

NSW Forest Science

NSW Forest Science is the forest research team within NSW Department of Primary Industries.

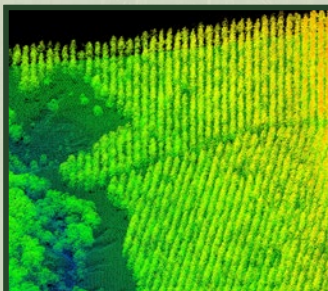
NSW Forest Science provides evidence based services to forest managers and policy makers that underpin sustainable use of native forests and timber plantations.

The team is research and technology focused, innovative and collaborative. Its core values are integrity, trust, service and accountability.

KEY SERVICES



**FOREST ECOLOGY
& BIODIVERSITY**



**FOREST RESOURCE
ASSESSMENT**

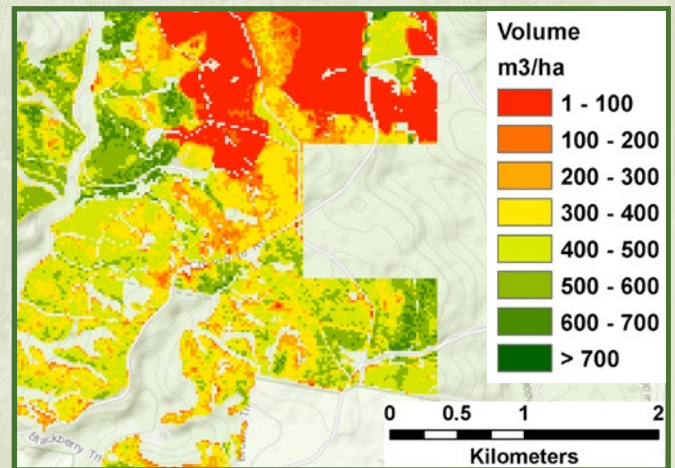


**FOREST HEALTH
& BIOSECURITY**



**CARBON IN FORESTS,
WOOD & BIOENERGY**

NSW forests comprise public and privately owned plantation and natural forests that are managed for economic (wood and forest products), social (jobs, recreation and cultural values) and environmental benefits (carbon, biodiversity and soil and water conservation). NSW Forest Science has the knowledge, skills and expertise to assess and quantify forest values in accordance with rigorous scientific standards.



FOREST ECOLOGY & BIODIVERSITY


Assessing sustainable management of forested landscapes:

- Designing and analysing landscape scale biodiversity monitoring programs with a focus on new low cost technology
- Assessing the implications of management practices on forest fauna such as koalas
- Developing predictive spatial models to optimise management of threatened species in forests
- Monitoring biodiversity in hardwood plantations
- Collecting and managing long-term ecological datasets

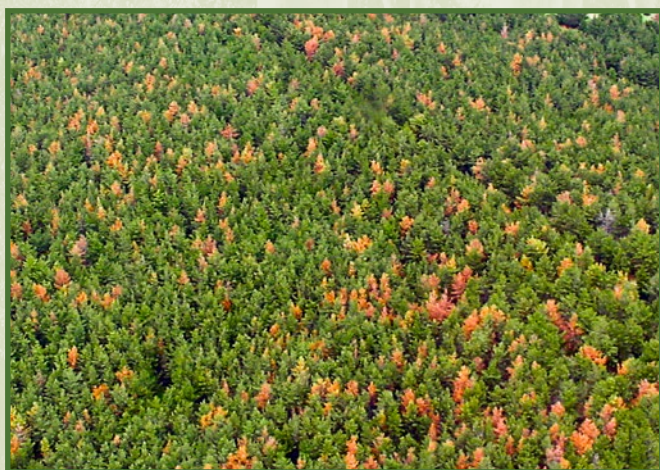
FOREST RESOURCE ASSESSMENT

Improving the accuracy, efficiency and cost effectiveness of forest assessment over space and time:

- Evaluation and adoption of remote sensing technologies for forest monitoring
- Assessment and characterisation of plantation and native forest timber resources
- Forest growth modelling and wood quality assessment
- Assessment of socio-economic values for forests



Sustainable access is dependent on forests that are healthy, resilient and biosecure. NSW Forest Science is committed to providing monitoring and surveillance services that promote forest health and biosecurity.



