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AUS4INNOVATION

Aus4Innovation Newsletter

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Introduction

INNOVATING THE INVISIBLE: DECODING NATURE'S DATA FOR A SUSTAINABLE FUTURE

At Aus4Innovation, we believe that nature holds powerful answers to today's challenges - in soil, water, and signals from plants and ecosystems. These hidden forces can help us create a more sustainable future.

In this issue, **Innovating the Invisible**, we explore how science, technology, innovation and collaboration are helping us uncover and use nature's data. From AI tools that monitor soil health, to satellite systems that map the land, innovation is giving us new ways to understand and protect our planet.

We also highlight the strong partnership between Australian and Vietnamese experts who are working together on smart, sustainable solutions for climate resilience and inclusive growth.

Join us on this journey to see how innovation is turning the invisible into real-world impact.



HIGHLIGHTS

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Insights

VIET NAM'S INNOVATION SYSTEM: A STRATEGIC OVERHAUL FOR THE FUTURE

Viet Nam is setting bold ambitions to transform itself into a high-income, innovation led nation with a globally competitive landscape by 2045. This vision is supported by a trio of groundbreaking policies: Resolution 57/NQ-TW, the Law on Science, Technology and Innovation, and Resolution 193/2025/QH15, which together create a comprehensive roadmap for innovation.

Resolution 57/NQ-TW establishes the strategic direction, highlighting science, technology, and innovation as the driving force for development. It sets ambitious targets, including achieving a top 30 ranking in the Global Innovation Index and ensuring the digital economy contributes at least 50% of GDP by 2045. It also emphasises increased R&D investment, aiming for 2% of GDP by 2030, and prioritises talent development in key fields such as AI and biotechnology.

The Law on Science, Technology and Innovation provides the legal framework to implement this vision. For the first time, it places innovation on equal footing with science and technology. Key provisions include encouraging the commercialisation of research and adopting an outcome-based management approach for state-funded projects, incentivising practical application and entrepreneurship.

Resolution 193/2025/QH15 turns policy into action through pilot programs and regulatory sandboxes, enabling flexible experimentation in strategic sectors like digital technology. It also enhances the autonomy of public institutions and mitigates risks for scientists, fostering high-risk, high-reward projects.

Together, these policies position Viet Nam as a dynamic player in global innovation, paving the way for sustainable growth powered by technology and forward-thinking leadership.

ADVANCING VIET NAM'S INNOVATION AGENDA: TURNING POLICY INTO PRACTICE

Following Viet Nam's extensive uplift of its innovation system through recent policies, significant strides are being made to transform these policies into practical tools. Contributing to this effort is the "Innovation Policy Evaluation Framework" project, a collaboration between CSIRO's Data61 and Viet Nam's Ministry of Science and Technology (MST), supported by the Aus4Innovation program.

At the heart of the framework is the Innovation Impact Assessment Checklist, which enables decision-makers to evaluate how proposed regulations can support innovation while aligning with long-term development priorities.

MST piloted this checklist during the revision of the Law on Science and Technology. The checklist was introduced to assess several critical articles in the draft Law, aiming to address existing policy bottlenecks - some to highlight include how to foster technology commercialisation, enable sandbox mechanisms, and accept a certain level of risk in publicly funded R&D. This tested and affirmed the practicality of the checklist in identifying both enablers

and potential regulatory frictions affecting innovation system functions.

