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ROOFTOP SOCIAL



Review of the ACT Environmental Offsets Policy

Final report

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Prepared for: ACT Government

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Executive Summary

This review of the *ACT Environmental Offsets Policy 2015* (the Policy) was commissioned in April 2023 by the Environment, Planning and Sustainable Development Directorate (EPSDD) on behalf of the ACT Government. This report shares the findings and discusses future potential pathways to adapt the Policy.

The review is timely. There is increasing recognition that “in a rapidly changing climate, with unsustainable development and use of resources, the general outlook for our environment is deteriorating” (Australia’s State of the Environment Report, 2021). Land-clearing is a leading cause of biodiversity loss globally and nationally, and habitat loss and fragmentation due to urban development is threatening biodiversity in the bush capital. The legacy of the Black Summer bushfires will also be with the ACT for many years to come and some species and ecological communities are unlikely to return to their pre-fire state (Biodiversity Impacts and Lessons from 2019-2020). Adding in the cumulative impacts of climate change, better protection of nationally significant urban mature trees and grasslands in the ACT is urgently needed.

This report concludes that a focus on mitigation, rather than offsetting practices that generally facilitate the destruction of environment, can deliver nature positive outcomes. The ACT has strong foundations to become a leader in the development of inclusive, nature-positive policies. While the review identifies areas for improvement in the Policy, our engagement across the ACT Government has revealed a high level of commitment and passion to manage nature responsibly.

This report proposes eight recommendations that we believe are purpose-driven and pragmatic. A brief workplan is identified, with the first action being to establish a new governance body that would be responsible for managing all elements of the Policy. Revising the governance structure will provide an opportunity to align with nature-positive developments and better integrate First Nations perspectives into the foundations of the Policy and its implementation.

Summary of review methodology

This review involved several rounds of engagement (interviews and workshops) with ACT Government stakeholders who are involved in the management and delivery of offsets policy, as well as examination of ACT Government documents and a horizon scan of environmental offset management in other jurisdictions.

The review was undertaken in two stages, with an interim report delivered to EPSDD on 5 June 2023.

The review is not an audit of the performance of the Policy.

Overview of the Environmental Offsets Policy and recent developments

Introduced in 2015, the Policy sets out the ACT Government’s approach to using environmental offsets for protecting matters of national environmental significance (MNES) under the Australian Government Environment Protection and Biodiversity Conservation Act 1999 (EPBC) and for ACT protected matters. The Policy was developed to be consistent with the EPBC.

The Policy has not been fully implemented. One of the reasons for this is that the Policy’s implementation relies on a bilateral agreement with the Commonwealth, but this agreement has never been resolved. Environmental offsets in the ACT are therefore still operating under the Commonwealth’s EPBC, now 24 years old, rather than the ACT’s own policy.

Since 2015 there have been several significant policy developments in environmental offsets, nationally and internationally. Two of note shape the context of future policy development in the ACT:

- In January 2021, an independent review of the EPBC by Professor Graeme Samuel AC was released. The Australian Government has since committed to implementing a nature-positive plan that will

include laws designed to repair nature, protect plants, animals and places with the proposed introduction of environmental standards that will describe the environmental outcome objectives. A new agency, Environment Protection Australia, is proposed as part of these reforms.

- In December 2022 the Kunming-Montreal Global Biodiversity Framework (GBF) was adopted during the fifteenth meeting of the Conference of Parties to the UN Convention on Biological Diversity (COP 15). As part of this, the Australian Government committed to protect and conserve 30% of land and oceans as well as restore 30% of degraded ecosystems by 2030 ('30 by 30').

There are currently 25 sites in the ACT and one in NSW that are approved under the EPBC to offset ACT developments. The offset sites range in size from 7.2ha to 822.8ha and cover a total of 2,301.4ha.

Key findings of the review

The ACT has strong **foundations to become a leader** in the implementation of inclusive, nature-positive policies.

Renewed efforts to implement the Policy would benefit from **revising the governance structures** that underpin its development and implementation. Responsibility for oversight of environmental offsets in the ACT sits with the Environmental Offsets Working Group (EOWG) and the Environmental Offsets Executive Group (EOEG). The EOWG is formally recognised in the ACT Environmental Offsets Framework. A single governance body to supplant these two groups would provide a means to bring together all relevant ACT Government departments and stakeholders, as well as representatives of First Nations communities. Based on best corporate governance practices including publication of meeting minutes, a governance body would enable a holistic focus on all elements of the Policy. It would not be a statutory body.

At present there is limited understanding of the Policy among its stakeholders, as well as limited familiarity with nature-positive developments. To address this, there is an opportunity to establish a **nature-positive learning program** that would harness global and local expertise.

Whilst there is evidence of quality communication for individual environmental offset sites, it is difficult to understand the overall outcomes that are delivered through the Policy or to assess its overall nature-positivity. Similarly, there is no overall stocktake or consolidated catalogue of environmental assets across the ACT. **Evaluating and communicating annually** the nature-positive outcomes delivered through the Policy would support community confidence.

The Policy is founded on a **mitigation hierarchy**, defined as 'avoid - mitigate - offset', where environmental offsetting is the last resort. Renewed efforts to implement the Policy would benefit from a focus on the management of all elements of the mitigation hierarchy. Key to the effectiveness of a mitigation hierarchy is an understanding of the ACT's environmental assets. This can be achieved by **mapping the extent and assessing the quality of endangered ecological communities** in the ACT by conducting an inventory of box-gum woodland (BGW) and natural temperate grasslands (NTG).

The compensation framework for the Policy was to be based on the ACT Environmental Offsets Calculator (ACT EOC). The ACT EOC is currently outdated and not in use; instead, the Commonwealth Offset Assessment Guide (OAG) calculator is used. The role of environmental offset calculators has been the subject of debate, including because ecological knowledge is incomplete and there is uncertainty about the future, which makes it challenging to forecast the trajectory of ecosystems. An alternative to re-establishing the ACT EOC is for the newly established governance body to develop a **principles-based framework** – one that recognises the importance of the ACT's unique ecosystem and would work in conjunction with the Commonwealth OAG.

The current wording of the Policy does not reflect the current global focus on nature-positive outcomes. Indigenous knowledge, values and perspectives are also not explicitly recognised in the Policy wording.

Revising the wording would bring it up to date. The name of the Policy itself should change to reflect the focus on avoidance and mitigation, not just on offsets.

Registers are crucial for recognising the value of nature. There is, however, no register of potential offset sites in the ACT. This may cause delays during the approval process. There is a need ensure that registers for current and prospective offsets are up to date and capture all needed information.

Currently, environmental offsets managed by the ACT Government may be **located inside or outside the ACT's borders**. The reliance on NSW and Victoria as potential comparable bioregions is not supported by an appropriate **bilateral agreement** to provide confidence that environmental offsets are being managed according to ACT's expectations. One of the challenges often identified by stakeholders is the scarcity of land within the ACT. Land may become more available for offsets within the ACT if issues around the certainty of **rural leases** are addressed. A newly established governance body will need to identify opportunities to maximise environmental offsets located in the ACT by systematically identifying and addressing impediments to locating all environmental offsets **within the ACT's borders**.

Recommendations

We propose eight recommendations for the ACT Government to consider:

No.	Recognising that...	Our recommendation is to...
1	The importance of the mitigation hierarchy to effectively deliver the Policy	Map the extent and assess the quality of endangered ecological communities in the ACT by conducting an inventory of box-gum woodland (BGW) and natural temperate grasslands (NTG)
2	Stakeholders' have limited knowledge about how environmental offsets work	Establish a nature-positive learning program for Government, First Nations and community stakeholders involved in the management and implementation of the Policy
3	The ACT Environmental Offsets Calculator is out of date	Support the alignment of ACT protected matters together with Commonwealth obligations by developing a framework that combines the Commonwealth offset calculator with a principles-based approach for assessment of ACT protected matters
4	The importance of environmental offset registers to valuing nature	Ensure that registers for current and prospective offsets are up to date and capture all needed information
5	The location of environmental offsets outside of the ACT results in a loss of income that could be used for nature-positive investments, and reduces oversight of outcomes	Systematically identify and address impediments to locating all environmental offsets within the ACT's borders
6	It is essential that the ACT community has trust that the Policy delivers nature-positive outcomes	Evaluate and annually communicate the results of implementing the Policy
7	The wording of the current Policy does not align with a focus on nature positive outcomes and does not incorporate the importance of First Nations knowledge, values and perspectives	Revise the Policy wording
8	The current governance structures are not efficient and effective	Establish a cross-directorate decision-making governance body that would be responsible for the management of all elements of the Policy

Start immediately

Implementation of the recommendations can start immediately by establishing an **interim governance body** with responsibility for revising the wording of the Policy and defining a Terms of Reference for a permanent governance body. The International Sustainability Standards Board (ISSB) is a recent example of an interim governance body leading to the establishment of a permanent one.

A foundation for implementing the recommendations is broad-based understanding of all elements of the Policy. If a commitment to developing a **nature-positive learning program** is made immediately, the first tranche of training could be delivered before the end of the year.

Mapping the extent and assessing the quality of endangered ecological communities in the ACT by conducting an **inventory** of box-gum woodland (BGW) and natural temperate grasslands (NTG) can also begin immediately.

1 Introduction

The Policy

Environmental offsets are used to compensate for the unavoidable, significant impacts of development on threatened species and habitats. Areas of land are set aside and protected in perpetuity.

Offsets are part of a statutory environmental approval process used when land is released and developed in the ACT. The Policy, introduced in 2015, was designed to protect:

- all Matters of National Environmental Significance (MNES), guided by the EPBC
- ACT Protected Matters, determined by the ACT Scientific Committee, a statutory expert body appointed by the Minister for the Environment.¹

The stated primary objectives of the Policy are:

1. To ensure areas of high conservation value or irreplaceable assets are avoided, or avoided and mitigated:
 - a) Environmental offsets are considered only after feasible and appropriate avoidance and mitigation measures have been taken.
 - b) The use of environmental offsets cannot be used to make inappropriate actions appropriate.
2. Should impacts be acceptable, to ensure the impacts from the loss of ecological communities and habitat are balanced by commensurate gains in extent or quality elsewhere.

Other key features of the Policy:

- Implementation of offsets in the ACT is through the [ACT Environmental Offsets Calculator](#) and the [ACT Environmental Offsets Register](#).
- The [ACT Environmental Offsets Framework](#) provides a summary of how offsets are assessed and implemented.
- The developer is responsible for finding, securing and managing offsets.
- Offsets declared under the EPBC are subject to the Commonwealth's [Offset Policy Principles and guidance](#).
- Most offset sites in the ACT are managed by the ACT Parks and Conservation Service (PCS) within the EPSDD with compliance and annual reporting requirements, and only after that converted to nature reserves (also managed by PCS) and protected under the ACT's Nature and Conservation Act 2014.

This review

In April 2023, the ACT Government commissioned Rooftop Social and the UTS Institute for Sustainable Futures to conduct a review of the Policy. The review included:

- engagement with ACT Government stakeholders involved in the management and delivery of offsets policy in the ACT and to seek their feedback on issues with the current system.
- a horizon scan of offsets policy interstate and overseas
- a full review of the Offsets Policy, including its management and implementation across the ACT Government and suggest recommendations for addressing issues discussed during the review, drawing on approaches from other jurisdictions where appropriate.

An Interim Report was delivered to EPSDD on 5 June 2023. This document is the final report for the review.

¹ Members of the ACT Scientific Committee have expertise in biodiversity and/or ecology, conservation science and conservation management. The Committee has a significant role in advising the Minister for the Environment and the Conservator of Flora and Fauna in relation to nature conservation, including making recommendations to the Minister on the listing of threatened species and providing advice to the Conservator during development of draft action plans.

2 Methodology

The review involved a combination of stakeholder engagement, examination of ACT Government documents and a horizon scan of environmental offset management in other jurisdictions. The review is not an audit of the performance of the Policy.

2.1 Stakeholder engagement

Stakeholder consultation included approach to representatives from across ACT Government involved in developing and / or delivering the Policy including:

- Chief Minister, Treasury and Economic Development Directorate (CMTEDD)
 - Chief Minister – Policy and Cabinet
 - Treasury – Economic and Financial; Finance and Budget
- Major Projects Canberra
 - Light Rail Projects
- Suburban Land Authority (SLA)
 - Sustainable Release Coordination
- Transport Canberra and City Services (TCCS)
 - Infrastructure Delivery
- EPSDD
 - Dharuwa Ngunnawal Caring for Country Committee (DNCCC)
 - Environment, Heritage and Water
 - Environment, Water and Emissions Reduction
 - Parks and Conservation Service
 - Planning and Sustainable Development
 - Statutory Planning
 - Strategic Planning and Policy.

Interviews

All up, we undertook 14 interviews with 30 participants. All interviews were conducted online using MS Teams. Most interviews were conducted with a small group of participants. A team member from Rooftop Social facilitated each interview. Observers included one representative from ISF and one or two staff from EPSDD. Some interviewees were in acting roles and not in their substantive position.

Organisations represented in the interviews can be seen in Appendix B (stakeholder mapping) and discussion questions are shown alongside the findings in Section 2.

Guiding questions

The guiding questions for the review are shown in Table 1.

Table 1: Guiding questions and data sources

	Existing data sources		New data
	Internal documents supplied by EPSDD	External literature (published and grey)	Stakeholder consultations
Q1. How is the current policy currently being implemented in the ACT?			✓
Q2. What role do different stakeholders currently play and how do they intersect?	✓		✓
Q3. How effective is the current policy? What are its strengths and weaknesses?	✓		✓
Q4. What is best practice in environmental offsets policy in other parts of Australia and internationally?		✓	
Q5. How can the policy be strengthened?	✓	✓	✓

Table 1 also references three key data sources:

- A review of internal documents supplied by EPSDD including the Policy, a Ministerial brief containing issues and risks for the ACT environmental offsets program, draft Terms of Reference for the EOEG and a draft Environmental Offsets Expenditure Review Report.
- A review of external literature (published and grey)
- Consultation with stakeholders (see below).

Sensemaking workshops

Two workshops were held (on 19 and 20 July 2023) to provide ACT government representatives with an opportunity to understand the findings of the review and to provide their feedback about the potential options for the way forward. There were 28 participants across the two workshops; 25 people attended in person with the remainder joined virtually. In the workshops, participants were invited to ask questions share their feedback verbally and in written form using a structured process based on the [Critical Friend Protocol](#).

2.2 ACT Government documents

The following ACT documents were analysed:

- ACT Environmental Offsets Draft Guidelines
- ACT Environmental Offsets Policy
- ACT Environmental Offsets Revised Draft Guidelines
- ACT Environmental Offsets Framework
- ACT Offsets Policy and Delivery Framework - Position Paper
- ACT Environmental Offsets Policy and Delivery Framework Position Paper - Consultation report
- ACT Environmental Offsets Delivery Framework.

2.3 Horizon scan

The horizon scan considered **seven case study jurisdictions**:

- Case Study 1: Australian Government
- Case Study 2: New South Wales
- Case Study 3: Queensland
- Case Study 4: Victoria
- Case Study 5: United Kingdom
- Case Study 6: France
- Case Study 7: Germany

These jurisdictions were chosen because of their appropriateness to the ACT context and the relevance of the insights that they may offer to policy options. **Key themes** from across the case studies are discussed in Section 4 of the report. Individual jurisdictions profiled one by one in **Appendix C**, including:

- a summary of the biodiversity offset schemes in place in this jurisdiction
- how these schemes tackle key issues in biodiversity offsetting, including their intended outcomes, particularly with regard to being nature-positive; legal enforceability; measurement and data; independence; and mitigation hierarchy
- brief conclusions and implications for ACT
- references (as end notes).

2.4 Reporting

The drafting process for this final report included two rounds of feedback over a two-week period. Firstly, the project manager and advisory group for the review provided their comments on the whole report. After their suggestions were incorporated, we sought feedback on the Executive Summary from people that attended the sensemaking workshops. We consulted with the project manager frequently during this time.

3 Key findings from the document review and stakeholder consultation

The views presented in this Section of the report represent those of the ACT Government stakeholders we heard from in May-June 2023. Their comments mainly related to the way environmental offsets are applied and managed in practice in the ACT (under the Commonwealth system), rather than the specifics of the Policy itself. This is because the Policy has not been implemented as intended, and most stakeholders are not familiar with its detail.

3.1 Stakeholder mapping

Most stakeholders have difficulty explaining how their work in environmental offsets intersects with others in EPSDD or ACT Government.

One of the tasks in the review was to develop a stakeholder map, identifying roles and responsibilities in the Policy.

EPSDD is the primary directorate involved in managing environmental offsets in the ACT. Stakeholders with peripheral responsibility for offsets include CMTEDD, SLA and TCCS. Beyond this, the relationships in the stakeholder map are not easy to represent.

If it were an actual map of a physical location, the stakeholder network around biodiversity offsets in the ACT would mostly resemble an archipelago: a set of islands that are within sight of each other, but not joined up by any clear or easy lines of connection.

For more, see Appendix B.

Box 1: Stakeholder discussion guide (Part A and B)

Your context

- **Your role** within the Directorate / ACT government and the extent of your involvement with the policy
- **Your familiarity** with the ACT Environmental Offsets Policy
- How does your work in environmental offsets **intersect** with others in the Directorate?

The current policy / system

- **Outcomes:** How well has the policy / system achieved its intended outcomes; anything effective (or ineffective)
- **Strengths / weaknesses** of the current policy / system
- **Barriers / enablers** to implementing the current policy / system
- **What else** EPSDD or others could / should have been doing over the last 8 years to implement the policy / system
- **How well key issues are covered by the current policy:** incl. threatened flora and fauna, challenges with weeds and pests, demand and supply of environmental offsets in ACT, views of First Nations communities

3.2 Implementation of the Policy

At present, offset areas in the ACT are established and managed following the processes under the Australian Government EPBC.

Implementation of the Policy relied on a bilateral agreement between the States/Territories and the Commonwealth Government. However, this agreement never came into effect, so the Policy has never been implemented as intended. Environmental offsets have nonetheless been established in the ACT under the EPBC.

There are currently 25 sites in the ACT and one in NSW that are approved under the EPBC to offset ACT developments. The offset sites range in size from 7.2ha to 822.8ha and cover a total of 2,301.4ha. The Commonwealth has responsibility for approving offsets; the ACT Government is then responsible for managing the protected areas and complying with the approval conditions.

