

# **EMISSIONS TRADING & POLICY SUMMIT**

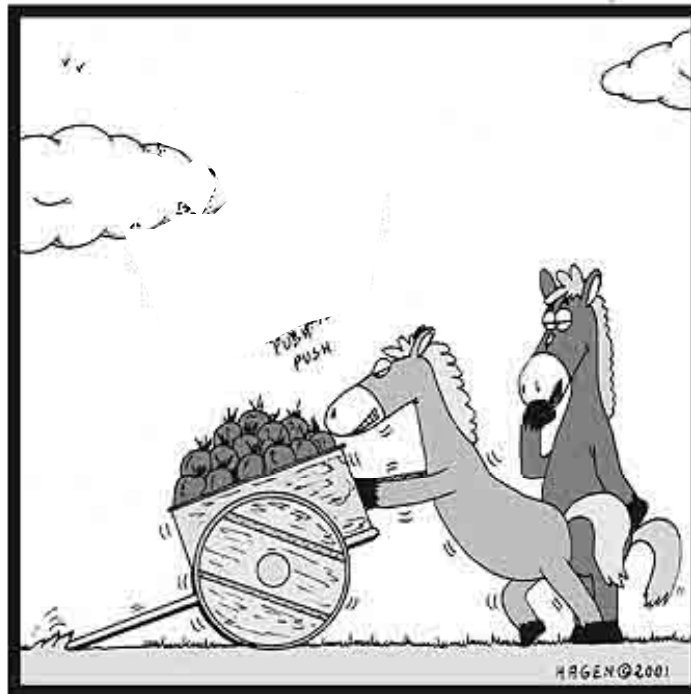
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Wellington

## **Impacts of an ETS on the Forestry Sector**

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# Sequencing

- 2005 review – bring forestry & agriculture into an existing ETS
- Forestry in from 1 Jan 08 – sort out legislation and rules later
- Agriculture, partially, by 2013



**It has to be this way**

# Forest Owners are impacted in very different ways

	Pre 1990	Post 1989
ETS	Compulsory unless exempt	Optional
For those in	98% of liabilities	Credits and liabilities
Liability	For land use change	At harvest

