

NSW FOREST MONITORING AND IMPROVEMENT PROGRAM

Program Strategy
DRAFT FOR CONSULTATION

June 2019

DRAFT FOR COMMENT

The Commission is inviting verbal or written feedback on this draft paper by 4 July 2019.

For example:

1. How can the Program be improved?
2. What are your priority information needs?
3. How can you contribute? How would you like to be involved?

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Table of Contents

Better evidence is needed for ecologically sustainable forest management	1
The community is demanding reliable and trusted evidence	1
The NSW Government is responding	2
The Program will deliver evidence to improve forest management	3
Delivering a state-wide view on forest health and management	3
Focusing on evidence to adapt and change	4
Leveraging research and expertise across the community and industry	4
Delivering independent advice on how forest management can be improved	5
The Program is a partnership with independent oversight	7
Expert advice will guide the Program	7
Providing a platform to draw in experience and expertise	7
The Program will focus on the evidence decision makers need to know	9
Good practice will guide the Program	9
Focusing on priority needs	10
Providing insights and modelling scenarios	11
Establishing clear feedback loops to forest management	12
Establishing long-term plans in parallel with rolling out initial projects	13
Using evidence to recommend changes	13
Continuous improvement will be core to the Program	14

Introduction

This document provides a draft Program Strategy for the NSW Forest Monitoring and Improvement Program ('the Program'). It has been drafted by the NSW Natural Resources Commission ('Commission') in consultation with the NSW forest Monitoring Steering Committee. The Commission is responsible for independently overseeing the design, implementation and review of the Program under a terms of reference from the Premier.

This Program Strategy describes:

- What the Program aims to achieve
- How the Program will be delivered
- How success will be assessed.

The Commission is inviting submissions from stakeholders on this draft Program Strategy by 4 July 2019.

For example, the Commission is keen to understand in the design phase:

- What are the priority issues and decision needs the Program should focus on?
- Is the proposed Program design sound? How can the Program design be improved?
- How can organisations within and outside of the NSW Government contribute monitoring and research on NSW forests coordinated by the Program?

Better evidence is needed for ecologically sustainable forest management

The Program will deliver information and evidence to support the strategic management of forests and forest practices in NSW on both public and private land. The forest monitoring and evaluation provided by the Program will be targeted towards improving the adaptive management of forests across all tenures, including state forests, national parks, private native forests, private conservation forests and crown forested land. The Program will provide independent advice to forest managers in NSW on how policies and on-ground management can be improved, through evaluation of forest monitoring data, performance benchmarking and research.

The NSW Government has committed to Ecologically Sustainable Forest Management (ESFM) under its NSW Forest Management Framework. As part of this commitment, NSW has committed to maintaining or increasing the full suite of forest values for present and future generations across the NSW native forest estate, including environmental, social, economic and cultural values.¹ Tracking the status and trend of these forest values is important for forest managers to understand whether NSW is on track in achieving its ESFM commitment.

NSW has around 20.4 million hectares of forested land, the majority of which is native forests. Around 58% of NSW forests are on private or leasehold land, around 27% held in conservation reserves and around 10% held in state forests and managed for multiple uses including forestry and recreation.

The community is demanding reliable and trusted evidence

People in NSW are concerned about the ecological sustainability of NSW forests and whether there is sufficient reliable information available to track forest health, productivity and sustainability. There is strong community interest in whether or not forest values, including cultural, environmental, social and economic values are being maintained in NSW.² While people's interests and information needs about NSW forests are diverse – ranging from interests in forest biodiversity, sustainable timber production, recreation and cultural values – there is consensus and demand for reliable and transparent information to make better decisions about forest management in NSW.³

People would like to see how information can be best gathered and used to improve forest management in NSW. For example, assessments of the status and resilience of threatened species and the adequacy of protected areas to provide habitat for native animals amidst increasing threats and pressures, will help forest managers be better informed about species protection measures.

On the other hand, environmental and regeneration monitoring of state forests to determine the effectiveness of Integrated Forestry Operations Agreements (IFOAs) and their objectives, within the framework of a broader landscape monitoring program is expected to underpin sustainable timber production into the future.⁴

Making the best use of reliable evidence, research and technology is important for effective forest management.

The community in NSW expects that forest management is effective and evidence-based. Previous reviews of forest management in NSW, such as the independent review of the NSW Regional Forest Agreements (RFAs), have highlighted a gap between forest science and forest management in NSW, which needs to be addressed.⁵ This is an issue for all forest tenures, including the conservation estate and for production forests. NSW forest managers, on both public and private land, should be continuously monitoring their management practices and responding to better evidence about sustainable management.

People need to trust the source of evidence. Stakeholders have called for independent oversight and scientific expertise in the design, implementation and reporting of forest monitoring programs.⁶

People would also like to see improvements made by the NSW Government in meeting its reporting obligations.

NSW is subject to a range of reporting obligations, including under the NSW RFAs with the Australian Government, and internationally, under the Montreal Process and Convention on Biological Diversity.

The NSW Government is responding

The NSW Government has established a Forest Monitoring and Improvement Program ('the Program') to lead and coordinate monitoring, evaluation and research for improved forest management. The Premier has asked the NSW Natural Resources Commission (the Commission) to independently oversee the Program's design and implementation. A multi-agency steering committee, including independent scientific experts will guide the development, delivery, and implementation of monitoring, evaluation, and research plans.

