

A guide to

# Forestry in the Emissions Trading Scheme

May 2011

Ministry of Agriculture and Forestry



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# INTRODUCTION AND KEY CONCEPTS

# 1

## About this guide

This guide has been prepared to help the forestry sector, and those with an interest in the sector, understand the operation of the New Zealand Emissions Trading Scheme (ETS) for forestry.

The document provides a guide only and does not purport to give advice regarding specific circumstances in relation to the ETS, New Zealand's climate change legislation in general, or the particular circumstances of individual land and forest owners.

The guide is designed to provide a detailed introduction to forestry in the ETS. It explains:

- the ETS in general, and as it relates to forestry in particular;
- the definition of forest land, and the different forest classifications within the ETS;
- the entitlements and obligations of participants in the ETS who own:
  - exotic or indigenous forests established after 31 December 1989 on non-forested land (“post-1989 forest land”); and/or
  - forests established before 1 January 1990 that are predominantly exotic species (“pre-1990 forest land”);
- taxation implications for ETS Participants.

## Additional guides

MAF is progressively making available a series of guides that provide detailed information about the administration, rules and procedures that a Participant must follow in order to comply with the ETS and related legislation.

The following guides and standards are available on MAF's website at [www.maf.govt.nz/news-resources/publications.aspx](http://www.maf.govt.nz/news-resources/publications.aspx):

1. ***A Guide to Mapping Forest Land for the Emissions Trading Scheme***, and the ***Geospatial Information Mapping Standard***: these documents describe how to define an area of forest using either the online mapping tool or by submitting existing data in electronic form as shapefiles.
2. ***A Guide to Look-Up Tables for Forestry in the Emissions Trading Scheme***: describes how to use tables to determine the amount of carbon (the carbon stocks) within a Participant's forests.
3. ***A Guide to Classifying Land for Forestry in the Emissions Trading Scheme***: practical guidance on how to determine whether an area of forest is pre-1990 or post-1989 forest land under the Act.
4. ***A Guide to the Pre-1990 Forest Land Allocation Plan and Exemptions***: the options and process for pre-1990 forest landowners under the Pre-1990 Forestry Allocation Plan and exemptions.
5. ***A Guide to the Field Measurement Approach for Forestry in the Emissions Trading Scheme***, and the ***Field Measurement Standard for Forestry***: for those required to use the Field Measurement Approach, these documents describe how to carry out field measurement in their forests to provide data that is used to generate participant-specific tables of forest carbon stocks using an online carbon calculator supplied by MAF.

## The legislation

The legal requirements relating to forestry in the ETS are set out in:

- the Climate Change Response Act 2002 (the Act);
- the Climate Change (Forestry Sector) Regulations 2008 (the Regulations);
- the Climate Change (Pre-1990 Forest Land Allocation Plan) Order 2010 (The Forestry Allocation Plan).

These are available at [www.legislation.govt.nz](http://www.legislation.govt.nz).

## Taxation information

The taxation information included in this guide has been provided by Inland Revenue. Participants are advised to obtain specific advice in relation to their own tax circumstances.

## MAF contact details

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## Overview of the ETS and the role of forests

The Emissions Trading Scheme (ETS) was created by the Climate Change Response Act 2002. The ETS is designed to cover all significant greenhouse gases covered by the Kyoto Protocol, and involve all sectors of the New Zealand economy.

The objective of the ETS is to support global efforts to reduce greenhouse gas emissions by helping New Zealand to:

- reduce net emissions below business-as-usual levels;
- comply with our international obligations, including our Kyoto Protocol obligations.

An emissions trading approach is preferred because:

- there is broad consensus that it is effective and economically efficient;
- it is flexible;
- it provides an incentive for industry and private individuals to improve their resource use;
- it is consistent with the principles of the Kyoto Protocol.

As many of the terms used in this guide have defined meanings under the Act, careful reading is recommended of the **Key concepts and terminology** section and the **Glossary**.

### Greenhouse Gases

The impetus behind the ETS is to reduce total greenhouse gas emissions. These are the gases in the earth's atmosphere that trap the sun's heat (hence the term, "greenhouse"). The main greenhouse gases, apart from water vapour, are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O).

These gases are emitted naturally, but also occur as a result of human activity (for example, burning coal, deforestation, driving cars). The problem we are facing is rapidly growing levels of these gases in the earth's atmosphere. As these levels grow, they are expected to increase global temperatures and affect the climate system. With even quite modest temperature increases, changes in climate are expected to negatively impact on many of the world's inhabitants, and both natural and managed ecosystems.

Greenhouse gases can be removed from the atmosphere by "sinks". Forests and other woody vegetation can be carbon sinks as they remove atmospheric CO<sub>2</sub> through photosynthesis and store it as carbon in biomass (that is, in wood, leaves and woody litter).

Deforestation and harvesting, in effect, turns forests into sources of greenhouse gases, as most of the wood removed from a forest eventually breaks down and is returned to the atmosphere as CO<sub>2</sub>.

Natural forests that are not actively managed, or are in a steady state of management, are generally considered neutral in terms of CO<sub>2</sub> since over time and across the whole forest the carbon lost from harvesting, decay or fire is generally equivalent to the carbon stored through new growth.

### The Kyoto Protocol

To reduce greenhouse gas emissions, the international community has signed two agreements: the United Nations Framework Convention on Climate Change (UNFCCC), adopted in 1992, and the more widely known Kyoto Protocol, ratified by New Zealand in December 2002. The UNFCCC is the overarching agreement, under which sits the Protocol.



For developed countries, the Kyoto Protocol sets targets for reducing greenhouse gas emissions. Either the targets are achieved by 2012, or countries must take responsibility for offsetting emissions above their target. These obligations are binding and there are penalties if obligations are not met. New Zealand and other countries are currently negotiating a set of rules for a second commitment period which is expected to be five years in duration, commencing in 2013.

Under the Kyoto Protocol, only new forests planted since 1990 (Kyoto-compliant forests) are eligible to earn carbon credits (units of carbon) for increases in carbon stocks from 1 January 2008.

Deforestation is the second largest source of human-induced greenhouse gas emissions globally. Consequently, deforestation is also included in the Kyoto Protocol. When deforestation occurs, it creates emissions liabilities under the Protocol, and usually also under the ETS.

### How the ETS works

The forestry rules of New Zealand's ETS largely reflect the international Kyoto Protocol rules. This approach minimises the cost to taxpayers and the Government.

The ETS essentially puts a price on greenhouse gases and provides incentives that will encourage sectors to search for the most efficient way to lower net emissions across the economy. The ETS covers all significant gases and all sectors, but there is a phase-in period with different sectors entering at different stages.

Participants in the ETS have three core obligations:

- monitor their emissions and/or removals of greenhouse gases;
- report these to the Government by periodically filing an emissions return;
- surrender units to cover their reported emissions, or to claim units for their removals.

The primary unit of trade in the ETS is the New Zealand Unit (NZU). One NZU represents one tonne of carbon dioxide (CO<sub>2</sub>) either released to the atmosphere (emissions) or removed from the atmosphere (removals). The Government issues NZUs for increases in the carbon stocks in Kyoto-compliant forests and these may be held, or bought and sold, within New Zealand.

NZUs are held in named holding accounts in a central registry – the New Zealand Emissions Unit Register (NZEUR). NZUs are transferred between holding accounts when they are surrendered or sold. Participants selling NZUs instruct the registry to transfer them from their account to another account.

Similarly, Participants who are required to surrender units to meet an emissions liability can do so by instructing the NZEUR to transfer units from their account to a Crown surrender account. If a Participant does not have sufficient units, they are required to buy additional units for surrender. During a transition period that applies until 31 December 2012, Participants in the forestry sector can pay cash at a fixed rate of \$25 per NZU as an alternative to surrendering units.

### Emissions trading internationally

The ETS is linked to international markets that allows emissions trading to help meet obligations under the Kyoto Protocol. NZUs will generally be convertible into New Zealand Assigned Amount Units (AAUs)<sup>1</sup>, held by New Zealand under the Kyoto Protocol. AAUs can be used by any country to meet any of their obligations under the Protocol. They are not, however, automatically allowed into every country's

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<sup>1</sup> NZ receives an allocation of AAUs equivalent to its net emissions as at 1990. Exchange of NZUs for AAUs is subject to the Commitment Period Reserve – a rule under the Kyoto Protocol that requires a country to maintain the level of their AAUs at or over 90 percent of their 1990 baseline.



domestic emissions trading scheme.

A similar scheme to the ETS has been underway in Europe since 2005 beginning with the energy sector, and with other sectors being phased in over time.

### Forestry in the ETS

New Zealand's forests play a critical role in meeting the country's climate change objectives. The country's forest estate is already a significant store of carbon, and there is potential for this to expand further. The ETS provides incentives for increased tree planting by passing the carbon units earned under the Kyoto Protocol to forest owners. The ETS also creates accurate price signals for deforestation – the conversion of forest land to other land uses. For these reasons, forestry was the first sector to enter the ETS.

Under the ETS, Kyoto-compliant forests are referred to as post-1989 forests. Land that was already in forest on 31 December 1989 (either indigenous or exotic forest species), and that was dominated by exotic forest species as at 31 December 2007, is referred to as pre-1990 forest.

In the following sections, the rules for forestry in the ETS are explained by reference to these two categories of forest land: post-1989, and pre-1990, forest land.

Note that indigenous forests established before 1 January 1990 are not included in the ETS. Although New Zealand has to account for the deforestation of all forests under the Kyoto Protocol, it is not expected that significant areas of pre-1990 indigenous forest will be deforested as this is subject to other legislation including the Resource Management Act 1991 and Forest Act 1949. Therefore, pre-1990 indigenous forests are excluded from the ETS.

### Participation of forestry in the ETS

People can become Participants in the ETS in two ways:

- Voluntary – when they choose to bring post-1989 forest land into the ETS;
- Mandatory – when non-exempt pre-1990 forest land is deforested.

### Who is a Participant?

A Participant is a person who has obligations and/or entitlements under the ETS. Different persons can be the Participant depending on whether the land involved is pre-1990 or post-1989 forest land. The Participant is not necessarily the owner of the forest land if another party has control over the forest (see the table below).

