Annual Progress Report 2022-23
Private Native Forestry Monitoring Program

July 2023

NSW GOVERNMENT

Natural Resources Commission

The annual progress report has been prepared by the NSW Natural Resources Commission on behalf of the **NSW Forest Monitoring Steering Committee**.

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Acknowledgement of Country

The Natural Resources Commission acknowledges and pays respect to traditional owners and Aboriginal peoples. The Commission recognises and acknowledges that traditional owners have a deep cultural, social, environmental, spiritual and economic connection to their lands and waters. We value and respect their knowledge in natural resource management and the contributions of many generations, including Elders, to this understanding and connection.

List of acronyms

CEO	Chief Executive Officer
DPI	NSW Department of Primary Industries
DPE	NSW Department of Planning and Environment
EPA	NSW Environment Protection Authority
LLS	Local Land Services
NRC	Natural Resources Commission, 'the Commission'
NSW	New South Wales
MER	Monitoring, Evaluation and Reporting
PNF	Private Native Forestry

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Cover image: Private native forest near Coffs Harbour NSW, image courtesy NRC staff.

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1 Private Native Forestry Monitoring Program

In New South Wales, private native forestry (PNF) is the ecologically sustainable management of native forests on private property to produce timber or other forest products. The rules for conducting native forestry on private land are set out in four PNF codes of practice (PNF codes), established under the *Local Land Services Act 2013* (NSW) (**Figure 1**).[1]

The PNF codes released in May 2022 introduced new requirements for monitoring, assessment, and adaptive management. They task the NSW Forest Monitoring Steering Committee (the Steering Committee),[2] independently chaired by the Natural Resources Commission (the Commission), to:

- propose and oversee a PNF Monitoring, Evaluation and Reporting (MER) Framework noting the codes require joint approval of the Framework by the Chief Executive Officer of Local Land Services (LLS) and the Secretary of the Department of Planning and Environment (DPE)
- conduct annual checks to ensure the evidence base, including maps, is up to date, identify emerging evidence from monitoring and research, and opportunities for improvement
- formally assess the data and evidence every five years and advise relevant Ministers whether there is sufficient evidence to warrant a review of the codes[3]
- oversee updates to the PNF Koala Prescription Map.[4]

The Steering Committee (**Table 1**) is currently overseeing the development of the PNF MER Framework, along with a number of projects recommended in the Commission's advice on finalising the PNF codes.[5] When endorsed, the Framework will be submitted to the Chief Executive Officer (CEO) of Local Land Services (LLS) and the Secretary of the Department of Planning and Environment (DPE) for approval.

The design and implementation of the PNF MER Framework is overseen by the Steering Committee, which is independently chaired by the Commission. **Table 1** sets out the agencies and experts involved, including:

- NSW agencies with responsibilities for natural resource and environmental policy, regulation, science and monitoring, and forest management
- three independent experts providing advice on biodiversity, forestry, and soil and water.

This is the first annual progress report on the PNF Monitoring Program. Future annual progress reports will present the progress and achievements from the implementation of the approved PNF MER Framework.

1 Part 5B of the *Local Land Services Act 2013* sets out the objects, definitions and requirements for private native forestry.
2 Natural Resources Commission (2023) *Program governance and engagement*.
3 Relevant Ministers are the Minister administering the *Forestry Act 2012*, the Minister administering the *Local Land Services Act 2013* and the Minister administering the *Biodiversity Conservation Act 2016*.
4 See clauses 4.3 (2) and (3), and koala prescriptions in Appendix A, of the PNF codes.
5 Natural Resources Commission (2022) *Advice on finalising Draft Private Native Forestry Codes of Practice*.

