UNISA Report: Port Networks

Meeting: 8 October 2011

Executive Summary

The Upper North Island Strategic Alliance (UNISA) has identified four priority first order issues to focus on being Economic Development, Transport, Ports and Tourism. It is difficult to treat these issues in isolation as they are highly integrated with close linkages and opportunities for collaboration. Within this context, this paper focuses on port networks, including inland ports and airports. Initial discussions at the August 2011 UNISA meeting noted that a body of work needed to be done covering the issues and opportunities for port networks in the Upper North Island, including information on:

- Freight Volumes and Integration;
- Infrastructure requirements;
- Freight constraints;
- Airports; and
- Current Research and Reports (including productivity and future capacity and demand)

The compilation of this briefing paper is being led by the Northland Regional Council and Whangarei District Council and is being assisted, by work commissioned from Price Waterhouse Cooper Ltd.

The purpose of this report is to outline the importance of this priority issue and to note the other work being undertaken or currently available which is directly relevant to the Port issue and would be useful for UNISA members to have a general understanding of prior to considering the need for or scoping of any further work.

Recommendations

It is recommened that the UNISA:

1. Agree that UNISA compile a briefing paper, drawing on existing port research, to ensure that UNISA members develop a common agreement on the most effective way forward to capitalise on the opportunities identified and seek ways to integrate this work with the other priority areas of economic development, transport and tourism; and

2. Agree that UNISA engage with the Productivity Commission before the draft report is completed in December 2011 to ensure the Commission is aware of UNISA work on Ports. Following this consideration be given to lodging a submission or comments on the draft on behalf of UNISA as appropriate; and

3. Agree that UNISA continue to engage with the New Zealand Transport Agency (NZTA) to ensure that NZTA is privy to the most up to date information on freight movements and port developments within each region to ensure that Upper North Island Freight Plan is useful and relevant where possible.

Introduction

The Upper North Island of New Zealand comprises four regions – Northland, Auckland, Waikato, and Bay of Plenty. These regions, on a combined basis, host the majority of New Zealand's population and economic output. The Upper NI contains:

- New Zealand's three largest ports (by volume) and the largest international airport, which on a combined basis, accounted for 53% of total trade in 2010 by volume and 67% by value;
- A steel mill, oil refinery, and one of two cement plants;
- A high and growing proportion of New Zealand's population (53%); and
- A significant portion of employment (50%), and GDP (53%).

It is also responsible for large shares of national production of a range of key bulk products, particularly milk, dairy, logs, aggregates, and building materials. This combination contributes to the high level of freight activity within and between the regions, as well as significant projected future growth

Ownership of Ports

The UNISA members are the majority shareholders of the three ports in the upper North Island. There has been a previous merger attempt between Ports of Auckland Ltd (POAL) and the Port of Tauranga (POT), that was unsuccessful. POT is majority owned (55%) by Quayside Securities Ltd which is a council controlled organisation (CCO) of Environment Bay of Plenty. POAL is 100% owned by Auckland Council Investments Ltd which is a CCO of Auckland Council. Northport Ltd is a 50/50 joint venture between the Port of Tauranga (POT) and Northland Port Corporation (NPC). The Northland Port Corporation is an investment company which has a 53% majority shareholding by the Northland Regional Council.

Economic impact of ports on regions

Ports are recognised to be significant economic contributors to their surrounding region(s) as well as the rest of New Zealand. The benefits flow far beyond the direct income generated by the port and distributions made to shareholders.

Benefits must however be considered in the context of the total regional economies. For example:

- Auckland's regional GDP for 2010 is estimated to be $66 billion, and Bay of Plenty $9 billion; and
- Employment in 2010 is estimated at 663,000 FTEs for Auckland and 120,000 for Bay of Plenty.

Note that the figures in Table 1 below relate to different time periods and are likely to be based on different methodologies, therefore are not directly comparable. They do however indicate generally the extent to which ports generate economic benefits for their regions.

