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## Reflections and outlook for the New Zealand ETS: must uncertain times mean uncertain measures?

Richter, Jessika Luth; Chambers, Lizzie

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PO Box 117  
221 00 Lund  
+46 46-222 00 00



# Reflections and Outlook for the New Zealand ETS must uncertain times mean uncertain measures?

## Introduction

The New Zealand emissions trading scheme (ETS) was introduced by legislation in 2008. The legislated objectives as stated in section 3 of the Climate Change Response Act 2002 are to ‘support and encourage global efforts to reduce the emission of greenhouse gases by (i) assisting New Zealand to meet its international obligations under the [UNFCCC]

Convention and the [Kyoto] Protocol; and (ii) reducing New Zealand’s net emissions of those gases to below business-as-usual levels’.

Beyond this, the New Zealand government has confirmed three objectives for the ETS:

- help New Zealand to deliver its ‘fair share’ of international action to reduce emissions, including meeting any international obligations;
- deliver emission relations

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Jessika Luth Richter is a PhD researcher at the International Institute for Industrial Environmental Economics, Lund University.

Lizzie Chambers is founding director of Carbon Match Ltd and a Director of the New Zealand Forest Research Institute Ltd.

- in the most cost-effective manner;
- support efforts to maximise the long-term resilience of the New Zealand economy at least cost. (New Zealand Government, 2012; Ministry for the Environment, 2013a)

Criteria used by the Ministry for the Environment to assess the regulatory impact of changes to the ETS (shown in Table 1) give further insight into a possible interpretation of these objectives. Decarbonisation is part of long-term economic resilience, demonstrated by the criteria to ‘provide incentives for the long-term development of low-cost emission abatement technologies’ and to ‘minimise negative/maximise positive wider environmental impacts’ (Ministry for the Environment, 2012c, p.10). Furthermore, a key strategic driver for subsequent amendments made in 2012 was to ensure that the ETS ‘supports the government’s economic growth priorities:

providing more flexibility and mitigating short term costs for business while ensuring clear long term price signals that encourage a smooth transition to a low carbon economy’ (New Zealand Cabinet, 2012, p.1).

The initial design of the New Zealand ETS was heralded as a trail-blazing all-sectors, all-gases, flexible cap-and-trade system (see, for example, Moyes, 2008; Jiang, Sharp and Sheng, 2009). However, it was also criticised for its reliance on offsets (from both forestry and overseas) and lack of ambition in terms of gross domestic emissions reduction (for further criticisms see, for example, Bertram and Terry, 2010). Since its introduction the ETS has also undergone significant change, although the main framework of the scheme has remained intact.

Amendments introduced by the National government in 2009 deferred the imposition of obligations on the ag-

riculture sector and introduced intensity-based allocation for emissions-intensive and trade-exposed industries. ‘Transitional measures’ were also legislated: a ‘two for one’ surrender obligation (whereby emitters in all sectors except forestry are required to surrender only one unit for every two tonnes of emissions) and a fixed price option (effectively a \$25 price cap on the value of a New Zealand unit (NZU)). The measures were argued by the National government as being necessary in the uncertain economic climate and were supported by many industry stakeholder groups. However, they were also criticised for being overly generous with allocation, being even less ambitious than the original scheme design, and putting the interests of some stakeholder groups above others (Hood, 2010; Bertram and Terry, 2010; Bullock, 2012; Richter and Mundaca, 2014). Transitional measures were due to be phased out after 2012, but have instead been retained indefinitely.

This article discusses the development and performance of the scheme since the report of the Emissions Trading Scheme Review Panel in 2011. In particular, the article presents the results of a survey undertaken by the authors in April 2013 of stakeholders’ perception of the scheme and its performance. The survey was designed and administered by the authors using FluidSurveys software.

General questions about the scheme’s objectives and future outlook were asked of all respondents. More targeted questions regarding market and compliance behaviour were asked of respondents who identified themselves as either forestry participants, emitters with direct obligations, emitters indirectly affected by the scheme, carbon traders, or ‘others’, including representatives of non-governmental organisations and policy makers. The survey was advertised through numerous channels, including the Carbon Match website.

The key results of the survey were that considerable regulatory uncertainty has surrounded the scheme; that stakeholders are divided over its future; and that it currently provides no incentive for new planting. Lastly, this article discusses the issue of uncertainty in the scheme and

**Table 1: Ministry for the Environment assessment criteria under high-level objectives**

| High-level objective | Delivering fair share                      | Delivering cost-effective emission reductions                 | Long-term economic resilience  |
|----------------------|--|---|--|
| Criteria             | Facilitate international efforts           | Minimise short-term negative economic impacts                 | Minimise long-term negative economic impacts   |
|                      | Contribute to NZ international obligations | Minimise costs to businesses                                  | Maintain long-term international competitiveness   |
|                      | Enhance NZ’s international credibility     | Minimise market distortions                                   | Provide incentives for the long-term development of low-cost emission abatement technologies |
|                      | Contribute to achieving NZ’s fair share    | Minimise risks of trade sanctions                             | Maximise equity between sectors and socio-economic groups                                    |
|                      | Provide incentives to abate                | Minimise government’s administrative and implementation costs | Promote intertemporal equity   |
|                      | Contribute to meeting NZ’s 2050 target     | Minimise ETS participants’ compliance and transaction costs   | Ensure appropriate risk-sharing between emitters and government                              |
|                      |  | Promote understanding of ETS                                  | Appropriately reflect the Crown’s responsibilities as a Treaty partner                       |
|                      |  | Minimise fiscal costs/ maximise fiscal savings                | Support the development of the Māori economy consistent with their environmental values      |
|                      |  | Maximise market liquidity and transparency                    | Minimise negative/ maximise positive wider environmental impacts                             |
|                      |  | Facilitate links with other schemes                           | Ensure the environmental integrity of overseas emission units surrendered in the ETS         |

Source: Ministry for the Environment (2012c)

discusses possible scenarios for the future of the New Zealand ETS.

