

Unlocking the potential of satellite imagery

Digital Earth Australia (DEA) is an Australian government program that transforms free and open satellite imagery into insights about changes in Australia's natural and built environments.

The program seeks to increase the uptake and use of satellite imagery and other Earth observations by providing easier access to high quality satellite data prepared for Australian conditions.

DEA focuses your time and effort on creating value out of the data

rather than finding ways to manage it, clean it up, or present it. DEA helps Australian governments and businesses better understand environmental conditions such as soil and coastal erosion, the impact of land management practices, deforestation, urban development, and water quality and availability.

DEA gives farmers, land managers, industry and government the information they need to make better decisions about how they care for and use their resources sustainably and productively.

Join us

DEA is always trying to better understand the needs of Australian governments and businesses, and how they can engage with and learn from satellite imagery.

We invite you to collaborate with us to build new products and tools that address real world challenges, and strive for a more productive and sustainable future.

For further information:
Web: ga.gov.au/dea
Email: clientservices@ga.gov.au
Phone: 1800 800 173



Digital Earth Australia

from satellites to insights



Informing government decisions

DEA enables the Australian government to use Earth observation data to support decision making in areas such as agricultural productivity, water availability, land use and management.

DEA provides government departments and agencies with accurate and timely information on the health and productivity of Australia's landscape, helping them to monitor change, protect and enhance Australia's natural resources, and respond more effectively to problems of national and global significance.

CASE STUDY: Understanding water availability

Geographic footprint
New South Wales

Collaborators
New South Wales Government and Murray-Darling Basin Authority (MDBA)

DEA worked with the MDBA and the NSW government to pilot new automated methods of digitally mapping crop and water extent across the Murray-Darling river system.

Understanding water availability is essential for land management, particularly during times of drought. Using DEA Waterbodies, the NSW government can routinely provide a snapshot of water availability across the state through its monthly State Seasonal Update.

DEA Waterbodies is now available in each state and territory across Australia.

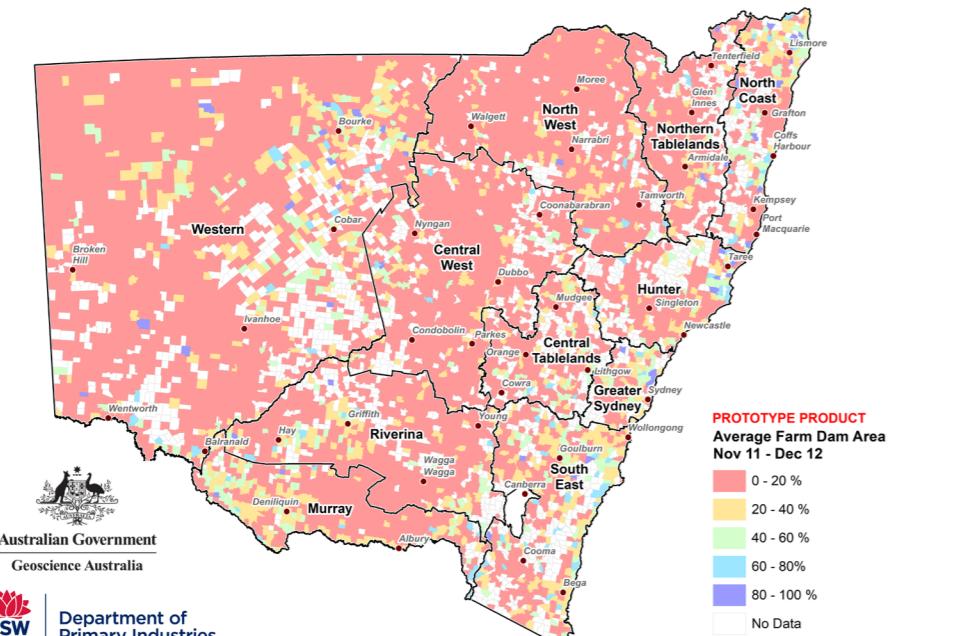


Image from NSW State Seasonal Update, 19 March – 19 April, 2019 showing average Farm Dams for the whole of New South Wales.