The current process for environmental offsets approval in the ACT is:

1. Offsets are proposed by a proponent as part of a development application.
2. Offsets are then approved by the Commonwealth as part of their approval process or by the planning and land authority as part of the statutory development application process.

3. The selection of an offset site for use by an ACT Government entity to offset a development could go through an 'approval process' (as in agreement to put that site forward).
4. However, the actual approval of an offset site is a legal part of the assessment and approval process under the EPBC Act and Planning and Development Act.

One stakeholder recommended that a role should be established in EPSDD as the conduit between the ACT Government and the Commonwealth, like a service navigator role. This person would work with ACT staff and those in the Commonwealth to facilitate open communication and ensure that necessary documentation is acceptable. Another reported that other jurisdictions have an embedded staff member from the Commonwealth and felt this might help improve the relationship.

Commonwealth is helpful, but getting the time to discuss the meaty topics is lacking.

The ACT Environmental Offsets Calculator (ACT EOC) has not been used and is currently under review.

This calculator was developed using MS Access, which is no longer supported by IT services in the ACT Government. The Commonwealth Offset Assessment Guide Calculator (OAG) is instead used by developers.

The EPBC protects all species of National Environmental Significance but does not cover ACT protected matters that are not listed as MNES. Accordingly, the Commonwealth Offsets Calculator does not consider matters that are ACT protected only. Most interviewees think it would be remiss for ACT protected matters to be not adequately covered in any revised policy or approach to managing offsets.

Most stakeholders are unfamiliar with the Policy and only a few were involved in its development.

Some stakeholders understand the Policy a little but are unclear about how it affects their work. Others are very focussed on doing their job (e.g. operational work managing offset sites) but said they had little or no understanding of the Policy itself.

I understand it to a point, not super well. I would say it affects my work, but not in a way that I'm aware of or that I'm really clear about.

There is confusion about who is responsible for establishing and maintaining offsets in the ACT.

Offsets are a whole-of-government issue but are not always viewed this way. In general terms, PCS feels responsible for the offsets management in the ACT. Some teams feel they hold more responsibility than necessary. Further, not all parts of government have a good understanding of offsets.

Our [offsets] team generally feels like we're responsible for the whole lot – sometimes the developer could be involved more. Not always the greatest understanding of offsets and what it entails.

Some deficiencies... in how we all understand where we stand and who's delivering what, who's reporting on what, who's ultimately responsible.

...even if conservator and ecologists say [it] should be protected, planning can overtake the decision.

Managing the offsets process can be a heavy burden to bear.

Some interviewees spoke about management of offset sites requiring specialised skills, and ACT Parks and Conservation officers felt insufficiently resourced to meet EPBC requirements for planning, reporting and evaluation which are additional to their primary role in hands-on ecological and land management.

If we miss something it could be irreparable. There are examples of this happening. Some people are afraid to take holidays. It's very stressful.

First Nations community members are keen to be part of decision-making. There are helpful community structures already in place and good examples of community engagement to build on.

First Nations communities were not involved in the development of the Policy. They do not have a strong voice regarding development in the ACT, and there is a nature stewardship focus to be extremely mindful of.

Quite often we as human beings forget that we are not superior to the landscape, including the flora and fauna of the landscape. A lot of people don't recognise that by developing the landscape for humans, we're damaging ecological systems we need to survive as a race as well.

The DDNCCC participates in decision-making related to the management of country. EPSDD manages 70% of Ngunnawal country in the ACT, noting that Ngunnawal country also extends beyond the borders of the ACT (e.g. into Queanbeyan).

The DNCCC recently held a round table at Nadjung Mada Nature Reserve, in Kenny. Questions were raised about whether the development at this site needs to go ahead or not. The intangible cultural values of the land need to be considered when thinking about offsets. Development affects the story of the landscape, the ecological systems, the landscapes at the borders and the stories that go along with it.

The Namurag Nature Reserve provides an example of a new reserve which demonstrates good practice engagement with First Nations communities.

When representing the views of community members, it is important not to rephrase their voices, values and aspirations.

Corridors are important to consider, as the way Canberra is planned has resulted in some fauna being cut off from food and water sources. Pathways through the landscape generally go along ridgeways and waterways. Knowledge here has been passed down through ancestors and song lines, not physical maps.

3.3 Perceived effectiveness of the Policy and system

Most stakeholders are unsure if the current environmental offsets approach in the ACT has achieved its intended outcomes.

According to most stakeholders engaged in the review, there is limited information about how effective environmental offsets have been in the ACT. One stakeholder suggested a traffic light system would be a useful way of keeping track of the effectiveness of offsetting. Another said that limitations in enforcement and monitoring prevented EPSDD from knowing whether outcomes were achieved or not.

I simply don't have a clue about how well we have achieved the intended outcomes.

We don't have an enforcement / compliance strategy – so we can check to see. I don't think we have a good monitoring system where we go and check if offsets are achieving outcomes.

One stakeholder commented that implementation of the environmental offsets framework was adequate from their perspective, but they lacked any visibility of the ecological outcomes.

Some stakeholders questioned the effectiveness of biodiversity offsetting in principle.

I think the whole system of offsets is flawed. Start with two pieces of bush, develop one keep the other – what's the gain by using an offset?

Others thought it was better than nothing; some suggested that a scheme based on credits might be better.

The offset policy has pitfalls, not really no net loss – but better than unregulated development.

The register of offsets is incomplete, data about ecological outcomes are insufficient and reporting mechanisms are unclear.

Reporting about offsets is required, e.g. about management activities that have been undertaken. In some cases, reporting is carried out annually and then every 5 years (e.g. Molonglo Strategic Assessment); in others reporting takes place every 4 years (e.g. reporting by PCS about what is working and what is not). There is no structured evaluation plan that sits alongside the current policy framework, and no systematic way of capturing lessons learned.

[Reporting is] about completing forms, not about actual work on the ground.

There is no clear reporting line or mechanism for communication through to different parts of government. Members of the offsets team are unclear about how to feed into the EOEG. The way offsets are reported to the Commonwealth and to the relevant Ministers is also unclear.

We need to report to the Commonwealth on our offsets – I don't understand how that works.

The Executive group responsible for governance of offsets does not meet often.

The EOEG has been established to provide cross-directorate oversight of offsets. The group is responsible for providing advice and recommendations on offset matters and making decisions where appropriate. However, we heard from stakeholders that the leadership role of this group could be strengthened.

EOEG should be making decisions. It doesn't meet often. It seems like a transactional group.

The Executive haven't met often enough. Once you have oversight, you can build in elements like reporting and escalating to ministers in split portfolios (i.e. environment and planning).

Better collaboration with others working in offsets across Australia would also be useful, e.g. conservators and public servants working in offsets teams in the Commonwealth and other states and territories.

Processes and decision making are often unclear and lengthy.

Guidance documents that describe how the Policy should be implemented are needed for EPSDD and proponents within government. These could include guidance about approval processes, Land Management Agreements and roles and responsibilities in decision making.

One example was shared where an environmental management plan and an offset management plan had been submitted to the Commonwealth Government. There were commitments from the ACT Government, but the plans were rejected by the Commonwealth and the project stopped. After more than two years, there is still no resolution on this project. The process for another project has taken six years and still no agreement has been reached.

Not clear about how decisions are made and how values are balanced.

Process is unclear and convoluted. We are supportive of policy intent. We try to play by the rules and feel like we're punished. There's no one we can turn to – then we get stuck in this rut – Commonwealth doesn't think what we're doing is good enough.

PCS staff report that they are often given limited time to provide expert advice on key documents (e.g. strategic assessments, offset management plans) and sometimes feel their comments are not considered. Sometimes opportunities to provide feedback are missed due to other work commitments that are unable to be changed (e.g. land managers undertaking critical fire-related activities).

I had 4.5 mins to reply to a strategic assessment recently.

Stakeholders are unsure about the consequences of non-compliance.

Stakeholders are uncertain about what happens if or when the conditions that must be followed for offsets areas are unmet. Some people thought this may also contribute to a 'don't worry' attitude.

There's a cultural tension...we have conditions to adhere to... but there's never been a big slap on the wrist.

The stick isn't clear. Consequences of non-compliance aren't clear. Like, loss of one lizard – what does this really mean?

It's the only enforceable policy we have in the planning system. And it hasn't been enforced to my knowledge.

Some stakeholders think the Policy is helpful for developers; others think it impedes development.

There is a tension between development and conservation in the ACT. There is a perception that offsets are used by developers in preference to avoidance and mitigation, which is not the preferred option and does not follow the hierarchy stated in the Policy.

If you're a developer, it's been fantastic.

The offsets policy looks like a loophole for developers, but others think it's a barrier to development.

It's working as a development tool in the ACT – not working as conservational mechanism. Avoidance is never followed because we have limited developmental land – always mitigation or offsetting. A lot of the developers are the ACT Government – on the one hand they want to develop as much land as possible; the other hand wants to conserve as much land as possible.

Current funding arrangements are problematic.

There is no universally agreed costing model for offsets in the ACT. There is uncertainty around the process of funding. Money paid by land developers for offsets goes into a central Treasury pool. PCS must then apply through the annual budget bid process for funding to manage the offset areas.

We heard from stakeholders that there is a need for funding arrangements to change, and that this will require Executive support. One interviewee commented that only a small proportion of funding paid by developers to Treasury is used to fund management. Sometimes offsets funds are used to support aspects of environmental management that are under resourced. Furthermore, sometimes there is a significant lag between when an offset site is identified and when funding is provided to start managing the land.

Funding – how does Treasury decide how to allocate funding – should be a given, not annual decision.

We tried to set up the system where there's a buy back system that was vetoed by senior exec and didn't get up and running at the start. Even if the bilateral agreement was up, it still would have been flawed. Money by a developer gets paid to central treasury, not to offset management. Treasury review 18 months ago of offsets – the system is flawed. Again, advised that we couldn't change it. It's a question of trying to get government commitments to change.

There is often a lot of excitement about funding that come with offsets, but imbalance because only a tiny proportion of the profits come back to fund repair / restoration.

The relationship between the EPBC and the Policy needs to be clarified.

The ACT system works on a principle of proximity, which means that offsets should be as close as possible to the development site. The proximity principle is not a requirement under the Commonwealth system.

How does our policy relate to the Federal Government policy? If we are developing policy how does ours add value?

Running two parallel systems (ACT and Commonwealth) adds duplication.

Wouldn't want to deal with two offsets policies. We wouldn't want to have two duplicating systems.

3.4 Strengthening offsets policy in the ACT

A whole-of-government approach is needed.

An overarching policy for land use management is being considered by an internal working group within ACT government. Offsets could be a sub-policy within it.

Stakeholders also feel that Executives, beyond those executives with direct environmental oversight, need to champion outcomes.

People in positions of power in the ACT government need to be invested in the policy and care about the outcomes.

Box 2: Stakeholder discussion guide (Part C)

A revised policy

- **Priorities** for the revised policy: what must be included
- Areas of the policy that need **clarifying** (i.e. intent is correct, but wording is opaque / unclear)
- Areas of the policy that need **adding, deleting or re-writing**
- **Good examples** of similar policies from other jurisdictions that we should look at as part of the review
- **Stakeholders** who need to be consulted in the review process

The Policy needs to be fit for purpose for the ACT.

Some stakeholders commented that the ACT is a reasonably small jurisdiction that in some ways operates more like a Local Government Area than a State and felt this should be reflected in the offsets framework. The government is often both the developer and the land manager, limited land is available to use for offsetting and land is usually leased from the government.

There's a big focus on infill. ACT is a small jurisdiction. There are approximately 26 offsets sites in the ACT – where we can draw on things from Commonwealth it's a good thing.

Conservator provides advice only... very little developmental land where there are no values – it's getting to boiling point – need to look at what's going to work.

The use of offsets needs to be more strategic and less reactive.

Guidance is needed about prioritisation of offset areas for future projects. A more strategic approach to identifying offset areas is needed.

We are limited in the land we have left, but we don't know if the land is suitable for [particular] species. Can we come up with list of sites for each protected matter that we could prioritise for private / government projects?

It would help if there was a bank of offsets for various habitats – as impacts are identified, don't have to start from scratch for looking for offsets.

What land do we have? What's available in the ACT? It'd be good to know this when developers want to offset in NSW.

Should we save offsets for big projects that must go ahead?

Stakeholders reported that it would be useful to have an inventory that identifies:

- areas that are suitable for development (i.e. no threatened species or habitats)
- areas that are protected (e.g. national parks, nature reserves, existing offset areas)
- potential offset areas (including baseline data for the threatened species or habitats on the site).

Stronger guidance is needed about advanced offsets.

A future policy will need to be clearer about the issue of advanced offsets, which is where a parcel of land is set aside and managed for use as an offset in the future. Potentially leaseholders could be paid to manage MNES on their land, to protect threatened species and habitats. Alternatively, the government could play this role. However, lack of funding inhibits the use of advanced offsets as funding is currently not available if the site is not connected to a project.

...having to withdraw land from leasehold at the moment. It's really complicated. Left to officers to deal with developers and other stakeholders – seem to be creating process as we go. Planning and implementation team need to be more readily available.

Do we want to invest in advanced offsets – know it's working when you come to approvals phase. If the site is larger than what is needed for one project, the rest of it could be used for another project if it was set aside as an advanced offset.

Use of land outside the ACT for offsets needs to be clarified.

Stakeholders identified the need for the Policy to provide guidance about when to use offset areas outside the ACT and how they should be managed.

We have very little control over where offsets get allocated. ACT developers inclined to convince government that can use offsets in NSW. Must think about how we can address this. There must be a way that we can influence that.

The Policy needs to be clear about whether land under a rural lease can be used for offsets, and the processes involved.

Currently there are very few offset areas on land that is under a rural lease arrangement. Stakeholders said this might be an option for the future, particularly given the challenges presented by the limited amount of land remaining for offsets in the ACT.

Interviewees said it would be important to decide the incentives needed for leaseholders to manage the threatened species and habitats on their land. Currently, if the ACT government needs take land back from a leaseholder, the lease is withdrawn and a licence is issued instead, stipulating the how the land must be managed. Lack of monitoring, compliance and enforcement is an issue.

Clarity is needed around a range of other issues.

These include:

- roles and responsibilities for monitoring, compliance, enforcement
- future expectations between ACT and Commonwealth governments
- value of environmental vs carbon offsets.

4 Key findings from the horizon scan

This section summarises the key findings from our horizon scan of Australian offset markets and general trends around the world.

The horizon scan considered **seven case study jurisdictions**: three Australian states, three international examples and the Australian Government. The practices and insights from each jurisdiction have been profiled in Appendix C. This Section of the report provides analysis across the case studies:

- Firstly, we describe broad trends that underpin the global and domestic development of offset schemes over the last 50 years
- Finally, we distil the key implications from this analysis for the development of policy in the ACT

4.1 Broad trends that set the scene

Australia

An independent review of the EPBC was recently conducted by Professor Graeme Samuel AC, publicly released on 28 January 2021. The Australian Government has committed to implementing a Nature Positive Plan that will include laws designed to repair nature and protect precious plants, animals and places, with the proposed introduction of environmental standards that will describe the environmental outcome objectives. A new Environment Protection Agency has also been proposed.

As part of establishing National Environmental Standards, the Australian Government has indicated that a standard for environmental offsets is an immediate priority. In May 2023, the Commonwealth released for consultation its proposed Draft National Environmental Standard for MNES.

In Australia there have been a number of recent audits, internal inquiries and parliamentary inquiries into national and state-based environmental offset schemes. These reviews have all identified challenges with implementation and resulted in reforms. These audits and inquiries have consistently found:

- a lack of identifiable outcomes from policy implementation
- inadequate transparency of schemes
- inconsistencies across state and federal policies
- challenges and limitations with measurement
- a lack of overall demonstrable nature-positive outcomes.

The importance of nature is increasingly recognised globally

Biodiversity is inextricably linked to planetary and human well-being and there is widespread recognition of the significant implications for society if biodiversity is degraded further. The recent COP 15 held in Canada in 2022 resulted in the development of the Kunming-Montreal GBF¹ to address global biodiversity loss through four goals and 23 targets, notably to protect 30% of land and oceans as well as restore 30% of degraded ecosystems by 2030 (30 by 30).² The Australian Government has itself committed to protect and 30% of land and 30% of oceans by 2030.

The international focus on biodiversity is complemented by national biodiversity strategies in many countries. Language around nature-positive, or biodiversity net gain, is common across jurisdictions.

The European Green Deal establishes that nature is an important ally in the fight against climate change, and that restoring nature and enabling ecosystems to thrive again offers a quick and cheap solution to absorb and store carbon. As part of the Green Deal, the 2030 EU Biodiversity Strategy is a long-term plan to protect nature and reverse the degradation of ecosystems. The EU Commission proposes to restore Europe's forests, soils, wetlands and peatlands to increase absorption of CO₂ and make the environment more resilient to climate change. Bioenergy, used sustainably, is expected to contribute to the phase-out

of fossil fuels and the decarbonisation of the EU economy. The Commission proposes strict new criteria to avoid unsustainable forest harvesting and to protect areas of high biodiversity value.³

France is seeking to demonstrate global leadership around biodiversity. The Libreville Plan (One Forest Summit)⁴ held in March 2023 was led by France and Gabon to focus on up-scaling high-integrity, biodiversity-positive carbon credits and develop nature certificate schemes.⁵

The February 2021 UK Dasgupta independent review on the economics of biodiversity⁶, produced by Professor Sir Partha Dasgupta from the University of Cambridge, highlighted that nature's value must be at the heart of economics. The review concluded that nature is a 'blind spot' in economics, and we can no longer afford for it to be absent from accounting systems that dictate national finances or ignored by economic decision makers.⁷

An example of a country developing a national biodiversity strategy is Canada's 2030 National Biodiversity Strategy. This is currently in development in a collaboration with provinces, territories and Indigenous representatives, and with input from partners and stakeholders. A draft is expected for review by the end of 2023. Canada's Federal Sustainable Development Strategy (2022-2026),⁸ designed under a strengthened Federal Sustainable Development Act, takes a whole-of-government approach to sustainability across 101 federal organisations. This strategy includes reflections from members of National Indigenous Organisations on dimensions of sustainable development such as history, culture and Indigenous rights. First Nations, Inuit and Métis encouraged a distinctions-based approach.

