

The Nature Repair Market Bill 2023

Policy Impact Assessment

Department of Climate Change, Energy, the Environment and Water

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Final Policy Impact Assessment for the Nature Repair Market Bill 2023

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Final Policy Impact Assessment for the Nature Repair Market Bill 2023

Purpose

This Policy Impact Assessment (PIA) addresses the introduction of the Nature Repair Market Bill 2023 (the Bill) and the operation of the Nature Repair Market (NRM).

References cited are in the public domain.

Overview

In August 2022 the Prime Minister¹ and the Minister for Environment and Water² announced the Government's intention to develop legislation to establish an NRM. This voluntary market would reward landholders for undertaking projects that provide biodiversity outcomes such as regeneration of landscapes, and the protection and enhancement of remnant vegetation and habitats for native species.

Arrangements to establish an NRM would include issuing Biodiversity Certificates for successful projects, recognising the biodiversity outcomes achieved. These certificates will be a new class of asset, recorded in a public register maintained for the purposes of transparency and sharing relevant information, and will be tradeable personal property.

Biodiversity projects have the potential to complement existing activity in some industry sectors. Participants such as land managers, first nations groups, farmers, pastoralists, non-government organisations, foresters, or Indigenous ranger groups may identify the potential to generate additional income streams or other benefits to their primary focus of supplying agricultural and input markets, generating carbon credits, or maintaining cultural connection to country.

Other parties such as conservation groups and land remediation consultants may see participation in this new market as part of their core business and may rely on the arrangements to guide their activities.

The Bill recognises that stakeholders have diverse interests which may evolve as the market matures. The proposed arrangements balance the need for providing both certainty and flexibility to potential participants who will assess for themselves whether their voluntary participation is in their best interests.

The Bill articulates the market arrangements and introduces requirements and obligations for those who choose to participate in this market, and it will be supported by subordinate legislation, including rules and methods approved by the Minister for the Environment and Water. To avoid doubt, people who wish to do so will still be able to lawfully undertake commercial biodiversity projects outside of this legislative framework.

Biodiversity is one of multiple services provided by the environment that sustain life and are generally described as ecosystem services. Initiatives to incorporate ecosystem services into a market-type framework are a relatively new, and there are few instances around the world where these markets are developed and operating at scale (the market in Australian Carbon Credit Units (ACCUs) is a local example). These initiatives generally require governments to lead the development of a market because the private sector has generally been hesitant to be drawn into the public policy domain, and volunteer

¹ Biodiversity certificates to increase native habitat and support Australian landholders 26 August 2022

² Address by the Minister for the Environment and Water to the National Biodiversity Conference dinner, 27 July 2022
<https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22media%2Fpressrel%2F8699470%22;src1=sm1>

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to pay for services and benefits previously not paid for (the reduction of greenhouse gas emissions being one of the few exceptions).

As a result, there are limited precedents to inform a detailed policy approach, and no equivalent markets to inform the development of an Australian nature repair market. Hence, the policy and market design will have to be sufficiently flexible to allow for refinements as a result of experience and feedback from market participants and other interested parties (an 'adaptive management' model).

The policy issue being addressed.

Biodiversity is in decline.

Nature's annual contribution to the global economy through the provision of services related to biodiversity, as a source of food and shelter, clean water, air, and healthy soils is estimated to be USD\$125 trillion a year³. In Australia, land based (terrestrial) ecosystems provide more than AUD\$325 billion in ecosystem services⁴. Australia is globally renowned for the quality of its agricultural, forestry and fisheries products and aquatic and land-based biodiversity, which are a significant attraction for both domestic and inbound international tourists.

Our land managers depend directly on the health of their natural resources and actively manage their land for their success, productivity, and growth. Agriculture, forestry, and tourism industries alone contribute more than \$120 billion to the economy and employ more than 1 million Australians⁵.

However, Australia's biodiversity is declining. Successive 'State of the Environment' reports, the review of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), and other independent reviews have highlighted the ongoing decline. The *Australia State of the Environment 2021* report reinforced many of the issues relating to the decline of biodiversity in Australia, the urgent need to protect native flora and fauna and introduce new initiatives to arrest the decline.

- Approximately 44 per cent of Australia's forests and woodlands have been cleared since European settlement; 39 per cent being cleared before 1972. The three most heavily cleared habitats in these areas together previously covered more than 170,000 square kilometres of Australia, and each has lost more than 80% of its original extent. In temperate ecosystems, less than 2% of original grasslands remain.
- It is estimated that Australia gains around 20 new pests or diseases each year. These invasive species impact native species through a combination of habitat modification and predation.
- There is a high rate of species extinction in Australia. Over 50 Australian animals and 30 plants are known to be extinct. A further 404 animal species and over 1300 plant species are either critically endangered, endangered, or vulnerable. In the 2019-20 bushfires, an estimated 65 threatened species had over half of their habitat impacted. A further 49 species had more than 80% of their habitat damaged by the fires.
- Australia's oceans are amongst the most diverse and many of Australia's marine habitats are unexplored. 80% of Australian's live within 100km of the coast and this has had significant impacts on adjacent catchments, coastal ecosystems, and nearshore waters over the last 200 years. Harvesting and poor water quality eventually causing destruction of 92% of Sydney rock oyster reefs and the extinction of South Australian oyster reefs. 95% of Tasmanian giant kelp forests have disappeared due to shifting environmental conditions intersecting with

³ Costanza et al (2014), Changes in the global value of ecosystem services, *Global environmental change*, 1 26, 152-8.

⁴ ABS, 2010, Australia's Biodiversity (Yearbook Australia, 2009-2010 Feature Article), Available at: <https://www.abs.gov.au/ausstats/abs@.nsf/Previousproducts/1301.0Feature%20Article12009-10>

⁵ Calculated using Australian Bureau of Statistics National Account data.

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overharvesting of predators of the sea urchins which graze kelp. The decline of many of Australia's coral reef systems has been documented in recent decades, dramatically affecting their ability to support a diverse range of marine species, many endemic to Australian waters⁶.

Active land and biodiversity management by landholders is not commonly valued by markets, although properties with remnant bushland and intact landscapes which support remaining indigenous species of flora and fauna may trade at a premium to neighbouring properties if these attributes are valued by eventual buyers.

The processes for valuing these attributes tend to be opaque and subjective, due in part to inadequate information and methods. Feedback from consultation on the policy position and the exposure draft of the Bill indicates that this limits the availability of private sector funds for investment in biodiversity improvement.

Biodiversity is a public good.

In an economic sense, biodiversity is a public good, defined as a good that is freely available, and users cannot be barred from accessing or using them. This introduces a risk that public goods like biodiversity can be overconsumed to the extent that their long-term availability is threatened. These characteristics are consistent with the decline in biodiversity in Australia and elsewhere. Governments are increasingly taking the lead in recognising and managing these risks, particularly when they impact on economies and the quality of life of their communities.

Whilst in recent decades governments have supported landholders by offering grants or other time-limited support for biodiversity protection and restoration, public funding is insufficient to support existing biodiversity or sustain the level of restoration required to avoid a downward spiral. The Australian Land Conservation Alliance estimates that we need to spend over \$1 billion⁷ a year to restore and prevent further landscape degradation. There are limits to the quantum of public funding available, and many competing demands for public funds.

From a supply perspective, around 17% of Australia is part of the Indigenous land estate⁸, and the agricultural sector manages approximately 60 per cent of Australian land across diverse landscapes and utilises a wide variety of production systems. Other land holders, fisheries and conservation managers protect and manage other ecosystems on land and in aquatic domains (fresh, salt, and marine waters), generating outcomes which contribute to the quality of life enjoyed by the resident population and appreciated by tourists. However, the benefits of protecting, maintaining, and enhancing biodiversity are not valued by existing markets, and funding support for such activities has been restricted to time-limited grant and research programs with limited coverage. This means there is no added incentive to protect or enhance biodiversity on areas for those that fall outside of current grant offerings.

From a demand perspective, businesses and other entities are increasingly expressing an interest and/or volunteering to invest directly in landscape restoration and protect or create biodiversity. Their motivations may be varied, including a desire to seek an acceptable financial return, or more broadly to support their social licence to operate⁹. However, the demand for investment in these opportunities is difficult to define, and these voluntary markets are not developing in the absence of a clear framework.

⁶ Saunders et al (2022). A roadmap for coordinated landscape-scale coastal and marine ecosystem restoration. Report to the Reef and Rainforest Research Centre, Cairns, Queensland.