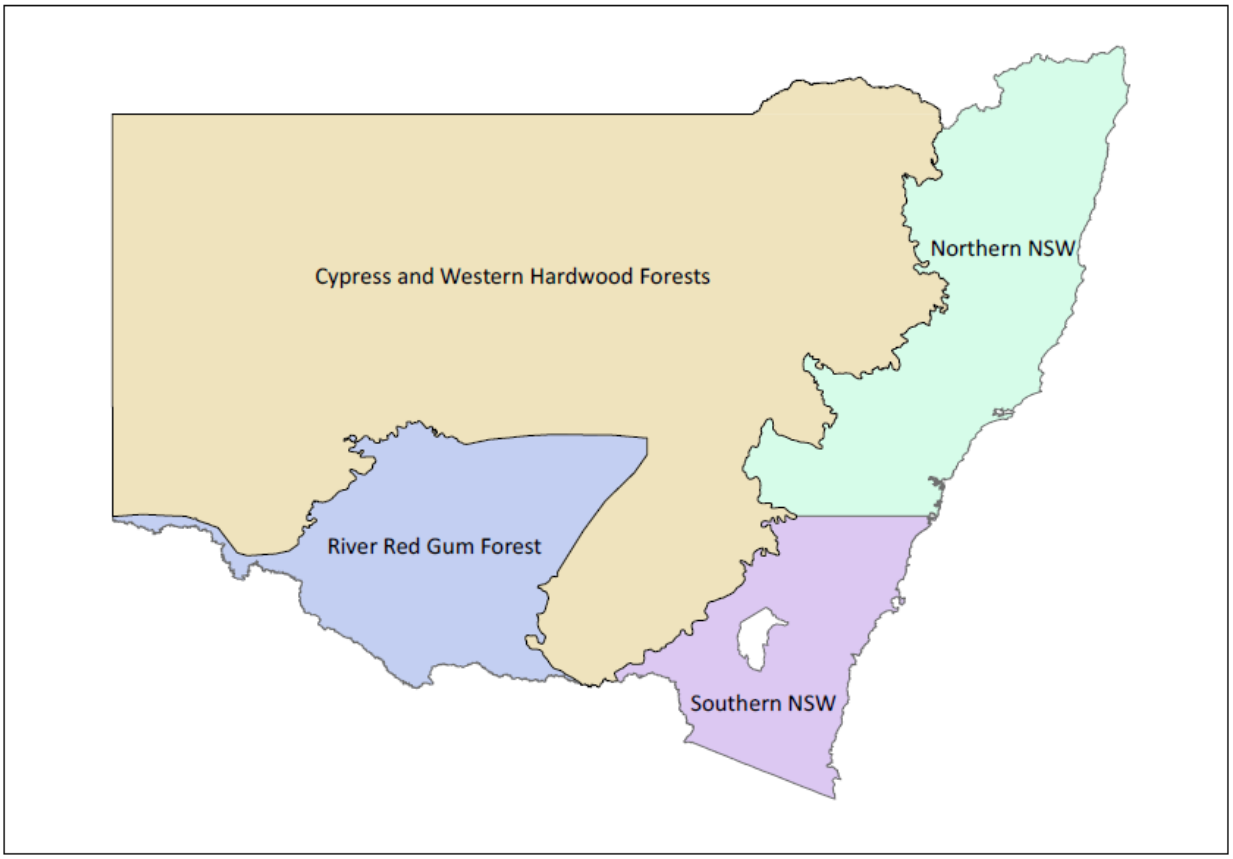

Figure 1: PNF code of practice regions in NSW[6]

Table 1: NSW Forest Monitoring Steering Committee composition

NSW Government agencies	Independent experts
▪ Natural Resources Commission (Chair) ▪ Local Land Services (LLS) ▪ Environment Protection Authority (EPA) ▪ Department of Planning and Environment (DPE) ▪ Department of Primary Industries (DPI) ▪ Aboriginal Affairs NSW ▪ National Parks and Wildlife Service (NPWS) ▪ Forestry Corporation of NSW (FCNSW)	▪ Professor Patrick Baker, University of Melbourne ▪ Professor Phillip Gibbons, Australian National University ▪ Dr Peter Hairsine, Australian National University

[6] PNF codes for Northern NSW and Southern NSW regions, apply to all forests in those regions except those that meet the definitions of river red gum forests, cypress forests or western hardwood forests.

2 Progress and achievements in 2022-23

Table 2 outlines the status of program delivery since the PNF codes were released in May 2022. The remainder of this section details the projects completed or commenced in 2022-23.