#### **The New Zealand ETS as a tool for decarbonisation**

Decarbonisation of the New Zealand economy is considered challenging. Around half of the country's gross greenhouse gas emissions (excluding LULUCF: those from land use, land-use change and forestry) can be attributed to agriculture. While mitigation options exist, the effectiveness of their application varies, as does the estimation of their costs (see, for example, Cooper, Boston and Bright, 2012; Kerr and Zhang, 2009). Dependence on private transport is high, with total emissions from the domestic transport sector making up about 20% of total gross emissions and projected to continue to increase steadily. Demand for car transport is also relatively inelastic to fuel prices due to the country's low population density and culture of mobility and geographic isolation (Ministry for the Environment and Treasury, 2007). Hence emissions reductions in this sector, while possible, are challenging.

In contrast, an average of 70% of electricity in New Zealand is generated from renewable sources, mostly hydro. This already high contribution of renewables means that many low-cost fuel switching opportunities used by other developed countries for emission reductions are not available in New Zealand (OECD, 2011). There is still scope for increased investment in renewable energy, and energy efficiency is attractive in New Zealand. Large-scale afforestation, particularly of marginal and erosion-prone land, as well as avoided deforestation has been argued to be one of the most cost-effective ways of reducing net emissions, at least in the shorter term (Ministry for the Environment, 2008).<sup>1</sup> It is for this reason that New Zealand's key policy tool for reducing emissions, the New Zealand ETS, is the first emissions trading scheme in the world to include forestry both as a source of units for removals and as a direct point of obligation for emissions. Setting aside the debate over whether afforestation simply buys time or in fact is the first rung on the ladder of transition

to a greener economy, a practical aim of the ETS has been to drive afforestation and deter deforestation. Indeed, it is not to industry but to forestry that the vast bulk of issuance of emission units has been made to date (EPA, 2014).

#### **Performance of the New Zealand ETS**

The 2011 report of the Emissions Trading Scheme Review Panel found that the ETS was performing to expectations, but also made suggestions aimed at improving the operation and effectiveness of the scheme to ensure it meets its objectives. Broadly speaking, had the review panel recommendations been adopted their

businesses, as well as giving more certainty (Ministry for the Environment, 2012a; 2012c). In practice, the amendments diverged significantly from the panel recommendations. Instead of 'transitional measures' being phased out, these were retained indefinitely and applied to new sectors due to enter the scheme in 2013. The phasing out of 'free' allocations to the industrial sector was postponed indefinitely, removing what would have been a marginal, but annually increasing, pressure on direct industrial emitters and large energy consumers to achieve emissions reductions. Finally, the idea of implementing a general quantitative

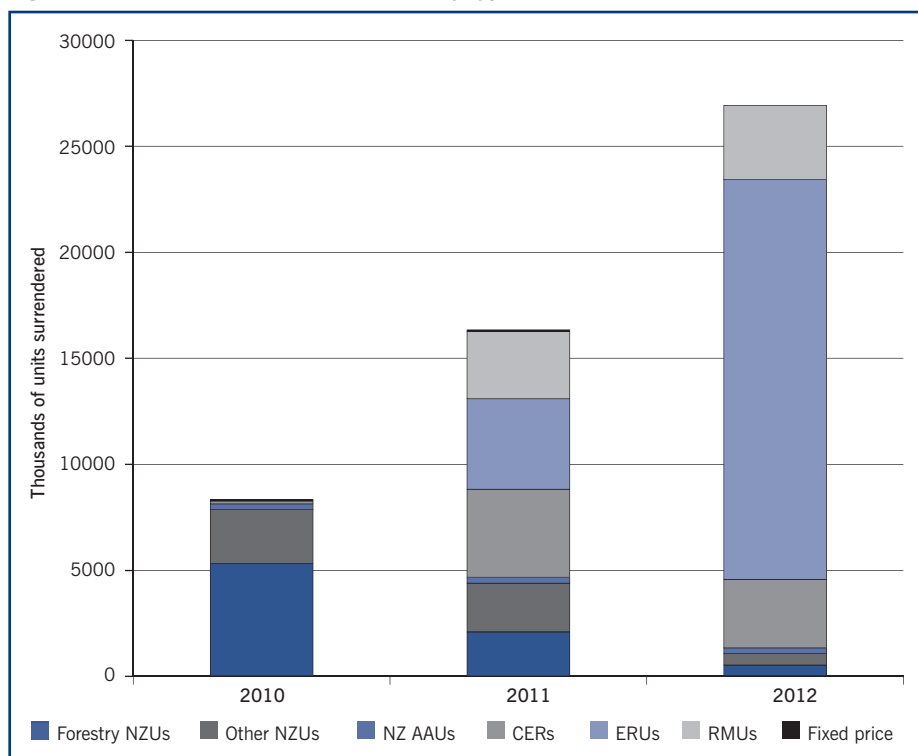
**Critics perceive that the ETS is not working as envisaged because the price signal is far too weak to incentivise behaviour change and low-carbon investments while key emitters are shielded from the price and forests are being converted to emissions-intensive dairying ...**

