



Land management and biodiversity conservation reforms

Final advice on a response to the policy review point
July 2019



Natural Resources Commission

Enquiries

Enquiries about this report should be directed to:

Name	Liam Hogg
Phone	(02) 9228 4844
Fax	(02) 9228 4970
E-Mail	nrc@nrc.nsw.gov.au
Postal address	GPO Box 5341, Sydney NSW 2001

List of acronyms

BCT	Biodiversity Conservation Trust
CAR	Comprehensive, Adequate and Representative
EES	Environment, Energy and Science Division of the Planning, Industry and Environment Cluster
LLS	Local Land Services
MER	Monitoring, Evaluation and Reporting
NSW	New South Wales
OEH	Former Office of Environment and Heritage
SLATS	State-wide Landcover and Tree Survey Methodology
The Code	The Land Management (Native Vegetation) Code
The Commission	The Natural Resources Commission
The reforms	The Land Management and Biodiversity Conservation reforms

List of Local Land Services regions abbreviations

CT	Central Tablelands
CW	Central West
GS	Greater Sydney
HUN	Hunter
MUR	Murray
NC	North Coast
NW	North West
NT	Northern Tablelands
RIV	Riverina
SE	South East
WES	Western

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Executive summary

Background

In 2017, the NSW Government implemented the Land Management and Biodiversity Conservation reform package (the reforms), which included the new *Biodiversity Conservation Act 2016* and amendments to the *Local Land Services Act 2013*. The reforms are delivered through four key pillars, which are:

- the Land Management Framework, including the Land Management (Native Vegetation) Code (the Code), which sets out the types of native vegetation clearing allowed on private land and rules for each type of clearing, including set aside requirements to compensate for the impacts of certain types of clearing
- \$240 million investment in private land conservation, managed by the Biodiversity Conservation Trust (BCT)
- improved frameworks to manage native plants and animals, including investment in the Saving our Species program, a process for protecting Areas of Outstanding Biodiversity Value, risk-based wildlife licensing and codes and a modernised process for listing threatened plants and animals
- the Biodiversity Offsets Scheme.

The reforms came in response to an election commitment to implement the recommendations of a 2014 review by the Independent Biodiversity Legislation Review Panel. The review outlined 43 recommendations to improve biodiversity conservation on private land, strike the right balance between production and conservation, increase certainty for landholders and reduce regulatory burden. Prior to legislation being passed, a policy review trigger was agreed upon between the then Minister for the Environment and the then Minister for Primary Industries to “initiate a review of the policy framework (including legislative, regulatory and financial settings)” if notified clearing and applications for certification for clearing reached an annualised threshold figure of 20,000 hectares measured in any six month period.

The Premier has requested through a terms of reference that the Natural Resources Commission (the Commission) provide independent, evidence-based advice on a response to the policy review trigger for the Land Management and Biodiversity Conservation reforms being reached in October 2018. This report presents the Commission’s final findings. The advice covers:

- the appropriateness of the current trigger
- proposed improved triggers and the current status of trigger thresholds
- monitoring, evaluation and reporting (MER) indicators for measuring environmental, social and economic outcomes
- emerging issues from available data
- opportunities to improve service delivery and risk mitigation.

The reforms are contested, complex and significant. Having a timely, fit-for-purpose response to emerging risks, coupled with a coordinated long-term MER approach is critical. The Commission’s advice is based on an assessment of the NSW Government’s intent behind the reforms as indicated in relevant legislation, the second reading speeches to Parliament and the expert panel report that informed the reforms.

Findings

The current trigger is not appropriate for its intended use

The Commission has assessed the current trigger and found that it is not appropriate for its intended purpose for the following reasons:

- The basis of the current threshold is not transparent.
- It is a high-level indicator that does not incorporate reform components intended to mitigate environmental risk.
- It does not represent the holistic nature of the reforms.
- It does not adequately consider regional variation.

The Commission also considers the review response proposed under the current trigger (a full review of the entire reform package) is likely disproportionate to the risk that it is measuring.

A new trigger framework is needed to monitor key risks

The Commission has developed a framework for a 'dashboard' set of triggers that are more appropriate for determining policy review points (outlined in **Figure 1**). The framework includes multiple triggers that reflect:

- the primary intent of the reforms
- the key risks to policy success
- good practice principles for developing policy review triggers.

The Commission proposes that triggers should be reported quarterly to the Cluster Ministers Group for the Planning, Industry and Environment Cluster. The previous reporting to Cabinet should be replaced by reporting on an annual or exceptional basis if thresholds are exceeded to ensure Cabinet remains informed. No single trigger is proposed to initiate a comprehensive policy review. Instead, the framework proposes appropriately targeted review responses for each trigger. **Figure 2** provides a proposed dashboard demonstrating how the triggers could be reported and shows available data that highlights the triggers that have been exceeded.

It is important to note that a NSW Government-wide indicator of biodiversity value is necessary to properly assess and implement the reforms and would be the preferred biodiversity trigger. However, agencies have not developed a single measure that is a reasonable proxy for biodiversity value. Although there has been significant scientific progress in developing credible proxies for monitoring biodiversity value, it is likely to take some time to develop and reach agreement on such a measure. As such, it should be a priority to develop a single measure of biodiversity value used across government as part of a coordinated, reform-specific MER program.

The new trigger framework has identified three key risks to the reforms – regarding policy implementation, biodiversity and compliance – that should be addressed immediately

The Commission used available data to assess the triggers outlined in **Figure 1** and considers that the policy implementation, state-wide biodiversity, regional biodiversity and compliance trigger thresholds have been exceeded and represent major individual risks to reform success (**Figure 2**). The following sections outline these risks. The Commission does not recommend an overall review of the full reform policy framework at this stage and provides recommendations on targeted reviews in response to individual risks.

Focus area	Trigger	Risk exposure measured	Trigger response
1. Policy Implementation	<p>Any of the following critical instruments for implementing the reform are not implemented or operational as policy intended within the first 18 months of the reform (February 2019):</p> <ul style="list-style-type: none"> Land Management (Native Vegetation) Code A publicly available Native Vegetation Regulatory Map showing all categories Biodiversity Conservation Investment Strategy Private land conservation agreements A single measure for assessing the biodiversity value under the Biodiversity Offsets Scheme A coordinated, reform-specific MER program 	<p>Policy not implemented as intended or change in policy intent</p> <p>Key outcomes not being achieved</p> <p>NSW Government commitments not delivered</p>	<p>For any instrument not yet implemented or operational as policy intended, firstly review if the instrument is still a government priority and secondly if it can effectively be implemented or operational within three months</p> <p>If the instrument is still a priority and it can't be implemented or operational within three months, review if there are any barriers to implementing the instrument and develop an action plan for its implementation</p>
2. Compliance	<p>Area of unexplained clearing exceeds the pre-reform average</p>	<p>Policy not implemented as intended</p> <p>Biodiversity impacts from unexplained clearing</p> <p>Lack of landholder certainty and clarity around native vegetation clearing regulations</p>	<p>Develop action plan to address known causes or undertake a review of the implementation of, engagement or compliance with regulations</p>
3. Biodiversity - state-wide <i>*see footnote [1]</i>	<p>The annualised combined area (ha) of set asides and conservation agreements is less than two times the area (ha) approved for clearing (certifications and notifications under Parts 3, 4, 5 and 6 of the Code)</p>	<p>Biodiversity impacts from clearing not adequately compensated</p>	<p>Relevant agencies provide response to Ministers on drivers (e.g. is there a known cause or are the drivers unknown?)</p>
4. Biodiversity - regional <i>*see footnote[1]</i>	<p>Using a 'traffic-light' risk rating system, LLS regional risk to biodiversity from clearing under the reforms exceeds 'high risk' thresholds: The risk rating system considers the area of land approved to be cleared and area of set asides in each LLS region. Risk rating is provided as 'Low: No Action', 'Medium: Keep Watch' and 'High: Review Required'</p>	<p>Biodiversity impacts from clearing not adequately compensated</p>	
5. Socioeconomic	<p>State-wide investment in conservation agreements falls below 80 percent of budget</p>	<p>Landholders not engaging with policy to conserve biodiversity on private land</p>	<p>Develop action plan to address known causes or review of drivers and barriers to landholder uptake of private land conservation agreements</p>
Reported for consideration without threshold	<p>Cumulative area approved to clear under Parts 3, 4, 5 and 6 of the Code (ha)</p>		

Figure 1: The Commission's proposed trigger framework¹

¹ For the purposes of the biodiversity triggers, the Commission has applied a 0.7 discount multiplier to areas cleared under Part 3 (Pasture expansion) to recognise that this is a thinning code where a proportion of vegetation is retained.

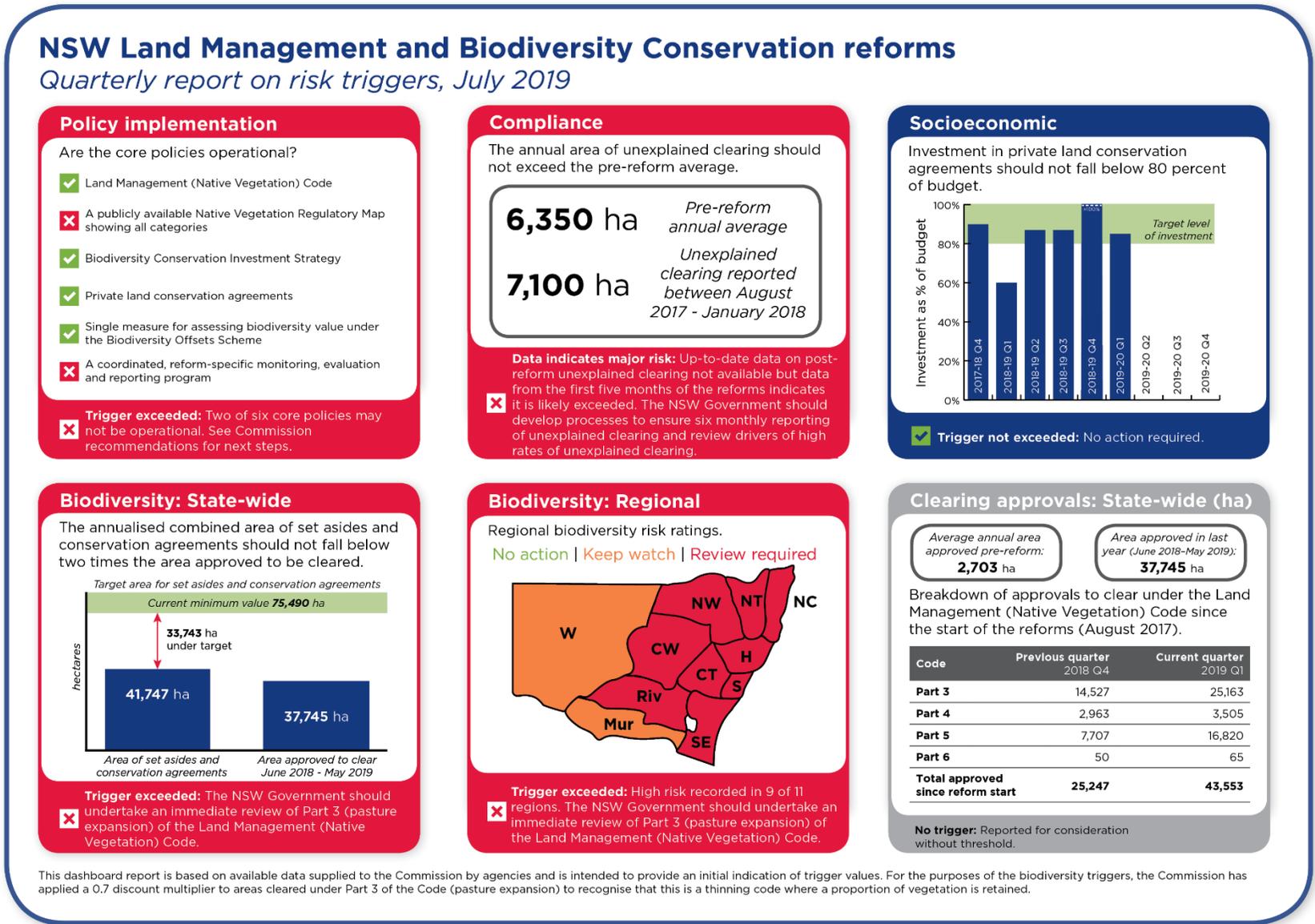


Figure 2: Proposed trigger reporting dashboard and current trigger value

A Native Vegetation Regulatory Map showing all map categories is not publicly available

A review of the critical policy instruments contained in the policy implementation trigger found that a publicly available version of the Native Vegetation Regulatory Map, including Category 1 (exempt) and Category 2 (regulated) land, has not been released.

The Commission recommends the staged, public release of the Native Vegetation Regulatory Map for woody vegetation-dominant landscapes, including Category 1 (exempt) and Category 2 (regulated) land, immediately on a region-by-region basis. This will provide greater certainty to landholders but will not be without its own risks. The staged release of the map for woody vegetation-dominant landscapes must be supported by processes to improve its accuracy and resolve any disagreements with the map. The map for native grassland-dominant landscapes should be released publicly only once there is confidence in the mapping of native grasslands.

Compliance frameworks are inadequate and high rates of unexplained clearing pose a major risk

Data on the extent of unexplained clearing – the Commission’s proposed compliance trigger – are only available for the first five months of the reforms (**Figure 2**) and are not considered sufficiently representative to demonstrate whether the reforms are resulting in a decrease in unexplained clearing, as would be expected. However, the data that is available indicate that there is a major risk from unexplained clearing. The long term average of just under 60 percent of agricultural cleared land being unexplained is a concern. This trend, coupled with a significant increase in approvals to clear poses a significant risk to biodiversity and the legitimacy of the reforms. Further, not being able to report unexplained clearing in a timely way undermines public confidence in the system. As a priority, the NSW Government should:

- develop processes to report up to date data on unexplained clearing every six months
- review the drivers behind high rates of unexplained clearing and implement measures to address any issues
- review roles, responsibilities and resourcing in enforcing compliance, including which part of the Planning, Industry and Environment Cluster is best placed to be the regulator. Enforcement needs to be firm, fair and well-resourced in order to ensure effective compliance and trust in the reforms.

On compliance more broadly, the Commission notes that the Audit Office of NSW has recently released an audit of the management of native vegetation in NSW. This audit recommended a number of improvements to the delivery of the reforms, particularly around coordination among agencies and ensuring timely compliance with approvals under the Code. The Commission broadly agrees with the findings of the Audit Office’s report, in particular that:

- there are significant delays in identifying unlawful clearing and few penalties imposed by Environment, Energy and Science (EES), with no prosecutions under the current reforms
- there are limited processes to ensure approvals under the Code are complied with, in particular set aside management requirements
- there are delays in the sharing of information on compliance activities under the Code
- the lack of a publicly available Native Vegetation Regulatory Map limits landholders’ ability to determine if their plans for clearing are lawful.

In addition, the Commission considers that:

- the roles and responsibilities for monitoring and enforcing the Code (between LLS and EES) need to be reviewed
- monitoring of compliance with certifications and notifications to clear, including the establishment and management of set asides, under the Code needs to be strengthened, including increasing transparency.

Widespread use of Part 3 of the Code - which relates to thinning - poses a risk to biodiversity state-wide

The Commission found that the state-wide biodiversity trigger and nine of the eleven regional biodiversity trigger thresholds have been exceeded (**Figure 2**). The state-wide trigger considers the area approved for clearing against the area of set asides and private land conservation agreements. The regional trigger only considers the area approved for clearing against set asides, as BCT investment in private land conservation is reported at a different regional level and is based on a state-wide strategic plan. The current trigger values indicate that there is a state-wide risk to biodiversity value from native vegetation clearing and that the policy intent of the reforms is not being achieved.

In 2018/19, over 37,000 hectares² were approved to be cleared (excluding clearing for invasive native species). This is around 13 times the annual average rate of approval pre-reform, which was approximately 2,700 hectares on average per year between 2006/07 and 2016/17.³

In the second reading speech to Parliament for the *Biodiversity Conservation Act 2016*, the then Minister for Primary Industries stated that “for each hectare cleared under the framework, it is estimated that between two and four hectares will be set aside and managed in perpetuity” in order to conserve biodiversity values. No Local Land Services (LLS) region is achieving this benchmark. Instead of setting aside an area for conservation equivalent to two to four times the area approved for clearing, nine of the eleven regions are setting aside less than the area approved for clearing (between 6 and 69 percent of the area approved to be cleared⁴). These low set aside ratios are driven mainly by the extensive use of Part 3 of the Code (pasture expansion).

Part 3 of the Code relates to thinning for pasture expansion purposes. Thinning is a form of clearing under the Code that does not require set asides. This part of the Code was not part of the Independent Biodiversity Legislation Review Panel’s recommendations. The rules of this part of the Code and its application by LLS should be immediately reviewed. The NSW Government should not wait until the proposed three-year review to do this.

A coordinated, reform-specific MER program is needed to report on reform outcomes

A coordinated, reform-specific MER program is considered a critical reform component in the policy implementation trigger. There is currently no overarching MER program for the reforms. The Planning, Industry and Environment Cluster should fast track the development and

² Note: This figure represents the total treatment area associated with approvals to clear and includes approximately 21,500 hectares of clearing under Part 3 of the Code (pasture expansion) which is a thinning code where a proportion of vegetation is retained. The Commission notes that when discussed in association with the trigger values in this report, figures for total treatment area have a discount multiplier of 0.7 applied and will differ from figures for the total treatment area. The report will highlight when total treatment area or the discount multiplier is applied.

³ Note: This figure represents total treatment area associated with Property Vegetation Plans and includes thinning associated with these Plans.

⁴ With the 0.7 discount multiplier applied.

implementation of a coordinated, reform-specific MER program to holistically track performance and report on outcomes. The Commission has developed an overarching MER framework based on the reform-specific program logic to be used as a guide for agencies. This should be actioned as a priority to inform the three- and five-year reviews committed to by the NSW Government.

There are further opportunities to improve the reforms' service delivery and mitigate risks

In addition to the findings of the trigger and MER framework analysis, the Commission found that:

- the strategic coordination among agencies can be improved and requires independent oversight and the building of a collaborative culture and trust between agencies
- other, less critical, policy instruments may not be operating as intended, including the Native Vegetation Panel and the process for declaring Areas of Outstanding Biodiversity Value and should be reviewed as part of the three-year review.

