underlying the introduction of containerisation was aggregation - the shipping companies paid the additional costs to move the cargoes to and from the container ports of their choice, while continuing to charge a national rate of freight. Mechanisms were set up to ensure that no shippers were disadvantaged by being located away from a container port, and so shippers ended up paying no more in transport costs than would have previously been paid to take the product to the traditional conventional port of loading.

In the meat industry the aggregation arrangements were pre-dated by the "port works" scheme, which began in the 1940's and was adopted over the whole country in 1967.This arose out of a desire to introduce a single payment schedule for each island. This scheme was easily adapted when containerisation was introduced, with transport charges for the processing works' account being based on the cost/distance to the traditional port, regardless of whether the meat was being moved to a distant container port for shipment. The N.Z. Meat Producers Board instituted an aggregation

fund to average the costs of inland transport over all meat shipped.

As the 1980's have developed, however, the original principles of Aggregation have become intertwined with the "user pays" philosophy, which seeks to identify costs where they lie. The rationale for cargo being aggregated from Hawkes Bay to Wellington was to minimise the port times of expensive containerships. The philosophy of user pays indicates that a producer must pay for the cost of transport to the port in order to highlight this cost and thereby put pressure on the transport system to become more efficiient. These philosophies are therefore somewhat in conflict where the producer happens to be located away from the container port, as is quite often the case.

6. USER PAYS

The Kiwifruit industry
User pays in the meat export industry

One of the first industries to remove aggregation from the rate of freight was the kiwifruit industry in the early 1980's. At that stage almost all kiwifruit was being shipped in containers through the main container terminals, but the feeling of some of the major members in the industry was that the growers who had established themselves in the newer areas with cheaper land values, such as Nelson and Hawkes Bay, were having their inland transport costs subsidised by the established growers in the Bay of Plenty region.

Subsequently, the development of kiwifruit shipments in conventional refrigerated vessels which load at regional ports such as Gisborne, Napier, and Nelson as well as Tauranga has largely overtaken this argument, with almost all growing areas having access to a port of shipment in reasonable proximity.

In the meat industry, however, the change from the port works system to an actual cost basis has meant substantial increases for some producers. For example, the bulk of Hawkes Bay sheepmeat is destined for the United Kingdom/ European markets, and under the present contract arrangements is shipped in containers through the port of Wellington. Thus while the original concept of concentrating the cargo to a small number of loading ports has been maintained and ensures that the sea freight rate reflects these economies of scale, it is true that the other half of the equation - that shippers were not disadvantaged by being located away from a container port - no longer fully continues. Of course, the reverse situation also applies, in that those plants which are located relatively close to a container port no longer effectively subsidise the distant works.

The situation has roused considerable emotion and debate, and even reached the courts when Hawkes Bay Federated Farmers sought an injunction through the High Court citing broken promises by

the Meat Board. The judgement did not rule in favour. More recently the debate has been further clouded because the change of rules comes at a time when there is strong demand for competition and for market forces to prevail. A major argument from Hawkes Bay interests has been that the Meat Board should have admitted another shipping line into the North American beef trade at the end of 1987 - this line would have loaded meat at Napier, thus saving transport costs for Hawkes Bay shippers. The counter argument which persuaded the Meat Board to opt for the status quo was that freight rates for other meat to a wider range of destinations in North America would have been substantially higher, and that overall the economies of scale by restricting the number of carriers involved enabled the best total deal for the exporters of beef to North America.

The transport costs now arising under user pays are immediate and identifiable to the producer. The benefits of moving the cargo to the main container ports are reflected in the price and quality of the service that the shipping companies are able to offer - these are less immediately obvious, and it is not unnatural that the inland transport costs should generate so much attention.

7. ON-SHORE COSTS

The campaign to focus on on-shore costs
The Apple and Pear Marketing Board and Dairy Board
Developments in the Wool industry

The areas of cargo handling in the ports and transport from farm gate to the port have been lively issues in the 1980's. The subject of cargo handling in the ports is dealt with in the next section.

The Railways were for a long time given an effective monopoly of long distance transport with the 150 kilometre rule. While the Railways were and remain an effective way of moving large volumes of various products, both break-bulk and in containers, the effective monopoly and the then Government policy that Railways should really be a social welfare service by employing large numbers of people it did not need, meant that it bcame very inefficient organisation in terms of pricing.

Deregulation of the transport industry has brought radical change. Initially large numbers of new players entered the road transport area, putting intense competition on the Railways (and each other). The depressed economy over the last few years has just as rapidly seen many of these companies go out of business or merge with others when the over-supply situation became unsustainable.

The effect for users of transport services has been that rates have been held at much lower real levels, and therefore producers and manufacturers have benefitted from the deregulation. Many large manufacturers and companies with national distribution reuirments have been major influences in the development of the road/rail competition, while the Apple and Pear Marketing Board and Dairy Board were prominent among producers to focus on inland costs.

The NZAPMB with its monopoly control over pipfruit exports has long been able to monitor its own distribution costs effectively. The Board has developed strategies of moving product to its major cool stores in the growing areas for storage before shipment, and because of the volumes it controls has been able to contract transport operators at very keen rates.