net effect would have been to increase the scope and size of the ETS, relative to where it stands at the time of writing this article (March 2014). The panel recommended that 'transitional measures' – specifically the 'two for one' deal and \$25 price cap – should be phased out (albeit more gradually than originally envisaged). The panel also reaffirmed the 'all sectors, all gases' approach, and said that it was appropriate that agriculture was to be included (with free allocation).

The government's consultation document in April 2012 largely reflected these recommendations, and also proposed a quantitative restriction on the surrender of international units (New Zealand Government, 2012). All else held constant, such a restriction could reasonably have been expected to provide increased continuity of demand and hence greater support for the domestic carbon emissions unit, the NZU. However, actual amendments made later that year focused instead on easing the burden and cost on households and

restriction on the use of United Nations offsets (i.e. 'supplementarity limits') appeared to fall by the wayside and such restriction was not introduced.

It is perhaps the failure to implement this general quantitative limit on offset use which has had the greatest impact on the efficacy of the scheme to date. Those with obligations remain able to use UN offsets for up to 100% of surrender obligations and this will remain the case until at least May 2015. The extreme reliance by obligated participants to date on the cheapest, and in some cases lowest quality, certified emission reductions (CERs), emissions reduction units (ERUs) and removal units (RMUs) has drawn questions internationally over the environmental effectiveness of the scheme. The fact that the concept of 'supplementarity'<sup>2</sup> remains undefined in the New Zealand ETS has been the subject of criticism (see Mundaca and Richter, 2013). It should be noted that while a series of amendments to render certain low-quality offsets<sup>3</sup> ineligible were made,

**Figure 1: Breakdown of surrendered units by type**

Source: Ministry for the Environment, 2011, 2012b, 2013b

these did not equate to a more general quantitative restriction, and in any event they were made after many of these units were already in the New Zealand registry.

The result is that the scheme's ability to meet all of the government's stated policy objectives (as outlined in the introduction above) has been stunted. The 2011 government report on the ETS (Ministry for the Environment, 2011) concluded that the scheme was on course to meet the first two objectives, but the 2011 review panel also concluded that it was still too early to discern the impact of the scheme, particularly in relation to the long-term resilience objective (objective three). The review panel found that there remained a need for a clear price path to incentivise low-carbon investments in order to deliver the government's third objective (and to continue to work towards the first). Indeed, it is hard to see how the current scheme could be supporting efforts to maximise the long-term resilience of the New Zealand economy at least cost, if this is dependent on the prevailing carbon price and the level of ambition set by the scheme (two determinants highlighted by Ministry for the Environment in their regulatory impact statement regarding the proposed

2012 amendments: see Ministry for the Environment, 2012c, p.22).

Critics perceive that the ETS is not working as envisaged because the price signal is far too weak to incentivise behaviour change and low-carbon investments, while key emitters are shielded from the price and forests are being converted to emissions-intensive dairying (see, for example, Taylor, 2013; many of these arguments were also made in public submissions in the 2012 consultations).

With such unfettered access to UN offsets, over the course of 2011–13 the large surplus of international units, particularly ERUs and RMUs, as evidenced by the volume of these units in the New Zealand Emission Unit Register (see EPA, 2014) EPA, 2013; Ministry for the Environment, 2012b), and their falling prices became the dominant influence over the price of the New Zealand unit, which fell from just over \$20 in late May 2011 to little more than \$6 in late May 2012, to less than \$2 in late May 2013. As market events in the European Union ETS continued to see the price of ERUs and RMUs descend to negligible levels, New Zealand units appeared set to play an ever-diminishing role in the mix of units surrendered each

year by those with obligations under the scheme (see Figure 1).

This trend could have continued for perhaps a decade had the 2012 United Nations climate change conference not had significant implications for the New Zealand ETS in this regard. Indeed, that the price of a New Zealand unit continued to outstrip that of an ERU (which have traded into the New Zealand market for less than 15 cents) can only have been due to the possibility of further policy change which would have the effect of increasing the future carbon price.

It was ironic, then, that it was the New Zealand government's own international negotiating position and decision not to take on a second commitment under the Kyoto Protocol which delivered this, causing the country to lose access to the Kyoto flexible mechanisms with effect from the conclusion of the true-up period for the first Kyoto commitment period.<sup>4</sup> As a result, from 1 June 2015 Kyoto units will no longer be eligible for use in the New Zealand ETS and New Zealand emitters will no longer have access to the cheap international offsets on which they have relied almost exclusively to date. By default, then, the New Zealand carbon market, historically so highly linked to and affected by the market for Kyoto offsets, looks set to become cut off. While future linking to other markets is, of course, possible, at this stage only units of New Zealand origin will be able to be used for compliance from 1 June 2015 onwards.