Table 1: Economic impact of ports on regions

Economic Impact	POAL - Auckland	POT – Bay of Plenty
FTEs	2008: 1,002 (568 direct)	2006: 1889 (950 direct)
GDP	2008: $144m ($100m direct)	2006: $383.27 m
Output	2008: $270m ($169m direct)	n/a
Distributions to shareholders	2006 – 2010: $436m (including in-specie distributions)	2006 – 2010: $169m
Cruise	2010: $63m regional GDP	2006: $10.5m regional GDP

Source: POAL and POT websites, Port of Tauranga Economic Impact Report (2006), Covec report on Economic Impact of POAL (2008), New Zealand Cruise Industry Study (2010)

Freight Volumes and Integration

The ports in Whangarei, Auckland and Tauranga handle over 70% of NZ imports, largely due to Whangarei's specialisation in oil imports at Marsden Point. On a combined basis, the three major sea-ports in the Upper North Island (UNI) handled 53% of total NZ trade in 2010 by volume and 67% by value.

Each of the UNI sea-ports have their unique competitive strengths, with Northport in Whangarei having the NZ Refinery and as yet unutilised industrial zoned land, POAL being located in the nations largest and fastest growing population centre, and POT being a primary UNI gateway located in close proximity to substantial forestry and agricultural industries.

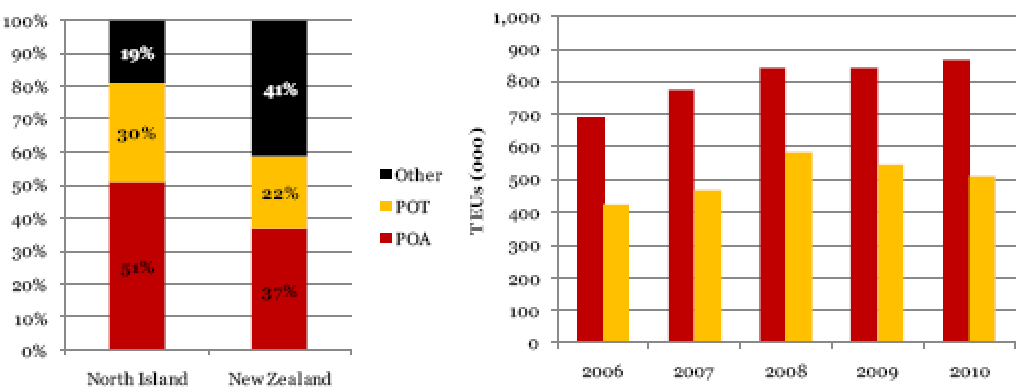
Inland ports increase the size and reach of a port. Inland ports can also improve the efficiency of port operations in instances where there are bottlenecks at the port due to land transport, or land area (for example - storage). Ports of Tauranga has a metro port (inland port) facility at Onehunga with a direct rail connection to the Port of Tauranga. Ports of Auckland has a freight hub (inland port) located at Wiri (South Auckland) with a direct rail link to the Port of Auckland. It is also worth noting that KiwiRail has a container hub facilitiy at Southdown (South Auckland).

Auckland Airport, which handles small volumes of light, high value, time sensitive freight, also accounts for a significant portion of freight by value.

Container trade is centred in the upper North Island, with POAL and POT accounting for around 81% of North Island container volumes, and 59% of total New Zealand container volumes as shown in Figure 3.

There is intense competition for container trade between POAL and POT due to the fact that ports are high fixed cost businesses, and POT and POAL are located in relatively close proximity (211 km, which is less than three hours by road). Given the ability to switch between the ports at a relatively low cost, the small number of large shipping lines can exert significant market power in price negotiations with the two ports. The close proximity also facilitates POT's use of its Metroport facility in South Auckland, through which it competes for Auckland volumes (both import and export). POAL and POT container volumes over the 2006-2010 period are set out in Figure 3 below. POAL and POT's market shares of the upper NI container trade have been approximately 60% and 40% respectively over the five year period.