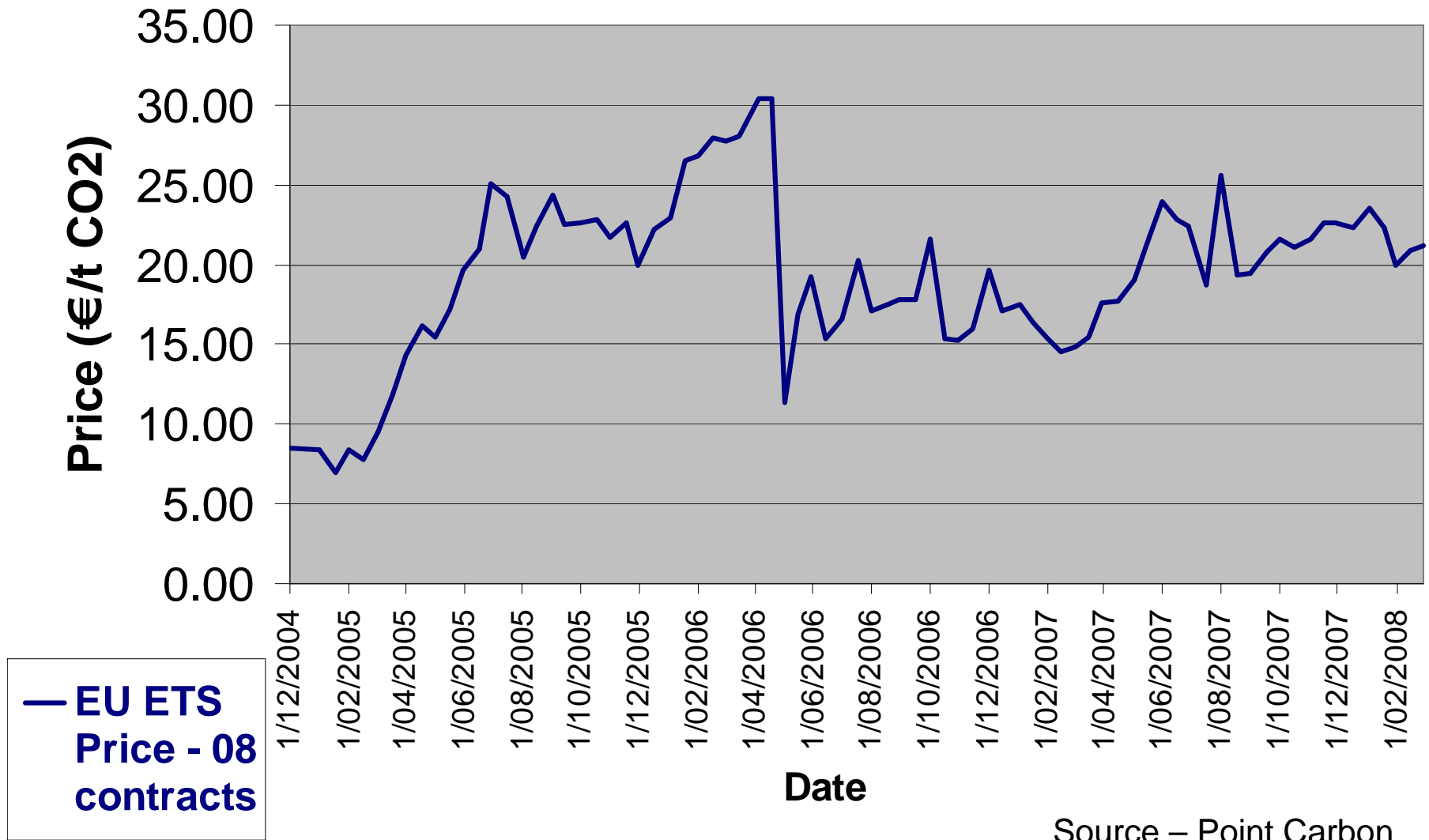
# Post 1990 – let the seller beware

- Those opting in are responsible for:
  - Any losses including Acts of God or Devil
  - Monitoring, measuring, registration, certification, reporting administration & insurance costs (all still unclear)
- Participants won't receive all the credits
  - Allocation will be conservative
  - Amount relates to sophistication of monitoring