Voluntary	Mandatory
<p>If post-1989 forest land is voluntarily brought into the ETS, then the Participant can be:</p> <ul style="list-style-type: none"><li>• legal owners of the forest land; or</li><li>• holders of a registered forestry right; or</li><li>• registered leaseholders; or</li><li>• parties to a Crown conservation contract.</li></ul>	<p>If pre-1990 forest land is deforested, then the Participant is the:</p> <ul style="list-style-type: none"><li>• landowner;</li><li>• unless a person has deforestation rights over forestry land and the landowner cannot control that deforestation.</li></ul>

### Post-1989 forest land in summary

Post-1989 forest land is primarily exotic or indigenous forest that is established **after** 31 December 1989 on land that was non-forest land on 31 December 1989. For these forests:

- Owners of the forest land (or those with a registered interest in the forest on the land) may voluntarily become Participants in the ETS, and in doing so are entitled to receive NZUs for the increase in carbon stocks in their forests from 1 January 2008.
- Participants have legal obligations for forest land registered in the ETS, including to:
  - report at least once every five years on the change in carbon stocks in their registered forest area, using one of two methods specified in the Regulations: either default carbon stock tables for Participants with less than 100 hectares of registered forest land, or the Field Measurement Approach (FMA) for Participants with 100 hectares and more;
  - surrender units if the carbon stocks in their registered forest area fall below a previously reported level (for example, due to harvesting or fire). However, the surrender liability is capped at the amount of units previously received by the Participant for that area of forest land (if any);
  - notify the Government if any part of the forest area registered in the ETS is sold or transferred to another party, and, if required, to surrender any units that may be owed up to the time of transfer;
  - if withdrawing land from the ETS, surrender the net balance of NZUs that have been issued for the land (called the unit balance) to return the balance to zero.
- Participants in the ETS may choose to register part or all of their post-1989 forest land. Additional forest land can be registered at any time.
- Landowners have until the end of 2012 (the end of the first commitment period under the Kyoto Protocol) to decide whether to register post-1989 forest and receive NZUs for that period. If they do, they can claim NZUs for all the carbon stored in their forest from 1 January 2008 to 31 December 2012.
- Landowners can also register after 2012, but they can only claim NZUs for the carbon sequestered from 1 January 2013.
- No NZUs are earned for carbon sequestered before 2008.
- If landowners do not register their post-1989 forest, no units are issued in respect of that land nor are any units required to be surrendered if the area is harvested or deforested.

Details of the process for registering post-1989 forest land and information on obligations and entitlements can be found later in this guide (see section **Bringing post-1989 forest land into the ETS**).

### Pre-1990 forest land in summary

Pre-1990 forest land is land that was in forest on 31 December 1989, that remained in forest, and was predominantly exotic species, on 31 December 2007.

For these forests:

- Landowners have no obligations under the ETS if pre-1990 forest land is not deforested (that is, if it is re-established after harvesting).
- No NZUs are earned for an increase in the carbon stock of pre-1990 forest land.
- If an area of more than two hectares of pre-1990 forest land that is not exempt is deforested in any five year period from 1 January 2008, the landowner becomes a mandatory Participant in the ETS. The landowner must:
  - notify the deforestation activity; and

- submit an emissions return; and
  - either surrender units or, for liabilities incurred up to the end of 2012, pay cash at a rate of \$25 per NZU for emissions resulting from deforestation.
- Pre-1990 forest landowners may choose to either:
    - apply for a one-off allocation of NZUs; or
    - if eligible, apply for an exemption from deforestation obligations if the pre-1990 forest land was owned on 1 September 2007 by a person(s) who owned on that day less than 50 hectares of pre-1990 forest land in total; or
    - if eligible, apply for an exemption from deforestation obligations for the deforestation of tree weeds.

Landowners need to choose between an allocation and an exemption – the same area of pre-1990 forest land cannot be both exempt and receive an allocation. These options are not automatic: landowners must make a choice and apply. The less than 50 hectares exemption is available at the same time as the pre-1990 forestry allocation so landowners can make the best choice between the options available.

Further information on entitlements and obligations for landowners with pre-1990 forests, and details about applying for an exemption from the ETS are provided in the section **Exemptions from the ETS for pre-1990 forest land**, and in *A Guide to the Pre-1990 Forestry Allocation and Exemptions*.

### Pre-1990 Forest Land Allocation Plan

The Pre-1990 Forest Land Allocation Plan (Forestry Allocation Plan) allocates NZUs to owners of pre-1990 forest land in partial compensation for the loss in value of their land as a result of the introduction of the ETS.

Landowners are not required to join the ETS to participate in the allocation process. However, they do have to apply, and supply verifiable information about the forest on their land, and have a NZEUR holding account into which their NZUs will be transferred.

Applications for an allocation close on 30 November 2011.

### Exemptions from the ETS for pre-1990 forest land

The less than 50 hectares exemption is a one-off opportunity available to landowners to exempt pre-1990 forest land from the ETS. The exemption applies to the land, and means that the land use can be changed at any time without generating liabilities under the ETS.

The landowner on 20 July 2010 is eligible to apply for the less than 50 hectares exemption provided the application area was owned by a person who on 1 September 2007 owned less than 50 hectares of pre-1990 forest land in total. Their total landholdings on 20 July 2010 may exceed 50 hectares.

The closing date for applications is 30 September 2011. Applications can be made online, and required information includes a statutory declaration from each person that owned the land on 1 September 2007 and an electronic map of the forest area.

Pre-1990 tree weed exemptions ensure tree weed clearance is not discouraged. Tree weed exemptions will be advertised from time to time.

## Key concepts and terminology

Under the Act, forest is classified in a particular way, according to definitions that are closely aligned with the Kyoto Protocol. The definitions and terms are important because if the land is forest land, then different classes of forest land have different entitlements and obligations. Also, if the land does not qualify as forest land, it cannot be registered in the ETS to earn NZUs, nor are there liabilities if trees are cleared.

In this section we introduce key concepts and terminology to help potential Participants:

- determine whether their land and forest meets the criteria for forest land under the ETS;
- classify their forest land as pre-1990 or post-1989 forest land;
- define the area of their forest land;
- determine the carbon stocks in their forest, using the prescribed methods available to estimate these;
- decide whether an activity that has affected their forest's carbon stocks must be reported.

### What are forest species?

A forest species is a tree species capable of reaching at least 5 metres in height at maturity in the place it is located, but excludes tree species grown or managed primarily for the production of fruit and nut crops.

### How is forest land defined?

Forest land is an area of land of at least 1 hectare with forest species that have, or are likely to have:

- a crown-cover of more than 30 percent on each hectare; and
- an average crown-cover width of at least 30 metres.

If an area of forest temporarily does not contain species capable of meeting the height and crown-cover thresholds because of human actions or natural events (for example, harvesting, or damage by strong winds), but is likely to again, then it is referred to as being “temporarily unstocked” and is therefore still considered to be forest land.

### How is deforestation defined?

Generally, deforestation is forest clearing followed by a change to another land use (for example, to grazing). After deforestation, the deforested area is classified as non-forest land.

Deforestation may also be deemed to have occurred after clearing if the re-planted or regenerated forest does not meet criteria for minimum stocking (stems per hectare) and/or crown cover – see the section **Related information** for details.

Note that:

- Deforestation of pre-1990 forest land always incurs a liability to surrender units, unless the deforested area is either 2 hectares or less in any five year period from 1 January 2008, or occurs on exempt land.
- Deforestation of post-1989 forest land registered in the ETS incurs a liability to surrender any units received in relation to the land.

## Classifying forest land

An assessment of whether an area of forest meets the definition of forest land under the Act is required, and if so, whether it is classified as pre-1990 or post-1989 forest land. Evidence supporting the classification will need to be provided with applications to register the area of forest land in the ETS. Such information might include historical aerial photographs, farm and stand records, contractor payments, receipts for relevant activities (such as planting or harvesting) and historical maps.

To confirm that proposed forest land is eligible to join the ETS as post-1989 forest land Participants will need to show that either:

- the area was grassland without any woody species on 31 December 1989;
- if woody species were present on 31 December 1989, they were not forest species;
- if it was forest land on 31 December 1989, then it was deforested between 1 January 1990 and 31 December 2007;
- if forest species were present on 31 December 1989, then under the management regime for the land at the time it was unlikely that the stocking of forest species would have ever become sufficient to achieve a crown cover of more than 30 percent (for example, because of regular clearing, or grazing);
- if the land was formerly pre-1990 or exempt forest land that had been deforested and any liabilities from that deforestation have been met.

If sufficient information is not provided, the area will not be registered as post-1989 forest land.

Detailed information about classifying forest land for the ETS is provided in [A Guide to Classifying Land for the Forestry Emissions Trading Scheme](#).

## Determining the year of establishment of planted forest

Most owners of plantation forests (as opposed to naturally regenerated) will know the year in which their forest was planted, and this will also usually be the year the area became forest land. However, there may be some forests where the planting date is not known with certainty. If this is the case, forest owners may need to obtain specific evidence of when the forest was planted by estimating the age of trees.

## Determining the year of establishment of naturally regenerated forest

The year in which an area of naturally regenerated forest species becomes forest land may sometimes be difficult to determine if the transition from grassland to forest land is a progressive process. If the forest land does not clearly fall into a pre-1990 or post-1989 category, it may be necessary to fell a small sample of trees so that the average age can be determined by ring-counting.

Alternatively, the time at which substantial natural regeneration first occurred may be able to be related to a specific management event (for example, removal of livestock, or ceasing scrub-cutting).

## Defining forest land areas

The area of forest land must be defined when the forest owner:

- registers with MAF that they wish to include post-1989 forest in the ETS; or
- files an emissions return with MAF recording the liability after pre-1990 forest land is deforested; or
- applies to MAF for an exemption for their pre-1990 forest land under the ETS; or
- applies to MAF for an allocation of NZUs for their pre-1990 forest land.

It is important that the boundaries of forest land are accurate because:

- A person/persons cannot claim NZUs for forest areas that are not either owned by them, or to which they do not have rights. Therefore, the forest land boundaries must be checked against the boundaries of land titles included in the registration or application.
- If the Participant over- or under-states the area of their forest land, the resulting carbon assessment could be incorrect.

Areas of forest land are defined using shapefiles – computer files that contain data delineating the boundary of the forest land, and that allow it to be related to cadastral information (such as title boundaries) and to satellite or aerial imagery. Shapefiles can be created using a tool provided online by MAF, or they may be created in the forest owner's own geographic information system, provided the shapefiles comply with the content and format prescribed in the *Geospatial Mapping Information Standard*.

Further information about shapefile specifications is included in *A Guide to Mapping Forest Land for the Emissions Trading Scheme*.

### Carbon accounting and unit balances

At registration all post-1989 forest land to be registered must be allocated to one or more Carbon Accounting Areas (CAAs). A permanent Carbon Accounting Record (CAR) is kept for each CAA for each participant by MAF. It records the New Zealand Units (NZUs) issued or surrendered over time through participant's emissions returns. The running balance of the NZUs in the CAR is called the unit balance.