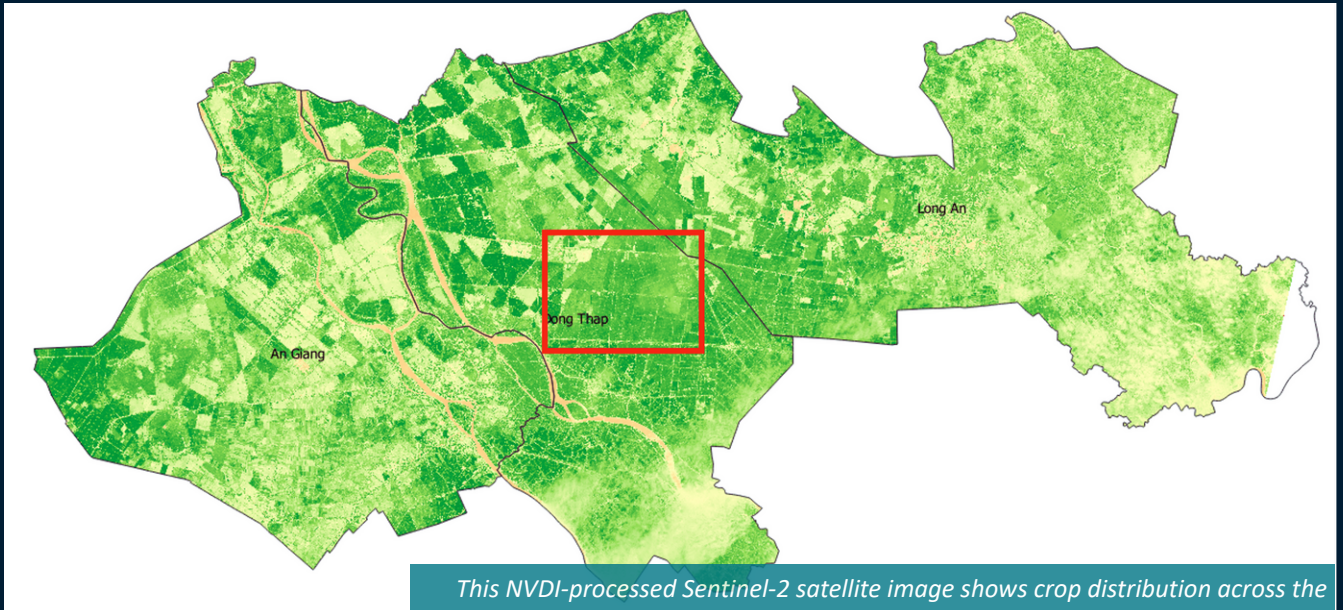
Additionally, the checklist was introduced to the shrimp sector in Ca Mau province to identify policy issues in this strategic export sector of Viet Nam.

As a key part of this process, CSIRO and MST ensured that the embedded criteria on environmental and inclusive growth continued to be reflected in each and every step. This enables regulators to measure beyond economic impacts as policies are developed.

With the successful application of the checklist at both the sector and national levels, this approach shows strong potential to strengthen Viet Nam's innovation system while ensuring inclusivity and sustainability are front and centre. Incorporating insights from partners such as Australia, this strategy highlights Viet Nam's dedication to fostering an innovation-driven economy while addressing pressing societal issues.

Initiatives

SMARTER FARMING THROUGH GEOSPATIAL INNOVATION



Exciting progress is being made in transforming crop monitoring in Viet Nam. An Aus4Innovation backed project led by the University of Southern Queensland (UniSQ) and Viet Nam National Space Center (VNSC), is employing geospatial and AI technologies to support smallholder farmers and government decision makers.

The project team has developed workflows to process multi-source data from satellites, drones and field surveys enabling the calculation of 14 vegetation indices - key for assessing crop health. Data pre-processing and vegetation index (VI) calculations have been finalised, and AI models for mapping rice and fruit crops are currently undergoing testing with these datasets.

To ensure usability, 15 Vietnamese farmers and stakeholders are providing feedback on the platform design. Their insights will shape the user-friendly web tool, enabling precise, accessible crop health monitoring. This project is paving the way for smarter, data-driven farming decisions and a more sustainable future for Viet Nam's agriculture.

Read more about this project [here](#).

CATALYSING INNOVATION IN THE CENTRAL HIGHLANDS

Founded through a partnership between Australia's national science agency, CSIRO, and the five Central Highlands provinces in 2022, the Central Highlands Innovation Cluster (CHIC) focuses on fostering innovation for sustainable agricultural development.

Over the past three years, the platform has fostered a supportive environment for innovation, strengthening collaboration among researchers, businesses, policy makers and farmers, and sparking new solutions to challenges in the agriculture sector.

Following the regional restructure in the Central Highlands, our local partners - Tay Nguyen University and the Western Highlands Agriculture and Forestry Science Institute (WASI) - are stepping up to lead the Coffee Innovation Cluster - an evolution from the former CHIC to ensure the Cluster's legacy continues.

As one of CIC's first initiatives, Tay Nguyen University and WASI have launched the 'Climate-smart Coffee Innovation Challenge' with support from the Aus4Innovation program.

This exciting Innovation Challenge invites SMEs, cooperatives, researchers, start-ups, and students to collaborate in shaping a sustainable future for Viet Nam's coffee industry as it faces climate change challenges.



CSIRO TEAM AT HANOI OPEN DRAGON BOAT & SUP REGATTA



The Australian Embassy team, coordinated by the energetic CSIRO crew, made waves at the Hanoi Open Dragon Boat and SUP Board Regatta! Competing alongside 10 teams in the Embassies and international organisations category, our paddlers proudly delivered the best Heat round result and advancing straight to the semi-finals!

Beyond the competition, the event was a fantastic opportunity to strengthen connections across the Embassy. A huge shoutout to the team for their sportsmanship, spirit, and dedication. It was truly a day of teamwork, enthusiasm, and fun!