'Collaboration with Geoscience Australia is highly important for our team, who provide official updates on Seasonal Conditions for the state of NSW. This has significantly strengthened the information base for Seasonal Conditions reporting in NSW.'

Dr Anthony Clark,
Leader Climate Applications and Digital Agriculture, Climate Unit, NSW DPIE



Enabling businesses to thrive

DEA provides Australian businesses with access to free and open satellite imagery, creating opportunities for the development of applications that can improve productivity and sustainability.

By preparing satellite data for Australian conditions, DEA is reducing up-front costs for businesses and enabling them to concentrate on innovation and value-adding for their customers.

CASE STUDY: Supporting the livestock industry

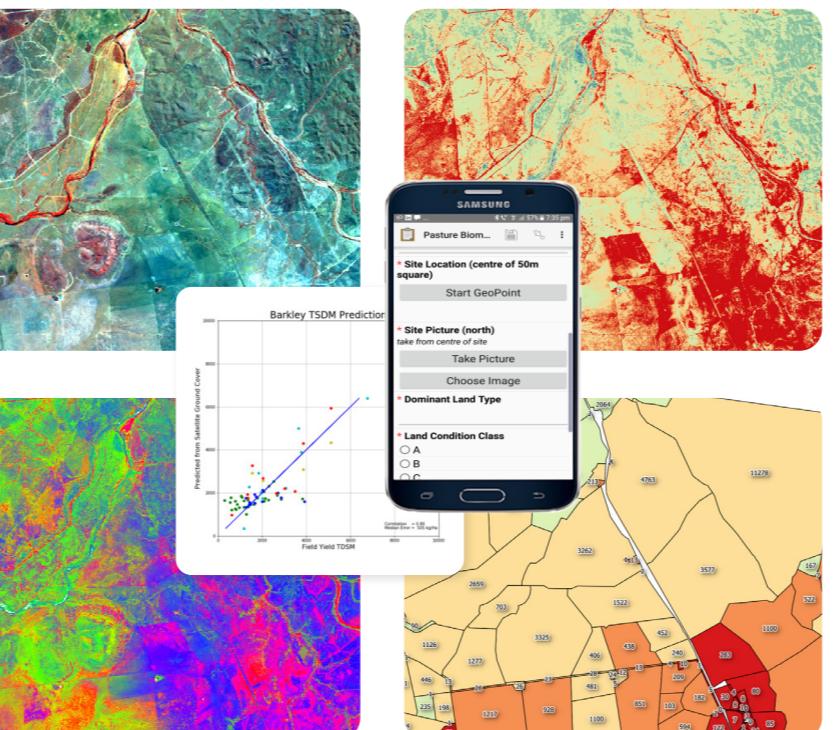
Geographic footprint
National

Collaborator
CIBO Labs Pty Ltd, Queensland

Website
cibolabs.com.au

Cibo Labs is an agricultural data analytics company that supports the red meat and livestock industry, which, in 2016-17, contributed \$18.4 billion to Gross Domestic Product (GDP) and generated \$13.3 billion in export revenue and employment for more than 400 000 people.

Cibo Labs combines DEA's datasets with its own on-ground data and machine learning techniques in its MyFarm platform, which provides primary producers with information specifically tailored to their farm, making every decision less complicated, more profitable, lower risk and more environmentally sustainable.



CiboLab's MyFarm dashboard presents near real time data at paddock-scale, giving it a score showing how much feed is available, enabling farmers to optimise stock rates and grazing patterns.

'DEA is letting us focus on product development, rather than the raw imagery analysis that we used to have to deal with in the past.'

Mr Phil Tickle,
Managing Director, Cibo Labs



Connecting government and industry

Earth observations from space (EOS) contribute around \$5.3 billion annually to the Australian economy through industry programs, and are projected to generate over 15 000 jobs by 2025.