In 1983 the Dairy Board started to negotiate freight rates with the major Conferences which excluded the aggregation element. New rates were established on a port-to-port basis, whereby the Board undertook all its own internal transport. The Board's philosophy was and remains that it directs which product is to be made in which dairy factory, and therefore can match up its production to the contracted shipping services. For example, the bulk of products for the Arabian Gulf markets are manufactured in the Taranaki area to minimise the cost of transport to the port of New Plymouth, which is the port used in that service.

The Wool Board, while not being a single desk seller like the Apple and Dairy Boards, does nevertheless have a wide range of powers covering the wool industry. The Wool Board has been very effective in bringing competition into shipping services to the major markets, and over recent years it too has been focussing on the on-shore costs of wool processing and transport.

During the days of conventional shipping, wool was often baled on the farm and shipped out of the nearest conventional port "as is", having been bought from the local wool sale by the exporter. When containerisation was introduced to New Zealand, the concept of the CWF, or Central Wool Facility, was introduced to dump and pack the wool to ensure an even flow of wool to the shipping services. No longer would a vessel call into Bluff for five or more days to load meat and top off with two or three thousand bales of wool bought by exporters at the local wool sale - the new technology required the wool to be pre-packed into containers and those containers railed or sent by road to the container terminal to be ready for loading in one day.

Eight CWF's were established around the country based on the traditional wool selling centres : Auckland, Napier, Wanganui, Wellington, Christchurch, Timaru, Dunedin, and Invercargill. For the container trades wool was to be dumped and packed at these facilities, which were set up with many of the traditional stock firms such as Wrightsons and Dalgety as shareholders. After packing, the wool was aggregated (transported) at the shipping companies' cost to the container port of loading. The cost of the dumping and packing previously had been the exporters', and this continued through a mechanism of a Pre Shipment Charge collected by the shipping company which then paid the actual costs of these items to the Wool Facilities. However, the ocean freight rate included the cost of the movement to the port, so the freight rate was common no matter which port of shipment was used.

Initially the standard number of bales packed into containers was 56, but technology soon developed wool presses which could compact the wool much more, and 96 bales became the norm. Now up to 108 bales are frequently packed and sometimes up to 120 bales can be packed into containers using the third generation of presses. With an average bale weight of say 150 kgs, the average weight of wool packed into containers has dramatically increased from 8,400 kgs with 56 bales per container to approximately 16,800 kgs with around 112 bales. This has in itself brought great savings for wool shippers, because most freight rates are on a "per container" basis. This means that the freight on a per bale basis has dramatically reduced, as freight rates have not, through a variety of factors including competition, increased to compensate for the greater weights in the containers.

Since the advent of the wool facilities common Wool Pre Shipment Charges applied, with the CWF's pooling their costs and revenue to spread the capital costs of equipping with the high density presses. In the 1988/89 season for the first time the pool system has been abolished, and separate charges apply at each CWF to reflect the actual costs at each facility. The Wool Pre Shipment Charges applying on the NZ/UK & Europe trade in the previous 1987/88 season compared with the new individual charges are shown in Table 7.1.

The aim of the new charging structure is to induce the wool to move to the cost effective wool facility when taking in the total costs of transport, packing and dumping. Initially, because of the considerable differentials between some of the charges there are areas where wool will in fact move away from a port to a CWF for dumping and packing, and then be railed back past its origin to the port of loading. An example of this is shown in Table 7.2, which illustrates how a 108 bale parcel of wool avilable at Masterton for FCL shipment on a Conference Line vessel from Wellington to Europe would move to Napier for dumping and packing and then be railed back to Wellington. In time, however, it can be expected that market efficiencies will come to bear and this type of movement will cease.

Table 7.1. : WOOL PRESHIPMENT CHARGES
NZ/UK & EUROPE TRADE

Wool Facility	1987/88 Total	1988/89 Dumping	Packing	Total
Auckland	$13.89	$ 7.74	$ 3.65	$11.39
Napier	$13.89	$ 5.67	$ 3.00	$ 8.67
Wanganui	$11.79	$ 7.92	$ 1.80	$ 9.72
Wellington	$13.89	$ 9.19	$ 3.30	$12.49
Christchurch	$13.89	$10.82	$ 3.85	$14.67
Timaru	$13.89	$ 7.17	$ 3.65	$10.82
Dunedin	$13.89	$ 8.82	$ 3.85	$12.67
Invercargill	$13.89	$11.68	$ 3.60	$15.28

Notes :

1. In the 1987/88 season, all receiving/dumping charges were pooled by all wool facilities to produce a national average charge of $10.24 per bale. Packing at all facilities was also averaged at $3.65 per bale, except Wanganui which does not have a high dense press and where the packing charge was $1.55 per bale.

2. Charges in the 1988/89 season were set to reflect the actual costs at each facility. The general level of costs has reduced as facilities become more efficient, and particularly as the servicing costs for their capital investment have reduced.

Table 7.2. : COSTING FOR WOOL EX MASTERTON FOR SHIPMENT EX WELLINGTON

Shipment of 120 Bales - approx 16,000 kgs.