The Program will be supported by a funding commitment of \$9.2 million over four years, for forest monitoring and mapping, announced by the Department of Industry as part of the NSW Budget 2018-19. This investment will support the design and establishment of monitoring and evaluation program. Further funding of at least \$2 million, over five years from 2019-20, is targeting the design and establishment of the Coastal IFOA monitoring program, and is being provided by the Environment Protection Authority through the Waste and Environment Levy and contributions from Forestry Corporation of NSW. The Program seeks to leverage and partner with other NSW agencies, such as the NSW National Parks and Wildlife Service and Local Land Services, to strengthen the overall evidence base for forest management.

The Program will seek continued investment. With a 20 year horizon of current forest agreements, it will be important for the program to secure sustainable funding by demonstrating its benefits within the first four years – such as delivering priority information needs, reducing duplication in monitoring effort, and adapting management based on objective evidence.

Program outcome and aims

The Forest Monitoring and Improvement Program will deliver evidence to adaptively manage NSW forests across tenures in an ecologically sustainable manner.

The Forest Monitoring and Improvement Program aims to:

1. Focus on the information required to improve the adaptive management of NSW forests
2. Provide the public with transparent, independent, accessible, and robust evidence of forest management performance
3. Be adaptable to changes to both research priorities and forest monitoring methods
4. Be cost effective by employing efficient mechanisms to meet Program objectives
5. Satisfy NSW's obligations for national and international forest management reporting.

The Program will deliver evidence to improve forest management

Delivering a state-wide view on forest health and management

The Program will include forest monitoring, evaluation, research and reporting on both public and private land across NSW. Information will be generated through the Program to improve adaptive management across all tenures of NSW forests, including state forests, national parks, private native forests, and crown forested land.

Specifically, the Program will incorporate requirements for the monitoring, evaluation, reporting and improvement of forest management and environmental protection under the three NSW Regional Forest Agreements (RFAs) and four NSW Integrated Forestry Operations Approvals (IFOAs). This includes NSW's obligation to report against indicators for Ecologically Sustainable Forest Management (ESFM). Tracking the status and trend of long term measures of forest health, such as key biodiversity metrics, will be important for this purpose.

The Program will build on and refine the range of existing NSW forest monitoring, evaluation and research initiatives and provide opportunities for coordination and partnership.

Indicators for Ecologically Sustainable Forest Management

In 1993, Canada convened the International Seminar of Experts on the Sustainable Development of Boreal and Temperate Forests. This process established the Montreal Process Working Group on Criteria and Indicators. The group developed a framework to describe, assess, and evaluate progress towards sustainable forest management.

The framework includes a suite of indicators grouped under seven criteria.

- Conservation of biological diversity
- Maintenance of productive capacity of forest ecosystems
- Maintenance of ecosystem health and vitality
- Conservation and maintenance of soil and water resources
- Maintenance of forest contribution to global carbon cycles
- Maintenance and enhancement of long-term multiple socio-economic benefits to meet the needs of societies
- Legal, institutional and economic framework for forest conservation and sustainable management

Australia has adapted the indicators to better suit the country's unique forest conditions. The State and Commonwealth governments have worked together under the Montreal Implementation Group (MIG) to implement national indicators that have both national and regional relevance.

The NSW Forest Monitoring and Improvement Program is required to report against these indicators for ecologically sustainable development.

This Program will explicitly link monitoring, evaluation, and research to decision-making for policy and on-ground management of NSW forests.

Traditionally, many monitoring programs have relied on 'backward-looking' monitoring programs that 'collect the data now, and ask the evaluation questions later'. This approach can lead to monitoring a large number of things and gathering information that may have little use in decision making. This approach can direct limited monitoring resources way from what decision makers and forest managers really need to know.⁷

The Program will seek to understand the needs of decision makers, stakeholders and the broader community in sustainable management of NSW forests and underpin effective adaptive management. It will also provide direct evidence-based feedback to forest managers and policy makers about improvements recommended.

In addition, the Program will facilitate opportunities for the community and government to review monitoring data and research aimed at improving forest management, including through the Program's annual forums. Reporting of monitoring data will become more dynamic, for example through the establishment of online interactive dashboards. It will go beyond traditional models of reporting, such as the five yearly reviews for Regional Forest Agreements. This will provide a more agile and responsive approach to risks and results as they emerge.

What is Ecologically Sustainable Forest Management?

NSW has committed to Ecologically Sustainable Forest Management (ESFM) and to maintain and monitor the broad range of social, economic and environmental values of forests.⁸

Ecologically Sustainable Forest Management seeks to maintain the economic, social and ecological benefits and services provided by forests while maintaining cultural and environmental values, such as biodiversity and water quality, and sustaining the forest health and productivity for current and future generations.

The core Principles of Ecologically Sustainable Forest Management⁹ are to:

- Maintain or increase the full suite of forest values for present and future generations across the NSW native forest estate
- Ensure public participation, access to information, accountability and transparency in the delivery of ESFM
- Ensure legislation, policies, institutional frameworks, codes, standards and practices related to forest management require and provide incentives for ecologically sustainable management of the native forest estate
- Apply precautionary principles for prevention of environmental degradation
- Apply best available knowledge and adaptive management processes.

Focusing on evidence to adapt and change

Effective adaptive management of forests

The complexity of natural systems means there will always be some uncertainty about how an ecosystem, such as a forest, will respond to different management interventions.¹⁰

Adaptive management helps ensure forest management activities are contributing to specific objectives by drawing on evidence from monitoring, evaluation and research. Adaptive management also assists forest managers to learn about what interventions work best to improve their management strategy over time.¹¹

Active adaptive management is deliberate 'learning by doing'.¹² It relies on using tools to identify and predict the consequences of management actions, posing good evaluation questions to test assumptions and designing monitoring and research initiatives to answer those questions.¹³

Policy makers and forest managers will 'plan to learn'. This approach focuses management on obtaining new information and insights about what works, what does not and what needs to be done next.¹⁴

Leveraging research and expertise across the community and industry

Building on the NSW Government's \$9 million investment in forest monitoring and evaluation, the Program aims to leverage the expertise of a wide range of research organisations and community groups.

