



STAGE 1 OF THE NRM SPATIAL HUB: World leading technology for Australian Agriculture

In its first two years of development, the NRM Spatial Hub (the Hub) has delivered the ability for rangeland managers to efficiently and consistently map, plan, analyse and monitor their property infrastructure, land resources and ground cover. The world-first technology has demonstrated significant potential to contribute to a more profitable and sustainable industry.

The Hub combines the latest cloud computing and geospatial mapping technologies with world-leading time-series satellite remote sensing, in a way that's not been available to individual landholders before.

For the first time, pastoralists can use and compare their own data with government data in a secure, consistent and interactive way. In just 30 seconds, a manager can now analyse and report on seasonal trends in ground cover within a paddock or across their entire property for the most recent season and compare it to the last ~30 years.

This is an Australian first and has been acknowledged by members of the global scientific community as a breakthrough in sustainable agriculture. In January 2016, the Hub was the focus of a front page article by NASA titled "Satellite data helps Australian ranchers meet the rising demand for meat in a changing world".



EMBRACED BY INDUSTRY

With support from the National Landcare Programme, the first stage of the NRM Spatial Hub (the Hub) initiative commenced in April 2014 and concluded on May 31, 2016. When the project was conceived, we set the ambitious goals of developing the technology, testing it on 40 properties, and raising the level of knowledge on a further 240 commercial enterprises. We far exceeded those expectations, with more than 300 properties covering more than 50 million hectares using the Hub by April 2016.

While the Hub is still in its infancy, our experience working with over 300 properties has clearly demonstrated the capacity to bring together a range of new technologies that can significantly improve how family, indigenous and corporate landholders invest in and manage their properties.

WHAT LANDHOLDERS SAID ABOUT THE HUB IN STAGE 1

1. 90% of respondents said they found the Hub easy to use
2. 95% said the Hub has the potential to measurably improve the productivity, profitability and sustainability of their property
3. More than 50% felt the Hub would save them between 10 and 30 labour days a year.
4. 75% said it would measurably increase safe carrying capacity through better pasture utilisation
5. 72% rated this type of technology as important to making their business both viable and sustainable in the future
6. If we took an average property size from our sample and assumed they used the Hub technology to guide their future investment in infrastructure development, they could conservatively increase annual revenue by more than 35% through improved pasture utilisation and increased stocking rates.

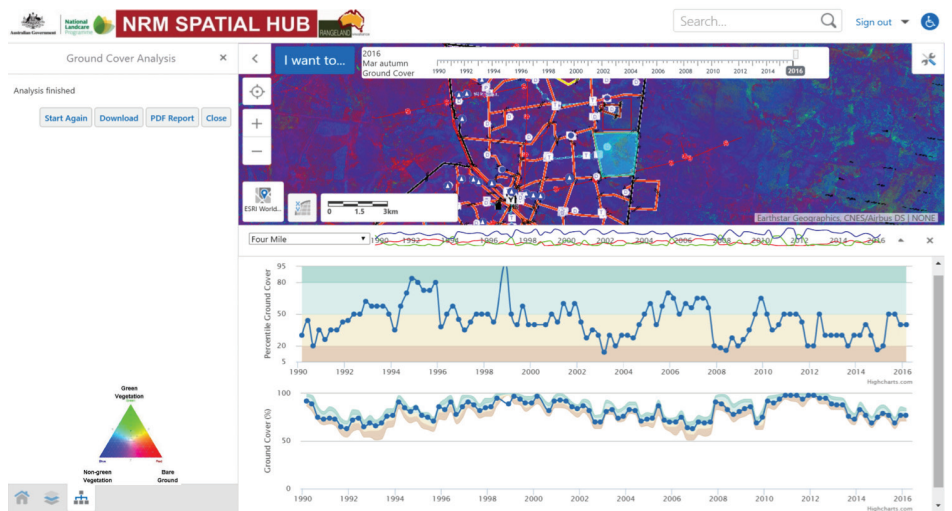
KEY ACHIEVEMENTS

1. Built and demonstrated the latest on-line spatial information technology to enable the development of standardised digital infrastructure and grazing plans in any location in Australia, and ultimately anywhere in the world.
2. Used world-leading remote sensing science and technology to develop simple dashboard tools allowing non-specialist users to access, analyse and visualise paddock-scale satellite time-series indicators of land condition and trends.
3. Trained and provided technical support to land managers, so they could better understand and interpret spatial and temporal ground cover patterns.
4. Collaborated with pastoralists, land managers and scientists on other innovative uses of this information, and evaluated the potential for estimating pasture biomass on a routine basis.
5. Demonstrated how the latest technologies can contribute significantly to more profitable and sustainable management of Australia's range lands, and individual properties.

WE DEVELOPED IMPORTANT PARTNERSHIPS

The NRM Spatial Hub is the result of close collaboration between more than twenty Australian organisations including:

- The Australian Government National Landcare Programme
- The Australian Rangelands NRM Alliance (14 NRM Bodies),
- Meat and Livestock Australia,
- The QLD, NSW, SA, WA and NT State Governments
- The QLD Remote Sensing Centre and Joint Remote Sensing Research Program
- TERN AusCover and CSIRO
- Geoscience Australia
- The Cooperative Research Centre for Spatial Information (CRCSI).



WHERE TO NOW?

July 2016 marks another key milestone in the development of the Hub, with a new and extended partnership between the Rangelands NRM Alliance (RA) regions; the Cooperative Research Centre of Spatial Information (CRCSI); Meat and Livestock Australia, Australian Wool Innovation, and our stage one collaborators. The focus of this partnership over the next 12 months (to June 2017) is to consolidate and support the existing service to industry and government stakeholders; extend the service to southern grazing regions; scope future development, and to transition the Hub to a self-sustaining business model.

The initial two years of the Hub focused on property planning and sustainable grazing development in the rangelands. In Stage 2 we plan to extend the use of the Hub into southern grazing systems, and also explore opportunities identified by the Hub users such as:

- Pasture budgeting
- Drought assessment
- Regional and national monitoring and reporting
- Biodiversity management
- Fire, pest and weed management
- Emergency management
- Carbon markets.

The next stage of the NRM Spatial Hub is looking very exciting.

LEAD & PARTNER ORGANISATIONS & CONTACTS

The CRC for Spatial information and the Rangelands NRM Alliance
Visit us at www.nrmhub.com.au and subscribe to our newsletter.

If you would like to register your interest in using the Hub please

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