  - Only sequestration from 2008 counts
- Cannot be liable for more than credited (FFF)

# Key information is unavailable

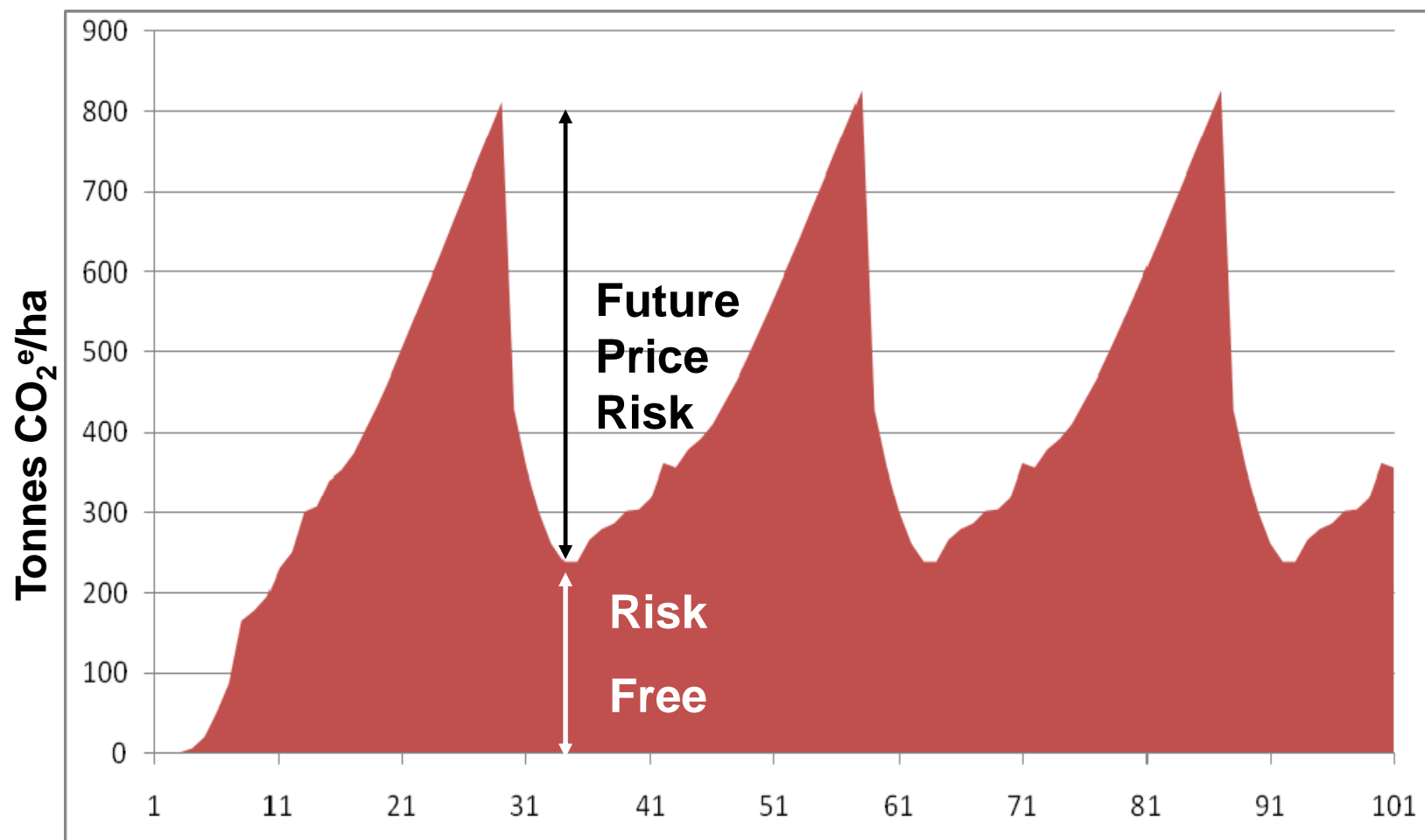
- Carbon will be measured from 1 Jan 08 but measuring specs haven't been developed
- Who will be the registered certifiers
- What is taxable and what exempt?
- How will age (vintage of units be dealt with)
- Monitoring costs are unknown
- Will the rules be changed in the future?

