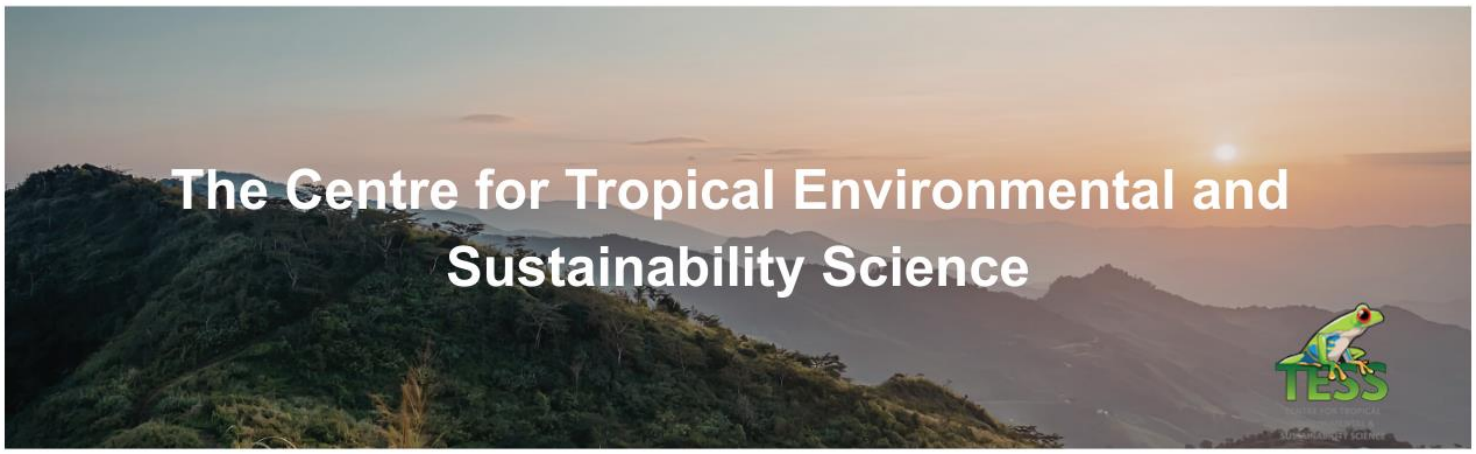
Update March 2026



Hello TESSians,

Welcome to the new-look edition of the Centre for Tropical Environmental and Sustainability Science newsletter at James Cook University. In this issue, we highlight the diverse research, partnerships and achievements emerging from our community of scientists, students and collaborators working across the tropics. From advancing our understanding of tropical ecosystems to developing practical solutions for environmental and sustainability challenges, the work of TESS continues to demonstrate the importance of multidisciplinary research in supporting resilient environments and communities. We hope you enjoy this snapshot of the exciting work taking place across the centre.

Susan Laurance

Director

CENTRE NEWS

In January, Director of the Centre for Environmental and Sustainability Science and Professor of Ecology at James Cook University, **Dr Susan Laurance**, was appointed to the **Australian Academy of Science's National Committee for Ecology, Evolution and Conservation.** More information...

On 26 February, the Wet Tropics Restoration Alliance held a networking-focused event at the JCU Ideas Lab, Nguma-bada campus, Smithfield. The event focused on bringing together Restoration Alliance members, partners and friends working across the Wet Tropics to share information, ideas and collaborate. Talks were targeted towards land managers, restoration practitioners, and anyone interested in restoration. More information...

PAPER ALERTS

There have been a lot of papers published this year, and we are still trying to catch up with adding them to the website, but please come and browse some excellent research. Here are a few to get you started....

Implications of African infrastructure development for threatened species' habitats and persistence – *Sean Sloan, Pablo Izquierdo*

Infrastructure development (ID) is an economic priority for Africa but threatens remaining natural areas, supporting some Sustainable Development Goals while undermining others. Despite increasing African ID investment, its scale and environmental implications remain poorly surveyed, particularly for biodiversity.

Sean asked us to highlight the following points: 1. The analysis in this publication is based on actual, observed habitats for each threatened terrestrial species in Africa, not just proxies or broad species ranges (i.e., B.A.D. data) as common in the literature. 2. Analysis concludes, conservatively, that future infrastructure development across Africa would have minimal impact on threatens species persistence, excepting a few very small-range species. This is in contrast to the greater alarmism in the literature, based almost always on inferior data. Of course, different perspectives on my data may validly come to different conclusions.