Figure 3: Upper North Island Container Volumes and Market Share 2006-2010



Source: Ports of Auckland & Port of Tauranga 2010 Annual Reports

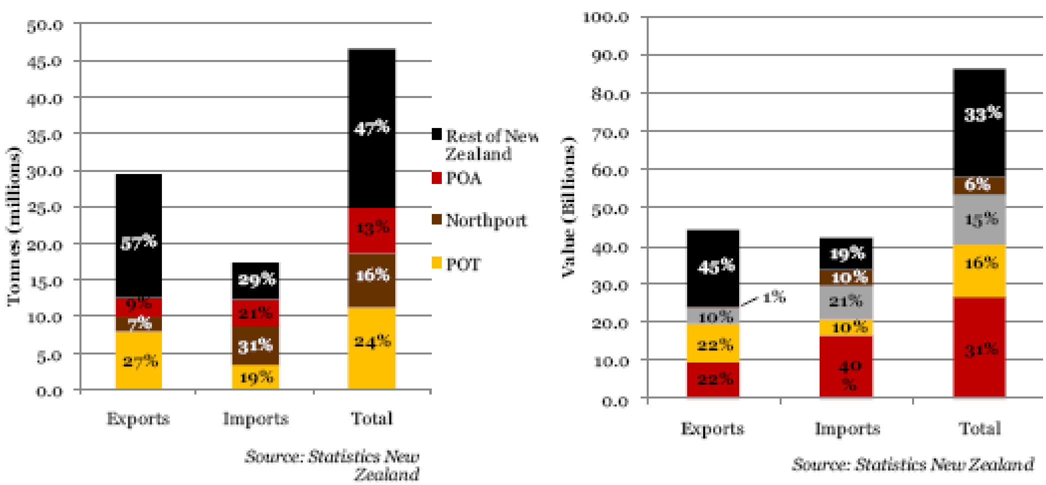
Source: Ports of Auckland & Port of Tauranga 2010 Annual Reports

Northport is New Zealand's largest bulk and break-bulk port by volume, followed by POT. POAL has relatively small bulk and break-bulk volumes. The Upper NI ports (including Auckland Airport) accounted for 53% of total trade in 2010 by volume and 67% by value as shown in Figure 4 below.

POT, which has a larger proportion of exports, is the largest port by total volume, while POAL, which is more import focused, is the largest port by value.

Northport is the largest import port by volume, given its significant oil imports. Auckland Airport handles 15% of New Zealand's total trade by value.

Figure 4: 2010 Imports and exports by volume and value



The UNI regions are highly integrated, accounting for 56% of total freight movements in NZ, of which 90% moves within or between the four regions. Inter-regional freight is forecast to grow by 100% over the next 25 years and roads will account for 86% of movements. This will put significant pressure on already heavily used parts of the transport network. The majority of the increase in inter-regional freight is expected to be in movement of aggregates from Waikato and Northland to Auckland. This has implications for the relevant importance of the rail link between Auckland and Northland compared with other transport priorities. The issue of ports in the UNI is an integral part of the wider transport picture and cannot be viewed in isolation – if transport is deemed to be a priority for UNISA– then ports must also be a priority.