Nature-positive practices are increasingly integrated into markets

The integration of biodiversity into markets with a focus on development of carbon and biodiversity credits is formally recognised through Target 19 of the GBF.⁹

Financial system participants, including corporations, banks and investors, are recognising the importance of nature related risks through frameworks such as the Taskforce on Nature-related Financial Disclosures. This Taskforce aims to develop and deliver a risk management and disclosure framework for organisations to report and act on evolving nature-related risks, with the ultimate aim of supporting a shift in global financial flows away from nature-negative outcomes and towards nature-positive outcomes.¹⁰

The integration of biodiversity into carbon markets is recognised through the Core Carbon Principles (CCP)¹¹ which were recently released by the Integrity Council for the Voluntary Carbon Market (ICVCM). ICVCM is part of a suite of regulatory measures driven by Mark Carney, UN Special Envoy on Climate Action and Finance and former Governor of the Bank of England. ICVCM aims for the CCP to become the 'gold standard' for carbon credits. The framework recognises sustainable development benefits including biodiversity. There is the potential for higher quality carbon credits that deliver biodiversity benefits to attract a higher price in the carbon market.¹²

The United Kingdom is currently developing a biodiversity unit market by supporting oversight functions. This includes creating supporting systems such as a biodiversity gain site register, upholding probity rules and avoiding conflicts of interest and establishing statutory biodiversity credit pricing.¹³

The Australian Government is proposing a 'Nature Market Repair Bill 2023'. The Commonwealth has committed to introducing this legislation to establish a structure for the Clean Energy Regulator to issue certificates (personal property) to support investment in biodiversity. A single tradable certificate will be issued for each project, which can be sold to buyers under commercial contracts. At a domestic level, the Queensland LRF¹⁴ is a \$500 million initiative that seeks to facilitate a pipeline of qualifying Queensland-based carbon offset projects, including through private sector investment. The LRF uses carbon farming as a catalyst to support farmers in generating additional income streams. Potential co-benefits of carbon farming projects include environmental, social, and economic benefits, healthy waterways, and

maintaining the quality of the Great Barrier Reef. The project is unique in that it also aims to generate other co-benefits (including for First Nations) and uses measurement tools to track how these benefits manifest.

Environmental offset schemes are in a constant state of evolution

Environmental offset schemes were first developed in Germany in the 1970s and California in the 1980s as a mechanism to address the mitigation and compensation of impacts stemming from developments and projects. No country has perfected the management of environmental offsets.

- In Germany**, their environmental offset system evolved as Production-integrated Compensation (PIC), a practice combining environmental improvements with farming. Initially adopted in 1976 through Impact Mitigation Regulation (IMR) as part of the Federal Nature Conservation Act, the Germany's federal structure has resulted in **inconsistent implementation of national laws across German states**, including inconsistent regulatory frameworks, institutional structures and registers of environmental offsets. Germany is seeking to evolve its approach to environmental management. Its response to its biodiversity challenges includes the draft Federal Action Plan on Nature-based Solutions for Climate and Biodiversity (2022)¹⁵ which supports municipalities as key actors for achieving a transition to green space management and performing a wide range of ecosystem services, in particular for recreation, health and biodiversity.
- In the United Kingdom**, early attempts to introduce a formal offsetting system in 2011 were aborted in 2014 due to conflict between economic and environmental goals, in particular economic growth, and problems of housing affordability in London and the South-East of England.¹⁶ The United Kingdom is notable for passage of the Environmental Act 2021 that aims to halt the decline in species by 2030, requiring new developments to improve or create habitats for nature and tackling deforestation elsewhere. The Environment Act 2021 makes Biodiversity Net Gain (BNG) mandatory for all but small developments.
- In France**, a historical challenge for the implementation of offset programs has been conflict with farmers and other land users when development in densely populated areas have required agricultural farmland for offsets.¹⁷ France's Law for the Recovery of Biodiversity, Nature and Landscapes (August 2016) enshrined principles in the environmental code with a mitigation hierarchy to avoid, reduce and compensate – *séquence éviter, réduire et compenser* (ERC). Farmers are now involved in supplying biodiversity offsets through voluntary contracts with developers, accepting to change their farming practices or land use to provide the targeted ecological gains ('Agri-environmental Biodiversity Offsets Schemes'; ABOS).

Australia's system of environmental offsets is most common to the German system, and many of the issues that have been identified as concerns for Australian state-based schemes are evident in Germany.

4.2 Best practices in biodiversity offset schemes

Across the various jurisdictions we have considered, there are four 'best practices' that are key elements of effective biodiversity offset schemes.

Use of market structures, including up-to-date and publicly available registers

The importance of finance and markets is increasingly recognised. One example is in the UK, which plans to facilitate the operation of the biodiversity unit market. A key element to the establishment of an environment offset market involves up-to-date and publicly available registers. A register, like the title of a house, is a mechanism to recognise value. Without a register, landholders are not able to demonstrate their 'ownership' of offsets to external parties including banks and investors. Government registers are key to valuing environment as an asset not a liability on the government balance sheet.

Administration through an independent agency

Enforcement is a key element of mitigation hierarchies to 'avoid - mitigate - offset'. The French OFB has 2,800 agents for compliance. It is also notable for its ability to earn income from other sources (offshore wind tax) as well as invest in research.

Independent agencies build trust through integrity and transparency. Trust is the key to stakeholder support, including the local community and private sector.

Integration with carbon offsets

The growth of a carbon offset market in Australia is a likely result of the passage of Safeguard Mechanism legislation at a Federal level. Carbon offsets have the potential to deliver environment benefits. The Queensland Land Restoration Fund is an example of a carbon initiative that delivers environmental outcomes, with the Accounting for Nature framework providing assurance and integrity. There is an opportunity for carbon offsets to deliver environmental benefits if integrated into planning frameworks. There is a need to understand the opportunity of integrating environmental offsets with carbon credits.

Development of skills and training

France has a focus on training senior civil servants in the challenges of the ecological transition. By the first half of 2023, around 200 Directors-General of Ministries and members of ministerial cabinets will be trained on biodiversity, climate and/or resources.¹⁸

As indicated by the Samuel Review, the EPBC and environment offsets are inherently complex. Different levels of skill will be required according to one's job function, but a broad understanding of the role of environmental offsets and the role that they can play is an important element in building capacity across the public sector in Australia.

4.3 Key insights for the environmental offsets policy in the ACT

In Australia, environment offsets policies have been used in various jurisdictions as a tool to balance the economic benefits of development against the loss of biodiversity attributable to development. Several reviews of Australian policies in recent years have highlighted how these policies have not delivered on nature-positive outcomes. There are key lessons from these reviews that can assist policy makers in delivering more effective and targeted future policies that balance economic development with nature.

In summary, there are several key insights from our horizon scan:

- Policies as they exist generally fail to deliver nature-positive outcomes, which require nature to be left in a greater state in the future.
- Future policies should address key weaknesses in existing frameworks, including calculators and registers.
- There is a need to harmonise policy across jurisdictions to ensure a common focus with clear outcomes focused on nature-positivity.
- A strong legal framework is required, one that gives legitimacy to environment offsets and incentivises land managers to improve biodiversity.
- Transparent and up-to-date registers are key to creating legal title to carbon, biodiversity or co-benefits to empower biodiversity markets and enable markets to address their impacts.
- Priority should be given to ensure future policy includes engaging with and actively utilising insight from First Nations peoples. Policy makers can use the experience of the Queensland LRF as an example.
- Clear long-term measurement and monitoring programs should be included in future policies. Failure to measure and monitor programs has left significant uncertainty around offset projects, and

resulted in several situations where obligations related to offsets were avoided. Long term measurement and monitoring based on the best scientific evidence can assist in strengthening mitigation hierarchies ensuring priorities for offsetting based on risk.

- There is a need for independence. The Chubb review of the Australian Carbon Credit Unit Scheme highlighted the importance of independence and recommended a separate integrity body.

Combined, these insights can support greater validity to an environment offset program that not only gives the community confidence that outcomes are being delivered but provides the market with confidence that the scheme offers equity between development and biodiversity.

5 Recommendations

The report proposes options that are purpose-driven, pragmatic and action-oriented. Options are presented under four broad themes: leadership; governance; mitigation hierarchy; and nature-positive.

5.1 Leadership

The ACT has strong foundations to become a leader in the implementation of inclusive, nature-positive policies.

Whilst the review has identified areas for improvement in the Policy, one of the elements that stands out from the stakeholder engagement is the high level of commitment and passion that exists to manage nature responsibly.

One area where the ACT can demonstrate leadership is by integrating traditional custodians' knowledge, values and perspectives into a revised wording of the Policy. The current Policy only mentions Indigenous matters once.

No.	Recognising that...	Our recommendation is to...
7	The wording of the current Policy does not incorporate the importance of First Nations knowledge, values and perspectives	Revise the Policy wording

The incorporation of Indigenous knowledge, values and perspectives into the development and implementation of the Policy is critical, recognising that First Nations peoples have cared for country for thousands of years. Australia's unique biodiversity is a product of their stewardship.

Ecosystem corridors are important to consider. Although the planning of Canberra generally accommodates for wildlife movements, there are some instances of fauna being cut off from food and water sources. Indigenous pathways through the landscape generally go along ridgeways and waterways. Knowledge of these pathways has been passed down through ancestors and song lines, not physical maps. Understanding the linkages between Indigenous pathways and biodiversity across the ACT can only be achieved if First Nations are a foundation of the Policy.

In consultation with local First Nations communities, there is an opportunity to revise the wording of the Policy to integrate Indigenous knowledge, values and perspectives. Doing so would be consistent with the goals and targets of the Kunming-Montreal GBF¹⁹ that emphasise the contribution, rights, values and knowledge systems, and views of Indigenous and other local communities. These are explicit in one of the four GBF goals and seven of its 23 targets.

There is limited understanding of the Policy among stakeholders, as well as limited familiarity with nature-positive developments. To address this, there is an opportunity to establish a nature-positive learning program that would harness global and local expertise.

No.	Recognising that...	Our recommendation is to...
2	Stakeholders' have limited knowledge about how environmental offsets work	Establish a nature-positive learning program for Government, First Nations and community stakeholders involved in the management and implementation of the Policy

One opportunity is to establish an annual nature-positive learning forum that brings together all those professionals in the ACT Government that are involved in the management of the Policy in some form. An annual nature-positive learning forum would also provide an opportunity to build connectivity with First Nations peoples.

Of course, the issue of nature-positive learning is not limited to the ACT – there is a need for learning across Australian states. A forum could provide an opportunity for the ACT to demonstrate national leadership by convening environmental offsets professionals working in state governments.

A nature-positive learning program would be consistent with global leadership. France has a focus on training senior civil servants in the challenges of the ecological transition. By the first half of 2023, around 200 Directors-General of Ministries and members of ministerial cabinets will be trained on biodiversity, climate and/or resources. Training includes a theoretical component coupled with field visits. The French Biodiversity Agency – Office Français de la Biodiversité (OFB) – has been mandated by the Ministry of Ecological Transition and Territorial Cohesion to participate in this training plan and organise field visits.

The Australian Government’s commitment to host a [Global Nature Positive Summit](#) in 2024 offers an opportunity for the ACT to host global experts. Across Australia there are many environmental offsets professionals that would value the opportunity to learn from global leaders. By collaborating with the Australian Government around the organisation and hosting of the Summit, the ACT could gain profile as a supporter of best practice environmental offset policy development across Australian states and territories.

Through the stakeholder engagement process undertaken for this review, one issue identified is the length of time and uncertainty of outcome when engaging with the Federal Government for approval of environmental offsets. The intention of the Policy was to be consistent with the EPBC and to align with national policy. Implementation of the policy itself relied on a bilateral agreement between the States/Territories and the Commonwealth Government which was not implemented as intended.

Whilst the Federal Government has clear stated intentions to reform the EPBC, policy uncertainty currently continues. Until resolved, this will continue to impact the ACT in terms of management of the Policy. The ACT Government does not need to wait until there is policy certainty at the Federal level to implement the Policy based on its own priorities.

5.2 Governance

Renewed efforts to implement the Policy would benefit from revising the governance structures that underpin the Policy.

Responsibility for oversight of environmental offsets in the ACT sits with the EOWG and the EOEG. The EOWG is formally established through the ACT Environmental Offsets Framework²⁰ and role includes:

- improving efficiencies in the offset planning and establishment process
- improving communication between directorates
- avoiding duplication
- ensuring directorates are involved in relevant projects from an early stage and
- ensuring input is received at appropriate times to reduce delays.

In addition to the EOWG, the EOEG was established to provide cross-directorate oversight of offsets. The group is responsible for providing advice and recommendations on offset matters and making decisions where appropriate.

Greater clarity and transparency around governance arrangements will benefit the overall trust in the Policy to deliver on intended outcomes. We heard from stakeholders about a range of issues that could be addressed through a governance structure that results in responsibility for the management of all aspects of the Policy. These include:

- First Nations communities being represented on the existing governance groups
- development of a universally agreed costing model for offsets in the ACT
- certainty around the process of managing funding.

Whilst outside the scope of this review, there is also a need to understand the role that carbon offsets can play delivering environmental outcomes if integrated into planning schemes. Australia faces a choice on how carbon offsets projects are developed. If there is a potential that the ACT Government uses carbon offsets, for instance to offset flights of government employees, then there is an opportunity to consider what sorts of carbon offsets should be prioritised, and where should they be located.

No.	Recognising that...	Our recommendation is to...
8	The current governance structures are not efficient and effective	Establish a cross-directorate decision-making governance body that would be responsible for the management of all elements of the Policy

The governance body would not be a statutory body and should be based on best corporate governance practices including publication of minutes of meetings. The governance body would enable a holistic focus on all elements of the Policy and could establish sub-groups with a focus on addressing specific issues. As an example, the governance body could establish a sub-group that developed a principles-based framework as an alternative to the ACT EOC.

5.3 Mitigation hierarchy

The ACT Environmental Offsets Policy is founded on a mitigation hierarchy defined as 'avoid - mitigate - offset', where environmental offsetting is the last resort.

The primary objective of the Policy is to ensure areas of high conservation value or irreplaceable assets are avoided, or avoided and mitigated, with environmental offsets only considered after feasible and appropriate avoidance and mitigation measures have been taken.

Renewed efforts to implement the Policy would benefit from a focus on the management of all elements of the mitigation hierarchy.

No.	Recognising that...	Our recommendation is to...
1	The importance of the mitigation hierarchy to effectively deliver the Policy	Map the extent and assess the quality of endangered ecological communities in the ACT by conducting an inventory of box-gum woodland (BGW) and natural temperate grasslands (NTG)

A lack of confidence amongst stakeholders about whether the mitigation hierarchy is working effectively has the potential to impact on the overall confidence that the Policy is meeting its objectives.

Where decisions are made to avoid critical habitat destruction, there is a benefit from communicating this, not only at the time an environmental offset site may be approved, but subsequently. Ongoing reporting on avoided habitat destruction has the potential to foster community trust.

Key to the avoidance element of the mitigation hierarchy is to recognise the value of nature in the first place. One issue identified by stakeholders was the lack of a formal register of *potential* offset sites. This has implications in terms of the time required to search for a suitable site, including site surveys. It also reflects that there is no overall map of ACT's ecosystem assets.

To address concerns that the mitigation hierarchy is not operating according to best practice there is an opportunity for the ACT Government to consider adopting the System of Environmental Economic Accounting (SEEA). SEEA is the accepted international standard for environmental-economic accounting, developed in 2012 by the United Nations, the European Commission, the Food and Agriculture Organization of the United Nations, the Organisation for Economic Co-operation and Development, International Monetary Fund and the World Bank Group.

In December 2022, Australia and the United States announced that they will embark on a joint approach to natural capital accounting using the SEEA framework.²¹ As part of the agreement with the US, Australia will share experiences, methods and learnings including a focus on accounting for biodiverse spatial areas and integrating with First Nations peoples. An outcome will be an annual dialogue.²²

The SEEA framework can support the ACT Government to:

- organise data about ecosystems
- measure ecosystem services, like the way that an ecosystem cleans the air and filters our water
- track changes in ecosystem assets, like the degradation of native forests
- link data and information to economic and other human activity
- manage environmental risk
- improve decision making.²³

A key element of a mitigation hierarchy is the mechanism to determine compensation. The compensation framework for the Policy (for matters outside of EPBC) was to be based on the ACT Environmental Offsets Calculator (ACT EOC). The ACT Environmental Offsets Framework²⁴ establishes a process for assessment of the quantum of offsets using appropriate methodologies that include the ACT EOC, Commonwealth OAG or other methodology established under the Planning Act. The Framework establishes criteria on which calculator is most appropriate in different circumstances. An assessment methodology for the ACT EOC was released on 18 May 2015.

The intent was for the ACT EOC to align with the Commonwealth OAG calculator. The ACT EOC details that certain species have a special offset requirement which must be met before an offset can be provided. The species identified as requiring special offset requirements currently include the Brown Treecreeper, Golden Sun Moth, Hooded Robin, Grey-headed Flying Fox, Little Eagle, Pink-tailed Worm-lizard, Striped Legless Lizard and Superb Parrot. These species are considered significant to the ACT and have priority in the Policy implementation.

It is evident from stakeholder engagement that the ACT EOC is currently not up-to-date and is not being used; instead, the Commonwealth Offset Assessment Guide (OAG) calculator is in use. The impact of not using the ACT EOC in circumstances appropriate for identified species is unknown.

No.	Recognising that...	Our recommendation is to...
3	The ACT Environmental Offsets Calculator is out of date	Support the alignment of ACT protected matters together with Commonwealth obligations by developing a framework that combines the Commonwealth offset calculator with a principles-based approach for assessment of ACT protected matters

To fully implement the ACT Environmental Offsets Framework as it is currently constructed, there is a need to decide whether to update the ACT EOC.

In other Australian jurisdictions there is concern about the reliability of calculators. For an offset calculator to operate well there is a need to ensure that there is sufficient funding for operation and regular maintenance. The financial cost of re-developing the ACT EOC is unknown.