The unit balance is important because:

- When forest is withdrawn from the ETS, the total unit balance as assessed by a mandatory emissions return at the date the forest is withdrawn must be surrendered to return the unit balance to zero.
- While the forest is registered in the ETS, the unit balance runs with the land regardless of who owns the forest or the land, whether the post-1989 participant changes, or who has claimed or surrendered units.
- When land, a forestry right, a forestry lease or a Crown conservation contract is transferred or expires while the forest is still registered in the ETS, then the unit balance and responsibility for complying with the ETS goes to the new participant.

The opening unit balance for a new participant's CAA is the closing balance for a previous participant's CAA for the same area of land. Unit balances cannot be less than zero as debits cannot exceed credits. That is, liabilities are capped at the number of units previously received for the CAA.

## Carbon sequestration and determining carbon stocks

### Carbon sequestration

Carbon sequestration is the process by which carbon dioxide is removed from the atmosphere during photosynthesis, and stored as carbon in forest biomass (trunks, branches, foliage, roots and forest-floor litter). To determine the total carbon sequestered in a forest at any given time (the forest carbon stocks) it is necessary to work out how much carbon is in the following carbon pools:

- The above-ground live biomass, which includes the stem, branches, and leaves or needles.
- The below-ground live biomass, which is the root system of the tree. Once the tree is harvested this

usually decays slowly over time.

- The coarse woody debris, which includes all larger woody material left on the forest floor after any pruning, thinning or harvesting operations, or due to natural mortality. This coarse woody debris decays slowly over time.
- The fine litter, which is composed of decaying leaves or needles, and small branches and twigs. This usually increases slowly over time, until a balance between annual litterfall and decay is reached.

Forest biomass consists of about 50 percent carbon, and over time practically all of the change in forest carbon stocks comes from changes in the four biomass pools above. The remainder comes from changes in the carbon stored in forest soils over time, but these changes are usually quite small and difficult to measure at reasonable cost. ETS Participants are therefore not required to measure changes in soil carbon.

Gains in forest carbon stocks through growth and sequestration will reach a maximum level over time, and are eventually offset by carbon losses through harvesting, thinning, and natural decay. Emissions returns filed under the ETS are used to account for the change in forest carbon stocks (which may be positive or negative) over a predetermined period.

### Determining carbon stocks

The total forest carbon stock is assessed at two points in time: at the beginning and end of an emissions return period<sup>2</sup>. The change in carbon stocks is the amount sequestered (if increasing) or emitted (if decreasing) in that period.

There are two methods available for quantifying changes in carbon stocks in forests: the default table approach and the Field Measurement Approach (FMA). The default table approach is series of simple look-up tables of pre-calculated values for carbon stock by forest age for participants with less than 100 hectares of post-1989 forest land in the ETS. The FMA provides participant-specific tables based on information collected from a network of randomly located sample plots on the participants' forest land. Both approaches use the same emissions return process.

### The default tables (less than 100 hectares in the ETS)

The default carbon stock tables (for both pre-1990 and post-1989 forest land) use well-established growth modelling techniques to predict the growth of trees of a particular forest type, and hence the increase in carbon stocks with age. The tables are provided in Schedule 6 of the Regulations, and each provides total carbon stocks expressed in tonnes of carbon dioxide per hectare by forest age.

The default tables include values for five forest types: *Pinus radiata*, Douglas-fir, exotic hardwoods, exotic softwoods, and indigenous forests. For *Pinus radiata*, there are regionally-averaged tables. For the other forest types, there is one nationally-averaged look-up table as sufficient data is not yet available to construct regional tables. The default tables are accurate at a regional or national level respectively, but they do not reflect variations in local growth rates due to site factors such as fertility or soil moisture.

An advantage of the default tables is that an assessment of the change in carbon stocks can be made without the expense and complexity of field measurements.

***A Guide to Look-Up Tables for Forestry in the Emissions Trading Scheme*** explains how to use the default tables to calculate carbon stocks in growing forests, and to determine emissions associated with harvesting and

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<sup>2</sup> Emissions return periods are either the commitment period or the period ending with a transmission of interest (in both cases an emissions return is mandatory), or calendar years (in which case emissions returns are voluntary).



deforestation. The guide also covers how to determine the age and predominant species of a forest, and includes the default table for that species.

### **The Field Measurement Approach (100 hectares or more in the ETS)**

Larger forests involve larger changes in carbon stocks and therefore a more accurate assessment approach is needed to minimise under- or over-reporting. Field measurement is a more accurate but more complex method of determining forest carbon stocks than the default tables, so only Participants with 100 hectares or more of registered post-1989 forest land are required to use this approach. FMA Participants quantify changes in carbon stocks for their mandatory emissions returns covering commitment period 1 (2008–2012), and at least once in every mandatory emissions return period thereafter.

The FMA will be progressively implemented from September 2011 to September 2012. Initially, FMA Participants will be able to request the locations for their permanent sample plots from MAF, and establish and measure their plots. The information FMA Participants are required to collect at each plot location includes the type and dimensions of trees, the dimensions of shrub types (optional) and silviculture information. The approach is based on plot-based forest inventory procedures used in NZ, together with NZ-calibrated forest growth models and carbon conversion functions.

From September 2012, Participants will be able to submit their FMA information for processing by MAF's Carbon Calculator. The information is used to calculate total stem volume, and from that total, carbon stocks in above- and below-ground live biomass is estimated. The Participant receives Participant-specific carbon stock tables for use in preparing their emissions returns. The FMA is not available for use prior to the mandatory emissions return at the end of the first commitment period.

Detailed information is available in *[A Guide to the Field Measurement Approach for Forestry in the Emissions Trading Scheme](#)*.

Participation in the ETS in respect of post-1989 forest land is voluntary. Being a Participant entitles that person to receive NZUs for the increase in carbon stocks in the forest from 1 January 2008 onwards. However, it also requires the surrender of NZUs whenever the carbon stocks in the forest fall below a previously reported level.

Owners of post-1989 forest who do not voluntarily participate in the ETS have no entitlements, or obligations, under the Act. Owners can harvest or deforest the land without liability for the emissions, and no exemptions are required.

This section covers:

- who is eligible to participate in the ETS;
- your obligations as a Participant;
- dividing forest land into carbon accounting areas (CAAs);
- the emissions return process;
- how to exit from the ETS;
- fees and charges.

## Eligibility for participation

The following persons are eligible to apply to be registered in the ETS as Participants with respect to post-1989 forest land:

- the legal owners of the forest land;
- holders of a registered forestry right;
- registered leaseholders;
- parties to a Crown Conservation Contract.

The following forest land is eligible to be registered in the ETS:

- land that was not forest land on 31 December 1989 and that has subsequently been established as exotic or indigenous forest land;
- land that was forest land on 31 December 1989 but was deforested before 1 January 2008, and then later reforested;
- pre-1990 forest land or exempt land that was deforested after 31 December 2007 and was then later reforested, provided any deforestation liability has been met.

### Interested party permission

There are two situations where the written permission from an interested party is required before a person can be registered as a Participant in the ETS:

- Where the legal owner of forest land wishes to be registered as the Participant, but there is a registered forestry right or registered lease over the post-1989 forest land. The written permission of the registered forestry right holder or registered lease holder is required in this case.

- If a registered forestry rightholder or registered leaseholder wishes to be registered as the Participant, the written permission of the landowner is required.

The permission requirements above gives landowners, forestry right and leaseholders the opportunity to seek independent professional advice on the implications of granting consent for the activity and forest land becoming subject to the ETS requirements.

## Bringing post-1989 forest land into the ETS

Post-1989 forest land is brought into the ETS by applying to be registered as a Participant with respect to that forest land. Applicants must meet one of the following criteria:

- they own the forest land, or
- they hold a registered forestry right or registered lease over the forest land, or
- they are a party to a Crown conservation contract.

In addition, a Participant is an unincorporated body under the Act if:

- where the applicants are partners in a partnership, trustees or in a joint venture, two or more of them jointly own post-1989 forest land (or jointly hold a registered forestry right or registered lease, or are jointly parties to a Crown conservation contract); or
- where the applicants are not partners in a partnership, trustees or in a joint venture, three or more of them jointly own post-1989 forest land (or jointly hold a registered forestry right or registered lease, or are jointly parties to a Crown conservation contract).

**The requirements of the application process described below mean applicants should carefully check the names shown on all documents, and the land title(s), registered forestry right, registered lease or Crown conservation contract to ensure they reflect the correct legal names of members who will participate.**

The key steps involved in for applying to register post-1989 forest land in the ETS are described below.

### Step 1: Identify the correct Participant name(s)

Determine the correct Participant name(s) by referring to (as applicable):

- the certificates of title; or
- the registered forestry right or lease; or
- the Crown conservation contract.

Determine whether or not the Participant is an unincorporated body.

The name of the Participant to be registered must match the legal name(s) that appear on the relevant certificates of title for the land (as landowner or registered forestry right or leaseholder), deed register or the Crown conservation contract.

An exception is unincorporated bodies which can specify any Participant name they want in their registration application. However, the names of all the members of the unincorporated body must match the names listed on the relevant certificates of title for the land, deed register or Crown conservation contract.

## **Step 2: Apply to the NZ Emissions Unit Registry for a Participant holding account**

All ETS Participants must have a New Zealand Emissions Unit Registry (NZEUR) holding account. Any NZUs claimed for net increases in carbon stock are transferred into this holding account, and any NZUs that must be surrendered for reductions in net carbon stocks must be surrendered from this account.

The NZEUR holding account name must match the name of the Participant to be registered, with the exception of unincorporated bodies (see below). That is, the NZEUR holding account name must match the legal name(s) that appear on the relevant certificates of title for the land (as landowner or registered forestry right or lease holder), deed register or the Crown conservation contract.

Unincorporated bodies can specify any NZEUR holding account name they want. However, the account holder names of the holding account must match the names of the members making up the unincorporated body. That is, the NZEUR account holder names must match the legal name(s) that appear on the relevant certificates of title for the land (as landowner or registered forestry right holder), deed register or the Crown conservation contract.

Participants can apply online for an NZEUR holding account at [www.eur.govt.nz](http://www.eur.govt.nz). If you have questions about the holding account application process, call **0800 CLIMATE (254 628)** and select the Emissions Unit Register option.

## **Step 3: Apply to MAF to be registered as a Participant**

Applications to be registered as an ETS Participant are made to MAF, either:

- online at [www.maf.govt.nz](http://www.maf.govt.nz) (select Forestry in the ETS, Online ETS Transactions); or
- by downloading and completing a paper-based registration form from [www.maf.govt.nz](http://www.maf.govt.nz).