A recent Australian Government report¹ demonstrates that Earth and marine observation is currently worth \$29 billion to Australia and is forecast to increase to \$96 billion by 2030.

Building connections between industry, government, universities and non-government organisations to address challenges is critical to realising the full potential of Earth observations.

CASE STUDY: Characterising Victoria's wetlands

Geographic footprint
Victoria

Collaborator
Astron Environmental Services Pty Ltd, Western Australia, and Victorian Department of Environment, Land, Water & Planning

Wetlands play a key role in the health of Australia's waterways, protecting its shores from wave activity, reducing the impacts of floods, absorbing pollutants and improving water quality. They are home to a wide variety of animal and plant life, and critical to our indigenous history.

In 2019, Astron Environmental Services used the DEA platform to develop a successful method to map inundation of waterbodies across Victoria.

Astron has mapped the state's wetlands with unprecedented detail and authority, contributing to the evidence-based strategies of environmental managers and the health of Victoria's wetlands.

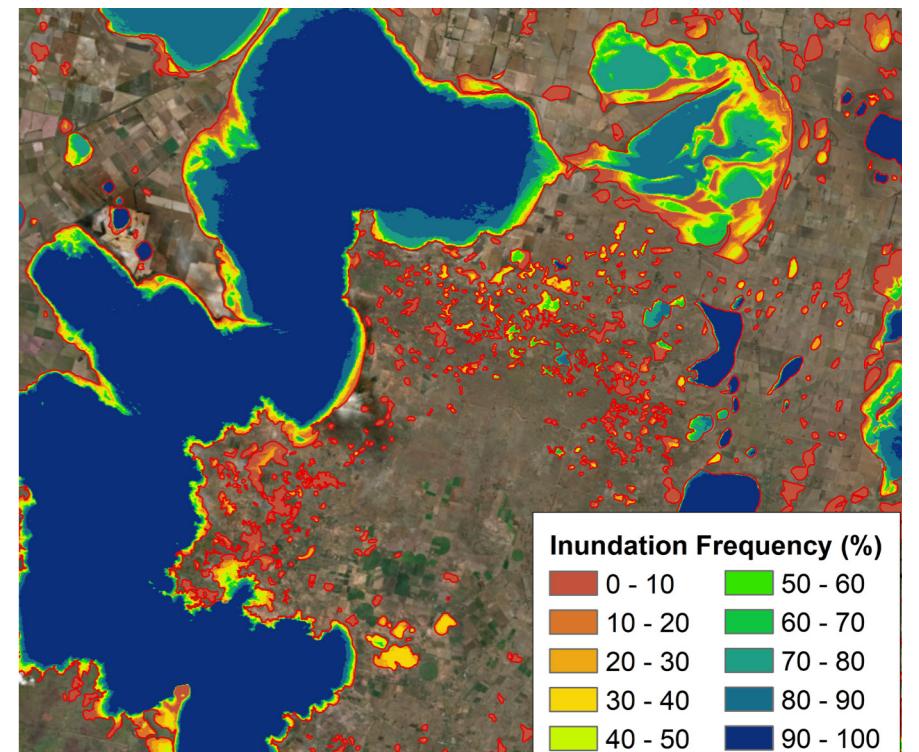


Image showing inundation frequency of wetlands in the Corangamite region of Victoria.

1. Australian Government, Current and future economic value of earth and marine observing to the Asia Pacific region, November 2019. www.industry.gov.au/data-and-publications/current-and-future-value-of-earth-and-marine-observing-to-the-asia-pacific-region

'The DEA infrastructure and tools developed by Geoscience Australia has enabled fast and efficient processing routines to be developed, and greatly reduced the time required for data processing, to a point where it is commercially viable.'

Dr Jasmine Muir,
Manager – Geospatial,
Astron Environmental Services