1. Shipper instructs wool ex CWS Masterton to Napier CWF

	Cost to Shipper	Cost to Line
Brokers store to CWF Napier Cartage 120 x $6.70	$ 804.00	-
Wool Pre Shipment Charge 120 x $8.76	$1051.20	($1051.20)
Dumping and Packing at Napier 120 x ($5.67 + $3.00)	-	$1040.40
Positioning of container		$ 96.00
Railage Napier to Wellington		$ 924.15
	$1885.20	$1008.35

Total Cost : $ 2893.55

2. Lines re-direct wool to Gracefield (Wellington CWF)

Brokers store to CWF Wellington Cartage 120 x $4.20	$ 504.00	-
Wool Pre Shipment Charge 120 x $8.76	$1051.20	($1051.20)
Dumping and Packing at Wellington 120 x ($9.19 + $3.30)	-	$1498.80
Positioning of container		$ 32.00
Transport from CWF to Terminal		$ 80.00
	$1555.20	$ 559.60

Total Cost : $ 2114.80

3. Shipper direct the wool to Gracefield (Wellington CWF)

Brokers store to CWF Wellington Cartage 120 x $4.20	$ 504.00	-
Wool Pre Shipment Charge 120 x $12.61	$1513.20	($1513.20)
Dumping and Packing at Wellington 120 x ($9.19 + $3.30)	-	$1498.80
Positioning of container		$ 32.00
Transport from CWF to Terminal		$ 80.00
	$2017.20	$ 97.60

Total Cost : $ 2114.80

Options 2 and 3 are therefore the cheapest and the same in total, the only difference being whether the shipping company absorbs the higher costs at Gracefield by only charging the lower Napier PSC.

However, unless there is some intervention the shipper will in fact place the wool at Napier as per Option 1, as this is the immediate least cost alternative.

8. PORT COMPANIES

The philosophy under which Port Companies were established.
The criteria under which they are to operate.

The Labour Government's desire to bring more efficiencies into all sectors of the economy extended into the waterfront area through the Ports Industry Review Committee which met over a prolonged period of time in 1986/7. The Committee included representatives of Harbour Boards, stevedores and shipping companies, and the waterfront unions.

There was a general acknowledgement that the waterfront needed to become more efficient, and the thrust of the major reforms arising out of the Review was to establish Port Companies to operate the commercial activities of the old Harbour Boards. The Wellington Harbour Board anticipated the Government's legislation by setting up the Port of Wellington in 1987, but was forced to suspend its plans when faced with legal action by the Government. However, Wellington was one of only four Port Companies to receive approval to commence operations on 01 October 1988. (The others were Timaru, Nelson and Marlborough). This followed the passing of the Ports Reform Act in 1988, which determined that all Harbour Boards would be required to set up Port Companies to run their commercial operations.

The new Port Companies are required to make a return on their assets, and also to pay Company Tax and Land Tax. All of these aspects are a cause of concern to users of the ports, as they are costs and criteria which the old Harbour Boards did not have. Many argue that the assets of the Harbour Boards had been bought and paid for over the years by users of the port through the charges they paid, and that requiring the new Port Companies to continue to make a return on them was making users pay twice. The valuations that were finally agreed for the various Companies are therefore fundamental to the level of charges that the Companies will have to set in order to achieve the required rates of return.

After each port establishment unit put its proposals to the Minister for the valuation of its assets, the Government then had

to weigh up the wish to keep port charges down while setting the valuations at such a level as to make sure that the companies had to work hard at reaching the desired rates of return (approximately 8% after tax). In almost all cases the Government increased the proposed valuations. In some cases -Lyttelton and Port Taranaki- the valuations were below their debt level : i.e. the ports were technically insolvent. An exception was Wellington, where the high valuation, partly arising from the revaluation of the City during the 'boom' of mid-1987, was reduced from $119 million to $72.5 million.

On the other hand, the establishment of the Port Companies has undoubtedly required the managements of those enterprises to take a close look at some of the labour levels and practices that had been allowed to exist under the old Harbour Boards. In many cases the new Companies have decided that they will require far fewer employees than the Harbour Boards used to have on their payrolls, and accordingly there has been a wide level of early retirements and some redundancies.

In Wellington, for example, the Port of Wellington now employs substantially fewer staff than the Wellington Harbour Board did just a few years ago :-

Wellington Harbour Board	Y/e 30 Sept 1983	604
	1985	534
	1986	519
	1987	519
Port of Wellington	October 1988	280

Even though some of these reductions are as a result of declining trade flows (less conventional CKD for example as companies like Ford move to Auckland and more CKD is moved in containers), and there is a small number of staff employed by the residual Harbour Board, the bulk of the reductions arise from fresh examinations of work and management practices in all areas of the port operations.

What will happen to that Harbour Board land and other assets not passed over to the new Port Company will in many areas be the subject of vigorous local debate over 1988/89, as the proposed Local Government reforms intend that Harbour Boards be abolished and the residual assets be transferred to local authority bodies. Many of these are looking eagerly at the prospect of major property windfalls.

9. EMPLOYMENT ON THE WATERFRONT

Numbers employed
Port-by-port levies
The Waterfront Industry Commission
Demarcation issues

Over the last few years there has been a determined effort to reduce numbers of waterside workers to more realistic levels, and in the last three years the Bureau Registers have reduced by more than 1,200 men : this represents reductions of approximately 25%. Current Register strengths are set out in Table 9.1, together with the numbers in 1964 by way of interesting comparison.

