

Ministry for Primary Industries

Development of a Climate Change Information System (CCIS)



REDUCING GLOBAL GREENHOUSE GAS EMISSIONS

THE SITUATION

As part of New Zealand's international obligation to reduce greenhouse gas emissions, the Emissions Trading Scheme (ETS) was set up in 2008. It creates a financial incentive for New Zealanders to change their behaviour through reducing emissions, investing in clean technology and renewable power generation, and planting trees.

New Zealand Units (NZUs) are the primary emission units used in the ETS. The New Zealand Government (Ministry for Primary Industries—MPI) allocates NZUs into the market by giving them to individuals or firms in specific sectors, awarding them to individuals or firms conducting approved removal activities, or by selling them.

The NZ ETS covers the forestry, energy, industry and waste sectors. The forestry scheme enables farm foresters to claim credits in recognition of forestry's potential to remove and store carbon emissions.

Participants from the forestry sector are required to surrender one NZU for each tonne of greenhouse gas emissions they produce. Participants can gain carbon credits based on the amount of forest cover on a block of farm forest land.

To administer New Zealand's ETS, an accurate system was required for participants to capture and manage NZU's.



THE SOLUTION

The Climate Change Information System (CCIS) was initially developed in 2010. It is a spatially-enabled web application that enables foresters and farmers to register the accurate location of their forestry stands as part of the submission process for obtaining NZU's under the ETS.

CCIS integrates LINZ parcel, title and owner data with other contextual data such as imagery and roads to provide a reference dataset onto which foresters and farmers can draw or upload the boundaries of their stands. Maintaining the accuracy and currency of the spatial reference data is key to enabling this. If any data mismatches exist, the transaction will fail resulting in the requirement to submit new data and significant time loss and inconvenience for customers.

“The more we can do to simplify the Emissions Trading Scheme transaction process, the greater the impact New Zealand can have on reducing global greenhouse gas emissions.”

Matt Wootton, GIS Team Leader, MPI

With approximately 2 million hectares of exotic forested land and over 42 million NZUs transferred to date, the accuracy of land size and boundary information is paramount. It is e-Spatial's responsibility to maintain and enhance the application's spatial components on an ongoing basis to ensure the integrity, usability and potential scalability of the system.

