

LOOKING AT LUCAS

+ LAND USE AND CARBON ANALYSIS SYSTEM

+ ISSUE 1 + SPRING 2007 +

Welcome to the first issue of 'Looking at LUCAS', the e-newsletter to keep you informed about the milestones and merits of the Land Use and Carbon Analysis System (LUCAS) project.

We hope you find the newsletter useful and welcome your ideas, feedback and suggestions to lucas@mfe.govt.nz

What is LUCAS?

The New Zealand Land Use and Carbon Analysis System – known as the LUCAS project – is a programme of work to measure and monitor the carbon stocks of New Zealand's forests and soils.

Carbon stock information is required for New Zealand's reporting requirements under the Kyoto Protocol and the United Nations Framework Convention on Climate Change.

LUCAS is an important part of the Government's climate change policy package and will help inform our future international climate change negotiations. The data collected as a result of LUCAS will also support New Zealand's rural land-use sustainability and the New Zealand Emissions Trading System.

How will LUCAS work?

The project will use satellite data and aerial photography to map changes in land use since 1990. All the information will be stored and analysed in a purpose-built application and database.

LUCAS will be operational by early 2010, when the first greenhouse gas inventory report under the Kyoto Protocol is due. From 2008 to 2012, the Ministry for the Environment will continue to add data to the LUCAS database to improve our carbon stock estimates. The final report for the first commitment period of the Kyoto Protocol will be submitted in April 2014.

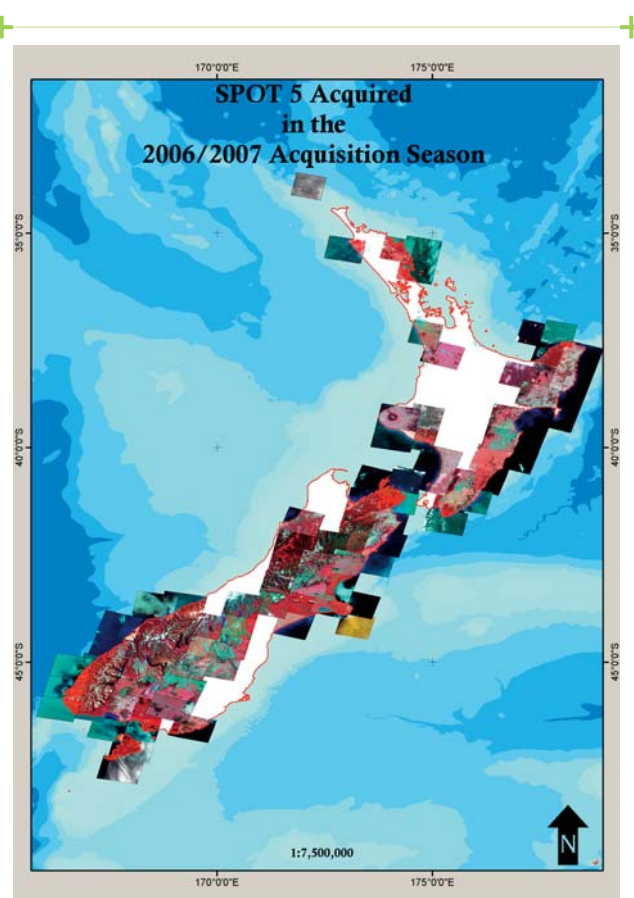


Figure 1 Map showing where cloud-free SPOT-5 imagery was acquired in the Summer of 2006/07.



Ministry for the
Environment
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Satellite imagery is available

The Ministry for the Environment has negotiated an all-of-government purchase agreement for SPOT 5 satellite imagery. Under the agreement the SPOT imagery is available to all government departments, crown entities and local authorities.

Over the past summer, 60 per cent of New Zealand has been covered in cloud-free imagery (see Figure 1). Over the coming summer SPOT 5 imagery of the remainder of New Zealand will be acquired. This imagery will be used to map land use at the start of the first commitment period of the Kyoto Protocol. The SPOT 5 imagery covers 60 x 60 km and has a spatial resolution of 10 m (see Figure 2).