# Whither the price of Carbon?



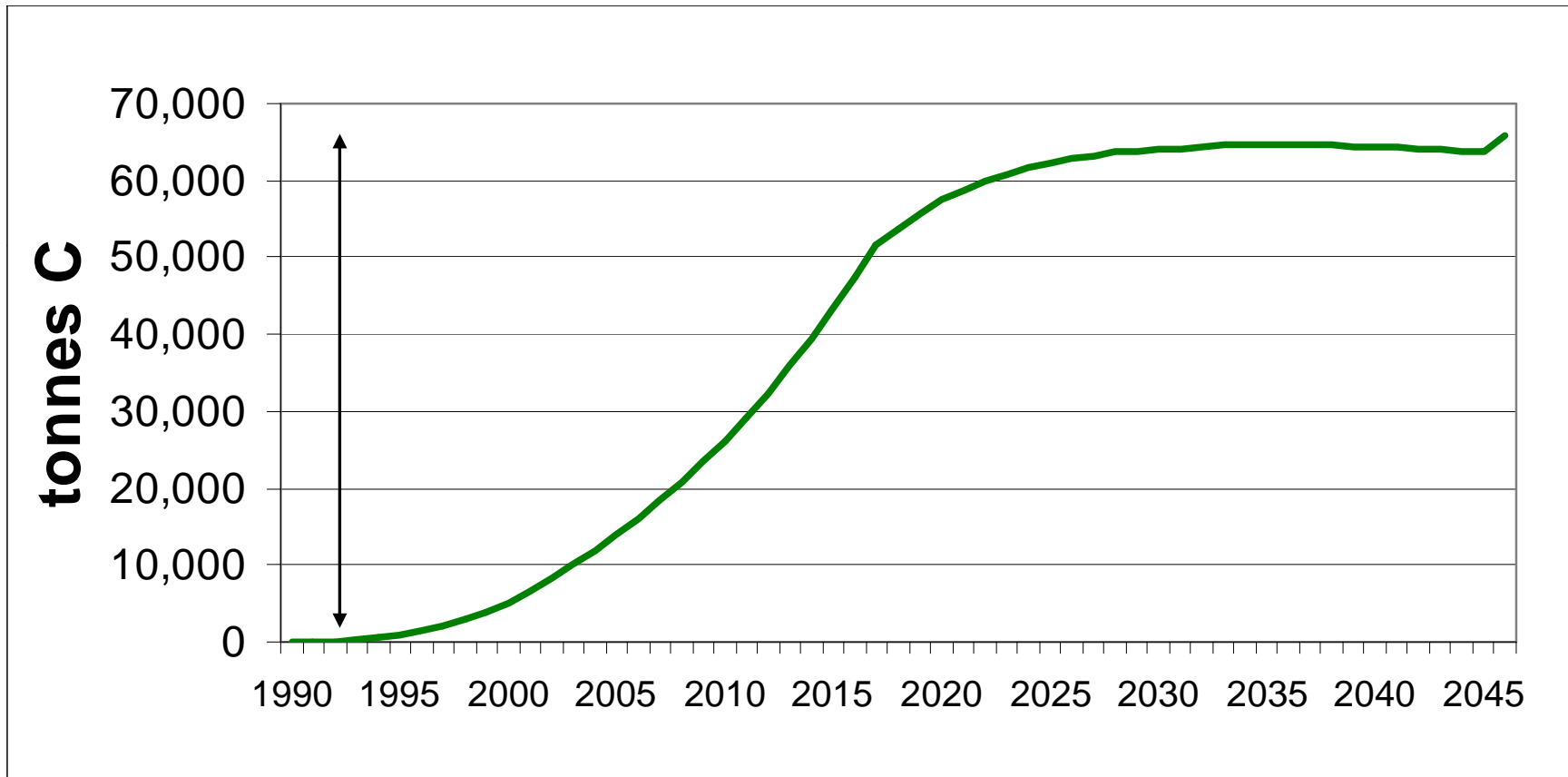
Source – Point Carbon

# Carbon potential in a stand (*radiata pine*)



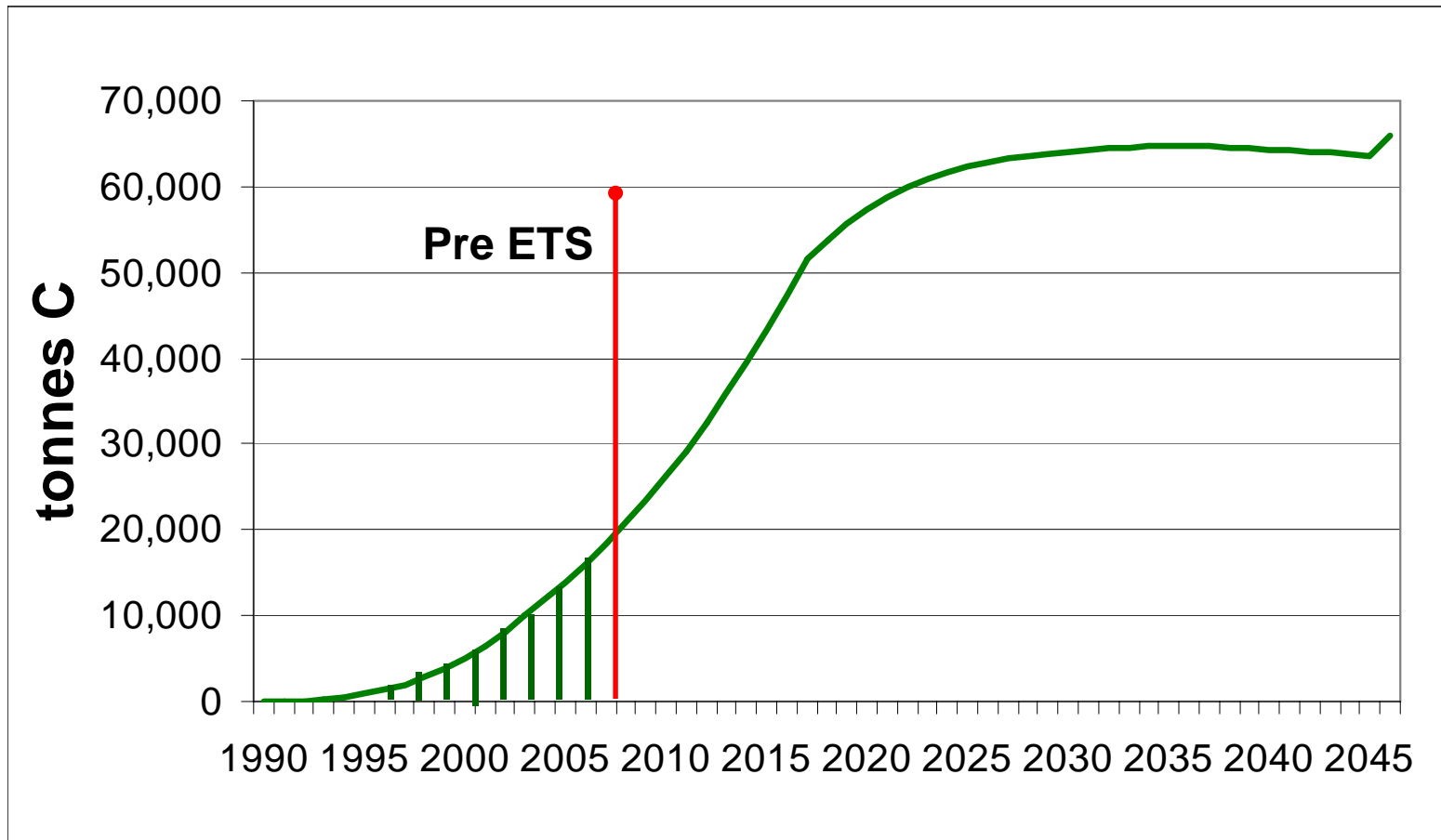
Source: MacLaren

# Carbon potential in a normal forest



Source – MAF

# But pre 2008 doesn't count!



# Pre 1990 issues

All liability, no credit.