The Program seeks to work with a wide range of partners – including community organisations, Indigenous groups, and universities – to draw in monitoring, research, data, and evaluation skills – convening and consolidating experience from across the state at local and regional levels. For example, we will aim to provide a platform for:

- local volunteer organisations, with an interest in ecologically sustainable forest management, to contribute their experience in wildlife surveys to the Program's forest biodiversity monitoring
- Indigenous organisations with experience in forest management to share their experience with the Program's evaluations, for example, in cultural burning practices to lower the risk of wildfire
- carbon farming organisations monitoring forest biomass and carbon sequestration, to collect and exchange data with NSW agencies on forest regeneration rates
- universities undertaking forest ecology and spatial modelling of forest biodiversity to contribute their research to the Program and collaborate with NSW agencies.

The larger area of forest cover held on private and leasehold land in NSW provides an opportunity to draw in the experience of the private sector and landholders. For example, the Program aims to partner with:

- forestry industry organisations and landholders – including in private native forestry – to enhance the monitoring of forest management activities and provide information to enhance forest management
- land managers supporting biodiversity conservation on private land – whereby organisations that are monitoring the effectiveness and efficiency of biodiversity conservation on private land could potentially contribute data and research to enhance management effectiveness on private conservation sites.

Delivering independent advice on how forest management can be improved

The Commission will provide independent advice by reviewing forest monitoring data, evaluation and research, drawing on a diverse range of expertise and information from both within the NSW Government and outside of government. The Commission will deliver clear and practical recommendations to NSW Government agencies and forest managers on both emerging challenges in forest management, such as forest health issues arising due to the effects of climate change, and on opportunities to improve the management of forests in NSW.

In providing its independent advice, the Commission will look to benchmark forest management performance – environmental, economic, social and cultural – in NSW and hold NSW forest management agencies accountable against performance criteria.

Evaluation, reflection and learning are key pillars of the Program. Evaluations will be initiated by the Commission from the outset of the Program, running parallel with the establishment of new forest monitoring activities.

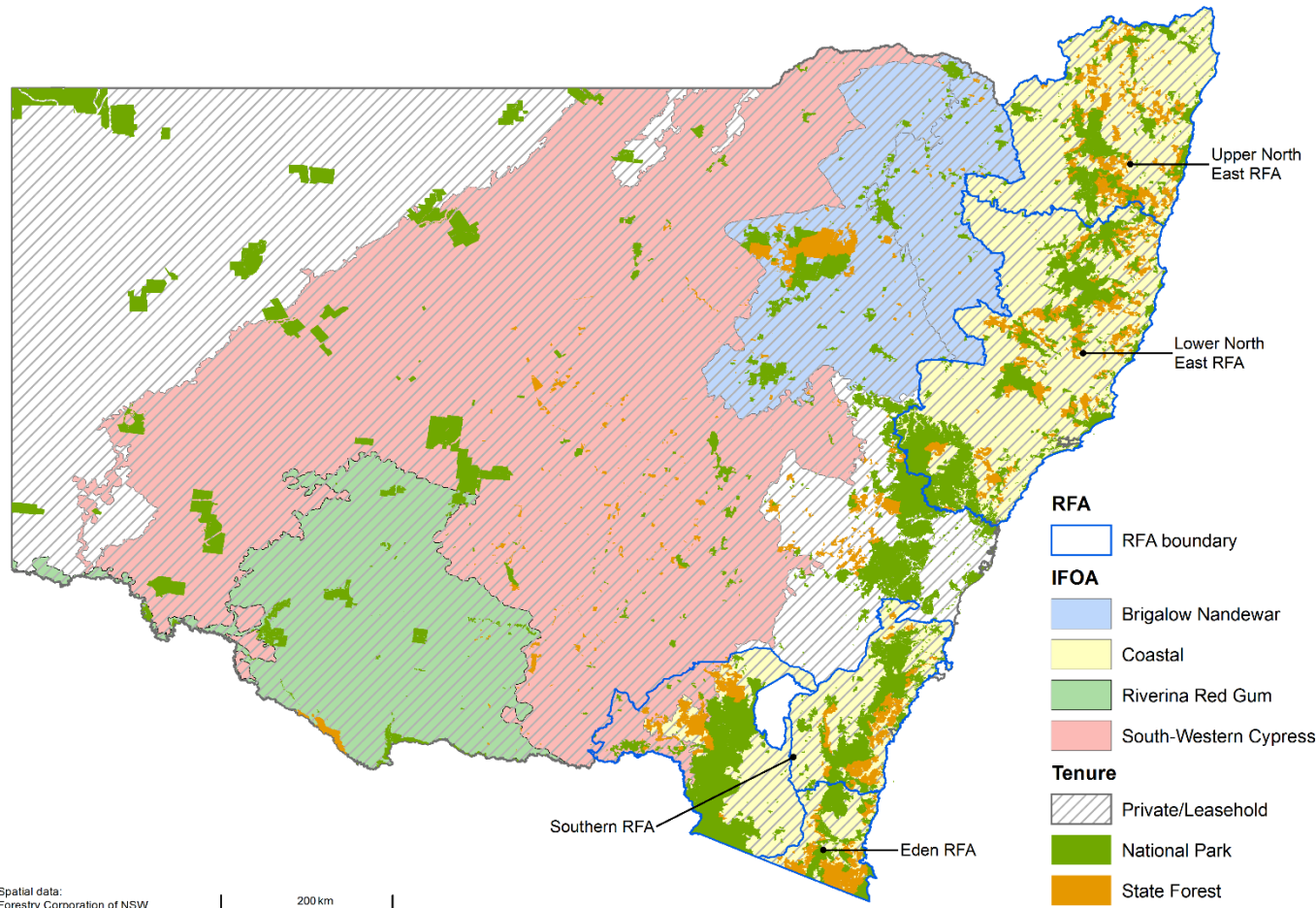
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Regional Forest Agreements and Integrated Forest Operation Approvals

Regional Forest Agreements

(RFAs) are long-term bilateral agreements between the Australian and state governments to balance environmental, economic and social uses and values of key native forest regions across Australia.