The role of ground-based laser scanning in quantifying and crediting tropical forest restoration: An Australian case study - *Alexander W. Cheesman, Lucas A. Cernusak, Abbey R. Yatsko, Jed Calvert, Keith Cook*

Tropical forest restoration is a critical component of efforts to meet the global challenges of climate change, biodiversity decline and land degradation. Financing the adoption of large-scale restoration efforts requires accurate and robust evaluation of their benefits.

Ground-based techniques such as terrestrial or mobile laser scanning (TLS or MLS) allow for accurate, repeatable and importantly traceable determination of forest biomass and structure. The use of these techniques in assessing forest restoration offers an opportunity to both improve ecosystem models that underpin current carbon markets and provide for the direct tracking of carbon sequestration into regenerating forests over time. Furthermore, the evaluation of ecosystem structural metrics (e.g. canopy closure and structural complexity) can help provide robust and transparent data to underpin nascent environmental and biodiversity markets to help support forest restoration.

Thermal drones for wildlife research in tropical forests: A review of best practices, challenges, and opportunities – *Emmeline Norris, Will Edwards & Susan Laurance*

Tropical forests support exceptional biodiversity yet remain underrepresented in long-term wildlife research and monitoring programs due to logistical, financial, and methodological constraints. Conventional ground-based survey methods are often ineffective in these environments, particularly for rare, cryptic, or arboreal species. Drone-mounted thermal cameras (thermal drones) offer a promising alternative by detecting endothermic animals from above based on their thermal signatures, with advantages for surveying inaccessible or densely forested habitats.

HDR / ECR

We would like to introduce you to two new TESSian Master of Philosophy candidates, working with Bill Laurance on a project in PNG. Please come and say hello if you are in the vicinity of the E2 building at JCU Nguma-bada campus, Smithfield.

Danny Nane is from Lae in Papua New Guinea.

He was previously Community Conservation Coordinator for the Tree Kangaroo Conservation Program (TKCP) and its YUS Conservation Area, working with local communities in rural PNG to protect the endangered Matschie's tree kangaroo and its habitat.

He is a camera trapping specialist and has a drone pilot license.

Kennedi is from Bogor in Indonesia.

He was previously Assistant Manager Biodiversity Research & Landscape Management at Yayasan Inisiasi Alam Rehabilitasi Indonesia - International Animal Rescue Indonesia (YIARI) in the biodiversity and restoration division (West Kalimantan Program).

He specialises in bioacoustics and herpetology.

Opportunity: If any of our HDR's have mammal trapping experience and would like to put this experience to profitable use, please contact the TESS centre for more information on an opportunity to train others.

UPCOMING EVENTS

Brisbane March 23-25	ANET 2026 | Breaking the barriers: Innovating to improve ecological outcomes on transport and other linear infrastructure. Keynote speakers: Professor Bill Laurance and Professor Leonore Fahrig.
Cairns May 20	Special TESS Seminar | Dr Carsten Schradin and Dr Lindelani Makuya. Each will present a 20-minute talk. There will be an opportunity to meet them and chat afterwards in true TESS style.
Cairns July 26-29	International Society of Ethnobiology (ISE) Congress 2026 | The theme of the ISE Congress 2026 is "Indigenous and Local Knowledge Connections: Honouring Heritage and Innovation".

DID YOU SEE ...?

The image from Simon Costanzo on LinkedIn – a reminder that everything we do on land eventually ends up in water.

Timothy Forster's photograph of Kelvin-Helmholtz clouds over the Flinders Range.

ENDNOTE

Last year we were lucky enough to have a workshop run by Laurie Hedges, internationally acclaimed environmental filmmaker. He highlighted the importance of visual media in ecology.

If you have an image or footage you would like to share, we would love to showcase your work and perhaps take a leaf out of The Bureau of Meteorology's book and publish a TESS calendar.

January and February were very hot. My personal "home space" health and safety officer (a very sensible friend) would like to remind us to take precautions out and about, keep hydrated and find areas to cool off.

We hope you enjoyed this issue and learning more about the people and projects shaping tropical environmental research at James Cook University. If you are interested in collaborating with researchers from the Centre for Tropical Environmental and Sustainability Science, we would love to hear from you.

Credits: Masthead Image - Sunrise over mountain range © Felicia Manolache's Images via Canva Pro; Curlew cooling in a puddle © Anabel Belson

Centre for Tropical Environmental and Sustainability Science

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