Based on the findings of the review, the Commission provides the following recommendations:

In order to address critical risks to reform outcomes, the Commission recommends that the following actions are addressed immediately:

- 1 If the implementation of the Native Vegetation Regulatory Map remains a NSW Government priority, EES implement a **staged release of the Native Vegetation Regulatory Map**:
 - 1.1 The first stage should involve the immediate release of all categories of the map for woody vegetation-dominant landscapes on a region-by-region basis. This needs to be supported by processes to improve map accuracy, including a process to resolve disagreements on map accuracy that remain following EES' normal appeal process that is overseen by an independent body.
 - 1.2 The second stage should involve the release of all categories of the map for native grassland-dominant landscapes, once there is more confidence in the accuracy of the mapping of native grassland.
- 2 The NSW Government **strengthen compliance frameworks** by:
 - 2.1 Reviewing the roles, responsibilities and resourcing for monitoring and enforcing compliance with certifications and notifications to clear and set asides under the Land Management (Native Vegetation) Code.
 - 2.2 Developing clear processes to monitor and report on compliance with certifications and notifications to clear and set asides under the Land Management (Native Vegetation) Code. Monitoring and reporting processes should be developed with consideration of best practice principles, including ensuring monitoring can identify incidents of non-compliance and compliance risks in a timely way.
 - 2.3 Reviewing the drivers of high rates of unexplained clearing and address identified issues.
 - 2.4 Developing processes to ensure six monthly monitoring and reporting of unexplained clearing as part of the trigger framework.

- 3 The NSW Government undertake an **immediate review of Part 3 (pasture expansion) of the Land Management (Native Vegetation) Code** to address risks to biodiversity values state-wide resulting from high rates of certifications and notifications to clear under this part of the Code.

In order to continue to monitor key risks associated with the Land Management and Biodiversity Conservation Reforms the Commission recommends that:

- 4 The NSW Government replace the existing policy review trigger with the immediate implementation of the Commission's proposed trigger framework.
- 5 EES, LLS and BCT provide a quarterly report on the status of triggers to the Cluster Ministers Group for the Planning, Industry and Environment Cluster.
- 6 Previous reporting on triggers to Cabinet be replaced by reporting on an annual or exceptional basis if thresholds are exceeded to ensure Cabinet remains informed.

In order to report on key outcomes associated with the Land Management and Biodiversity Conservation reforms, the Commission recommends that:

- 7 If a coordinated, reform specific MER program remains a NSW Government priority, the NSW Government implement an overarching MER program within six months that is informed by the Commission's proposed MER framework so that sufficient data is collected to inform the three- and five-year reviews to the best possible extent.

In order to implement the proposed trigger and MER frameworks and improve service delivery more broadly the Commission recommends that:

- 8 The Secretary of the Planning, Industry and Environment Cluster establish an overarching steering committee comprised of relevant agencies to oversee coordination and implementation across the whole reform, including:
 - the implementation of the trigger and MER frameworks
 - alignment of strategic priorities, including conservation investment
 - responses to emerging issues
 - landholder engagement and capacity building
 - data and information sharing.
- 8.1 The steering committee should have an independent chair appointed by the Secretary (such as a senior representative of the Secretary's Office).
- 9 As part of the three-year review, the NSW Government should consider:
 - 9.1 Barriers to landholder engagement with the Native Vegetation Panel. This review should include the roles and responsibilities of the Panel under the *Local Land Services Act 2013* and potential opportunities to increase the options available to the Native Vegetation Panel to assist with applications that fall outside of the Code.
 - 9.2 Whether adequate processes are in place for agencies and the broader community to nominate areas to be recommended by EES for declaration as an Area of Outstanding Biodiversity Value.

1 Introduction and context

The Premier has asked that the Commission provide independent, evidence-based advice on a response to the Land Management and Biodiversity Conservation reforms' policy review trigger being reached in October 2018.

1.1 Background to the reforms and policy review trigger

In 2017, the NSW Government implemented the Land Management and Biodiversity Conservation reforms, which included the new *Biodiversity Conservation Act 2016* and amendments to the *Local Land Services Act 2013* (**Box 1**).

The reforms are delivered through four key 'pillars', summarised below and in **Table 1**:

- The Land Management Framework, including the Land Management (Native Vegetation) Code, which sets out the types of native vegetation clearing allowed on private land and rules for each type of clearing, including set aside requirements to compensate for the impacts of certain types of clearing.
- \$240 million investment in private land conservation, managed by BCT.
- Improved frameworks to manage native plants and animals, including investment in the Saving our Species program, a process for protecting Areas of Outstanding Biodiversity Value, risk-based wildlife licensing and codes and a modernised process for listing threatened plants and animals.
- The Biodiversity Offsets Scheme.⁵

The various activities under these pillars are managed by BCT, LLS and the former Office of Environment and Heritage (OEH). The Commission notes that, as of 1 July 2019, OEH has been abolished and its activities are now delivered by the new Environment, Energy and Science Division of the Planning, Industry and Environment Cluster. For the purposes of this review, the Commission will refer to the agency as EES. Implementation of the Land Management Framework is undertaken by the state-wide Sustainable Land Management Unit within LLS. Where specific LLS regions are discussed, this refers to the geographical region and not the regional LLS offices.

⁵ Note: The Biodiversity Offsets Scheme is largely used for development approvals, which are outside the terms of reference. While the option exists to assess clearing for agricultural production and establish stewardship sites through the use of the Biodiversity Offsets Scheme, this function has not been taken up by landholders to date.

Box 1: The Land Management and Biodiversity Conservation Reforms

In 2014, the then Minister for the Environment appointed the Independent Biodiversity Legislation Review Panel⁶ to conduct a comprehensive review of the *Native Vegetation Act 2003*, *Threatened Species Conservation Act 1995*, *Nature Conservation Trust Act 2001* and parts of the *National Parks and Wildlife Act 1974* that relate to clearing of native vegetation on private land, conservation of native plants and animals and private land conservation. The aim of the review was to provide recommendations on how to simplify legislation and make it more effective to improve biodiversity conservation, support sustainable land management and reduce compliance and administrative burdens. In the same year, the Panel released a report calling for transformational policy change to conserve biodiversity and support sustainable development. The report outlined 43 recommendations to achieve this.

The NSW Government made an election commitment to implement the Panel's recommendations and passed the *Biodiversity Conservation Act 2016* and amendments to the *Local Land Services Act 2013* in November 2016. These replaced existing legislation, including the *Native Vegetation Act 2003*. The new legislation commenced on 25 August 2017.

The reforms aim to ensure a balanced approach to agricultural production, development and biodiversity conservation, consistent with the principles of ecologically sustainable development.^{7,8} Broadly, the intent of the reforms is to contribute to improved biodiversity value⁹ at the bioregional and state scales, provide greater flexibility for landholders to improve productivity on their land and give landholders more capacity and confidence to sustainably manage their land and participate in biodiversity conservation.

Prior to legislation being passed, a policy review trigger was agreed upon between the then Minister for the Environment and the then Minister for Primary Industries to "initiate a review of the policy framework (including legislative, regulatory and financial settings)" if notified clearing and applications for certification for clearing¹⁰ reached an annualised threshold figure of 20,000 hectares measured in any six month period.

⁶ The Panel was comprised of Dr Neil Byron (Chair), Dr Wendy Craik, Dr John Keniry and Professor Hugh Possingham (initial panel member but did not participate in completion of the final report).

⁷ The overarching purpose of the *Biodiversity Conservation Act 2016* is to "maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development." Components of the reform under the *Local Land Services Act 2013* align with the object of the Act to "to ensure the proper management of natural resources in the social, economic and environmental interests of the State, consistently with the principles of ecologically sustainable development."

⁸ In both acts, ecologically sustainable development is defined in Section 6 (2) of the *Protection of the Environment Administration Act 1991*.

⁹ For the purposes of this review, 'biodiversity value' refers to attributes described in the definition of biodiversity and biodiversity value in the *Biodiversity Conservation Act 2016*, which is a broad definition encompassing both the variety of species and ecosystems, as well as ecosystem integrity.

¹⁰ Notification under the Code refers to notification for intended clearing being given under Section 60X under the *Local Land Services Act 2013*. Certification under the Code refers to a code compliant certificate being issued under Section 60Y of the *Local Land Services Act 2013*. For the purposes of this report, the term 'approved' refers to both notifications and certifications of native vegetation clearing on Category 2 (regulated) land. Where the Commission discusses notified clearing or certified clearing separately, the specific term will be used. The terms of reference indicates that the trigger excludes clearing associated with allowable activities and clearing under Part 2 of the Code (invasive native species) and the current trigger excludes this type of clearing. As such, this has been excluded from the Commission's analysis to date and is not included in references to 'approvals.'

Table 1: Overview of the Land Management and Biodiversity Conservation reform pillars

Reform pillar	Key components	Responsible body	Key policy intent
The Land Management Framework <i>(under the Local Land Services Amendment Act 2016)</i>	<ul style="list-style-type: none"> The Code, which sets out types of clearing allowed and rules for each type of clearing including set aside¹¹ requirements to compensate for the impacts of certain types of clearing A publicly available Native Vegetation Regulatory Map that identifies rural land that is regulated (Category 2) and unregulated (Category 1) Allowable activity provisions that allow clearing for everyday land management The Native Vegetation Panel for approvals outside the Code or allowable activities 	<ul style="list-style-type: none"> LLS (framework implementation)¹² EES (compliance, map development and reviews, including landholder initiated reviews) 	<ul style="list-style-type: none"> Provide landholders with more certainty and opportunities to improve productivity and economic outcomes Give landholders the information and empowerment to manage their land Manage environmental risk by ensuring biodiversity value is conserved through land use rules and set asides
Private land conservation <i>(under the Biodiversity Conservation Act 2016)</i>	<ul style="list-style-type: none"> \$240 million for voluntary private land conservation agreements, invested under the Biodiversity Conservation Investment Strategy 2018¹³ Agreements, including permanent and term conservation agreements, and permanent biodiversity stewardship agreements, which allow for the creation of biodiversity credits 	<ul style="list-style-type: none"> BCT (manage investment) EES (develop investment strategy) 	<ul style="list-style-type: none"> Contribute to improved biodiversity value at bioregional and state scales Provide opportunity to diversify income streams for rural landholders
Improved frameworks to manage native plants and animals <i>(under the Biodiversity Conservation Act 2016)</i>	<ul style="list-style-type: none"> The Saving our Species program Risk-based wildlife licensing and codes A process for protecting Areas of Outstanding Biodiversity Value A modernised process for listing threatened plants and animals A Threatened Species Scientific Committee to assess threat status of species and ecological communities 	<ul style="list-style-type: none"> EES 	<ul style="list-style-type: none"> Contribute to improved biodiversity value at bioregional and state scales Protect targeted threatened species and habitats

¹¹ In some cases, the Code may require the establishment of a 'set aside' of existing native vegetation on the property in exchange for the removal of native vegetation. Set asides are listed on a public register and must be actively managed to promote vegetation integrity in perpetuity.

¹² Note: The Code also requires concurrence from the Minister administering the *Biodiversity Conservation Act 2016*.

¹³ Under the *Biodiversity Conservation Act 2016*, the Minister responsible under the Act is to approve and publish a Biodiversity Conservation Investment Strategy to guide the NSW Government and BCT in prioritising investment in biodiversity conservation. The strategy includes principles to identify priority investment areas and investment in those areas, as well as a map of priority investment areas. The Minister is required to review the strategy every five years and may amend the strategy at any time.

Reform pillar	Key components	Responsible body	Key policy intent
The Biodiversity Offsets Scheme (under the <i>Biodiversity Conservation Act 2016</i>)	<ul style="list-style-type: none"> ▪ The Biodiversity Conservation Fund, to which landholders can make payments to satisfy offset obligations ▪ Permanent biodiversity stewardship agreements, which allow for the creation of biodiversity credits ▪ The Biodiversity Assessment Method which assesses biodiversity value, calculates biodiversity losses from development and gains from actively managing stewardship sites 	<ul style="list-style-type: none"> ▪ BCT (agreements and the Fund) ▪ EES (Biodiversity Assessment Method) 	<ul style="list-style-type: none"> ▪ Provide a process for landholders to avoid, minimise and offset biodiversity impacts from development ▪ Manage environmental risk by ensuring biodiversity value is conserved through use of offsets

1.2 The terms of reference

Broadly, the terms of reference (**Attachment 1**) asks the Commission to provide advice on:

- triggers to initiate policy review points, including the appropriateness of the current trigger and whether new triggers are required
- broader MER indicators for reform review to determine if the reforms are balancing environmental, social and economic outcomes
- emerging issues from available spatial and temporal data
- early findings on opportunities for reform service delivery optimisation or improved risk mitigation.¹⁴

To assist with the review, the Commission engaged a panel of experts with experience in ecology, land management and social science.¹⁵ The Commission also established a working group of staff from key agencies responsible for the implementation of the reforms, including BCT, LLS and EES.

1.3 What is the difference between triggers and MER indicators?

The purpose and design of policy review triggers and MER indicators are very different. The purpose of a trigger is to provide an early alert to decision makers regarding potential unacceptable risks. Triggers provide decision makers with an 'early warning sign' that a particular aspect of a policy may not be functioning properly and that the agreed policy outcomes are at risk. Triggers do not comment on the effectiveness of the policy or indicate there is a definitive problem that would, for instance, require immediate cessation of any particular aspect of the reform. Instead, they flag that key risks to policy success have passed an agreed threshold and identify when additional investigation is necessary, as well as where this investigation should be targeted. Triggers should be efficient to measure and should focus monitoring on the most critical risks. Trigger thresholds should reflect the NSW Government's risk appetite.

Given this purpose, triggers should be a limited set of specific, simple indicators that can be understood by decision makers and easily and cost-effectively measured. They should capture emerging risks in a timely fashion and, where required, use short-term, proxy measures to predict expected change in risk exposure levels.

On the other hand, MER indicators aim to inform longer-term reviews and provide evidence of progress toward reform outcomes, including whether or not the reforms are striking the right

¹⁴ Under the terms of reference, the Commission will not assess the reform policy settings or aspects of the planning and development system. In developing advice on these issues, the Commission is to consider:

- relevant obligations under the *Environment Protection and Biodiversity Conservation Act 1999*
- the existing science and body of knowledge about the protection of biodiversity for future generations
- the principles of ecologically sustainable development.

¹⁵ The expert panel members are:

- Dr Charlie Zammit - Ecological consultant and board member and adjunct professor for the Australian Research Council Centre of Excellence for Environmental Decisions, The University of Queensland.
- Dr Allan Curtis - Principal social research consultant and Adjunct Research Professor Charles Sturt University and Southern Cross University.
- Robert Freebairn - Agricultural consultant and former district agronomist for the Department of Primary Industries.

balance between environmental, economic and social outcomes. Additionally, they should report on policy effectiveness and efficiency and inform adaptive management and continuous improvement of the reform. While a MER framework will draw upon the information collected as part of the trigger framework, it will include a broader range of indicators, measured over longer time periods and with more complex monitoring methods. Compared with triggers, there is often a significant lag in being able to report on MER indicators.

Table 2 provides a set of principles that reflect what triggers and MER indicators and frameworks are trying to achieve.

Table 2: Good practice trigger and MER framework principles

Principle	Description
Overarching	
Credible	<ul style="list-style-type: none"> Indicators and thresholds should be robust and based upon the best available evidence. They should be scientifically based to the best extent possible but easy to understand for decision makers and stakeholders. Methodology and data underpinning triggers should be transparent. It should be clear how the indicators will be used to inform decisions, including transparency around where value or expert judgements are to be used.
Comparable and coordinated	<ul style="list-style-type: none"> Key, overarching indicators should be able to be compared across agencies undertaking different actions to address the policy. Individual indicators should be measured against a consistent benchmark in order to determine trends. Comparability should be supported through the development of methods for monitoring indicators that can remain relatively consistent over time.
At appropriate scale	<ul style="list-style-type: none"> Indicators should be at the appropriate spatial scale to identify key risks and issues, as well as to appropriately aggregate data (for example, LLS region, bioregional and state scale). The appropriate spatial scale should be determined individually for each indicator. While some indicators may be captured at the state scale, regional scale indicators will be important due to likely variation in the level of key risk exposure across NSW. For the broader MER indicators, a mix of lead and 'lag' indicators (a measure of states or risk exposure level that have already occurred) can be used. Indicators should be targeted at the appropriate level required for decision making (i.e. high-level, whole of policy issues).
Clear reporting for decision makers	<ul style="list-style-type: none"> Data should be readily available to meet reporting requirements. Reporting should be straightforward and easily interpreted by decision makers.

Trigger

Risk-based

- Triggers should be targeted to monitor key, high-level reform risk exposure and have thresholds to initiate further review and actions to address unreasonable levels of risk.
- The risks that individual triggers are monitoring should be clearly defined and communicated.
- Triggers should target key risks across the whole policy or program being evaluated.
- Risk thresholds should consider the principles of ecologically sustainable development.

Easy to measure

- Triggers should be simple, limited in number and relatively cost effective to collect, quality assure and report on.
- The data should also be relatively easy to interpret, understand and monitor.
- Where possible, triggers should be numbers/counts, ecological or monetary values, percentages, rates, ratios, time durations or a value from some pre-defined setting.
- Qualitative metrics are not preferred for triggers.

Timely

- The triggers need to be able to be measured and reported within timeframes required to make decisions regarding risks to program success.
- Where changes in key indicators are expected to occur over medium to long time periods, short-term measures that would be appropriate proxies should be incorporated into the triggers as a way to predict an expected change in risk exposure levels.

MER indicator

Holistic and balanced

- To address the terms of reference, the framework should, to the extent possible, be able to determine if the reforms are 'striking the right balance' between social, environmental and economic outcomes.

Measurable

- Indicators should be able to be measured with the required level of certainty and within appropriate timeframes.
- Where possible, indicators should be numbers/counts, ecological or monetary values, percentages, rates, ratios, time durations or a value from some pre-defined setting.
- Measurement techniques should be agreed to by relevant agencies, including what the value represents, how it is calculated and what is included or excluded.

Based on key evaluation questions

- The program logic should be used to identify the key evaluation questions that decision makers wish to answer through their MER frameworks.
- Key evaluation questions should then be used to target and develop indicators.

Able to inform management

- Review periods should be frequent enough to drive better outcomes and improvement in reform efficiency and effectiveness.

**Support
continuous
improvement
and adaptive
management**

- Frameworks should be used to adaptively manage and improve the reform in response to lessons from implementation.
- Frameworks should report against agreed reform outcomes statements and adaptive processes should be implemented if outcomes are not being met.
- The frameworks themselves should be reviewed regularly and adjusted to meet the information needs of decision-makers and accommodate changes in the context.

1.4 Why is a review of triggers and MER important?

The reforms are contested, complex and significant. They represent a new approach to private land management and biodiversity conservation and an investment of over \$340 million¹⁶ over the first five years of the reforms and \$70 million per year after the first five years. There is significant public interest in the reforms' outcomes. Achieving these outcomes is reliant on a number of different reform elements – implemented by different agencies – working together. These factors mean that there are a number of key risks to policy success. The NSW Government needs to be aware of the status of these risks and ensure that the policy is being implemented as intended. Further, the NSW Government needs to be able to understand what outcomes are being achieved and improve policies that may not be delivering the desired outcomes.

