Australia's National Greenhouse Accounts: Land Use, Land Use Change and Forestry

CSIRO Contributions to Woody Cover Monitoring in Australia

www.data61.csiro.au

The Remote Sensing and Image Integration team from Data61 have been working with the Department of the Environment (DoE) since 1999 to develop forest extent and change products that are used in greenhouse gas emissions calculations for the land sector to support Australia's international reporting agreements under the Kyoto Protocol and follow-up agreements.

CSIRO Role

We were a member of the Consortium that developed and tested the initial methodology for mapping forest extent and change across the continent in 1999. We are now a trusted advisor to DoE in the ongoing operational implementation of the program. We continue to:

- Develop and refine the methodology to take advantage of advances in technology (e,g. the Australian Data Cube) and new sensors and hence reduce the costs to DoE to maintain the operational program.
- Develop new products in response to evolving international and domestic reporting requirements.
- Perform annual updates of the more complex products.
- Provide technical support to the companies performing the operational updates and quality assurance of their outputs for DoE.
- Provide access to high-performance computing resources for more complex or intensive processing stages of the methodology.

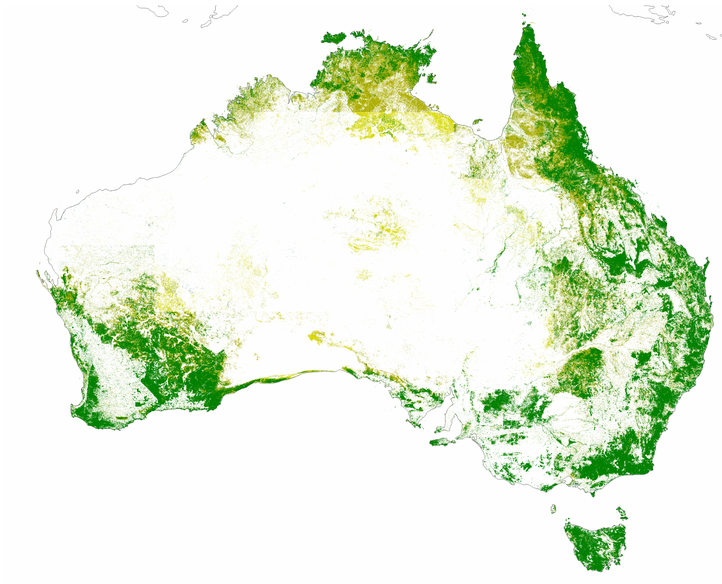

Figure 1: 2015 forest (dark green) and sparse woody (olive green) extent. Lighter shades indicate regions estimated from earlier years.

Current Products

The products currently generated as part of the National Inventory are:

- Cloud-free mosaiced dry season Landsat satellite images
- Forest (>20% canopy cover) extent and change since 1972 (annual coverage since 2004)
- Sparse woody (5-20% canopy cover) extent and change since 1988 (annual coverage since 2004)
- Plantation type (softwood, hardwood or native)
- Woody cover trends since 1988

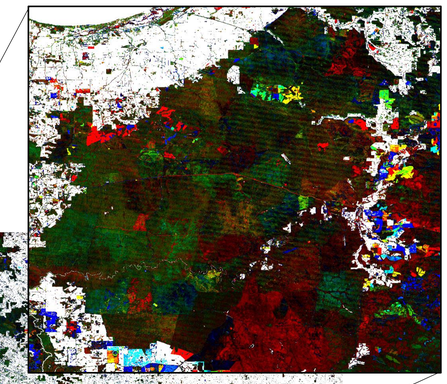

Figure 2: Left: Plantation type product, dark green is always forest, red is hardwood plantation and blue is softwood plantation. Right: Vegetation trends product. Dark areas are stable. Shades of red indicate decline, shades of blue indicate improvement and shades of green indicate decline followed by recovery..

FOR FURTHER INFORMATION

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