⁷ ALCA-Media-release-SoE-220719.pdf

⁸ Australia's Indigenous land and forest estate (2020) - DAFF (agriculture.gov.au)

⁹ RM Consulting Group (RMCG), 2016. Evaluating business investment in biodiversity conservation.

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A recent report prepared independently by PricewaterhouseCoopers suggests ‘a biodiversity market could unlock \$137 billion in financial flows to advance Australian biodiversity outcomes by 2050’¹⁰.

Limited incentives for non-government actors to address biodiversity impacts.

Split incentives arise because of the combination of the public good characteristics of biodiversity, and current market and policy settings. Split incentives are where those responsible for contributing directly and indirectly to impacts such as biodiversity decline do not bear the impacts or the costs. Current requirements to address adverse impacts are defined primarily through statutory project environmental approvals which are only required for a small subset of economic activity which exceeds a nominated threshold. Requirements can also vary between jurisdictions. The review of the EPBC Act highlighted that a significant range of adverse biodiversity impacts are not addressed by the market because they fall below a threshold where environmental approvals are required, accumulate over time, and are only assessed periodically (providing a snapshot rather than a continual view of what is happening).

The public good attribute of biodiversity means biodiversity is not easily appropriated or traded which can disincentivise private investment and landholder participation. There is currently no legal mechanism for landholders to ‘sell’ the outcomes from biodiversity activities to private buyers. This means philanthropic and financial investors have few options but to buy and lock up land to achieve biodiversity outcomes rather than supporting activities in conjunction with other land uses. This has the effect of limiting investment in biodiversity projects to individuals or organisations with a high level of discretionary income, and a flexible investment mandate which allows them to invest without expecting a conventional financial return. Furthermore, the opportunity cost for existing landholders of committing to biodiversity conservation may be high, limiting the financial incentive for landholders to deliver biodiversity outcomes on a given parcel of land.

The consequences of a lack of market arrangements include under-investment from the private sector and under-delivery of biodiversity outcomes such as habitat and ecosystem support for threatened species. Some characterise this outcome as ‘market failure’. This is particularly the case in developed regions where land has high value alternative uses and has operated that way for more than a century in the case of south-eastern Australia. In these circumstances, the maintenance and protection of native species is limited to remnant tracts of vegetation or landscape previously deemed unsuitable for development.

In the last century, in many locations there have been efforts to restore or establish new native habitat through environmental plantings along waterways, hillsides and areas prone to erosion and better manage existing vegetation to improve biodiversity outcomes. However, these are rarely delivered at a landscape scale, meaning that gains are localised (although they are nonetheless, locally important). This means that many remnant populations are vulnerable and have limited resilience to respond to threats (native or introduced), undermining their sustainability. There are many examples of significant native ecosystems at risk of reaching a tipping point where recovery to a pre-established state is not possible, where the ecosystem structure will be fundamentally changed with consequential impacts on biodiversity^{11 12}.

¹⁰ PricewaterhouseCoopers, *A Nature-positive Australia - the value of an Australian Biodiversity market*, December 2022.

¹¹ The 10 Australian ecosystems most vulnerable to tipping points. Laurence et al. (2011). *Biological Conservation* 144(2011) 1472-1480.

¹² 2021 Australia State of the Environment

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Imperfect market information and nationally consistent measurements

Consultation has highlighted that the lack of information that could define a 'market' in biodiversity hinders investment in potential projects that may deliver biodiversity outcomes.

A nationally consistent framework and measurement methodology is needed to support the development of a market that could deliver biodiversity benefits at a scale to arrest Australia's biodiversity decline. Consultation has highlighted that it will be critically important that governance measures are in place to ensure market integrity so that both buyers and sellers can be confident that what is being traded meets at least a minimum standard, even if different projects and different locations may deliver different outcomes.

Multinational companies, including Australian companies operating overseas, have advised that there is strong institutional and shareholder interest in participating in biodiversity markets. These companies advise that corporate governance requirements mean that their participation requires these markets to include mechanisms to ensure a high level of market integrity, and underpinned by robust, evidence-based scientific methodologies. The proposed policy position and market arrangements address these requirements because they will engender confidence in market outcomes to all potential participants and interested parties.

What benefits could biodiversity restoration provide Australia?

Recent research suggests that when ecosystems have less than 30% coverage of healthy native vegetation, ecosystem services and biodiversity sharply decline.¹³ The same research has calculated that 13 million hectares of land must be restored in Australia to reach the 30% by 2030 goal announced by the Minister for the Environment and Water in July 2022¹⁴.

The opportunity is to adopt a broad approach to allow for activity undertaken on all land types, inland, coastal, and marine waters. This maximises the opportunity for pursuing improved biodiversity outcomes and reflects the desire of a broad range of stakeholders to participate in the market by offering a range of projects across Australia. The resulting benefits from a program of this scale may include:

- restoration of habitat and ecosystem services, improving ecosystem resilience;
- expansion of habitat for endangered and threatened species;
- re-establishing ecosystem functions like pollination and erosion control;
- improving soil structure and productive capacity;
- creating jobs, strengthening regional industry capabilities around land remediation and conservation, diversifying regional economies, and improving resilience of livelihoods.

¹³ Mappin et al . (2021). The costs and benefits of restoring a continent's terrestrial ecosystems. *Journal of Applied Ecology*.

¹⁴ National Press Club address, 19 July 2022, Minister for the Environment and Water.

Why Government action is required, and Government's policy position

A 'business as usual' option would rely upon the market resolving matters on its own, with limited or no additional government intervention. The government has ruled out a continuation of the status quo, in view of the significant and expected continuing biodiversity decline. This decision was informed by the view that the opportunities for addressing biodiversity are hindered by inadequate information and insufficient methodologies for measurement and valuation, limiting incentives for change in behaviour or investment by the private sector. The cumulative environmental, economic, and reputational costs mean the existing policy settings and arrangements were assessed as unacceptable.

Policy options considered.

Relying heavily on existing, alternative measures was considered and ruled out for the reasons discussed below. Each of these measures are suited to particular circumstances, and will play a role in delivering improved outcomes under the Nature Positive Plan, but they were not assessed as suitable for delivering the breadth and scale of intervention required to arrest the biodiversity decline:

- Regulatory requirements through legislation – the Government has committed to stronger environmental legislation, but there is a limit on what regulation can achieve as a standalone strategy because it encourages proponents to focus on regulatory requirements rather than voluntary actions;
- Offsets – offsets are designed to compensate for significant residual impacts on protected matters arising from project development after appropriate avoidance and mitigation measures have been taken. The incorporation of a 'like-for-like' requirement in offset schemes means that the offset, in most cases, is located as close to the impact site as possible. Offset schemes are only considered where all other options in the avoid, mitigate hierarchy have been exhausted. It is important to recognise that offset and credit schemes have fundamental differences;
- Grant programs – traditionally, environmental grant programs have offered public funds to support activities that rely on an assumption that governments have near perfect information to establish biodiversity priorities, the activities required, and the costs of those activities are acceptable to landholders. As a result, grant programs operate within a prescribed scope and cannot utilise market-based approaches. They may not provide for innovation with the private sector and tailored approaches to local circumstances, and the need to scale up to achieve gains at a regional or landscape scale;
- Conservation and restoration programs reliant upon public sector funding - a government-led approach would require identifying the areas of most need of protection, restoration, and enhancement, defining the works to be undertaken, and instituting tailored programs to incentivise landholders and managers to undertake the required works. One study estimated that progressing towards a level of biodiversity stability may require \$2 billion per annum of public funds for the next 30 years to restore an estimated 13 million hectares of degraded land.

Government took the view that an appropriately designed market-based approach could complement the above measures, offering more flexibility, incentivising innovation, expanding the geographic scope of the initiative, and attract private sector capital into delivering improved biodiversity outcomes.

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Historically markets have been initiated through a variety of processes, including being initiated and led by the private sector (e.g., various commodity markets), a collaborative effort between public and private actors (e.g., financial markets), and leadership by government (e.g., markets dealing in externalities).

The role and contribution of government varies according to how the markets were initiated, how they evolved, and the maturity of the markets. National governments are more likely to be heavily involved where the costs and challenges of market establishment are high, there are aspirations for consistency across all sub-national jurisdictions or with international trading partners, and a desire to minimise or avoid friction, search, and transaction costs.