The registration process requires applicants to provide the following:

- the name and contact details of the person submitting the application;
- the name of the person who wishes to be registered as a Participant;
- the Participant's NZEUR holding account number;
- an electronic shapefile delineating the area of post-1989 forest land;
- evidence that the land is eligible to enter the ETS as post-1989 forest land;
- contact details for anyone deemed an "interested party";
- a declaration on the prescribed form that any actions by the applicant on the post-1989 forest land since 1 January 2008 complied at the time of application with the Resource Management Act 1991, the Biosecurity Act 1993 and regional and district pest management strategies, and the Forests Act 1949.

## **Step 4: Mapping the Post-1989 forest land**

Applicants are required to create an electronic map (the shapefile) of the post-1989 forest land included in the application, and to assign each area of forest land to a unique Carbon Accounting Area (CAA). CAAs can not be less than one hectare in size, there are no limits on the number an applicant may specify, and they need not comprise contiguous forest areas. For FMA Participants it is optional to assign forest class information (either Indigenous or Exotic) which is used for the allocation of sample plots.

MAF provides a tool for mapping forest land and creating a shapefile as part of the online application process to join the ETS. Alternatively, applicants may upload a shapefile generated from either their own spatial data using their own computer system, or from a consultant's system – provided it complies

with the content and format prescribed in the *Geospatial Mapping Information Standard*.

The online application process and mapping tool, the *Standard*, and *A Guide to Mapping Forest Land for the Emissions Trading Scheme* are available at [www.maf.govt.nz](http://www.maf.govt.nz).

## Emissions returns and receiving/surrendering units

### Step 1: Calculate changes in the carbon stocks in the forest

Participants must periodically calculate the changes in carbon stocks in their forests using either the default table approach or FMA. For more detailed information on these approaches see the section **Determining Carbon Stocks**, or refer to *A Guide to Look-Up Tables for Forestry in the Emissions Trading Scheme* and *A Guide to the Field Measurement Approach for Forestry in the Emissions Trading Scheme*.

A permanent Carbon Accounting Record (CAR) for each CAA is kept by MAF. It records the change in carbon stocks for the CAA over time, and the NZUs issued or surrendered.

### Step 2: File an emissions return

To be able to file an emissions return, the Participants must be on the list of Registered Participants held by NZEUR.

Participants claim NZUs for net increases in forest carbon stocks by filing a voluntary emissions return between 1 January and 31 March in any year for carbon stock change since the later of 1 January 2008<sup>3</sup> or the last emissions return. Where an emissions return indicates a net decrease in carbon stocks, Participants may be required to surrender units. Only one voluntary emission return may be filed each year.

A mandatory emissions return covering the entire commitment period from 1 January 2008 to 31 December 2012 is also required to be submitted, regardless of whether voluntary returns have been completed in the interim. The mandatory return for the first commitment period must be submitted between 1 January 2013 and 31 March 2013.

If a mandatory emissions return is submitted for a CAA for which a voluntary return or returns have already been submitted, then the mandatory return must assess the difference between the net units transferred under the voluntary returns and the units due to be transferred or surrendered (as applicable) under the mandatory return. The difference is then issued or surrendered as assessed under the mandatory return.

Participants can file an emissions return online at [www.maf.govt.nz](http://www.maf.govt.nz). The website also provides downloadable forms for making paper-based emissions returns, and instructions for submission of completed forms.

An emissions return requires information such as:

- the Participant's name and NZEUR holding account number;
- details of the Participant's CAAs covered by the return;
- an assessment of the Participant's net carbon stock change over the period covered by the return for each CAA.

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3 Or 1 January of the first year in any subsequent 5-year period.

Participants that are members of the same corporate group may form a consolidated group in order to file a single emissions return covering the activities of all the Participants. (An emissions return for a consolidated group can also include ETS activities in other sectors such as waste or stationary energy.) For the definition of a consolidated group, see **Glossary**.

### **Step 3: Receiving/surrendering units**

Participants entitled to NZUs for a net increase in carbon stocks will usually receive them within 20 working days of their emissions return being submitted, unless additional information about the emissions return is requested.

MAF may undertake a compliance audit of any emissions return, ask for additional information, or make a site visit to ensure the number of units claimed is correct and complies with the law. Audits can occur before or after units are issued, and may delay the processing of emission returns and the issuing of NZUs.

Participants liable to surrender units for a net decrease in carbon stocks must surrender them from their holding account within 20 working days of filing their emissions return.

Although only NZUs are issued for forest carbon sequestration, other types of carbon units can be surrendered to meet liabilities, including New Zealand Assigned Amount Units (AAUs). As a transition measure, Participants with a liability to surrender units may elect to pay cash at a rate of \$25 per NZU to meet surrender liabilities incurred up to 31 December 2012.

The ETS caps the maximum emission liabilities for the forest land in a CAA (for example, from harvesting, deforestation or fire) at the total number of NZUs previously issued net of any previous repayments or surrenders in respect of that CAA. As the cap operates for the forest land in a CAA, not the Participant, there may be situations where a Participant may have to surrender more NZUs than they have received.

## **Withdrawing from the ETS and Land Transactions**

### **Ceasing to be a Participant in the ETS**

A Participant can cease to be registered in the ETS in respect of some or all of their post-1989 forest land in the following ways:

- via land transfer (covered in the next section);
- if they decide at any time they wish to cease being a Participant in the ETS;
- if they no longer meet the eligibility criteria to be a Participant in the ETS.

In the second and third cases above, a Participant must notify MAF that they wish to remove an area of registered forest land from the ETS and supply details that fully define the area to be deregistered (in terms of existing forest land boundaries and the affected CAAs). They then will be notified that the land will be removed from their Participant record effective from a specified date.

When either ceasing to be a Participant or removing land from the ETS, the Participant is required to:

- submit an emissions return within 20 working days of having ceased to be a Participant or removing land from the ETS; and
- surrender the outstanding balance of units in the CAR relating to the land.

Due to the rules for calculating age, only the owner on 31 December is entitled to claim, or required to surrender, units for that whole year. That is, participant entitlements and obligations as determined by an emissions return are not calculated on a pro-rata basis for part years. This applies to transfers of interests also.

If part of a CAA is withdrawn from the ETS (or involved in a transfer) the unit balance is apportioned between the transferor and transferee portions of the CAA on a pro-rata by area basis.

Being removed from the Register of Participants does not alter any obligations a person has under the ETS in respect of the period they were a Participant (for example, filing emissions returns and surrendering NZUs).

### **Adding land and reconfiguring CAAs**

Participants can bring more post-1989 forest land into the ETS after their initial land is registered. They will be required to assign that forest land to one or more new CAAs, and forest class if applicable. Participants may also change the CAA configuration of their forest land by withdrawing whole CAAs from the ETS, changing the CAA structure, and adding the forest land back into their registered forest area. However, provided that exactly the same areas are added back in (but in a different CAA configuration), Participants may file a special emissions return to reclaim the surrendered units.

Adding and removing land may have implications for FMA Participants depending on whether or not the remaining land is equal to or less than 100 hectares, and whether the requirements for the minimum number of sample plots are still met.

### **Transfer of an interest in post-1989 forest land**

Post-1989 forest land that is in the ETS may be transferred to another person if:

- the Participant transfers the forest land, a registered lease or forestry right or a Crown conservation contract to another person;
- a forest landowner who is already a Participant registers a forestry right, or lease, or enters into a Crown conservation contract with another person for an area of forest land already in ETS;
- a forestry right, lease or Crown conservation contract relating to an area of forest land in the ETS expires or is terminated.

Transfer in the ETS means sale, assignment or transfer by operation of law, and the situations above are collectively referred to as transmitted interests. The existing Participant is referred to as the transferor, and the new participant as the transferee.

When an area of post-1989 forest land that is registered in the ETS is transferred:

- the transferor and the transferee must notify MAF on the prescribed form of the transfer within 20 working days or as soon as practicable if the transfer is by operation of law;
- the transferee automatically becomes the Participant with respect to that land from the date of transfer, and becomes responsible for the unit balance for that area of land;
- the transferor automatically ceases to be the Participant in respect to the transferred land.

The notification may be submitted by using MAF's online deregistration application process available at [www.maf.govt.nz](http://www.maf.govt.nz) or by downloading and completing a paper-based application form available from the same site.

When a registered forestry right, lease or Crown conservation contract expires or is terminated, the transferee (usually the landowner) will automatically become the new Participant. The landowner, as the



new Participant, may face a liability related to the ongoing decay of post-harvest forest biomass, and is required to repay the unit balance if they wish to withdraw the land from the ETS in the future.

The transferor remains entitled to receive (and liable to repay) units for carbon stock increases (or losses) covered by any emissions return submitted before the transfer.

With all transmitted interests, the transferor must submit an emissions return within 20 days of the date of the transfer, or as soon as possible if the transfer is by operation of law. Units must be surrendered within the 20 working days of submitting the return.

As usual, any liability a transferee may incur from future carbon stock decreases is capped by the CAAs unit balance.

Where part of a CAA is transferred, the unit balance of the CAA as updated by the mandatory emissions return described above must be allocated to subdivided parts on a pro-rata by area basis.

If a person is considering entering into a transmission of interest or the expiry of an interest is imminent, then the Participant may submit an emissions return that brings the unit balances of the affected CAAs up to date.

## Related information

### Register of Participants

Participants with post-1989 forest land will be entered into a public Register of Participants (available at [www.eur.govt.nz/search-the-register](http://www.eur.govt.nz/search-the-register)). The Register shows:

- the Participant's name;
- the ETS-related activity they undertake;
- the date they were registered as a Participant.

Specific details about Participants' post-1989 forest land are not made available. Participants will be notified that they have been entered on, or removed from, the Register of Participants.

### Administration fees

The following table sets out the fees and charges payable by Participants. These fees are not refundable if a registration applicant is found to be ineligible or an emissions return is disallowed.

<b>Fee Schedule for Post-1989 Forest Participants</b>	<b>Fee (incl. GST at 15%)*</b>
<b>Registration Application Fee</b> Includes up to 4.25 hours processing per Participant	\$562.22
<b>Emissions Return Filing Fee</b> Includes up to 0.75 hours processing per return	\$102.22
<b>Adding CAAs</b> Includes up to 0.75 hours processing	\$102.22
<b>Removing CAAs</b>	No charge Emissions return filing fee applies
<b>Reconfiguring CAAs (one or more CAA)</b> Includes up to 4.25 hours processing	\$562.22
<b>Transmission of Interest</b> Includes up to 0.75 hours processing	\$102.22 Emissions return filing fee applies also
<b>Hourly Rate</b> (over standard times above) Cost per hour	\$132.88
<b>MAF Travel Costs</b> (if required) Cost per hour for travel time Travel costs	\$132.88 Actual and reasonable

\*Fees are current at the date of publication, but may be amended from time to time. Applicants can check the MAF website or contact **0800 CLIMATE** to confirm for current fees.

