FROM FOREST TO GLOBAL MARKET: THE BUSINESS OF SHIPPING NEW ZEALAND LOGS



Meet Jon: A Forester Who Found a Career in Shipping

Jon Wisniewski is a Shipping Manager and Charterer for Aowhanui, working at the intersection of forestry, logistics, international trade and shipping.
He helps move New Zealand logs from forests and ports to international customers, mainly in China and India. His work involves securing the right volume and grades of logs, port space and vessels, and making sure cargo reaches its destination efficiently.
Jon has worked across the entire forestry supply chain, including forest establishment, silviculture, harvesting and log procurement, before moving into international shipping.
He didn't plan to become a shipping specialist but discovered a career he enjoys for its mix of problem-solving, mathematics, negotiation, relationships and international business.

WHAT DOES A SHIPPING MANAGER ACTUALLY DO?

At its simplest, Jon's job is about getting logs from a forest to an overseas customer. But there are many steps in between.
Jon needs to:

- find enough logs to fill a vessel
- make sure the logs are the right grades and volumes
- secure space at a suitable port
- negotiate prices with suppliers
- charter the right vessel
- plan which ports the vessel will visit
- coordinate the timing of the logs and the ship
- manage delays and unexpected problems
- help ensure the cargo reaches its overseas destination efficiently.

Every decision matters because the numbers involved can be enormous. A vessel carrying around 40,000 cubic metres of logs at US$70 per cubic metre represents a cargo worth approximately US$2.8 million.

Making the Shipping Journey Work

The Tauranga Port is the principal port of New Zealand. Approximately 6.3–7.3 million tonnes of logs are exported annually.

Northport in Whangarei. Approximately 2.1 million m³ are exported from Northport.

Port of Napier is situated in the Hawke's Bay. Approximately 2.7 million tonnes of logs leave from Napier.

Port of Gisborne. Approximately 2.2–2.4 million m³ of logs are shipped overseas from Tairāwhiti.

Port of Nelson. Approximately 1.1 million m³ of logs leave Aotearoa from Nelson's port.











Export Market Overview

Total Value: Forestry export returns hover around $6.2 billion per year.

Product Breakdown

Raw logs and poles account for roughly 54% of this trade, followed by sawn timber and wood pulp.

Key Destinations

China purchases over half of all New Zealand forestry exports, with other notable markets including South Korea, Japan, India, and Vietnam.



THE LOGISTICS BEHIND LOG EXPORTS

Having logs isn't enough. Jon also needs access to port space.

Most ports have limited capacity, and exporters may not be able to simply decide to start using a particular port.

The location of the logs, available port space and shipping route all have to work together.

A vessel visiting multiple ports is more expensive because every port call costs money and takes time.
Jon explains that:

- one load port and one discharge port is the most efficient
- two load ports and one discharge port is common
- three load ports becomes difficult
- four load ports can become uneconomic.

The goal is to move as much cargo as possible with as few port calls as possible.

Chartering a Ship

In the shipping industry, a vessel is chartered which is the shipping term meaning hired.
Jon's role as a charterer is to arrange the vessel needed to transport the cargo.

He has to consider:

- the amount of cargo available
- the vessel's capacity
- the vessel's location
- the destination
- shipping rates
- fuel costs
- port availability
- weather
- congestion
- the timing of the entire journey.

The availability and cost of ships can change depending on what is happening in other parts of the world.

For example, ships may be attracted to Australia to carry other cargoes, such as grain.

This can reduce the number of vessels available to transport New Zealand logs and increase shipping costs.

The Cost of Getting It Wrong

Shipping involves some very large financial risks.
If a vessel arrives at a port and the logs aren't ready, the exporter may have to pay demurrage.
What is demurrage?
Demurrage is the money paid when a vessel is delayed beyond the agreed time.
Jon says these costs can be around US$20,000 per day.
There is also the cost of calling at ports. A single port call can cost more than US$60,000.
This means that poor planning, delays, congestion or bad weather can quickly turn into significant financial losses.

Buying the logs: Where does the supply come from?

Aowhanui is a trading company rather than a large forest owner, so Jon needs to source logs from forest owners and managers.

Logs can be bought at-wharf-gate, when they arrive at the port, or through a stumpage agreement, where the standing trees are purchased before harvesting.

Longer-term fixed-price contracts can also provide greater certainty for both buyers and sellers, although they carry the risk of changing market and shipping costs.

Relationships are also important. Suppliers consider more than price when deciding who to sell to, including their existing relationships and whether an exporter has already committed to a vessel.

What Is "Run-of-Bush"?

Jon uses the term run-of-bush to describe buying the mix of logs that comes from a forest harvest rather than selecting only particular logs.

The logs are sorted into grades according to their characteristics, size and intended use.
These can include:

- Pruned logs
- A-grade logs
- K-grade logs
- Industrial grades, such as KI and KIS.

Customers may prefer particular log lengths or grades, but exporters generally work with the mix of logs produced by New Zealand forests.

The Challenge: Filling a Ship

One of Jon's biggest challenges is finding enough logs to fill a vessel.
The ship may already have been chartered before all the logs have been procured. This creates a significant financial risk.

For example, if a vessel is 7,000 cubic metres short and the shipping cost is around US$48 per cubic metre, the missing cargo could represent more than US$300,000 in dead freight.

What is dead freight?

Dead freight is money paid for cargo space that has been contracted but isn't filled.

The challenge is therefore not simply finding logs. Jon needs to find enough of the right logs, in the right place, at the right time.