The role of environmental offset calculators has been the subject of debate. A challenge with environmental offset calculators is that ecological knowledge is incomplete and there is uncertainty about the future, including impacts of climate change, which makes it challenging to forecast the trajectory of ecosystems.²⁵

The way in which a calculation method is developed has a significant impact on the resulting environment offset requirements.²⁶ If the ACT EOC were to be redeveloped, careful consideration would need to be given to evolving calculation methods (multiplicative, additive and matrix).²⁷

Given the intention of the Policy to align with the Commonwealth's EPBC for MNES, there is likely to be an ongoing need to use the Commonwealth OAG calculator (which may not include species considered ecologically significant to the ACT).

Recognising that redeveloping the ACT EOC would be resource-intensive yet still questionable in its effectiveness, there is merit in developing a principles-based compensation framework that acknowledges the importance of local biodiversity and wildlife corridors, is adapted to the ACT's local context, and works in conjunction with the Commonwealth OAG.²⁸ Developing such a principles-based compensation framework would require consultation with stakeholders including First Nations communities.

A range of other issues relevant to the effectiveness of the mitigation hierarchy were identified through the stakeholder engagement process. One of these is that there may be areas where the offset register information is not accurate or up to date.

No.	Recognising that...	Our recommendation is to...
4	The importance of environmental offset registers to valuing nature	Ensure that registers for current and prospective offsets are up to date and capture all needed information

Registers are crucial for recognising the value of nature. An example of the importance of registers in other spheres are registers that confirm ownership of land. Without confidence that property title registers are accurate, household lending would not be unlocked. There is a need to understand the attributes of an environmental register that are necessary for the unlocking of value. An approach to registers needs to accommodate future environmental offsets. There is, however, no register of *potential* offset sites in the ACT. This may cause delays during the approval process. There is a need for a review of the Environmental Offsets Register to understand the information that is essential for recognition of value.

Direct oversight of environmental offset site management is challenging because there are identified challenges with environmental offsets outside of the ACT. There is intention for environment offsets to be close to the ACT, but there is no clarity on the specific definitions of proximity. Currently environmental offsets managed by the ACT Government may be located inside or outside the ACT's borders. There is an example of a cross-border offset (Lot 2, Wallaroo Rd) that is managed by the Ginninderry Trust; it is understood that this was a condition of approval for stage one of the light rail development due to the development's impact on golden sun moth habitat.

The reliance on NSW and Victoria as potential comparable bioregions is not supported by an appropriate bilateral agreement that provides confidence that environmental offsets are being managed according to ACT expectations.

No.	Recognising that...	Our recommendation is to...
5	The location of environmental offsets outside of the ACT results in a loss of income that could be used for nature-positive investments, and reduces oversight of outcomes	Systematically identify and address impediments to locating all environmental offsets within the ACT's borders

The inability to impose environmental requirements (such as inspection or management) on rural leases limits their usefulness for offsetting purposes. Rural land in the ACT might be utilised for environmental offsets although ecological constraints are identified due to current land management practices.

One of the issues often identified by stakeholders is the scarcity of land within the ACT for offsets. Land may become more available for offsets within the ACT if issues around the certainty of rural leases are addressed. The Policy should establish a clear objective that it is the intention that all environmental offsets managed by the ACT Government are located within the ACT. A newly constituted governance body can then identify opportunities to maximise environmental offsets that are in the ACT.

5.4 Nature-positive

A key question arising from the stakeholder consultation is whether the Policy as it stands is delivering outcomes. One of the challenges identifies is that the wording of the Policy itself lacks clarity. The Policy's Principles states:

"Environmental offsets must...deliver an overall conservation outcome that improves or maintains the viability of the aspect of the environment that is within the scope of the Policy and is impacted by the proposed action [net gain]."

The Policy also states:

"The aim of offsetting as part of the environmental approvals process is to maintain or improve the likelihood of matters of NES and ACT protected matters persisting in the ACT. Environmental offsets are a measurable conservation outcome resulting from actions designed to compensate for unavoidable significant adverse environmental impacts of development on matters of NES and relevant ACT protected matters."

Under Objectives the Policy states:

"Should impacts be acceptable, to ensure the impacts from the loss of ecological communities and habitat are balanced by commensurate gains in extent or quality elsewhere".

The Policy defines net gain as:

"...the concept of maintenance and improvements of the protected matter from an ecological perspective. The assessment of net gain is complex and varies across species and ecosystems but generally has two key components:

- *improving current quality of a site to a better condition and*
- *increasing the functional extent of a site."*

There is a need to review the language and ambition of the Policy to provide clarity and alignment with recent developments that focus on nature-positive outcomes. The UK Environment Act 2021 for instance requires developments to deliver at least a 10% biodiversity net gain. Indigenous knowledge, values and perspectives are also not recognised in the Policy wording. Revising the wording of the policy would bring it up to date. The name of the Policy itself should change to reflect the focus on avoidance and mitigation, not just on offsets.

No.	Recognising	Our recommendation is to
7	The wording of the current Policy does not align with a focus on nature positive outcomes	Revise the Policy wording

Whilst there is evidence of quality communication of individual environmental offset site management and compliance, it is difficult to understand the overall outcomes that are delivered through the Policy or to assess its overall nature-positivity. Similarly, there is no overall stocktake or consolidated catalogue of environmental assets across the ACT. Communicating annually the nature-positive outcomes delivered through the Policy would support community confidence. The intention of aggregated communications would not be to add further costs. Much of the information needed would be found in existing reporting for

individual environmental offset sites. An aggregated communication report would bring together existing reporting and enable all stakeholders to gain an understanding of the effectiveness of the Policy.

No.	Recognising	Our recommendation is to
6	It is essential that the ACT community has trust that the Policy delivers nature-positive outcomes	Evaluate and annually communicate the results of implementing the Policy

5.5 Workplan

Implementation of the recommendations can start immediately by establishing an **interim governance body** with responsibility for revising the wording of the Policy and defining a Terms of Reference for a permanent governance body. The International Sustainability Standards Board (ISSB) is a recent example of an interim governance body leading to the establishment of a permanent one.

A foundation for implementing the recommendations is broad-based understanding of all elements of the Policy. If a commitment to developing a **nature-positive learning program** is made immediately, the first tranche of training could be delivered before the end of the year.

Mapping the extent and assessing the quality of endangered ecological communities in the ACT by conducting an **inventory** of box-gum woodland (BGW) and natural temperate grasslands (NTG) can also begin immediately.

The table below sets out a workplan, with indicative sequencing for the recommendations, based on financial year quarters (e.g. Q2 22-23 refers to October – November 2022).

Recommendation	2022-23			2023-24			
	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1. Conduct an inventory of box-gum woodland (BGW) and natural temperate grasslands (NTG)	X	X					
2. Establish nature positive learning program – design and pilot an initial offering	X	X	X				
3. Develop a framework that combines the Commonwealth offset calculator with a principles-based approach for assessment of ACT protected matters					X	X	X
4. Ensure that registers for current and prospective offsets are up to date and capture all needed information					X	X	X
5. Systematically identify and address impediments to locating all environmental offsets within the ACT's borders					X	X	X
6. Evaluate and annually communicate the results of implementing the Policy				X	X	X	X
7. Revise the Policy wording	X	X					
8. Establish a cross-directorate decision-making governance body that would be responsible for the management of all elements of the Policy	X	X					

Implementation planning in detail will depend on:

1. decisions about which recommendations will be pursued
1. availability of resources to implement the recommendations
2. speed of establishing and ratifying the new governance body
3. availability of stakeholders to work with the ACT Government to implement the recommendations
4. other policy reforms in the environmental offsets space (e.g. at the Federal government level).

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Appendix A: Glossary

	Definition
ACCUs	Australian Carbon Credit Units
ACT	Australian Capital Territory
ACT EOC	ACT Environmental Offsets Calculator
BCT	Biodiversity Conservation Trust
BSA	Biodiversity Stewardship Agreements
CCP	Core Carbon Principles
CO ₂	Carbon Dioxide
COP15	15 th meeting of the Conference of Parties to the UN Convention on Biological Diversity
DELWP	Department of Environment, Land, Water and Planning Victoria
DES	Department of Environment and Science, Queensland
DNCCC	Dharuwa Ngunnawal Caring for Country Committee
DPE	Department of Planning and Environment
EOEG	Environmental Offsets Executive Group
EOWG	Environment Offsets Working Group
EPBC	Commonwealth Environment Protection and Biodiversity Conservation Act 1999
EPSDD	Environment, Planning and Sustainable Development Directorate
ERF	Emissions Reduction Fund
EU	European Union
GBF	Kunming-Montreal Global Biodiversity Framework
ICVCM	Integrity Council for the Voluntary Carbon Market
IPART	Independent Pricing and Regulatory Tribunal
LRF	Queensland Land Restoration Fund
MLES	Matters of Local Environmental Significance
MNES	Matters of National Environmental Significance
NSW	New South Wales
NVCR	Native Vegetation Credit Register
NVR	Native Vegetation Regulations
OAG	Commonwealth Offset Assessment Guide
PCS	ACT Parks and Conservation Service
SA	Strategic Assessment
SEEA	System of Environmental Economic Accounting
SLA	ACT Suburban Land Authority
SLATS	Queensland Government's Statewide Landcover and Trees Study
TCCS	Transport Canberra and City Services
The Policy	ACT Environmental Offsets Policy 2015
UK	United Kingdom
UN	United Nations

Appendix B: Stakeholder mapping

One of the tasks in this review was to develop a stakeholder map, describing roles and responsibilities around offsets in the ACT. We approached this by asking interviewees about their role within the directorate / ACT Government, the extent of their involvement with the Policy and / or the ACT's system for environmental offsets and how their work in environmental offsets intersects with others. We also reviewed several organisational charts supplied by EPSDD. Detailed findings from these inquiries are presented in Tables B1 and B2 overleaf. We have also attempted to visualise the results – see below / at Table B1, which maps the way offsets are currently managed in the ACT.

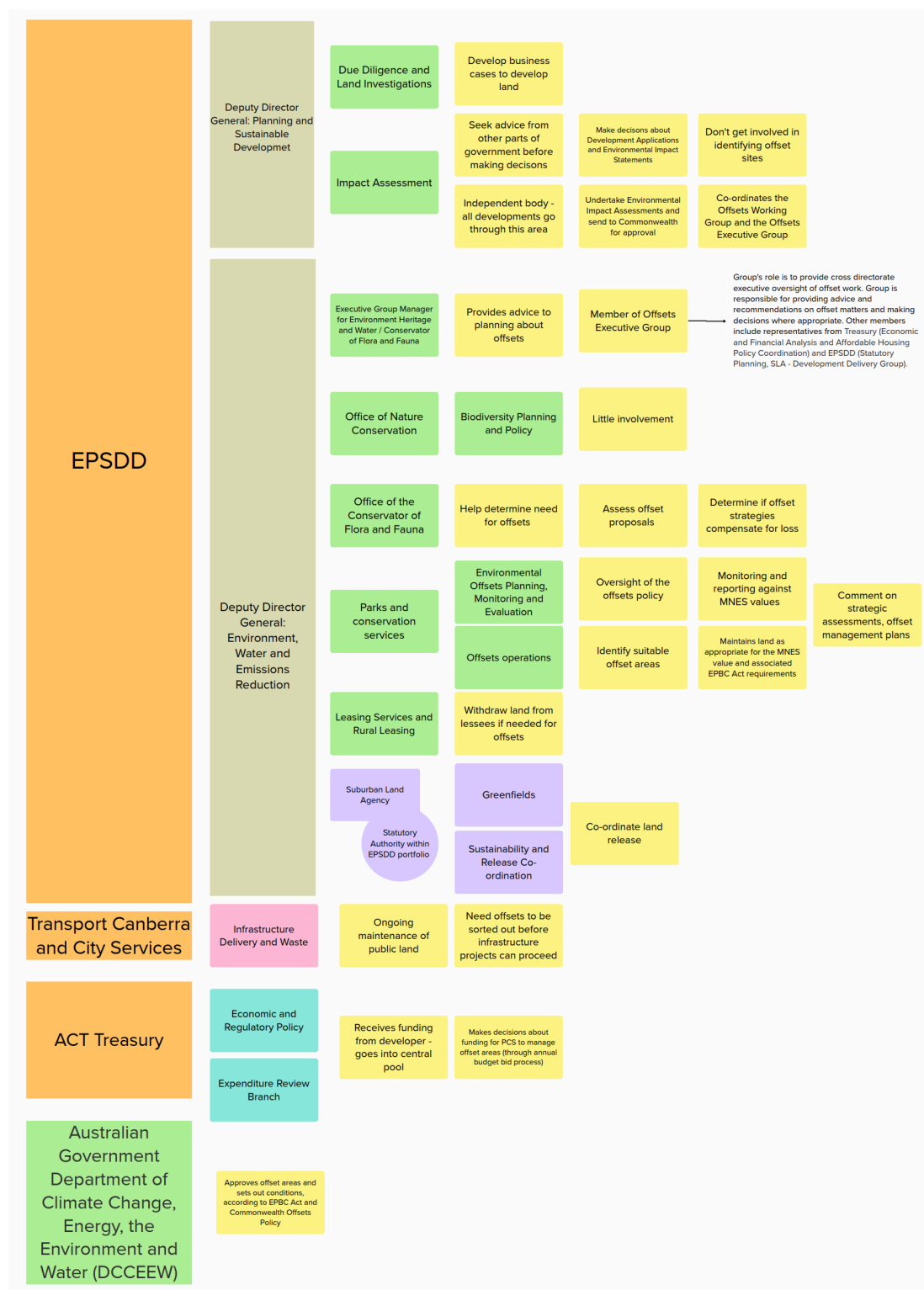


Table B1: Stakeholder mapping – within EPSDD

Directorate	Team	Involvement with offsets	Who we spoke with
EPSDD	Environmental Offsets	Oversight of the Policy Comment on strategic assessments, offset management plans Reporting	Assistant Director Lead Conservation Planner
	Due Diligence and Land Investigations	Develop business cases to develop land	Senior Director Director
	Impact Assessment – independent	Make decisions about Development Applications and Environmental Impact Statements Undertake Environmental Impact Assessments and send to Commonwealth for approval Co-ordinate Offsets Working Group and Offsets Executive Group	Senior Director x2
	Office of the Conservator of Flora and Fauna	Help determine need for offsets Assess offset proposals Determine if offset strategies compensate for loss	Conservator Liaison Senior Conservation Officer
	Parks and Conservation Service	Identify suitable offset areas Comment on strategic assessments, offset management plans Manage offsets - on the ground Monitoring and reporting	Senior Director Operations Manager, Northern Offsets Operations Manager, Southern Offsets Senior Ranger - Molonglo Ecologist Assistant Director - Urban Reserves North
	Office of Nature Conservation	Little involvement	Senior Fauna Ecologist Director, Policy
	Biodiversity Planning and Policy	Little involvement (interviewee shared prior experience with the Policy)	Assistant Director
	Leasing Services, Statutory Planning	Withdraw land from leasees if needed for offsets	Senior Director
	Rural leasing		Rural Leasing - Assistant Manager
	Environment, Heritage and Water	Member of Offsets Executive Group Provides advice to planning about offsets	Executive Group Manager/Conservator of Flora and Fauna

Table B2: Stakeholder mapping – outside of EPSDD

Directorate	Team	Involvement with offsets	Who we spoke with
Treasury	Economic and Regulatory Policy	Receives funding from developer - goes into central pool Makes decisions about funding for PCS to manage offset areas (through annual budget bid process)	Senior Director
	Expenditure Review Branch	Reviewed offsets funding arrangement in 2020	Senior Director
TCCS*	Infrastructure Delivery and Waste	Ongoing maintenance of public land Rely on approval of offsets to proceed with infrastructure projects	Project Manager, Land Release Infrastructure Senior Director, Infrastructure Delivery Project Manager, Facilities
			Senior Director, Infrastructure Delivery
SLA**	Greenfields	Co-ordinate land release	Program Director
	Sustainability and Release Coordination		Program Manager

*TCCS: Transport Canberra and City Services

**SLA: Suburban Land Authority

Appendix C: Case Studies

Case Study 1: Australian Government

Summary of scheme

The Australian Federal Government's EPBC addresses MNES. The Act is accompanied by the Offsets assessment guide (the guide) which gives effect to the requirements of the policy, utilising a balance sheet approach to estimate impacts and offsets for threatened species and ecological communities.

Three types of offsets are defined under the EPBC:²⁹

- *Averted loss offsets*: These offsets are met by purchasing and improving an otherwise at-risk area of land with the same habitat as that which is destroyed or damaged by the development. The land is then protected from future development. The protection of land through an averted loss offset does not add to the amount of habitat. When considered with the habitat loss from the development, a net reduction of habitat results.
- *Restoration offsets*: These offsets are met by creating new (or recovering old) habitat from highly degraded land. A development with a restoration offset can result in a net gain of habitat.
- *Advanced offsets*: Advanced environmental offsets are those that are 'supplied' in advance of an impact occurring. The offset area is set aside for potential future use by the owner, or to sell to another developer. The current offset policy allows advanced offsets for protecting and improving existing habitat (averted loss) and creating new habitat from highly degraded land (restoration).

The EPBC has been subject to recent independent reviews, both of which have been critical:

- A performance audit review of referrals, assessments and approvals of controlled actions under Act, undertaken by the Australian National Audit Office – see Box C2.
- The 'Samuel Review', an independent review of the Act undertaken in 2020 – see Box C3.

In December 2022 the Australian Government released the *Nature Positive Plan: better for the environment, better for business*³⁰ which outlined plans to protect 30% of Australia's land and seas by 2030, create a nature repair market, establish an independent Environment Protection Agency (EPA) and work in partnership with First Nations peoples, including to develop standalone cultural heritage legislation. As part of establishing National Environmental Standards the Australian Government indicated that a standard for environmental offsets is an immediate priority.