The registration application and emissions return filing fees are based on estimated standard processing times. Where applications or emissions returns are particularly large or complex (for example, involving large numbers of land titles, forestry rights or CAAs) there may be additional charges for processing time or travel costs as outlined above. MAF discusses this with applicants before proceeding.

Fees will be reviewed periodically to ensure they meet Government cost recovery policies. Advance notice of any changes to fees will be given through a consultation process.

The Chief Executive of MAF may grant in whole or in part an exemption, waiver or refund of any fee or charge if satisfied that there are special circumstances.

### Revisions to methods of calculating carbon stocks

When there is a change made to the process for determining carbon stocks that affects the number of units claimed or surrendered, the carbon stocks for a particular CAA may change. Examples of this include the introduction of revised default tables and the introduction of the FMA. This means when a mandatory emissions return is required either at the end of the commitment period or upon a transmission of interest in the land, the opening carbon stocks and closing carbon stocks are recalculated for the whole period, and there may be resulting adjustments (upwards or downwards) to the carbon accounting records for the CAA.

### Record-keeping and audit

ETS Participants are required to keep records of transactions, measurements, calculations and other

relevant information for 20 years. MAF is entitled to undertake audits and checks of these records and information to ensure compliance with the law. This can include inspection of stand records, historical records, spatial information, and any workings or calculations (such as those required to prepare an emissions return); and field visits.

## Tax treatment of units relating to post-1989 forest land

This section sets out the tax and GST treatment of units which relate to post-1989 forest land under the ETS. It does not deal with tax treatment related to complex transactions such as contracts for forward sale or purchase of units, put and call options, or derivative financial instruments involving units.

The tax rules set out below apply in the same way to:

- New Zealand Units (NZUs);
- Kyoto units;
- approved overseas units.

In common with the general tax treatment of forestry, income and expenditure relating to units is recognised on a cash basis.

Transactions in units which relate to post-1989 forest land are treated as being revenue for tax purposes, which generally means that income is assessable and expenditure is deductible.

The tax consequences of common transactions for post-1989 forest land Participants in the ETS are explained below.

### Transfer of NZUs to Participants

No income tax is payable either on receipt of NZUs transferred for a net increase in carbon stocks from 1 January 2008, or at the tax year end if they are still held.

### Sale of NZUs

The proceeds from any sale of NZUs that were received for a net increase in carbon stocks are subject to income tax in the year of sale. This will include any holding gains or losses.

It is intended that, except for the sale of NZUs allocated under the Forestry Allocation Plan for pre-1990 forests, sales of all units (however acquired) are subject to income tax in the year of sale.

### Surrender of units in relation to post-1989 forest

If the Participant still holds NZUs previously received for net increases in carbon stocks, the surrender of those units to meet emissions liabilities has no tax consequences.

However, if the Participant is required to purchase additional units in order to satisfy their obligation to surrender the same number of units previously issued for net increases in carbon stocks (but subsequently sold), the tax consequences are set out below.

### Purchase of replacement units

Where a post-1989 forest land Participant purchases units to replace NZUs previously issued for net increases in carbon stocks that have been sold (“replacement units”), a tax deduction is available for the cost of those units on acquisition.

### Purchase of additional units

Purchases of units that are not replacement units will be treated in a similar fashion to trading stock, with any net deduction only being available on disposal.

### GST

All transactions of units (including surrender) are treated as being zero-rated for GST purposes. When supplies, such as the sale of units, are made, GST invoices should record GST at zero percent. This means that no GST will be charged.

A Participant with post-1989 forest land may also be treated as making a supply to Government of a service of carbon capture. This service is also zero-rated, so invoices should show GST at zero percent. The value of the supply is the market value of the emissions units received by the Participant from the Government.

There is no restriction on the ability to claim any GST incurred either in dealing with units or in relation to the supply of carbon capture to the Government.

### Further information

Further information and examples on the income tax consequences to the forestry sector and the GST consequences to all sectors of transactions in emissions units of the Act is available on the Inland Revenue website at [www.ird.govt.nz/technical-tax/legislation/2008/2008-85/](http://www.ird.govt.nz/technical-tax/legislation/2008/2008-85/).

Owners of pre-1990 forest land have no obligations under the ETS if pre-1990 forest land is not deforested (that is, if harvesting is followed by normal re-establishment of the forest through replanting or natural regeneration).

However, owners of pre-1990 forest land automatically become Participants in the ETS if they deforest more than two hectares of non-exempt forest land in any five year period, starting 1 January 2008. As Participants, they will have to calculate and report their deforestation emissions and surrender units equal to those reported emissions.

Deforestation of two hectares or less of a person's total pre-1990 forest landholding in the five year period from 2008–2012, or in each subsequent five year period, is excluded from the ETS.

It is generally the landowner who assumes the liability for deforesting. This is because, in the vast majority of cases, it is the forest landowner who controls the decision whether or not to deforest.

There may be some circumstances where the right to change land use has been formally vested in a third party, and the forest landowner does not have control over that decision. In such circumstances, the third party will be the person obliged to register as the ETS Participant.

There are no fees or charges payable for any application or reporting relating to pre-1990 forest land.

This section covers:

- your obligations when deforesting non-exempt pre-1990 forest land, and the processes you must follow;
- the Forestry Allocation Plan; and
- exemptions from deforestation liabilities.

## Deforestation obligations

The following section outlines the steps a forest landowner needs to take if they deforest more than two hectares of non-exempt pre-1990 forest land in each five-year period from 1 January 2008.

### **Step 1: Notify MAF you have become a Participant in the ETS**

Pre-1990 forest landowners who deforest are required to notify MAF within 20 working days of commencing deforestation. Pre-1990 forest landowners who deforested in 2008 and/or 2009 were legally obliged to notify MAF of this deforestation by 31 January 2010.

The notification form will require information, such as:

- your name;
- your holding account number;
- details of the pre-1990 forest land.

The notification can be made online at [www.maf.govt.nz](http://www.maf.govt.nz) or by downloading and completing a paper-based notification form available on the same site.

## **Step 2: Obtain a holding account from the NZEUR**

A Participant in the ETS must have a holding account from which to surrender units to meet their deforestation liability. A holding account is obtained from the NZEUR (at [www.eur.govt.nz](http://www.eur.govt.nz)).

If you have questions about the holding account application process, please contact **0800 CLIMATE (254 628)**.

## **Step 3: Calculate the emissions associated with deforestation**

The Regulations contain the look-up tables for determining carbon stock decreases (emissions) from the deforestation of pre-1990 forest land. ETS Participants are required to use these look-up tables to assess any deforestation emissions liability to be included in an emissions return. There is no provision for calculating carbon stocks in pre-1990 forests using any other method.

*A Guide to Look-Up Tables for Forestry in the Emissions Trading Scheme* provides further information.

## **Step 4: File an emissions return**

For deforestation of pre-1990 forest land, the emissions return comprises an assessment of the Participant's liability to surrender units equal to the calculated CO<sub>2</sub> emissions arising from the deforestation (1 unit for each tonne of emitted CO<sub>2</sub>). The return requires only a single value for forest carbon stocks: those in the year that the forest clearing, associated with the deforestation, occurred.

A pre-1990 Participant must submit an emissions return between 1 January and 31 March of the year following.

Participants that are members of the same corporate group may form a consolidated group in order to file a single emissions return covering the activities of all Participants in that group.

Emissions returns can be filed online at [www.maf.govt.nz](http://www.maf.govt.nz). The website also provides downloadable forms for making paper-based emissions returns, and instructions for submission of completed forms. Emissions returns require information such as:

- land ownership details of the deforested pre-1990 forest land;
- a shapefile delineating the area of deforested land;
- the emissions resulting from the deforestation during the calendar year(s) covered by the return, and hence the Participant's liability to surrender units.

## **Step 5: Surrender units to meet emissions liabilities**

Units will be surrendered by transfer to a surrender account in the NZEUR, or for the first commitment period (2008–2012), by paying cash at a fixed price of \$25 per NZU.

Participants who have submitted an emissions return by 31 March of a particular calendar year are required to surrender units by 31 May of the same year to meet any emissions liability reported in that return.

## **Step 6: Ceasing to be a Participant**

Once a Participant has completed deforesting they must notify MAF as soon as practicable that they have ceased to be a Participant in the ETS. The notification may be submitted online at [www.maf.govt.nz](http://www.maf.govt.nz) or by downloading and completing a paper-based application form available on the same site.

If the same forest landowner subsequently decides to deforest another area of pre-1990 forest land, they will have to follow the same notification process again. Even without such notification, the owner of pre-1990 forest land is an ETS Participant from the moment they deforest until such time as they cease deforesting.

## Allocation of NZUs under the pre-1990 Forest Land Allocation Plan

The Government is allocating NZUs to owners of land covered by pre-1990 forests in partial compensation for the loss in land value as a result of the implementation of the ETS. Pre-1990 forest landowners must apply for their allocation which can be used to meet liabilities if they deforest in the future, they can hold or sell the units.

The deadline for applications for an allocation of NZUs is 30 November 2011.

Landowners who receive an allocation will still be able to deforest up to two hectares (over their total forest landholdings) in any five year period from 1 January 2008 without liability.

Indigenous forests established before 1 January 1990 are not included in the ETS and are not eligible to receive an allocation.

### How many NZUs will forest landowners be allocated?

NZUs are allocated on the basis of each mapped hectare of eligible pre-1990 forest land. How many NZUs are allocated per hectare to the eligible person depends primarily on when the land was acquired. Other relevant factors include how it was acquired, and how the land is owned.

The allocations are:

- 60 NZUs per hectare for eligible pre-1990 forest land that has not changed ownership arrangements since 31 October 2002;
- 39 NZUs per hectare for eligible pre 1990 forest land transferred<sup>4</sup> to the landowner on or after 1 November 2002; or
- 18 NZUs per hectare for eligible pre-1990 forest land that was Crown forest licence land on 1 January 2008 that was or will be transferred to an iwi under a Treaty of Waitangi settlement<sup>5</sup> after that date.

The allocation of 39 NZUs per hectare reflects the position that purchasers acquiring pre-1990 forest land after 31 October 2002 could reasonably have been expected to take account of the Government's announced intention to introduce deforestation controls in the price they paid for the forest land. There are a number of transfers that are exceptions to the rule for the 39 NZUs per hectare allocation (called excluded transfers). Typically, excluded transfers do not involve an arms-length transaction.

