

The impact of the Japanese earthquake on New Zealand forestry exports

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Introduction

On 11 March 2011, a 9.0 magnitude earthquake occurred off the Pacific coast of the North Eastern part of Japan. It is reported that two plywood mills were destroyed; six plywood mills and one major pulp and paper mill were damaged (Wood Markets, 2011). As a result, Japan is expected to increase imports of forestry products, especially plywood, to meet the demand arising from the earthquake disaster. As the second largest wood products export market and the third largest woodpulp export market for New Zealand (August 2011 export revenue), the impact of the Japanese earthquake on New Zealand forestry exports and potential demand should be substantial. The aim of this research is to analyze logs, lumber, plywood, mechanical pulp and softwood chips export to Japan in the short term after the earthquake and identify opportunities for New Zealand forestry industries.

The economic analysis

Logs and lumber

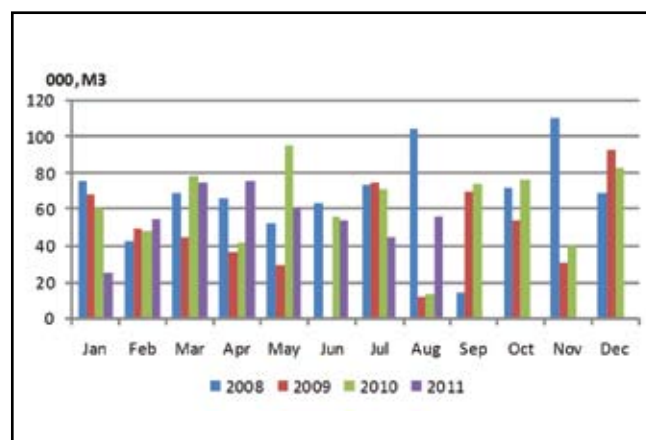
Japan is the fourth largest market (5%) by volume for New Zealand log exporters according to the most recent trade data (January to August 2011) after China (63%), South Korea (19%) and India (12%). It is assumed that Chinese buyers will continuous to take most of the available logs in New Zealand for the rest of the year, and possibly into 2012 thus limiting volumes available to Japanese buyers. Japan's softwood log import will possibly come from alternative suppliers such as the U.S. and Canada in the medium or even long term.

In the short term, there was a sign of log panic purchasing in April 2011 as Figure 1 shows. Exports to Japan increased dramatically comparing to April 2009 and 2010. Moreover, the April 2011 log export to Japan was slightly higher than March 2011 but similar pattern was not found in cases of 2008, 2009 and 2010.

The increase of New Zealand radiata pine grades A and J prices in Japan in April as shown in Figure 2 is consistent with the increase of log import volume in April. The prices stabilized after May indicating the market's expectation returns to normal.

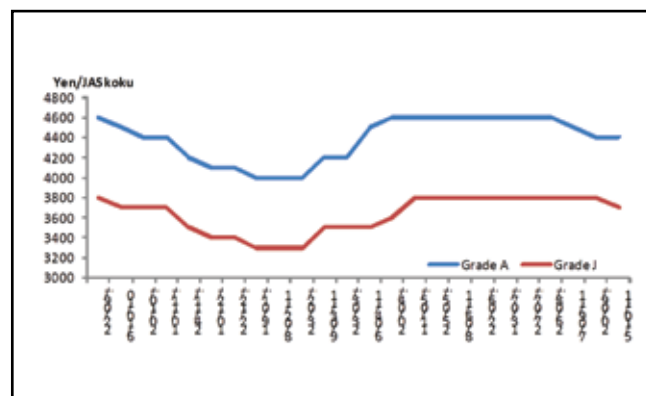
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² All analysis conducted by author and do not represent MAF's viewpoint



Source: Statistics New Zealand (SNZ)

Figure 1: New Zealand log export volume to Japan



Source: Japan Lumber Report (JLR)