Under the renewed RFAs, NSW has agreed to develop and maintain a Monitoring, Evaluation and Reporting Plan, including the identification of research priorities.



Spatial data:
Forestry Corporation of NSW
200 km
Document Path: U:\MXDS\Land and forests\Forestry MER\Draft maps\Draft Map 006 - IFOA RFA and Tenure.mxd

Integrated Forest Operation Approvals

(IFOAs) set the rules for how forestry operations can be carried out on State forests and other Crown-timber lands in NSW so that they balance the sustainable supply of timber whilst providing ongoing protection of threatened plants, animals, water and soils.

The new Coastal IFOA requires that a forest monitoring program must be overseen by a monitoring steering committee, which is to be independently chaired by the Natural Resources Commission. The three western IFOAs also have a requirement for the design and delivery of long-term monitoring programs.

The Program is a partnership with independent oversight

The Natural Resources Commission is responsible for independently overseeing and advising on the design, implementation, review and continuous improvement of the Program.

The Commission has established, and independently chairs a NSW Forest Monitoring Steering Committee (the Steering Committee).

The Steering Committee consists of NSW agencies with responsibilities for natural resource and environmental policy, regulation, delivery and science, as well as agencies with a direct role in forest management.

The Steering Committee's primary role is to develop an overarching strategy and Program plan. In addition, the Steering Committee ensures the Program is implemented efficiently and will lead periodic reviews of the Program.

NSW agencies will implement the monitoring, evaluation, research and reporting initiatives approved under the Program, including the collection, procurement, analysis and sharing of data and reports for forests on all tenures. NSW agencies remain responsible for the ongoing implementation, administration and adaptive management of forest agreements, including the RFAs and IFOAs.

More information on Program governance can be found at the [Commission's website](#).

Expert advice will guide the Program

The Program will draw on existing scientific and natural resources management expertise within agencies. In addition, the Commission has appointed four independent experts to advise the Steering Committee.

Independent experts

- **Professor Patrick Baker**, former Australian Research Council Future Fellow and School of Ecosystem and Forest Sciences, University of Melbourne
- **Associate Professor Phillip Gibbons**, Fenner School of Environment and Society, Australian National University
- **Associate Professor Jacki Schirmer**, Institute for Applied Ecology & Health Research Institute, University of Canberra and Senior Adjunct Fellow at the Fenner School of Environment and Society, Australian National University
- **Dr Peter Hairsine**, Centre for Water and Landscape Dynamics at the Fenner School of Environment and Society, Australian National University

Providing a platform to draw in experience and expertise

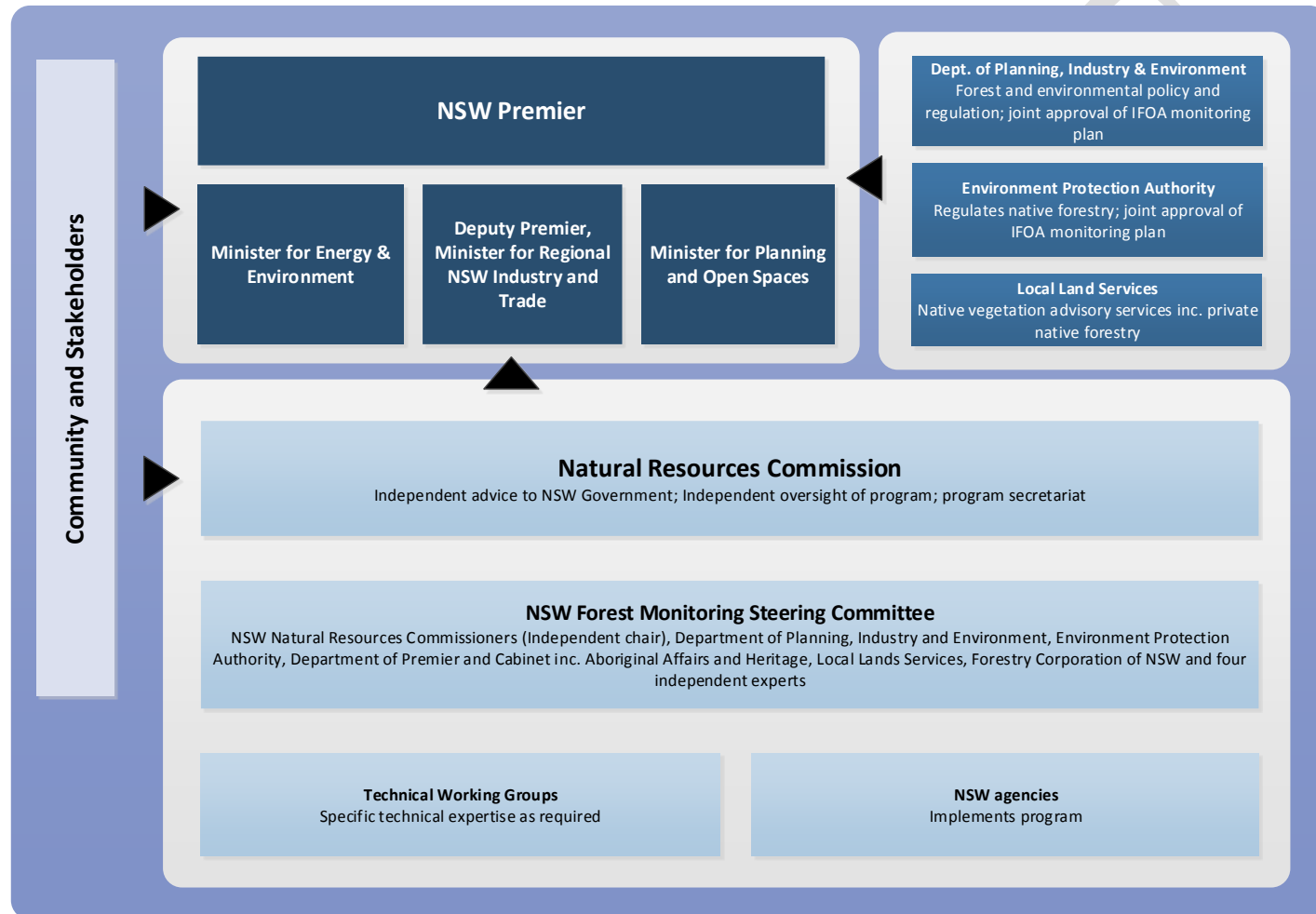
The Commission aims to draw on a wide range of expertise both inside and outside of the NSW Government in its oversight of the Program. Research organisations, land managers, community organisations, and industry all have experience to share on how forest management can be improved across tenures in NSW.