Box C2: The 2020 ANAO report³¹

In 2020 the Australian National Audit Office (ANAO) published a performance audit review of *Referrals, Assessments and Approvals of Controlled Actions under the Environment Protection and Biodiversity Conservation Act 1999*. A key finding was that the Department of Agriculture, Water and the Environment's administration of referrals, assessments and approvals of controlled actions under the EPBC Act is not effective.³²

Findings of the ANAO audit include:

- Arrangements for collecting and managing information on compliance with the EPBC Act are not appropriate.
- oversight structures, they have not been effectively implemented.
- performance measures relating to the effectiveness or efficiency of its administration of referrals, assessments and approvals have not been established.
- Referrals and assessments are not undertaken in full accordance with procedural guidance. Decisions have been overturned in court due to non-compliance with the EPBC Act and key documentation for decisions is not consistently stored on file.
- Appropriate monitoring, evaluation and reporting arrangements have not been established.³³

Box C3: The 2020 Samuel Review³⁴

In accordance with section 522A of the EPBC Act, an Independent Review of the Act is required at least every 10 years.³⁵ In 2020 Professor Samuel AC undertook an independent review of the EPBC Act with the purpose of examining 1) the operation of the Act and 2) the extent to which the objects of the Act have been achieved. Key points from the review identified that the Act is;

- Outdated and not trusted and requires fundamental reform
- It does not allow the Commonwealth to effectively fulfil its environmental responsibilities
- The Act and the way it is implemented results in piecemeal decisions. Decisions that rarely work in concert with environmental management responsibilities of states and territories.
- The Act is a barrier to holistic environmental management which is essential

The review specifically focused on offsets. A key conclusion is that whilst offsets have the potential to aid environmental restoration the current EPBC Act environmental offsets policy contributes to environmental decline rather than active restoration.

Key conclusions from the Samuel Review:

- The EPBC Act environmental offsets policy has major shortcomings in both its design and implementation.
- The EPBC Act uses overly prescriptive processes. This means the effort of the regulator and the proponent is often focused on completing the process as quickly as possible rather than achieving the outcome intended.
- Immediate change is required to the current EPBC Act environmental offsets policy to ensure that offsets do not continue to contribute towards environmental decline
- For the application of offsets conditions, the EPBC Act requires they be applied only for the protected matter the approval relates to — that is, they must be 'like-for-like'. This exceeds requirements in some jurisdictions. This results in additional or different conditions placed on projects that have better outcomes than would have otherwise been the case under State or Territory law alone.
- The 'avoid, mitigate, offset' hierarchy is a stated intent of the policy. This is not how the policy has been applied in practice.
- Proponents see offsets as something to be negotiated from the outset, rather than making a commitment to fulsome exploration (and exhaustion) of options to avoid or mitigate impacts. This is in part because the proponent has generally made the decision to develop a particular site before a referral is made under the EPBC Act. This limits real consideration of broadscale avoidance. Once a proposal is referred, assessment officers have limited scope and time to work with proponents to avoid and mitigate impacts. This becomes a 'nice to do', rather than a core focus of their efforts. An offset has become an expected condition of approval, rather than an exception.
- Most offsets are averted loss offsets that deliver only weak protection of remnant habitats of MNES that may have never been at risk of development. This is reinforced by the lack of a formal requirement to adequately demonstrate that the area set aside for the offset was sufficiently likely and able to be cleared for future development.
- There is no transparency of the location, quality or quantity of offsets. There is no register of offsets and, in the absence of such a tool, the same area of land may be 'protected' more than once.
- Amendments are required to ensure the policy is aligned with the reform framework and that offsets required under the EPBC Act or accredited arrangements can effectively achieve net-benefit outcomes for the environment.
- To reduce the costs of restoration, future offsets legislation should capture the recommended changes and consider the requirements of market participants. To incentivise early investment in restoration and encourage greater private investment, the legislation needs to improve the market settings, including consideration of market, depth, integrity and efficiency.
- A public register of offsets should also be established for all Commonwealth, State and Territory offset sites. This register should be designated as a National Environmental Information Asset

In May 2023 the Commonwealth released a draft of its proposed Draft National Environmental Standard for MNES for consultation.³⁶ A working group to inform the development of the draft standard for environmental offsets is being established with the first draft standards to be released for public comment in the second half of 2023 alongside details of the new legislation.³⁷ Indications from the Australian Government³⁸ are that key elements of an environment offset standard will be:

- If impacts are truly unavoidable, proponents will be able to propose environmental offsets.

- Environmental offsets should involve nature repair or restoration – in the same region, with the same type of habitat.
- ‘Avoided loss’ offsets will only be allowed where habitat is genuinely at risk of imminent loss.
- If it’s not practical for proponents to develop high quality offset projects, a conservation payment can be made.
- A conservation payment would then be invested in projects, supported by experts, that compensate for development and leave nature better off overall.

Nature Credits

The Commonwealth has committed to establishing legislation, through a nature market repair bill, to encourage and reward repairing nature. The Bill will establish a structure for the Clean Energy Regulator to issue certificates (personal property) to support the investment in Biodiversity. A single tradable certificate will be issued for each project, which can be sold to buyers under commercial contracts.

Certificates will provide standardised information to enable the market to confidently compare and value projects. Regular project reports will describe and verify the environmental outcomes achieved by the project. There are still questions over the independent role of the regulator. The bill proposes that the Clean Energy Regulator issues certificates as well as regulates the market. The proposed regulatory structure of the Nature Market Repair does not appear to be consistent with the findings in the Chubb review of Australian Carbon Credit scheme.³⁹ In particular, Recommendation 1 of the Chubb Review calls for the respective roles of scheme assurer, scheme regulator and related policy development should be clear, undertaken by visibly separate bodies, and each function resourced sufficiently to play its role effectively in administering the scheme and supporting well-functioning carbon offset markets.

In its current draft form, the Bill proposes a voluntary framework that facilitates the enhancement or protection of biodiversity in native species. It does not mention specifically nature-positive outcomes. Clarification is required on how certificates can be used for environmental offsets.

The Bill will be legally enforceable in that it allows for the creation of Certificates in relation to the protection and enhancement of biodiversity. The certificates will be a financial asset and capable of being traded both to Government and in private markets. The issue of certificates will be established under Clean Energy Regulator. Under the current proposal the regulator, register and enforcement agency which poses concerns over conflicts of interest and integrity of the scheme.

The current Bill proposes a permanence period of 25 years or 100 years, which is aligned to carbon projects under the Emissions Reduction Fund (ERF). Given the long lead time required to deliver change in natural capital there is some risk projects will not deliver desired outcomes. It is questionable if the permanence period under the Bill is best practice (what is best practice). The new Bill proposes a register be established to keep up to date records of projects under the act and ensure integrity and transparency of projects. Projects proponents will be required to report at a minimum every 5 years. Nature Market repair projects may be audited for compliance and their continued registration. Importantly those certified to audit projects will also be subject to Audits. Therefore, the assurance and compliance requirements under the Bill are designed to ensure the integrity of the environmental outcomes.

Under the proposed Bill it is intended that methods developed for projects are co-designed with stakeholders including First Nations. It is also envisaged that First Nations landholders will participate actively in projects and gain certification under the Bill.

2023 Federal Budget

The recent Federal Budget⁴⁰ (May 2023) has provided funding for several key initiatives that can impact on development of environment offsets:

- Water Market Hub – a digital platform for national water data management.
- Water Markets Website – allowing farmers to access live water market updates for the first time.
- Water market data standard – guaranteeing transparency and enforceability of the data being provided to the Bureau of Meteorology.
- Funding to establish Environment Protection Australia.
- Funding to support landholders to carry out activities that repair nature

²⁹<https://epbcactreview.environment.gov.au/sites/default/files/2021-01/EPBC%20Act%20Review%20Final%20Report%20October%202020.pdf>

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³⁸ <https://minister.dcceew.gov.au/plibersek/speeches/speech-nature-conservation-council-business-breakfast>

³⁹ <https://www.dcceew.gov.au/climate-change/emissions-reduction/independent-review-accus>

⁴⁰ <https://minister.dcceew.gov.au/plibersek/media-releases/managing-our-water-better-future>

⁴⁰ <https://www.unep.org/news-and-stories/story/cop15-ends-landmark-biodiversity-agreement>

Case Study 2: New South Wales

Summary of Scheme

The NSW Biodiversity Offsets Scheme was established in 2017 under the Biodiversity Conservation Act 2016 to 'maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development'. Any new application for development consent or modification to an approved development is subject to the biodiversity assessment requirements of the Act.⁴¹

Proposed development that involves the clearing of native vegetation, and meets certain thresholds, is required to undertake a Biodiversity Development Assessment Report. These reports determine an offset obligation, in biodiversity credits, to compensate for the biodiversity loss proposed.⁴² Biodiversity certification offers a streamlined biodiversity assessment process for areas of land that are proposed for development. The process identifies areas that can be developed after they are certified and measures to offset the impacts of development. Where land is certified, development may proceed without the usual requirement for site-by-site assessment.⁴³

The Scheme is a 'market-based conservation mechanism through which the impacts to biodiversity can be offset.' It enables landholders to establish in perpetuity Biodiversity Stewardship Agreements (BSAs) on sites to generate biodiversity credits, which can be sold to offset the negative impact on biodiversity as a result of development. BSA sites are intended to be managed over the long-term to generate the biodiversity gains required to offset the impact. The biodiversity credit market consists of 1,394 different types of ecosystem credits, which are approved to be traded in 364 different offset trading groups, and 867 different species credits.⁴⁴

The Biodiversity Conservation Trust (BCT) monitors and supports landholders to manage BSA sites under the Scheme. This includes making payments to landholders from funds held in the Biodiversity Stewardship Payments Fund for undertaking the required biodiversity management actions.⁴⁵

Clear outcomes / nature-positive

The NSW Auditor General's review of the effectiveness of the NSW Biodiversity Offsets Scheme concluded that the core elements of the Act are not designed effectively and that the NSW Government did not establish a clear strategy to develop the biodiversity credit market or determine whether the scheme's operation and outcomes are consistent with the purposes of the Biodiversity Conservation Act 2016.⁴⁶ According to the NSW Auditor General the Department of Planning and Environment (DPE) has not clearly articulated goals and performance measures for the Scheme and how these are expected to contribute to biodiversity outcomes in line with the Act.⁴⁷

Legally enforceable

The NSW Biodiversity Offsets Scheme was established in 2017 under the Biodiversity Conservation Act 2016. Core components of the Scheme that support the Act's purposes include:

- To establish scientific method to assess losses and gains in biodiversity values
- To establish a framework to avoid, minimise and offset impacts of development
- To encourage landholders to enter voluntary agreements to conserve biodiversity
- To establish market-based conservation mechanisms through which impacts to biodiversity values can be offset.

BSAs are in perpetuity and run with the land. The Agreement is also registered on the site's title.

The Auditor General notes that more work is needed to support landholders to develop new sites. Barriers to landholders entering the Scheme include high upfront costs, complex tax implications, and uncertainty around the likelihood of credit sales and prices. The poorly structured and incomplete information about the market, produced by DPE and the BCT, contributes to these upfront costs by creating uncertainty, which is a further barrier to landholder participation. DPE is developing a credit supply strategy but neither DPE nor BCT have sufficiently reduced barriers to landholder participation.

DPE does not maintain a complete public register of biodiversity credits including credits' transaction histories, as consistent with the legislative intent for a single register.⁴⁸

Measurable / rigorous data

The Auditor General identifies that the design of the Scheme risks the gains made and is therefore insufficient to offset losses resulting from impacts of development, and that DPE will not be able to assess the Scheme's overall effectiveness.⁴⁹

The Biodiversity Offsets Payment Calculator is used by developers to calculate the payment required to the Biodiversity Conservation Fund to transfer their obligation to the BCT for acquittal. The BCT, DPE and other stakeholders consider the Calculator unreliable but it remains the current, approved tool for developers to determine the payment required to acquit their obligations.

Prior to the transition, the DPE did not collect ecological data from sites under previous schemes. The BCT only introduced ecological monitoring requirements for new BSA sites in March 2021. This lack of monitoring requirements creates risks that biodiversity gains, which BSA sites are required to generate to offset biodiversity losses, will not be measured and achieved under the Scheme. DPE and BCT are yet to take necessary steps to ensure biodiversity outcomes at BSA sites are monitored and measured. Over 90% of active BSA sites do not have ecological monitoring programs thereby limiting the assessment of biodiversity of outcomes.

Independent

DPE designed and manages the Scheme under the Act. The BCT monitors and supports landholders to manage BSA sites which includes making payments for undertaking required biodiversity management actions. The Auditor General found there to be key questions around the program's integrity, transparency, compliance and sustainability all of which remain to be resolved (particularly oversight of accredited assessors, site assessments, and conflict of interest).⁵⁰ The Auditor General noted there are inadequate safeguards to mitigate potential conflicts between those roles.

The Auditor General identified that the BCT has inadequate safeguards to mitigate the conflict between its role in facilitating credit supply and its role as market intermediary and market participant.⁵¹ Conflicts of interest amongst scheme participants have been identified through media investigations.⁵²

The statutory 5-year review of the Biodiversity Conservation Act 2016, which establishes the Scheme, has commenced. A report on the outcome of the review will be tabled in each House of Parliament by 24 August 2023.⁵³

The NSW Government commissioned the Independent Pricing and Regulatory Tribunal (IPART) to monitor and report on the operation of the biodiversity credits market. Independent monitoring of the biodiversity credits market will support transparency and public confidence in the Scheme and help to improve its operation.⁵⁴

Mitigation hierarchy

Trading rules set out in the Biodiversity Conservation Regulation 2017 prioritise offsetting the obligations of a development with like-for-like ecosystem species credits. The Scheme allows developers to pay into

the Biodiversity Conservation Fund and transfer obligations to the BCT. The BCT must meet these acquired obligations by buying required credit or by undertaking other approved activities set out in the Regulation.

Conclusion

Significant work is still to be undertaken to ensure the Act is achieving its desired outcomes. The Scheme has been subject to significant media attention. The statutory review currently underway will be important for identifying future reforms.

Overall, the Scheme has resulted in 43,783 hectares protected in perpetuity under BSAs, with \$199.9 million invested in the Biodiversity Stewardship Payment Fund to provides annual payments to landholders for the ongoing management of BSA sites. In 2021–22, nearly \$10 million in annual management payments from the Biodiversity Stewardship Payment Fund were made to landholders.⁵⁵

Credit supply is lacking and poorly matched to growing demand. Initiatives established by the NSW Government include a \$106 million Biodiversity Credits Supply Fund to invest in the supply of biodiversity credits and a Taskforce to manage the Credits Supply Fund and to fast-track supply of in-demand biodiversity credits.⁵⁶

The lack of a public register remains a key issue for the valuing of credits as a financial asset.

As it stands, gains made through the Scheme may not be sufficient to offset losses resulting from impacts of development.

⁴¹<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/about-the-biodiversity-offsets-scheme>

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⁴⁶<https://www.audit.nsw.gov.au/sites/default/files/documents/FINAL%20-%20Effectiveness%20of%20the%20Biodiversity%20Offsets%20Scheme.PDF>

⁴⁷<https://www.audit.nsw.gov.au/sites/default/files/documents/FINAL%20-%20Effectiveness%20of%20the%20Biodiversity%20Offsets%20Scheme.PDF>

⁴⁸<https://www.audit.nsw.gov.au/sites/default/files/documents/FINAL%20-%20Effectiveness%20of%20the%20Biodiversity%20Offsets%20Scheme.PDF>

⁴⁹<https://www.audit.nsw.gov.au/sites/default/files/documents/FINAL%20-%20Effectiveness%20of%20the%20Biodiversity%20Offsets%20Scheme.PDF>

⁵⁰<https://www.audit.nsw.gov.au/sites/default/files/documents/FINAL%20-%20Effectiveness%20of%20the%20Biodiversity%20Offsets%20Scheme.PDF>

⁵¹<https://www.audit.nsw.gov.au/sites/default/files/documents/FINAL%20-%20Effectiveness%20of%20the%20Biodiversity%20Offsets%20Scheme.PDF>

⁵²<https://www.theguardian.com/media/2023/may/29/the-investigation-that-blew-the-lid-off-sydneys-environmental-offsets>

⁵³ <https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/overview-of-biodiversity-reform/statutory-review-of-the-biodiversity-conservation-act-2016>

⁵⁴<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/about-the-biodiversity-offsets-scheme/improvements-to-the-biodiversity-offsets-scheme>

⁵⁵<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/about-the-biodiversity-offsets-scheme/improvements-to-the-biodiversity-offsets-scheme>

⁵⁶<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/about-the-biodiversity-offsets-scheme/improvements-to-the-biodiversity-offsets-scheme>

Case Study 3: Queensland

Summary of scheme

The Queensland Environmental Offsets Policy⁵⁷ is a statutory instrument, given effect through section 12 of the Environmental Offsets Act 2014 and prescribed under the Environmental Offsets Regulation 2014. It is a tool to support the relevant administering agency, including a local government, when it has identified that an offset is required for a prescribed activity that has a significant residual impact on a prescribed environmental matter.

Under another Act, an administering agency may impose a condition (an offset condition) on an authority under the other Act for a prescribed activity for a prescribed environmental matter that requires an environmental offset to be undertaken or otherwise relates to an environmental offset.

An environmental offset is an activity undertaken to counterbalance a significant residual impact of a prescribed activity on a prescribed environmental matter.

The Act requires the administering agency must keep a Queensland Offsets Register.

To avoid duplication of offset conditions between jurisdictions, state and local governments can only impose an offset condition in relation to a prescribed activity if the same or substantially the same impact and the same or substantially the same matter has not been subject to assessment under one of the following Commonwealth Acts. Local government may only impose an offset condition where there will be a significant residual impact on a matter of local environmental significance (MLES).⁵⁸

All offsets must meet the following seven offset principles:

1. Offsets will not replace or undermine existing environmental standards or regulatory requirements or be used to allow development in areas otherwise prohibited through legislation or policy.
 1. Impacts must first be avoided, then mitigated, before considering the use of offsets for any remaining impact.
 2. Offsets must achieve a conservation outcome that counterbalances the significant residual impact for which the offset was required.
 3. Offsets must provide environmental values as similar as possible to those being lost.
 4. Offset provision must minimise the time-lag between the impact and delivery of the offset.
 5. Offsets must provide additional protection to environmental values at risk, or additional management actions to improve environmental values.
 6. Where legal security is required.

The offset must be of a size and scale proportionate to the significant residual impact on a prescribed environmental matter. However, the offset requirement for a significant residual impact on a prescribed environmental matter will be set at a maximum multiplier of 4 (i.e. a maximum of four times the area of the residual impact), with the exception of impacts to connectivity and waterways providing for fish passage, for which the offset requirement is set at a multiplier of 1.