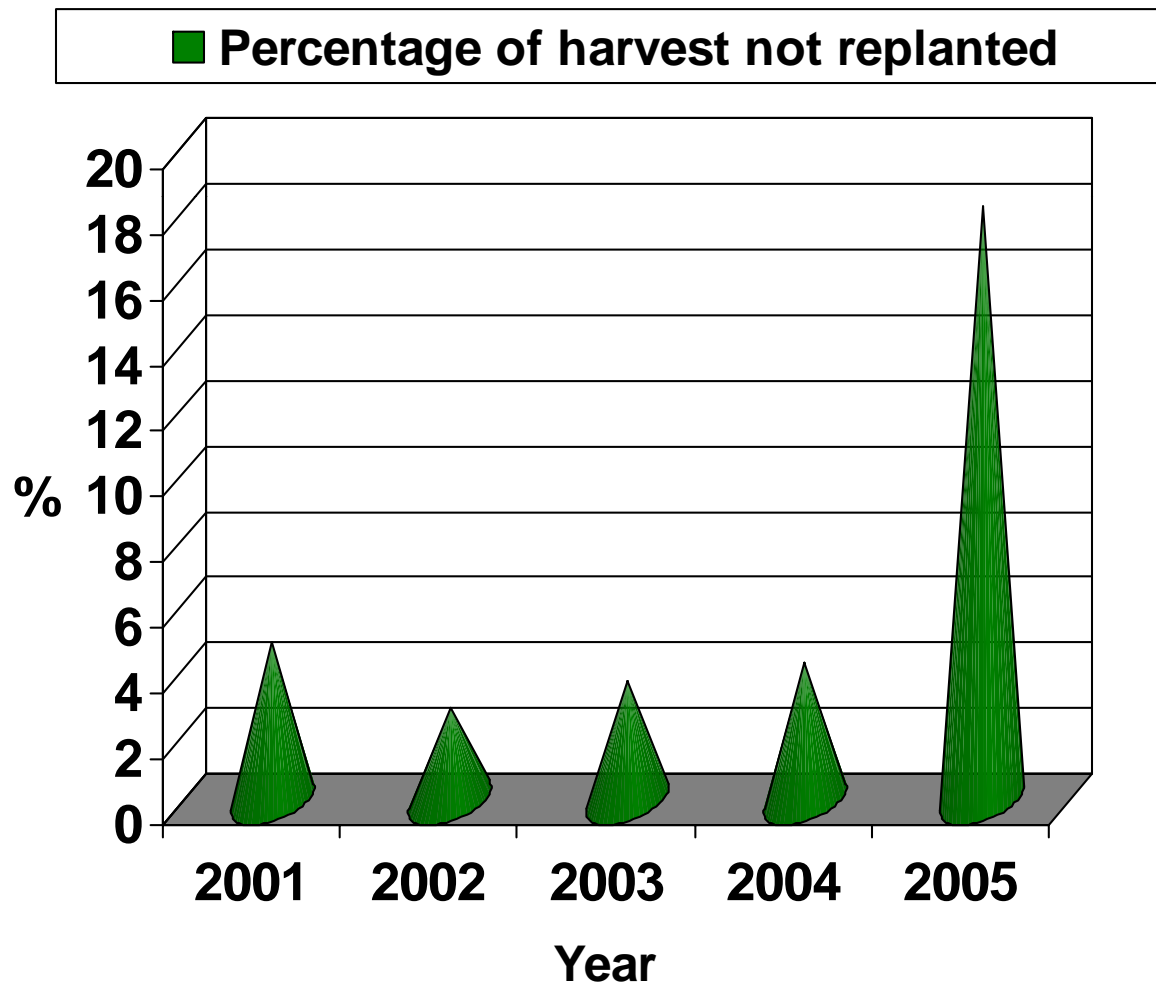
All emissions are not the same. Trees cannot be net emitters of carbon.