At the same time as reducing overall numbers other issues have been addressed, such as "spelling" and gang strengths. Spelling is where members of a gang of watersiders employed on a job take it in turns to take a rest from the job, and is a hangover from earlier days when the physical side of the waterfront work was far more strenuous - manual handling of carcases of meat or cartons of butter in the hold of a ship at -20 degrees C, or hauling around bales of wool was indeed hard work and justified the need for larger gangs with some members spelling throughout the working period. However, improvements to cargo handling equipment and methods - better cranes, palletisation, fork-lift trucks etc - have substantially reduced the physical element of the work on conventional ships. The result has been therefore, that fewer workers are required to handle the cargo and there is no longer a need for spelling to recover from the physical exertion of the job.

For many years waterside workers throughout the country have been part of a national pool of labour administered by the Waterfront Industry Commission (WIC). Employers, in the form of Stevedoring companies, would indent for gangs of watersiders for work on ships on a day-to-day basis, and pay the WIC for the labour employed. The wages levied on the employers were set at levels

sufficient to ensure that the overall costs of paying for the watersiders a guaranteed minimum wage all year round were covered. The national pool system meant that the costs to employers were the same all around the country, and effectively meant that some ports were subsidising others.

It was decided in 1987, in line with prevailing philosophies, that the national system should be replaced with port-by-port levies. The change was of considerable significance, in that it meant that in future each port would have to set its levy rates at a level which would see the port covering the overall costs of the watersiders on its register, without any subsidy from other ports. At all ports the Bureau Register levels were critically examined, and at most there was a need for redundancies before the port-by-port levy system came into effect.

The new system highlights the need of some ports to further reduce permanent watersider numbers or come up with an alternative method of providing labour if they are to remain in operation. For example, the daily rate per man which an employer has to pay (from 03 October 1988) to the WIC in Dunedin is $200, compared with $35 at Tauranga, $40 at Napier and $60 at Bluff. At that rate it is obvious that shipowners will as far as possible avoid sending their ships to Dunedin. This in turn would mean that the rate would have to increase even further to cover the same costs over fewer vessels, so the situation would get worse and worse. It is likely that at Dunedin it will be necessary to amalgamate the current separate registers at Dunedin and Port Chalmers and considerably reduce the numbers of watersiders in order to keep the costs to employers at even a reasonable level.

The future of the WIC itself is currently under review, as the second stage of the Government's process of ports reform after the establishment of the port companies. The WIC has functioned as an administrative body, paying the watersiders, collecting levies from employers and keeping all the book-keeping records straight. However, the system of a pooled labour force has had disadvantages in that neither the WIC nor the employers (stevedores) have had any real accountability in the employment

structure. The WIC pays the watersiders but has no direct involvement with the particular jobs they are employed on. Likewise, the employers do not have the normal direct one-to-one relationship with their employees as they are picked up from the pool on a daily basis.

It is likely that some form of local employment structure will be recommended to replace the existing national structure. The employers' proposal is that the WIC be abolished and replaced with local employer organisations at each port comprising stevedores and container terminal interests, and port companies where these would not already be involved as a stevedore or container terminal operator anyway. These local companies would be responsible for the existing management and industrial functions of the current employers national body, and the administrative functions of the WIC. In order to ensure that wages etc for local Waterside workers are correctly administered it will be necessary to ensure that some form of permanent administrative organisation exists at each port.

This structure would provide a basis for employers and waterside workers to interact and be accountable to each other at local port level, which is hindered by the current employment structure. It would be compatible with other recent port reforms which have been designed to ensure employers and workers at each port identify with their port's fortunes. It would also facilitate changes to labour arrangements by employers and waterside workers at each port to meet changing circumstances.

It is felt by employers that any new system should retain two key features :-

a. retain competitive stevedoring - i.e. there should not be a monopoly situation created through the employment structure, and there should be room for more than one stevedoring company at any port should the volume of work justify it.

b. retain the system of pooled labour - at most ports, while retaining a competitive stevedoring system there is insufficient continuous work to enable each stevedore to have a permanent workforce. The pool system therefore provides a solution to this problem while retaining desirable competition in the other aspects of the operation, such as provision of mechanical handling equipment. It also does not preclude the possibility of permanent employment at those ports where it can be justified. This would be most likely at the container terminals, where the container terminal operator could employ all the labour required to operate the terminal. At present a rotating labour force is used so that all watersiders at the port get the chance to work at the container terminal where earnings are higher, so there is still that problem to be overcome.

The Ports Reform legislation passed in 1988 also opened up an area of demarcation on the waterfront which in the latter part of the year has led to numerous strikes, pickets and court actions as the Harbour Workers' Union has battled to preserve its traditional work coverage.

The legislation made it possible, from 01 October 1988, for stevedores to provide their own mechanical handling equipment on the waterfront : previously all equipment had had to be provided by the Harbour Boards, and consequently was driven by Harbour Board workers. This had led to the "double-handling" situation, where waterside workers employed by stevedores unloaded the ship and placed the cargo on the wharf, whence it was moved by harbour board workers into the sheds. The intent of the new legislation was to try to avoid double-handling by allowing stevedores to provide their own equipment if they wanted to. Not unnaturally, the harbour board workers saw this as a threat to their continued existence, in that stevedores would want their employees -

watersiders - to drive the equipment and not harbour board workers.