The NSW Government has correctly identified the need for both policy review triggers and a reform-wide MER framework. Currently, there are reporting requirements in place that consists of a mandatory review at five years (2022) of the *Biodiversity Conservation Act 2016* and the land management (native vegetation) component of the *Local Land Services Act 2013* to “determine whether the policy objectives of those provisions remain valid and whether the terms of those provisions remain appropriate for securing those objectives.” The second reading speech to Parliament by the then Minister for the Environment also committed to a three-year review (2020) to:

“assess balance in the new system, including the effectiveness of the policy settings and legislative framework, the awareness and acceptance of the community, the native vegetation extent and condition, the uptake of incentives for conservation and other biodiversity conservation actions, as well as the level of development and increased farm productivity.”

While the current trigger is not fit-for-purpose, having policy review triggers for key risks remains critical to the reforms' success. The lessons learned from the three- and five-year reviews will likely only be reported after the reforms have been in place for at least four years and any response will likely be a reaction to existing issues. As such, triggers are needed to monitor certain risks, such as environmental and policy implementation risks, which are critical to monitor more frequently and proactively before they become more serious issues. The Commission notes that previous cabinet reporting on the trigger has stopped and therefore recommends that implementing a new fit-for-purpose framework of triggers should be a priority.

The Commission also notes that there is currently no coordinated MER approach to ensure outcomes can be understood and reported holistically across the reforms. While individual agencies are developing MER programs for their respective pillars, it is important to develop

¹⁶ Including \$240 million for private land conservation through BCT and \$100 million for Saving our Species programs.

and implement a robust framework of overarching MER indicators that synthesise key elements that should be measured across the reforms. Having an overarching framework will also ensure that there is sufficient data for the five-year review to be meaningful and to inform the three-year review to the best extent possible. **Figure 3** outlines how a trigger and MER indicator framework will work together to measure outcomes, manage risks and improve reform delivery.

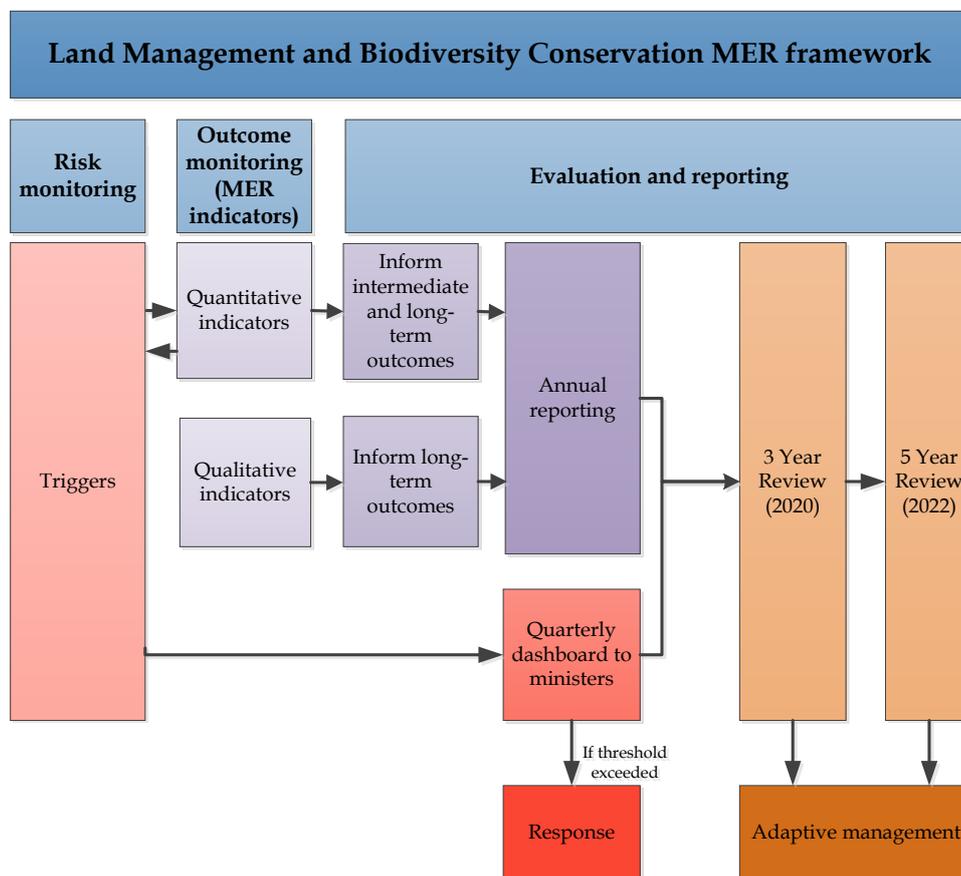


Figure 3: Overview of the proposed trigger and MER indicator frameworks

1.5 What this report will cover

This report provides final findings and recommendations on:

- the appropriateness of the current trigger
- measures of success for the reforms
- a framework of alternative triggers and the current status of these triggers
- a roadmap for the development of a high-level, whole-of-reform MER framework
- opportunities to improve service delivery and risk mitigation for the reforms.

The terms of reference also asks the Commission to consider emerging trends from available data. This report includes the results of this analysis where trends identified in available data informed the key findings and recommendations. **Attachment 2** summarises the data analysis requested by the terms of reference.

2 What does policy success look like?

The purpose of both the trigger and MER indicator frameworks is to ensure the reforms are implemented as intended and that reform activities have the desired outcomes. To identify outcomes, the Commission developed an overarching program logic for the reforms through:

- a review of relevant legislative objectives, the second reading speeches to Parliament for the Biodiversity Conservation Bill and Local Land Services Amendment Bill and the final report of the Independent Biodiversity Legislation Review Panel
- a review of existing program logics for reform components provided by agencies and publicly available information relevant to program logics
- input from the agency working group and expert panel.

The program logic is shown in **Figure 4** and outlines how the reforms were **intended** to work and the key actions, intermediate and long-term outcomes that comprise this. In addition to the reform actions, which are actions designed to influence change, the program logic also describes key foundational actions that are required for reform actions to be successful. The Commission notes that more detailed program logics exist for some reform pillars, which outline in more detail how specific program actions lead to short, medium and longer term outcomes. The program logic developed for this review considered these but was designed to represent at a high level how the suite of outcomes achieved by different programs under the reform pillars contribute to achieving the overarching reform outcomes.

The overarching goal of the reforms is clearly outlined in the *Biodiversity Conservation Act 2016* as contributing to “a healthy, productive and resilient environment maintained for the greatest wellbeing of the community now and into the future in line with the principles of ecologically sustainable development.” There are three overarching, long-term outcomes that contribute to this goal, which represent the primary intent of the reforms and the environmental, social and economic results expected by the NSW Government. These outcomes are to:

- **Contribute to improved biodiversity value at bioregional and state scales:** This is to be achieved by taking a more targeted and risk-based approach to biodiversity management and balancing biodiversity impacts from clearing on private land with set aside and offset requirements and more investment in private land conservation.
- **Give rural landholders certainty and increased opportunities for improving agricultural productivity and economic outcomes:** This is to be achieved through the new map and Code that clearly and accurately show which land is subject to regulation and which is not and focus regulation on areas with a high risk of loss of biodiversity value.
- **Give rural landholders capacity and make them feel empowered to manage their land and participate in biodiversity conservation:** This is to be achieved by engaging landholders in the new legislation, including on the options they have to sustainably improve productivity and through capacity building and knowledge sharing activities.

The Commission notes that, while the long-term outcomes of the reforms are centred on balancing environmental, social and economic outcomes, the reform activities are designed around the ‘four pillars’; the Land Management Framework, private land conservation, investment in native plants and animals and the Biodiversity Offsets Scheme. While all pillars have elements that may contribute to the three long term outcomes, the majority of activities have a direct focus on environmental outcomes. The exception to this is the Land Management

Framework. As such, the program logic has more activities and intermediate outcomes related directly to environmental outcomes. While this is an accurate description of the reforms, it is important to note that activities to deliver social and economic outcomes are core policy components and key to the success of the overall reform. As such, evaluation of the overall success of the reforms should consider the balance of environmental, social and economic outcomes.

2.1 Key assumptions and risks

To inform the trigger and MER indicators, the Commission undertook an analysis of the assumptions and risks associated with the program logic. Assumptions are unexamined theories or beliefs about how or why the program will work. Key risks to the reforms' success come when any of these assumptions does not hold. The key assumptions identified by the Commission are:

- biodiversity improvements through investment in and management of private land conservation agreements and set asides are maintained over time and adequately compensate for any loss of biodiversity value
- landholders want to be involved in the reforms and change business as usual practices
- market mechanisms for conservation activities provide a return on investment
- investment is targeted to priority areas and activities
- unregulated (Category 1) land is accurately identified and clearing or thinning of this land will have no significant impact on biodiversity values
- landholders comply with regulations, including the Code
- key policy elements are implemented as intended.

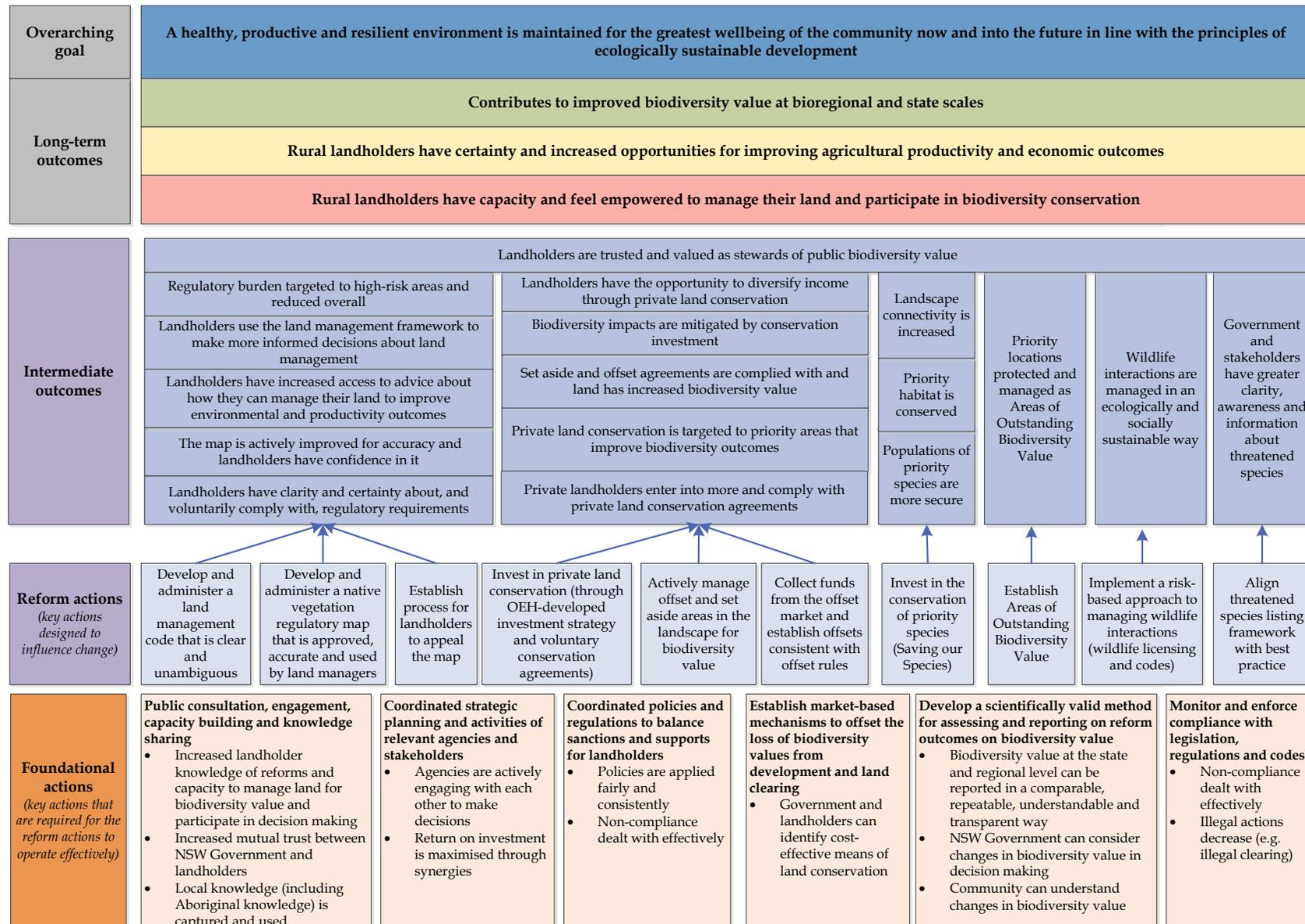


Figure 4: Overarching program logic for Land Management and Biodiversity Conservation Reforms

3 The current trigger is not appropriate for its intended use

As previously mentioned, an agreement was made between the then Minister for the Environment and the then Minister for Primary Industries that a full policy and regulatory review will be undertaken if notified clearing and applications for certification for clearing reached an annualised figure of 20,000 hectares measured in any six month period. The terms of reference asks the Commission to provide advice on the appropriateness of this trigger for a policy review.

The Commission assessed the appropriateness of this trigger, with consideration of the intended reform outcomes, risks to reform outcomes and best practice principles for trigger indicators. The Commission's view is that the current trigger is not appropriate for triggering a full-scale policy and regulatory review. The reasons for this are outlined in the points below. The following chapter will introduce an alternative framework of triggers.

- **The basis of the current threshold is not transparent:** There is no clearly documented or reported basis for the current trigger threshold and the Commission could not verify explanations provided by agencies against available data.

From discussions with EES and LLS, the Commission understands that the threshold was derived from a limited review of the annual rates of approved clearing pre-reform, under the *Native Vegetation Act 2003*. Agency representatives explained that the figure was meant to represent a rough doubling of the average annual area of land approved to be cleared pre-reform. The Commission was not able to verify this rationale against historic approvals data, which gives an average rate of just over 2,700 hectares per year between 2006/07 and 2016/17.¹⁷ Agency staff noted that some components of the reforms were still being developed when the trigger threshold was agreed to.

- **It does not reflect the reform components intended to manage environmental risk:** The Commission understands that the current trigger is intended to alert the NSW Government on potential risk to biodiversity values based on the area approved to be cleared. While clearing of native vegetation poses a risk to biodiversity values, the reforms also contain components that aim to compensate for any reduction in biodiversity values due to land clearing. This includes requirements for landholders to establish and actively manage set asides to compensate for certain types of clearing. There are also reform components which aim to improve biodiversity values in priority areas across NSW (for example, \$240 million investment in private land conservation sites). An appropriate assessment of risk to biodiversity values should consider both positive and negative changes in biodiversity value from clearing, set aside areas and private land conservation.
- **It does not reflect the multiple outcomes the reform is seeking to achieve:** While the reforms intend to manage the environmental risks posed by clearing native vegetation on private land, they also have core socioeconomic objectives. These include making it easier for landholders to engage in the land management framework, increasing opportunities for rural landholders to improve productivity by undertaking clearing in low-risk areas and generate income through stewardship. Given these objectives were also important drivers of the reforms' intent and that the NSW Government is seeking a balance of

¹⁷ Based on approved clearing Property Vegetation Plan public registers including clearing, thinning and paddock tree areas and thinning notifications under the *Native Vegetation Act 2003* from EES' NSW Report on Native Vegetation 2016/17.

environmental, social and economic outcomes, the NSW Government should also consider socioeconomic factors when developing review triggers.

- **It does not capture key risks to policy success:** Given the broad scope and complex structure of the reforms, there are multiple risk factors that may impact on policy success. For example, environmental policy outcomes are not just driven by regulation of clearing but also by encouraging landholders to improve biodiversity on their land and assurance that commitments to manage biodiversity values are met. As such, a lack of engagement in private land conservation initiatives and monitoring of land management agreements are key risks to the success of the policy. Similarly, socioeconomic outcomes are unlikely to be achieved if landholders are not engaging in the land management framework. The Commission also identified foundational activities, such as the monitoring and enforcement of compliance, that are critical to the success of the reforms and are not currently captured by the current trigger.
- **The current threshold does not consider regional variations in risk:** A state-wide threshold alone does not capture where clearing is occurring or consider regional variation in the risk of biodiversity value loss from clearing.
- **The review triggered is disproportionate to the trigger threshold:** Currently, exceeding the trigger threshold is intended to result in a “review of the policy framework (including legislative, regulatory and financial settings).” This implies a comprehensive review of the entire reform package. Given the broad scope and complex structure of the reforms, initiating a comprehensive policy review based only on clearing rates is likely to be inefficient, inappropriate and disruptive. As previously mentioned, there are multiple risks to policy success, many of which are focussed on specific areas of the reforms. The type of policy review initiated should be targeted to the policy aspects that impact on the risk threshold that is breached, so that fit-for-purpose solutions can be implemented.

4 A new trigger framework is needed to monitor key risks

The Commission recommends that a new policy review trigger framework should be adopted by the NSW Government. This chapter introduces the Commission's trigger framework in **Section 4.1** and subsequent sections provide more detail on the framework, including rationales for each trigger and proposed responses for trigger exceedances.

4.1 Trigger framework overview

Figure 5 provides an overview of the Commission's proposed framework of triggers for policy review, reflecting the multiple outcomes associated with the reforms. The triggers reflect critical components of the reforms as identified through the overarching program logic and the key risks to achieving policy outcomes (as outlined in **Chapter 2**). The triggers were developed with consideration of feedback from the agency working group, the expert panel and the best practice principles outlined in **Section 1.3**.

In line with the type of trigger requested by the NSW Government, the triggers are intended to give decision makers an 'early warning sign' that a particular aspect of the reforms may not be functioning properly and that the desired policy outcomes are at risk. The proposed triggers are associated with the risk factors that are most important to monitor frequently to determine if a review of any of the policy components is needed. These relate to key risks associated with policy implementation, compliance, environmental outcomes and socioeconomic outcomes. Exceedance of trigger thresholds indicates that further review of individual risks is required and the framework outlines the aspects of the reforms on which reviews should focus.

The framework is intended to focus on identifying critical indicators at the highest level of the reforms. There is likely to be a range of additional indicators that are important at the pillar level but do not provide the appropriate type of information for decision making in regards to the reforms as a whole. As such, pillar-level indicators have not been included in the framework, unless they also serve meaningfully as a reform-level indicator. Where regional-level triggers are indicated, the Commission has proposed that those triggers focus on LLS regions, which is a common administrative scale for many of the reforms' components and should be relatively simple to measure and report against for each agency. The Commission notes that different regional breakdowns, including bioregions, should be considered in broader MER reporting in order to report against legislative objectives.