Tax is retrospective, with a short-term fiscal focus

Significant artificial division between almost identical forests is created

Unnecessary - wholesale forest clearance is not a threat

# Deforestation proposals achieved their intended objective



# Pre-1990 forest becomes a “standed asset”

- The severity of the proposed tax means that land use change from forestry to other uses has stopped overnight.
- At \$25/t/CO<sub>2</sub> & 800 tonnes/ha the cost is \$20,000/ha

# The level of compensation is inadequate

- The liability on pre-1990 forest land is permanent, instant and affects all owners
- Government proposes compensation equivalent to 5.2% (the estimated historical deforestation average) for 13 years.
- This is reduced further by exemptions deducted from what non-exempt forest owners receive.

# Implications for NZ targets and ETS

- Will we need Russian hot air?
- Is government's goal of a net increase of around 21,000 ha/year until 2020 achievable?

# Industry implications - wood supply

- Non wood producing carbon forests
- Production forests but with harvesting influenced by carbon price
- Abandoned forests
- Replanting of pre-1990 for a limited period or limited area

# Industry implications - processing

## **Competitiveness at risk industry**

- Consumes 8% NZ electricity & 4% of gas
- Estimated to produce 50% of its energy needs from biofuels (burning wood waste)

## **Discrimination against early movers**

eg Pulp & Paper sector since 1990

- 43% increase in production of product
- 2% reduction in total emissions
- 31% reduction in emissions intensity
- 14% of electricity from biofuels

# Industry implications - processing

## Real example of an affected company

- @ \$25/t CO<sub>2</sub> the increase in electricity cost will be 1.4 times higher than the long run post tax profitability of the company (after the assistance programme has ended)
- In last 5 yrs the company has increased pulp output by 25% & reduced actual electricity use by 23%

# Kyoto Mark II

What will replace LULUCF rules in 2012 won't be known for a while = more investment uncertainty

Key issues:

- Maintain fast-forest fix
- Allow forestry-offsetting
- Improve upon the current treatment of Harvested Wood Products
- Maintain fast-forest fix
- Allow forestry-offsetting
- Improve upon the current treatment of Harvested Wood Products

# Impacts of an ETS on the Forestry Sector

## Slide 2 - Sequencing

As of 1 January this year forestry is in an Emissions Trading Scheme.

In 2005 the review of the Governments climate change policies concluded, amongst other things, that forestry and agriculture should be brought in to an existing Emissions Trading Scheme.

The reality is that we have rules and regulations already applying to foresters but those rules and regulations have yet to be developed and agreed.

## Slide 3 – Who's affected

Forest owners are affected in very different ways depending on which of a number of arbitrary categories they fall in to.

Pre and Post 1990  
Large and small holdings  
Indigenous versus exotic

It is interesting to reflect that forestry could quite easily have not been included in the Kyoto Protocol at all.

## Slide 4 - Post 1990 – let the seller beware

For those considering the option of being responsible for credits and emissions there are some significant issues to consider. As well as having responsibility for all the emissions at harvest, or before if something unexpected happens, there are a lot of associated costs to consider.

The government will be conservative in its allocation of credits and the amount provided is likely to be significantly less than the forests are actually taking up.

For those electing to stay outside the ETS, grants will be available for planting on non-forest land on a competitive tendering basis. The grants will vary between exotic and native and total \$50 million over 6 years.

## Slide 5 – Some key information is unavailable

On top of the risks and costs associated with managing the carbon there are other factors which influence the attractiveness of participation. Many of the key variables that are crucial to weighing-up a very long-term investment of this nature are missing.

PW to expand on the information still needed from MAF is still working on.

The extent, and therefore cost, of the monitoring that will be required has not yet been specified. The deadlines appear to be a year behind schedule.

All this adds to investment uncertainty but also constrains the ability of those who are willing and able to participate.

#### Slide 6 - Whither the price of carbon?

The price of carbon in the principle emissions trading market – the EU which covers approximately 40% of EU emissions continues to exhibit some unnerving fluctuations. However, following a spectacular price collapse when the future of the system came into question the price has recovered and the long term trend appears upward.

One EUA (Emissions Unit Allowance) = 1 tonne CO<sub>2</sub>. The penalty for non-compliance = of €40 for Phase I from 2005-2007 (rising to €100 in the Phase II 2008-2012) per excess tonne.

Concerns expressed by member nations and industry has led to changes announced in January this year which include centralized allocation (instead of national allocations), auctioning a greater share (60+%) of permits rather than free allocation, and inclusion NO<sub>2</sub> and PFC's.