Employers have long wanted the double-handling process to be ended, and so have endeavoured to work within the rules of the new legislation by using their own equipment and stevedores to move cargo from the ship to the shed. A number of vessels have been picketed by the harbour board workers, but court injunctions have ruled in favour of the employers. There has also been the situation where members of one union, the waterside workers, have crossed another union's picket line. Many in the industry feel that the only solution is for an amalgamation of the two unions, and that the Government should have ensured that this happened before the new Reform legislation was implemented. While both unions have said that they are in favour of amalgamation, neither union is naturally in favour of seeing large numbers of its current membership made redundant as would undoubtedly be the case if they were to merge. The Watersiders say that they have already taken their share of redundancies over the last few years, as we have seen above, and the Harbour Board workers have also had to face reductions around the country as the new Port Companies have come into existence with smaller workforces than the old Harbour Boards.

It is likely that continued pressure from all parties will bring about the amalgamation of the two unions in the fairly short term: the Government has indicated that it cannot let any single group or industry hinder the economic reform process.

Table 9.1 : BUREAU REGISTERS OF WATERSIDE WORKERS

Port	Current Strength	1964 Strength
Auckland	761	1,718
Tauranga	420	n.a.
Wellington	363	1,050
Lyttelton	379	719
Dunedin	33	)
Port Chalmers	128	) 525
Napier	314	332
Onehunga	59	n.a.
New Plymouth	119	332
Nelson	106	101
Timaru	151	215
Bluff	208	377
Gisborne	36	117
Picton	15	38
Westport	4	n.a.
Whangarei	50	n.a.
Opua	Nil	71
	3,146	

Notes :

1. Current figures supplied by New Zealand Association of Waterfront Employers.

2. The 1964 figues are taken from "New Zealand Overseas Trade : Report on Shipping, Ports, Transport and other Services" published in February 1964 jointly by the Producer Boards' Shipping Utilisation Committee in New Zealand, and the New Zealand Trade Streamlining Committee in London.

10. EMPLOYMENT AT SEA

There has been a common perception that those employed at sea have pay and conditions far in excess of those enjoyed by employees of similar status on land. To an extent this is true, and the situation has developed over many years, particularly with the maritime unions being able to extract concessions from weak employers who were perhaps in almost monopoly situations and in the last resort could pass on the resulting cost increases.

Recent years have, however, seen the economic realities of increasing costs (from New Zealand's high domestic inflation), high capital costs and standing charges, new types of ships and shipping methods (containers), and greater competition which have all combined to make shipowners concentrate on the costs of operating their fleets. The major company - The Union Company - has reduced its fleet substantially over the last decade because of these factors.

There has been a reduction in the number of opportunities for New Zealand officers and seamen. This has resulted from the reduced numbers of vessels now trading under the N.Z. flag, and also the reduced manning levels negotiated on modern ships.

The owners and/or managers of New Zealand manned vessels are :-

Union Company	12 vessels
New Zealand Line	8 vessels
N.Z. Railways	3 vessels
Pacifica Shipping	2 vessels
Tasman Express Line	2 vessels
Golden Bay Cement Group	2 vessels
N.Z. Cement Holdings	2 vessels
M.A.F.	2 vessels
P&O Containers	1 vessel

On the subject of manning levels these are, by international standards, still high, and there is an almost continuous negotiation going on between employers and the Unions to reduce

numbers further. The total crew on the P&O Containers large refrigerated containership 'Resolution Bay' is 33 personnel : the total on the 'New Zealand Pacific' has recently reduced to 39. This difference is compounded by the additional numbers required for the NZP because of the one day on, one day off conditions which are much more generous than the U.K. overall ratio of 0.56. This necessitates an effective 2.2 crews for the 'New Zealand Pacific'. The employers are looking particularly for greater work flexibility to reduce the overall manning bill.

Not unnaturally, the Unions are fighting to save their jobs, but at the same time the employers are making the point that jobs cannot be provided in the numbers and at the costs that the Unions want. Total numbers employed at sea in the New Zealand industry as at 01 January 1988 are detailed in Table 10.1.

A feature of the scene is that there are four 'Unions' involved : navigating officers, covered by the Merchant Service Guild; engineers, members of the Institute of Marine and Power Engineers; the Seamen's Union; and the Cooks and Stewards' Union. Thus the employers have to negotiate with four separate parties, each of which has its own ideas on its relative importance to the operation. There have been many suggestions that the Unions merge, but individual interests have prevented this.