The Commonwealth Government has addressed many of these aspects in the Australian carbon offsets market, through establishing the CFI Act which clearly articulates the role of government, and the roles, responsibilities, liabilities, and obligations of market participants. This experience has informed the development of the proposed NRM, and the associated Bill¹⁵.

Biodiversity markets in Australia¹⁶

There is limited publicly available information on the size of Australia's biodiversity markets¹⁷. However, it is recognised that it is growing. Demand in the voluntary carbon market is on track to reach 1,600,000 ACCUs in 2023, up from 25,000 in 2014-15, and some State regulatory schemes are requiring emissions reductions and offsetting. This represents a significant growth rate and increasing recognition particularly by large players that they need to pay for ecosystem services (in this case carbon sequestration and abatement). There is also an increasing demand for carbon + biodiversity units which deliver both carbon and biodiversity outcomes. There is a large potential for landholders to supply into the market.

Participants who supply and demand biodiversity services generally interact through direct transactions, often engage intermediaries (including market platforms), or even deal directly with individual business entities. For example, a firm facing obligations to replace biodiversity (perhaps as a condition of environmental approval for a specific project) may purchase land to provide the biodiversity directly rather than contracting with an existing landholder to supply the service.

Supply

Landholders can supply biodiversity services by managing their land in a way that protects, restores, or promotes biodiversity. There is a large potential for landholders to supply biodiversity services, as indicated by the participation of the agricultural sector in the Emissions Reduction Fund. Since 2012, projects on agricultural land have made up the majority of the issued ACCUs on the Emissions Reduction Fund, worth around \$1.45 billion (at issued prices). There has been significant uptake of methods involving the regeneration or protection of native forests on grazing lands, particularly in the semi-arid rangeland regions of Queensland and New South Wales¹⁸. There has been less uptake

¹⁵ Noting the importance difference that the CFI Act addresses offsets, whereas the Nature Repair Markets Bill does not.

¹⁶ Frontier Economics 2020, Biodiversity services platform scoping study, A report for the Department of Agriculture, Water and the Environment, 13 November 2020.

¹⁷ There is limited data available on regulatory offset obligations required by State and Territory or Commonwealth systems, or details of third party offset transactions, other than those involving trade in biodiversity credits. The information on government-led purchasing is dispersed across different governments and government agencies, and difficult to track through time. Similarly, no data is routinely collected or published on the size of the voluntary biodiversity market and nature of relevant trades.

¹⁸ Macintosh, A; Roberts, G; Buchan, S, 2019, Improving Carbon Markets to Increase Farmer Participation, A report prepared for AgriFutures.

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of agriculture-based methods in areas where there are alternative land uses for land that that could be intensively farmed.

Demand

Targeted consultation on the Government's policy position has provided a strong indication that demand for projects that deliver improved biodiversity outcomes will grow with the appropriate frameworks in place. Current demand for biodiversity services comes from compliance requirements (offsets), philanthropic investments, commercial decisions to meet biodiversity/environmental commitments, or as a public good investment by government. Many large corporations in Australia such as from the transport, industrial and retail sectors are increasingly interested, or already investing, in projects with biodiversity benefits. Philanthropic demand from environmental NGOs is another source of demand, potentially around \$100 million a year. This demand from different sectors suggests there is growing private sector and non-government appetite to pay for improved biodiversity outcomes, and additional unmet demand. These views are supported by the independent report by the PricewaterhouseCoopers referenced elsewhere in this document.

Separately the Government is supporting the Taskforce on Nature-related Financial Disclosures (TNFD). Its purpose is to develop a global risk management and disclosure framework for corporates and financial institutions to report and act on evolving nature-related risks and opportunities. The TNFD is currently being tested internationally and is expected to provide a framework for growing corporate demand for projects that improve the environment.

Beyond voluntary markets there are several compliance schemes that could also result in a long-term source of demand if regulators require biodiversity offsets as part of the environmental approval(s) for specific projects (where this is practicable), or as an outcome of a strategic regional assessment.

The Nature Positive Plan, released by the government in December 2022, outlines that biodiversity offsets should only be used following demonstration of attempts to avoid and mitigate harm. The Government intends to legislate and strengthen the 'offsets hierarchy' and identify Areas of High Environmental Value where development generally will not be allowed. If a development has impacts to matters of national environmental significance that cannot be avoided or mitigated, the project proponent will need to take compensating action that will deliver a net gain for the imperilled plants or animals. A National Environmental Standard for Environmental Offsets will be made under law to provide certainty and confidence in this approach. Projects certified under the Nature Repair scheme won't be used as offsets – unless and until – they meet the new MNES and Offsets standards.

If the Nature Repair Market meets the requirements of State and Territory schemes, these offset requirements could be a source of market demand.

Recommendation

It is recommended that Government proceed with a market-based approach (the Nature Repair Market, or NRM) which will establish a voluntary market where the non-government sector is engaged and finances delivery of improved biodiversity outcomes, using approved, robust methodologies.

Landholders/ project proponents will be rewarded for undertaking projects that protect or enhance biodiversity by receiving biodiversity certificates which can then be sold to other parties.

Other parties may wish to progress other biodiversity projects on different terms and under other arrangements, and if that is the case these projects will not be undertaken under this legislative framework.

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Scope

The scope of the NRM will include all of Australia's landmass and inland waters, and its terrestrial seas (out to the 12 nautical mile boundary). This includes the areas currently under the most significant and sustained threat of biodiversity decline due to habitat modification, fragmentation and loss, invasive species, and urban expansion. Many of the projects delivered through the NRM are expected to deliver improved outcomes in perpetuity by protecting the improved habitats, and this will support the Government's commitment to protecting 30% of Australia's land by 2030 (the protection of 30% of Australia's seas is addressed by other initiatives).

Competing land uses and the voluntary nature of the NRM means it is not possible at this point to be more definitive around the location or extent of land that will be addressed by the NRM. Nonetheless, the areas currently under threat are logical areas to evaluate for restoration projects, especially where threats can be mitigated or removed with careful planning.

The successful operation and confidence in the market relies heavily on fit-for-purpose methodologies developed to guide and deliver improved biodiversity outcomes in specific circumstances. These methodologies will need to comply with biodiversity integrity standards reflected in the NRM Bill, and will be developed with input from subject matter experts so that relevant scientific, Indigenous knowledge, and legal requirements are considered. Public consultation would be undertaken on the methodologies. The Minister for the Environment can only approve a methodology when the Independent advisory group has confirmed that the methods meet the integrity standards. Prior to making any decision, the Minister will be briefed on the consequences of adopting each methodology, including identifying areas where the methodology may be best suited, and the potential environmental, social, cultural, and economic impacts of any potential change in land use or economic activity.

The NRM will complement and leverage other elements of Government's Nature Positive Plan to deliver biodiversity improvements, such as:

- National Environmental Standards so there is consistency in the listing of threatened species and ecological communities, Regional Forest Agreements, and project evaluation and assessment;
- Regional planning that identifies areas of high, and moderate environmental value, plus areas identified for development and approved land uses;
- Environmental offset arrangements that deliver better overall environmental outcomes, including capacity to make conservation payments where suitable environmental offsets are not available; and
- Further development and publication of environmental-economic accounts to better understand the condition of the environment and interactions between the economy and the environment, extending this conversation onto the non-government sector through championing the focus on the Taskforce for Nature Related Disclosures, where corporates are encouraged to identify their impact on natural systems, including biodiversity.

This recommendation will deliver a nationally consistent framework that can increase the supply of biodiversity outcomes as well as addressing information issues that private sector cannot solve alone.

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Government investment in addressing these challenges will ensure that the right knowledge and expertise are harnessed and available in a consistent way to potential private investors.

Market design

A fully-fledged national voluntary biodiversity market requires a robust legal framework to support the delivery of the desired biodiversity outcomes. The legislation is modelled after the CFI Act which established a voluntary market for carbon sequestration projects that deliver carbon abatement. This has the benefit of making it easier for participants to pursue projects involving landscape restoration and management which will deliver both carbon and biodiversity outcomes.

The Bill (and associated consequential amendments) addresses three key objectives, including:

1. introducing a nationally consistent framework to describe and measure biodiversity outcomes;
2. enabling the purchase and transfer of biodiversity certificates, and a public register that describes biodiversity projects designed to deliver biodiversity benefits and certificates, so that the use of ownership, use and claimed benefits can be tracked and shared publicly; and
3. establishing project assurance and compliance systems to provide certainty to both buyers and sellers and which underpins market integrity.