Over the next 10-15 years, there are price forecasts in the \$30-70 range. Deutsche Bank, for example, project that the emissions price in the European ETS will be €35 a tonne (about NZ\$67 a tonne at current exchange rates) through to 2020. A recent Point Carbon survey found that the expected 2020 price was €23 a tonne (about \$44 a tonne).

The value of the global carbon market increased by 80% in 2007 and a recent projection out of the US is for a US\$1b market there by 2020.

Even the voluntary market continues to grow strongly.

#### Carbon potential in a stand

For the owners of forests first established after 1990 there is the potential to sell into the carbon market up to a certain level at a risk free level.

Owners will receive NZUs if the carbon stock increases and have to surrender NZU's if the stock falls. When a stand is harvested the carbon falls dramatically but does not fall to zero due to the carbon in the soil and litter that decays over a longer period of time. Thus, if the forest is replanted then there is a certain risk-free level that can be sold in to as illustrated. A permanent average base level is established.

#### Carbon potential in a normal forest

In a so-called normal forest where an annual and equal (on average) level of planting takes place the forest eventually reaches a high level reservoir where new growth (new planting and on-going growth of the existing forest) matches the loss to the atmosphere.

#### But pre-2008 doesn't count

Neither Kyoto nor the NZ ETS recognises the carbon sequestered post 1990 but pre 2008 – this is not considered additional to what would have occurred anyway and therefore, even though it reduces the carbon in the atmosphere it is less worthy. This means that if a stand is already 10 years old then there will be no ability to sell risk-free ahead of harvest. Why would you bother entering the ETS?

Even for a normal forest it can mean a significant reduction (one quarter to one-third) in the amount that can be sold. This mid-rotation anomaly is important because it creates a perverse incentive to knock over an immature post-1990 forest and start again so that it all counts from 2008 onwards. There is no penalty associated with doing this.

#### Slide 7 – Will we need Russian Hot Air?

What does all this mean for the availability of forest credits in the NZ ETS? The general reaction of owners of small forests is disinterest. Even owners of medium sized blocks who planted in the early 1990's are unlikely to have a strong interest because of the mid-rotation issue meaning that they have little to gain. Some foresters will participate but will hold on to the credits in the anticipation that the price of carbon will rise both to cover their own liabilities and maximize the price they sell their excess credits for. Other forest owners who are also processors may look to minimize their total business exposure.

Most interest will come from investors establishing new forests. Overall though the level of credits available for trading within the ETS is likely to be less than the level envisaged.

Another issue is that offshore buyers of NZUs (AAUs) will want clarification of the vintage of the units they are buying (this is another issue nicely 'smoothed over' in the NZ domestic ETS policy design, but it is real in the international Carbon markets). Any delay in implementation thus affects the early vintage credits.

#### Pre -1990 Issues

In New Zealand (and currently nowhere else) any owner of forest first established pre-1990 who changes land use, at any time in the future, will be taxed unless exempt.

The forest policy approach to pre-1990 forestry under the ETS is focused on adhering to the letter of the Kyoto Protocol wording and on minimizing the costs to crown during the five years of the first commitment period. It is not related to the impact of forestry on the atmosphere. It is not designed around the characteristics of the primary sector in New

Zealand. It is not designed with the intention of maximizing the potential contribution of the forest and other primary sectors to the economy. It is retrospective.

The “since 1990” restriction was introduced late in Kyoto negotiations due mainly to concerns related to the profile of slow growing northern hemisphere forests. The outcome – that no sequestration, even if it occurs after 1990, by forests planted before 1990 would be recognised does not reflect what the actual impact on the atmosphere is. Thus we have all liability recognized but none of the sequestration.

Carbon emissions from forests are not the same as emissions from other sources. Trees cannot be net emitters of carbon. The release merely reflects what has been absorbed over time.

The proposal has created two types of forest in New Zealand that are often indistinguishable on the ground or in the market and yet the operating conditions for the respective owners are vastly different.

The vast majority (around 95%) of harvested forest has historically been replanted. Until the last few years when the deforestation tax was proposed this small level was always more than offset by new planting meaning a net increase in the forest estate. Wholesale forest clearance is not a threat.

The level of compensation being offered to pre-1990 forest owners (5% for thirteen years) is inadequate when set against the permanent loss of land value that they are having imposed on them. There is no ability to relocate a forest without penalty and the allowance for those who have been granted exemption is being deducted from those who are not exempt.