FOREST HEALTH & BIOSECURITY

Providing forest health and biosecurity services to plantation and native forest managers:

- Detection and mapping of the extent and severity of pests and diseases in plantations and native forests
- Technical advice on the management of pests and diseases
- Research on the impact and management of pests and diseases
- Biosecurity surveillance for exotic forest pests and diseases that incorporate NSW port environs
- Liaison with state, federal and international forest health and biosecurity agencies and the forestry sector



CARBON IN FORESTS, WOOD PRODUCTS & BIOENERGY

Providing scientific backing for sustainable management of production forests and the climate benefits of using wood and wood products:

- Investigating use of existing and new sources of biomass for bioenergy generation
- Quantifying the carbon footprint of wood products and greenhouse balance of production forests
- Specialist assessments of key wood properties
- Guidance on carbon abatement benefits of forestry activities under the Emissions Reduction Fund and other mechanisms
- Investigating carbon dynamics of wood and paper products in landfills
- Investigating mechanical fuel load reduction in forests as an alternative fuel reduction approach

TECHNICAL SUPPORT

Services provided by NSW Forest Science are underpinned by a suite of technical capabilities which include:

- Field assessment and inventory
- Statistical analysis
- GIS, mapping, spatial modelling & remote sensing
- Cost-benefit analysis
- Scientific report writing

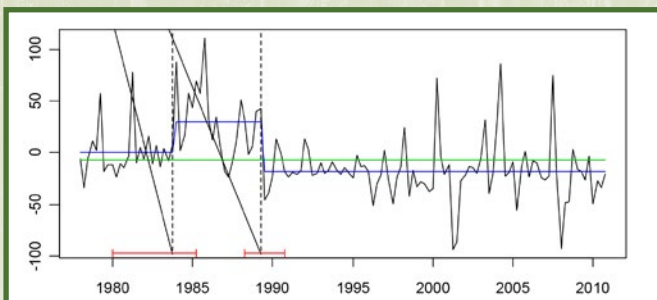


Field Assessment & Inventory



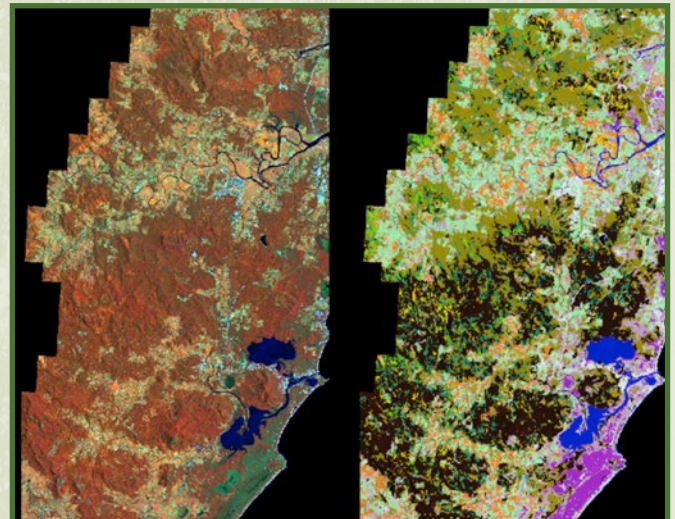
Expertise in designing, establishing, measuring, data collation and analysis of field campaigns for a range of forestry disciplines.

Statistics



Advice and assistance related to databases; survey design and sampling strategies; statistical programming, analysis and interpretation.

GIS, Mapping, Spatial Modelling & Remote Sensing



Expertise in GIS and mapping; the application of data acquired from a range of remote and automated sensors; spatial data analysis and modelling.

Cost Benefit Analysis

Strong knowledge of the commercial forestry sector in NSW with expertise in resource valuation and cost benefit analysis.

Scientific Report Writing

The NSW Forest Science team has published over 300 peer reviewed scientific publications.