Meanwhile, however, as our survey shows, the extensive changes to the domestic ETS design, all in only the first four years of the policy's existence, have led to considerable uncertainty among stakeholders over the continuing viability of the New Zealand ETS, particularly among foresters. Confidence has waned among foresters, and indeed the sector is set to become a net source of emissions rather than a sink by the mid-2020s. Not only is afforestation due to the ETS not currently indicated, but ongoing participation from the sector on a voluntary basis appears to be at risk, while investments from other sectors in low-carbon technology needed to begin the transition to a greener domestic economy also do not appear to be happening.



## Perceptions of the New Zealand ETS

Our survey highlighted a lack of consensus among participants on whether the ETS is meeting its objectives. Table 2 shows the number and categories of respondents to the survey and responses to the question about the performance of the ETS in relation to its objectives. It is important to note that several of the respondents who agreed that the New Zealand ETS is meeting its objectives noted that they were considering the policy's potential rather than actual performance to date.

One of the stand-out findings of our survey was that most respondents either disagree or strongly disagree that sufficient regulatory certainty has been provided by the government to date. Perhaps most seriously – for a country whose domestic emissions reductions plan appears to be so heavily geared towards afforestation, and indeed for a scheme whose domestic supply potentially relies heavily on the involvement of forestry – of the 85 foresters surveyed not one believed the ETS currently drives any new planting. The situation is particularly serious given that there are costs associated with involvement in the scheme. Indeed, over half of our respondents either disagreed or strongly disagreed that the ETS was a cost-effective way of reducing emissions, while 16.6% responded neutrally to the question.

As mentioned earlier, an important objective of the ETS is longer-term economic resilience, which includes transition to a low-carbon economy. There is cause for concern about whether this will transpire: longer-term decarbonisation will be facilitated by wise investments made in the short to mid term. Of the foresters surveyed, 37% indicated that the long-term carbon price (e.g. to 2020) was a decisive factor for them to stay in the ETS. Most said that the ETS had incentivised new planting in the past (63%), while 35% answered that the ETS had not incentivised new planting at all. No foresters answered that the ETS continues to incentivise new planting. Of those capable of afforestation, none indicated that they would consider doing so below \$10 per tonne of CO<sub>2</sub>e (CO<sub>2</sub> equivalent), and the highest percentage of respondents (43%) indicated that they would only

**Table 2: 2013 NZ ETS Outlook Survey responses to NZ ETS meeting its objectives**

| The NZ ETS helps New Zealand reduce its overall emissions |                   |       |          |       |         |       |       |       |                |      |                 |
|---|-------------------|-------|----------|-------|---------|-------|-------|-------|----------------|------|-----------------|
|   | Strongly disagree |       | Disagree |       | Neutral |       | Agree |       | Strongly agree |      | Total Responses |
| <b>Foresters</b>  | 26                | 30%   | 28       | 33%   | 8       | 9%    | 21    | 24%   | 3              | 3%   | 85              |
| <b>Emitters</b>   | 2                 | 6%    | 11       | 34%   | 9       | 28%   | 9     | 28%   | 1              | 3%   | 32              |
| <b>Traders</b>  | 3                 | 23%   | 6        | 46%   | 0       | 0%    | 4     | 31%   | 0              | 0%   | 13              |
| <b>Others</b>   | 8                 | 21%   | 13       | 33%   | 7       | 18%   | 9     | 23%   | 2              | 5%   | 39              |
| <b>Total</b>  | 39                | 23.1% | 58       | 34.3% | 24      | 14.2% | 43    | 25.4% | 6              | 3.6% | 169             |

| The NZ ETS is a cost-effective way of reducing emissions in New Zealand |                   |       |          |       |         |       |       |       |                |      |                 |
|---|-------------------|-------|----------|-------|---------|-------|-------|-------|----------------|------|-----------------|
|   | Strongly disagree |       | Disagree |       | Neutral |       | Agree |       | Strongly agree |      | Total Responses |
| <b>Foresters</b>  | 28                | 33%   | 20       | 23%   | 11      | 13%   | 22    | 26%   | 5              | 6%   | 85              |
| <b>Emitters</b>   | 2                 | 6%    | 8        | 25%   | 9       | 28%   | 13    | 41%   | 0              | 0%   | 32              |
| <b>Traders</b>  | 2                 | 15%   | 6        | 46%   | 0       | 0%    | 4     | 31%   | 1              | 3%   | 13              |
| <b>Others</b>   | 8                 | 21%   | 13       | 33%   | 8       | 21%   | 6     | 15%   | 4              | 10%  | 39              |
| <b>Total</b>  | 40                | 23.7% | 47       | 27.8% | 28      | 16.6% | 45    | 26.6% | 10             | 5.9% | 169             |

| The NZ ETS helps New Zealand transition to a greener economy in the future |                   |       |          |       |         |       |       |       |                |      |                 |
|--|-------------------|-------|----------|-------|---------|-------|-------|-------|----------------|------|-----------------|
|  | Strongly disagree |       | Disagree |       | Neutral |       | Agree |       | Strongly agree |      | Total Responses |
| <b>Foresters</b>   | 17                | 20%   | 29       | 34%   | 10      | 12%   | 23    | 27%   | 7              | 8%   | 85              |
| <b>Emitters</b>  | 4                 | 12%   | 5        | 16%   | 8       | 25%   | 15    | 47%   | 0              | 0%   | 32              |
| <b>Traders</b>   | 2                 | 15%   | 6        | 46%   | 0       | 0%    | 5     | 38%   | 0              | 0%   | 13              |
| <b>Others</b>  | 5                 | 13%   | 11       | 28%   | 6       | 15%   | 15    | 38%   | 2              | 5%   | 39              |
| <b>Total</b>   | 28                | 16.6% | 51       | 30.2% | 24      | 14.2% | 58    | 34.3% | 9              | 5.3% | 169             |

consider planting if the price was at least \$15–20. (This roughly corresponds with the findings in Manley, 2013.)