The NRM Bill includes provision to:

- Establish and issue tradeable certificates corresponding to individual biodiversity projects:
 - A Certificate will represent a description of a project maintained in a central, publicly accessible register maintained by the market regulator, providing details such as project location, scale, methodologies applied, progress achieved, and biodiversity outcomes delivered.
 - Certificates will establish property rights for landholders over the project that are separate from the land.
 - The certificates would include a list of project attributes to allow buyers to compare and understand the outcomes being delivered.
- Establish an independent advisory committee.
- Establish nationally consistent biodiversity methodologies that set out discrete ways in which biodiversity outcomes can be achieved that are informed by science to ensure environmental integrity.
- Establish an integrity and oversight system that provides confidence to investors about the outcomes that a project would deliver, including confirmation that projects are being maintained for relevant permanence periods.
- Develop a public registry of projects and of biodiversity certificates that provides information to the market on the supply of projects together with a trading platform that allows sellers to find information about the demand.
- The Bill includes a provision for Government purchasing of certificates, but no funding has been allocated to support this.

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Alignment to Government goals

The need to address the decline in Australia's biodiversity is a priority for the Government as set out in its Nature Positive Plan¹⁹. Government is encouraging voluntary action to address biodiversity impacts, as well as strengthening regulatory requirements because neither approach on their own will be sufficient to deliver the outcomes required. The establishment of an NRM will introduce a robust framework for voluntary action contributing to improved biodiversity outcomes.

Government is also progressing other actions, such the introduction of National Environmental Standards to set the outcomes for nationally important environment and heritage matters, the establishment of a National Environment Protection Agency to improve trust and transparency in regulatory decision-making, regional planning to identify conservation objectives at a landscape scale and speed up decision-making, improved conservation planning arrangements and reviewing the scope and application of a range of other conservation policies and initiatives to explore if they can be extended to improve biodiversity outcomes (such as recognising the biodiversity benefits of carbon credit projects).

In October 2022 the Minister for the Environment released the *Threatened Species Action Plan: Towards Zero Extinctions*²⁰. This sets out a pathway for threatened species conservation and recovery over the next 10 years, including preventing any new extinctions of plants and animals, and protecting and conserving at least 30% of Australia's land mass. Since then, an international agreement has been reached at 2022 United Nations Biodiversity Conference (COP15), through which most countries agreed to protecting 30% of the world's land mass and oceans by 2030²¹.

There will be regular assessments of the effectiveness of the Government's policy position, and the Bill recognises that there will be both statutory reviews of the legislation, and non-statutory reviews of the Government's policy approach. These reviews may inform future targets Government may adopt.

Governance structure

The policy position reflects a governance structure where the Department of Climate Change, Energy, the Environment and Water (DCCEEW) will be responsible for policy development, including the development of the technical methodology determinations that outline the various mechanisms through which biodiversity outcomes are to be achieved. The methodology determinations will establish specific requirements for how distinct types of project activities would be managed and would also be the legal mechanism through which certain rights and obligations are assigned to the project proponent. Two methodologies are currently being prototyped through the Agriculture Biodiversity Stewardship Package pilots²², and it's likely that the market will commence based on these two methodologies, and expand over time as other methodologies are developed and approved.

An NRM Committee will be established to advise on these methodologies and make recommendations to the Minister for the Environment and Water, informed by public consultation. The day-to-day regulation of the scheme and its integrity will be undertaken by the Clean Energy Regulator (CER) which already regulates comparable land-based projects under the CFI Act. It is anticipated that a portion of

¹⁹ *Nature Positive Plan: better for the environment, better for business*, December 2022
<https://www.dcceew.gov.au/sites/default/files/documents/nature-positive-plan.pdf>

²⁰ <https://minister.dcceew.gov.au/plibersek/media-releases/minister-launches-threatened-species-action-plan-toward-zero-extinctions>
released 4 October 2022

²¹ UN Biodiversity Conference (COP 15) (unep.org)

²² <https://www.dcceew.gov.au/environment/environmental-markets/agriculture-stewardship>

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participants in the biodiversity market would also have carbon projects established under that legislation, allowing for some potential efficiencies in the regulation of the two schemes by the CER.

Consequential amendments to existing Acts

Engaging the CER as regulator of the market arrangements to establish a national biodiversity market necessitates a few minor consequential amendments to the *Clean Energy Regulator Act 2011* (CER Act), and the *National Greenhouse and Energy Reporting Act 2007* (NGER Act). The required changes are described below.

Clean Energy Regulator Act 2011

There are amendments to the CER Act to ensure that:

- a. the proposed legislation can confer functions on the CER;
- b. the functions of the CER include functions conferred on it by a biodiversity law. A biodiversity law would consist of the proposed legislation and its instruments;
- c. additional fields of expertise relating to the proposed legislation are included for members of the CER;
- d. the CER can delegate its powers to officers of the Department administered by the Minister administering the proposed legislation who are formally assisting the CER under section 37 of the CER Act (including where that Minister is different to the Minister administering the CER Act);
- e. where the Minister gives a direction to the CER in relation to the proposed legislation, the Minister is required to consult with the Minister administering the proposed legislation;
- f. a person is not prevented from giving a document containing protected information to a court or tribunal if necessary to do so for the purpose of giving effect to the proposed legislation;
- g. an official of the CER can use or disclose protected information for the purpose of a biodiversity law;
- h. an official of the CER can disclose protected information that has been obtained by the Regulator under, or in accordance with, the proposed legislation, to the Minister administering the proposed legislation;
- i. an official of the CER is able to disclose protected information that has been obtained by the Regulator under, or in accordance with, the proposed legislation, to the Secretary of the Department administered by the Minister administering the proposed legislation, or an officer of the Department administered by the Minister administering the proposed legislation, for certain purposes relating to advising the Minister, the administration of relevant legislation, or relevant international agreements (including the development of such agreements);
- j. the CER can disclosure protected information from currently or formerly registered biodiversity projects that are more than seven years old for the purposes of developing methodology determinations;

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- k. an official of the CER can disclose protected information to Director of National Parks (within the meaning of the *Environment Protection and Biodiversity Conservation Act 1999*), the Regional Investment Corporation (within the meaning of the *Regional Investment Corporation Act 2018*), or a prescribed international biodiversity body, if the disclosure is authorised by the Regulator;
- l. the Minister administering the proposed legislation can authorise the use or disclosure of protected information that has been obtained under, or in accordance with, the proposed legislation for specific purposes that are appropriate and adapted to the implementation of the Convention on Biological Diversity; and
- m. if the CER delegates powers under the proposed legislation to Departmental officials, the secrecy and information sharing provisions in the CER Act should be taken to apply to those Departmental officials as if they were officials of the CER.

These changes will support the CER to administer the proposed legislation in a way that is consistent with, and streamlined to, its administration of other schemes.

National Greenhouse and Energy Reporting Act 2007

It is proposed to make minor amendments to the NGER Act to ensure that:

- a. the Minister may determine requirements to be met by registered greenhouse and energy auditors preparing for, or carrying out, an audit under the proposed legislation; and
- b. a register of greenhouse and energy auditors to is able to be kept under that Act for the purposes of the proposed legislation.

These changes would support the use of greenhouse and energy auditors to carry out audits under the proposed legislation, which is consistent with the approach taken by the Regulator under other schemes. It is anticipated there would also be amendments to subordinate legislation under the NGER Act including the *National Greenhouse and Energy Reporting Regulations 2008* and the *National Greenhouse and Energy Reporting (Audit) Determination 2009*.