For financial settlement offsets required by the State, the financial settlement payment amount must be calculated in accordance with the Financial Settlement Offset Calculation Methodology. Payments must be made to the local government's trust fund in relation to offset requirements for which the local government was the administering agency or to the offset account administered by DES for all other financial settlement offsets.

When choosing to deliver a proponent-driven offset, a notice of election must include a proposed offset delivery plan. The offset delivery plan must describe how an offset will be undertaken and how the conservation outcome will be achieved.

An advanced offset is an area of land that has been identified and registered as an advanced offset under section 14 of the Environmental Offsets Regulation 2014. Advanced offsets may be used to compensate for a future significant residual impact on one or more prescribed environmental matters.

Clear outcomes / nature-positive

The Queensland Government conducted a Review of Queensland's Environmental Offsets Framework in 2019.⁵⁹ The Review outlined that Government's 'vision for an environmental offsets framework that maximises the conservation outcomes and other co-benefits achieved by environmental offsets, contributing towards a healthy, productive and resilient environment Queenslanders enjoy'.

Submissions to the Review highlighted the existing barriers to counterbalancing impacts, and indicated changes that could be made to improve the function of the framework. Many submitters from the conservation sector and general community are concerned that the framework is not achieving the objective of counterbalancing unavoidable impacts and suggested that greater monitoring is required.

Key areas for reform identified in the Review:

- Increase of land supply for offsets
- Streamline offsets delivery process
- Improve monitoring, adaptive management and compliance
- Prevent unachievable offset conditions
- Clarify the scope of the framework.

The Queensland Government's Statewide Landcover and Trees Study (SLATS) monitors woody vegetation extent, clearing and regrowth using Sentinel-2 satellite imagery as its primary monitoring tool. In 2018–19, 680,688 hectares (ha) of woody vegetation were affected by clearing activity in Queensland. This represented about 0.7% of the state's woody vegetation. Of the total clearing activity in 2018–19, 559,844 ha (82% of all clearing activity) resulted in full removal of the woody vegetation. In 2019–20, 418,656 ha of woody vegetation was affected by clearing activity, a 38% decrease in clearing activity from 2018–19.⁶⁰

Legally enforceable

Queensland Environmental Offsets are regulated by the Environmental Offsets Act, with the associated policy used as the tool to support implementation. Generally, the land on which an offset will be delivered is required to be legally secured as an offset area.

Submissions made to the Queensland Government's Review of the Environmental Offsets Framework noted that a review of the legal security requirements for offset sites needs to be undertaken. Resource and extraction, and urban development submitters indicated that legal security requirements should be simplified and made more flexible. They also stressed that legal security should not be required in perpetuity, but only for the length of the impact. Conservation and community sectors emphasised that legal security requirements should be stricter, and sites better protected against future impacts. All sectors raised concerns that greater transparency is needed at all stages of offset assessment and delivery, particularly in relation to the administration of the Offsets Fund. There is also a need for stronger enforcement and compliance processes to be put in place for offset delivery. Key areas identified for reform are to simplify requirements for legal security and establish the foundations for an offset market.

Measurable / rigorous data

The quality of data in the Queensland Offsets Register has not been publicly reviewed.

Harness First Nations insight

The Act and policy are generally silent on the role of First Nations. First Nations peoples and NRM groups have emphasised that partnerships should be formed for more efficient delivery, and that First Nations peoples need more support and consideration under the framework. The Queensland Government has indicated that a co-operative approach to offsets delivery with First Nations peoples will be prioritised, with preference given to offsets located within the same native title area or lands of an impacted First Nations community. This will further strengthen cross-cultural knowledge exchange and build mutually beneficial and innovative partnerships.⁶¹

Independent

There is a code within the policy that allows the Chief Executive administering the Offsets Act 2014 to approve self-administered code of compliance for prescribed activities. This applies to the following entities Govt Depts and Agencies or Govt Owned Corps. No Independent bodies have been established to monitor the Offsets programs.

Mitigation hierarchy

The mitigation hierarchy 'avoid - mitigate - offset' applies to prescribed activities that impact prescribed environmental matters. Where an offset proposal is submitted before an authority is granted, an administering agency must be satisfied that all reasonable on-site avoidance and mitigation measures for the prescribed activity have been or will be undertaken to address impacts on prescribed environmental matters before approving an offset proposal.

Feedback from the review indicated that many submitters from across different sectors concluded that the mitigation hierarchy is not being strongly applied during assessment and that offsets are being allowed when they are unlikely to succeed. Many submissions also emphasised that there should be limits as to which environmental values can be offset. For environmental matters considered a 'high risk', submitters stated that impacts should be avoided or mitigated.

Queensland Land Restoration Fund

The Queensland LRF⁶² is a \$500 million initiative of the Queensland Government. The initiative seeks to use carbon farming as a catalyst to support farmers in generating additional income streams from the co-benefits generated from carbon farming projects. These co-benefits include environmental, social, and economic benefits, healthy waterways, and maintaining the quality of the Great Barrier Reef. The project is unique in that it also aims to generate other co-benefits, such as benefits to First Nations peoples and use measurement tools to track how these benefits manifest.

By providing transparent, robust data from the initiative, the Queensland Government has established guidelines for measuring the outcomes of land restoration projects in Queensland that generate co-benefits through carbon-farming projects. The environmental or natural capital co-benefits generated can be verified with the Accounting for Nature framework (DES, 2020).

The LRF initiative is a stimulatory package with which the Queensland Government facilitates project development by investing in them. The LRF provides financial incentives to cover pre-application and set-up costs, making the programme readily accessible, particularly to family farmers. Projects will deliver Australian carbon credit units (ACCUs), together with environmental, social, and economic benefits.

The LRF is not an environmental offset project it is a carbon-based land restoration initiative and provides an alternative approach to offsetting where outcomes, including environmental, are 'Additional' or nature-positive.

Box C1: The story of Goondicum, Queensland⁶³

This is a project that delivers additionality through carbon sequestration and creation of the co-benefits associated with the project.

Project summary

Goondicum Station is 7,000ha of prime agricultural land at the head of the Burnett River, 57km east of Monto, Central Queensland. This project involves two carbon methods that will protect 1,544ha of established native vegetation on land that has been historically cleared. The property lies within the Burnett Catchment and encompasses almost 20kms of riparian frontage along West Burnett Creek, feeding into the Burnett River. The Burnett River is connected to the coast and discharges into the Great Barrier Reef Marine Park. The project will improve water quality runoff to the Great Barrier Reef through the reduction of sediment and nutrients via timed, managed grazing practices and installation of new fences to reduce grazing pressure around creeks.

Carbon methods

Avoided clearing of native regrowth. Instead of re-clearing mature vegetation for pasture, this project will retain the area for permanent forest.

Clear Outcomes / Nature-positive

Given the project is positioned in the LRF it is a key requirement to have key outcomes or deliverables around co-benefits and these are clearly identified. These include improved water quality runoff to the Great Barrier Reef through the reduction of sediment and nutrients, protect and nurtured to regenerate to a mature ecosystem, project will improve precleared threatened regional ecosystems most of which is non-remnant vegetation. Retain area for permanent forest. Avoided clearing will protect precleared threatened regional ecosystems, most of which is non-remnant.

Legally Enforceable

Registered Carbon Project under the ERF and a registered project under the LRF.

Measurable / Rigorous Data

Goondicum Station, use the Accounting for Nature framework to measure the health of the property's environmental assets — Goondicum's soils, vegetation and wildlife.⁶⁴ The Accounting for Nature framework provides a clear method for landholders to quantify the physical state of their environmental assets in a scientifically rigorous way, and to be able to track their condition over time. Importantly using accounting for nature requires the measurement and monitoring regime are regularly undertaken and independently audited.

The Land Restoration Fund Co-benefits Standard⁶⁵, is the framework that specifies how co-benefits generated from a carbon project are to be measured, reported, and verified for the purposes of the LRF. The primary objective of the LRF Co-benefits Standard is to ensure there is rigour and a strong evidence base for measuring, reporting, and verifying co-benefits generated by projects registered under the LRF.

Independent

Accounting for Nature is an independent not for profit organisation.

Mitigation hierarchy

The management strategy involves avoidance, rehabilitation and restoration.

Conclusion

In conclusion, considering the purposes of environmental offsets, the Act has not resulted in delivery of environmental outcomes.

A key issue is the continuation of unauthorised land clearing.

From the Review submissions showed overall support for greater alignment with the Commonwealth Environmental Offsets policy and conservation priorities, and greater identification of strategic locations for offset delivery. Many submitters expressed the view that offsets could have positive co-benefits for local communities and that these are not being fostered in the current offset delivery process. Local

governments, consultants and brokers, and a range of other submitters raised concerns that land that is suitable for delivering an offset is difficult to find.

There is consensus across all sectors that there are a range of barriers to landholder participation which could be removed through increased incentives and greater facilitation of offsets markets by the Queensland Government.

Key areas for reforms:

- Identify and deliver offsets in strategic locations
- Align offsets frameworks with conservation priorities
- Align the framework with best practice principles for environmental offsets
- Encourage delivery of co-benefits
- Measurable / Rigorous Data

The Queensland Land Restoration Fund is an example of a carbon initiative that delivers environmental outcomes. The use of the Accounting for Nature framework provides assurance and integrity.

⁵⁷ <https://www.qld.gov.au/environment/management/environmental/offsets/legislation>

⁵⁸ https://environment.des.qld.gov.au/_data/assets/pdf_file/0018/293400/offsets-policyv1-13.pdf

⁵⁹ <https://www.qld.gov.au/environment/management/environmental/offsets/review>

⁶⁰ <https://www.qld.gov.au/environment/land/management/mapping/statewide-monitoring/slats/slats-reports/2019-20-slats-report/key-findings>

⁶¹ https://www.qld.gov.au/_data/assets/pdf_file/0008/141020/review-qld-env-offsets-framework-report.pdf

⁶² <https://www.qld.gov.au/environment/climate/climate-change/land-restoration-fund>

⁶³ <https://www.qld.gov.au/environment/climate/climate-change/land-restoration-fund/funded-projects/project-details?project=159219%20%20and%20the%20Goondicum%20Web%20site>

⁶⁴ <https://www.goondicumpastoralco.com.au/environmental-report/>

⁶⁵ https://www.qld.gov.au/_data/assets/pdf_file/0025/116548/lrf-co-benefits-standard.pdf

Case Study 4: Victoria

Summary of scheme

The Victorian Government requires a planning permit to remove, destroy or lop native vegetation. Landholders must apply for a planning permit from their local council. If a permit is granted a native vegetation offset must be secured before the native vegetation is removed.⁶⁶ Guidelines⁶⁷ are incorporated into all Victorian planning schemes.

There are two types of offsets:

- *Species offset* is required when the removal of native vegetation has a significant impact on habitat for a rare or threatened species. Species offsets must compensate for the removal of that particular species' habitat.
- *General offset* is required when the removal of native vegetation does not have a significant impact on any habitat for rare or threatened species.⁶⁸

Offsets are described as either first or third party:

- *First party offsets* are on land owned by the holder of a permit to remove native vegetation. First party offsets are used to meet landowners' own offset requirements.
- *Third party offsets* are on land owned by another party. Permit holders can purchase native vegetation credits from other landowners to meet their offset requirements.^{69 70}

An offset site requires an offset management plan which includes 10 years of management commitments for the offset site.⁷¹

The *Native Vegetation Offset Register* contains information relating to existing offsets including the number of habitat units that an offset generates and when these offsets have been used to offset the removal of native vegetation. This Offset Register includes the Native Vegetation Credit Register that tracks the creation and sale of third-party offsets.⁷²

A market for offsets is established through two schemes: BushTender and BushBroker.⁷³

- *BushTender*, landholders nominate their own bid price in a competitive tender and choose a range of actions to protect and enhance native vegetation. Successful landholders receive periodic payments under contractual agreements with the Department of Sustainability and Environment or Catchment Management Authority.⁷⁴
- *BushBroker* provides a system where native vegetation credits can be generated and traded, allowing interested landholders to provide the offset on behalf of developers requiring transactions in native vegetation removal. Buyers and sellers are matched in the BushBroker database and the two parties then negotiate a price.⁷⁵

The *EnSym Native Vegetation Regulations* (NVR) tool has been developed to help identify areas in the landscape that would meet species offset requirements for proposed native vegetation removal. The EnSym NVR Tool can be used to test clearing and offset scenarios prior to submitting final versions to the Department of Environment, Land, Water and Planning (DELWP) for processing.⁷⁶

Clear outcomes / nature-positive

The Victorian Government's objective is no-net-loss of biodiversity for native vegetation on private land. According to the Victorian Auditor General, Victoria is not achieving its objective of no net biodiversity loss from native vegetation clearing on private land.⁷⁷ A key reason identified by the Victorian Auditor General is the extent of unauthorised land clearing. DEWLP estimates that Victoria loses some 10,380 Ha of native vegetation on private land every year.⁷⁸

Legally enforceable

Third Party Offsets are recorded by DELWP on the Native Vegetation Credit Register (NVCR). Native vegetation credits can be purchased via an NVCR accredited broker.⁷⁹ DELWP's processes and internal controls to manage the credit register do not prevent oversubscription of offset credits. There are also no quality assurance processes to ensure that recorded information is accurate.⁸⁰ The Victorian Auditor General found that audited councils have not been able to prevent and take effective action against illegal clearing.⁸¹

The Victorian Auditor General recommends developing and implementing a process in the credit register that includes sufficient controls to maintain data security and integrity, including but not limited to appropriate user access, separation of user duties, preventing oversubscription.⁸²

Measurable / rigorous data

The Victorian Auditor General has found data quality issues with DELWP's datasets for its offset credit register and native vegetation calculator.⁸³ The Victorian Auditor General has recommended conducting a comprehensive inventory review of its offset sites' data, including but not limited to available offset credits at the time of site establishment, offset credit transactions, and remaining offset credits available.⁸⁴

The Victorian Auditor General's assessment of Victoria's offset scheme identifies that DELWP reports in accordance with its Monitoring, Evaluation and Reporting plan (the MER) on net biodiversity lost or gained from native vegetation clearing on private land but instead reports on outputs and process.⁸⁵

Mitigation hierarchy

The Victorian Government's mitigation hierarchy is Avoid, Minimise, Offset.⁸⁶ Under this hierarchy, councils must approve native vegetation removal only in instances where the removal cannot be avoided or minimised.⁸⁷ An application to remove native vegetation must include an offset statement. The statement must provide evidence that a suitable offset exists and can be secured in accordance with the Guidelines. The Victorian Auditor General identified compliance challenges with councils.⁸⁸

Conclusion

The Victorian Government established the regulatory framework and market structures to establish a functioning biodiversity offsets market. The inability to sanction unauthorised land clearing has severely impaired the scheme's integrity and effectiveness. The lack of independent structures and involvement of First Nations representatives is noted.

⁶⁶https://www.environment.vic.gov.au/_data/assets/pdf_file/0023/329450/Info-sheet-A-quick-comparison-of-first-party-and-third-party-offset-sites.pdf

⁶⁷https://www.environment.vic.gov.au/_data/assets/pdf_file/0021/91146/Guidelines-for-the-removal,-destruction-or-logging-of-native-vegetation,-2017.pdf

⁶⁸https://www.environment.vic.gov.au/_data/assets/pdf_file/0021/91146/Guidelines-for-the-removal,-destruction-or-logging-of-native-vegetation,-2017.pdf

⁶⁹https://www.environment.vic.gov.au/_data/assets/pdf_file/0027/329454/Info-sheet-How-to-meet-your-offset-requirement.pdf

⁷⁰https://www.environment.vic.gov.au/_data/assets/pdf_file/0023/329450/Info-sheet-A-quick-comparison-of-first-party-and-third-party-offset-sites.pdf

⁷¹https://www.environment.vic.gov.au/_data/assets/pdf_file/0021/91146/Guidelines-for-the-removal,-destruction-or-logging-of-native-vegetation,-2017.pdf

⁷²https://www.environment.vic.gov.au/_data/assets/pdf_file/0021/91146/Guidelines-for-the-removal,-destruction-or-logging-of-native-vegetation,-2017.pdf

⁷³<https://www.environment.vic.gov.au/innovative-market-approaches/ecomarkets>

⁷⁴https://www.planning.vic.gov.au/_data/assets/pdf_file/0034/94498/Whittlesea_Green_Wedge_Management_Plan_2011-2021_-_Part_2_-_Land-Section-2a.pdf

⁷⁵https://www.planning.vic.gov.au/__data/assets/pdf_file/0034/94498/Whittlesea_Green_Wedge_Management_Plan_2011-2021_-_Part_2_-_Land-Section-2a.pdf

⁷⁶<https://www.environment.vic.gov.au/native-vegetation/native-vegetation-removal-regulations/ensym-native-vegetation-regulations-tool>

⁷⁷<https://www.audit.vic.gov.au/report/offsetting-native-vegetation-loss-private-land?section=>

⁷⁸<https://www.audit.vic.gov.au/report/offsetting-native-vegetation-loss-private-land?section=>

⁷⁹https://www.environment.vic.gov.au/__data/assets/pdf_file/0027/329454/Info-sheet-How-to-meet-your-offset-requirement.pdf

⁸⁰<https://www.audit.vic.gov.au/report/offsetting-native-vegetation-loss-private-land?section=>

⁸¹<https://www.audit.vic.gov.au/report/offsetting-native-vegetation-loss-private-land?section=>

⁸²<https://www.audit.vic.gov.au/report/offsetting-native-vegetation-loss-private-land?section=>

⁸³<https://www.audit.vic.gov.au/report/offsetting-native-vegetation-loss-private-land?section=>

⁸⁴<https://www.audit.vic.gov.au/report/offsetting-native-vegetation-loss-private-land?section=>

⁸⁵<https://www.audit.vic.gov.au/report/offsetting-native-vegetation-loss-private-land?section=>

⁸⁶<https://www.audit.vic.gov.au/report/offsetting-native-vegetation-loss-private-land?section=>

⁸⁷https://www.audit.vic.gov.au/sites/default/files/2022-11/20220511_Offsetting-Native-Vegetation-Loss-on-Private-Land.pdf?