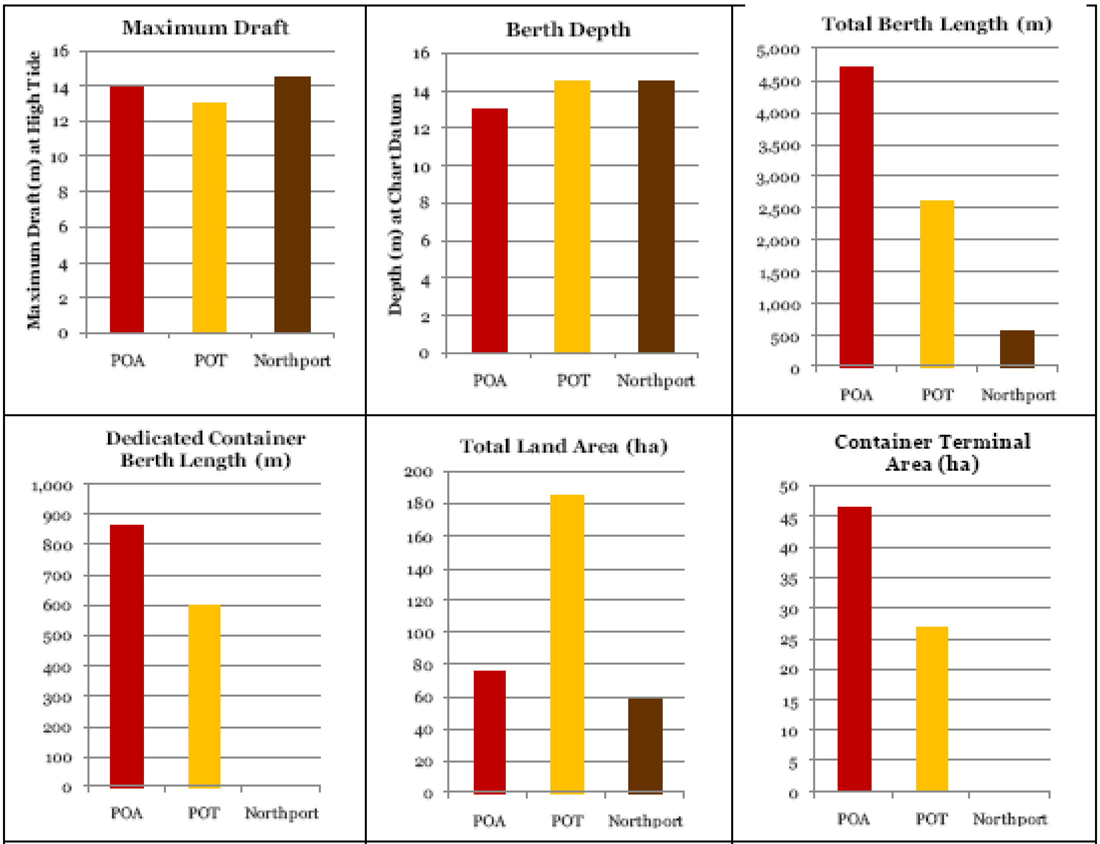
Infrastructure Requirements

Key port infrastructure includes channels, wharves, berths, cranes and other handling equipment, land, storage facilities, and connections to transport infrastructure. A comparison of key items of port infrastructure for the three upper NI ports is set out below, with further details in Figure 7 and Table 14 below. Key points to note are:

- Northport, with its deep water harbour can accommodate the largest draft ships. Northport and POT have the greatest berth depth, although POAL has resource consent to also increase its berth depth to 14.5 metres.
- POAL has the largest dedicated container berth length and terminal area, and most advanced port infrastructure.
- POAL can only increase its container land through costly reclamation. However, POT has only paved approximately 27 hectares of the 72 hectares at Sulphur Point, and therefore has significant scope for cheap expansion of container land.

- The area of land in Northport dedicated for container operations is unknown, however container volumes are negligible.
- POT has the largest total land area, however the 185 hectares of land includes land that is used for industries that provide support to the Port.
- Northport also has a significant area (180 hectares) of development land surrounding the Port.
- The 76 hectares of land at Ports of Auckland relates to land on the central Auckland waterfront. The Port also owns land at the Port of Onehunga, South Head, Pikes Point, Wiri and Gabador Place, providing more than 105 hectares of total land.

Figure 7: Comparison of key port infrastructure



Source: Port websites and media releases

Table 14: Upper NI ports operational infrastructure

Port Infrastructure	POAL	POT	Northport
Total Cranes	8	5	0
Post-Panamax Cranes	3	3	0
Straddle Carriers	43	24	0
Reefer Points	1,849	1,347	16

Source: Port websites and media releases

Freight constraints

Efficient supporting transport infrastructure is critical to the efficient functioning of ports, particularly as the trend towards larger ships results in increased peak flows.

An efficient transport system plays important role in New Zealand's international competitiveness. Many of New Zealand's key export commodities comprise low value agricultural and mineral products – primary products account for about two thirds of exports by value. For these products, transport costs are an important component of total costs and therefore have big impact on export prices.

New Zealand's transport sector faces a number of challenges including:

- A small dispersed population
- Geographical challenges including mountain ranges and the Cook Strait
- Historical underinvestment
- Significant projected growth in freight volumes
- Increasing fuel prices and the Emissions Trading Scheme.

Freight flows on road and rail networks in the Upper NI are high in relation to the rest of the country, therefore much of the infrastructure is under pressure.

Road:

- Many areas of the State Highway Network suffer from congestion, particularly in the Auckland, Waikato, Bay of Plenty regions.
- The proposed Roads of National Significance (RONS) will address Puhoi-Wellsford, Waikato Expressway, and the Tauranga Eastern Link.
- Congestion within Auckland will also be addressed to some extent by the Victoria Park tunnel and Western Ring Route.

