



CARROL CHAN

Pacific Node, PhD student

Investigating the role of cyclones in the spread of invasive weeds in the Pacific

Carrol Chan is a PhD candidate from Fiji who works under the umbrella of the University of Newcastle's Pacific Node. Carrol is one of three students researching how to tackle the challenge of invasive species in the Pacific. Invasive species can threaten biodiversity, food security, human health and ecosystem services, directly affecting species loss and ecosystem function causing a loss of resilience in responding to climate change.

Carrol's project aims to prove how remote sensing is a feasible and critical monitoring tool for the Pacific by utilising remotely sensed imagery and remote sensing techniques to map the distribution of three invasive weeds - the African Tulip, Merremia vine and Devils Ivy - and examine the role of cyclones in their spread.

Carrol's research activities also include utilising global datasets in species distribution models to identify at-risk areas and developing a review on the applicability of remote sensing techniques in this area, while considering the current geospatial industry in the region. Her project is co-supervised by Dr Andrea Griffin, Dr Sascha Fuller, Professor Matthew Hayward, Dr Chris Owers and Associate Professor In-Young Yeo.

“The project I am working on provides me the opportunity to apply and develop my technical skills in remote sensing for the management of invasive species in the Pacific and allows me to develop my soft skills with regards to project management and stakeholder engagement.”

- Carrol Chan

ENGAGEMENT

The projects aimed at strengthening invasive species management across the Pacific region are funded by the Secretariat of the Pacific Regional Environmental Programme (SPREP) through the Pacific Regional Invasive Species Management Support Service (PRISMSS) mechanism. PRISMSS brings together experts to provide a framework of cohesive support to Pacific Island countries and territories, with a focus on the protection of Indigenous biodiversity and ecosystem function. PRISMSS is supported by the New Zealand Ministry of Foreign Affairs and Trade under the Managing Invasive Species for Climate Change Adaptation in the Pacific (MISCCAP) project.

Carrol is collaborating with local stakeholders in Pacific countries, such as the Ministry of Natural Resources and Environment (MNRE) in Samoa, and SPREP for guidance in her research. In her spare time, Carrol is a board member of OSGeo Oceania, a volunteer organisation for open geospatial communities in the Oceania region. Carrol has also coordinated events, including the upcoming Pacific Geospatial Conference where she is leading the Women in Geospatial Session.

“This research will allow relevant issues to be assessed locally and provide information to assist Pacific islanders respond to donor, international, regional and national obligations.”

- Mr David Moverley,
SPREP Invasive Species Adviser



PACIFIC NODE

The Pacific Node is a strategic initiative of the Newcastle Institute for Energy and Resources (NIER) at the University of Newcastle, in partnership with the Secretariat of the Pacific Regional Environment Programme (SPREP).

The Pacific Node provides a flexible framework to harness joint capacity and develop collaborative engagement between academia, industry, government and communities to contribute to and deliver demonstratable impact for the environment, economies, societies, and culture of the region across four priority areas:

- Climate Change Resilience
- Ecosystem and Biodiversity Protection
- Waste Management and Pollution Control
- Environmental Governance

Through the Pacific Node the University of Newcastle works with Pacific partners to deliver a targeted PhD program, research collaboration, and capacity development training throughout the Pacific region.

www.newcastle.edu.au/pacific-node