Trigger thresholds have been determined with consideration of best practice principles, the feasibility of reporting, risk appetite of the decision makers and the ease with which they can be communicated to decision makers. The trigger thresholds are intended to capture potential key risks early. At the same time, they are considered to not be so conservative that they are overly sensitive to normal fluctuations in variables that do not pose significant risks.

The framework has also been developed with consideration of the upcoming three-year review, which is planned to occur in approximately 12 months. The Commission has aimed to ensure that the triggers do three things in this respect. First, they reflect material risks. Second, they are able to be easily measured in shorter, more frequent timeframes and, third, they are not indicators that are more appropriate to review as part of the three-year review, based on the level and type of risk they are monitoring. The framework should be reviewed as part of the three- and five-year reviews, with the potential to amend triggers or trigger thresholds based on the review's findings.

Focus area	Trigger	Risk exposure measured	Trigger response	
1. Policy Implementation	<p>Any of the following critical instruments for implementing the reform are not implemented or operational as policy intended within the first 18 months of the reform (February 2019):</p> <ul style="list-style-type: none"> Land Management (Native Vegetation) Code A publicly available Native Vegetation Regulatory Map showing all categories Biodiversity Conservation Investment Strategy Private land conservation agreements A single measure for assessing the biodiversity value under the Biodiversity Offsets Scheme A coordinated, reform-specific MER program 	<p>Policy not implemented as intended or change in policy intent</p> <p>Key outcomes not being achieved</p> <p>NSW Government commitments not delivered</p>	<p>For any instrument not yet implemented or operational as policy intended, firstly review if the instrument is still a government priority and secondly if it can effectively be implemented or operational within three months</p> <p>If the instrument is still a priority and it can't be implemented or operational within three months, review if there are any barriers to implementing the instrument and develop an action plan for its implementation</p>	
2. Compliance	Area of unexplained clearing exceeds the pre-reform average	<p>Policy not implemented as intended</p> <p>Biodiversity impacts from unexplained clearing</p> <p>Lack of landholder certainty and clarity around native vegetation clearing regulations</p>	<p>Develop action plan to address known causes or undertake a review of the implementation of, engagement or compliance with regulations</p>	
3. Biodiversity - state-wide <i>*see footnote [1]</i>	The annualised combined area (ha) of set asides and conservation agreements is less than two times the area (ha) approved for clearing (certifications and notifications under Parts 3, 4, 5 and 6 of the Code)	Biodiversity impacts from clearing not adequately compensated	<p>Relevant agencies provide response to Ministers on drivers (e.g. is there a known cause or are the drivers unknown?)</p>	
4. Biodiversity - regional <i>*see footnote[1]</i>	<p>Using a 'traffic-light' risk rating system, LLS regional risk to biodiversity from clearing under the reforms exceeds 'high risk' thresholds:</p> <p>The risk rating system considers the area of land approved to be cleared and area of set asides in each LLS region. Risk rating is provided as 'Low: No Action', 'Medium: Keep Watch' and 'High: Review Required'</p>	Biodiversity impacts from clearing not adequately compensated		<p>Develop action plan to address known causes or undertake a review of potential drivers including the:</p> <ul style="list-style-type: none"> - implementation of Code - implementation of set asides, including set aside discount - uptake or location of conservation agreements - training of officers - strategic conservation investment priorities
5. Socioeconomic	State-wide investment in conservation agreements falls below 80 percent of budget	Landholders not engaging with policy to conserve biodiversity on private land		<p>Develop action plan to address known causes or review of drivers and barriers to landholder uptake of private land conservation agreements</p>
Reported for consideration without threshold	Cumulative area approved to clear under Parts 3, 4, 5 and 6 of the Code (ha)			

Figure 5: The Commission's proposed trigger framework¹⁸

¹⁸ For the purposes of the biodiversity triggers, the Commission proposes applying a 0.7 discount multiplier to areas cleared under Part 3 of the Code (Pasture expansion) to recognise that this is a thinning code where a proportion of vegetation is retained.

4.2 Individual triggers and responses

As previously mentioned, triggers should measure the status of key risks to the success of the reforms. The triggers in the framework are grouped into four key risk areas, which were identified through the program logic. These areas are policy implementation, compliance, biodiversity and socioeconomic outcomes. Given the broad nature and multiple pillars of the reform, responses to risks should be about targeted learning and improvements, rather than resetting the overall policy settings. The following sections provide more detail on the rationale behind the triggers and responses for each of these risk areas.

In addition to the triggers, the cumulative area approved to clear under Parts 3, 4, 5 and 6 of the Code should be reported for consideration as part of quarterly reporting on the triggers. Although there is limited evidence to support the use of this indicator as a trigger or to set a trigger threshold, the Commission considers that the total area approved to be cleared will be of interest to Ministers and stakeholders and should be regularly reported.

4.2.1 Policy implementation

Achievement of the policy outcomes is reliant on the key policy instruments being implemented as intended. Certain foundational activities are critical for the achievement of outcomes. Assessing the extent to which these actions are implemented is straightforward and indicative of likely program success. As such, they are considered to be suitable as trigger indicators.

Figure 5 outlines the reform instruments that should be monitored as part of the trigger. Critical instruments have been identified from relevant legislation, the second reading speeches and the Independent Biodiversity Legislation Review Panel's report. Instruments were selected based on the program logic and risk assessment undertaken by Commission.

It is important for these instruments to be implemented within a reasonable timeframe from the beginning of the reform. The reforms have been in place for nearly two years, which the Commission considers is sufficient time for all critical instruments to be established. As such, a response should be triggered if any instrument is not currently in place.

If triggered, an initial high-level review should determine whether the instrument remains a priority for the NSW Government and, if so, whether there is a clear plan demonstrating that the instrument is likely to be developed in the short term. If this review finds no plan or that the plan is not appropriate, a broader review of the barriers to implementing the instrument should be undertaken and a clear plan for implementation with timelines should be developed.

4.2.2 Compliance

Monitoring compliance with the Code is important to test whether or not agencies and landholders are applying the tools developed under the reform in the correct way. A key risk to biodiversity outcomes is unlawful clearing. In addition, the intent of the reforms was to give landholders more certainty around native vegetation clearing regulations, which would in turn increase voluntary compliance with the regulations. An increase in illegal clearing may indicate that the regulations are not achieving these outcomes. While there is a range of other compliance activities that are important to the implementation of the reform, these are best captured as part of the MER framework.

Failure to ensure that regulations are complied with increases biodiversity risk and also undermines public confidence in the system. The NSW Government has recognised this risk in recent approaches, such as the establishment of the Natural Resources Access Regulator to independently manage compliance in relation to water extraction. The Commission is of the view that if compliance monitoring and enforcement of the Code is not enhanced, a loss of public trust similar to that seen in regards to water management could occur. As such, unexplained clearing should be monitored regularly prior to the three-year review and investigated in a timely manner.

The Commission understands there is a time lag and difficulty in identifying actual unlawful clearing that may make it an inappropriate trigger indicator. Instead, it is proposed that the trigger monitor 'unexplained' clearing (which is more easily detectable with satellite imagery) as a proxy for unlawful clearing. The extent to which unexplained clearing is unlawful can be determined as part of further review if the trigger threshold is exceeded.

The trigger's threshold is set to measure whether the annual area of unexplained clearing exceeds the seven-year pre-reform average, which is the period that unexplained clearing is reported in EES' report on NSW Woody Vegetation Change 2017-2018. The trigger threshold will monitor whether unexplained clearing increases. While the aim is to reduce unexplained clearing, monitoring and targets for this are more appropriate to be measured as part of the MER framework.

Currently, state-wide unexplained clearing is monitored and reported annually. **Section 5.2.1** provides more detail on reporting to date. In order to inform the trigger framework, this should be done at least on a six-monthly basis. The Commission understands that there are technical challenges associated with reviewing state-wide satellite imagery and EES has indicated that a new approach will need to be developed to report every six months in accordance with the trigger. EES has indicated that if the NSW Government implements this trigger, additional resources would need to be provided.

4.2.3 Biodiversity

The reforms are based on the assumption that biodiversity value can be maintained while allowing some clearing, provided that it is of lower biodiversity value and where necessary it is compensated for with strategic areas that are maintained to enhance their biodiversity value. This assumption can only hold if the rules are both adequate and complied with. If this approach is not implemented robustly, there is a risk of loss of biodiversity value. As such, there should be a trigger that considers the magnitude of both positive and negative biodiversity impacts.

The preferred trigger for monitoring this risk would be a measure that serves as a reasonable proxy for net gain or loss of biodiversity value. Ideally, an appropriate proxy measure for biodiversity value would be able to assess changes in biodiversity value against thresholds both state-wide and at the regional level to capture regional variations in risk. The Commission is of the view that this is a necessary step to properly assess and implement the reforms. However, agencies have not developed a single measure that is a reasonable proxy for biodiversity value. Although there has been significant scientific progress in developing credible proxies for monitoring biodiversity value, it is likely to take some time to develop and reach agreement on such a measure. As such, it is still a priority to develop a NSW Government-wide indicator of biodiversity value but this is more appropriate as part of the MER framework at this time.

In light of this, the proposed framework provides biodiversity triggers that are based on hectare values. The Commission has proposed some elements in the trigger calculations that aim to address the limitations of using coarse hectare values as a proxy for biodiversity risk, including applying a discount multiplier of 0.7 to areas cleared under Part 3 of the Code (pasture expansion) – which is a thinning code – to recognise that a proportion of vegetation is retained.

The Commission has proposed two triggers for biodiversity risk; one at the state-wide level and one at the LLS regional level. A regional level trigger is important as the level of risk associated with biodiversity value loss varies considerably across regions in NSW, due to different levels and types of clearing in different regions.

The state-wide biodiversity trigger monitors whether the annualised area approved for clearing (certifications and notifications under Parts 3, 4, 5 and 6 of the Code) is likely to be adequately compensated in terms of biodiversity value by the establishment of set asides and conservation agreements. The trigger threshold – that the area of set asides and conservation agreements should be at least twice the area approved for clearing – is based on a target given by the then Minister for Primary Industries in the second reading speech to Parliament. In the second reading speech it was stated that:

“for each hectare cleared under the framework, it is estimated that between two and four hectares will be set aside and managed in perpetuity.”

The Commission considered whether to expand the trigger to include Part 2 – invasive native species clearing. As invasive native species clearing is a management action that has been previously recommended to improve biodiversity value, its performance as a management action should be monitored in the wider MER framework.

The regional trigger considers the area of land approved to clear and area of set asides in each LLS region to determine a biodiversity risk rating and can notify the NSW Government on areas that have a high risk of clearing not being adequately compensated through set asides under the Code. The regional trigger does not consider the area of private land conservation agreements, as BCT investment in private land conservation is reported at a different regional level and is based on a state-wide strategic plan. The biodiversity risk rating for each LLS region is determined by assessing approvals and set asides against the following two criteria:

- The area of approvals to clear native vegetation in that LLS region does not exceed area conserved under the Code (i.e. a 1:1 ratio of set asides to approvals).
- The set aside requirements from the second reading speech to Parliament for the *Biodiversity Conservation Act 2016* which indicated that a minimum 2 hectares would be set aside for each hectare approved to clear (i.e. a 2:1 ratio of set asides to approvals).

The regional risk rating will be reported as a ‘traffic-light’ map of LLS regions. Risk rating is provided as ‘Low: No Action’, ‘Medium: Keep Watch’ and ‘High: Response Required.’

Table 3 shows the risk rating thresholds that have been proposed for the regional biodiversity trigger.

Table 3: Regional risk rating thresholds

Risk Rating	Meets 1:1 ratio for set asides and approvals	Meets 2:1 ratio for set asides and approvals	Response
Low			No action
Medium			Keep watch
High			Response required

The Commission also trialled the use of a regional risk rating method that considered regional risk of loss derived from historical and predicted future percent reduction in native vegetation cover associated with clearing approvals. This was to reflect the different levels of clearing that occur within different regions of NSW and the higher biodiversity value of remaining native vegetation in highly cleared regions. The Commission determined that this method did not meet the good practice trigger principle of being relatively easy to understand and interpret and as such it has not been proposed for the trigger framework. Further, the application of this method had results comparable to the simplified method above, with nine of the eleven regions being a high risk. However, the method may be used to guide the development of a single measure to monitor biodiversity value as part of the overarching MER framework. **Attachment 3** provides further detail on this method.

4.2.4 Socioeconomic

The social and economic outcomes identified in the program logic are core components of the reforms and engagement of landholders is key to the success of many aspects of the reforms. The Commission acknowledges that there is a broad range of important socioeconomic indicators that should be measured under the reforms. However, given the nature of many socioeconomic indicators, the type of risks associated with them and the relatively short period of time before the three-year review, many of the indicators associated with measuring socioeconomic factors are more appropriately captured through less frequent reviews.

The Commission also considers that there is adequate evidence of key socioeconomic factors, such as engagement of landholders, to allow these indicators to be measured and reviewed at a reduced frequency. Further, reporting these indicators – which often rely on landholder surveys – at the frequencies required for triggers (i.e. quarterly) is not considered an efficient approach and may result in landholder ‘survey fatigue.’ As such, the majority of indicators related to socioeconomic outcomes are captured in the MER framework that is proposed in **Chapter 6**.

In terms of the key risks to the reforms’ success, an important predictive indicator of whether socioeconomic outcomes are likely to be achieved is whether or not landholders are actually engaging with the reforms in the first instance and using the policy tools. If they are not, it can be assumed that the reforms are unlikely to achieve socioeconomic outcomes and potential barriers should be investigated. The framework proposes a trigger that measures the proportion of BCT budget invested as it is an easily measurable indicator of whether or not landholders are engaging with reform components that encourage private land conservation. The extent to which landholders are engaging with the reforms through applications under the Code is

another indicator of potential socioeconomic outcomes. However, the risks surrounding a lack of engagement with the Code can be inferred through the compliance and biodiversity triggers, which provide an indication of the amount of land approved to clear.

4.3 Trigger reporting and governance

Agencies previously reported a 'dashboard' of information related to the current trigger to Cabinet every six weeks. It is not clear how the elements of this dashboard were selected or how they were meant to be used in decision making. Feedback from agencies is that this report was onerous to produce, particularly at such a routine frequency. The new Planning, Industry and Environment Cluster provides opportunities to better focus periodic reporting to relevant Ministers within the cluster and to have less frequent reporting to the Cabinet when required. The Commission proposes that triggers should be reported quarterly to the Deputy Premier, Minister for Agriculture and Western NSW, Minister for Energy and Environment and Minister for Planning and Public Spaces. As previously mentioned, the Commission proposes that the compliance trigger should be reported every six months. The previous reporting to Cabinet should be replaced by reporting on an annual or exceptional basis if thresholds are exceeded to ensure Cabinet remains informed. The Commission recognises that there is a broader range of indicators that will be important to measure less frequently as part of a high-level MER program (discussed in more detail in **Chapter 6**).

Figure 6 provides an example of how the proposed trigger framework could be reported. The framework has been designed to be reported clearly on one page. Where any trigger thresholds are exceeded and there are additional relevant details (for example, any known causes of the exceedance or further details on actions that may already be in place to address the issues), this information could be provided in text from the agencies accompanying the one page report.

The implementation of the trigger framework will require the coordination of BCT, LLS and EES. In **Chapter 7** on service delivery and risk mitigation, the Commission recommends that the Secretary of the Planning, Industry and Environment Cluster establish an overarching steering committee to oversee coordination and implementation across the whole reform, comprised of relevant agencies and with an independent chair (for example, a representative from the Secretary's Office). This committee should have responsibility for the implementation of the trigger framework, including reporting and responding to exceedances.

5 Key risks identified by the new trigger framework

The Commission has used available data to determine if any of the proposed trigger thresholds have already been exceeded. This data is presented in the proposed trigger reporting dashboard (**Figure 6**).¹⁹ Based on this analysis, the Commission has identified three critical risk areas that are likely to impact on the reforms' success:

- A Native Vegetation Regulatory Map showing all map categories has not been made publicly available.
- Compliance frameworks are inadequate and high rates of unexplained clearing pose a major risk.
- Widespread use of Part 3 of the Code – which relates to thinning – poses a risk to biodiversity state-wide.

These risks are outlined in the following sections. In addition, the policy implementation trigger identified that there is no coordinated, reform-specific MER program, which is a critical reform component. The terms of reference asked the Commission to review the MER framework for the reforms and the Commission has developed detailed guidance on the development of an overarching MER framework, which is presented in **Chapter 6**. As such, this aspect of the policy review trigger is discussed in that chapter.

In identifying critical policy instruments, the Commission also identified two policy instruments that were not considered significant enough for the trigger framework but that should be evaluated as part of the three-year review. These include the Native Vegetation Panel and the process for establishing Areas of Outstanding Biodiversity Value. While established, there are opportunities to improve the operation of these instruments to ensure they are delivering objectives. These instruments are discussed further in **Chapter 7** on improving service delivery.

¹⁹ Data for the policy implementation trigger is based on discussions with agency representatives. Data for the compliance trigger was provided by EES and reflects the data as at 27 June 2019. Data for biodiversity triggers was provided by LLS and reflects the data as at 19 May 2019. Data for the socioeconomic trigger was provided by BCT and reflects the data as at 26 June 2019.