Table 2: Progress dashboard

PROGRESS DASHBOARD		
Developing the PNF MER Framework		
Drafting with input from technical review team	**Completed**	✓
Endorsement by Steering Committee[7]	**In progress**	»
Approval by CEO LLS and Secretary DPE	**2023-24**	»
Develop implementation plans	**2023-24**	»
Research and evaluation projects		
Remote sensing feasibility study	**Commenced**	»
Process to verify and improve the PNF koala prescription map and underlying models		
Evaluate map and models and propose approach to validate and update	**Completed**	✓
Develop guidance for identifying high value koala habitat	**Completed**	✓
Oversee development of protocol for landholder requested verification of the map at a property scale	**Commenced**	»
Validate the PNF koala prescription map using independent vegetation survey data at a state-wide scale	**Commenced**	»
Prepare updated koala habitat model and model inputs	**Commenced**	»
Prepare next draft PNF Koala Prescription Map	**2023-24**	»
Risk-based review of threatened species protections		
Develop shortlisting approach and apply to threatened species in Appendix A of the PNF codes to identify key species	**Completed**	✓
Develop risk assessment framework and apply to key species	**In progress**	»
Consider risk ratings and if further protections warranted	**2023/24**	»
Reporting and adaptive management		
Annual check of the evidence base 2022-23	**Completed**	✓
Annual progress report 2022-23	**Completed**	✓

[7] The Steering Committee endorsed the PNF MER Framework at their July 2023 meeting.

2.1 Developing the PNF MER Framework

The Steering Committee has overseen development of the PNF MER Framework.[8] It established a cross-agency technical review team to input to this work. Agencies represented include the Commission, LLS, EPA, DPI, DPE and FCNSW. Independent experts from the Steering Committee provided advice to support development.

The Commission with input from the technical review team has developed the PNF MER Framework. The Commission, on behalf of the Steering Committee will propose the PNF MER Framework to the CEO LLS and the Secretary DPE for joint approval.

Following approval, LLS will develop a PNF MER implementation plan and will have primary responsibility for delivering the PNF MER Framework. This will include undertaking monitoring and targeted investigations that will build the evidence base and inform decision making, longer-term reviews and adaptive management. The Steering Committee, independently chaired by the Commission, will oversee implementation, and conduct annual checks of the evidence base and the formal five yearly assessment. The Commission will prepare and publish annual progress reports.

To support developing the implementation plan, the Commission has engaged experts to conduct a remote sensing feasibility study. The study will consider available remote sensing technologies to better understand the feasibility of monitoring PNF code outcomes and will look at cost effectiveness and the usefulness of the data generated.

2.2 Improving the koala prescription map and underlying models

The Commission's advice on finalising the PNF codes recommended the PNF koala prescription map be adopted as an interim map due to constraints during development, including time and availability of information and modelling.[9]

The Steering Committee is now overseeing a process to verify and improve the PNF koala prescription map and underlying species distribution models. The aim of this large and complex project is to ensure koala prescriptions for PNF are applied in high value koala habitat areas. Critical to its success is cross-agency collaboration, and in particular the work of the DPE Science Strategy and Impact Branch.

To input to this process, the Steering Committee has established a cross-agency technical review team chaired by Peter Cochrane, Assistant Commissioner. Agencies represented include the Commission, LLS, DPE, EPA, DPI and FCNSW. The Commission engaged independent experts to provide advice and support the project, including:

- Professor (Honorary) Jane Elith, University of Melbourne
- Dr Alistair Melzer, Central Queensland University
- Dr Natalie Briscoe, University of Melbourne
- Dr Doug Binns, consulting flora ecologist.

Professor Elith conducted a preliminary evaluation of the PNF koala prescription map and underlying models and identified opportunities for improvement. For example, revisiting decisions made during modelling, such as modelling tree species across their whole range and reconsidering how the tree species index was compiled and preparing one koala habitat model for NSW rather than for individual regions.

[8] The Steering Committee endorsed the PNF MER Framework at their July 2023 meeting.
[9] Natural Resources Commission (2022) *Advice on finalising Draft Private Native Forestry Codes of Practice*.

