

## **Communique 5:**

### **Forest monitoring proposals selected**

This is a communiqué from the cross-tenure NSW Forest Monitoring Steering Committee, which oversees the NSW Forest Monitoring and Improvement Program. The Steering Committee includes NSW government agencies and independent scientific experts. The Commission independently chairs the Steering Committee.

#### **Project proposals**

The Commission placed an open call for proposals for specific projects to address state-wide evaluation questions in May 2020. Following a merit-based assessment process, the Steering Committee has selected 11 projects.

The program has now invested over \$2.1 million, across 13 projects since October 2019 in partnership with leading universities, Aboriginal community groups and NSW agencies. The project will deliver monitoring and evaluation to support ecologically sustainable forest management.

#### **1. Data services**

Spatial Vision will analyse data management practice and management standards, support developing appropriate data architecture and infrastructure for the program, and source and integrate data. The work will build on, and link to existing data infrastructure such as the NSW SEED data portal. Dr Zaffar Mohamed-Ghouse, a former Director at FrontierSI (previously CRC for Spatial Information), will lead the work. This work will support the program to address all state-wide evaluation questions.

#### **2. Forest-dependent jobs**

Synergies and Verterra will synthesise available data and develop and pilot methods to estimate forest-dependent jobs. Professor John Mangan, University of Queensland and Dr. Glenn Dale will lead the work. This work will address the state-wide evaluation question on the social and economic well-being forests deliver for people.

#### **3. Aboriginal culture and renewal - Coordinator**

Firesticks will coordinate a process to assess Aboriginal cultural values and renewal in post-fire forests. This role will help guide and support assessment case studies in different forests and fire-impacted areas of the state. This will deliver on-ground cultural and economic support for local Aboriginal communities. Firesticks was invited to submit a proposal on advice from a cross agency and community Aboriginal culture working group. Oliver Costello, CEO at Firesticks and a Bundjalung man from northern NSW, will lead the Firesticks team. This work will address the state-wide evaluation question on Aboriginal forest management and decision-making.

#### **4. Aboriginal culture and renewal – Case study**

The Coffs Harbour Local Aboriginal Land Council will lead on-ground cultural values and renewal assessment in the Coffs Harbour area. It will assess issues such as cultural values pre-and-post the 2019-20 wildfires. Actions will be identified to support cultural restoration and renewal in the forests. This case study is part of a broader approach to develop a model to assess cultural values across forest tenures, through Aboriginal-led, Country-based assessments, monitoring, and research.

## **5. Baselines, drivers and trends for forest extent, condition and health**

Spatial Vision and the NSW Department of Primary Industries Forest Science Unit will lead a consortium including RMIT University, University of New England, PF Olsen, University of NSW, NSW Forestry Corporation and the Department of Planning, Industry and Environment to deliver baselines, drivers and trends for forest health across tenures. Stephen Farrell and Dr Christine Stone will lead a team of over twenty eminent scientists. This work will address state-wide evaluation questions on forest extent, condition and health.

## **6. Post-wildfire impacts and recovery**

The Steering Committee approved this project in October 2019. The NSW Department of Planning, Industry and Environment will deliver the tools and methods to rapidly assess the immediate effects of wildfires across tenures and identify where mitigation and recovery actions need to be implemented. Project collaborators include the NSW National Parks and Wildlife Service and the Bushfire Management Research Hub at University of Wollongong. Dr. Rebecca Gibson, NSW Energy, Environment and Science will lead the team. This work will address state-wide evaluation questions on forest extent, condition and health.

## **7. Carbon balance of NSW forests**

The Mullion Group will quantify the carbon balance of NSW forests. This will provide a baseline for the program to forecast the carbon balance change under different policy, management and climate scenarios. Dr Robert Waterworth, a lead IPCC author and former Eureka science prize winner will lead the work.

## **8. Baselines, drivers and trends for species occupancy and distribution**

The University of New England and the NSW Department of Primary Industries Forest Science Unit will deliver baselines, drivers and trends for species occupancy and distribution in NSW forests across tenures. Over 15 leading scientists will form the team including scientists from the NSW Department of Planning, Industry and Environment who will adopt indicators and modelling from the NSW Biodiversity Indicators program as part of the work. Professor Nick Reid, University of New England will lead the project. Dr. Rod Kavanagh will coordinate investigators across the project. This work will address state-wide evaluation question on species distribution and occupancy.

## **9. Fauna monitoring on north coast forests**

The Steering Committee approved this project in October 2019. The NSW Forestry Corporation of NSW and the NSW Department of Primary Industries will monitor, analyse and report trends in fauna species occupancy since 2015 in north coast state forests and reserves. It will also assess the changing status of koala population as measured by occupancy, including changes in koala density after recent wildfires on the NSW north coast. Project collaborators include the NSW National Parks and Wildlife Service, Local Land Services and the Science Division in the NSW Department of Planning, Industry and Environment. Dr. Chris Slade, senior ecologist Forestry Corporation will lead the team. This work will address state-wide evaluation question on species distribution and occupancy.

## **10. Fauna call recognisers**

NSW Department of Primary Industries, in collaboration with Queensland University of Technology, NSW Forestry Corporation and Victorian University of Wellington will develop fauna call recognisers for a range of forest dependent species such as large forest owls and

frogs. Automated tools will rapidly and reliably process large volumes of data generated by acoustic recorders. A national and international team experienced in forest monitoring, acoustic technology and computer science will deliver the work including Dr. Brad Law, Department of Primary Industries, Professor Paul Roe, Queensland University of Technology and Dr. Nirosha Priyadarshani, Victoria University of Wellington. This work will address state-wide evaluation question on species distribution and occupancy.

### **11. Baselines, trends and drivers for forest water catchments**

The University of Melbourne will deliver baselines, drivers and trends for water quality and quantity in NSW forest catchments. The work will also identify data gaps and key metrics to track thresholds and support modelling future outcomes under different scenarios. A team of eminent researchers will deliver the work including Professor Andrew Western and Associate Professor Angus Webb.

### **12. Baselines, trends and drivers for soil stability and health in forest catchments**

A consortium including the NSW Department of Planning, Industry and Environment, University of Sydney and University of New England will implement a project to deliver baselines, drivers and trends for soil stability and health in forest catchments. Over ten eminent scientists will contribute to the project including Dr. Jonathon Gray, NSW Department of Planning, Industry and Environment, Associate Professor Brian Wilson, University of New England and Associate Professor Thomas Bishop, University of Sydney. This work will address state-wide evaluation questions on soil stability and soil health in forest catchments.

### **13. Evaluating forest road network to protect forest waterways**

Alluvium, in partnership with the NSW Soil Conservation Service will assess the effectiveness of forest road network to protect in-stream water quality and minimise soil erosion. Dr Peter Nyman will lead the technical work covering forest hydrology, geomorphology, catchment modelling and spatial analysis. This work will address state-wide evaluation questions on water quality and quantity in forest catchments and soil health in forest catchments.