Rail:

- There is a high intensity of rail use south of Auckland including the North Island Main Trunk line and the East Coast Main Trunk line.
- Flows via rail include substantial movements to and from Glenbrook Steel Mill (as it is the only facility of its type in New Zealand).
- There is also pressure on the Auckland urban rail network, where freight and passenger needs have to be balanced.

The major transport challenges for each of the three upper NI ports are as follows:

Table 3: Upper NI ports - transport challenges

Port	Transport Challenges	Proposed / potential developments
Northport	• No rail link • KiwiRail review of services - threat of losing Main Trunk Line services • Incomplete State Highway 1 connection	• Puhoi to Wellsford SH1 (RONS)
POAL	• Traffic congestion on State Highway network, particularly in peak hours • Long term rail capacity – competition from passenger rail	• Grafton Gully Stage 3 project • Electrification of Auckland rail network
POT	• Single track rail line on East Coast Main Trunk line	• Tauranga Eastern Link SH2 (RONS) • Second Tauranga Harbour rail bridge (mooted)

Airports

Auckland Council has signalled its desire for Auckland to become an international destination for tourists. Regional airports are considered a major catalyst for tourism development, and tourism makes a significant contribution to our regional economies. Including airports in this area of focus is an opportunity to see how neighbouring regional economies can benefit from and enhance Auckland's goals by broadening the tourism product on offer – extending from the Far North to the Bay of Islands down through to Coromandel, Rotorua and Bay of Plenty in the south.

Current Research that is relevant to Ports:

International Freight Transport Services: New Zealand Productivity Commission, July 2011

The Productivity Commission is an independent Crown Entity. The Commission completes in depth inquiry reports on topics selected by the Government.

The government has asked the Commission to undertake an enquiry into international freight transport services:

- What are the factors influencing the accessibility and efficiency of international freight transport services available to New Zealand firms; and
- Are there opportunities for changes in New Zealand's infrastructure and regulatory regimes that could increase the accessibility and efficiency of international freight transport services for New Zealand firms?

In answering these questions the Commission has been asked to pay particular attention to:

- The effects of New Zealand's distance from overseas markets and reliance on overseas providers of international transport services
- The costs, efficiency, productivity level and growth of all components of New Zealand's international freight services supply chain, with international comparisons; and
- The effectiveness of current regulatory regimes (including those in the Civil Aviation Act 1990 and Shipping Act 1987) and the potential costs and benefits of alternative regulatory arrangements, with international comparisons

The issues report sets out the context international and regionally before considering the efficiency of individual components (e.g. ports, sea freight, airports, domestic freight) and the efficiencies of interfaces between components, and finally considers the efficiency of the entire logistics chain.

The commission has produced an issues paper to begin the inquiry process. A draft report is expected to be released in December 2011 and a final report to government in April 2012.
Link to document: http://www.productivity.govt.nz/current-inquiries

Where to Next:	Recommend engagement with the Productivity Commission (at both Political and technical levels) before the draft report is completed in December 2011 to ensure the commission is aware of the UNISA work on Ports. Following this, consideration be given to lodging submission or comments on the draft on behalf of UNISA as appropriate.

The Upper North Island Freight Project – New Zealand Transport Agency

The Upper North Island Freight Plan (UNIFP) is designed to provide the basis for more aligned public and private decision making on matters affecting the efficient and safe movement of freight. The Northland, Auckland, Waikato and the Bay of Plenty was chosen as it has significant, and increasing, volumes of freight and is an area of significant government transport investment.

The UNIFP aims to:

- Maximise the value of current and planned road and rail investments
- Align the development of new or improved freight facilities
- Better integrate freight transport and land use planning
- Identify bottlenecks and opportunities to improve network connections
- Prepare the freight network for the growing freight task and future trends
- Ensure freight is not overlooked in wider transport planning

NZTA will be engaging with local and regional government in the Upper North Island, Freight Operator's Forum members and regional ports.

NZTA anticipates developing a key themes document by October 2011 and developing a draft discussion document by December 2011.

Link to document: not available yet

Where to Next: Recommend continued engagement with the New Zealand Transport Agency – particularly if not already underway. Particularly important to ensure NZTA is privy to the most up to date information on freight movements and port developments within each region to ensure the UNIFP is as useful and relevant as possible.

Airports

To date no work has been commissioned in the context of UNI from independent consultants and there does not appear to be any previous reports which would be beneficial to this topic.