Impact

HIGH-LEVEL LESSONS AND INSIGHTS: DRIVING IMPACT THROUGH INNOVATION

The Innovation Partnership Grant mechanism (Grant) is a key component of the Aus4Innovation program, delivering approximately AUD 7 million in funding to date, across 15 projects that tackle Viet Nam's socio-economic challenges. This grant is unique in its ability to move ideas from "proof of concept" to "proof of application", enabling tested innovations to be applied in real-world settings.

The **High-Level Lessons and Insights** report for Innovation Partnership Grant captures the invaluable lessons learned from implementing this grant. It highlights the keys to success - such as forming the right partnerships with complementary skills, involving high-caliber experts, and maintaining robust project design, management, and evaluation processes. Additionally, the grant has been instrumental in enabling Viet Nam to access advanced Australian technological capabilities and equipping Vietnamese innovators with practical knowledge to refine and apply innovations effectively.

The document also identifies potential challenges, including the risk of focusing on underdeveloped ideas and the lack of a legal framework for valuing, recording, and transferring assets from non-state funded science projects - issues crucial to ensuring long-term impact. By addressing these bottlenecks, the innovation system can continue building a thriving culture of sustainable innovation.

SHARING EXPERTISE ON MONITORING AND EVALUATION FOR INNOVATION

At a recent event hosted by Viet Nam's Ministry of Science and Technology, Aus4Innovation was invited to deliver a dedicated session on Monitoring, Evaluation and Learning (MEL) for innovation. The event was attended by Vice Minister Bui The Duy, government officials, scientists, and researchers, and provided a platform for dialogue on strengthening the impact of innovation initiatives in Viet Nam.

The A4I team introduced Australia's Department of Foreign Affairs and Trade's (DFAT) guidelines for developing Theory of Change and MEL tools, which have been integral for Aus4Innovation's innovation projects. These frameworks have helped Aus4Innovation effectively track progress, assess outcomes, and capture lessons learned, and in turn advance Viet Nam's innovation system to support socioeconomic development.

The session emphasised the importance of structured MEL to move beyond activity-based reporting. By focusing on measurable change, the MEL approach enables innovation projects to demonstrate tangible environmental, economic, and social impacts. The tools presented (ranging from indicator frameworks to case studies) can be tailored to suit Viet Nam's innovation system.

The presentation was well-received, sparking interest among participants on integrating such practices into Viet Nam's science and technology programs. Aus4Innovation is proud to contribute its expertise to foster evidence-based decision-making for sustained innovation and impact.

This engagement further solidifies Aus4Innovation's role as a trusted partner in strengthening Viet Nam's innovation system.



Innovations

AI REVOLUTIONISING PLANT-BASED PROTEIN INNOVATION

Artificial Intelligence (AI) is transforming plant-based protein development by enhancing sustainability, productivity, and consumer personalisation. Using platforms like CSIRO's MAGDA++, AI analyses large agricultural datasets to optimise crop yields, monitor soil health, and enhance water and fertilisation efficiency. It also enables the creation of tailored protein blends that meet individual dietary needs, while preserving nutritional integrity. From refining protein extraction to developing products that replicate the taste and texture of animal proteins, AI drives impactful food innovations. Positioned at the forefront, Australia leverages AI to build resilient food systems and meet rising global demand for sustainable protein solutions.



BEAM-DOWN SOLAR REACTOR: A BREAKTHROUGH FOR GREEN HYDROGEN

CSIRO has unveiled a groundbreaking beam-down solar reactor technology that uses concentrated sunlight to produce green hydrogen - a cleaner alternative to grey hydrogen which is produced from methane. Developed at CSIRO's Newcastle Energy Centre with support from the Australian Renewable Energy Agency, the reactor uses doped ceria particles to split water into hydrogen and oxygen in a cost-effective, energy-efficient process. This innovation, with potential solar-to-hydrogen efficiency surpassing 20%, represents a leap in solar thermal capability. It offers a pathway to decarbonise hard-to-electrify industries like steelmaking and shipping, positioning Australia as a global leader in low-emissions fuel production.

PLASTIC POLLUTION ALONG AUSTRALIAN COASTLINES DROPS BY 39%

Recent CSIRO research reveals a 39% reduction in plastic pollution along Australian coastlines over the last decade. Surveys conducted across six metropolitan regions found notable decreases in plastic waste in Newcastle, Perth, and the Sunshine Coast, though increases were observed in Hobart and Port Augusta. Flexible plastics like food packaging remain the most harmful to wildlife, while cigarette butts and polystyrene are the most commonly found items. The study, part of CSIRO's goal to achieve an 80% reduction in plastic waste entering the environment by 2030, highlights the role of public awareness and policy in addressing plastic pollution.