Weather, Congestion and the Things You Can't Control

Even the best shipping plan can be disrupted.
Weather can delay vessels, while congestion can mean a ship arrives at a port and has to wait behind other vessels.

Jon recalls the congestion experienced at Gisborne in 2021, when large numbers of vessels were waiting offshore and demurrage costs reached millions of dollars.

This is one of the reasons shipping requires constant problem-solving. A plan that works in the morning may need to change by the afternoon.

The Mathematics of Shipping

Shipping is a business where mathematics has real financial consequences.
Jon needs to work with:

- cubic metres of logs
- vessel capacity
- shipping rates
- cargo values
- port costs
- fuel costs
- time
- exchange rates and international markets
- financial risk.

The volume of logs is often measured in JASm³, or JAS cubic metres, a measurement used in the New Zealand log trade.

The Numbers

Imagine a ship is carrying 40,000 JASm³ of logs.

If the shipping cost is US$50 per cubic metre, how much would it cost to transport the cargo?

40,000 × US$50 = US$2,000,000
That's US$2 million in shipping costs alone.

This helps explain why even small decisions about vessel capacity, port calls or delays can have major financial consequences.

The Jargon

Laycan: 0001LT/15-May-2359LT/30 May
Load: 1SB each 13SP Nelson/Lyt/Picton
Load Rate:4,000 JAS PWWD SHINC Lyt
7,000 JAS PWWD SHINC Picton
8,000 JAS PWWD SHINC Nelson
Discharge: 1SP 1SB Kandla
Discharge Rate: 5,000 JAS PWWD SHINC
Freight: USD xx /JAS FIOS (Last port to be Picton)

Demurrage: USD xx PDPR HD
Commission: 2.5%
Adcom + 1.25% broker

WHAT DOES IT ALL MEAN?

GLOSSARY OF SHIPPING TERMS

DISCOVER FORESTRY NEW ZEALAND

A Language of Its Own

Shipping has developed its own specialised vocabulary, much of which has been used for generations.
Some important terms include:

Charter- To hire a vessel to transport cargo
Charterer-The person responsible for arranging or chartering a vessel
Tonnage- A measure associated with vessel carrying capacity
Load port- A port where cargo is loaded
Discharge port- A port where cargo is unloaded
Dead freight- Payment for cargo space that has been contracted but isn't filled
Demurrage- Money paid when a vessel is delayed
Bunkers- Fuel used by a ship
Ballast- When a ship travels without cargo to collect a new load, it travels in ballast. The tanks are full of seawater for stability.
Broker- A person or company that helps arrange commercial shipping transactions
JASm^3- A measurement of log volume used in the New Zealand log trade

Jon says that when he first started working in shipping, he couldn't understand much of the documentation because of the specialised terminology and abbreviations.

What Skills Do You Need?

A career in log procurement and shipping draws on a wide range of skills.

Mathematics- You need to be comfortable working with volume, rates, costs and financial calculations.

Communication- Negotiating with suppliers, customers, brokers and shipping companies requires clear communication.

Problem-solving- Things regularly go wrong. You need to be able to assess a situation and find a solution.

Relationship building- Securing a reliable supply of logs depends heavily on relationships with forest owners, managers and suppliers.

Commercial awareness- You need to understand how supply, demand, costs and international markets affect business decisions.

Forestry knowledge- Understanding how trees are grown, harvested and converted into logs helps Jon make better procurement and shipping decisions.

Patience and empathy- Negotiation isn't just about numbers. Understanding what motivates other people can make a significant difference.

CURRICULUM LINKS

Mathematics & Statistics

The strongest curriculum link

- calculating log volumes in JASm³
- calculating vessel capacity
- working out shipping costs per cubic metre
- calculating the cost of dead freight
- calculating demurrage costs
- comparing different shipping routes and port combinations
- using data to make commercial decisions
- estimating risk and potential financial losses

Social Sciences

Students could investigate:

- New Zealand's log export industry
- why New Zealand exports logs
- China and India as international markets
- supply and demand
- global trade
- how international events affect New Zealand businesses
- the role of ports in the economy
- how decisions made overseas can affect people working in New Zealand.

Technology

Students can investigate how:

- harvesting systems supply the logs
- trucks transport logs to the port
- port systems receive and store logs
- specialised machinery loads vessels
- information and measurement systems track cargo
- shipping systems coordinate multiple organisations.

English

Students could:

- interpret shipping terminology
- explain a complex process clearly
- write a report about the journey of a log
- interview someone working in shipping
- create a presentation explaining how a vessel is loaded
- argue whether exporting logs is beneficial to New Zealand.

Key Competencies Connection to Jon's work

Thinking- Solving problems, calculating costs, weighing up risks and making decisions

Using language, symbols and texts- Understanding shipping terminology, measurements, contracts, data and financial information

Managing self- Managing deadlines, competing priorities and high-pressure decisions

Relating to others- Negotiating with suppliers, brokers, port operators and customers

Participating and contributing- Working as part of a complex international supply chain

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WIDE TRUST

The Wood Industry Development and Education (WIDE) Trust is a charitable trust established in 2018 with the mission to support development and education in the forestry and wood industry sectors through the provision of grants and scholarships to New Zealand students and institutions.

FOREST GROWERS LEVY TRUST (FGLT)

The Forest Growers' Levy Trust collects the commodity levy paid on harvested wood material from forest growers and acts as the custodian of those funds. The Trust ensures the levy is invested in research, development, biosecurity, promotion and other industry-good activities that benefit New Zealand's plantation forest sector.