At the moment, the Ministry will distribute all images and the End-user License Agreement on DVDs (at no cost to you). The imagery will be in a raw (unrectified) form and will not be aligned to the NZTM map grid, until the project begins processing the data in mid-2008.

Agencies wanting to use the imagery must agree to the conditions of the End-user License Agreement. The Agreement stipulates the permitted uses of the imagery and that it can only be used for business-related purposes, and not for commercial gain.

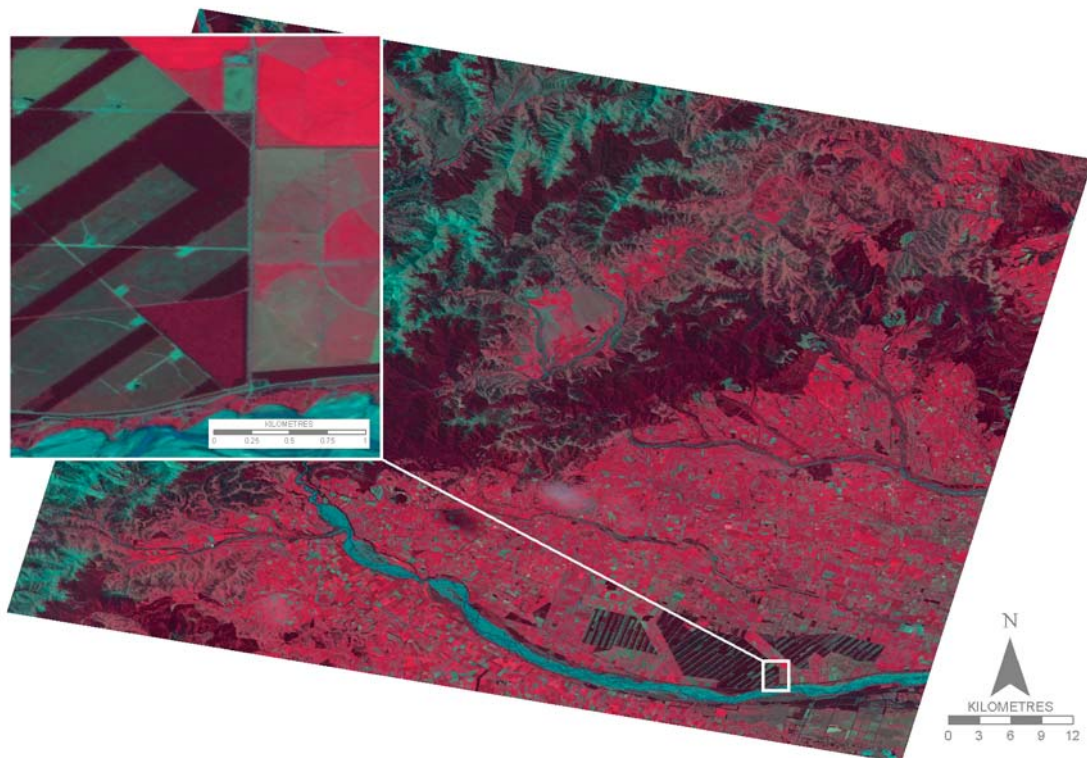


Figure 2 A raw SPOT-5 image of the Oxford and Darfield areas separated by the Waimakariri River. The image is depicted as colour infrared, however the imagery can be depicted in natural colours. The insert in the top left shows in more detail the information obtained from such imagery: visible are channels in the river, willows between the river and the road, circular pasture patterns (bright red) associated with centre-pivot irrigation systems, and different types of planted forest species (dark red and brown) in the left part of the insert. © CNES 2007

+ NEED MORE INFORMATION?

If you require more information about the LUCAS project, the available SPOT 5 imagery, the End-user License Agreement, or to order a copy of the satellite imagery, please email lucas@mfe.govt.nz

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