Impact analysis

Summary

Economic benefits of the approach	<ul style="list-style-type: none">• It is challenging to estimate the net economic benefits of the NRM given that participation is voluntary, the adoption rate, nature, and geographic spread of projects is not yet known, a market in biodiversity certificates does not yet exist, and the delivery of outcomes from the first tranche of projects will be at least three to five years away.• The aforementioned estimate by PricewaterhouseCoopers in December 2022 that ‘... a biodiversity market could unlock \$137 billion in financial flows to advance Australian biodiversity outcomes by 2050’ could be used as a rough guide.• However, it is important to note that if this estimate of financial flows is used as a proxy for investment in biodiversity projects or initiatives,
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	<p>they are not an estimate of the impact on measures of national economic activity such as Gross Domestic Product (which would require different means of analysis using assumptions that will be difficult to test and validate).</p>
Regional benefits of the approach	<ul style="list-style-type: none"> • The NRM is designed to facilitate private sector investment into projects that deliver biodiversity improvements, which could focus on conservation, repair, restoration, maintenance, and protection. These projects could be delivered across Australia, and its possible some regions are favoured more than others. This distribution will largely reflect decisions made by the market itself based on perceived need or opportunity. Where appropriate, the approach will allow for projects to be recognised for both carbon credit and biodiversity outcomes. • On the assumption that most economic benefits will arise where the money is invested in projects, then the economic effects of the market will tend to be more evident in areas where projects are delivered.
Participation	<ul style="list-style-type: none"> • Consultation has highlighted a large level of interest in progressing projects to deliver improved biodiversity outcomes (supply side), and the importance of aligning policy and standards with State and Territory and emerging international frameworks to maximise the pool of potential buyers (demand side). The policy position addresses these requirements.
Government	<ul style="list-style-type: none"> • Government’s role is to develop the policy position and legislative framework, regulate the market, and support industry development. • The Bill includes a provision for Government purchasing of certificates, but no funding has been allocated to support this.
States and Territories	<ul style="list-style-type: none"> • The introduction of a national biodiversity market underpinned by relevant Commonwealth legislation may represent a degree of potential competition for supply into the various sub-national schemes, but there may also be synergies in aligning policies and methodologies.
Environment	<ul style="list-style-type: none"> • The successful delivery of biodiversity projects is intended to slow the rate of biodiversity decline in the early phases of market development and arrest the decline as the number of projects increases in number and in geographic spread. It may be premature to commit to biodiversity-related targets or key milestones given the complexity, and uncertainty around participation, and project success (failure) rates.
Landholders	<ul style="list-style-type: none"> • The existence of a market that supports biodiversity projects in exchange for money from private buyers has the potential to benefit a range of landholders who want to generate additional income streams or other benefits to their core activities.

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<p>Cost to participate</p>	<ul style="list-style-type: none"> • The voluntary nature of the scheme means that landholders would only proceed with a biodiversity project if the expected benefits (financial and otherwise) exceed the costs of the project and provide an acceptable return. Each landholder may have their own criteria for this calculation, and the market arrangements need to have sufficient flexibility to accommodate a range of motivations. • Government will provide industry development activities to support landholders wishing to participate in the market, and initial estimates suggest an average indicative estimate of regulatory costs for landholders of \$340 per annum over a 10-year project life (noting that the eventual cost is sensitive to the scale and complexity of each project).
<p>Implications for rights over real property (land)</p>	<ul style="list-style-type: none"> • Projects can be registered by landholders, or other parties who have the consent of the landholders and other eligible interest holders to progress a project on a specific site. • The intention of the scheme is that biodiversity projects would get noted on the title of the land (or area) where the project occurs, and that the party who is registered as the proponent of the project on would be the one with the legal obligation to maintain the project, regardless of ownership of the land or area where the project is undertaken. • In the event of a land sale, there would be provisions for the new owner to voluntarily take over as the proponent of the project, but they would not be obligated to do so; this would have to be a matter of negotiation between a buyer and seller of a property and potentially the project proponent.
<p>Broader community and economy</p>	<ul style="list-style-type: none"> • Individual landholders, and potential buyers of Biodiversity Certificates will determine which locations are best suited to the delivery of biodiversity projects, subject to relevant approvals from local, State and Territory governments which might have expectations, or policy overlays relating to land use.
<p>Risks, unintended consequences, and perverse outcomes</p>	<ul style="list-style-type: none"> • The primary risk to success of projects is the potential impact of natural disasters on individual projects and the temporary disturbance this can cause before the systems are able to recover. The scheme is intended to operate so that as long a landholder made reasonable efforts to follow the obligations set out in the methodology determinations towards recovery, then the impact of natural disturbance would not be interpreted as non-compliance against the project obligations. • There may be additional material risks where: <ul style="list-style-type: none"> a) participants in the market may not behave in line with the methodologies or rules and default on their obligations to maintain their projects (to be managed through enforcement of compliance obligations); and/or b) the approved protocols and rules are incapable of fully delivering the desired outcomes, or even lead to perverse environmental outcomes (to be assessed during protocol development and subsequent monitoring).

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Key influences on the success of the recommended approach	<ul style="list-style-type: none">• The success of the policy rests heavily on three key factors, the:<ol style="list-style-type: none">1. ease of participation and project implementation, which should encourage the delivery of projects, and the supply of associated biodiversity certificates (supply certainty);2. uptake by private and public investors to deliver biodiversity outcomes at scale (demand certainty); and3. ability of participants on both the supply and demand sides of the market to be seen to capture sufficient benefits to encourage re-investment and attract new participants to the market (certainty around the potential for the market to grow).
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Financial flows

Under the proposed policy approach, the financing of proposed biodiversity projects would initially be fronted by the landholder or project proponent²³. If the project proponent then chooses to sell their certificate²⁴, the proponent would then be compensated by a buyer who wishes to secure those outcomes. This would mean the ultimate funding for the biodiversity projects is coming from the non-government sector instead of the public sector. The scheme recognises the importance of issuing a biodiversity certificate as quickly as possible so that the project proponent can recover the upfront costs of the project. The award of a certificate will only be considered if the project is progressing towards delivering, and appropriately maintaining, the targeted biodiversity outcomes as determined in accordance with the methodology the project has approval to implement.

Participation

Based on the experience of the Agriculture Stewardship Pilots, it is expected that the biodiversity market would initially have around 20 to 30 landholders per region who would be willing to participate as potential managers of biodiversity projects. These projects would be issued Biodiversity Certificates if they were successful. Multiple variables will determine how attractive participation will be in any particular region, including competing demand and use for areas that might be suited to potential biodiversity projects. It is difficult to forecast participation with any level of precision given the NRM scheme is new, and the market for biodiversity certificates has not yet emerged.

If the adoption rate from the Agriculture Stewardship Pilots was extrapolated across the 50-odd NRM regions²⁵ in Australia this may mean somewhere in the neighbourhood of 1,000 to 1,500 potential participants on the supply side, at least in the initial stages. Other markets in ecosystem services, such as the market for Australian carbon credits, initially experienced a relatively slow growth rate which improved as confidence in market arrangements grew, and policy changes and public support underpinned demand for the product(s). New markets often require time to establish a positive track record and evolve through a series of logical phases. This new, national biodiversity market may follow a similar path.

Consultation to date has highlighted broad interest in demand from mid to large scale corporates, but uncertainty remains around the demand aspects of the market. As discussed elsewhere in this

²³ Landholders and project proponents could be the same, although the Bill recognises that they could be different parties.

²⁴ A Biodiversity Certificate would be awarded to the registered project proponent (subject to the proponent and the project meeting all relevant requirements). Some project proponents may elect to retain their certificates rather than transfer or sell them to another party.

²⁵ NRM regions are regional areas with a natural regional management organisation that receives public funding to deliver natural resource management strategies and progress relevant strategies within their region.

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document, an independent report by the PricewaterhouseCoopers identifies very significant potential demand out to 2050. Demand for Biodiversity Certificates may come from philanthropic investors, parties who have environmental approval obligations to meet, and from the market for ESG investment²⁶ which has grown rapidly as an investment style over the past decade. The pool of capital available for ESG investment in Australia is substantial, and was reported to be \$980 billion in 2018, including \$70 billion in sustainability-themed investments. Interest in the biodiversity markets will be highly sensitive to the integrity of the market arrangements, confidence in the outcomes being delivered by individual projects, and how well the projects satisfy investment-related criteria.

It is anticipated that the first movers or early adopters in a market such as this may be project proponents/suppliers offering a mix of carbon and biodiversity outcomes. There has been considerable interest to date from buyers already active in the voluntary carbon market who are interested in supporting projects that deliver additional non-carbon benefits²⁷. A '*carbon plus biodiversity*' project would give participants some confidence about entering a new market and the price that they might be able to secure for the outcomes that a biodiversity project alone could not provide. Over time, the market may establish pricing parameters for the biodiversity outcomes that it values the most.

Both the supply and demand sides of the market are likely to be at least partially price-sensitive, although other motivations may be relevant in the decision-making process as well. The process of establishing a price for Biodiversity Certificates will be left for buyers and sellers to determine themselves through negotiation.

Commonwealth Government

The work required of the Commonwealth Government (and the associated costs) includes:

The initial development of the legislative framework – key tasks would include project management, policy work and consultation. The initial few months would be spent developing primary legislation followed by subsequent development of subordinate regulations and rules over the following 12 to 18 months.