Among emitters, 66% of respondents said that the ETS has caused no emission reductions in their company to date, despite the initial prices in 2010–11 of over \$20. A further 6% said that reductions were planned but had not yet eventuated. Of those who could reduce emissions, the majority indicated that they would seek to do so if the price stayed above \$20 (24%) or \$25 (28%). This fact, taken with the perception that the ETS no longer drives afforestation, would appear to indicate that investment in a low-carbon economy driven by the ETS is at a standstill.

### Dealing with uncertainty

The theme emerging from the answers to our survey was that of a lack of regulatory certainty. In response to the statement

‘the Government has provided sufficient regulatory certainty about the NZ ETS’, over 80% of the total respondents either disagreed (31.4%) or strongly disagreed (50.3%). There is great uncertainty about whether the ETS will continue past 2020, with just under half (48%) of the respondents confident that this would be the case. However, in contrast to Australia’s carbon pricing mechanism, the New Zealand ETS’s framework and the policy of carbon pricing at least has support from the major political parties, although bipartisan support of the design remains elusive (though National and Labour nearly came to a memorandum of understanding on this in its early stages: see New Zealand Labour and National Parties, 2007).

The scheme still lacks a sufficient and predictable price signal to give certainty about future costs or to incentivise low-carbon investments. Our survey revealed

that most respondents would ideally like to know the price of carbon for the next three – five years or longer. In proposing the 2012 amendments the government noted that ‘participants will also have more certainty about the price of carbon as the \$25 price cap will be extended’ (Ministry for the Environment, 2012a). The fixed price option provides certainty about the highest potential costs faced by obligated participants and provides a safety valve to that end, with the ETS essentially functioning as a tax if the price of carbon increases beyond \$25. In fact, some businesses in passing on carbon prices to consumers have used

the Iwi Leadership Group claim against the government over the loss in value of carbon forestry (see Reuters, 2014).

The Iwi Leadership Group proposed, along the lines of the price cap, a price floor, which is a potentially proportionate and symmetrical policy response to help address this issue. The price floor mechanism is recognised both in theory (see Aldy and Stavins, 2012; Jacoby and Ellerman, 2002; Philibert, 2006), and in practice with the auction price floors in the California ETS (of \$US10) and the UK (at £16/tonne) (additionally, the original design of the Australian carbon pricing mechanism included an \$15

Committee on Climate Change or the Climate Change Authority in Australia; even the European Commission is assuming more responsibility for the ETS cap, which had formerly been the sum of member states’ caps). Nor does it have the potential command and control power of the Environmental Protection Agency in the United States. The Parliamentary Commissioner for the Environment has an independent role as an advising officer of Parliament and this could be a natural home for such an institution. However, with a very small staff and a large portfolio covering wide-ranging environmental issues, more resources would be needed to expand this role and stronger mechanisms for enhancing its authority to make the government more accountable in its policy targets which deviate from scientific recommendations for seriously addressing climate change.

## **It seems apparent that the ETS with its current settings will cause negligible domestic emissions reductions in the short term and uncertain investment for the longer term.**

the \$25 price cap as a proxy price, when lower-priced units were actually being used for compliance (evidence of this was commented on by the review panel (Emissions Trading Scheme Review Panel, 2011, p.32). While this gives certainty that the businesses will not undercharge consumers (in fact, they are more likely to profit), this practice has already led to disputes (see, for example, Smellie, 2013).

While there is certainty regarding the highest costs of compliance, there is no certainty of any such price to underpin investments in decarbonisation. The range of \$0–25 is a wide margin within which forestry and other investments become viable or not. The deforestation intentions survey (Manley, 2013) and our own survey reveal that the price of carbon in New Zealand is currently not sufficient to deter deforestation or incentivise new planting. In line with results in the Manley survey, our survey indicates that prices over \$10–15 are probably needed to incentivise new planting. Beyond new planting, certainty about the value of existing forestry NZUs is also a point of contention, and the argument behind

price floor). As of the time of writing a floor was also being considered as one of six structural changes to the EU ETS (European Commission, 2014). It may be an option to explore; although an overall cap designed to ensure that supply and demand produces a consistent strong price signal could also help the New Zealand ETS better meet its third objective of incentivising low-carbon investments and transitioning the economy (Mundaca and Richter, 2013).