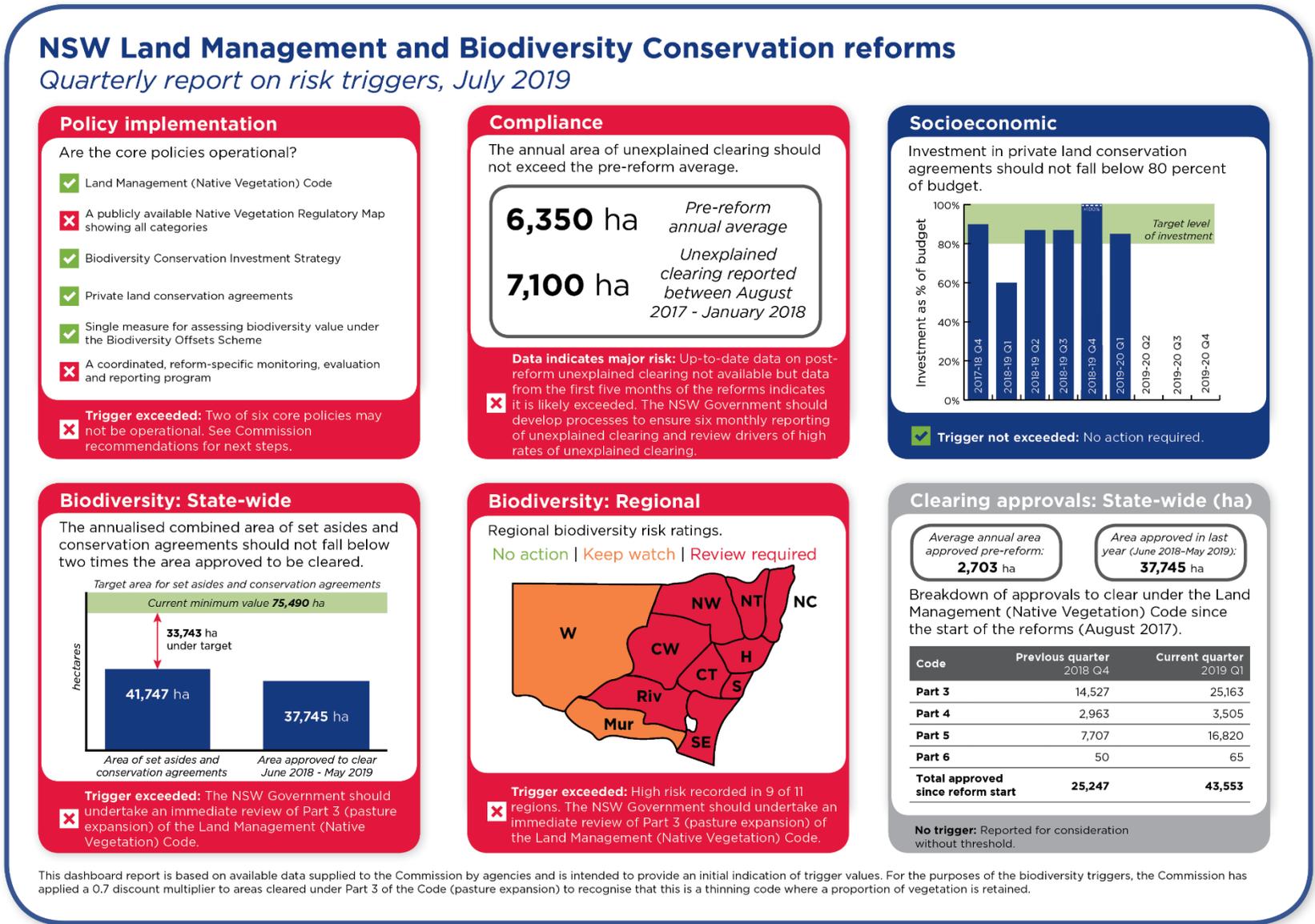


Figure 6: Proposed trigger reporting dashboard and current trigger values

5.1 A Native Vegetation Regulatory Map is not publicly available

A publicly available Native Vegetation Regulatory Map was a key component of the reforms. The intent of the map was to provide landholders with clarity and certainty about what management activities they can undertake on their land.

Currently, the two main land categories in this map (Category 1 – exempt land and Category 2 – regulated land) are not publicly available. The Commission understands that a draft map with these categories has been developed by EES and is available to some LLS staff to assist landholders in determining the categorisation of their land. The Commission also understands that EES has produced a strategy for releasing all categories of the map but that there has been no clear approval to do this. Various reasons for this have been provided, including concerns around landholder privacy and the accuracy of the map. However, the lack of a public map is likely to impact on outcomes related to landholder clarity and certainty, reduces opportunities to improve the map and increases the risk of unlawful clearing.

The recent Audit Office of NSW audit of native vegetation management recommends that EES implement a staged release of the remaining draft map categories, allowing sufficient time for landholder review and input, as well as adequate resources to update the map. The Commission supports this recommendation but notes that there are currently significant inaccuracies within the map components dealing with native grassland-dominant landscapes. As such, only the map for woody vegetation-dominant landscapes (with all categories) should be released in the first instance. The map for native grassland-dominant regions (with all categories) should only be released once there is confidence in the mapping of native grassland.

Allowing sufficient time for landholder input and resources to update the map are essential, recognising that the map is likely to have inaccuracies and will require continuous improvement. The Commission also considers that the continuous improvement process should provide for landholders to appeal parts of the map that they consider are inaccurate to an independent expert body if disagreements remain following the normal appeal process.

5.2 Compliance frameworks need to be strengthened

Analysis using the new trigger framework found that there is inadequate data to assess the proposed compliance trigger, which focuses on rates of unexplained clearing. However, the limited data that are available indicate that rates of unexplained clearing pose a major risk to biodiversity.

Additionally, the Commission's review of opportunities to improve service delivery and mitigate risks found that the reforms' compliance frameworks can be strengthened more broadly. This reflects the recent findings of the Audit Office of NSW's audit of native vegetation management. The following sections present all the Commission's findings in regards to compliance risk.

5.2.1 Limited data on unexplained clearing indicates major risk

Data on the extent of unexplained clearing is only available for the first approximately five months of the reform (between 25 August 2017 and January 2018). These figures are provided in the dashboard (**Figure 2**) but they largely reflect clearing under pre-reform approvals. As such,

they are not considered sufficiently representative to demonstrate whether the reforms are resulting in a decrease in unexplained clearing, as would be expected.

However, the available data indicate that there is a major risk from unexplained clearing. Based on total area, the area of unexplained clearing identified in the first five months of the reform alone (7,100 hectares) exceeded the annual pre-reform average (6,350 hectares). Extrapolating this to an annual figure indicates that the trigger would be exceeded significantly. Further, when the proportion of unexplained to approved clearing is considered, nearly 60 percent of the total area cleared under the reforms is unexplained, which is of concern. The Commission notes that not all unexplained clearing is necessarily unlawful clearing but data were not available to indicate the proportion of unexplained clearing that is found to be unlawful.

Maintaining biodiversity values under the reforms relies on landholders complying with the Code and a key measure of the reforms' success is a reduction in the amount of unlawful clearing. The available data indicate that there is a major risk from unexplained clearing or that systems for monitoring unexplained clearing are inadequate. Further, not being able to report unexplained clearing in a timely way undermines public confidence in the system. As a priority, the NSW Government should develop processes to report up to date data on unexplained clearing every six months. The NSW Government should also review the drivers behind high rates of unexplained clearing and implement measures to address any issues.

5.2.2 Strengthening compliance more broadly

Native vegetation management is a highly contentious area that is characterised by value-based conflict and mistrust. A key component of the reforms is that the NSW Government is placing trust in rural landholders as effective stewards of their land and of biodiversity. For this approach to work, there must also be trust from the wider community in the NSW Government and the regulatory systems developed to hold landholders to account. Historically, trust in a 'firm but fair' regulator has not existed and the implementation of the reforms have not regained community trust to date. Regaining this trust will be a difficult – but not unachievable – task.

The Commission notes the Audit Office's findings in relation to compliance, including that:

- there are significant delays in identifying unlawful clearing and few penalties imposed by EES, with no prosecutions under the current reform
- there are limited processes to ensure approvals under the Code are complied with, in particular set aside management requirements
- there are delays in the sharing of information on compliance activities under the Code
- the lack of a publicly available native vegetation map limits landholders' ability to determine if their plans for clearing are lawful.

The Commission broadly agrees with the findings and recommendations of the Audit Office's report and acknowledges agencies responses to their recommendations.

In addition to the Audit Office recommendations, the NSW Government should review the existing roles, responsibilities and resources available to monitor and enforce compliance. Strengthening compliance monitoring and response requires clear roles and responsibilities for the full range of compliance activities. The Commission encourages the NSW Government to identify lessons learnt from recent efforts to upgrade compliance enforcement in water

management through the successful creation of the independent Natural Resources Access Regulator. The Commission notes that separating regulatory activity from policy and operations is good practice. Other key regulatory principles include responsiveness, transparency, proportionality and consistency. The NSW Government should provide certainty to landholders backed by enforcement that is 'firm but fair.'

In general, EES are responsible for the compliance and enforcement of the *Biodiversity Conservation Act 2016* and Part 5A of the *Local Land Services Act 2016*, specifically native vegetation clearing under the Code. However, while EES retains responsibility for enforcement in instances of breaches of the Act, other compliance responsibilities (for example, monitoring and reporting on compliance) for some reform activities have been delegated – or are intended to be delegated – to BCT and LLS, where these agencies are directly responsible for the implementation of those activities.

The Commission found that there is a lack of clarity around responsibilities for enforcing approvals and set asides under the Code (Part 5A of the *Local Land Services Act 2013*). The Commission notes there is clear designation of responsibilities for compliance with the private land conservation agreements (under the *Biodiversity Conservation Act 2016*).

Compliance under Part 5A of the *Local Land Services Act 2013*

EES is responsible under Part 5A of the *Local Land Services Act 2013* for compliance enforcement in relation to unlawful land clearing and the development of the Native Vegetation Regulatory Map. There is a lack of clarity around the specific roles LLS and EES have in monitoring and enforcing compliance with certifications and notifications to clear and set asides under the Code.

The specific processes related to monitoring and reporting on compliance under the Code are not clearly articulated or documented. EES' undertake annual satellite monitoring²⁰ and investigation of unlawful clearing. EES also have policies in place to undertake enforcement activities in response to unlawful clearing. The Audit Office found that there are delays of up to two years in identifying unlawful clearing, which limits EES' ability to reduce the environmental impacts of unlawful clearing. EES are currently piloting an early detection system to improve detection of unlawful clearing in some cases. The Audit Office also found that, despite a high number of reports and investigations, only two or three prosecutions for unlawful clearing take place each year and few remedial directions and penalty notices are issued to landholders. Further, no prosecutions have been undertaken under the current reforms.

Outside of investigation and enforcement of unlawful clearing, there is limited evidence of more routine monitoring of general compliance with the conditions of certifications and notifications. Given the risks associated with non-compliance with clearing approvals, it is critical to routinely monitor landholder activities to ensure compliance risks are identified in a timely way.

As noted by the Audit Office, there is also a lack of clear processes to ensure that landholders are implementing effective set aside management actions. The Commission understands that LLS' predictive MER program (due to be implemented in June 2020) will seek to understand the biodiversity outcomes from set aside management. However, it is not clear how this program

²⁰ Through the State-wide Landcover and Tree Survey (SLATS) methodology.

will provide information on the activities undertaken to manage set asides and whether the timeliness of this information will allow it to be used as a compliance monitoring mechanism.

Compliance under the *Biodiversity Conservation Act 2016*

Compliance responsibility for private land conservation agreements (including biodiversity stewardship agreements for offsetting) is clearly outlined in a draft compliance policy, which delegates responsibilities from the former OEH (now EES) to BCT. BCT's role is to ensure landholder compliance with private land conservation agreements, including initiating civil enforcement proceedings to remedy or restrain a breach of an agreement. EES is then responsible for dealing with more serious acts that constitute an alleged offence under the *Biodiversity Conservation Act 2016*.

The policy establishes a risk-based approach to compliance, which includes desktop monitoring, annual reporting requirements for landholders, on-site monitoring and audits. BCT's key performance indicator framework includes indicators on the extent to which landholders are managing sites in accordance with agreements (which will be reported on the receipt of annual reports) and the number of compliance referrals to EES. The Commission considers that the approach under the draft compliance policy is sound overall and should be finalised. Monitoring and reporting on compliance in this space should be implemented as soon as possible.

5.3 Widespread use of Part 3 of the Code related to thinning poses a risk to biodiversity state-wide

As mentioned previously, the Commission has proposed two triggers for biodiversity risk – at the state-wide and regional scales – in order to capture variations in the level of risk associated with biodiversity value loss across regions in NSW. The state-wide trigger considers the area approved for clearing against the area of set asides and private land conservation agreements. The regional triggers consider the area approved for clearing against set asides only, as BCT investment in private land conservation is reported at a different regional level and is based on a state-wide strategic plan.

Based on available data, the state-wide trigger and nine of the eleven regional trigger thresholds proposed by the Commission have been exceeded.

Under the state-wide trigger the total area of set asides and conservation agreements needs to be at least twice the amount of the area approved to be cleared. Based on current annual approval area, the target area for set aside and conservation agreements is 75,490 hectares. Currently, only 55 percent of that target area has been established, with 33,743 hectares more required to meet the target.

Of the regional trigger thresholds, nine LLS regions recorded a high risk to biodiversity values, with two – Murray and Western – being a medium risk. Two regions of particular concern are Northern and Central Tablelands, which set aside significantly less area than was approved for clearing (**Table 4**), despite the benchmark in the second reading speech to set aside two times the amount approved to be cleared.²¹ Recording a high risk in the majority of regions in addition to exceeding the state-wide trigger threshold indicates that the Code is not adequately

²¹ Note: Data has been assessed using LLS geographic regions but LLS regional offices are not responsible for the administration of the Code. The central Sustainable Land Management Unit within LLS is responsible for administration of the Code.

responding to biodiversity risks and a review has been triggered. The review should be targeted to areas of the Code which are the most likely contributors to this risk.

The Commission's analysis of publicly available data and data provided by agencies identified two trends associated with the Code that should be investigated in more detail. First, the overall amount of land approved to be cleared and set aside under the Code and, second, the use of Part 3 of the Code, which relates to thinning. The following sections outline these issues in more detail.

Table 4 : Regional biodiversity risk ratings²²

LLS region	Area approved to be cleared ²³ (ha)	Area set aside (ha)	Set aside/ approval area ratio ²⁴	Meets 1:1 ratio?	Meets 2:1 ratio?	Biodiversity risk rating
Central Tablelands	592	35	0.06	✗	✗	High
Central West	4,799	3,325	0.69	✗	✗	High
Greater Sydney	95	29	0.31	✗	✗	High
Hunter	1,389	365	0.26	✗	✗	High
Murray	165	316	1.91	✓	✗	Medium
North Coast	724	143	0.20	✗	✗	High
North West	1,552	668	0.43	✗	✗	High
Northern Tablelands	5,248	453	0.09	✗	✗	High
Riverina	3,823	2,531	0.66	✗	✗	High
South East	943	204	0.22	✗	✗	High
Western	12,345	16,432	1.33	✓	✗	Medium

²² Based on the area approved to clear and set aside area since the commencement of the biodiversity reforms from approvals data supplied by LLS on 13 May 2019.

²³ For the purposes of the biodiversity triggers, a 0.7 discount multiplier has been applied to the total treatment area approved for clearing under Part 3 (Pasture expansion) to recognise that this is a thinning code where a proportion of vegetation is retained.

²⁴ For the purposes of the biodiversity triggers, a 0.7 discount multiplier has been applied to the total treatment area approved for clearing under Part 3 (Pasture expansion) to recognise that this is a thinning code where a proportion of vegetation is retained.

Increased amount of land approved to be cleared under the Code

The Commission analysed the state-wide area approved to be cleared pre- and post-reform (**Figure 7**). Although thinning under pre-reform legislation is listed as a management action rather than a clearing approval, thinning under the *Native Vegetation Act 2003* has been included in the analysis as a more accurate comparison of pre- and post-reform clearing codes.

The Commission found that there has been a significant increase in the amount of land approved to be cleared since the reform, for example 37,745 hectares²⁵ was approved in 2018/19 compared to the annual average rate of approval pre-reform, which was 2,703 hectares per year (annual average between 2006/07 and 2016/17).²⁶

One of the largest annual areas approved pre-reform was 5,663 hectares in 2015/16, which reflects a spike in the period prior to the reforms being implemented.

An increase in the number or area of applications would be expected to occur associated with a change in government policy. In 2015/16, increases in applications may have been the result of landholder concern surrounding the potential implications of the recommendations of the review of biodiversity legislation by the independent panel. The Commission notes that before the 2019 election, the Opposition indicated an intent to repeal the current biodiversity legislation. As such, the post-reform spike may be the result of landholders looking to take advantage of the new Code prior to the election, particularly given that the approvals last for 15 years.

It may be too early to determine if the increase in approvals is driven by the election or generally due to changes in the rules around clearing making it 'easier' for landholders to undertake clearing. The Commission notes that rate of approvals decreased after the election but still remains considerably higher than historic rates. However, any review of the Code as part of a trigger response should investigate the drivers behind increased applications under the Code, as well as the processes behind increased levels of approvals.

²⁵ Note: This figure represents the total treatment area associated with approvals to clear and includes approximately 21,500 hectares of clearing under Part 3 of the Code (pasture expansion) which is a thinning code where a proportion of vegetation is retained.

²⁶ Note: This figure represents total treatment area associated with Property Vegetation Plans and includes thinning associated with these Plans.

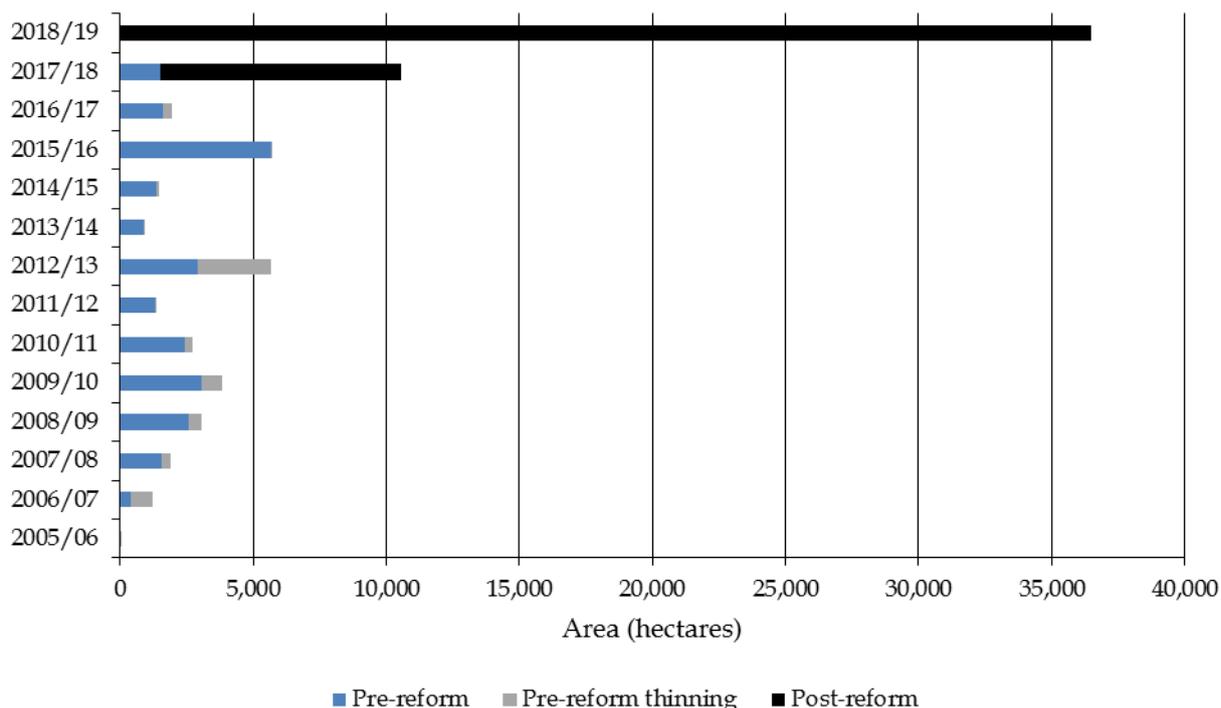


Figure 7: Comparison of land approved to be cleared pre-reform and post-reform²⁷

Use of set asides and application of Part 3 of the Code (pasture expansion)

The reforms are based on the assumption that, in order to deliver triple-bottom-line outcomes, biodiversity value can be maintained while allowing some clearing provided that it is appropriately compensated for by areas that are managed to enhance their biodiversity value. To ensure this, it is important that adequate areas of land are conserved in areas subject to clearing. Under the *Local Land Services Act 2013*, only certifications to clear Category 2 land under Part 5 (equity) and Part 6 (farm plan) Code authorisations require that areas of existing native vegetation are set aside and managed for biodiversity values to compensate the loss of native vegetation.