Table 10.1. : NUMBERS EMPLOYED AT SEA IN THE N.Z. INDUSTRY

	Actual Jobs on board ships		Total Manning Requirements
Masters	35		76.26
Deck Officers	106.5*		227.9
Radio Officers	21		43.75
Pursers	10		32.5
Chief Engineers	36		75.66
Engineer Officers	109		236.94
Electricians	31		68.66
Able Seamen	255		538.32
Ordinary Seamen	31		64.36
Deck Boys	16		32
Crew Attendants	36		75.5
Motormen	103		213.36
Cooks	61		134.3
Stewards	120		310.28
Permanent Ch.Stewards	27		58.64
		Ratio	
Totals	**997.5**	**2.19**	**2188.45**
Total Officers	**348.5**	**2.19**	**761.67**
Total Seamen	**441**	**2.09**	**923.56**
Total Catering	**208**	**2.42**	**503.22**

Notes :

1. Ministry of Transport figures as at 01 January 1988.

2. * "Holmdale" has a Third Mate on board at sea, but not while in port.

11. THE NATIONAL LINE

The Shipping Corporation of New Zealand Bill was introduced into Parliament in August 1973. The then Prime Minister, Norman Kirk, said :

> "Notwithstanding the very high dependence New Zealand has on shipping for its prosperity, we have always remained, in terms of our export trade, in the hands of overseas-owned shipping companies...This determination to break out and have some means of protecting New Zealand's interests and establishing a competitive factor through this Bill is an important step forward."

It was intended that the new Corporation would save foreign exchange, provide jobs for New Zealand seamen, provide a merchant fleet in times of national emergency, have a voice in the development of international trades, and influence freight rates.

In some areas the Corporation was successful :-

- entering the trans Tasman trade and ending the Union Company's monopoly
- entering the Pacific trade to West Coast North America, and introducing the landbridge operation to serve central and eastern states.
- development of controlled atmosphere carriage of fresh produce in association with Transfresh of the U.S.A.

However, the realities of the capital costs of participation in the international shipping scene have made the Corporation's existence very difficult throughout its life. In some trades the Corporation (or New Zealand Line to use its trading name) has had to join Conferences and Consortia just simply to be able to participate ; it is not possible, for example, to provide a service to Europe with one ship, so the New Zealand Line joined forces with the other Conference operators in a rationalised service which enables it to offer space on each of the 15 ships in the trade, and not just its own.

The hope of its founders had been that by participation in such arrangements with overseas shipping companies the Line would be able to influence freight rates etc for New Zealand's benefit. The reality is that the Line's cost structure with its high manning costs on ships and lack of the economies of size of the other lines has in fact made it one of the high cost operators and therefore not in a position to concede reductions in freight rates. (Reductions in real freight rates over the 1981-87 period have generally resulted from the oversupply in world shipping capacity).

The Shipping Corporation / New Zealand Line has always been undercapitalised, and has made some substantial operating losses in recent years. Profits recorded in 1983 and 1985 were largely due to changes in accounting methods and sale of vessels which were then leased back. The Annual Report to Parliament has detailed the following results over recent years :-

Year ending	Profit / (Loss)
1983	$10.0 m
1984	($ 5.7 m)
1985	$10.2 m
1986	($47.0 m)
31 August 1987	$ 7.18 m (after $120 m capital injection)

For the most recent six month period the result was reported as

29 February 1988	($ 6.17 m)

In the July 1988 Budget, the Minister of Finance announced that the Government intended to sell the Corporation, and tender documents were released to interested parties in October. Bids are due by the end of November 1988. How bidders will value the Corporation is not known - asset backing as at August 1987 was stated as $NZ41 million (but has been reduced by subsequent losses).

12. COASTAL SHIPPING

The decline of coastal shipping

There are now very few ships operating on the New Zealand coast. The main ones are :-

N.Z. Railways Cook Strait ferries
Pacifica Shipping (operating two ships, Lyttelton/Wellington and Lyttelton/Auckland)
Golden Bay Cement
N.Z. Cement Holdings
Coastal tankers (managed by the Union Company on behalf of the oil companies)
Liquigas Ltd (the L.P.G. carrier 'Tarihiko')
D.S.I.R. and M.A.F.

The Union Company used to have a large fleet around the coast, but this was progressively withdrawn as the capital costs of replacing ships exceeded the likely returns. The Labour Government's freeze of Railways charges in the 1972-75 period was one of the final straws for coastal shipping, as the ship operators faced with cost increases due to high inflation lost business to the subsidised Railways. The Union Company's 'Rangatira' operating between Wellington and Lyttelton was one on the casualties of this period. Even the Shipping Corporation, operating the 'Coastal Trader" was not able to maintain a viable service, and that vessel was withdrawn in 1985.

Pacifica Shipping was founded to challenge the Railways' monopoly which was left after the demise of these operations, and to-date has managed to provide a very valuable alternative to shippers between the two islands.

13. TRANS TASMAN SHIPPING

"The most expensive stretch of water in the world"

This description has been applied to the Tasman by shippers who for example have found that they can ship goods more cheaply from Dunedin to the United Kingdom or the U.S.A. than to Sydney. The costs of inland transport and charges at ports in both Australia and New Zealand are contributing factors to these high costs, and to an extent it can be argued that it is not the water that is expensive but the landside costs at each end.

However, costs of ship operation do contribute to the high overall cost. The present situation is that there is a 'de facto' monopoly on the Tasman imposed by the maritime unions (seamen and watersiders particularly) which reserves Trans Tasman shipping for vessels manned by New Zealand or Australian crews.