NRC is currently commissioning further independent advice on this matter.

Existing Reports which are particularly relevant:

There are a number of key reports which are particularly relevant to the port networks within the Upper North Island. Two of the most relevant reports are summarised below. (It is anticipated that other reports will be added to this section over time.)

The Question of Bigger Ships – New Zealand Shippers Council, August 2010

The New Zealand Shippers Council (NZSC) is an association of major New Zealand-based cargo owners – both importers and exporters.

The report investigates bigger ship services between New Zealand and South East Asia. The report presents the NZSC's findings on the value that can be realised through the introduction of bigger ships (5000 & 7000 TEU ships). The report ultimately concludes that two ports (one in North Island and one in South Island) should become 7000 TEU ship capable within the next five years to ensure NZ does not become dependant on a hub services from Australia.

Link to document: http://www.shipperscouncil.co.nz/documents/The_Question_of_Bigger Ships.pdf

Coastal Shipping and Modal Freight Choice - Rockpoint Corporate Finance Ltd, July 2009

Study commissioned by the New Zealand Transport Agency to better understand the commercial drivers behind freight mode choice as a precursor to the development of policy aimed at the successful encouragement of coastal shipping.

The report concludes that the structural changes in the market most likely to benefit coastal shipping is the rationalisation of New Zealand port calls by international shipping lines. The report recommends:

- Mandatory data capture (container, breakbulk and bulk flows) through NZ ports, on road and on rail
- Development of dedicated resources within the Ministry of Transport related to shipping
- Development of investment strategy for KiwiRail (which has been undertaken)
- Regional Land Transport Strategies be extended to include coastal shipping (which the Northland strategy does)
- Clear articulation of the governments policy views in relation to potential consolidation or coordination of port services

Link to document: http://www.nzta.govt.nz/resources/domestic-sea-freight-development-fund/coastal-shipping-and-modal-freight-choice/index.html

Additional sources of information that are useful to gain a broader context and understanding of the issues and challenges for ports are included in **Appendix 1**.

Recommendation:

It is recommended that UNISA members becoming familiar with the existing reports already published which are particularly relevant to Ports. The compilation of this briefing paper is being led by the Northland Regional Council and Whangarei District Council.

The proposed way forward is to:

1) Identify the issues and opportunities for port networks in the Upper North Island (as outlined above);

2) Gain common agreement on the most effective way forward;

3) Devise a strategy to capitalise on these opportunities identified; and

4) Investigate ways to integrate Ports work with the other priority areas of Economic Development, Transport and Tourism.

Appendix 1: Additional Sources of Information
The following sources of information are also useful to gain a broader context and understanding of the issues and challenges for ports:

- New Zealand Companies Office
  - www.business.govt.nz/companies
- Statistics New Zealand
  - www.stats.govt.nz
- Upper North Island Freight Study (August 2010)
  - http://www.nrc.govt.nz/upload/7767/Upper%20North%20Island%20Freight%20Study%20-%20August%202010.pdf
- Port company websites
  - www.poal.co.nz
  - www.port-tauranga.co.nz
  - www.northport.co.nz
- Ports of Auckland Development Plan (2008)
  - http://www.poal.co.nz/news_media/publications/POAL_port_development_plan_2008.pdf
- Ports of Auckland Annual Review (2010)
  - http://www.poal.co.nz/news_media/publications/POAL_annual_review_2010.pdf
- Port of Tauranga Annual Report (2010)
  - http://www.port-tauranga.co.nz/images.php?oid=3011
- Northland Port Corporation Interrim Report (2010)
  - http://www.northlandportcorp.co.nz/sites/default/files/NPCInterim2010.pdf
- Economic Impact of POAL, Covec (December 2008)
  - http://www.poal.co.nz/news_media/publications/POAL_economic_impact_report_covec_2008.pdf
- Port of Tauranga Economic Impacts for 2006, University of Waikato (November 2006)
  - http://www.port-tauranga.co.nz/images.php?oid=1388
- Long term optimisation of the New Zealand Port Sector, Auckland Regional Holdings (October 2009)
  - http://www.poal.co.nz/news_media/publications/Long%20term%20Optimisation%20of%20the%20New%20Zealand%20Port%20Sector.pdf