The Commission analysed authorisations under the Code since the reforms began and found that Part 3 (pasture expansion) – which relates to thinning²⁸ and does not require set asides – was the most widely used part of the Code, with 25,163 hectares approved for clearing. This was the most used authorisation under the Code in all regions except Riverina and Western, where the most used authorisation under the Code is Part 5 (equity).

The Commission notes that the then Minister for Primary Industries’ second reading speech to Parliament states that “for each hectare cleared under the framework, it is estimated that between two and four hectares will be set aside and managed in perpetuity.” When only the set asides under Part 5 and 6 of the Code are considered, this ratio is close to what is actually occurring at the state level. Current data indicates that 24,503 hectares of set asides have been certified to compensate for 13,287 hectares of land approved to be cleared with set aside

²⁷ Pre-reform approvals data derived from public register of approved Property Vegetation Plans and self-assessable thinning areas from the Native Vegetation Report card 2016-17. Post-reform approvals data derived from register of certifications of intended clearing and notifications of intended clearing (excluding Part 2 – invasive native species) provided by LLS on 13 May 2019.

²⁸ Division 1 and Division 2 relates to uniform thinning and Division 3 relates to mosaic thinning.

requirements (**Figure 8**). At the LLS regional level, half of the regions had more than two hectares of vegetation set aside for every hectare approved to be cleared under Parts 5 and 6 of the Code. These regions were Central Tablelands, Murray, Central West, Hunter, South East and Greater Sydney.

However, when all certifications and notifications for approval since the start of the reforms are considered (including Part 3 – pasture expansion but excluding Part 2 – invasive native species), less than 54 percent of the state-wide area approved to be cleared (45,553 hectares) was set aside (**Figure 9**). The post-reform data highlights that the only regions that have achieved a greater than a 1:1 ratio of total area approved to be cleared (excluding Part 2 - invasive native species) to area set aside are the Murray (316 hectares set aside) and Western regions (16,432 hectares set aside). These are the only two LLS regions that did not receive a high risk rating for the regional biodiversity trigger.

The two LLS regions where the set aside areas were lowest relative to the area approved to be cleared were Central Tablelands (which had 1,404 hectares approved to be cleared and 35 hectares or 2.5 percent set aside) and Northern Tablelands (which had 6,915 hectares approved to be cleared and 453 hectares or 6.5 percent set aside²⁹). Additionally, North Coast, North West and South East had set aside areas that were less than 20 percent of the area approved to be cleared. This compares to a benchmark area of set asides of between 200 percent and 400 percent (two to four times) the area approved to be cleared.

One of the key objectives of the reforms is to achieve no net loss of biodiversity in NSW. The wide use of Part 3 of the Code (pasture expansion) is resulting in overall set aside ratios being well under the benchmark set by the then Minister for Primary Industries in the second reading speech to Parliament. There is a risk that this specific part of the Code may be undermining the whole reform framework. As such, Part 3 of the Code and its use should be urgently reviewed.

²⁹ Note: These figures are based on total treatment area for Parts 3-6 of the Code.

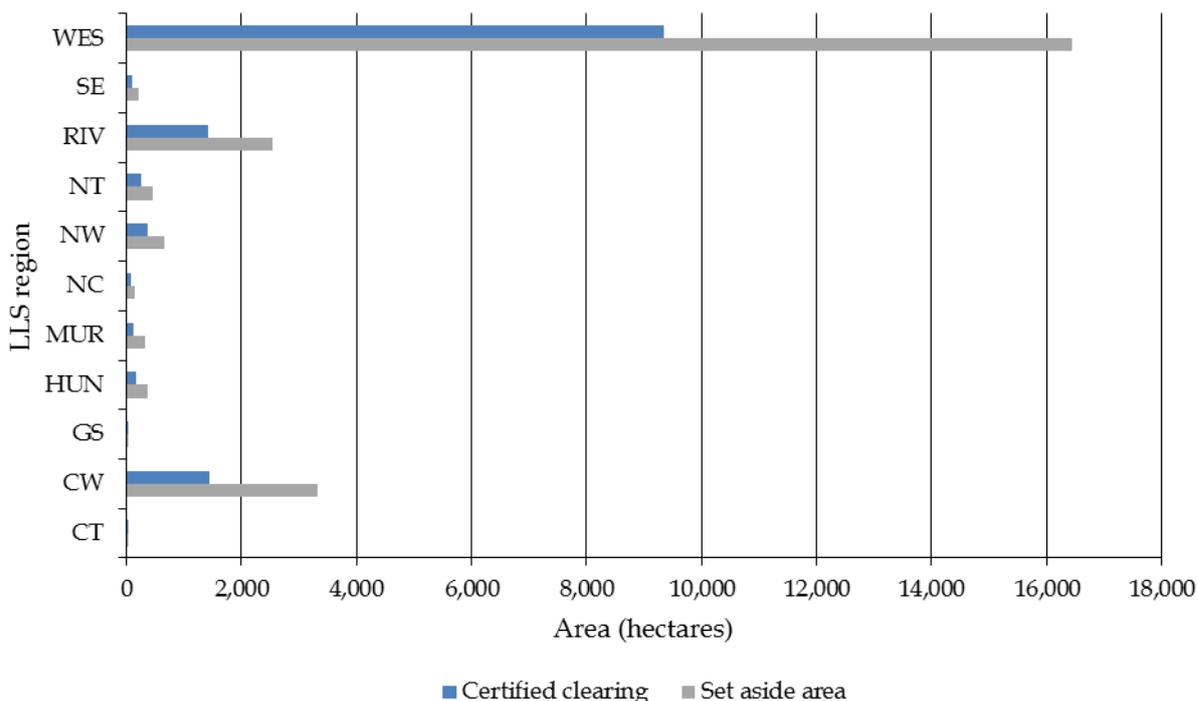


Figure 8: Certified clearing under Parts 5 and 6 of the Code and set aside areas for LLS regions³⁰

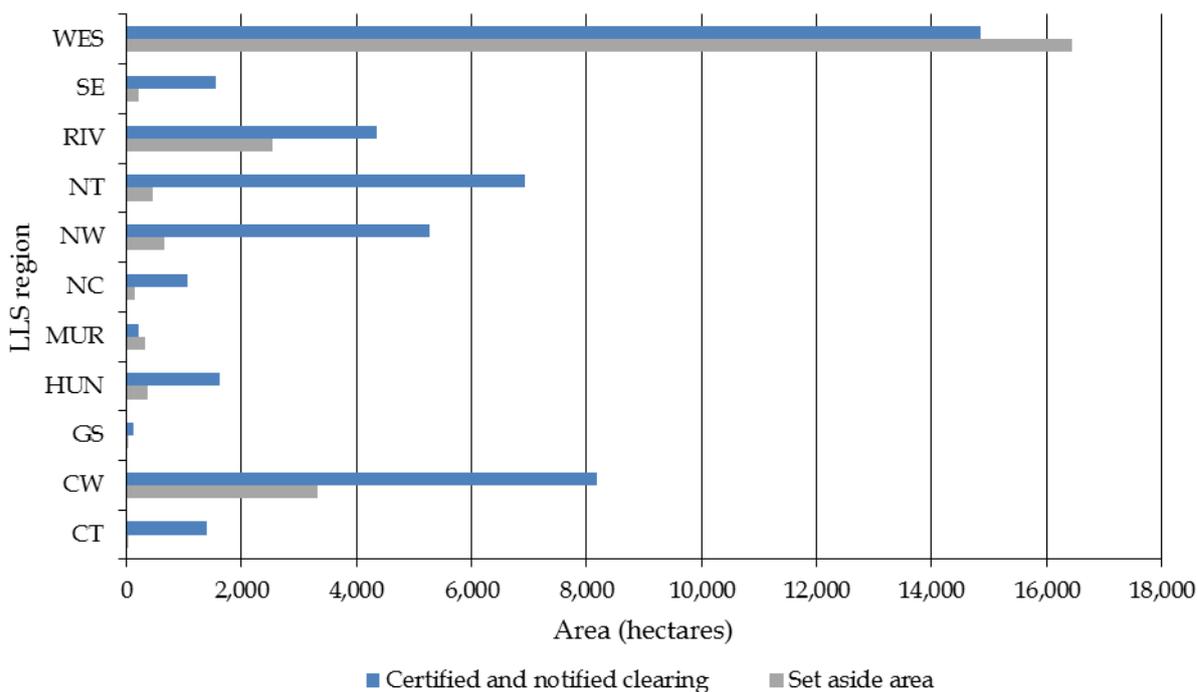


Figure 9: All certifications and notifications (excluding Part 2) under the Code and set aside areas for the LLS regions³¹

³⁰ Data derived from register of certifications of intended clearing and notifications of intended clearing (excluding Part 2 - invasive native species) supplied by LLS on 13 May 2019.

³¹ Data derived from public register of certifications of intended clearing and notifications of intended clearing (excluding Part 2 - invasive native species).

Recommendations

In order to address critical risks to reform outcomes, the Commission recommends that the following actions are addressed immediately:

- 1 If the implementation of the Native Vegetation Regulatory Map remains a NSW Government priority, EES implement a **staged release of the Native Vegetation Regulatory Map**:
 - 1.1 The first stage should involve the immediate release of all categories of the map for woody vegetation-dominant landscapes on a region-by-region basis. This needs to be supported by processes to improve map accuracy, including a process to resolve disagreements on map accuracy that remain following EES' normal appeal process that is overseen by an independent body.
 - 1.2 The second stage should involve the release of all categories of the map for native grassland-dominant landscapes, once there is more confidence in the accuracy of the mapping of native grassland.
- 2 The NSW Government **strengthen compliance frameworks** by:
 - 2.1 Reviewing the roles, responsibilities and resourcing for monitoring and enforcing compliance with certifications and notifications to clear and set asides under the Land Management (Native Vegetation) Code.
 - 2.2 Developing clear processes to monitor and report on compliance with certifications and notifications to clear and set asides under the Land Management (Native Vegetation) Code. Monitoring and reporting processes should be developed with consideration of best practice principles, including ensuring monitoring can identify incidents of non-compliance and compliance risks in a timely way.
 - 2.3 Reviewing the drivers of high rates of unexplained clearing and address identified issues.
 - 2.4 Developing processes to ensure six monthly monitoring and reporting of unexplained clearing as part of the trigger framework.
- 3 The NSW Government undertake an **immediate review of Part 3 (pasture expansion) of the Land Management (Native Vegetation) Code** to address risks to biodiversity values state-wide resulting from high rates of certifications and notifications to clear under this part of the Code.

In order to continue to monitor key risks associated with the Land Management and Biodiversity Conservation Reforms the Commission recommends that:

- 4 The NSW Government replace the existing policy review trigger with the immediate implementation of the Commission's proposed trigger framework.
- 5 EES, LLS and BCT provide a quarterly report on the status of triggers to the Cluster Ministers Group for the Planning, Industry and Environment Cluster.
- 6 Previous reporting on triggers to Cabinet be replaced by reporting on an annual or exceptional basis if thresholds are exceeded to ensure Cabinet remains informed.

Note: The Commission also recommends that the Secretary of the Planning, Industry and Environment Cluster establish an overarching steering committee to oversee coordination and implementation across the whole reform, including the implementation of the trigger and MER frameworks (see recommendation 8 in Chapter 7).

6 A coordinated, reform-specific MER framework is needed

The terms of reference asks the Commission to provide advice on the following issues related to broader MER indicators for reforms:

- Appropriate metrics for establishing whether the existing reforms are striking the right balance between social, economic and environmental outcomes.
- Appropriate measures of success for social, economic and environmental outcomes, considering the NSW Government's expressed aims and intent of legislation and second reading speeches.
- Whether existing government monitoring programs are sufficient to determine if reforms are achieving objectives.

In analysing the proposed policy implementation trigger, the Commission found that there is currently no coordinated, reform-specific MER program to ensure reform outcomes can be understood and reported holistically across the various programs (**Chapter 5**). This is considered a critical component to ensure the success of the reforms.

The Commission has developed an overarching MER framework that is designed to holistically track performance and the success of the reforms. The Commission recommends that, within six months, the NSW Government implement an overarching MER program that is informed by the Commission's proposed MER framework. The steering committee that is recommended to be established in **Chapter 7** should be responsible for reviewing, finalising and implementing the MER program.

This chapter introduces the proposed MER framework.

6.1 MER framework overview

Table 5 below outlines the proposed MER framework, which is based on the program logic developed by the Commission (**Figure 4**). The table indicates how the MER indicators can inform the long-term and intermediate outcomes as identified in the program logic and the proposed timing and responsibilities for the indicators.

The NSW Government has committed to a three-year review to assess balance in the new system and a mandatory review at five years of the *Biodiversity Conservation Act 2016* and the land management (native vegetation) component of the *Local Land Services Act 2013* to "determine whether the policy objectives of those provisions remain valid and whether the terms of those provisions remain appropriate for securing those objectives." For these reviews to be meaningful, having a coordinated, reform-specific MER program is critical. An MER program is particularly important for capturing socioeconomic outcomes, including landholder benefits from the Code, which are not captured in the trigger framework as they are not reflected in priority risks and are more suited to being measured over longer time periods.

The Commission acknowledges that all agencies currently have their own MER programs that are in various stages of development but there is currently no coordinated MER approach to ensure reform-specific outcomes can be understood and reported holistically across the various programs.

While agencies' individual MER programs can provide important information on the reform, they focus individually on specific reform aspects and are not designed to deliver the consistent, high-level information required to holistically evaluate the reform. Where there are similar types of indicators across the pillars, these should be developed, monitored and reported in a coordinated way to increase efficiencies and increase comparability between indicators. The new cluster arrangements provide an opportunity for improved coordination across agencies, particularly in the collection, analysis and use of data that should be leveraged.

In developing the framework, the Commission sought input from the agency working group and the expert panel on the most appropriate indicators for each intermediate and long-term outcome in the program logic. The Commission sought advice from the agency working group on where existing pillar-level MER programs have data that can be integrated in the framework to assess overall reform outcomes.

The proposed framework is intended as a guide for agencies and is designed to complement existing MER programs rather than replace them. While the Commission considers that these indicators are sufficient to assess intermediate and long-term outcomes, the timeframes available under the terms of reference did not allow for detailed analysis or testing of the framework. As such, the Commission acknowledges that additional work may be required to refine the indicators.

The proposed MER framework includes the development of a single measure of biodiversity value for the reforms. The Independent Biodiversity Legislation Review Panel considered that the development of a NSW-Government-wide indicator of biodiversity value was necessary to properly assess and implement the reforms. The Commission understands that, at the time of the review, the Biodiversity Assessment Methodology (which was developed to measure biodiversity value for the purposes of the Biodiversity Offsets Scheme) was considered by the Panel to be an appropriate measure to be used across the reform. In practice, the Biodiversity Assessment Methodology – while functional for the Biodiversity Offsets Scheme – is too expensive and not fit-for-purpose for assessing biodiversity value across the whole reform.

Agencies have not developed a single measure that is a reasonable proxy for biodiversity value but the Commission considers that establishing such a measure remains an important component of an overarching MER program. Without this measure, the NSW Government cannot assess the extent to which the reforms are resulting in no net loss of biodiversity value in NSW. Developing such a measure is a complex and challenging – but important – task.

Table 5 provides indicative timeframes for how frequently each indicator could be reported. It is critical that public reports on the progress of the reforms be published annually. Final reporting timeframes should be determined by the proposed steering committee and should be informed by the information requirements of relevant Ministers and agencies, as well as available resources.

While the trigger and MER frameworks serve different purposes, the information collected as part of the MER framework will inform the triggers. **Table 2** shows how the MER indicators may contribute to trigger monitoring and vice versa.

The indicators identified by the Commission's analysis fall into the following categories:

- 1 **Single measure of biodiversity value:** A NSW Government-wide indicator of biodiversity value is necessary to properly assess and implement the reform. This measure should be monitored annually to provide an overall 'picture' of the relative gain or loss of biodiversity value. As there is currently no single measure of biodiversity value, this indicator should be developed as part of the MER program to inform the five-year review. While developing the triggers, the Commission trialled a biodiversity risk rating method, which may be used to guide the development of this indicator (**Attachment 3** provides more detail on this method). Once developed, this indicator should be reported on at least annually.
- 2 **Administrative records:** These are quantitative indicators that are (or can easily be) collected routinely as part of agency record keeping. They document the outputs of the reforms' activities and can provide performance trends for indicators of several of the immediate outcomes. Example indicators include the number of enquiries to agencies regarding the reforms, the number of site visits undertaken by agencies and the area of the approvals. This type of data can easily be reported at relatively high frequencies, depending on the data requirements of agencies and Ministers.
- 3 **Priority targets:** Achieving several of the reforms' outcomes requires targeting resources and investment in priority areas, for example, identified landscape corridors and Areas of Outstanding Biodiversity Value. Recording and reporting on the extent to which the reforms' activities are achieving the priorities identified in the reforms' program logic is important to ensure these outcomes are being achieved. These indicators will require monitoring from all agencies and could be recorded as an attribute for each set aside, offset or private land conservation agreement, potentially through a common spatial database. These types of indicators are likely best reported annually.
- 4 **Auditing and compliance:** These are indicators of actual implementation of the reforms. Monitoring compliance is important to test whether or not agencies and landholders are applying the tools developed under the reform in the correct way. While the Commission is proposing a compliance trigger based on unexplained clearing, there are a broader range of compliance activities that should be monitored as part of the MER program, for example, the extent to which landholders are complying with the management conditions for set asides. Broader compliance indicators should be routinely tracked and reported by responsible agencies as frequently as resources allow.
- 5 **Social outcome studies:** Socioeconomic outcomes are a key component of the reforms, in particular the Code, which seeks to improve productivity and other socioeconomic outcomes while managing environmental risk. As many of the indicators for evaluating social outcomes are not included in the trigger framework, it is important that they are captured here. These studies should be undertaken as rural landholder surveys and include questions regarding qualitative, less tangible long-term outcomes such as trust and empowerment of landholders. The survey design will require specialist input to ensure the best results and should be run at least twice before the five-year review. The first survey should occur as early as possible to obtain a baseline with the following surveys providing the relative level of change. The Commission notes that LLS is undertaking a social survey related to outcomes of the Code in a joint project with the University of NSW, which will be an ongoing 'well-being' survey of landholders, monitored against a baseline survey undertaken in mid-2018 regarding the Code.
- 6 **Evaluation (including independent studies):** These are indicators for evaluating long-term outcomes that require synthesis and deeper analysis of multiple sources of data, including both qualitative and quantitative data. These studies should be used to inform

the three- and five-year reviews and should include some level of independent assessment of key outcomes. They should be designed to address key evaluation questions about long-term outcomes, the critical foundational activities and the assumptions and theories that underpin the reforms as a whole, for example, that the reform actions as a whole are sufficient to generate and balance environmental, economic and social outcomes.

