

## Forestry in the ETS: Current State

Introduced in 2008, the New Zealand Emissions Trading Scheme (ETS) is New Zealand's key climate change policy tool to reduce greenhouse gas emissions.

In the ETS emitters must either reduce their emissions or buy emission units from others – e.g. from foresters who have earned units for removing emissions.

The current accounting approach for post-1989 forests (see over page) in the ETS acknowledges the short term carbon stock change in production forests. This enables post-1989 forestry participants to earn emission units in line with their forests' growth but also requires them to repay emissions units to the government at each harvest.

Pre-1990 forests are unable to earn emission units for their forest growth, however are required to pay deforestation liabilities if they were to deforest their forest land.

### 1st

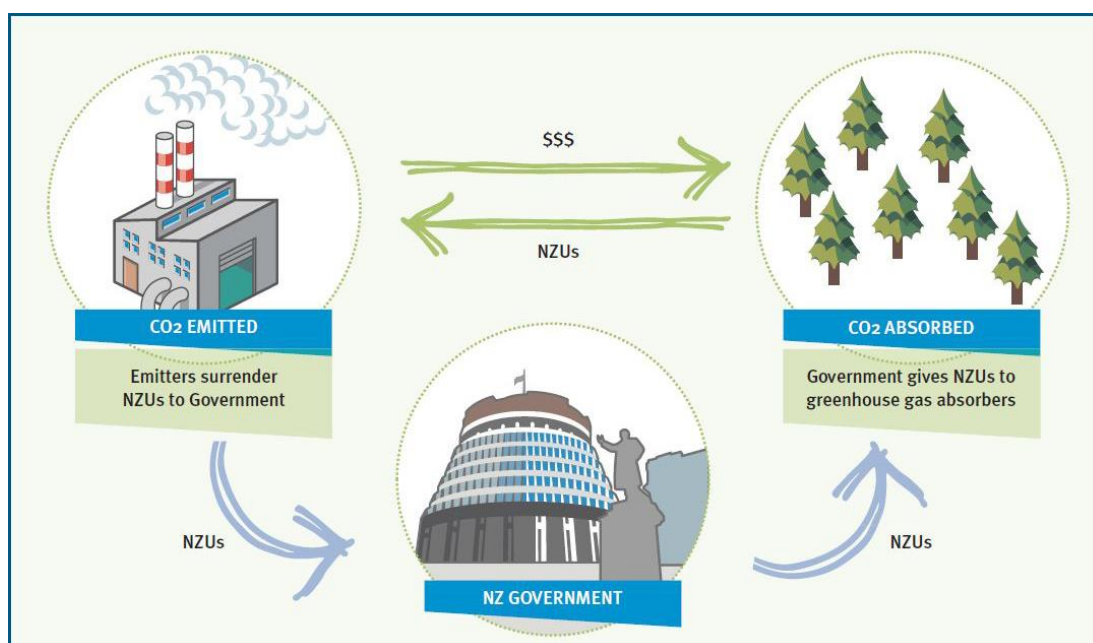
The NZ ETS is the first and only ETS in the world to include the carbon sink of forestry in the scheme.

### 2,150

Post-1989 forestry participants were registered in the ETS in 2017.

#### How the ETS works:

- The ETS puts a price on greenhouse gas emissions in the form of an 'emission unit'. The ETS requires all sectors of New Zealand's economy to report their emissions and, if required to, buy emissions units that they can surrender to the government to cover their emissions.
- These emission units are allocated and surrendered between the Government and required industries. They can also be bought and sold within the market between emitters and forestry participants (that sequester carbon). An emission unit represents 1 tonne of carbon dioxide equivalent of greenhouse gas emissions.
- The scheme encourages forest planting by allowing eligible foresters to earn New Zealand emission units (NZUs) as their trees grow and absorb carbon dioxide.
- Currently, the only eligible emissions units in the ETS are the New Zealand Unit (NZU), and New Zealand originated Assigned Amount Units (AAU).



## There are currently two classes of forest in the ETS

### Pre-1990 forests

Pre-1990 forests are forest land that:

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

Pre-1990 forests are unable to earn emission units for their forest growth, but are required to pay deforestation liabilities.

### Post-1989 forests

Post-1989 forests are forest land that:

- was not forest land on 31 December 1989; or
- was forest land on 31 December 1989, but was deforested between 1 January 1990 and 31 December 2007; or
- was pre-1990 forest land that was deforested on or after 1 January 2008, and the liability arising from the deforestation has been met; or
- is ETS-exempt pre-1990 forest land that has been deforested, and the liability that would arise had the land not been exempt has been met.

The ETS is a voluntary scheme for post-1989 forest owners. These owners are only eligible to earn emission units for forest growth if they choose to enter into the ETS. Currently their emission unit allocation and repayment liabilities are determined by the 'saw tooth' or carbon stock change accounting approach.

## Current Accounting – Carbon Stock Change Approach (the 'saw tooth')

- For registered post-1989 participants, as their forest grows it has an increasing carbon stock and the forest will earn emission units equal to the change in carbon stored.
- Harvesting, or the loss of forest cover through an adverse event, results in a reduction in carbon stock. The participant will need to repay units to the Government equalling the reduction.
- If the forest is replanted, then the subsequent forest growth will increase in carbon stock once again, and enable the participant to re-earn emission units for forest growth.
- As the carbon stock of the forest does not return to zero (due to residual carbon stored in the roots underground) the forest owner accrues a portion of units, known as 'low risk units'. These units are not required to be repaid at harvest, so participants can sell them on the carbon market without facing a future liability as long as the land remains in forest.
- This 'carbon stock change' accounting approach is commonly known as 'saw tooth'. An example of a planted radiata pine forest in 2008 under this accounting method is shown in this time series graph.