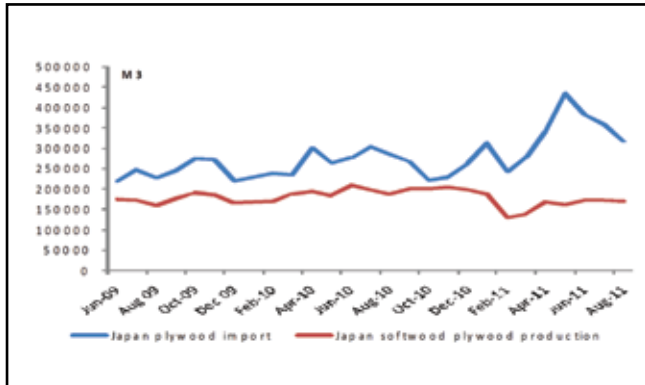
Figure 2: New Zealand radiata pine prices in Japan (CIF)

It is reported that radiata pine sawmills in Japan were not damaged by the earthquake and tsunami and it is estimated that lumber demand may take 9 to 12 months to have a measurable impact on imports (JLR, 2011). As a result, the short-term demand is expected to have no significant increase until the re-building strategy is completed. However, with the appreciation of New Zealand dollar to the US dollar and high radiata pine export prices, it is possible that Japanese buyers will shift their interest to North American or Russian lumber.

Plywood

Plywood is needed for emergency housing and imports are expected to increase sharply in the short term following the earthquake. As shown in Figure 3, there was aggressive purchasing of imported plywood at the end of March and the following April and May. But such a panic buying is over now – the August

month is the third month that plywood import volume is decreasing continuously. Figure 3 also shows that there was a drop in production at the end of March but quickly recovered due to increased in production by domestic plywood producers outside the damage zone.

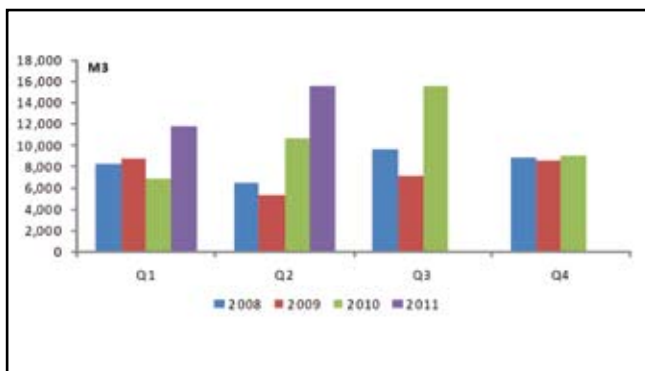


Source: Statistics NZ and Ministry of Economy, Trade and Industry Japan

Figure 3: Japan softwood plywood import and production

Figure 4 shows Japanese quarterly plywood imports from New Zealand. The first quarter 2011 imported volume was higher than the same quarter in 2008, 2009 and 2010. This is likely to be due to the increased purchasing following the earthquake. The second quarter imported volume increased by 46% compared to the second quarter 2010 in response to the demand for emergency housing.

Despite the strong demand for plywood in Japan, there were not many opportunities for New Zealand plywood suppliers as the major plywood suppliers to Japan are Malaysia, Indonesia and China. New Zealand plywood exports to Japan in the June quarter 2011 was only 1.3% of total Japanese imported volume but Malaysia, China and Indonesia were 43%, 24 % and 24%, respectively.