- 7 **Existing state-wide and program-specific MER programs:** These are indicators that are already being measured (or are planned to be measured) by agencies. They include indicators from EES' Biodiversity Indicators Program, which is a monitoring program to measure the status of biodiversity and ecological integrity under the *Biodiversity Conservation Act 2017*. LLS is also developing a predictive MER program to calculate the changes in biodiversity value and economic gains and losses from each instance of Code application. The program aims to rely less on extensive plot-based monitoring data and more on remotely-sensed attributes modelled over time to predict change after an intervention. Predictions are then validated using existing data and on-ground measurements from current and future LLS activities where necessary. The Commission understands that the program will be used to assess the outcomes of the Code.

These programs - which are in different stages of development - are useful and should be complemented with a broader range of high level indicators to ensure outcomes are being assessed holistically across the reforms. The EES Biodiversity Indicators will provide specific information regarding some reform outcomes through short-term and output indicators. Results from EES will also provide contextual information regarding broader changes in environmental, social or economic outcomes that may require further investigation. LLS' predictive MER program will provide specific data related to the Land Management Framework pillar but this will need to be complemented with indicators that capture outcomes across the reforms as a whole.

Recommendations

In order to report on key outcomes associated with the Land Management and Biodiversity Conservation reforms, the Commission recommends that:

- 7 If a coordinated, reform specific MER program remains a NSW Government priority, the NSW Government implement an overarching MER program within six months that is informed by the Commission's proposed MER framework so that sufficient data is collected to inform the three- and five-year reviews to the best possible extent.

Note: The Commission also recommends that the Secretary of the Planning, Industry and Environment Cluster establish an overarching steering committee to oversee coordination and implementation across the whole reform, including the implementation of the trigger and MER frameworks (see recommendation 8 in Chapter 7).

Table 5: The Commission’s proposed overarching MER framework

MER indicator and example methods	Indicative Timing	Indicators currently measured	Agency	Intermediate Outcomes	Long-Term Outcomes			Triggers informed
					Biodiversity	Economic	Social	
<p>Biodiversity Value Once developed, all relevant agencies should measure biodiversity using a single method.</p>	Annually	None	All	This indicator is not aimed at any specific intermediate outcomes but will indirectly inform those related to biodiversity	X			
<p>Administrative Records Each relevant agency to keep records of the following and report on an agreed basis to the reform steering committee:</p> <ul style="list-style-type: none"> ▪ Number of landholder enquiries regarding private land conservation and certifications, notifications and actual clearing under the Code. ▪ Number of external partners participating in Saving our Species. ▪ Number of site visits relating to private land conservation, certifications and Native Vegetation Panel approvals. ▪ Number of and investment in approved private land conservation agreements, offsets, set asides, clearing (certifications and notifications) and wildlife licences issued. ▪ Area of approved private land conservation agreements, offsets, set asides, clearing (certifications and notifications). 	Collected quarterly to six-monthly and reported annually	Yes (or easily sourced if not) but would require central collation	All	Regulatory burden targeted to high-risk areas and reduced overall		X	X	<p>Policy implementation: the data will provide indirect evidence that key policy activities have been implemented and effective</p> <p>Biodiversity: the data will help inform the threshold values for this trigger at the state-wide and regional scale.</p> <p>Socioeconomic: the data will help inform potential barriers and drivers for the investment trigger.</p>
				Landholders use the land management framework to make more informed decisions about land management		X	X	
				Landholders have increased access to advice about how they can manage their land to improve environmental and productivity outcomes		X	X	
				The map is actively improved for accuracy and landholders have confidence in it		X	X	
				Biodiversity impacts are mitigated by conservation investment	X			
				Private landholders enter into more and comply with private land conservation agreements	X	X		
				Wildlife interactions are managed in an ecologically and socially sustainable way			X	

MER indicator and example methods	Indicative Timing	Indicators currently measured	Agency	Intermediate Outcomes	Long-Term Outcomes			Triggers informed
					Biodiversity	Economic	Social	
<ul style="list-style-type: none"> Number of Native Vegetation Panel enquiries, applications and area approved (high risk areas) under Division 6 of Part 5A of the <i>Local Land Services Act 2013</i>. Number of enquiries, challenges and amendments to the Native Vegetation Regulatory Map. 				Government and stakeholders have greater clarity, awareness and information about threatened species	X			
<p>Targeting priorities Identify priority attributes for each approved private land conservation agreement, offset or set aside, including if they are or contain:</p> <ul style="list-style-type: none"> a landscape corridor unrepresented or under-represented landscapes threatened ecological communities priority species habitat priority locations that are also Areas of Outstanding Biodiversity Value threatened species or populations over-cleared vegetation types Saving our Species sites. 	Annually	Some of these attributes are likely recorded but may require retrospective attribution for others	All	Private land conservation is targeted to priority areas that improve biodiversity outcomes	X			Policy implementation: identifying where priorities have been targeted will inform the implementation of key policies, including Areas of Outstanding Biodiversity Value.
				Landscape connectivity is increased	X			
				Priority habitat is conserved	X			
				Populations of priority species are more secure	X			
				Priority locations protected and managed as areas of outstanding biodiversity value	X			
	Extent of all clearing and	EES have capacity to	All	Landholders have clarity and certainty about, and		X	X	Compliance: the audit of native

MER indicator and example methods	Indicative Timing	Indicators currently measured	Agency	Intermediate Outcomes	Long-Term Outcomes			Triggers informed
					Biodiversity	Economic	Social	
<p>Audit and Compliance</p> <ul style="list-style-type: none"> Each responsible agency undertakes audit (using consistent lines of enquiry where possible) of management conditions in private land conservation agreements, offsets (BCT funded) and set asides and report on findings and non-compliance. The audit should include a field inspection of random sample of private land conservation agreements, set asides and offsets across all bioregions to verify management is improving biodiversity values. EES to monitor extent of native vegetation cleared (on land covered by the code) monthly and compare this to approved clearing (certifications, notifications and Native Vegetation Panel approvals). An evaluation of the diversity of income for landholders, for example, payments for private land conservation against overall income. 	<p>approved clearing – 6 monthly as part of the compliance trigger</p> <p>As frequently as possible for other indicators</p>	<p>report on unexplained clearing</p> <p>No known audits of compliance with set aside conditions</p> <p>No known audits of compliance with approval clearing conditions</p> <p>BCT have indicators in place for compliance with private land conservation and offsets and for diversification of income</p>		voluntarily comply with, regulatory requirements				<p>vegetation clearing will directly inform the compliance trigger.</p> <p>Policy implementation: the audit of management conditions will indirectly provide qualitative information about the implementation of the Land Management (Native Vegetation) Code.</p>
				Set aside and offset agreements are complied with and land has increased biodiversity value	X			
				Private land conservation is targeted to priority areas that improve biodiversity outcomes	X			
				Private landholders enter into more and comply with private land conservation agreements				
					X	X		

MER indicator and example methods	Indicative Timing	Indicators currently measured	Agency	Intermediate Outcomes	Long-Term Outcomes			Triggers informed
					Biodiversity	Economic	Social	
<p>Social outcome studies (landholder survey) Surveys of rural landholders asking evaluative questions about the use of the reforms (for example the Code, BCT investment, Saving our Species and the Native Vegetation Regulatory Map). The survey requires expert input for its design and could be undertaken through different methods such as phone calls or directing online users of the map to a quick survey.</p> <p>Questions may ask whether landholders agree with questions such as:</p> <ul style="list-style-type: none"> ▪ I feel empowered to manage my land (without significant input from the NSW Government). ▪ I feel trusted and valued for my role in public biodiversity conservation. ▪ I find that there are less regulations governing how I manage my land. ▪ I have used the land management framework to make decisions about native vegetation management on my property in past X years. ▪ The Land Management Framework provides a clear explanation of my options, responsibilities and the processes to be completed. 	Annually (or if online - then as users login)	<p>LLS are developing a social 'well-being' survey which will build on a 2018 survey of landholders.</p> <p>Biodiversity Indicators Program will monitor the community's appreciation of biodiversity</p> <p>Other landholder surveys may need to be developed or redesigned to be fit-for-purpose.</p>	All agencies	Regulatory burden targeted to high-risk areas and reduced overall		X	X	
				Landholders use the land management framework to make more informed decisions about land management		X	X	
				Landholders have increased access to advice about how they can manage their land to improve environmental and productivity outcomes		X	X	
				The map is actively improved for accuracy and landholders have confidence in it		X	X	
				Landholders have clarity and certainty about, and voluntarily comply with, regulatory requirements		X	X	

MER indicator and example methods	Indicative Timing	Indicators currently measured	Agency	Intermediate Outcomes	Long-Term Outcomes			Triggers informed
					Biodiversity	Economic	Social	
<ul style="list-style-type: none"> I am confident that the accuracy of the map has been improved over time. The Native Vegetation Regulatory Map provides useful and accurate information to support my decision making about the management of native vegetation on my property. The native vegetation regulations provide real opportunities for rural landholders to develop their on-farm enterprises. In NSW, the benefits of opportunities to diversify incomes through private land conservation outweigh any associated costs. 				Landholders have the opportunity to diversify income through private land conservation		X	X	
				Landholders are trusted and valued as stewards of public biodiversity value	X	X	X	
<p>Evaluation (including independent studies) Risk-based studies designed to answer long-term key evaluation questions and test the underlying assumptions for the reform package.</p>	Designed to inform three- and five-year review	No broad evaluative or independent studies	All	Independent studies are specifically aimed at long-term outcomes but will indirectly inform many of the intermediate outcomes	X	X	X	
<p>Existing state-wide and program specific MER programs Indicators of biodiversity, social and economic changes (not necessarily directly attributable to the reforms), including the:</p> <ul style="list-style-type: none"> LLS predictive MER model for biodiversity value predictive MER model for economic value 	As per agency MER	Yes as these are current or intended MER programs	EES / LLS	Landholders have the opportunity to diversify income through private land conservation		X	X	Biodiversity: data from the MER programs, in particular the biodiversity indicators, will inform the state-wide and regional biodiversity triggers.
				Biodiversity impacts are mitigated by conservation investment	X			
				Set aside and offset agreements are complied with and land has increased biodiversity value	X			

MER indicator and example methods	Indicative Timing	Indicators currently measured	Agency	Intermediate Outcomes	Long-Term Outcomes			Triggers informed
					Biodiversity	Economic	Social	
<ul style="list-style-type: none"> ▪ EES biodiversity indicators. 				Landscape connectivity is increased	X			
				Priority habitat is conserved	X			
				Populations of priority species are more secure	X			

7 Further opportunities to improve service delivery and mitigate risks

The terms of reference asks the Commission to consider and, where appropriate, make recommendations on early lessons regarding opportunities for service delivery optimisation or improved risk mitigation. It was agreed that this analysis would be a high-level assessment of issues associated with the strategic implementation of the reforms as a whole. While the findings and recommendations in the previous chapters of this report are designed to improve service delivery and mitigate risks, this chapter outlines additional findings regarding opportunities to support the implementation of the trigger and MER frameworks and the reforms more broadly. These findings were informed by the development of the program logic, trigger and MER frameworks and through interviews with relevant agency staff. The Commission was not able to consult with stakeholders outside of the agencies due to this review being Cabinet in Confidence.

The Commission notes that the Audit Office of NSW has recently released their audit of the management of native vegetation in NSW, which recommended a number of improvements to the delivery of the reforms, particularly around the coordination of agencies and ensuring timely compliance with approvals under the Code. The Commission broadly agrees with the findings of the Audit Office's report. The findings in this chapter and the rest of the report complement and build upon these findings with further recommendations to improve service delivery and mitigate risks.

7.1 Strengthening strategic coordination of relevant agencies

Three agencies are responsible for delivering the different pillars of the reforms and coordinated delivery is critical for the success of the reforms. Each agency has developed specific objectives for their own pillars but there is little evidence of strategic coordination. Coordination has largely been limited to agreements between individual agencies and has tended to focus on specific issues, rather than a comprehensive, reform-wide approach. Coordination is also limited by an 'us and them' culture and key differences between agencies' strategic intent. A more holistic approach to strategic coordination with independent oversight is required. The new Planning, Industry and Environment Cluster provides an opportunity to drive improved coordination.

Current coordination mechanisms and identified issues

Agencies have established the following mechanisms to facilitate strategic coordination:

- The Biodiversity Conservation Investment Strategy developed by EES to guide BCT investment.
- A Strategic Engagement Group with LLS and EES representatives.
- Several operational groups, including a state-wide operations working group with representatives of LLS regional staff and EES, an interagency compliance working group with representatives from LLS and EES and working groups for the Biodiversity Offsets Scheme pillar.

- Bilateral memorandums of understanding (MOUs) between BCT, EES and LLS, which are in various stages of development.³²

These mechanisms have largely been developed to drive coordination on specific aspects of the reforms and there is currently no mechanism driving coordination more holistically. Agencies noted there was a steering committee comprised of all three agencies for the development of the reforms but a comparable model has not been carried over to their implementation. Agency staff interviewed indicated that, outside of the targeted mechanisms above, knowledge sharing and engagement between agencies is generally informal, particularly at the operational level.

The MOUs reviewed by the Commission reflect good practice in terms of their expressed aims and intent but the EES and LLS MOU has not been finalised after nearly two years. There is limited evidence of core components of the agreements being implemented to date, including integrated land management and conservation actions, information sharing and joint engagement and communications.

Staff also considered that agencies had been generally inwardly focussed and have had limited strategic coordination as they worked to establish new processes to undertake their individual responsibilities under the reforms. This may be further driven by agency culture, with some agency staff indicating that there was an 'us and them' culture, with key differences between the strategic goals of some of the agencies. The Commission also observed a similar lack of focus on the overall intent of the reforms and a focus on delivering the individual pillars.

Feedback from agencies indicates that resource and time constraints, as well as adjustment to new legislation, may have been drivers behind relatively siloed implementation to date. However, the Commission is of the view that strategic coordination of agencies is a critical foundational element of the reforms and strong frameworks should have been established as a priority. Coordination is necessary to align priorities, maximise outcomes and increase efficiency. Moving forward, it is also critical in terms of reporting on whole-of-reform outcomes. While individual agencies may be able to report on pillar-level outcomes, the NSW Government will need to be able to report whether the reforms as a whole are delivering broader outcomes.

Strengthening coordination through an independently chaired steering committee

Good working partnerships require openness, trust and honesty, agreed shared goals and values and regular communication between partners.³³ A steering committee comprised of relevant agencies within the Planning, Industry and Environment Cluster should be established to improve communication, address emerging issues and strengthen alignment of the reforms' programs with shared goals. As noted in **Chapters 4 and 6**, this steering committee should also oversee the implementation of the trigger and MER frameworks. Given the importance of these reforms and the risk of potential conflicts between agencies, the steering committee should have an independent chair appointed by the Secretary of the Planning, Industry and Environment Cluster (such as a representative of the Secretary's Office).

³² The Commission has reviewed the MOUs between BCT and LLS, and between BCT and EES. The MOU between LLS and EES is currently in the draft stage and could not be reviewed.

³³ Community Development and Health Network (nd) Factsheet: Partnership Working. Available at: https://www.cdhn.org/sites/default/files/downloads/FACTSHEETS%2013_Screen%20View.pdf.

The role of the steering committee should broadly be to oversee coordination and implementation across the reforms, including the implementation of the trigger and MER frameworks, alignment of strategic priorities and the response to emerging issues. In particular, the Commission identified the following key policy aspects that should be considered by the committee as a priority:

- **Landholder engagement and capacity building:** The Commission identified capacity building, engagement and knowledge sharing as a key foundational activity intended by the reforms and necessary to achieve objectives. While the Commission notes that the BCT and LLS MOU specifically promotes actions to ensure “regional collaboration in landholder engagement, customer service and program promotions,” it appears that engagement and capacity building activities are largely undertaken separately by agencies. The steering committee should develop and promote a more coherent and strategic approach across the NSW Government to ensure this foundational step is being achieved. A priority action for this approach could be to establish joint communications products that provide a single point of reference for landholders to understand what their options are under the whole of the reforms.

The Commission also acknowledges the importance of LLS’ role in engaging landholders on the reform and the trust that landholders place in LLS. The steering committee should develop engagement approaches that leverage LLS’ relationship with landholders to strengthen landholder engagement across the reforms while ensuring the core components of the legislation and regulations are implemented as intended.

- **Coordinating conservation investment:** While there is some evidence that agencies are working together on conservation investment under the separate pillars (for example, LLS and BCT are collaborating on possible conservation agreements for travelling stock reserves), these efforts appear to be *ad hoc*. There is potential to have a more strategic approach that considers the full range of conservation investment under the reforms. Synergies could be achieved if LLS, EES and BCT actively work together to ensure that, where possible, conservation investment and set aside decisions are strategically aligned, for example, coordinating investment and set asides to achieve better landscape connectivity.
- **Data and information sharing:** The Audit Office report identifies a need for improved information and data sharing between LLS and EES to support more timely compliance actions and to update the Native Vegetation Regulatory Map. The Commission similarly found limited sharing of data between agencies. LLS has indicated that new systems are currently being developed to provide EES with a direct portal to spatial data on notifications and certifications as a priority. In addition to this, the proposed steering committee should explore how data and information sharing systems can be improved to support other activities, including the trigger and MER frameworks and strategic decision making around conservation investment.

7.2 Policy instruments that should be considered in the three-year review

While assessing critical policy instruments for the trigger framework, the Commission identified two policy instruments that were not considered significant enough for the trigger but that should be evaluated as part of the three-year review. These include the Native Vegetation Panel and the process for establishing Areas of Outstanding Biodiversity Value. While established, there are opportunities to improve the operation of these instruments to ensure they are delivering reform outcomes, for example, providing the Native Vegetation Panel with more flexibility in its decision making and establishing a more transparent process for nominating Areas of Outstanding Biodiversity Value.