Independent and agency experts, with input from the technical review team, have developed approaches to verify the PNF koala prescription map and update and improve the underlying species distribution models. The Commission and experts are working closely with DPE scientists, spatial analysts and modellers to progress the identified improvements.

The validation of the interim PNF koala prescription map is currently underway. The analysis is being undertaken by Professor Elith using over 3,300 independent vegetation surveys across the four PNF code regions. To support any PNF koala prescription map improvements, the Steering Committee endorsed 'Guidance for identifying high value koala habitat for PNF purposes.'[10]

2.3 Risk-based review of threatened species protections

The Commission's advice on finalising the PNF codes recommended the Steering Committee oversee a risk-based review of threatened species protections for key species in Appendix A of the PNF codes.[11] The Commission found that the revised codes were a substantive improvement on the PNF codes that were in affect prior to May 2022, including providing more robust koala protections, improved riparian zone protections and revised settings for some threatened species. However, the advice also noted that a review of the threatened species protection is needed to reflect new PNF code settings, best available knowledge, and recent impacts from disturbance events, including the 2019-20 wildfires, and should be carried out by a cross-agency technical review team.

The Steering Committee is now overseeing this work and has established a cross-agency technical review team chaired by Peter Cochrane, Assistant Commissioner. Agencies represented include the Commission, LLS, DPE, EPA, DPI and FCNSW. The Commission engaged independent experts to provide advice and support the project, including:

- Dr Doug Binns, consulting flora ecologist
- Professor Philip Gibbons, Australian National University.

The technical review team, supported by ecological experts, has conducted a vulnerability assessment of the 256 threatened species listed in Appendix A of the PNF Codes. From this, key flora and fauna species have been identified and these are now progressing through a detailed risk assessment. The risk ratings from this assessment will be used to determine if further consideration of species protections are warranted.

The Commission has experienced delays in obtaining critical datasets, which have hindered progress of this work area. These delays have recently been resolved and the team anticipates progressing the remaining areas of work early in the 2023-24 year.

[10] Natural Resources Commission (2023) Guidance for identifying high value koala habitat for PNF purposes.

[11] See Section 4.5 in Natural Resources Commission (2022) *Advice on finalising Draft Private Native Forestry Codes of Practice*.

3 Annual check of the evidence base

A key adaptive management approach adopted for the PNF Monitoring Program is to conduct annual checks to ensure the evidence base, including maps, is up to date, identify emerging evidence from monitoring and research, and opportunities for improvement.

The annual check considers multiple lines of evidence to identify:

- emerging evidence around private native forestry from monitoring, evaluation and research generated by the PNF Monitoring Program or from other sources
- opportunities for improving the PNF MER Framework, including changes to monitoring and evaluation priorities and data collection.

The Steering Committee, independently chaired by the Commission, has carried out the annual check of the evidence base, as required under Section 4.3 of the PNF codes and in accordance with the endorsed approach.[12] Noting the PNF MER Framework was not approved at the time of the 2022-23 annual check, this first check focused on identifying new and emerging evidence from other sources. In following years, evidence from monitoring and evaluation activities conducted under the Framework will also contribute to the evidence. The identified opportunities for improvement will inform ongoing work to finalise the Framework and develop the implementation plan.

The Commission team hosted the annual check of the evidence base in May 2023 with LLS, EPA, DPE and DPI, and the independent experts from the Steering Committee. Eight sources of evidence were identified. A summary of the evidence and actions arising from the annual check of the evidence base is presented in **Table 3**.

The Commission has considered available PNF approvals data (**Figure 2**), which shows that most PNF approvals by area and number occur in Northern NSW, with the highest proportion of private native forest approved for PNF in the River Red Gum Forests region.

As well as identifying recent evidence through the annual check, the Commission has compiled historical evidence covering the period from the late 1990s to present in a stocktake of the evidence base. In total, 42 PNF specific evidence sources have been identified, predominantly related to investigations in the Northern NSW region on forest health and regeneration, or productive capacity. Non-PNF specific evidence sources have also been considered and included in the evidence base where they provide relevant or contextual information. A summary of the PNF specific evidence base is presented in **Figure 3**.