The Commission and the Forest Monitoring Steering Committee will engage with the community, environment and industry stakeholders on the Program design, implementation, annual reviews and major reviews.

As a first step, the Commission will seek submissions on this Program Strategy (see introduction on page 1).

The Program is committed to transparency and the principle of open government. The Program will publish reporting on the Program results and progress, including any recommendations of the Commission and the NSW Forest Monitoring Steering Committee for any suggested changes to the RFAs or IFOAs, or the NSW Forest Management Framework.

Governance structure



The Commission will lead and advise on the governance, design, and direction of the Program. The Commission is accountable for ensuring forest agreement reporting commitments are met.

In delivering this function, the Commission will collaborate with NSW agencies through the Steering Committee and consider its advice and guidance. Final Program decisions will be made by the Commission within the Steering Committee.

The Commission will report to the Premier and other Ministers responsible for forest policy and management.

The Commission and Steering Committee are independent from the ongoing implementation, administration and adaptive management of the forest estate, forest policies and forest agreements.

The Commission can provide evidence-based recommendations to Ministers and their relevant NSW agencies.

The community will be engaged on the Program design, implementation, annual reviews and major reviews.

The Program will focus on the evidence decision makers need to know

Good practice will guide the Program

A set of good-practice principles¹⁵ will guide the design and delivery of the Program.

A fundamental principle is to link monitoring, evaluation, research and reporting to decision making for policy and on-ground management of NSW forests.

PROGRAM PRINCIPLES	Program aims
The Program should meet both decision-making needs and reporting requirements	
<ul style="list-style-type: none"> ▪ Monitoring, Evaluation and Reporting (MER) should address a variety of objectives of relevant tenure managers and decision-makers across different forest uses and at different scales (e.g. landscape and site scale) ▪ MER should be able to provide information that informs decision-making at multiple operational levels; for example, for the information needs of Ministers, policy makers, regulators and tenure managers ▪ MER information should be readily available to meet reporting requirements, such as for the State of the Forests and State of the Environment reports 	<ul style="list-style-type: none"> ▪ Focus on the information required to improve the adaptive management of NSW forests ▪ Satisfy NSW's obligations to national and international forest management reporting
Evaluation questions should inform the Program design and focus monitoring	
<ul style="list-style-type: none"> ▪ A 'collect the data now, ask the evaluation questions later' approach may not always support improved management ▪ A proactive, inquiry-driven MER program will target decision makers' needs and make efficient use of scarce resources 	<ul style="list-style-type: none"> ▪ Focus on the information required to improve the management of NSW forests
The Program should provide information at relevant spatial scales	
<ul style="list-style-type: none"> ▪ MER for forest management needs to be capable of accommodating spatial scales ranging from the stand to landscape to RFA or IFOA region ▪ There should be complementarity between information provided at different spatial scales 	<ul style="list-style-type: none"> ▪ Focus on the information required to improve the adaptive management of NSW forests
Program priorities and the extent of information required should be determined through an analysis of risks, value and cost	
<ul style="list-style-type: none"> ▪ Risk, value and cost analysis will support decision-makers to prioritise information needs ▪ A risk-based approach assesses the need to monitor or evaluate condition and threats based on economic, social and environmental impacts ▪ MER should balance precision and cost effectiveness, while ensuring that reporting criteria and indicators are reported with sufficient data 	<ul style="list-style-type: none"> ▪ Be cost effective by employing efficient mechanisms to meet Program objectives ▪ Focus on the information required to improve the adaptive management of NSW forests
Review periods should be frequent enough to inform management and decision-making	