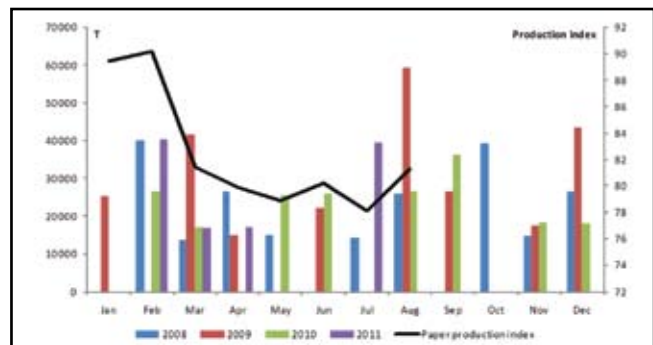


Source: Ministry of Economy, Trade and Industry Japan

Figure 4: Japan quarterly softwood plywood import from New Zealand

Pulp and Chips

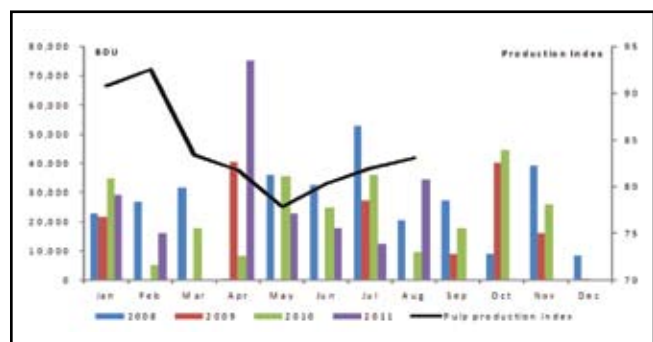
The earthquake and tsunami have damaged one of Japan's major pulp and paper mill. Figure 5 shows that the Japanese paper production index dropped by about 10% from February to March. After electric power shortage issues had been resolved, the paper industry began to recover in August and no doubt the reason for New Zealand's mechanical pulp export to Japan in July, after an absence in May and June.



Source: Statistics New Zealand, Ministry of Economy, Trade and Industry Japan

Figure 5: New Zealand mechanical pulp export to Japan (volume) and Japanese paper production index (2011)

It is estimated that pulp mills in the affected region consumed roughly 22-24% of Japan's total pulpwood chip consumption in 2010 (Flynn, 2011). The earthquake and tsunami caused pulp production drop significantly from February to May as Figure 6 shows. The aggressive purchase of New Zealand softwood chips in April indicated stock building for future pulp production concern. In August, New Zealand exports of softwood chips to Japan increased suggesting future production recovery.



Source: Statistics New Zealand, Ministry of Economy, Trade and Industry Japan

Figure 6: New Zealand softwood chips export to Japan (volume) and Japanese pulp production index (2011)

Table 1 compares New Zealand's forestry export revenues to Japan for June quarter 2010 and 2011. The main increases came from softwood chips and mechanical pulp. Log export to Japan increased only

by 4.3 million USD due to China being the dominant market driver of New Zealand radiata pine. Malaysia, China and Indonesia are the most important plywood exporters to Japan. However, New Zealand managed to increase its plywood export earning from Japan by 3.4 million USD. In terms of lumber exports to Japan, New Zealand does not have a competitive advantage with potential increases coming from Russia, Canada and US.

Table 1: The second quarter New Zealand main forestry export revenues to Japan in 2010 and 2011 (millions of USD)

	Q2 2010	Q2 2011	Difference
Softwood chips	9.34	22.41	13.07
Mechanical pulp	16.46	24.40	7.93
Logs	28.41	32.68	4.27
Plywood	6.09	9.53	3.44
Lumber	8.36	9.60	1.24

Source: Ministry of Economy, Trade and Industry Japan

Conclusion and Outlook

It has been seven months now since the earthquake occurred in Japan. Although it is still too early to finalise the quantitative economic impact of the Japanese earthquake on New Zealand forestry products, this research identified the increased demand for emergency use products and potential products for future re-construction. Take the June quarter export revenue as an indicator, Table 2 shows that Malaysia, China, Indonesia and Canada benefited the most due to high demand of plywood in Japan. In terms of New Zealand, export revenue was mainly contributed by softwood chips and mechanical pulp.

Table 2: Revenue¹ from major exporters to Japan in the second quarter in 2010 and 2011 (millions of USD)

	Q2 2010	Q2 2011	Difference
China	94.54	152.28	57.74
Malaysia	200.86	335.06	134.21
Canada	284.81	328.32	43.51
Indonesia	141.62	192.68	51.06
US	173.81	201.35	27.54
New Zealand	68.66	97.61	28.95

Source: Ministry of Economy, Trade and Industry Japan

Over the medium to long term, the demand for mechanical pulp and softwood chips is expected to increase once the electric power supply in affected areas returns to normal. However, due to the limited capacity of production in New Zealand, the increase is not expected to be dramatic. New Zealand lumber exports to Japan are experiencing high costs and an appreciated New Zealand dollar but the reconstruction process may lead to increased demand.

Reference

Flynn, R., (2011). RISI VIEWPOINT: Impact of the Japanese earthquake and tsunami on wood and timber markets. European Pulp and Paper Outlook Conference, Amsterdam.

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Wood Markets. (2011). Monthly international report, V16, Number 3.

¹ Revenue is estimated as the sum of imported revenue of plywood, softwood chips, mechanical pulp, logs and lumber.