HỘI THẢO THAM VẤN

PHÁT TRIỂN HỆ THỐNG ĐỔI MỚI SÁNG TẠO, KHOA HỌC VÀ CÔNG NGHỆ
VÀ CHUYỂN ĐỔI SỐ TẠI VIỆT NAM

CONNECTION WORKSHOP

BUILDING STRONG AGRICULTURAL INNOVATION SYSTEM
AND DIGITAL INFORMATION INFRASTRUCTURE

tháng 5 năm 2021

Interview

SHAPING INNOVATION FOR SUSTAINABILITY:
INSIGHTS FROM PROF. ANDY HALL

In a thought-provoking interview with Tia Sang magazine, Prof. Andy J. Hall, team lead at CSIRO and head of the Innovation Policy team for the Aus4Innovation program, discusses a transformative approach to innovation. Prof. Hall highlights how the current market-driven model of innovation worldwide prioritises economic gain, often at the expense of social and environmental well-being. This unchecked focus has contributed to critical issues like climate change and widening inequality.

To address this, he advocates for "directing innovation" through mission-driven initiatives - akin to the historic moon landing mission - that focus on tackling pressing societal and environmental challenges. According to Prof. Hall, policymakers must take a more proactive role in guiding innovation pathways rather than leaving them solely to market forces. He distinguishes "social innovation," which addresses urgent social issues, from "responsible innovation," which ensures key stakeholders are involved in creating impactful, ethical solutions.

Prof. Hall underscores that while economic growth remains essential, it must be harmonised with goals for environmental sustainability and social equity. His vision invites us to rethink innovation as a tool not just for profit, but for progress.

Read the [full interview in Tia Sang](#) for more insights from Prof. Hall on reshaping innovation systems.



Prof. Andy Hall is a researcher, evaluator and advisor on the application of systems ideas in the field of agricultural science technology and innovation policy and practice. Originally trained as a plant pathologist, he holds a PhD in Science and Technology Policy Studies from the University of Sussex, UK.

He has held various positions in Uganda, the UK, India, and the Netherlands, and currently is a science and technology policy analyst with a specialisation in the study and design of agriculture innovation processes, policies and practices at CSIRO.

Prof. Hall is most well known for his work on agricultural innovation systems, a topic he has researched and written about extensively over the last 20 years. His core interest continues to focus on finding ways to more effectively harness agricultural research for innovation and development.

Invitations

INTRODUCING EARTH OBSERVATION TECH FOR SUSTAINABLE AGRICULTURE

Join the Earth Observation (EO) workshop in Dak Lak province on 4 November, as CSIRO partners with Can Tho University and Tay Nguyen University to expand EO applications in the Central Highlands. This workshop will explore collaboration opportunities to scale EO technology for sustainable agriculture, starting with a cashew pilot.

BREWING A SUSTAINABLE FUTURE: NET-ZERO COFFEE WORKSHOP

Join the Central Highlands Innovation Cluster on 5 November for a Net-Zero Coffee Workshop, where experts and innovators will explore strategies to reduce GHG emissions throughout the coffee value chain. Discussions will focus on solutions like the circular economy, driving sustainable practices in the coffee industry. Save your spot now!

POLICY DIALOGUE: STRENGTHENING VIET NAM'S AGRICULTURAL INNOVATION SYSTEM

Join us in Hanoi on 6 November for a high-level policy dialogue focused on enhancing Viet Nam's agricultural innovation system. Drawing on global evidence, international best practices, and Australian insights, the event will explore policy options to address challenges and support Viet Nam's sustainable development goals.



CLIMATE-SMART COFFEE INNOVATION CHALLENGE

12 innovative proposals will advance to mentoring, followed by two weeks of expert guidance. Finalists will compete for eight coveted spots, with winners celebrated at the award ceremony on Viet Nam Coffee Day, 10 December. Stay tuned to discover the winners and look forward to their groundbreaking initiatives!

INNOVATION PARTNERSHIP GRANTS: FINAL ROUND UPDATE

The 5th and final round of Aus4Innovation's Innovation Partnership Grants has shortlisted six outstanding applications from over 80 Expressions of Interest. Shortlisted teams will submit detailed proposals in November, followed by technical review and grant negotiations. Winners of this flagship innovation program will be announced in February 2026. Stay tuned!

Aus4Innovation is a ten-year (2018-2028) A\$33.5 million flagship program aimed at strengthening Viet Nam's innovation system to support inclusive and sustainable socio-economic development. The program is funded by Australia's Department of Foreign Affairs and Trade (DFAT), co-funded and managed by CSIRO – Australia's national science agency and delivered in strategic partnership with Viet Nam's Ministry of Science and Technology.

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