Industry development activities that include the provision of advice to potential and actual buyers and sellers in the market, and intermediaries.

Ongoing management of the market and the integrity of the market arrangements, including expanding the responsibilities of the regulator, establishing the register, compliance, and the tools, processes, and IT interface the regulator will need to undertake their role.

The initial estimate of the cost to taxpayers of drafting, consulting on, and delivering the market arrangements was \$13.2m over two years from 2021-22 to 2022-23, although this is sensitive to the scope of the market which is currently the subject of public consultation. Further costs to administer the market over the longer term are estimated at \$10m a year based on the experience of the CER in regulating the carbon market, but this is highly dependent on the level of market participation.

²⁶ ESG investing is when an investor considers sustainability features (including environmental, social and governance factors) to inform their investment strategy.

²⁷ Including parties interested in Indigenous carbon credits and the current Carbon + Biodiversity pilot.

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States and Territories

Various States and Territory governments have existing schemes relating to biodiversity. The introduction of an NRM may represent a degree of potential competition for supply into the various sub-national schemes. For instance, a particular landholder might choose to undertake a project under the national market arrangements and deliver a Biodiversity Certificate, rather than participate in a state-based scheme. New South Wales has a market-based scheme which offers credits to the private market²⁸, while other jurisdictions operate compliance schemes designed to identify or deliver offsets for development where there are unavoidable environmental impacts. Commonwealth, state, and territory environment ministers have agreed to cooperate in the development of biodiversity markets in Australia. A national market and sub-national schemes may co-exist for at least some time.

There may also be a new cost for states and territories, which would be empowered (but not required) to note the existence of a biodiversity project on land title systems they manage. However, as with the carbon scheme, the intention would be for the CER to notify the states of the existence of a project. If the state or territory chooses to act on it, then it may take on additional responsibility for managing the notification of encumbrances on land title for the purposes of property transactions. Initial consultation with the various states and territories suggested that such a requirement would not have much of an impact beyond what is already created by the carbon credit market.

State and territory governments may seek to leverage opportunities to facilitate private investment through the scheme, through providing state-based industry development support. This market would also create a nationally consistent approach to describe and measure biodiversity outcomes and allow coordination between state and national approaches.

The Commonwealth and each State and Territory Government financially support the 50-odd NRM Regions Australia, which make an important contribution to managing Australia's natural landscapes. The NRM Regions may choose to play a proactive role in supporting the development of a national biodiversity market, and to do so may require additional capabilities, expertise, and funding.

Environment

The successful delivery of biodiversity projects is intended to slow the rate of biodiversity decline in the early phases of market development and arrest the decline as the number of projects increases in number and in geographic spread. However, it is not realistic to suggest a timeframe for delivering these outcomes given the various uncertainties involved.

However, there is significant potential to enhance significant regions of the Australian landscape if 1000 new biodiversity protection or enhancement projects are established each year, and a high proportion of these projects successfully deliver the desired biodiversity outcomes. This does not mean that the gains will be evenly distributed across Australia, and there is a risk that biodiversity declines continue in some regions because of factors beyond control. Natural processes and influences will have a significant influence on the success of the program, some areas won't be suited to projects, and some projects will fail to deliver the desired outcomes. A 100% coverage and success rate is unrealistic, but the benefits that will be gained are expected to be important, nonetheless.

A network of new biodiversity projects that grows year-on-year across Australia is likely to generate a range of benefits, including (but not limited to):

²⁸ Aspects of the NSW scheme have recently been revised as a consequence of a recent review by the NSW Auditor-General, "*Effectiveness of the Biodiversity Offsets Scheme*", published 30 August 2022.

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- planting of additional perennial vegetation in areas that were previously bare and at risk of erosion;
- water quality improvements from reduced runoff;
- reestablishment of critical ecosystem functions such as pollination ;
- added habitat for species that will allow space for them to recover and reproduce;
- sequestration of carbon in vegetation, soils, and wetlands;
- commitments to protecting unique or endangered existing habitat; and
- additional, diversified income streams for landholders, which may allow them stay on their land and continue their primary agricultural business, supporting smaller enterprises and the contribution they make to regional communities and economies.

Landholders²⁹

The existence of a market that supports biodiversity projects supported financially by non-government or private buyers has the potential to benefit a range of landholders, including farmers, pastoralists, foresters, and Indigenous ranger groups who may generate additional income streams or other benefits to their core activities. Additional income may diversify their income sources and increase their business and financial resilience. Depending upon the nature of the project the same landholders may also directly benefit from other non-financial benefits such as increased shelter for livestock and improved erosion control from planting of new vegetation areas, improved water retention and carbon content of soils, and improved amenity.

Other landholders may dedicate the majority or the entirety of a property to the purpose of creating biodiversity outcomes. This might represent a significant change in the use of the property, management practices and the business model which may generate effects on neighbouring properties and the broader community³⁰. This has occurred in the market for carbon credits where proponents have bought entire properties in less intensively farmed areas and revegetated or ‘rested’ large areas or the entire property to generating carbon credits.

Biodiversity projects are likely to require a more active than a passive approach to management, but this will be determined by the nature of the approved methodologies and how they are applied in each location. It’s possible that some properties may be converted entirely to biodiversity projects and that is entirely within the rights of the landholder or project proponent provided they have all relevant approvals. The scale of the challenge of arresting the biodiversity decline and stabilising the situation may necessitate this, but that is a decision for individual landholders.

Biodiversity is a public good, and projects have the potential to generate positive spill over effects on neighbouring properties, the region and the broader community, and these effects may build over time.

Costs to participate.

It is anticipated that landholders will have limited obligations in the event of a natural disturbance to their project. Generally, landholders would be required to manage their projects to ensure vegetation and species are able to recover from such events (to the extent that is realistic and possible). Different requirements may apply to projects involving particular species or eco-systems.

The market arrangements will have different rules in the event of a significant reversal of biodiversity outcome due to intentional acts or omissions of the proponent that would ensure that any purchaser of

²⁹ Landholders and project proponents could be the same, although the Bill recognises that they could be different parties. In this section of the PIA, the term “landholder” can be interpreted as meaning the same as “project proponent”.

³⁰ Community impacts are addressed in a later section.

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the related biodiversity certificate was made whole, through the provision of equivalent biodiversity certificate or otherwise.

Financial, opportunity and economic costs

Choosing to participate in the market will come with two types of costs to a landholder. The first are the upfront or on-ground costs to deliver a biodiversity project, which are not considered a regulatory burden because they would be costed into the project itself during the development phase. As a guide, information from the current Agriculture Stewardship pilots indicates that the annual per-project implementation cost to landholders for projects meeting the criteria could range from \$65,000 to \$175,000 on average over 10 years, but will vary considerably by region, scale and type of project being implemented.

The voluntary nature of the scheme means that landholders would only proceed with a biodiversity project if the expected benefits (financial and otherwise) exceed the costs of the project and provide an acceptable return. Each landholder may have their own criteria for this calculation, and the market arrangements need to have sufficient flexibility to accommodate a range of motivations.

Government will provide industry development support to landholders wishing to participate in the market, such as tools, advice, and materials to assist them in assessing their potential costs and benefit of running a project on their property. Landholders will be responsible for finding a buyer for an awarded Biodiversity Certificate and deciding for themselves whether a sales agreement is necessary before proceeding with the project and biodiversity outcomes are secured. The main establishment cost for landholders will be the time involved in assessing the opportunity and determining whether to proceed to develop and price the project.

The operational costs for a specific project will be determined by the methodology chosen, how it is applied in a particular location, the scale of the project, and the management regime applied. It is not possible to anticipate what those costs may be given the diversity of potential projects and locations.

Regulatory burden

Each landholder or project proponent will incur administrative or in-kind costs to participate in the scheme and which represent the regulatory burden of the scheme. These are costs that can be avoided if landholders choose not to participate. These costs include costs related to preparing applications, negotiating and securing consents to establish the project, implementation, and ongoing monitoring and reporting costs. All landholders will incur some administrative and regulatory costs associated with progressing a project, including:

- Application process: prospective project proponents will be required to submit an online application form that includes relevant information, such as personal and company details, information about how the proposed project is going to be undertaken, including which project methodology, consents that have been achieved, and accompanying documents.
- Consent of eligible interest holders: to support the application process prospective proponents may be required to obtain consent from interest holders such as lenders, non-exclusive native title holders, and any other parties with relevant rights over the proposed project site.
- Reports: project proponents will be required to report on their project. Reporting periods are being considered and would likely vary by protocol but could be every two to five years, meaning there may be up to 5 reports over a 10-year period.