The Union Company for many years operated an effective monopoly across the Tasman, protected in part by this industrial policy. In 1983, New Zealand Line and the Australian National Line (A.N.L.) began a joint Trans-Tasman service in competition with the Union Company - but still with New Zealand and Australian crews. In 1986 NZL, ANL and Union Company combined in a rationalised service , sharing space on each others ships. Other companies also operate services : Tasman Pulp and Paper have two ships dedicated to their own requirements; B.H.P. operate two vessels, again principally for their own requirements, but also exploiting a niche for containerised cargoes from some of the regional ports; and Tasman Express Line are now operating an apparently successful service with two ships carrying containerised cargoes only.

The overall costs of shipping on the Tasman are a concern to both the Australian and New Zealand governments, and have been identified as an important area that must be addressed in order to better achieve the benefits of the C.E.R. agreement. A Review of Trans Tasman shipping was undertaken by the N.Z. Ministry of

Transport and the Australian Bureau of Transport Economics in 1986/87. Some of the major conclusions were :-

- greater competition since the last review in 1980 had increased efficiencies in the trade and produced considerable innovation.

- significant room for improvement remains through reduced on-shore costs and increased vessel efficiency

- significant freight savings could be achieved if other international operators were able to enter the trade.

- trade union restrictions on access for wider competition had caused freight costs to be higher than they otherwise would have been.

Both governments have frequently and publicly expressed a desire to free up shipping on the Tasman, but it remains to be seen when and how the Maritime unions will be persuaded or made to change their current exclusivity policies.

14. THE ROLE OF THE PRODUCER BOARDS

The unique position of the Boards in shipping arrangements.

The various Producer Boards in New Zealand each have an involvement in shipping arrangements, but the scope of this varies considerably.

Throughout this paper mention has been made of different aspects of Boards' involvement relating to particular issues. The position of each may be summarised thus :-

N.Z. Meat Producers Board.

Has statutory authority under the Meat Export Control Act of 1921/22 to control shipping arrangements, even though it does not ship meat on its own account at present. In the major liner trades it still exercises this authority, and negotiates rates and conditions of service with the shipping companies. It is now usual for representatives of the exporting companies to be on the Meat Board's negotiating team, but it is the Board which has the final authority to conclude arrangements.

N.Z. Dairy Board.

As the sole exporter of dairy produce the Board has a direct involvement in all aspects of shipping arrangements. It is a very hard negotiator, and has considerable experience in the charter market through its need to ship to developing markets where there are no liner services. This experience, together with the fact that butter, cheese and dry milk products are relatively homogenous and easy to ship, enables it to make direct comparisons between charter shipping costs and containerised liner services. In recent years the oversupply of tonnage and consequent low charter freight rates have thus enabled the Board to substantially reduce rates in all the major liner trades.

N.Z. Wool Board.

The Wool Board does make shipments on its own account, but is generally not regarded as a major shipper of wool. It does have authority to negotiate the terms and conditions for the export of wool and to "designate" shipping companies which may be used. In the 1980's the Wool Board has been very active in its endeavours to reduce the costs of shipping wool by encouraging competition between shipping companies.. In the European trade the Board for many years had an exclusive agreement with the Conference Lines, who guaranteed to provide ships to meet wool sale dates and cover the likely quantities to be shipped. This exclusive arrangement was ended in October 1982 when the Board allowed ABC containerline into the trade for the first time, and since that date there have been no exclusive contracts. The success of the Board's involvement and the reductions in freight rates was illustrated in section 3.

N.Z. Apple and Pear Marketing Board.

Another "single seller" Board which has had a close involvement and control of its own shipping arrangements for many years. Because of the requirement to ship at the peak time of year for refrigerated cargo shipping, the Board has adopted a policy of competitive tendering for its shipping requirements, and therefore uses a number of shipping companies to provide tonnage over the season. The principal ports are Napier and Nelson, and the volumes of fruit being exported through those ports are such that the Board is concerned at the capacity of the ports to handle projected volumes. The Board's interest in the Omniport development at Napier is typical of its forward thinking. It is now also looking to ship some of its product in containers, particularly fruit originating in growing areas close to container ports, such as Otago and Auckland.

N.Z. Kiwifruit Marketing Board.

For many years kiwifruit was exported by a limited number of licensed exporters who made their own shipping arrangements. Initially containerisation was ideal for the relativley limited volumes of kiwifruit to the main and developing markets, but as volumes grew shipments to Europe,Japan and North America moved almost entirely in conventional reefer ships. The formation of the Kiwifruit Marketing Board will bring kiwifruit shipping under one overall body for the first time. For the 1989 season Fruitfed Export has been contracted by the Board to negotiate shipping arrangements on the Board's behalf, but it remains to be seen whether the Board will continue with this approach or take a more direct role in future years.

15. DEVELOPMENTS IN TECHNOLOGY

Controlled Atmosphere carriage of perishable produce.
Carriage of Chilled Meat
Cargo handling methods

Controlled Atmosphere carriage of perishable produce.

Perishable commodities can be prevented from ripening too quickly by being chilled. Further storage life can be obtained by storing the produce under "controlled Atmosphere" conditions. Essentially this involves control of the proportions of oxygen, carbon dioxide and nitrogen in the atmosphere surrounding the fruit.