Based on the information applicants provide, they will be advised of the number of NZUs they will be allocated. They will have the opportunity to seek a correction to the allocation if they can provide evidence it should be otherwise.

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<sup>4</sup> Transfer means a legal transfer of the ownership of the land.

<sup>5</sup> Crown forest licensed land transferred to Ngati Awa and Te Uri o Hau under treaty of Waitangi settlements receives 60 NZUs per hectare of eligible pre-1990 forest land,



## Companies

For companies (excluding some co-operative companies), a change of shareholding of more than 51 percent constitutes a change of ownership and is eligible for an allocation of 39 NZUs per hectare. The date a shareholding change is considered to have occurred is the date recorded in the company's share register.

Intra-company restructures such as transfers to a wholly owned subsidiary, to a holding entity or between subsidiaries do not trigger the 39 NZUs per hectare allocation.

Land owned prior to 1 November 2002 by a company as a trustee is eligible for the 60 NZUs per hectare allocation unless there has been a substantial change in the class or classes of beneficiaries on whose behalf the land is held.

There are other cases of transfers of ownership between companies, trusts and partnerships where the beneficiaries are largely the same that are also exclusions to the 39 NZUs category and receive 60 NZUs.

If both an excluded transfer and a change in a company ownership (or holding company ownership) of more than 51 percent has occurred, then the land is eligible for the 39 NZUs per hectare allocation.

## When will applicants receive their allocation?

The allocation will be transferred in two parts:

Total allocation (per hectare)	Transferred before 31 December 2012	Transferred during 2013
60 NZUs	23 NZUs	37 NZUs
39 NZUs	15 NZUs	24 NZUs
18 NZUs	7 NZUs	11 NZUs

If the law changes, some or all of the second part of the allocation may be cancelled.

When an applicant gets their NZUs will depend on when they apply, and how long their application takes to process.

## Pre-1990 exemptions from the ETS

Exemptions from the ETS are not automatic and must be applied for by the forest landowner (or those with a liability for deforestation). The Act provides for two types of exemption for pre-1990 forest land:

- less than 50 hectares exemption – where the total pre-1990 forest land area owned by the person who owned the land as at 1 September 2007 (with any associated persons, if applicable) was less than 50 hectares; and
- deforestation of tree weeds exemption – for the deforestation of pre-1990 forest land that is tree weeds.

Owners of exempt pre-1990 forest land are not eligible for an allocation of NZUs for the same area of forest land. Before applying for an exemption, landowners should therefore carefully consider whether or not they wish to forgo any entitlement they may have to an allocation of NZUs.

The deadline for application for a less than 50 hectare exemption is 30 September 2011, although there is provision for accepting late applications on a case by case basis.

### Exemptions for pre-1990 forest land of less than 50 hectares

If a person is one of the following, they are the person who can apply:

- is a landowner of pre-1990 forest land on the issue date of the Forestry Allocation Plan (20 July 2010); or
- was the landowner of pre-1990 forest land that was deforested and converted to another land use after 1 January 2008, the person may be eligible to apply for the forest area to be exempted from deforestation liabilities.

### Eligibility for a less than 50 hectares exemption

For any area of pre-1990 forest land to be eligible to receive a less than 50 hectares exemption, it must have been owned on 1 September 2007 by a person or persons (together with any associated persons) who owned **in total** less than 50 hectares of pre-1990 forest land on that date. At the time the exemption application is made, the land may now be owned by a person who owns more than 50 hectares in total – the important thing is the extent of landholding on the 1 September 2007 date. When identifying ownership, only legal ownership is considered and not beneficial interests.

Where pre-1990 forest land was co-owned by joint tenants as at 1 September 2007, to be eligible, none of the joint tenants at that time is permitted (individually, or with associated persons except for a professional trustee) to have owned more than 50 hectares of pre-1990 forest land. For calculation purposes, each joint tenant's proportionate interest is treated as a divided interest.

Similarly, if the land was co-owned by tenants in common, none of the co-owners at that time is permitted (individually or with associated persons) to have owned more than 50 hectares of pre-1990 forest land for the area to qualify for the exemption. For calculation purposes, each co-owner's interest is treated as a divided interest.

If pre-1990 forest land and the landowner qualify for the less than 50 hectares exemption, an application can be made for part of the forest land area to be exempt and a separate part of the area to receive an allocation of NZUs, but the same area of pre-1990 forest land are cannot have both an exemption and an allocation.

### Pre-1990 forest land purchased after 1 September 2007

If pre-1990 forest land is purchased after 1 September 2007, the total landholdings of the owner on 1 September 2007 is still used to determine eligibility. That landowner must have had total landholdings of pre-1990 forest land of less than 50 hectares on 1 September 2007 for land purchased after that date to be eligible for an exemption. The new landowner on 20 July 2010 is the one who can apply for the exemption, and as with all less than 50 hectare exemption applications, a statutory declaration by the landowner on 1 September 2007 will have to provided in respect of their total pre-1990 forest landholding as at that date.

### Applying for a less than 50 hectares exemption

Applications for a less than 50 hectares exemption may be submitted online at [www.maf.govt.nz](http://www.maf.govt.nz) or by downloading and completing a paper-based application form available on the site.

Information required to apply for an exemption includes:

- the name of the person who is applying for the exemption;
- evidence of ownership of the land on the date that the deforestation occurred, or on 20 July 2010 (as applicable), in the form of computer freehold registers (titles) from Land Information NZ (LINZ), or other relevant records (such as Māori Land Court records);
- the total area of pre-1990 forest land for which the exemption is sought and evidence the land is pre-1990 forest land and has been deforested (as applicable);
- a shapefile that includes all pre-1990 forest land for which the exemption is being sought. MAF is considering providing an online tool for applicants to use to create a shapefile. Alternatively, applicants may upload their own shapefile from existing spatial data, so long as it complies with the format in the *Geospatial Mapping Information Standard*. The *Standard* and *A Guide to Mapping Forest Land for the Emissions Trading Scheme* are available at [www.maf.govt.nz](http://www.maf.govt.nz);
- a statutory declaration from each person who owned the land on 1 September 2007 (other than a joint tenant who is a professional trustee) that the person owned (with any associated persons) less than 50 hectares of pre-1990 forest land on 1 September 2007.

If MAF is satisfied that:

- the land to which the exemption application relates is pre-1990 forest land;
- the land to which the application relates is eligible to qualify for an exemption; and
- each of the requirements listed above has been met;

then:

- the land will be declared exempt;
- the applicant will be notified that the land has been declared exempt;
- a notice will be sent to the Registrar of the Māori Land Court (in whose jurisdiction the land is located), the Registrar-General of Land, or the Registrar of Deeds (as applicable) that the land is exempt land under the Act;
- the relevant Registrar receiving the notice will record it in the appropriate record relating to the exempt land.

Exemptions remain with that land even if it is subsequently sold.

### Exemptions for deforestation of tree weeds

Tree weed exemptions are for the deforestation of pre-1990 forest land that is legitimate tree weed forest, such as wilding conifers.

Tree weed exemptions will be available at intervals and are valid for clearance of tree weeds during specified five-year periods.

You need to provide the following information with your tree weed exemption application:

- evidence that the land is pre-1990 forest land;
- evidence that the forest species are legitimate tree weeds;
- evidence of legal ownership; and
- other supporting information to help determine the priority of the application such as the species, the risk of spread, any requirements for control imposed by territorial authorities, management plans, and the location of reserves and other values threatened by the spread of the tree weeds.

There is a cap on the total amount of emissions that the Government will cover with the tree weed

exemption for the first 5 year period, 2008 to 2012. Applications will be scored on six key criteria and prioritised. If there is significant demand in an exemption round, some applicants may miss out.

An NZEUR holding account is not required.

Successful applicants will be notified of their exemption. You should keep the exemption notice for future reference, such as when selling the land. Unlike the less than 50 hectares exemption, notices are not placed on the land titles.

Tree weed exemptions lapse if tree weed clearance is not completed in the five-year period 2008 to 2012, or if clearance is not started within 24 months of the landowner being notified of the exemption.

## Related information

### Register of ETS Participants

Participants who notify MAF that they have deforested will be entered into a publicly available Register of Participants. The Register will show:

- the Participant's name;
- the ETS-related activity they undertake (in this case deforesting pre-1990 forest land).

The Participant will be advised that they have been entered in the Register of Participants. Their name will be removed from the Register once they have advised MAF that they have ceased deforesting.

Details about a Participant's pre-1990 forest land are not available to the public from the Register of Participants.

### Deforestation of young trees

Harvesting mature trees and replanting the land, or allowing it to regenerate, is not considered deforestation. However, to prevent landowners replanting and then deforesting young trees to reduce their liability, the ETS requires an owner to either:

- pay the full liability for the mature trees that were recently harvested; or
- allow the newly planted trees to grow for nine years before deforesting.

Thus, if pre-1990 forest land is deforested, and the trees on the land are less than nine years old, the emissions liability is calculated based on the age and species of the oldest trees cleared from the pre-1990 forest land during the previous nine years.

### Deforestation of land cleared before 2008

When land was cleared before 2008, deforestation is deemed to have occurred before 1 January 2008 if on 31 December 2007:

- the land did not meet the definition of forest land, and had no other merchantable timber from exotic forest species; and
- four years after it met the conditions above, it is not forest land and an allocation under the Forestry Allocation Plan has not been made.

### Replanted or regenerated forest that does not survive

If a pre-1990 forest is harvested but for some reason the replanting or regeneration does not survive,

then, in some circumstances, deforestation is considered to have occurred. The deforestation will be treated as having occurred either four, 10 or 20 years after the harvesting of the pre-1990 forest, unless the following criteria are met:

- Four years after harvesting, if a given hectare has not:
  - been replanted with at least 500 stems of forest species; or
  - naturally regenerated to at least 500 stems of forest species;

and either:

- 10 years after harvesting, if predominantly exotic forest species are growing but a given hectare does not have crown cover of at least 30 percent of trees that have reached 5 metres in height.
- 20 years after harvesting if predominantly indigenous forest species are growing but a given hectare does not have crown cover of at least 30 percent of trees that have reached 5 metres in height.

The liability for the deforestation will be calculated by reference to the age and forest species of trees that were harvested four, 10 or 20 years earlier as the case may be.

### Compensation for deforestation required by third parties

If the owner of pre-1990 forest land becomes a Participant in the ETS because they are required to deforest to allow public works (such as construction of a road) the landowner is liable for the deforestation liability. However, the person who required the works must compensate the landowner if they are not compensated under any other Act – such as the Public Works Act 1981.