PROGRAM PRINCIPLES	Program aims
<ul style="list-style-type: none"> ▪ Evaluation of forest management programs and monitoring data on a regular basis will drive better outcomes and value for money ▪ Performance and accountability will be improved through more consistent monitoring and evaluation, occurring at least annually for RFAs and IFOAs. 	<ul style="list-style-type: none"> ▪ Satisfy NSW's obligations to national and international forest management reporting ▪ Focus on the information required to improve the adaptive management of NSW forests
The Program should facilitate coordination between agencies and data sharing	
<ul style="list-style-type: none"> ▪ The Program creates an opportunity to bring tenure managers together (for example, from National Parks, State forest, Crown land reserves) to address management issues across tenures (such as pests and weeds) ▪ Establishing data sharing arrangements between agencies and across tenures, will enhance transparency of information and cooperation 	<ul style="list-style-type: none"> ▪ Be cost effective by employing efficient mechanisms to meet Program objectives ▪ Provide the public with transparent, independent, accessible and robust evidence of forest management performance
The Program should facilitate public engagement and improve public confidence	
<ul style="list-style-type: none"> ▪ Increasing public participation increases management effectiveness, cooperation and legitimacy ▪ The Program should ensure community and stakeholders have opportunities to be engaged in decision-making in a timely manner ▪ Relevant MER information should be consistently published and accessible to the public 	<ul style="list-style-type: none"> ▪ Provide the public with transparent, independent, accessible, and robust evidence of forest management performance ▪ Focus on the information required to improve the adaptive management of NSW forests
The Program should continually evolve to respond to priority questions and risks	
<ul style="list-style-type: none"> ▪ Monitoring and evaluation should continually be reviewed and adjusted to meet the information needs of decision-makers ▪ An iterative process will enable the Program to accommodate changes in the context, and be adapted to respond to the new information requirements of decision-makers 	<ul style="list-style-type: none"> ▪ Be adaptable to changes to both research priorities and forest monitoring methods.

Focusing on priority needs

The Program has adopted four key design elements to develop monitoring, evaluation, reporting and research:

- **Identify and prioritise information needs** – to understand the needs of decision makers and community preferences within the context of ecologically sustainable forest management. Priority evaluation questions will focus monitoring, research and reporting effort to deliver practical evidence to meet priority needs.
- **Identify performance criteria** – for example, forest management practices in NSW can be benchmarked against other jurisdictions or other natural resources management systems. Establishing clear performance criteria enables thresholds or 'safe operating spaces' to be established for a forest practice. This will provide clear and transparent boundaries to inform and trigger management responses.

- **Identify opportunity cost of information** – to ensure that generating new, and potentially unnecessary, information is not at the cost of investing in improved management performance.
- **Identify best practice monitoring and research methods** – to ensure the best, most scientifically robust, approach, is applied to answer the evaluation question at hand.

‘Value of information analysis’ - assessing the opportunity cost of new information¹⁶

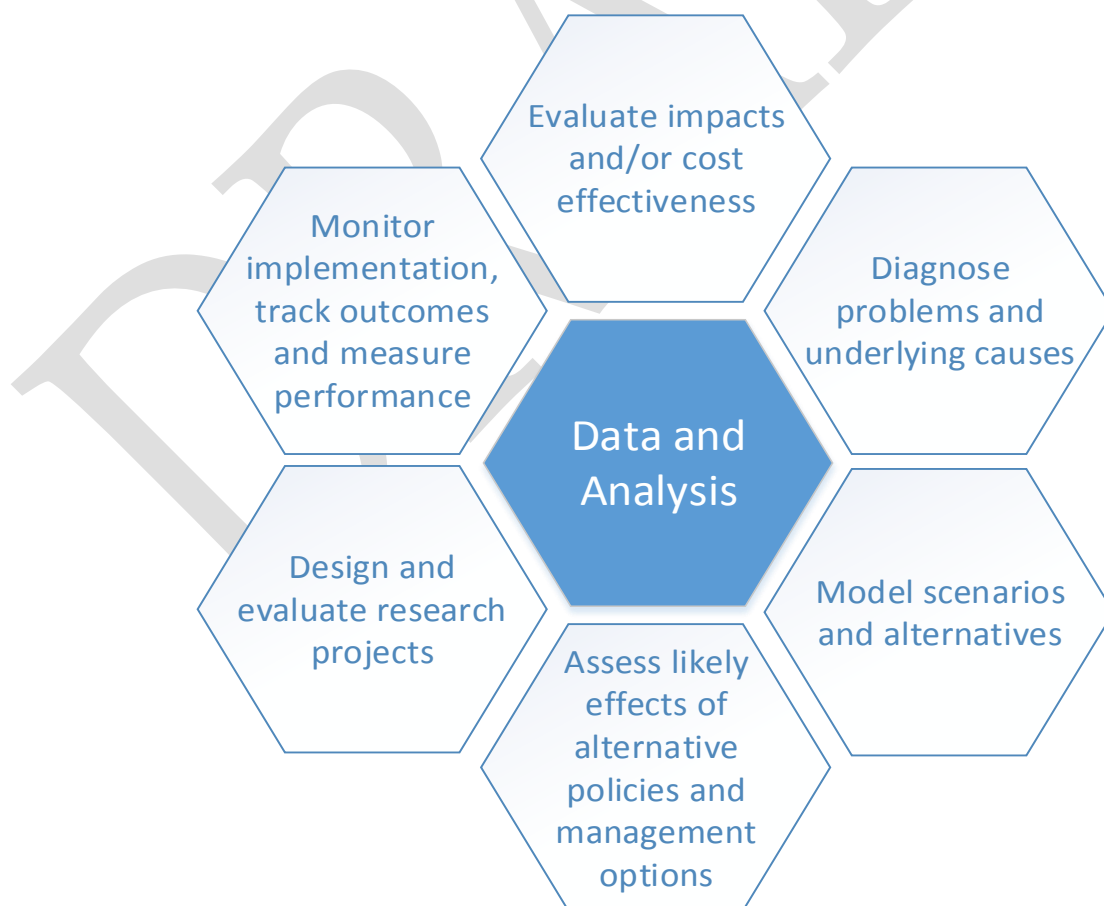
The Program will adopt a ‘value of information’ approach to prioritise forest monitoring, evaluation and research efforts in NSW.