Several companies have developed methods to control atmospheres over the prolonged periods necessary for sea journeys to distant markets. The most usual technology seen in New Zealand is a modification of an integral container (a container with its own inbuilt refrigerating machinery) to add in the necessary atmosphere control.

Controlled atmosphere carriage has proved successful for such commodities as nectarines to Kuwait, and apples to the United Kingdom. However, the additional costs of the system mean that it will most likely be most practicable for commodities which cannot last for even short sea journeys just as chilled cargo. Ordinary apples can be transported perfectly well to Europe under normal chilled carriage conditions : using controlled atmosphere carriage does indeed improve the overall quality of the out-turn, but not sufficiently to really outweigh the additional costs. The controlled atmosphere technology therefore is likely to concentrate on specialised commodities, such as fresh asparagus to Japan, for example.

Carriage of Chilled Meat

Chilled lamb and beef have been carried by sea to overseas markets for many years. Modern ships' refrigeration systems mean that it is easy to ensure that carriage temperatures on board are maintained at the required level of half a degree, plus or minus half a degree.

The principal problem has been that even with this very strict control of temperatures the "shelf life" for chilled lamb has only been in the region of 7 - 8 weeks. One of the main markets for chilled lamb is the United Kingdom. As the Conference Lines' largest and fastest vessels still take around 30 days from last port in New Zealand to Tilbury, this does not leave much spare time for killing and processing the lambs, transporting them to the port, loading on board, discharging the containers in Tilbury, distribution in the U.K. and final sale in the retail outlet.

A new system following from research at the Meat Industry Research Institute of N.Z. (MIRINZ) has been developed by UEB in association with Waitaki International. The system is called Captech - **C**hilled atmosphere **p**ackaging **tech**nology - and uses a variation of the controlled atmosphere approach. Lamb cuts are placed inside a special foil laminated bag, air is extracted, and carbon dioxide is pumped in. The bag prevents the carbon dioxide escaping, and also stops oxygen in the air from getting in. It is believed from trials that this method of shipment could double shelf life up to about 16 weeks, which would substantially open up opportunities for New Zealand exporters.

Cargo handling methods.

The introduction of containers was a major change in cargo handling methods, and the basic container as we know it today is likely to be a principal unit of international shipping into the next century.

In the conventional shipping area methods of handling cargo have remained substantially unchanged over many years, with cargo basically being either palletised or not. For example, apples are loaded into ships loosely on pallets, but the individual cartons are taken off the pallets and stowed, whereas kiwifruit is generally packed into trays at the packhouse, trays are loaded onto pallets and the complete pallet unit is shipped "as is".

An interesting development very recently announced at Napier is the formation of Omniport, a company which is to lease one of the berths from the Port of Napier and install new equipment for loading apples. The company, a consortium of an American company Continental Marine Terminal (CMT) Systems and New Zealand interests McKay Shipping and McLay Holdings Ltd will be installing two "spiralveyors" on the wharf to load cartons of apples. The apples will be brought down from the Apple and Pear Marketing Board cool stores to a covered store on the wharf, where the cartons will be put onto conveyors which will take them up to the ship, and a spiral conveyor system will take them down into the holds to be stowed.

The investment is substantial - $NZ 45 million, while the benefits are suggested to be a quicker turnround of ships, reduced numbers of watersiders required to load each ship (thus releasing labour to work on other vessels during the peak fruit season), and all-weather loading as the whole system is covered. This latter advantage is not so material given the generally good weather in Hawkes Bay over the fruit season which causes only few weather delays anyway.

16. E.D.I. (Electronic Data Interchange)

New technology in the commercial side of shipping

The shipping industry has often been characterised as one dependent on a great deal of paperwork : bills of lading, manifests etc. In the days of conventional ships which spent weeks discharging and loading on the coast there was plenty of time to process paperwork, and it was the practice to place a complete typed manifest on board a ship before it sailed (albeit with the occasional last-minute panic!). Containerisation, with large vessels discharging and loading many containers at a port in a very short time, could not have been achieved without computers to assist in the commercial and operational paperwork.

Computer technology is continuing to develop very rapidly, and increasingly transactions btween shipping companies and their clients, statutory bodies like Customs, and ports and terminals will be electronic. This will replace vast volumes of paperwork.

In the United Kingdom, a system called D.I.S.H. (**D**ata **I**nterchange with **Sh**ippers) has been operating since mid-1987, linking several shipping companies and major customers. Transactions such as confirmations of bookings and schedule changes, and copies of non-negotiable Bills of Lading (for checking) are sent electronically between the various parties, via a common-user network. Considerable savings in paperwork have been achieved, and because information now only has to be input once by one party much duplication and potential error has been eliminated.

New Zealand is on the verge of major E.D.I. development. N.Z. Customs are very keen to see large quantities of information, such as manifests submitted by shipping companies, transmitted elctronically. Shipping companies in turn are investigating ways in which they can provide their clients with faster, more accurate and cost effective services.

The industry is currently looking at various alternatives for the common-user network necessary for proper E.D.I., and also which standards to use for the details of message formats and computer protocols etc. It would be a brave person who predicted a "paperless" shipping industry by the turn of the century, but the next decade promises continuing advances in communications and computer technology which will revolutionise the traditional procedures and image of the shipping industry in New Zealand.