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- Application for a Biodiversity Certificate: project proponents could be required to submit one crediting application based on project reports once during the project period.
- Notices: project proponents will be required to notify the Commonwealth where certain events occur. This could include a change in project proponent, a natural disturbance such as bushfire or where the proponent ceases to be a fit and proper person (e.g., bankruptcy). These notice obligations are unlikely to occur for all proponents – and it is assumed that there will be an average of one notification requirement over the life of each project across the scheme.
- Support for Commonwealth audit activity: as part of the market assurance process, DCCEEW may commission an “annual audit program” where each year a small proportion of projects would be subject to an external audit. While the financial cost of this type of audit would be paid for by the Commonwealth, there may be in kind costs for proponents relating to answering auditors’ questions, providing documents and potentially escorting auditors during site visits. It is estimated that on average, these audits will require approximately eight hours of input from the landholder or project proponent. It should be emphasised that not all projects would be audited, and that many Commonwealth audits would be undertaken on projects where there are known or suspected compliance issues.

An estimate of preliminary administrative and regulatory costs is included in the table below, assuming that around a quarter of all projects will be subject to audits over their project period. This table excludes costs associated with Project Proponents researching, preparing, and submitting project applications. This suggests an indicative estimate of the cost per project of \$340 per annum for Project Proponents to participate in project audits over a 10-year project life based on the following breakdown:

Item	Hours	Cost per hour	Number of times	Total cost
Application process	4	\$100.00	1	\$400.00
Eligible interest holder consent issues	4	\$100.00	1	\$400.00
Reports	4	\$100.00	5	\$2,000.00
Application for a Biodiversity Certificate	3	\$100.00	1	\$300.00
Notice costs	1	\$100.00	1	\$100.00
Support for project audit	8	\$100.00	0.25	\$200.00
Cost over 10-year life of a single project				\$3,400.00

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Item	Hours	Cost per hour	Number of times	Total cost
Cost per project per year				\$340
Cumulative annual regulatory cost (assuming 500 live projects)				\$1,700,000

Where reasonable, project assurance will be supported through mechanisms like information sharing between the CER and other Government agencies, and the use of geospatial data (consistent with recent regulatory reforms under the CFI scheme). This is the approach that was practicable for farmers participating in the Agricultural Biodiversity Stewardship Package where they are now not required to undertake audits at their own expense, and there is no financial cost for undertaking audits for these participants.

The Commonwealth will also develop online tools that allow participants to upload assurance information as projects are undertaken at marginal cost. For example, allowing time and location stamped photographs of planting to be uploaded at the time it occurs.

Despite this, it is possible that external audits paid for by participants would occur for a small proportion of premium projects that lead to very specific outcomes such as population by specific fauna.

Implications for rights over real property (land)

The policy position is based on the intent to create a market that allows the creation of an asset, separate from the land, in the form of a Biodiversity Certificate, which will be personal property that a Certificate holder can trade to another party for a financial consideration.

The intention of the scheme is that biodiversity projects would get noted on the title of the land where they occur, but that the person who is registered as the proponent of the project on the Register would be the one with the legal obligation to maintain the project, regardless of ownership of the land.

The scheme will allow people who are not the current owners of the land to register a project on behalf of the landholder with consent (as is currently allowed in the Australian carbon offsets market). The intent is for the existence of the project to be recorded in a relevant land title system so that interested parties, including future land purchasers, would be informed about any constraints around future land use. Any regulatory enforcement actions would be taken against the person registered as the proponent of the project.

In the event of a land sale, there would be provisions for the new owner to voluntarily take over as the proponent of the project, but they would not be obligated to do so; this would have to be a matter of negotiation between a buyer and seller of a property and potentially the project proponent.

Risks, unintended consequences, and perverse outcomes

The primary risk of this market-based approach is the potential impact of natural disasters on the market and the temporary disturbance this can cause before the systems are able to recover. These delivery risks will be considered when methods are being developed, and by the NRM Committee advising on proposed methods.

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Landholders would be required to make reasonable efforts to follow the obligations set out in the biodiversity methodologies towards recovery, then the impact of natural disturbance would not be interpreted as non-compliance against the project obligations.

Another risk is that participants in the market do not behave in line with the protocols or rules and default on their obligations to maintain their projects. Or that the approved protocols and rules do not fully incapable of fully delivering the desired outcomes, or even lead to perverse environmental outcomes. These performance risks will also be considered when developing protocols, and by the NRM Committee.

It is also possible the market may result in unanticipated outcomes. For example, buyer preferences could favour certain types of landholders, certain types of projects or protocols, or certain regions of Australia even if they are not the areas where the greatest biodiversity gains can be achieved. This concentration or bias in the type of projects undertaken could constrain or skew the total biodiversity gains for Australia. The take-up rate and cumulative outcomes delivered by the market will be monitored and reported to the Minister on a periodic basis, accompanied by advice on whether the market is performing as intended. Unanticipated outcomes will need to be assessed on a case-by-case basis.

The legislation makes provision for the rules to specify excluded biodiversity projects. The purpose of this provision is to enable the Minister to ensure that biodiversity projects do not have unintended, adverse impacts. In deciding whether to make rules the Minister for the Environment and Water will have to consider if there is a material risk that the kind of project would have a material adverse impact on one or more of the following:

- the availability of water;
- biodiversity (other than the kinds of biodiversity addressed by the project);
- employment;
- the local community; and
- land access for agricultural production.

Other potential risks of a scheme include parties choosing not to participate, or participants becoming disenchanted with the market. Some reasons for this might be:

- participation is perceived as too complex or burdensome;
- the price buyers are willing to pay is not high enough to compensate landholders for the costs to deliver their projects;
- uncertainty over price or other benefits that that may be obtained by landholders and project proponents;
- uncertainty around demand, or lack of buyers for specific project types; and
- distortion of market dynamics and operations arising from over or undersupply.

Feedback from consultation

In August 2022 the Prime Minister and the Minister for the Environment and Water announced the Government's intention to develop legislation to establish a market-based biodiversity certificate scheme (subsequently referred to as the Nature Repair Market). The first round of consultation on this market-based scheme was undertaken from August to October 2022, with more than 200 written submissions received, and multiple meetings with interested parties, States and Territory governments, and First Nations groups.

The NRM Bill has been drafted to reflect these policy settings, and an Exposure Draft was released for public comment at the end of 2022, concluding in early March 2023. More than 150 written submissions were received, and multiple meetings with interested parties, States and Territories and First Nations groups. Feedback highlighted that potential market participants often have conflicting interests in how the market is designed and implemented, so the Bill carefully balances these differing views. The operation of the Act will be subject to a statutory review every five years so there is an ability to refine market arrangements moving forward to reflect how well the scheme is addressing the original policy goals, and subsequent objectives that arise over time.

The primary feedback from the two rounds of consultation is as follows (including succinct explanations as to how this feedback has informed the policy design):

1. Support for the intent for the market to drive additional private sector investment in biodiversity outcomes.
2. Stakeholders noted the importance of the market focus on integrity and transparency. The NRM bill has been drafted with a focus on integrity and transparency to build confidence in the market and demonstrate biodiversity outcomes. This includes an independent advisory committee, public consultation on methods and a public registry system to track projects and use of certificates.
3. Recognition of the importance of Indigenous knowledge and participation of First Nations groups in the market - these expectations were common to many respondents and have been addressed by several features of the Bill and the scheme.
4. Interest in the Commonwealth playing an active role in supporting the market development – such as providing national, regional, and local priorities, sharing the risks of participation, purchasing certificates, providing a means to value certificates, and services to match buyers and sellers. The current policy design is based on participants managing their own risks of participation, with Government adopting a supporting role in providing supporting information about the market and addressing barriers to participation. The government is implementing on-ground support arrangements and continuing to invest in improvement measurement techniques to drive down costs. Government will review its role as the market develops.
5. A desire for harmonisation where possible with State and Territory schemes – the Government has consulted with States and Territories at the Ministerial and Departmental level and agreed to share lessons learnt from existing market-based approaches. Environment ministers have also noted the need to collaborate on approaches to measuring biodiversity.