⁸⁸<https://www.audit.vic.gov.au/report/offsetting-native-vegetation-loss-private-land?section=>

Case Study 5: United Kingdom

Summary of scheme

Nature recovery efforts and ambitions in England to reverse biodiversity decline by 2030 include biodiversity net gain policy for new developments, a series of nature recovery programmes, and a national habitat map.

The February 2021 UK Dasgupta independent review on the economics of biodiversity⁸⁹, produced by Professor Sir Partha Dasgupta from the University of Cambridge highlighted that Nature's value must be at the heart of economics. Nature is a 'blind spot' in economics. We can no longer afford for it to be absent from accounting systems that dictate national finances, or ignored by economic decision makers.⁹⁰

In November 2021 the United Kingdom's Environmental Act 2021 became law. The Act aims to halt the decline in species by 2030, require new developments to improve or create habitats for nature, and tackle deforestation overseas.⁹¹ The Environment Act will deliver⁹²:

- Long-term targets to improve air quality, biodiversity, water, and waste reduction and resource efficiency
- A target on ambient PM2.5 concentrations, the most harmful pollutant to human health
- A target to halt the decline of nature by 2030
- Environmental Improvement Plans, including interim targets
- A cycle of environmental monitoring and reporting
- Environmental Principles embedded in domestic policy making
- Office for Environmental Protection to uphold environmental law

The Environment Act 2021 makes BNG mandatory for all but small developments. The Act requires developments to deliver at least a 10% biodiversity net gain increase from the pre-development biodiversity value. The Department for Environment, Food and rural Affairs (DEFRA) has consulted on Biodiversity Net Gain Regulations and Implementation.⁹³

Prior to the commencement of a development, a biodiversity gain plan must be submitted to the relevant planning authority for approval. The biodiversity gains and losses of a development will be measured in 'biodiversity units', using a metric which uses habitats as a proxy for biodiversity and calculates units by taking account of the type, extent and condition of habitats.⁹⁴

Developers can create or enhance off-site habitats, either on their own land or by purchasing biodiversity units on the market, and as a last resort to prevent undue delays, purchase statutory biodiversity credits from the UK Government where they can demonstrate that they are unable to achieve biodiversity net gain through the available on-site and off-site options.⁹⁵

To facilitate the operation of the biodiversity unit market, the priority of the UK Government is to:

- setting clear regulations and providing guidance
- arranging oversight functions to ensure consistent implementation across England
- creating supporting systems if needed, such as the biodiversity gain site register
- upholding probity rules and avoiding conflicts of interest in relation to the role of the
- establishing an approach to statutory biodiversity credit pricing, sales, and investment which supports, and does not conflict with, the market⁹⁶

The UK Government does not currently propose to establish a centralised trading platform for biodiversity units or for the UK Government to take on other roles which could be performed by the private sector or other third parties, such as brokering.

Clear outcomes / nature-positive

The UK Government's 25-year plan to improve the environment⁹⁷ establishes an ambition for clean air, clean and plentiful water, thriving plants and wildlife, reduced risk of harm from environmental hazards such as flooding and drought. The Environment Act 2021 implements the Government's plan. Regulations have yet to be implemented and therefore it is not possible to assess outcomes at this stage.

Legally enforceable

The Environmental Act 2021 stipulates BNG is mandatory for all with limited exceptions.

The Act states that biodiversity gain sites (off site) must be maintained for at least 30 years after the completion of the works to create or enhance the habitat. Biodiversity gain site enhancements will be secured through conservation covenants or planning obligations which can ensure that habitats are maintained even if the land is sold.

To count towards a development's net gain requirement, off-site biodiversity gains will need to be secured through a conservation covenant or planning obligation and registered prior to final approval of the biodiversity gain plan. The process and eligibility criteria for registering biodiversity gain sites are set out in Part 3 'the biodiversity gain site register'.⁹⁸

Measurable / rigorous data

The UK Government is consulting on the development and implementation of a biodiversity metric which will be managed by Natural England.⁹⁹ The biodiversity metric will calculate how a development, or a change in land management, will change the biodiversity value of a site.

Natural England is a non-departmental public body within the Department for Environment Food & Rural Affairs (Defra), working closely with Local Authorities on Local Nature Recovery Strategies to:

- support Defra to implement an approach to BNG that delivers nature recovery ambitions when mandated
- design and operate a digital register that provides trust and assurance into BNG system
- develop a simple, effective, well-received statutory credits scheme, incorporating a sales service and investment strategy
- develop net gain concept for marine environment
- establish robust monitoring and evaluation, threading to other reporting requirements and Environment Act targets.¹⁰⁰

Natural Capital and Ecosystem Assessment (NCEA)¹⁰¹ is a science innovation and transformation programme, spanning land and water environments, to collect data on the extent, condition and change over time of England's ecosystems and natural capital, and the benefits to society. It will underpin England's management of, decisions about, and policy for their natural capital, to ensure investment in environmental reforms that achieve maximum benefit and provide insights on the pressures their ecosystems face. Across terrestrial and marine, NCEA aims to:

- increase the spatial scale of some data (for example, species distribution, biodiversity)
- provide reliable data to help account for carbon stocks within England's soils, peatlands, trees, and marine habitats
- assessment of ecosystems in inland and coastal waters, marine environment, and on land including soil ecosystems
- draw together existing data streams, (including from UK Research and Innovation and UK Hydrographic Office)
- provide tools (for example, datasets, indicators of environmental status, models) to understand how we impact nature both positively and negatively.

NCEA is a partnership programme managed by Defra, with contributions from¹⁰²:

- Centre for Environment, Fisheries and Aquaculture Science (Cefas)
- Environment Agency
- Forest Research
- Natural England
- Joint Nature Conservation Committee
- Marine Management Organisation
- Royal Botanic Gardens, Kew
- UK Centre for Ecology and Hydrology
- Other strategic partnerships with research and non-governmental organisation communities, to share techniques on measuring location, condition and trend and what this might mean for NCEA monitoring.

Mitigation hierarchy

When determining planning applications, local planning authorities should apply the following principles:

- (a) if significant harm to biodiversity resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- (b) development on land of Special Scientific Interest, and which is likely to have an adverse effect on it, should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest.
- (c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, and
- (d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.¹⁰³

Market developments

Developer examples follow:

- Kidbrooke Village, developed by Berkeley Homes, is an example of voluntary adoption of BNG principles. The site includes species-rich meadows and wildlife wetlands.¹⁰⁴
- Savills UK, a developer, defines nature-positive as creating more biodiversity than is destroyed, so that species and ecosystems begin to recover.¹⁰⁵ They highlight native woodland creation, and note that planting new woodland can be monetised by selling verified carbon credits for the carbon sequestered by the growing trees. There is the possibility to sell other additional ecosystem services bundled with these credits, for example, flood management, water cooling and biodiversity uplift. In Cairngorms National Park, Scotland a native woodland and habitat creation scheme of 1,900 hectares has been co-developed with Calthorpe Estates and Scottish Forestry. Over its lifetime the Scheme will sequester 400,000 tonnes of carbon, as well as increasing the biodiversity, habitat, and connectivity of the landscape.¹⁰⁶
- British Land promotes nature-based offsets which are mostly forestry related. They use nature-based offset credits from accredited projects, where possible selecting projects which also support biodiversity or have economic benefits for local communities. As part of their 2030 strategy, all developments are net zero embodied carbon with offsetting used only once everything possible has been done to reduce embodied emissions. On completion of a development, the residual embodied

carbon which could not be avoided through design and material choice is offset with nature-based offset credits from accredited projects and where possible with projects that also support biodiversity or have economic benefits for local communities. It is unclear whether there is any independent verification of last resort use of offsets.¹⁰⁷

Conclusions

The United Kingdom's BNG framework consists of many elements that are familiar to Australian environmental offset policies. The Environmental Act 2021 has become law, with regulations in the process of being established.

⁸⁹ <https://www.gov.uk/government/publications/final-report-the-economics-of-biodiversity-the-dasgupta-review>

⁹⁰ <https://www.cam.ac.uk/stories/dasguptareview>

⁹¹ <https://www.gov.uk/government/news/world-leading-environment-act-becomes-law>

⁹² <https://www.gov.uk/government/news/world-leading-environment-act-becomes-law>

⁹³ <https://consult.defra.gov.uk/defra-net-gain-consultation-team/consultation-on-biodiversity-net-gain-regulations/>

⁹⁴ https://consult.defra.gov.uk/defra-net-gain-consultation-team/consultation-on-biodiversity-net-gain-regulations/supporting_documents/Consultation%20on%20Biodiversity%20Net%20Gain%20Regulations%20and%20Implementation_January2022.pdf

⁹⁵ https://consult.defra.gov.uk/defra-net-gain-consultation-team/consultation-on-biodiversity-net-gain-regulations/supporting_documents/Consultation%20on%20Biodiversity%20Net%20Gain%20Regulations%20and%20Implementation_January2022.pdf

⁹⁶ https://consult.defra.gov.uk/defra-net-gain-consultation-team/consultation-on-biodiversity-net-gain-regulations/supporting_documents/Consultation%20on%20Biodiversity%20Net%20Gain%20Regulations%20and%20Implementation_January2022.pdf

⁹⁷ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

⁹⁸ https://consult.defra.gov.uk/defra-net-gain-consultation-team/consultation-on-biodiversity-net-gain-regulations/supporting_documents/Consultation%20on%20Biodiversity%20Net%20Gain%20Regulations%20and%20Implementation_January2022.pdf

⁹⁹ https://consult.defra.gov.uk/defra-net-gain-consultation-team/technicalconsultation_biodiversitymetric/results/offsen_consultation_biodiversity_metric_gov_response_mar2023.pdf

¹⁰⁰ <https://www.gov.uk/government/publications/natural-england-action-plan-2022-to-2023/natural-england-action-plan-2022-to-2023--2>

¹⁰¹ <https://www.gov.uk/government/publications/natural-capital-and-ecosystem-assessment-programme/natural-capital-and-ecosystem-assessment-programme>

¹⁰² <https://www.gov.uk/government/publications/natural-capital-and-ecosystem-assessment-programme/natural-capital-and-ecosystem-assessment-programme>

¹⁰³ <https://www.gov.uk/guidance/national-planning-policy-framework/15-conserving-and-enhancing-the-natural-environment#para175>

¹⁰⁴ <https://www.gov.uk/government/news/new-developments-to-deliver-for-people-and-nature>

¹⁰⁵ https://www.savills.com.au/research_articles/167771/336040-1

¹⁰⁶ <https://www.savills.com/impacts/natural-forces/carbon-offsetting.html>

¹⁰⁷ <https://www.britishland.com/sustainability/environment/offsetting>

Case Study 6: France

Summary of scheme

The first national strategy for biodiversity was created in 2004 with the aim of better responding to the challenges of restoring, conserving and protecting biodiversity in France. In 2011, this strategy was revised with the aim of strengthening the commitment of stakeholders and integrating biodiversity into all public activities and policies, whether local or national.

The Law for the Recovery of Biodiversity, Nature and Landscapes was promulgated on 9 August 2016. The law enshrined principles in the environmental code with a mitigation hierarchy of avoid, reduce and compensate – ERC.

The objective of no net loss of biodiversity, or even gain, and the obligation to respect the avoidance, reduction and compensation sequence for any project impacting biodiversity and the services it provides was enshrined in law. If the avoid, reduce and compensate sequence is not applied, the project cannot be authorised as is.

Article 69 of the law brings the recognition of the natural sites of compensation with the creation of a statute of operator of ecological compensation. The text of the law identifies the three methods of implementing compensation: the project owner can carry out the measures himself, call on a third party, or even resort to the acquisition of ecologically equivalent compensation units. The nature of the compensation remains specified by the project owner in the impact study and the latter remains solely responsible for the effectiveness of the compensation.

Article 72, offers the possibility in the form of a contract called ‘real environmental obligations’ between a public authority, a public institution or a legal person under private law acting for the protection of the environment and an owner to perpetuate over time and over the course of the various owners, ‘*obligations whose purpose is the maintenance, conservation, management or restoration of elements of biodiversity or ecological functions in a natural, agricultural or forest area*’.¹⁰⁸ Following consultations in 2021 the National Biodiversity Strategy 2021-2030 (NBS 2030) was adopted and published in March 2022.¹⁰⁹ In addition to local consultations with Basin Committees, local authorities, Regional Biodiversity Agencies, OFB Regional Directorates, a citizen consultation was organised in the form of a questionnaire.¹¹⁰ The five pillars of NBS 2030 are:

- Pillar 1: Protected, restored and resilient ecosystems
- Pillar 2: "Natural resources and ecosystem services used sustainably and equitably
- Pillar 3: A society that is aware, trained and mobilised
- Pillar 4: Cross-functional management supported by knowledge and focused on results
- Pillar 5: Financing to support biodiversity policies¹¹¹

A 2021 Standardised Implementation guide on the approach to sizing ecological compensation¹¹² proposed a national framework for designing and sizing ecological compensation measures.

A compensation measure is primarily an ‘ecological action’ such as:¹¹³

- Restoration and rehabilitation measures: Action on a degraded environment (due to human activity or natural evolution) in order to bring it to a state that is more conducive to its effective operation and/or biodiversity. e.g. rehabilitating a wetland in order to benefit the flora and fauna.
- Creation measures: Creating a habitat on a site where there was initially none. e.g. creating artificial shelters or feeding areas for wildlife.
- Management measures: Action that ensures the optimal management of an environment, species, or their habitat. e.g. giving up or substantially reducing pesticide use.¹¹⁴

The OFB was established as a statutory body to protect and restore biodiversity in Metropolitan France and its Overseas Territories.

A resource centre^{115, 116} has been established by the OFB and the Ministry of Ecological Transition to provide documentation and tools to support application of the ERC sequence. Tools include online tutorials, a and access to ERC case law. The centre contributes to the transfer of knowledge and the promotion of actions on ERC.

Compensation measures must be in 'kind'. A financial payment may constitute a compensation measure only when it is directly allocated to an ecological action that complies with the regulatory principles laid down in the env code.¹¹⁷

Clear outcomes / nature-positive

The objective of the ERC sequence is to design, implement and commission (or operate) 'least impact' land use planning projects, generating no net loss or even a gain in biodiversity.¹¹⁸ The final objective is to move towards zero residual impact for environments and species.¹¹⁹

France has jurisdiction over 55,000 sq. km of coral reefs and lagoons. By 2022 30% of French terrestrial and marine ecosystems will have been classified as protected areas, with 10% given high protection, compared to only 1.8% today.¹²⁰

Legally enforceable

The objective of no net loss of biodiversity, or even gain, and the obligation to respect the ERC sequence in any project impacting biodiversity and the services it provides, are enshrined in law.

Measurable / rigorous data

Article 6g of the Law for the Recovery of Biodiversity, Nature and Landscapes directs the creation of a computer tool for geolocation of the compensatory measures to allow better monitoring of the commitments of project owners and in particular prevent sites dedicated to compensatory measures from being used in the context of other development projects. The administrative authority may ask the contracting authority for financial guarantees to ensure the fulfillment of the ecological compensation obligations. The French Biodiversity Agency will in particular monitor compensation measures for damage to biodiversity.

A system for assessing site management effectiveness will be deployed for all categories of protected area in order to make sure conservation objectives are met with respect to local, national, European and global issues. It will be necessary to store evaluation data in information systems which, once harmonised, will make it possible to fulfil international reporting obligations.¹²¹

The French offsets frameworks is principles based. Rather than reliance on calculators, guidance is provided:

- The method chosen must allow a correct assessment of the achievement of ecological equivalence.
- The general approach is logical and consistent with the current state of knowledge ecological: the ecological indicators, coefficients and possible formulas of calculations are based on justified relationships.
- It must make it possible to measure losses and gains in the same way and comparable and verify that [Gains] ≥ [Loss].
- It must make it possible to study the immediate and distant environment of the site(s) of compensation and impact, so as to fully understand the dynamics of population, the overall functioning of the ecosystem and the logics of connectivity of the two sites.

- If the chosen method uses a mathematical formula to size compensation (quantitative method), then this formula must be explained and justified.¹²²

Independent

The OFB was established as a statutory body to protect and restore biodiversity in Metropolitan France and its Overseas Territories. In 2021 OFB had 2,800 agents with functions including:

- Search for innovative solutions aimed at better characterizing the natural environments concerned by the projects, as well as effectively reducing or compensating for the impact of certain human activities on them;
- Support to the territorial authorities in charge of drawing up plans and programmes;
- Forthcoming production of an inventory of sites with high potential for ecological gain, in partnership with the Observatory of Natural, Agricultural and Forest Areas;
- Technical support to the decentralized services of the State in charge of project appraisal;
- Monitoring and control of ERC measures prescribed by the State within the administrative acts authorizing projects and implemented by project owners.¹²³

OFB issued 4,500 opinions in 2020 to facilitate the upstream integration of ecological issues into projects, while the ensuing administrative police and judicial police actions make the obligations linked to the ERC sequence effective. Environmental inspectors range from prevention to control to sanctions if necessary. Environmental inspectors and is vested with the authority to ascertain violations and issue summons.¹²⁴

An example of OFB intervention is an amusement park development in Oise intervened in October in the sector of an amusement park in order to control the sites presenting impacts on biodiversity.¹²⁵ The project is located in an area with significant biodiversity challenges, in the immediate vicinity of a special protection area and a Natura 2000 classified special conservation area, and within the Oise regional natural park.

Mitigation hierarchy

The ERC is the foundation for reconciling biodiversity protection, economic development and land use planning.

- Avoid: Avoidance must occur very early in the development of our plans, programs and projects in order to propose developments with a better ecological balance, more socially acceptable, more resilient and economically viable.
- Reduce: The guide for the implementation of avoidance aims to support all the actors concerned by offering them a step-by-step, synthetic and pedagogical instruction manual, to implement an optimal approach to avoidance at the level of program plans and projects, the only solution that makes it possible to ensure the non-degradation of the environment.
- Compensate: The third step in the avoid, reduce, compensate for ecological compensation sequence occurs when the impacts on biodiversity generated by projects, plans or programmes could not be avoided or reduced. Compensation measures must then be implemented to generate gains at least equal to the losses incurred.¹²⁶

The Libreville-Plan (One Forest Summit)

France is demonstrating global leadership around biodiversity. The Libreville-Plan (One Forest Summit)¹²⁷ held in March 2023 was led by France and Gabon and is focusing on up-scaling high-integrity, biodiversity-positive carbon credits and developing nature certificate schemes.¹²⁸

Conclusion

France has adopted an approach to environmental offsets that does not require the establishment of registers, calculators and tradeable offsets. France's principles based regulatory approach puts the onus on developers to avoid, reduce and compensate with the well-resourced OFB ensuring compliance. OFB, which is supported financially with revenues from France's offshore wind tax,¹²⁹ has a focus on research and education as well as global responsibilities through France's external territories.