It is clear that the ETS is still strongly influenced by politics, and this underlies much of the uncertainty and lack of ambition surrounding the policy. One step towards de-politicising the ETS would be the establishment and proper resourcing of a truly independent regulatory authority. The establishment of the Environmental Protection Authority (EPA) as a separate Crown agency in 2011 put the ETS regulatory functions more at arm’s length from ministers (Smith, 2010, p.3). However, the EPA does not advise on the ETS and emission reduction targets in the same manner as independent administrative bodies elsewhere (for example, the UK

### **Outlook for the New Zealand ETS**

New Zealand will meet its Kyoto commitments for 2008–12, but largely due to forestry offsets (under article 3.3) and units acquired under the Kyoto flexibility mechanisms, rather than by absolute reductions in gross domestic emissions, which, on the contrary, have continued to rise significantly even through the first commitment period. Now net emissions (i.e. including emissions and removals from domestic forestry) are rising as well, as the ETS and other economic factors drive deforestation. The latest Ministry for the Environment report projects that net emissions will reach 90 million tonnes of CO<sub>2</sub>e by 2040 (Ministry for the Environment, 2013c). This 50% rise in emissions (from 1990 levels) contrasts starkly with the government’s 2050 target of a 50% reduction, which would be 29.9 million tonnes of emissions. The forest sequestration that has been helping to meet short-term commitments will instead become a liability as large amounts of post-1989 forests are harvested or deforested as predicted in the 2020s and onwards (see Bertram and Terry, 2010).

It seems apparent that the ETS with its current settings will cause negligible domestic emissions reductions in the short term and uncertain investment for the longer term. (Even in 2011 the review

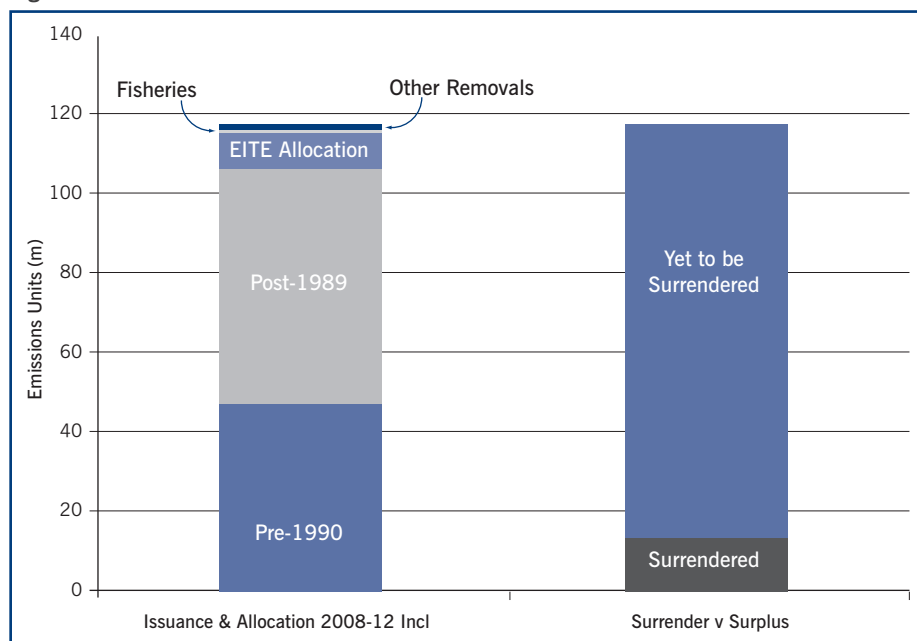


panel noted that the impact of the scheme had been low even though price signals then had been higher (Emissions Trading Scheme Review Panel, 2011, p.17).) New forestry investments appear to have been committed to on a lagged basis, driven by earlier (higher) price signals, or indeed by ancillary drivers independent of the price (e.g. log prices). This is consistent with findings from the deforestation survey of 2012, which showed that ‘the ETS scenario leads to higher levels of deforestation than the No ETS scenario’, and predicts greater deforestation rates in the 2020s and continuing conversion of forest land to dairy – all likely contributing to a significant increase in emissions for New Zealand. In fact, that survey even found one respondent intending to implement an accelerated level of deforestation under the ETS scenario in response to current low carbon price: ‘We want to make hay while the sun shines’ (Manley, 2013, p.12).

Our survey indicated a ‘wait and see’ strategy, with 60% of forestry respondents currently in the scheme indicating that they would remain in the ETS but did not intend to trade. Another 15% indicated they would opt out of the scheme, with most indicating that they would surrender international units for their liability and either sell or retain their New Zealand units. However, one of the authors of this article is involved directly in the market and recent observations of market behaviour indicate that this number is likely to increase as those eligible become more fully apprised of their options.

The EPA has already recorded over 545 foresters leaving the scheme, almost all since the carbon price fell below \$10 in mid-2011, and over 400 in 2013. The settings of the ETS also enable post-1989 forest owners to opt their land in and out of the ETS, and this behaviour has been observed. This fact, combined with the fact that any eligible emissions units can be used in order to meet any resulting liabilities under the ETS, has recently presented attractive arbitrage opportunities for forest owners. Indeed, in the 2013 calendar year alone over 92 million Kyoto units were imported into the New Zealand Emission Unit Register, a

**Figure 2: Allocation and use of NZUs**



Source: Ministry for the Environment, 2011, 2012b, 2013b; 2013d

staggering number given that compliance demand from fossil fuel-related emissions remains less than 20 million tonnes per annum. One possible cause of the influx is that among post-1989 forestry owners, the most economically rational course of action is now to opt out of the ETS and surrender RMUs and ERUs back to the government. This removes the risk from post-1989 land in the sense that it can now be deforested or harvested without further future liability (which could be difficult to quantify given regulatory uncertainty and hence uncertainty about the future price of carbon). In essence, post-1989 foresters can pre-fund future harvest liabilities at negligible cost today. There is a further upside in that foresters who wish to can continue to hold New Zealand units earned to date in the hope of future price appreciation. Indeed, for many older post-1989 foresters ‘de-risking’ NZUs in this way puts them in a position to sell more carbon than if they stay in the ETS.