This approach recognises that we need information to make effective forest management and policy decisions. However, generating new information is not free. Monitoring forests is expensive, and these expenses accrue over the long term. Consequently, the decision to invest in new information should be made with the knowledge of the associated opportunity cost. The opportunity cost might be other actions that could have resulted in greater improvement in management performance rather than investing in new information.

‘Value of information’ is a scientifically recognised process that determines the value of obtaining new information to reducing uncertainty around future management decisions.¹⁷ The process will help the Program to prioritise information that is the most valuable and cost-effective in providing evidence for effective forest management. It has been used extensively in medicine, engineering, land remediation and fisheries management.¹⁸

Providing insights and modelling scenarios

The Program will coordinate a review forest monitoring data, analyse trend, and review evidence as to how forest management can be improved in NSW. A variety of question-driven data analysis approaches will be used under the Program, including modelling scenarios and impact pathways for different management alternatives.



Evaluation questions – what do we want to know?

1. Where have we been? Where are we now? What is changing?

These questions could relate to indicators across ecological, social, cultural or economic domains. These type of questions typically lend themselves to long-term, landscape trend monitoring programs with established baselines.

Specific evaluation questions *could* include, but not limited to:

- What is the current status and trend of a particular species, in a certain tenure or bioregion?
- What is the current status and trend of forest dieback?
- What is the economic and social contribution of forest-based recreation and tourism to regional economies and human well-being?
- Are the full suite of forest values being maintained or increased across the NSW forest estate?

2. What is working? What is not?

These questions could relate to specific management actions or programs to address a particular issue, and the potential intersection or trade-offs between ecological, social, cultural or economic values associated with the issue. Assumptions underpinning some actions or programs may be more certain than others. These type of questions typically lend themselves to hypotheses driven research or monitoring projects or programs.

Specific evaluation questions *could* include, but not limited to:

- Are koala browse tree retention rates adequate on state forests?
- Does ecological and forest thinning improve biodiversity and forest stand health?
- How effective are initiatives to improve regional nature-based tourism?
- Are forests in a better condition for being in the conservation reserve system?

3. What do we do next? What needs to change? Where do we want to go?

These questions typically arise as a result of the answers to the preceding questions. Alternatively, it can also be the starting evaluation question for a known policy or forest management problem. Predictive or scenario-modelling can inform these questions, and/or other deliberative processes that engage experts, stakeholders, and community members to reflect on the evidence at hand.

Specific evaluation questions *could* include, but not limited to:

- How might the population of a particular species change under a range of forest management settings for habitat tree retention?
- How might the distribution and extent of an important timber species change under various climate change scenarios?
- How might forest ecosystems respond to disturbances, such as drought or increased fire intensity, under different climate change scenarios?
- Is the forest-based economy in NSW effectively responding to future opportunities and emerging risks?

Establishing clear feedback loops to forest management

Given there is a diverse range of organisations that manage forests in NSW – the Program will need to establish clear structures for how the evidence obtained through monitoring, evaluation and research, can lead to better forest management on both the public and private estate. To steer improvements in management, the Program will provide evidence-based practical guidance for both policy and on-ground management. This should be underpinned by monitoring datasets and an analysis of their implications for forest management.

Feedback processes to NSW agencies and stakeholders through the Program will be established, and may include:

- Providing recommendations to policy agencies and Ministers on legislation, regulations and policies that govern or impact on forest management

- Reviewing forest management plans for national parks, state forests and crown land reserves, and how land managers perform against their plans
- Reviewing the effectiveness of the Coastal IFOA conditions and protocols in achieving its overall objectives, and providing recommendations to the Environment Protection Authority and the Department of Primary Industries of any adjustments needed to the Coastal IFOA
- Establishing systems for performance triggers and thresholds that provide early warning systems to forest managers about disruption and the need for an adjustment to forest management practice.

Establishing long-term plans in parallel with rolling out initial projects

The first priority in the Program is to design and recommend to the NSW Government a monitoring and evaluation plan for the Coastal IFOA on state forests in 2019, a timeframe required by the Coastal IFOA. A long-term plan for state-wide monitoring and evaluation plan will be recommended to the NSW Government in 2020.

In parallel with the design of these plans, the Program will coordinate the implementation of initial 'building block' monitoring, evaluation, and research projects, within its first two years. These initial projects will be prioritised through consultation with stakeholders and review by the Steering Committee.

Using evidence to recommend changes

The Program will go beyond traditional models of reporting, and provide a more agile and responsive approach to risks and results as they emerge.

Under the Program, the Commission can recommend changes to the NSW Forest Management Framework including forest policy, legislation and agreements, such as the IFOAs and RFAs.

In addition, the Steering Committee will:

- publish monitoring and evaluation results annually, including to inform annual forums under the Coastal IFOA and meetings between the Australian Government and NSW Government on the RFAs
- publish major progress and end-term reviews
- provide opportunities for the community and research organisations to participate in the design and review of monitoring and evaluation plans under the Program.

Continuous improvement will be core to the Program

A successful Program will deliver the expected outcomes and aims set out under this strategy. Success will also mean delivering the Program against good practice principles, and adapting and improving over time.

To measure our performance against the outcomes and aims we expect to deliver, we need to answer three basic evaluation questions:

1. Are we achieving what we said we would?

For example, against the aims and performance measures for the Program.