#### Deforestation proposals achieved their intended objective

The threat of a deforestation tax has seen deforestation levels soar from 2005 through 2007. This rationale reaction has been actively encouraged by government and officials as it improves New Zealand’s national accounting position under Kyoto. Only deforestation after 2008 counts – therefore do as much as you are going to do before that date.

#### Pre-1990 forest becomes a “standed asset”

Since 1 January 2008 the deforestation proposals have stopped land use change from forestry overnight. Land is now effectively locked in to forestry because of the size of the penalty that exists.

This inflexibility is not in New Zealand’s long-term interest.

#### The level of compensation is not adequate

The Government's decision has the effect of expropriating the 'alternate use' value of pre-1990 forest land. The government discussion document concludes that most forest owners will face economic loss as a consequence.

The actual impact of Government's decision on individual forest owners will be vary but all will be affected.

Approximately 1.2 million hectares of land is affected and the value of the contingent liability transferred to the forest industry is massive. The final future loss/liability cannot be known but on the above figures the liability will be at least \$24 billion dollars. In contrast government is providing about three-quarters of a billion in compensation.

The Emissions Trading Tax Issues paper prepared by the policy advice division of the IRD indicates that this liability will be a capital account transaction. Therefore, if the emissions liability bill is \$20,000 per hectare, then around \$30,000 per hectare of the forest revenue net of costs will be required to pay this bill assuming the forest owner's marginal tax rate is 33 cents.

Owners of small forests will be exempt but the cost of this will be passed on to those other forest owners who are not exempt.

Forestry is being asked to shoulder 95% of its emissions immediately even though those emissions are matched with previous sequestration whereas other sectors will be looking at meeting 5% of their 1990 emissions levels in the future. This is described as "generous" to forestry.

### Implications for NZ targets and ETS

Given the uncertainties, costs and risks the availability of forest credits to the NZ ETS becomes an issue.

In addition, while the credits, or the AGS alternative, will certainly increase forest planting this will be significantly offset by land prices that reflect that agriculture is not in the ETS, and also that many of the forest investors who provide the pool of new investors are existing investors – ie pre-1990 forest owners - whose confidence has been damaged.

An additional 250,000ha over 2007 levels by 2020 is only around 21,000ha/yr. This is about half the level planted from the mid 1970's to the mid 1980's but forestry is struggling to justify current land prices.

### Industry implications – wood supply

- Wood supply impacts. There will be some unpredictable and possibly perverse outcomes even if the decisions are also logical.
  - Non wood producing carbon forests. Some forests will be established solely for carbon with no intention of harvesting.

- Production forests but with harvesting influenced by carbon price. The timing of harvesting may be brought forward or delayed depending on the price of carbon. Indeed carbon may become the more important variable. This makes planning wood flows very difficult.
- Abandoned forests. If economics are such that the return from replanting and/or harvesting is negative then forest may be abandoned to revert
- Replanting of pre-1990 for a limited time (Trees 8 years or younger are measured as if they were 8 years, exotic species are considered reforested when reaching five metres in height and 30 percent crown cover by 10 years of age).

### Industry implications – processing

#### Competitiveness at risk industry

- Wood processing consumes 8% of total NZ electricity & 4% of gas
- Estimated to produce 50% of its own energy needs from biofuels (burning wood waste)

#### Discrimination against early movers

eg Pulp & Paper sector since 1990

- 43% increase in production of product
- 2% reduction in total emissions
- 31% reduction in emissions intensity
- 14% of electricity from biofuels

### Industry implications – processing

#### Real example of an affected company that would be put out of business

- @ \$25/t CO<sub>2</sub> the increase in electricity cost will be 1.4 times higher than the long run post tax profitability of the company (after the assistance programme has ended)
- In last 5 yrs the company has increased pulp output by 25% & reduced actual electricity use by 23%

### Kyoto Mark II

While the current focus of the ETS is on the next 5 years there remain important issues to be addressed within the Kyoto LULUCF rules. It is accepted that a number of the rules do not match reality and countries now have a level of experience to draw on in considering what changes are needed.

- Maintain fast-forest fix (cannot be liable for more than you receive credit for)

- Allow forestry-offsetting (if the atmosphere cannot distinguish between sites why should Kyoto? This has broad political support now in NZ and the Australian industry is very supportive)
- Improve upon the current treatment of Harvested Wood Products – it will need to be a simple solution. No solution after 12 years of international negotiations illustrates the complexity that can be associated with harvested wood products. A simple method, even if not entirely accurate, will still be better than what currently exists.

New Zealand negotiators need to work hard with other like-minded countries, particularly Australia, and be ambitious.