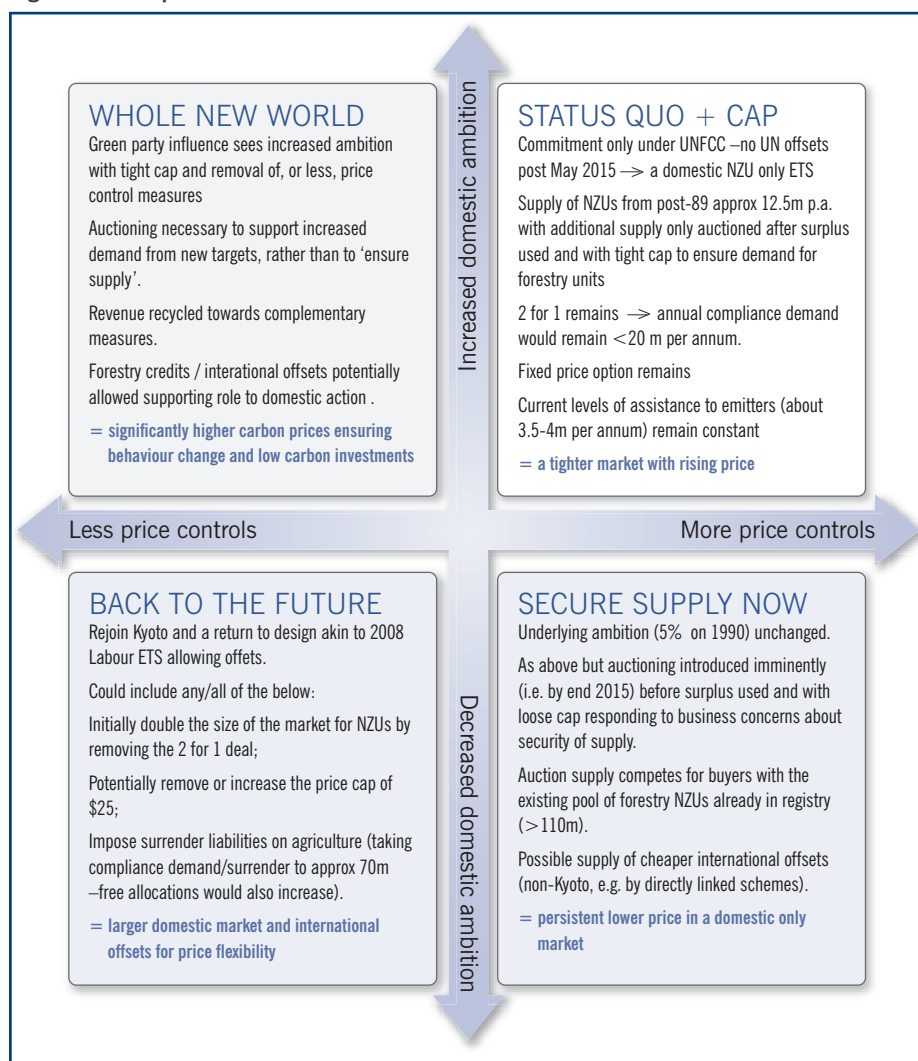
Evidence of the beginning of this trend was also found in the ETS annual report for 2011 (Ministry for the Environment, 2012b): deforestation emissions reported were roughly half actual units surrendered by forest owners. Numbers were small and the trend was relatively recent, with the ‘switch’ point at which New Zealand units started trading consistently above international units occurring around

July 2011. The allure of using ERUs to effectively pre-fund harvesting liabilities means surrender of ERUs by forest owners may remain a dominant theme until mid-2015. Indeed, the scale of issuance to post-1989 foresters and the ongoing availability of cheap ERUs means that there is scope for surrender by forest owners to outstrip surrender from all the other (fossil-fuel emitting) sectors combined.

This situation, combined with the market behaviour of emitters buying international units, suggests that ERUs will dominate the surrender mix until May 2015. Indeed, 67% of emitters in our survey who managed their company’s obligations expected to surrender almost entirely (over 90%) ERUs in 2014. The result is that there is a large number of New Zealand units that have been issued and not used (see Figure 2). While international units already purchased must either be used by 31 May 2015 or re-exported, NZUs have no such expiry.

In the face of current compliance demand from the non-forestry sectors compared to issuance to date, there is the potential for significant oversupply in the market and thus ongoing low carbon prices even after May 2015. However, there are reasons to believe that this will not be the case. The first is that there appears to be a reluctance among forestry sellers, who tend to be seasoned

Figure 3: Four possible scenarios for the NZ ETS in the near future



long-term investors, to sell at prices lower than what the surveys discussed here indicate. Secondly, as the schematic in Figure 3 illustrates at a high level, there are a number of different political and regulatory scenarios that could see issuance to date used up for compliance much more quickly than under the status quo.