2. Are we achieving it in a way we said we would?

For example, against the governance, principles and community engagement for the Program.

3. Are we learning and improving the Program?

For example, against scheduled reviews and responding to recommendations where appropriate.

The answer to these questions will help us:

- demonstrate our impact and value
- ensure accountability and transparency
- identify opportunities for improvement and innovation.

The Program Strategy will be formally and independently reviewed every five years. The Steering Committee will review and provide progress reports annually to the NSW Government, which will be published on the Commission's website.

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Performance measures

What are we trying to achieve?	What will success look like?	Short-term KPIs (1-2; ongoing) years	Medium-term KPIs (3-5 years)
1. Focus on the information required to improve the adaptive management of NSW forests	<ul style="list-style-type: none"> ▪ The Program is addressing a clear set of priority information needs for decision makers, land managers, stakeholders and the community ▪ Uncertainties in forest management actions are reduced in a systematic manner with targeted evidence based information provided by the Program ▪ Forest governance, policy and/or management actions adapt or respond to clear evidence from monitoring, evaluation and research provided by the Program ▪ The NSW Government continues to invest in the Program, as it is providing valuable information to improve forest management and inform forest policy decisions 	<p>1.1 Monitoring and evaluation plans focused on priority information needs are in place, by end 2020</p> <p>1.2 At least two existing forest management plans or programs have been evaluated providing recommendations to enhance management, by end 2020</p> <p>1.3 Baselines have been established to track status and trends for priority ESFM indicators in the Coastal IFOA region, by end 2020</p>	<p>1.4 Decision makers and/or land managers report improved forest management in response to evidence from evaluations provided by the Program, by end 2021</p> <p>1.5 A network of permanent forest monitoring plots are established in Regional Forest Agreement regions to report on priority ESFM indicators, by end 2022</p>
2. Provide the public with transparent, independent, accessible and robust evidence of forest management performance	<ul style="list-style-type: none"> ▪ Scientifically robust forest management performance criteria are established, visible and publically available ▪ Forest agreement reporting commitments are met, visible and publically available ▪ Stakeholders and the community trust processes and outputs from the Program ▪ Forest monitoring data, research and evaluations are made available to the public, where feasible 	<p>2.1 Forest management performance criteria addressing priority information needs are established and peer-reviewed, by mid-2020</p> <p>2.2 Annual forums are established to draw in expertise of research organisations, stakeholders and the community, in reviewing forest monitoring, research and evaluations, by end 2020</p>	<p>2.3 Reporting commitments against the monitoring and evaluation plans, as well as existing forest agreements, are being met from end 2020 and are publically available</p> <p>2.4 Stakeholders and community are satisfied the process and information is robust, credible and transparent, by end 2021</p>

Performance measures

What are we trying to achieve?	What will success look like?	Short-term KPIs (1-2; ongoing) years	Medium-term KPIs (3-5 years)
3. Be adaptable to changes to both research priorities and forest monitoring methods	<ul style="list-style-type: none"> ▪ Monitoring, evaluation and research activities adapt to new or evolving priority evaluation questions and decision needs ▪ Best-practice research, evaluation and monitoring methods are adopted where appropriate and affordable ▪ NSW agencies demonstrate how research has informed their on-ground monitoring and evaluation of forest management practices 	<p>3.1 The application of emerging research and technology is piloted or adopted by the Program in the development of monitoring and evaluation plans, by end 2020</p> <p>3.2 Research opportunities and partnerships are established in the design of monitoring and evaluation plans, by end 2020</p>	<p>3.3 New technologies and monitoring methods, such as advances in remote sensing, are adopted and implemented by the Program where they are cost-effective and deliver better results, by end 2022</p> <p>3.4 Forest managers report improvements to their forest management practices through the application of improved monitoring approaches and research findings, by end 2022</p>
4. Be cost effective by employing efficient mechanisms to meet Program objectives	<ul style="list-style-type: none"> ▪ Unit cost of data collection is lowered, for example through technological improvements ▪ The Program enhances synergies between NSW agencies, and enables cost sharing and improved consistency in data collection; duplication is reduced and reporting aligned ▪ Use of existing monitoring data is maximised for evaluation and research into enhanced management 	<p>4.1 Agreement is reached on a minimum dataset and standardised approaches to cross-tenure forest monitoring by NSW agencies, by end 2020</p> <p>4.2 Data management plans are established, providing efficiencies by standardising existing datasets and data formats, by end 2020</p> <p>4.3 At least two efficiency measures have been introduced by the Program, which reduce duplication in data collection and optimise existing forest monitoring programs, by end 2019.</p>	<p>4.4 The unit costs of site-based sampling approaches are reduced, through advances in modelling and more efficient measurement techniques, by end 2023</p> <p>4.5 Sustainable grant funding is extended for ongoing monitoring, evaluation and research under the Program, by end 2023</p>

Performance measures

What are we trying to achieve?	What will success look like?	Short-term KPIs (1-2; ongoing) years	Medium-term KPIs (3-5 years)
<p>5. Satisfy NSW’s obligations to national and international forest management reporting</p>	<ul style="list-style-type: none"> ▪ Reporting commitments are met on time, and are visible ▪ Annual meetings between the Australian and NSW governments on the Regional Forest Agreements (RFA) are held to track progress against RFA commitments and priority ESFM indicators 	<p>5.1 The Program design captures and addresses all NSW obligations to national and international forest management reporting, by end 2019</p>	<p>5.2 All reporting commitments are being met on time and available on NSW’s Sharing and Enabling Environmental Data (SEED) portal, by end 2021.</p>

DRAFT

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