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6. A desire to maximise participation on the supply side – the scope of the market is open to all landholders and managers, and extends into Australia’s coastal waters. Many landholders see the potential for new and complementary income streams to their core business activities, and many service providers see opportunities for business growth.
7. Mixed views as to whether it was preferable for the public or private sector to finance the investment required to deliver the desired biodiversity outcomes – some stakeholders expressed the view that the Commonwealth should re-assess its broad taxation and spending priorities, and reallocate funds to support the investment the NRM is designed to deliver. This is not the approach that is reflected in the policy design, but the feedback has highlighted several other ways the Commonwealth could support participation in the market, and these will be considered during the (next) implementation phase.
8. Views that a market-based approach would have to be underpinned by a variety of measures that ensure market integrity, accountability of decision makers (including the Minister), transparency and reporting – these expectations were effectively universal and have been addressed by several features of the Bill and the scheme.

Further analysis of the feedback from consultation is still underway, and will be considered whilst finalising the Bill, the development of subordinate legislation and other mechanisms enabled by the market. This feedback will be published consistent with relevant policies (i.e., where people have consented to publication etc).

Implementation and review

Implementation plan

A staged implementation is planned, whereby the Bill creates a framework for the market to be established and administered, and the further detail about its commencement and operation is captured in other legislative instruments that will be drafted and introduced after further consultation. This will allow the CER to prepare to take on the regulation of the scheme and DCCEEW to support the Minister in appointing the NRM Committee.

Ongoing consultation will focus on the key elements of the supporting legislative instruments that will allow this market to have the greatest net benefit, such as making participation as easy as practical, and encouraging the widest uptake by the private and public sectors. DCCEEW will continue to draw on expertise and support provided by stakeholders, consultants, and experts in biodiversity and the lessons learned from the Agriculture Stewardship pilot programs.

The Commonwealth Government will continue to work with the States and Territories to ensure compatibility of the scheme with any overlapping programs in their jurisdictions to optimise and streamline the options for landholders.

To mitigate any impacts of the introduction of the market, the Commonwealth has already committed to work with the other governments to ensure as much consistency between the new market and existing schemes as possible, and streamline the information and communication with potential participants. This includes engagement on consistent approaches to measuring biodiversity outcomes, approach to land titles and preventing any duplication of on ground assessment and compliance and incorporating this into the scheme design.

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States and Territories may need to investment time to understand how a national scheme might intersect with their existing programs and land title registers. States and territories may face questions from constituents about the scheme and how to participate, so education of other governments will also be necessary to alleviate this potential burden. The Commonwealth will support Natural Resource Management organisations as a source of information across regional Australia. It will take time to reach to achieve alignment and involve some uncertainty in the interim. These discussions are ongoing.

Evaluation of the recommended option

Establishing the market and facilitating the first tranche of projects will take some time, and the measures of success during this establishment phase are activity based (e.g., passing of legislation, being ready to receive applications, development, and approval of a series of methods).

It is envisaged that the market will have reached a level of maturity within ten years, reflecting the following attributes which are relevant measures of success:

- a competitive and fair operating market;
- participants and the public have confidence in the outcomes of projects;
- a market that allows a level of comparison, and supports trading in biodiversity certificates; and
- a framework that is contributing to measurable improvements to environmental outcomes including biodiversity.

The Department intends to monitor progress rigorously throughout the implementation phase, and there will be a formal statutory review of the operation of the Act five years after it commences, and a second ten years later. The above measures of success will be relevant to both these reviews.

Implementation challenges and risks

The implementation of the proposed legislation has several high-level implementation challenges and risks. These are discussed below.

Ensuring fit for purpose policy and regulatory settings

As an emerging market, it will be important to establish the correct framework settings for best managing the biodiversity market. In developing draft legislation, DCCEEW will use the CFI Act as a general model with its core themes of:

- codified processes for achieving environmental outcomes;
- the establishment of projects from willing proponents;
- the issuance of certificates for biodiversity outcomes ; and
- the Commonwealth Government taking responsibility for ensuring compliance through the project, including over any permanence period.

There are many decisions to be made within these broad settings, and there is a real risk that some of the initial settings could unintentionally inhibit the healthy development of the biodiversity market. To address this issue, DCCEEW is undertaking three actions:

- engaging with experts and State and Territory government officials who have expertise and experience in design and operation of environmental markets to develop the scheme;

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- drafting a Bill that has sufficient flexibility to adjust settings through legislative rules – this is an approach that has worked effectively in the CFI, and allows regulatory settings to be adjusted to best meet the needs of a developing market; and
- subjecting the legislation to internal administrative review 24 months after the scheme opens to applications, and a legislative review five years after the scheme opens to applications.

Measurement of biodiversity and other outcomes

The cost-effectiveness of this market-based approach will be strongly influenced by the transaction costs for participation in the program. The approach to the measurement of biodiversity is likely to represent a large proportion of these costs³¹. The measurement of biodiversity, as far as possible, will be based on a nationally consistent, spatially explicit classification scheme and approach to condition assessment. While there is currently no nationally agreed approach to biodiversity measurement that is ‘fit for purpose’ for a market-based approach, the development of the measurement framework will assess, adapt and/or combine a range of existing approaches and datasets to support the implementation of the program, including (but not limited to):

- National Vegetation Information System (NVIS)
- Australia’s Terrestrial Ecosystem Research Network (TERN)
- Ecosystem accounting, under the Australian Government’s Strategy and Action Plan for Environmental-Economic Accounting.
- Other environmental datasets held by DCCEEW.

A dataset with spatial and temporal resolution sufficient to discriminate change within the ecosystem targeted by the project will be a key element of a measurement methodology. As with other biodiversity programs, remote sensing datasets will be complemented by expert-driven field assessment.

Ensuring effective administration of the legislation

The second challenge relates to ensuring that the legislation establishing the scheme is well administered. As a new area of regulation for the Australian Government, there is a risk of legislation being administered in a way that does not provide ideal market outcomes. This risk is being addressed through consulting widely, and drawing upon the expertise, the day-to-day regulatory powers and responsibilities being provided to the CER.

The CER is a well-established environmental regulator that has significant experience in regulating land-based environmental projects³², strong compliance and enforcement arrangements, a register of environmental auditors and an annual audit program. Perhaps most significantly, the CER acts as a “market” regulator (as opposed to simply an environmental regulator). The CER is very experienced at creating the environment for transparent markets supported by mechanisms to encourage competition, and the frequent publication of market data that informs both buyers and sellers of potential business opportunities.

³¹ OECD - Paying for Biodiversity (2010)

³² Consultation has highlighted early interest in carbon projects also being recognised for their biodiversity benefits, and these projects would be registered as eligible offsets projects under the CFI Act.

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Management of implementation risks

A detailed assessment of implementation risks will be undertaken after feedback on the Exposure Draft has been considered, and the Bill is finalised. The main measures of mitigating implementation risks rely upon four elements of the policy position and market design:

Nationally consistent, robust methodologies for biodiversity projects	<ul style="list-style-type: none">• The methodologies developed to define the requirements projects must address to deliver specific biodiversity outcomes will be evidence-based and will ensure consistency in application regardless of where the project is undertaken.• Methodologies will be developed, and then reviewed and refined with the NRM Committee before recommendations are made to the Minister
An independent expert advisory group	<ul style="list-style-type: none">• The NRM Committee will include members with suitable expertise and experience in working in ecosystem markets, and will advise on the methodologies for biodiversity projects, and the associated implementation framework.• This group will make a significant contribution to ensuring the market can have a high level of confidence in the biodiversity outcomes recognised in an issued Biodiversity Certificate
Minister excludes ineligible projects	<ul style="list-style-type: none">• The Bill allows the Minister to exclude ineligible projects, and delegate this power to the Regulator.• This gives the Minister (and their delegate) the capacity to recognise the risks of unintended consequences and perverse outcomes and avoid or minimise these to the extent possible.
The market regulator – the CER	<ul style="list-style-type: none">• The Bill addresses the role of the Regulator in receiving, assessing, granting, and registering project applications, their role in managing compliance, and their responsibility for completing project-specific and system audits.

Review

DCCEEW will monitor and review the new legislation on an ongoing basis through the ongoing consultation it has committed to. Careful consideration will be given to the feedback from potential future participants and buyers in the biodiversity market and the States and Territories that may be impacted by it.

DCCEEW will make any necessary changes to the supporting legislative instruments to incorporate this advice and will have ample opportunity to respond and amend accordingly.

Given the uncertainties associated with creating a new property right and market, a Post Implementation Review will be undertaken within 2 years from commencement of the Legislation.