All new sources of evidence identified through the annual check will be added to the evidence base to ensure it is up to date.

[12] Natural Resources Commission (2023) *Private Native Forestry Monitoring, Evaluation and Reporting – Approach for the annual check of evidence*. Prepared on behalf of the NSW Forest Monitoring Steering Committee.

Table 3: Summary of annual check actions

Evidence sources	Adaptive management – actions arising
Preliminary reports from two PNF research studies commissioned by LLS (unpublished reports, projects in progress)	The Commission and LLS to consider the findings from these studies when undertaking the remote sensing feasibility study and developing the PNF MER Framework implementation plan
PNF Plan and Forest Management Plan areas and number approved,[13] authorised by LLS and future reporting of area and volumes harvested	Data available in public registers can be used and reported in the monitoring program when available
Compliance activities undertaken by the EPA[14]	LLS and EPA to identify opportunities for advice and support services provided by LLS to support PNF Plan holders better understand their obligations or to flag matters relating to conditions for consideration as part of the formal five-yearly assessment process
Status of threatened species listings in Appendix A of the PNF codes (project in progress[15])	Identified updates to species listings will be considered by LLS for minor amendments at the earliest opportunity or for consideration during the five-yearly formal assessment
Count of threatened species records in or near PNF approved areas (project in progress[16])	Consider in the project risk-based review of threatened species protections and may also be relevant to consider during the five-yearly formal assessment
PNF Koala Prescription Map – erroneously includes Travelling Stock Reserves (project in progress[17])	Remove Travelling Stock Reserves in the next PNF Koala Prescription Map update
Additional contextual material: Outputs from the Forest Monitoring and Improvement Program including baseline studies: forest extent, condition and health; water and soil resources; biodiversity; carbon cycles; and productive capacity[18] Journal publications – four papers identified[19,20,21,22]	Consider landscape scale contextual information in the PNF MER implementation plan, when analysing monitoring data and during the five-year formal assessment Add to stocktake of evidence base

13 LLS (n.d.) *Monitoring, Evaluation and Reporting*.
14 EPA (2022) *Native forestry compliance update*.
15 Natural Resources Commission (2023) *Threatened species protections*.
16 Ibid.
17 Natural Resources Commission (2023) *Koala prescription mapping*.
18 Natural Resources Commission (2023) *Cross-tenure, methods, data and reports*.
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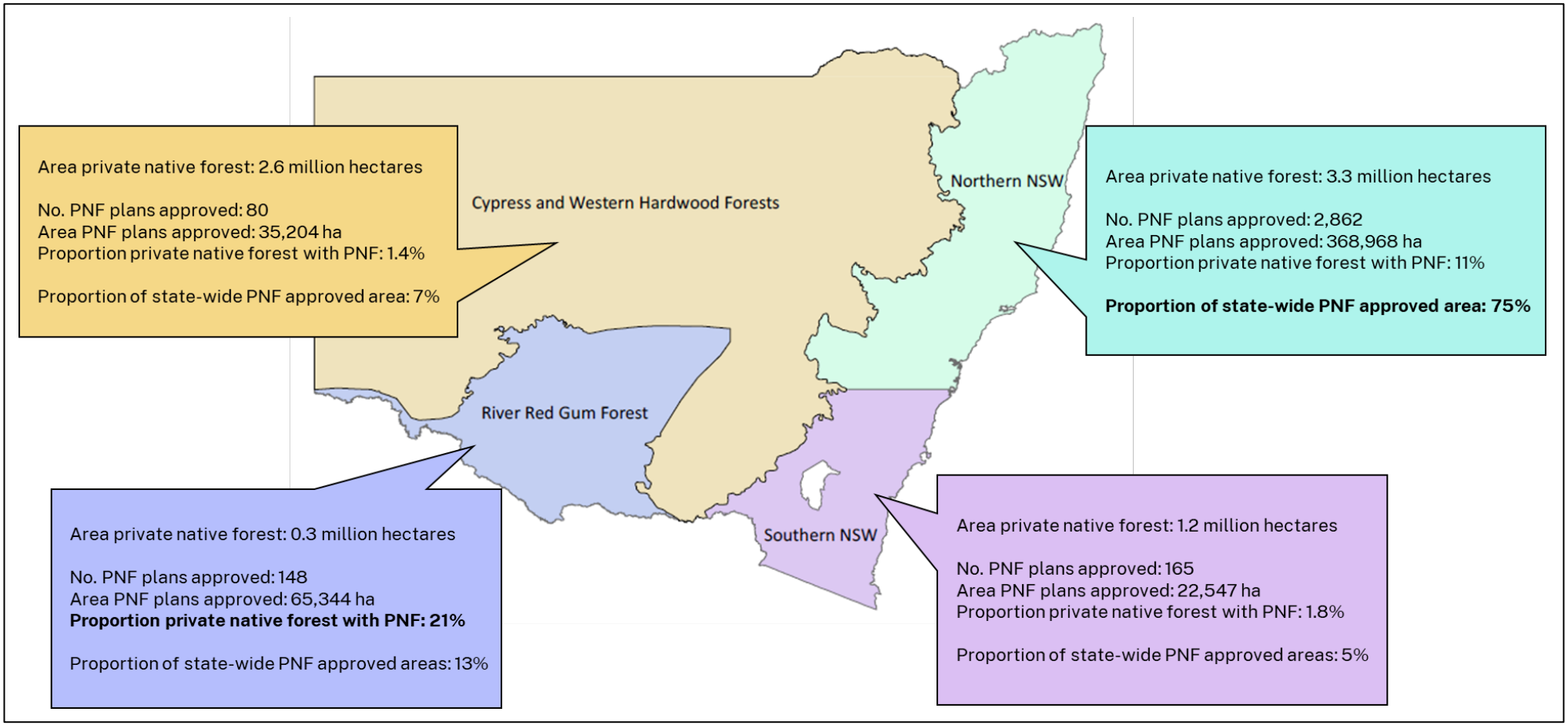