An element of the French system that is worthy of note is the focus on training with programs to train senior civil servants in the challenges of the ecological transition. By the first half of 2023, around 200 Directors-General of Ministries and members of ministerial cabinets will be trained on biodiversity, climate and/or resources.¹³⁰ Training includes a theoretical component coupled with field visits. The OFB has been mandated by the Ministry of Ecological Transition and Territorial Cohesion to participate in this training plan and organize field visits.

¹²⁸ <https://www.ecologie.gouv.fr/eviter-reduire-et-compenser-impacts-sur-lenvironnement>

¹²⁹ <https://biodiv.mnhn.fr/national-biodiversity-strategy-2030>

¹³⁰ <https://www.ofb.gouv.fr/la-strategie-nationale-pour-la-biodiversite>

¹³¹ <https://biodiv.mnhn.fr/national-biodiversity-strategy-2030>

¹³² <https://professionnels.ofb.fr/fr/doc/approche-standardisee-dimensionnement-compensation-ecologique-guide-mise-en-oeuvre>

¹³³ <https://erc-biodiversite.ofb.fr/erc/compenser/definition-o>

¹³⁴ https://fee.asso.fr/wp-content/uploads/2023/03/Invent_ANGLAIS_2023_2MARS_V2.pdf

¹³⁵ <https://erc-biodiversite.ofb.fr/>

¹³⁶ <https://www.ofb.gouv.fr/actualites/ofb-mobilise-pour-une-meilleure-application-de-la-sequence-eviter-reduire-compenser-erc>

¹³⁷ <https://erc-biodiversite.ofb.fr/erc/compenser/definition-o>

¹³⁸ <https://erc-biodiversite.ofb.fr/erc/definition>

¹³⁹ <https://www.ofb.gouv.fr/actualites/eviter-reduire-et-compenser-les-amenagements-dans-loise>

¹²⁰ <https://www.ecologie.gouv.fr/sites/default/files/2030%20NATIONAL%20STRATEGY%20FOR%20PROTECTED%20AREAS.pdf>

¹²¹ <https://www.ecologie.gouv.fr/sites/default/files/2030%20NATIONAL%20STRATEGY%20FOR%20PROTECTED%20AREAS.pdf>

¹²² https://www.ecologie.gouv.fr/sites/default/files/Approche_standardisee%20C3%A9e_dimensionnement_compensation_%20C3%A9cologique.pdf

¹²³ <https://www.ofb.gouv.fr/mettre-en-oeuvre-la-sequence-eviter-reduire-compenser>

¹²⁴ https://fee.asso.fr/wp-content/uploads/2023/03/Invent_ANGLAIS_2023_2MARS_V2.pdf

¹²⁵ <https://www.ofb.gouv.fr/actualites/eviter-reduire-et-compenser-les-amenagements-dans-loise>

¹²⁶ <https://www.ecologie.gouv.fr/eviter-reduire-et-compenser-impacts-sur-lenvironnement>

¹²⁷ <https://www.oneplanetsummit.fr/en/events-16/one-forest-summit-245>

¹²⁸ <https://www.thegef.org/newsroom/publications/innovative-finance-nature-and-people>

¹²⁹ <https://energynews.pro/en/france-part-of-the-tax-on-offshore-wind-turbines-donated-to-lifeguards-at-sea/>

¹³⁰ <https://www.ofb.gouv.fr/actualites/les-hauts-fonctionnaires-se-forment-aux-enjeux-de-la-transition-ecologique>

Case Study 7: Germany

Summary of scheme

A key finding from the 2023 OECD Environmental Performance Review¹³¹ is that biodiversity in Germany has degraded in past decades. The conservation status of species and habitats shows deteriorating trends. More than one third of species in Germany are endangered and progress towards many national targets adopted under the Convention on Biological Diversity insufficient.

Germany's management of nature goes back to the Impact Mitigation Regulation (IMR) that was adopted in 1976 as part of the Federal Nature Conservation Act to address the mitigation and compensation of impacts stemming from developments and projects. The term 'mitigation' refers to avoidance and minimisation measures but also compensation. Compensation measures were originally carried out by the developing firm itself and were required to maintain strong links between the biodiversity lost through the development project and the compensation. This approach led to highly fragmented and costly offsets and caused the system of compensation to be reformed. The resultant Impact Mitigation Regulations are the foundation for the German biodiversity compensation system.

The German Nature Conservation Act (BNatSchG) requires that unavoidable significant adverse effects on nature and landscape are to be offset by adequate compensation or substitution measures.¹³² Germany's offset framework is now known as production-integrated compensation (PIC) (Produktionsintegrierte Kompensation), a practice combining environmental improvements with farming which evolved in the early 2000s.¹³³ PIC is a compensation measure integrated into agricultural or forestry production. Environmental credits, called 'ecopoints', are credited to an individual eco-account, which can then be freely traded on the market.¹³⁴ Compensation periods range from 20-30 years.

PIC measures are negotiated between a farmer, investor, and an approving authority. In some federal states commercial compensation agencies act as an intermediary between farmer and intervener. An example is Flächenagentur Baden-Württemberg.¹³⁵

Compensation measures are to be documented in offset registries, which are accessible and allow identification of an individual PIC. Evidence suggests that offset registries are not in place across German states.¹³⁶

Legal frameworks are developed at a state level. In most federal states, PIC regulations are partial, are not legally binding, refer only to certain sectors (especially for highway projects), or are abstract.¹³⁷ An example of a federal state regulatory framework is the Bavarian Compensation Ordinance (BayKompV).

Critiques of the PIC argue that high expenses negatively affect overall PIC cost efficiency as safeguarding the site itself does not yield environmental credits. Monitoring of PIC is expensive requiring agreed management terms complex and time-consuming methods by qualified staff.¹³⁸ The PIC framework it is argued does not create a stable habitat or ecosystem¹³⁹

Germany is seeking to evolve its approach to environmental management. The draft Federal Action Plan on Nature-based Solutions for Climate and Biodiversity¹⁴⁰ released in 2022 supports municipalities as key actors for achieving a transition to green space management and performing a wide range of ecosystem services, in particular for recreation, health and biodiversity. A new funding programme set up under the Federal Action Plan will support municipalities in the transition to near natural green space management. Annually from 2023, 20 municipalities will be supported in their transition to near natural green space management. The reforms relax the requirements regarding spatial, temporal and functional coherence with the objective of improving biodiversity outcomes and streamlining the compensation process. The federal state of Hessen is an example of the design and implementation features of the programme – including the important public sector role in biobanking.

Under the Action Plan Nature-based Solutions for climate and biodiversity (NbS) will play a substantial role in achieving the German government's climate and biodiversity goals and in measures to adapt to the impacts of the climate crisis.¹⁴¹ The goal is to strengthen, restore and preserve ecosystems to mitigate climate change and serve as valuable habitats for plants and animals and leverage synergies to simultaneously tackle global heating and biodiversity loss. The Action Plan is closely linked to other programmes by the German government and will mainly be funded by the new Climate and Transformation Fund. Four billion euros are available until 2026, which will make important investments in Nature-based Solutions for climate and biodiversity. A cabinet decision is expected in 2023 towards full implementation.¹⁴²

Clear outcomes / nature-positive

Germany's environmental performance is concerning. In 2021 the European Commission decided today to refer Germany to the European Court of Justice for not respecting its obligations under the Habitats Directive (Directive 92/43/EEC) on the conservation of natural habitats and of wild fauna and flora.¹⁴³ Under the Directive, Member States must designate Special Areas of Conservation (SACs). The EU Commission's concern is that Germany is still failing to designate a significant number of sites as SACs. The Commission considers that the conservation objectives set for sites in Germany are not sufficiently quantified, measurable and reportable.

The OECD Performance Review¹⁴⁴ acknowledges that Germany has initiated an ambitious programme to foster investments in nature-based solutions, and indicates that it needs to further address the triple crisis of energy, climate and biodiversity in an integrated and holistic manner and should explore opportunities to use market-based instruments to protect biodiversity. The country faces multiple pressures on nature and water, threatening biodiversity and natural capital. The 2023 OECD review recommends biodiversity and nature-based solutions including rapid agreement upon delivery mechanisms, including eligibility criteria, funding and accountability mechanisms for the Federal Action Plan on Nature-based Solutions for Climate and Biodiversity (Aktionsprogramm Natürlicher Klimaschutz, ANK) ensuring that all ANK projects consider their impact on biodiversity, water and broader ecosystem health in addition to their climate change mitigation and adaptation objectives.

Legally enforceable

Germany's offset framework, PIC is implemented at a state level with evidence suggesting that not all states have adopted a legal framework.

Measurable / rigorous data

On 22 June 2022, the European Commission tabled a proposal for a legal instrument for nature restoration with binding restoration targets, which had already been announced in the EU Biodiversity Strategy for 2030 presented in May 2020. In addition to ensuring the good condition of ecosystems, the focus will be on their importance for climate regulation, water regulation, soil health and disaster preparedness and protection. The legal instrument will thus be a significant component of Nature-based Climate Action. The core element of the legal instrument will be the creation and implementation of a national restoration plan. The plan will combine and coordinate restoration measures in all habitats/landscape areas (including Habitats Directive habitat types, forests, peatlands, rivers/floodplains, agricultural landscapes, urban green spaces, coasts/oceans/seas) and levels (federal, Länder, local) and will involve a multi-sectoral, multi-level approach with a high degree of planning, coordination and communication. It will require a complex process of gathering, collating and analysing data from all sectors. Stakeholders will be effectively involved at an early stage. Germany has committed in 2023 to establish a funding programme to support structures and measures for data collection, planning, dialogue processes, consultation, implementation and

monitoring at all levels (federal, Länder, local) for the creation and implementation of the national restoration plan.¹⁴⁵

Germany's federal system has similarities to Australia. Measures in the German Government's draft Action Plan focus on involving and support and incentives for local communities as partners and participants, because the people who manage land and those responsible in municipalities and cities know what is most urgently needed.¹⁴⁶ A central office will coordinate a Climate Wilderness Ambassador network and this process will explore whether there are synergies with the establishment of agencies for Nature-based Climate Action.¹⁴⁷

Mitigation hierarchy

Germany's Impact Mitigation Regulation is based on a mitigation hierarchy.

Firstly, it is determined whether a planned project is to be regarded as having a significant impact. If significant impairment of nature and the landscape cannot be excluded, the facts indicating the extent to which these impairments might be avoided or minimized must be clarified. The duty of avoidance is strict and legally binding, so the project applicant is not allowed to choose between avoidance and reduction of impacts on the one hand and compensation on the other. No avoidable impairment may be implemented. For unavoidable negative effects, corresponding restoration compensation measures must first be implemented. Lost functions and values must be restored with compensation of equal ecological nature.¹⁴⁸

Market developments

In Berlin, growth sees competition for space. The Berlin Strategy¹⁴⁹ is the city-wide, cross-departmental model to 2030 which integrates the activities of the various Senate departments. The Senate Chancellery has been in charge of the Berlin Strategy since 2016. The Senate Department for Urban Development, Building and Housing maps the spatial dimension of the model and works out the key areas of urban development.

The Senate Department for Urban Development, Building and Housing, the Berlin Strategy takes an integrated medium to long-term perspective on cross-departmental control to meet diverse changes and challenges and develop Berlin in solidarity and in a sustainable and cosmopolitan manner. As an integrated strategy for the entire city and for specific areas, regional planning was included in the development process. In it, trend-setting strategies, goals and fields of action are named and located in key areas of urban development.

The development process and participation involved all Senate departments, representatives of urban society and the specialist public. The results of several strategy forums, advisory groups and two opinion polls/surveys were incorporated into the development of the Strategy 3.0 approved by the Berlin Senate in April 2021.¹⁵⁰ Population growth, social cohesion, increasing space requirements, climate change, transport, energy transition, and the consequences of the Pandemic were the urgent reasons for the update. It includes eight individual strategies (Chapter 2). Version 3.0 sees the addition of the naming of the lines of conflict that arise in the growing city, and solutions for dealing with conflicting goals.

Berlin's whole-city compensation concept framework for mitigating development impacts is especially applicable to housing construction. As Berlin is both a German federal state and a city, state and municipal tasks are not separate. Therefore, its planning sovereignty can extend to the entire municipal territory. Their urban land-use planning eco-account is a strategic instrument within the whole-city compensation framework and is pivotal for the enhancement of biodiversity, recreation, and blue-green infrastructure¹⁵¹:

- The Berlin Senate administrations SenSBW and SenUMVK have jointly prepared a rough assessment of the project's impacts from a citywide perspective.

- An interdepartmental steering committee carries out the respective allocation of compensation to interventions.
- A holistic approach, early impact assessment, the exploitation of multifunctional capacities, and the timely securing of land are the basis for successfully compensating for the loss of nature and landscape in Berlin as a growing city.
- A systems analysis of different subdomains clearly shows critical variables influencing land-use change and impervious soil coverage. The variables are, e.g., the demand for new housing that can be reduced by exploiting various potentials and the use of building integrated or already-sealed sites to prevent further soil sealing.
- Eco-accounts enable out-of-kind and off-site compensation, which can be decoupled in time and space from the intervention and its impacts. Under these boundary conditions, enforcing the paradigm of no net loss of biodiversity is critical. Strict adherence to the guidelines and adequate monitoring are necessary to achieve this goal. The demand, its coverage, the resulting impacts, and the required compensation form a system. If the system boundary is shifted away from individual development projects towards the urban whole, solutions for avoiding impacts are conceivable, which enable no net land take.¹⁵²

Conclusions

There are a number of similarities between Australia and Germany. They in common a similar degree of biodiversity loss and endangered species over recent decades.

Germany's PIC offset framework is implemented at a state level with different levels of compliance. The structure of this is similar to Australian environmental offset frameworks. The same challenges experienced in Australia, such as uncertainty around legal frameworks and absence of registries, also exist in Germany.

A positive case study of particular relevance to the ACT is Berlin, a city / state / local government which is adopting a holistic approach to enhancement of biodiversity, recreation, and blue-green infrastructure. Germany's 4 billion euros Federal Action Plan on Nature-based Solutions for Climate and Biodiversity (Aktionsprogramm Natürlicher Klimaschutz, ANK) could become a game changer and contribute massively to enhancing natural climate protection.¹⁵³

¹³¹ <https://www.oecd.org/env/oecd-environmental-performance-reviews-germany-2023-f26da7da-en.htm>

¹³² <https://www.sciencedirect.com/science/article/pii/S0264837721001010>

¹³³ <https://www.mdpi.com/2071-1050/10/11/4161/htm>

¹³⁴ <https://www.sciencedirect.com/science/article/pii/S0264837721001010>

¹³⁵ <https://www.mdpi.com/2071-1050/10/11/4161/htm>

¹³⁶ <https://www.mdpi.com/2071-1050/10/11/4161/htm>

¹³⁷ <https://www.mdpi.com/2071-1050/10/11/4161/htm>

¹³⁸ <https://www.mdpi.com/2071-1050/10/11/4161/htm>

¹³⁹ <https://www.sciencedirect.com/science/article/pii/S0264837721001010>

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¹⁴¹ https://www.bmuv.de/fileadmin/Daten_BMU/Download_PDF/Naturschutz/aktionsprogramm_natuerlicher_klimaschutz_entwurf_en_bf.pdf

¹⁴² <https://www.bmuv.de/en/download/federal-action-plan-on-nature-based-solutions-for-climate-and-biodiversity>

¹⁴³ https://ec.europa.eu/commission/presscorner/detail/en/IP_21_412

¹⁴⁴ <https://www.oecd.org/env/oecd-environmental-performance-reviews-germany-2023-f26da7da-en.htm>

¹⁴⁵ https://www.bmuv.de/fileadmin/Daten_BMU/Download_PDF/Naturschutz/aktionsprogramm_natuerlicher_klimaschutz_entwurf_en_bf.pdf

¹⁴⁶ https://www.bmuv.de/fileadmin/Daten_BMU/Download_PDF/Naturschutz/aktionsprogramm_natuerlicher_klimaschutz_entwurf_en_bf.pdf

¹⁴⁷ https://www.bmuv.de/fileadmin/Daten_BMU/Download_PDF/Naturschutz/aktionsprogramm_natuerlicher_klimaschutz_entwurf_en_bf.pdf

¹⁴⁸ https://www.bmuv.de/fileadmin/Daten_BMU/Download_PDF/Naturschutz/aktionsprogramm_natuerlicher_klimaschutz_entwurf_en_bf.pdf

¹⁴⁸ [https://www.tandfonline.com/doi/pdf/10.3152/147154605781765652#:~:text=HE%20IMPACT%20MITIGATION%20regulation%20\(IMR,stemming%20from%20developments%20and%20projects.](https://www.tandfonline.com/doi/pdf/10.3152/147154605781765652#:~:text=HE%20IMPACT%20MITIGATION%20regulation%20(IMR,stemming%20from%20developments%20and%20projects.)

¹⁴⁹ <https://www.berlin.de/sen/stadtentwicklung/planung/berlinstrategie/>

¹⁵⁰ <https://www.berlin.de/sen/stadtentwicklung/planung/berlinstrategie/aktuelle-fassung-3-0/#2>

¹⁵¹ Berlin Case Study by Baganz, G.F.M.; Baganz, D. Compensating for Loss of Nature and Landscape in a Growing City. *Land* 2023, 12, 567.

¹⁵² Baganz, G.F.M.; Baganz, D. Compensating for Loss of Nature and Landscape in a Growing City—Berlin Case Study. *Land* 2023, 12, 567. <https://doi.org/10.3390/land12030567>. <https://www.mdpi.com/2073-445X/12/3/567>

¹⁵³ <https://issuu.com/oecd.publishing/docs/highlights-oecd-environmental-performance-reviews->