FINAL

Second round of SmartSat CRC, New Zealand Space Agency research projects to advance Trans-Tasman space industry

Adelaide, 14 November 2024 – SmartSat Cooperative Research Centre (SmartSat) and the New Zealand Space Agency (NZSA) have announced today the second round of jointly funded space research projects under the Australia-New Zealand Collaborative Space Program.

In partnership with the New Zealand Space Agency (part of New Zealand's Ministry of Business, Innovation and Employment – MBIE), the four new projects focus on advancing Earth Observation technologies for better environment and agricultural management.

Commencing this month, the successful projects address crop and agricultural monitoring, advancing biomass mapping and supporting indigenous communities through Earth Observation technologies.

SmartSat CRC CEO, Professor Andy Koronios, emphasised the importance of this collaboration:

"We are excited to extend our collaboration with the New Zealand Space Agency and the wider MBIE team by funding these important research projects. By investing in space technologies for farm management, land monitoring and the integration of indigenous knowledge, we are improving our understanding of how to more reliably and sustainably look after our unique countries," he said.

"We hope these new projects encourage enduring partnerships between Australian and New Zealand researchers, establish platforms for larger-scale future research initiatives, help develop talent and joint expertise, support R&D initiatives, and enhance business development. We also hope to build scientific capacity in alignment with both industry and end user needs to address major environmental, economic, and social challenges for both nations."

The new research projects are:

Indigenous Pathways to Advance Fuel Moisture Earth Observation Technologies for Improved Fire Planning Management Strategies
Bushfire Research Centre of Excellence, Fenner School of Environment and Society, Australian National University, and Scion (New Zealand Forest Research Institute)
This project will interface traditional Aboriginal and Indigenous Māori knowledge with contemporary scientific methods to better understand and manage fire-prone landscapes across Australia and New Zealand. Researchers will use satellite data to create 'life maps'

that integrate science-derived models with traditional methods of reading the landscape and assessing fuel flammability – such as moisture content in vegetation – with a view to developing a near real-time flammability monitoring system.

Enhancing Fractional Cover Models Using Hyperspectral Data for Improved Pastoral Condition Assessment in Australia and New Zealand
FrontierSI and Manaaki Whenua - Landcare Research
This project seeks to enhance fractional cover data products (used to analyse and interpret proportions of green vegetation, non-green vegetation, and bare ground in a landscape) calibrated and proven in Australian conditions for use in monitoring pasture conditions across New Zealand. By enabling better land condition assessments and management practices, the outcomes of this study will contribute to more sustainable land use, help mitigate the risk of erosion and protect vital soil and water resources.

Satellite sensing into agricultural practices: Phase A - ANZ's Cal/Val campaigns of satellite, airborne and ground GNSS sensing of soil moisture
The University of Newcastle, FrontierSI and the University of Canterbury
This project will demonstrate the integration of soil moisture measurements collected using Global Navigational Satellite Systems (GNSS) from several platforms, including satellites, aircraft and ground receivers. The study will collect baseline remote sensing data for assessing spatial and temporal variations of soil moisture in the hopes of better supporting decision making for agricultural practices and environmental applications.

SilverEye – Satellite Imaging for Land Vegetation, Environmental Recovery in Ecosystems and Yield Enhancement
CSIRO and the University of Auckland
This project aims to develop satellite capability to improve return time and resolution of agricultural monitoring, supporting crop management and environmental best practices across the southern hemisphere.

The first tranche of projects jointly funded under the Australia-New Zealand Collaborative Space Program, announced in July 2024, include research into monitoring methane emissions, enhancing real-time monitoring of greenhouse gases, managing free space optical communication nodes across Australia and New Zealand, improving the tracking of space objects, and developing a joint AUS-NZ concept for maritime domain awareness.

Further information can be found on the MBIE website.

Ends

SMARTSAT CRC ENQUIRIES:

Alison Bowman
Communications and Media, SmartSat CRC
0481 273 462 | alison.bowman@smartsatcrc.com

ABOUT THE SMARTSAT CRC

The SmartSat Cooperative Research Centre brings together over 135 participating organisations, including national and international partners, with more than 400 researchers. With a portfolio of over 150 R&D projects across Advanced Communication, Connectivity and IoT Technologies, Advanced Satellite Systems, Sensors and Intelligence, and Next Generation Earth Observation Data Services, SmartSat continues to contribute to building Australia's space R&D capability. The SmartSat Cooperative Research Centre activities are funded by the Australian Government Department of Industry, Science and Resources through the Cooperative Research Centres Program. Find out more at www.smartsatcrc.com.