### Rejoining the ETS as post-1989 forest land

Exempt pre-1990 forest land that is deforested, and subsequently replanted or allowed to regenerate, can be brought into the ETS as post-1989 forest land. This requires that any liabilities that would have been due had the land not been exempt land must be surrendered. Once this has occurred, the owner of the post-1989 forest may apply to become a Participant in the ETS.

### Deforestation for investment projects

The obligation under the ETS to surrender units to meet emissions liabilities arising from any non-exempt deforestation of pre-1990 forest land applies regardless of the nature of the reasons for the deforestation. For example, deforesting as part of a renewable energy project still requires the emissions liability to be met, and there are no exemptions for investment projects. The project is thus required to take account of the full cost of the deforestation.

## Tax treatment of NZUs for pre-1990 forests

This section sets out the tax and GST treatment of units in relation to pre-1990 forest land under the ETS. It does not deal with tax treatment related to complex transactions such as contracts for forward sale or purchase of units, put and call options, or derivative financial instruments involving units.

The tax rules set out below apply in the same way to:

- New Zealand Units (NZUs);
- Kyoto units;
- approved overseas units.

Most transactions in units which relate to pre-1990 forest land are treated as being on capital account for tax purposes, and so are not subject to income tax.

A small number of forest landowners (such as land developers) may hold pre-1990 forest land on revenue account. Their income tax position is not considered here.

### **Forestry Allocation NZUs**

Owners of eligible pre-1990 forest land may be allocated NZUs free of charge under the Forestry Allocation Plan. No income tax is payable either on receipt of the NZUs from the Government, or at tax year end if they are still held. Also, no tax is payable on any increase in the market value of the NZUs during the time they are held.

### **Sale of Forestry Allocation NZUs**

No tax is payable on the sale of NZUs transferred under the Forestry Allocation Plan. Thus holding gains and losses are not in the tax net.

### **Surrender of NZUs when pre-1990 forest land is deforested**

When there is a liability to surrender NZUs from deforesting pre-1990 forest land, the surrender of NZUs (or payment of \$25 per NZU for liabilities incurred before 31 December 2012) to meet this liability has no tax consequences. That is, effectively, no deduction arises.

### **Purchase of additional NZUs**

A forest owner who does not hold enough NZUs to meet their deforestation liabilities will need to acquire more on the market. In keeping with the capital treatment of pre-1990 forest land, effectively no deduction is available for any purchased NZUs.

### **GST**

All transactions of units (including surrender) are treated as being zero-rated for GST purposes. When supplies (such as the sale of emissions units) are made, GST invoices should record GST at zero percent. This means that no GST will be charged. There is no restriction on the ability to claim GST on costs related to dealing with units.

### **Further information**

Further information and examples on the income tax consequences to the forestry sector and the GST consequences to all sectors of transactions in emissions units of the Act is available on the Inland Revenue website at [www.ird.govt.nz/technical-tax/legislation/2008/2008-85/](http://www.ird.govt.nz/technical-tax/legislation/2008/2008-85/).

# ADDITIONAL INFORMATION

# 4

## Key dates

Date	Action
1 November 2002	Date at which ownership of pre-1990 forest land for eligibility of highest allocation of units under the Forestry Allocation Plan is determined.
1 September 2007	Date at which ownership for eligibility of land under the less than 50 hectares exemption is determined.
1 January 2008	Forestry sector entered the Emissions Trading Scheme. Date at which registered post-1989 forest land could start earning NZUs for net increases in carbon stocks.
<b>2011</b>	
31 May 2011	Final date for pre-1990 participants to surrender NZUs to meet deforestation liabilities detailed in an emissions return filed by 31 March 2010 and/or 31 March 2011.
31 August 2011	FMA expected to be in force.
30 September 2011	Final date for applications from owners of pre-1990 forest land for a less than 50 hectare exemption.
30 November 2011	Final date for applications for an allocation of NZUs for eligible pre-1990 forest land.
<b>2012</b>	
30 September 2012	The carbon calculation tool is expected to be available for FMA participants.
31 December 2012	Final date for applications to join the ETS and become eligible to claim units for 2008–2012.
<b>2013</b>	
31 March 2013	Final date for post-1989 participants to file a mandatory emissions return for the five-year period 1 January 2008–31 December 2012. This return includes a reconciliation which takes account of any emissions returns voluntarily filed earlier during the five-year period, and any units received/surrendered as a result of those returns.

Some dates are subject to change. See [www.maf.govt.nz](http://www.maf.govt.nz) for updates.

## Compliance and audit

MAF will encourage and monitor compliance with the provisions of the Climate Change Response Act 2002. This will be achieved through:

- a nationwide communications programme to promote understanding of entitlements and obligations;
- publishing guides, information and frequently asked questions;
- placing programme advisers in regions to provide a face-to-face information and guidance service;
- reviewing registration applications and emissions returns to ensure they comply with the legislation. This may involve follow-up contact by MAF with the forest landowner or other parties;
- a programme of spot checks and detailed site audits.

There are both civil penalties and criminal offences for non-compliance with obligations under the ETS.

### Civil penalties

The civil penalties are aimed at supporting obligations under the ETS to calculate emissions and surrender units equal to emissions. Key points are:

- If a Participant fails to surrender units by the due date, is found to have submitted an incorrect emissions return or failed to submit a return at all, they must surrender the outstanding units and will be subject to an excess emissions penalty of \$30 per outstanding unit (called the “excess emissions penalty”). This is designed to be an incentive for people to apply due caution. In certain circumstances the penalty may be reduced by up to 100 percent. This is a discretion that can be applied where the person voluntarily discloses their failure to comply, or MAF is satisfied the person formed a view on the information to be included in an emissions return which, while incorrect, was reasonable. Therefore, if a person is considered to have made a genuine mistake then there is the ability to reduce the penalty. This could also be used in circumstances where Participants cannot comply through no fault of their own, while still requiring them to ultimately surrender units.
- If a Participant knowingly fails to comply with their obligations or provides false information, they may be liable to surrender double the number of units they are assessed as owing and a further penalty of \$30 for each of those units.
- Interest accrues on the amount of a penalty until it has been paid in full, and any associated units required to be surrendered have been surrendered.

### Criminal offences

A person may be charged with committing a criminal offence for failing to collect information, notify MAF that the person is a mandatory participant, submit an emissions return or keep information in relation to an activity. The penalties increase in relation to the severity of the offence and comprise:

- A graduation of fines for failure to collect information, notify MAF that the person is a mandatory participant, submit an emissions return or keep information in relation to an activity, without reasonable excuse. There are fines of \$8000 for a first offence, \$16 000 for a second offence and \$24 000 for each subsequent offence.
- Failure to provide information or documents, or failure to appear before the chief executive of MAF or an enforcement officer when required, without reasonable excuse, may incur a fine of up to \$12 000 for an individual and \$24 000 for a body corporate,.
- Knowingly or wilfully failing to comply with parts of the Act, including knowingly providing false



information and wilful obstruction of officers may lead to a fine of up to \$25 000 for an individual and \$50 000 for a body corporate.

- A separate offence is provided for evasion – namely, failure to comply with the Act with intent to deceive and obtain a material benefit or avoid a material detriment. This offence has a fine of up to \$50 000 and/or a term of imprisonment of up to five years.

Where a body corporate is convicted of an offence under the Act, directors and others concerned in management of the body corporate may also be guilty of the offence and subject to a penalty.

A person may apply for an emissions ruling on:

- whether something that the person is doing, or proposes to do, is an activity<sup>6</sup> under the Act;
- whether the person is a participant, or is eligible to be a participant under the Act; and
- the correct application of regulations relating to methodologies for carbon stock assessment.

Rulings are binding only in respect of the person(s) applying for the ruling.

Applications must:

- be in the prescribed form;
- state the name and address of the applicant;
- identify the questions in respect of which the ruling is requested;
- identify the legal and other issues to be considered;
- disclose all relevant facts and documents;
- state the sections and regulations in respect of which the ruling is sought;
- state the propositions of law (if any) relevant to the issues raised in this application;
- provide their opinion of what the ruling should be in the form of a draft ruling.

Further information may be requested from an applicant if necessary to assist with consideration of the application.

## Emissions rulings

The fees are:

	<b>Fee (incl. GST at 15%)</b>
Application	\$470.00
Hourly rate (for processing time in excess of 4 hours)	\$117.50

The application fee must be paid when the application is made. If advice from a third party is required in processing the application, these costs will be charged to the applicant in full. Applicants may request an estimate of the total charge payable for the application.

If an application will take longer than 4 weeks to process, the applicant will be provided with an estimate of the likely time to process the application.

<sup>6</sup> Forestry activities include deforesting pre-1990 forest land, owning post-1989 forest land, being a holder of a forestry right or lease for post-1989 forest land, or being a party to a Crown conservation contract.

The fees above are current at the date of publication. They are set under the Climate Change (Emissions Rulings: Fees and Charges) Regulations 2010, may be amended from time to time. Application forms are available at [www.eur.govt.nz](http://www.eur.govt.nz).

## Other Sustainable Forestry Programmes

MAF offers other forestry programmes in addition to the ETS, including the East Coast Forestry Project (ECFP), and the Permanent Forest Sink Initiative (PFSI).

Guides and further information on each of these schemes are available at [www.maf.govt.nz](http://www.maf.govt.nz).

In some cases forests are able to participate in more than one forestry programme, as shown in the following table.

### Compatibility of Sustainable Forestry programmes

	PFSI	ECFP	ETS
PFSI		Yes	No
ECFP	Yes		Yes*
ETS	No	Yes*	

\* ECFP grant rates are lower for forests also entering the ETS.

## Further information and contact details

For information on forestry and agriculture in the Emissions Trading Scheme contact the Ministry of Agriculture and Forestry:

Website: [www.maf.govt.nz](http://www.maf.govt.nz)  
 Email: [climatechange@maf.govt.nz](mailto:climatechange@maf.govt.nz)  
 Telephone: 0800 CLIMATE (254 628)

For all other sectors in the Emissions Trading Scheme and climate change in general contact the Ministry for the Environment:

Website: [climatechange@maf.govt.nz](mailto:climatechange@maf.govt.nz)  
 Email: [info@climatechange.govt.nz](mailto:info@climatechange.govt.nz)  
 Telephone: 0800 CLIMATE (254 628)

For holding accounts and matters relating to units contact the New Zealand Emissions Unit Register:

Website: [www.eur.govt.nz](http://www.eur.govt.nz)  
 Telephone: 0800 CLIMATE (254 628)

## Glossary

### Assigned Amount Unit (AAU)

The units allocated to Annex 1 countries (see [www.unfccc.int](http://www.unfccc.int)) under the Kyoto Protocol on the basis of their quantified emission target for the first commitment period, 2008–2012. One AAU is equal to one tonne of carbon dioxide.