7.2.1 The Native Vegetation Panel

The Native Vegetation Panel is intended to be an expert independent body under the *Local Land Services Act 2013* to assess clearing proposals that cannot be accommodated by allowable activities or the Code.³⁴

The Native Vegetation Panel was formed in July 2018 in line with the requirements of the *Local Land Services Act 2013*. Three panel members were appointed by the then Minister for Primary Industries. External applicants were sought through an expression of interest process, analysis of board and committee lists and direct approaches to potential candidates but this did not return any external applicants that met the Minister's requirements. As such, the members appointed by the Minister are agency staff.

At the inception meeting for the Panel, it was agreed to meet when required or when applications to the Panel were received. There have not been any applications to the Panel and as such they have not met since the induction meeting.

A lack of applications to the Panel suggests that there are barriers to landholders engaging with the Panel processes, limiting the extent to which the Panel can fulfil its intended role under the legislation. The Commission understands that the Panel Secretariat (provided by LLS) has received enquiries from a small number of interested landholders but these have not progressed with an application due to potentially high costs associated with the Panel's process. Potential high costs may come from requirements to appoint a Biodiversity Assessment Method assessor and develop a Biodiversity Development Assessment Report. There are also significant costs associated with offsets including establishing stewardship sites, purchasing and retiring biodiversity credits and payments into the Biodiversity Conservation Fund required to compensate for biodiversity impacts resulting from an application.

The three-year review should consider barriers to landholder engagement with the Native Vegetation Panel. This review should include the roles and responsibilities of the Panel under the *Local Land Services Act 2013* and potential opportunities to increase the options available to the Native Vegetation Panel to assist with applications that fall outside of the Code.

³⁴ Note: The Native Vegetation Panel can also assess native vegetation clearing applications for non-rural areas that exceed the Biodiversity Offsets Scheme threshold. However, this role is outside the scope of this review.

7.2.2 Process for declaring Areas of Outstanding Biodiversity Value

The *Biodiversity Conservation Act 2016* gives the Minister for Energy and Environment the power to declare Areas of Outstanding Biodiversity Value, which are areas that contain irreplaceable biodiversity values that are important to the whole of NSW, Australia or globally. They are considered to be a priority for private land conservation investment. Existing areas of declared critical habitat under the *Threatened Species Conservation Act 1995* became Areas of Outstanding Biodiversity Value when the *Biodiversity Conservation Act 2016* commenced.

The Commission understands that no new Areas of Outstanding Biodiversity Value have been declared under the new legislation. While legislation provides a framework for declaration once EES has recommended an area for consideration by the Minister, as yet there is no clear process for how EES will identify areas for recommendation or whether other agencies or community members can nominate areas for recommendation by EES. A lack of clarity and strategic direction regarding these matters may reduce the extent to which priority areas are identified and miss opportunities to engage the broader community in biodiversity conservation.

The three-year review should consider whether adequate processes are in place for agencies and the broader community to nominate areas to be recommended by EES for declaration as an Area of Outstanding Biodiversity Value.

Recommendations

In order to implement the proposed trigger and MER frameworks and improve service delivery more broadly the Commission recommends that:

- 8 The Secretary of the Planning, Industry and Environment Cluster establish an overarching steering committee comprised of relevant agencies to oversee coordination and implementation across the whole reform, including:
 - the implementation of the trigger and MER frameworks
 - alignment of strategic priorities, including conservation investment
 - responses to emerging issues
 - landholder engagement and capacity building
 - data and information sharing.
- 8.1 The steering committee should have an independent chair appointed by the Secretary (such as a senior representative of the Secretary's Office).
- 9 As part of the three-year review, the NSW Government should consider:
 - 9.1 Barriers to landholder engagement with the Native Vegetation Panel. This review should include the roles and responsibilities of the Panel under the *Local Land Services Act 2013* and potential opportunities to increase the options available to the Native Vegetation Panel to assist with applications that fall outside of the Code.
 - 9.2 Whether adequate processes are in place for agencies and the broader community to nominate areas to be recommended by EES for declaration as an Area of Outstanding Biodiversity Value.

Attachment 1 - Terms of reference

Attachment 2 – Summary of data analysis

Terms of reference data analysis component	Key findings
<p>The spatial and temporal characteristics of land clearing (including historical, current and projected rates of clearing).</p>	<ul style="list-style-type: none"> ▪ The Commission undertook an analysis of state-wide vegetation change and conservation in the eight years pre-reform to determine how the vegetation clearing and conservation actions under the reforms compares with other types of native vegetation change and approaches to conservation in NSW. ▪ Between 2009/10 and 2017/18 there was approximately 600,000 hectares added to public and private conservation areas. Total vegetation loss was on the order of 570,000 hectares, with approximately 435,000 hectares due to fires and forestry, the majority of which can be expected to regenerate. As of January 2018, of the approximately 133,500 hectares cleared for development and agriculture, only 34,079 hectares was due to approved clearing under the <i>Native Vegetation Act 2003</i> and Parts 3-6 of the Code. ▪ As at 13th May 2019, 45,553 hectares has been approved to be cleared under Part 3-6 of the Code (excluding Part 2 – invasive native species). ▪ Current rates of approvals peaked in February 2019 at 6,940 hectares approved to clear in that month. Since February 2019, this rate has reduced to an average rate of approximately 3,550 hectares per month. ▪ The Commission notes that before the 2019 election, the Opposition indicated an intent to repeal the current biodiversity legislation. As such, the post-reform spike may be the result of landholders looking to take advantage of the new Code prior to the election, particularly given that the approvals last for 15 years.
<p>The implications of actual versus approved clearing and biodiversity conservation investment rates in determining a trigger.</p>	<ul style="list-style-type: none"> ▪ The Commission was not able to assess actual clearing of notifications but was able to assess actual clearing of certification approvals. ▪ An analysis of available data found that by March 2019, only 45 percent of the state-wide certifications were fully or partially cleared since the reforms began. Of the certifications that were cleared, 47 percent of these were fully cleared, with the rest partially cleared. Of the approximately 33,600 hectares approved to be cleared under certifications state-wide, only 16 percent (5,465 hectares) had actually been cleared to March 2019. ▪ At the LLS regional level, Riverina had the highest rate of approvals actually cleared (72 percent), followed by Greater Sydney (56 percent), Hunter (29 percent) and Murray (28 percent). In all other regions, approved versus actual clearing was less than 22 percent. ▪ The Commission notes that approvals to clear land are valid for 15 years and while some areas may never actually be cleared, the potential to clear in areas not yet cleared will remain for some time and approvals should be continually monitored. ▪ The analysis found that 29 percent of the analysed post-reform certifications were acted upon within the first year of approval. 55 percent were yet to be acted upon at all. The analysis suggests that post-reform certifications are being acted upon in a shorter timeframe than the time it took landholders to act on pre-reform approvals. ▪ An analysis of 207 pre-reform Property Vegetation Plans found that, of those assessed, 83 percent were fully or partially cleared. Of the Property Vegetation Plans that were cleared, 57 percent were fully or mostly cleared,

	<p>with the rest partially cleared. Of the approximately 15,211 hectares state-wide approved to be cleared under these Plans, 73 percent (11,062 hectares) has actually been cleared.</p> <ul style="list-style-type: none"> ▪ Only certifications to clear Category 2 land under Part 5 (equity) and Part 6 (farm plan) Code authorisations require set asides. When only these parts are considered, 24,503 hectares of set asides have been certified to compensate for 13,287 hectares of land approved to be cleared with set aside requirements. At the LLS regional level, half of the regions had more than two hectares of vegetation set aside for every hectare approved to be cleared. These regions were Central Tablelands, Murray, Central West, Hunter, South East and Greater Sydney. ▪ When all certifications and notifications for approval are considered (including Part 3 – pasture expansion but excluding Part 2 – invasive native species), less than 54 percent of the state-wide area approved to be cleared (45,553 hectares) was set aside. The only regions that have achieved a greater than a 1:1 ratio of total area approved to be cleared (excluding Part 2 - invasive native species) to area set aside are the Murray (316 hectares set aside) and Western regions (16,432 hectares set aside). ▪ The two LLS regions where the set aside areas were lowest relative to the area approved to be cleared were Central Tablelands (which had 1,404 hectares approved to be cleared and 35 hectares or 2.5 percent set aside) and Northern Tablelands (which had 6,915 hectares approved to be cleared and 453 hectares or 6.5 percent set aside). Additionally, North Coast, North West and South East had set aside areas that were less than 20 percent of the area approved to be cleared.
<p>The type of vegetation cleared.</p>	<ul style="list-style-type: none"> ▪ The Commission undertook analysis of vegetation type cleared for agriculture more broadly using SLATS³⁵ data and did not identify any unexpected emerging trends or issues at this time. ▪ In the period between 2009 and 2015, the most cleared vegetation formation was wet sclerophyll, which was then overtaken by clearing of semiarid woodlands (shrubby formation) between 2015 and 2018. The change from wet sclerophyll clearing to semiarid woodland clearing is a result of an increased rate of change of woody vegetation within the North West and Western LLS regions due to crop, pasture and thinning activities from 2015 to 2018. These region are likely to be dominated by semiarid vegetation communities.
<p>The type of Code authorisations used.</p>	<ul style="list-style-type: none"> ▪ The Commission analysed authorisations under the Code since the reforms began and found that the most widely used parts were Part 3 (pasture expansion), with 25,163 hectares cleared, followed by Part 5 (equity), with 16,832 hectares cleared. Part 3 (pasture expansion) was the most used authorisation under the Code in all regions except Riverina and Western. In these regions the most used authorisation under the Code is Part 5 (equity).
<p>Investment in private land conservation.</p>	<ul style="list-style-type: none"> ▪ The Commission analysed data on BCT investment in private conservation since the commencement of BCT when the reforms began and found that BCT conservation investment programs have been highly subscribed

³⁵ Data derived using the State-wide Landcover and Tree Survey Methodology.

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- As of March 2019, BCT has invested \$55.72 million and secured new conservation agreements totalling 19,091 hectares for conservation since the start of the reform.³⁶ Investment by region was:
 1. Central West (\$17.5 million/3,984 hectares)
 2. Murray-Riverina (\$13.14 million/5,138 hectares)
 3. South-East (\$12.87 million/3,783 hectares)
 4. Northern Inland (\$5.91 million/4,700 hectares)
 5. North Coast (\$6.3 million/684 hectares).
 - Conservation investment also occurs through the Saving our Species program, which is implemented by EES. From when the reforms began to January 2019, just under \$29 million has been invested under the strategy for actions to secure priority threatened species.³⁷
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³⁶ The Commission understands that there are four BCT tenders that have closed and are currently being assessed in the Northern Inland, Central-West, Murray-Riverina and North Coast BCT regions. As they are still in progress, they have not been included in the analysis to date.

³⁷ Data on Saving our Species investment sourced from the Cabinet submission on Land Management and Biodiversity Conservation reform progress dated 21 February 2019.

Attachment 3 – Trialled regional risk rating method (not adopted for trigger)

The Commission trialled the use of a regional risk rating method that considered regional risk of loss derived from historical and predicted future percent reduction in native vegetation cover associated with clearing approvals. This was to reflect the different levels of clearing that occur within different regions of NSW and the higher biodiversity value of remaining native vegetation in highly cleared regions. The Commission determined that this method did not meet the good practice trigger principle of being relatively easy to understand and interpret and as such it has not been proposed for the trigger framework. **Table A3.1** provides an overview of the trialled approach.

Table A3.1: Overview of the trialled regional risk rating method

Stage	Overview
<p>Stage 1:</p> <p>Establish the native vegetation resilience in each LLS region</p>	<ul style="list-style-type: none"> ▪ This stage considers regional variation in clearing and conservation across LLS regions. Regions with higher levels of historical clearing combined with low levels of conservation will indicate that the remaining vegetation is more likely to form part of a threatened ecological community or is at higher risk of being lost. If high clearing rates are maintained, the resilience of the vegetation in that region is reduced. ▪ Regional vegetation resilience for each region is determined in two stages: <ol style="list-style-type: none"> 1. Risk of loss estimate: This is used as a gauge of the biodiversity risk of native vegetation and is based on the average annual percentage rate of loss for forested habitat³⁸ in the period from 2005 to 2014.³⁹ A risk of loss over a one hundred year period is proposed, in line with the objectives of the reform to secure threatened species and control threats to vegetation communities, plant species and animals over the next 100 years.⁴⁰ 2. Proportion of each LLS region held in in-perpetuity agreements: This is land within the CAR reserve system and is important because the more vegetation secured within the CAR reserve system, the less sensitive that region is to further vegetation loss. ▪ The thresholds used in this method are based on the Aichi biodiversity targets as a guide for an appropriate threshold for conservation.⁴¹ Although not for use in administrative areas, LLS regions where 17 percent the region’s area is in conservation reserve are broadly in line with the conservation expectations of international protocols. ▪ Table A3.2 provides an overview of the threshold categories for establishing vegetation resilience for LLS regions.

³⁸ Forested habitat is defined as “woody vegetation with at least 20 percent canopy cover, reaching, or with the potential to reach, at least 2 metres high, covering at least 0.2 hectares.”

³⁹ The University of Queensland (2017) Guidance for deriving ‘Risk of Loss’ estimates when evaluating biodiversity offset proposals under the EPBC Act. Report to the National Environmental Science Programme Department of the Environment and Energy.

⁴⁰ To calculate the 100-year projected background loss, the average annual background rate of loss for the LLS region, provided by University Queensland (2017), is multiplied by 100.

⁴¹ Convention on Biological Diversity: Aichi Biodiversity Targets, Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity, Target 11.

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- Stage 2:**
- Establish a biodiversity risk weighting for each LLS region based on native vegetation resilience**
- This stage uses a biodiversity risk weighting matrix to establish the vegetation resilience within each LLS region.
 - The matrix is derived from the NSW Biodiversity Assessment Methodology’s Biodiversity Risk Weighting Tool, which will represent resilience of native vegetation in that region.⁴² The matrix is shown in **Table A3.3**. As the biodiversity risk is based on historical background clearing (the risk of loss) and conservation (the proportion of region conserved within in-perpetuity agreements under the CAR reserve system), the weighting will be a static number and will not change as a result of future approvals and set asides under the Code.
 - This process assumes that regions with higher levels of historical clearing and lower levels of conservation in the CAR reserve System will have a higher likelihood of remaining vegetation containing greater areas of threatened ecological communities, which puts them at increased risk of biodiversity loss.
 - The indicative biodiversity risk weighting for each LLS region is shown in **Table A3.4**.
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- Stage 3:**
- Establish a biodiversity risk weighting for each LLS region based on native vegetation resilience**
- This stage aims to highlight any potential risks of current loss for each LLS region, considering the area approved for clearing and the area of native vegetation conservation through set asides.
 - The proposed biodiversity risk weighting represents the set aside ratio of a particular region that is consistent with the second reading speech to Parliament by the then Minister for Primary Industries, as well as the NSW principles of biodiversity offsets. The offset principles include that:
 - Offsets will complement other government programs: a range of tools are required to achieve the NSW Government’s conservation objectives, including the establishment and management of new national parks; nature reserves; state conservation areas and regional parks; and incentives for private landholders.
 - Offsets should aim to result in a net improvement in biodiversity over time: enhancement of biodiversity in offset areas should be equal to or greater than the loss in biodiversity from the impact site.
 - LLS regions with a higher biodiversity risk weighting are identified to be at greater risk from further clearing and therefore require higher rates of conservation through set asides.
 - The biodiversity risk rating for a LLS region will be assessed against:
 - The biodiversity risk area which represents the target set aside area to mitigate impacts to native vegetation in that LLS region in accordance to the principles of offsetting
 - The set aside requirements from the second reading speech of a minimum of 2:1 ratio of area of vegetation set aside against that approved to clear
 - Area of approvals to clear native vegetation in that LLS region does not exceed area conserved under the Code (i.e. a 1:1 ratio of set asides to approvals).The following risk rating thresholds have been set:
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⁴² Derived from the Biodiversity Risk Weighting tool in Appendix 7 of the Biodiversity Assessment Methodology.

- The risk rating thresholds are:

Risk Rating	Meets 1:1 ratio	Meets 2:1 ratio
Low	✓	✓
Medium	✓	✗
High	✗	✗

- Table A3.5 provides an example of the biodiversity risk rating based on current regional data for areas certified to clear and set asides, as well as the indicative biodiversity risk weighting (as detailed above).

Table A3.2: Threshold categories for establishing vegetation resilience

Threshold Category	Risk of loss (Proportion forest in LLS Region over 100-years)	Conserved (Proportion of LLS region conserved in CAR Reserve system)
Low	<6%	6%
Medium	6% - 12%	6% - 12%
High	12% - 17%	12% - 17%
Very High	>17%	>17%

Table A3.3: Biodiversity risk weighting matrix

Biodiversity risk weighting		Conserved within CAR reserve system			
		Very high: >17%	High: 12-17%	Medium: 6-12%	Low: <6%
Risk of loss	Very high: >17%	2	2.25	2.55	3
	High: 12-17%	1.5	1.75	2	2.5
	Medium: 6-12%	1.25	1.5	1.75	2.25
	Low: < 6%	1	1.25	1.5	2

Table A3.4: Indicative biodiversity risk weighting for each LLS region

LLS region	Risk of loss over 100- years (%)	Area of LLS region in National Parks and Wildlife Estate (%)	Biodiversity risk weighting
Central Tablelands	15.85	15	1.75
Central West	17.75	3	3.0
Greater Sydney	1.15	46	1.0
Hunter	18.05	21	2.0
Murray	10.85	9	1.75
North Coast	0.55	21	1.0
North West	13.5	4	2.5
Northern Tablelands	16.7	15	1.75
Riverina	17.55	5	3.0
South East	19.10	23	2.0
Western	31.25	5	3.0

Table A3.5: Example biodiversity risk ratings based on the biodiversity risk weighting, area approved to clear and area set aside

LLS region	Area approved to be cleared (ha) ⁴³	Biodiversity risk weighting	Total biodiversity risk (ha)	Area set aside (hectares)	Set aside / approval area ratio	Meets criteria 1	Meets criteria 2	Biodiversity risk rating
Central Tablelands	592	1.75	1,035	35	0.06	✗	✗	High
Central West	4,799	3	14,397	3,325	0.69	✗	✗	High
Greater Sydney	95	1	95	29	0.31	✗	✗	High
Hunter	1,389	2	2,778	365	0.26	✗	✗	High
Murray	165	1.75	289	316	1.91	✓	✓	Low
North Coast	724	1	724	143	0.20	✗	✗	High
North West	1,552	2.5	3,881	668	0.43	✗	✗	High
Northern Tablelands	5,248	1.75	9,184	453	0.09	✗	✗	High
Riverina	3,823	3	11,469	2,531	0.66	✗	✗	High
South East	943	2	1,886	204	0.22	✗	✗	High
Western	12,345	3	37,035	16,432	1.33	✗	✓	Medium

⁴³ A 0.7 discount multiplier has been applied to areas cleared under Part 3 (Pasture expansion) to recognise that this is a thinning code where a proportion of vegetation is retained.