Decisions in Doha have already made a significant change to the outlook of the New Zealand ETS in restricting access to international Kyoto units other than primary CERs. However, the growth of liquidity in the NZU market has undoubtedly been hampered by the lack of supplementarity limits to date. So, against this backdrop of uncertainty we may also see further policy focus on potentially enabling auctioning of units in order to 'assure supply'. Could the market be poised to undergo redesign by default? If so, this will present opportunities to use the design

of the auction to make other fundamental structural changes. At the moment there is neither an auctioning design blueprint nor any information on the prerequisite cap-and-carbon budgeting process that would be necessary to ensure the integrity of such a step. However, these design features will dominate in a closed system and require significant consultation to ensure their robustness and equity. Figure 3 details some of the possible scenarios for the New Zealand ETS in balancing interests between managing the costs to businesses and consumers by having price controls, and managing the ambition to incentivise emissions reductions, behaviour change and longer-term investments. The policy choices have implications for the carbon price (and thereby the costs to emitters or the incentives for low-carbon investments), as well as the domestic environmental performance of the scheme in response to this price. While price controls can

give more certainty about these costs (and incentives if floors are used), the overall level of political ambition is more determinant of the likely price.

Legislative amendments made by the current government in late 2012 mean that auctioning could be implemented via regulation. Thus far, the New Zealand government focus appears to have been on ensuring the lowest cost of compliance to business and households, rather than on providing the price signals necessary to drive investment in decarbonisation as part of ensuring long-term economic resilience. To this end, it is important that the implementation of auctioning, if any, is not driven simply by the need to ensure continuity of supply of emissions units to emitters, but that it is underpinned by an appropriate and effective cap on domestic emissions (the 'responsibility' target to date cannot be regarded as such given that use of imported UN offsets has been unconstrained).

To this end the European Union ETS can offer lessons. While there were mechanisms implemented which provided for relief of pressure, the removal of excess supply has been an issue that continues to prove difficult for the European Commission to address. The over-generous cap in the EU ETS, for example, left a projected surplus of two billion allowances to remain over the entirety of its third phase (until 2020). The recently approved 'back-loading' of new units in the EU ETS (effectively the temporary reduction in previously signalled auction volumes) is the first step in addressing this issue, and longer-term structural reform proposals include a 'stability reserve' which would create automatic adjustments in the supply of units to the market as well as adjustment of the EU cap (European Commission, 2014).

Like the EU ETS, the New Zealand ETS will have challenges in addressing the surplus supply and setting a cap that achieves credible emission reductions, while balancing predictability and flexibility. Given the large volume of New Zealand units issued but not surrendered to date, the strong respect for property rights in New Zealand and distaste for retrospective law making and regulation, the most effective mid-term fixes will

likely be on the demand side. The most obvious would be signalling the removal of the 'two for one' provision and the reinstatement of phasing down the rate of free allocations where applicable. Over the longer term, however, auctioning is highly likely to be required in order to better manage the market and ultimately see emissions reductions take place.

The general election of 2014 has significant implications for carbon market policy. The Labour Party has previously signalled that it would continue to support Kyoto. While this may not even be administratively feasible in the time scale required, if the country were to rejoin then presumably access to UN offsets would be re-enabled. A bill previously introduced by Labour sought to require a minimum of 50% of compliance obligations to be met with NZUs. This again creates uncertainty for the emitters and landowners alike.

## Conclusion

It is clear that the first years of the New

Zealand ETS have lacked regulatory certainty, an essential ingredient for domestic investment that could contribute to the decarbonisation and hence resilience of the economy. While the government has made amendments to the scheme with the goal of providing greater certainty, our survey suggests that significant uncertainty persists. This is likely to undermine or delay the low-carbon investments needed to meet the long-term economic resilience objective of the scheme.

The extreme reliance by emitters to date on international offsets has likewise been to the detriment of carbon forestry domestic action and has delayed investment in long-term projects. It also appears to have been at odds with the goals of international climate commitments. Moving forward, there are a number of opportunities to improve the design of the scheme within the existing legislative and policy framework.

<sup>1</sup> There are also critics of forestry's long-term emission reduction potential and arguments that there are many cost-

effective abatement opportunities in other sectors (see, for example, Bertram and Terry, 2010).

- 2 The idea of the flexibilities offered by the Kyoto unit trading was that they should be supplementary to domestic action. Article 17 of the Kyoto Protocol, referring to supplementarity, reads: 'The Parties included in Annex B may participate in emissions trading for the purposes of fulfilling their commitments under Article 3. Any such trading shall be supplemental to domestic actions for the purpose of meeting quantified emission limitation and reduction commitments under that Article' (UNFCCC, 1992, emphasis added).
- 3 <http://climatechange.govt.nz/emissions-trading-scheme/building/regulatory-updates/guidance-emission-reduction-units-certified-emission-reduction-units-ets.pdf>.
- 4 The New Zealand government's negotiating position was to attempt to keep open access to cheaper international Kyoto markets without taking a responsibility commitment in Kyoto II. It was a gamble to expect continued access to cheap Kyoto units for countries unwilling to take on responsibility targets for the second commitment period of the Kyoto Protocol. The decision at Doha to restrict access was not surprising and had been well signalled as a risk given earlier threats by developing countries (Reklev and Allan, 2012).

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