### Associated Person

A person is an associated person in relation to one or more other persons if:

- each person is a body corporate and each of the bodies corporate:
  - consist substantially of the same members or shareholders; or
  - is under the control of the same persons.
- any of the bodies corporate:
  - has the power, directly or indirectly, to exercise, or control the exercise of, 25 percent or more of the voting power at a meeting of the other; or
  - is able to appoint or control 25 percent or more of the governing body of the other.

### Carbon Accounting Area (CAA)

An area of post-1989 forest land determined by the Participant during the ETS registration process that is the basic unit for which accounting of carbon gains and losses is calculated. A CAA must be at least 1 hectare in size; there are no limits on the number of CAAs a Participant may specify; and they do not need to comprise contiguous forest areas.

### Carbon Accounting Record (CAR)

A permanent record kept by MAF of the change in carbon stocks over time, and of the NZUs issued or surrendered to match that change.

### Carbon Dioxide (CO<sub>2</sub>)

A naturally-occurring gas which is also a by-product of burning and breakdown of fossil fuels and biomass, land-use changes and other industrial processes. It is the principal human-induced greenhouse gas that contributes to global warming.

### Carbon Dioxide Equivalent (CO<sub>2</sub>-e)

The quantity of a given greenhouse gas multiplied by its global warming potential, which equates to its global warming impact relative to carbon dioxide. This is the standard unit for comparing the degree of warming that can be caused by emissions of different greenhouse gases.

### Carbon stocks

The total carbon stored in a forest, including that in stem wood, bark, branch, leaves, litter, woody debris, stumps and roots.

## Clearing

Clearing means in relation to a tree and includes:

- the felling, harvesting, burning, removing by mechanical means, spraying with herbicide intended to kill the tree, or undertaking any other form of human activity that kills the tree; and
- the felling, burning, killing, uprooting, or destroying by a natural cause or event; but
- does not include pruning or thinning.

## Consolidated Group

A group of entities may elect to form a consolidated group in relation to any pre-1990 deforestation or post-1989 forest land activity. In relation to this provision, an entity means a reporting entity or reporting entity's subsidiary, within the meaning of the Financial Reporting Act 1993; that is, a company or an issuer. The term "issuer" has a specific meaning in the Financial Reporting Act 1993.

Entities electing to form a group must notify the Ministry of Economic Development in the prescribed form and must nominate one of its entities as the agent of the group. The entities must agree to be jointly and severally liable for any obligations under the Act, and to the allocation to the nominated entity of any units to which any member of the group may become entitled.

## Crown Conservation Contract

Crown conservation contract means a written agreement with the Crown (including a concession granted in accordance with Part 3B of the Conservation Act 1987) for the removal and storage of greenhouse gases on post-1989 forest land that is Crown land managed or administered under the Conservation Act 1987 or any of the Acts listed in Schedule 1 of that Act.

## Deforestation

Deforest, in relation to forest land means:

- to convert forest land to land that is not forest land; and
- includes clearing land, where the following applies:
  - four years after clearing, a given hectare has not been replanted with at least 500 stems of forest species or has not naturally established a covering of at least 500 stems of forest species; and either:
    - 10 years after clearing, predominantly exotic forest species are growing, but a given hectare does not have tree crown cover of at least 30 percent from trees that have reached five metres in height; or
    - 20 years after clearing, predominantly indigenous forest species are growing, but a given hectare does not have tree crown cover of at least 30 percent from trees that have reached five metres in height.

Deforestation does not include forest land that is replanted or allowed to regenerate after harvesting has occurred. Deforestation is generally treated as occurring on the date the hectare is cleared as part of the deforestation process. The only exceptions are where deforestation is deemed to have occurred four, 10 or 20 years after clearance in the circumstances outlined above; however, in these circumstances any liabilities associated with deforestation are calculated as at four, 10 or 20 years earlier, respectively.

## Exotic Forest

An exotic forest is a forest in which the predominant species does not occur naturally in New Zealand – that is, it is not an indigenous species.

## Forest Class

Forest class means forest land that is:

- exotic post-1989 forest land; or
- indigenous post-1989 forest land.

## Forest Land

Forest land:

- means an area of land of at least 1 hectare that has, or will have, tree crown cover from forest species of more than 30 percent in each hectare; and
- includes an area of land that temporarily does not meet the requirements specified in above because of human intervention or natural causes but that is likely to revert to land that meets the requirements;
- does not include –
  - a shelter belt of forest species, where the tree crown cover has, or is likely to have, an average width of less than 30 metres; or
  - an area of land where the forest species have, or are likely to have, a tree crown cover of an average width of less than 30 metres, unless the area is contiguous with land that meets the requirements specified in the two bullet points above.

If an area of forest land temporarily does not meet the forest species and crown cover requirements because of human action or natural events (it may have just been harvested, or trees may have been blown over by strong winds), but is likely to meet these requirements in the future, it is still considered to be forest land as per paragraph (b) above. Such areas are termed “temporarily unstocked”.

## Forest Species

Tree species capable of reaching at least five metres in height at maturity in the place that it is located, but not including tree species grown or managed primarily for the production of fruit and nut crops.

For the purposes of the Forestry ETS, any woody vegetation (including tree ferns) capable of reaching five metres in height in the place it is growing is considered to be a “tree”.

## Forest Type

Forest type, in relation to a hectare of forest land, means:

- *Pinus radiata* if the predominant forest species on the land is *Pinus radiata*; or
- Douglas-fir if the predominant forest species on the land is Douglas-fir; or
- exotic softwoods if the predominant forest species on the land is an exotic softwood; or
- exotic hardwoods if the predominant forest species on the land is an exotic hardwood; or
- for post-1989 forest land, indigenous forest if the predominant forest species on the land is indigenous.

### Harvesting

Harvesting is when the forest species are cleared from the land, and new forest species seedlings are either planted or naturally regenerate. In this case, there is no land use change involved when the trees are harvested. The harvested area remains forest land, and is referred to as being temporarily unstocked.

### Indigenous Forest

A forest that comprises tree species that occur naturally in New Zealand or have arrived in New Zealand without human assistance. Strict definitions may relate to the original method of forest establishment (and the direct involvement of people in the process), the mixture of flora and fauna, and the conditions believed to have been present prior to human intervention.

### Kyoto Protocol

A protocol that sits under the United Nations Framework Convention on Climate Change that includes emissions limitation or reduction commitments for countries listed in its Annex B Developed Countries and Economies in Transition (see [unfccc.int/resource/docs/convkp/kpeng.html](http://unfccc.int/resource/docs/convkp/kpeng.html) for further information).

### Landowner

The legal owner, or owners, of the freehold estate in the land.

Note: a holder of a registered forestry right; leaseholder with a registered lease; or party to a Crown conservation contract are also eligible to participate in the ETS.

### New Zealand Emissions Unit Register (NZEUR)

See [www.eur.govt.nz](http://www.eur.govt.nz).

### New Zealand Unit (NZU)

A greenhouse gas unit specific to the New Zealand Emissions Trading Scheme.

### Orthographically Corrected Aerial Photograph

An aerial photograph that has had all the distortions due to camera tilt and surface relief removed. An orthophotograph has the advantages of a photograph in that all the visible features are displayed. It also has the constant scale and accuracy of a map.

### Participant

A person becomes a mandatory Participant if they undertake certain activities covered by Schedule 3 of the ETS (for example, deforesting pre-1990 forest land). Other people may become participants by voluntarily registering in respect of activities listed in Schedule 4 (for example, post-1989 forest land).

### Post-1989 Forest Land

Forest land that:

- was not in forest land on 31 December 1989; or
- was forest land on 31 December 1989 but was deforested (that is, converted to another land use)

- between 1 January 1990 and 31 December 2007; or
- was pre-1990 forest land, other than exempt land:
    - that was deforested on or after 1 January 2008; and
    - in respect of which any liability to surrender units arising in relation to deforestation has been satisfied; or
  - was exempt land:
    - that has been deforested; and
    - in respect of which the number of units that would have been required to be surrendered in relation to deforestation, had the land not been exempt land, have been surrendered.

Both exotic and indigenous forest species are eligible to participate in the ETS as post-1989 forest land.

### Pre-1990 Forest Land

Forest land that:

- was forest land on 31 December 1989;
- remained as forest land on 31 December 2007; and
- where the forest species on the forest land on 31 December 2007 consisted predominantly of exotic forest species.

Does not include any forest land that meets the definition above but:

- has been deforested and any liability arising from that deforestation has been satisfied;
- was declared to be exempt land, has been deforested and the New Zealand Units that would have been required to be surrendered had the land not been exempt have been surrendered.

Only forests comprising predominately exotic forest species are subject to the ETS as pre-1990 forest land (noting that the definition above prevents exotic forest from being converted to indigenous forest after 31 December 2007 and then deforesting the indigenous forest without obligations).

### Registered Forestry Right

Registered forestry right means a forestry right registered under the Forestry Rights Registration Act 1983.

### Registered Lease

Registered lease:

- in relation to a lease in respect of land registered under the Land Transfer Act 1952:
  - means a lease registered under that Act; and
  - includes a lease registered under the Land Transfer (Computer Registers and Electronic Lodgement) Amendment Act 2002.
- in relation to a lease in respect of land that is not registered under the Land Transfer Act 1952, means a lease registered under the Deeds Registration Act 1908.

### Removals

The amount of greenhouse gases removed from, or not released into, the atmosphere due to an activity (expressed in CO<sub>2</sub> equivalents, CO<sub>2</sub>-e).

### Shapefile

An electronic file used for digital mapping and which is a standard mapping format used within the New Zealand forest industry. The Climate Change (Forestry Sector) Regulations 2008 use the term “geospatial mapping information” to refer to what is commonly known as a shapefile. Schedule 5 of the Regulations provides more detail on when a shapefile must be provided. For people who do not have access to the software necessary to create a shapefile, MAF provides an online mapping tool for landowners to meet this requirement.

### Unincorporated Body

An unincorporated body means:

- the persons are partners in a partnership, trustees or in a joint venture–
  - two or more persons jointly owning post-1989 forest land (or jointly holding a registered forestry right or registered lease, or jointly parties to a Crown conservation contract);
- the persons are not partners in a partnership, trustees or in a joint venture–
  - three or more persons jointly owning post-1989 forest land (or jointly holding a registered forestry right or registered lease, or jointly parties to a Crown conservation contract).

### Woody Species

A shrub or tree species with a woody stem or stems. Areas of woody species may comprise non-forest species (for example, gorse, broom, tauhinu), forest species, or a mixture of both.