Figure 2: PNF plan approved areas and approvals by PNF code region[23]

[23] PNF plan areas and approvals up to 2021-22 taken from LLS reporting webpage; private native forest area by PNF code region was estimated using Australia's State of the Forest Report 2018 tenure of Australia's forest spatial dataset ('aus-forten18_geotiff') by 2Rog Consulting for the NRC 2023. Note: the area of PNF plans approved does not equate to the area harvested.

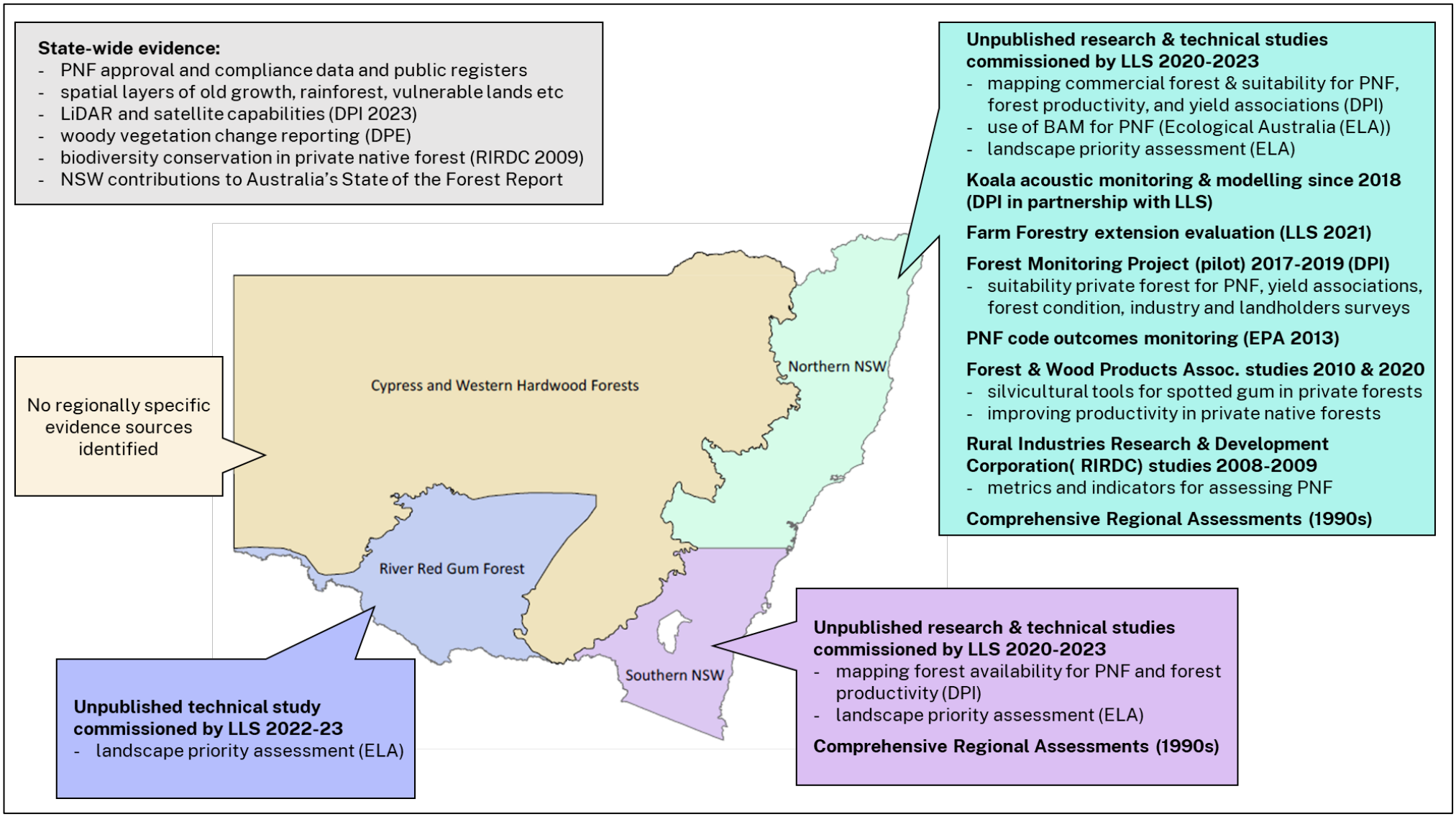

Figure 3: Summary of the PNF evidence base

4 Priority next steps

4.1 Implementation planning and commence monitoring

The Commission is now working with agencies and experts to finalise the PNF MER Framework for endorsement[24] and approval, and has engaged experts to conduct the remote sensing feasibility study. The priority next step for the PNF MER program will be for LLS to develop the implementation plan overseen by the Steering Committee. The Commission team will work closely with LLS to support this work and transition responsibility for delivery of the Framework to LLS.

LLS will commence MER activities outlined in the future implementation plan, with oversight from the Steering Committee.

The Steering Committee, independently chaired by the Commission, will continue its oversight responsibilities including the next annual check of the evidence base.

4.2 Koala habitat modelling and mapping

Once the expert evaluation of the existing PNF koala prescription map is complete, the Steering Committee will consider the findings. The PNF codes task the Steering Committee with overseeing updates to the map, noting updates require the joint approval of the Minister administering the *Local Land Services Act 2013* and the Minister administering the *Biodiversity Conservation Act 2016*.

The Commission will continue to work closely with independent experts and DPE scientists and modellers to progress updates to the species distribution models underpinning the PNF koala prescription map. This will include evaluating model performance using independent vegetation survey data. Following this, a draft updated map will be prepared by DPE, and the technical review team and experts will consider implications. The Steering Committee will then consider findings, and if warranted, propose map updates to the relevant Ministers.

4.3 Finalising the risk assessment for threatened species

Noting the recent resolution of critical data access issues to undertake this work, the risk assessment for key species listed in Appendix A of the PNF codes will be undertaken. The results of the assessment will then be used to consider if species protections are current based on best available data.

The Steering Committee will then consider the findings and recommendations, and appropriate next steps. These could include proposing amendments to protections for species if high risks have been identified.

[24] The Steering Committee endorsed the PNF MER Framework at their July 2023 meeting.