Scoping Paper:

Expanding Finance Opportunities to Support Private Land Conservation in Australia

October 2018

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About ALCA

The Australian Land Conservation Alliance (ALCA) is a national conservation organisation working to promote the conservation of private lands in Australia. ALCA is Australia's first national organisation that brings together key participants in the private land conservation sector. ACLA's Board Members include representatives from the following organisations:

- Bush Heritage Australia;
- Biodiversity Conservation Trust of NSW;
- Greening Australia;
- Landcare Australia;
- Nature Foundation SA;
- NRM Regions Australia;
- Queensland Trust for Nature;
- South Endeavour Trust;
- Tasmanian Land Conservancy;
- The Nature Conservancy – Australia Program; and
- Trust for Nature (Victoria).

ALCA's Board Members bring a wealth of existing accumulated expertise, providing great potential to further enhance the private land conservation sector's capacity, effectiveness and contribution to state and national conservation policy objectives.

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Executive Summary

- Conservation is significantly underfunded around the world. This includes in Australia, where the conservation finance gap is estimated to be around AUD 10 billion per annum. To put this in perspective, this represents less than 0.5% of total annual institutional investment in Australia[1].
- Private landholders manage 77% of Australia's land area, with much of this managed by indigenous people, including some of its most important ecological areas - a crucial role in protecting our nation's environmental assets. Expanding finance approaches to broaden the role of private land conservation, in conjunction with increasing Australia's protected area network and other efforts, is a priority issue.
- The Australian Land Conservation Alliance (ALCA), in collaboration with the Australian Government Department of Environment and Energy (DoEE) and the US-based Conservation Finance Network (CFN), undertook this desktop review of both international and domestic finance approaches which may be deployed and/or expanded to support private land managers in restoring, conserving and managing Australia's landscapes, waterways and populations of threatened species.
- 26 major finance approaches – spanning philanthropic giving, government financing and private investment - were assessed as to their relative deployment complexity, scalability and suitability in addressing Australia's conservation finance gap.
- These approaches include both financing approaches that *directly* benefit conservation and restoration (where conservation is the main objective), and those approaches that could *indirectly* benefit conservation on private land through sustainable land management practices (i.e. conservation is a secondary objective).
- Government currently provides the dominant source of conservation financing to support Australia's natural environment.
- While both government funding (e.g. grants, tax incentives) and philanthropic giving (individuals, corporates) will continue to play a major role in conservation, this will always be constrained by the general health of the economy and competing priorities placed on government budgets.
- Various international targets and agreements to which Australia is a party, such as the Sustainable Development Goals and the Paris Agreement, have spurred the private sector's interest in investing in social and environmental outcomes, alongside market returns. The business case for conservation has also been enhanced by Australia's strengthening brand as a global supplier of clean, healthy and sustainably grown food and fibre products, and of nature-based tourism opportunities.
- As such, there are growing opportunities to use philanthropic and government sources to leverage private sector investment as part of a blended-finance approach. This is particularly the case where conservation indirectly benefits from impact investment in sustainable agricultural and forestland real-assets, or via urban green infrastructure and regional development funding.
- There is, however, no single best financing approach to conservation – the type of approach utilised will depend heavily on the objectives (e.g. protection versus restoration versus sustainable land management), prioritisation of threats to a specific environmental asset, and the socio-cultural context of a conservation project.
- 10 key recommendations follow. If implemented, Australia could significantly lift the funding available for conserving natural assets, particularly those found on private land. In so doing, we will be closing the conservation finance gap and ensuring a healthier Australia for future generations.
- While several of these recommendations focus on government-led action, there are also many opportunities to share the responsibility of these actions with NGOs and the private sector.

Key recommendations – in brief

These recommendations were developed based on the research conducted to develop this Paper and consultation with expert conservation finance practitioners. The recommendations are divided into three categories: (a) enabling factors for further investment, (b) scaling up direct conservation, and (c) scaling up indirect conservation. For further detail on each recommendation please see Section 5.3. While many of these recommendations focus on government action, there are also many opportunities for shared-action with NGOs and the private sector.

Recommendations to create the enabling factors for further investment

Recommendation 1: Create an Australian network of conservation finance practitioners

The formalisation and ongoing commitment to support a growing network of Australian conservation finance practitioners, as has been established in the US, will play an important role in accelerating conservation finance. The Australian Land Conservation Alliance (ALCA) could be well-placed to host the nascent network as it develops, working with cross-sector partners to resource its development and identify steps to be achieved.

Recommendation 2: Identify & support the development of intermediaries

Intermediaries are critical to connecting project developers with investors, structuring finance, aggregating smaller deals, and ultimately bringing scale to the market. Our consultation highlighted the relative lack of intermediaries in Australia who can capably cross the philanthropic, government and private sectors, speak each of their languages and readily identify the areas where their interests align in order to plant the seeds of a 'deal'. Government could precipitate this by continuing to support conservation finance efforts such as this project, which seek to develop the capacity of all sectors to improve conservation finance literacy and connect self-identified intermediaries with sector members. With the philanthropic and private sectors, Government could also support innovation and capacity building grants which could fund intermediaries to work with those developing conservation projects.

Recommendation 3: Environmental accounting & standardised metrics

The development in Australia of a set of nationally consistent metrics to quantify and measure conservation, financial, and social returns on investment was identified during consultations as an important enabling factor. Therefore, we recommend that, in consultation with NGOs, project developers and the finance sector, the federal government continues to develop a nationally consistent standard for environmental-economic accounting (including environmental condition accounting) to underpin the development of a standardised set of metrics that are clearly understood by both the conservation and finance sectors.

Recommendations to scale-up *direct* conservation finance flows

Recommendation 4: Create a major Australian environmental trust fund

Environmental trust funds are a proven method around the world for creating a dedicated, sustained funding source for long-term environmental projects. Australia has the opportunity to demonstrate its commitment to biodiversity conservation through contributing a major capital amount to a new Australian environmental trust fund. It could ensure that the funding is leveraged against other funding sources by imposing matching requirements, replicating one of Australia's most successful private conservation programs – the National Reserve System program of the early 2000s. The fund design would need to incorporate an ongoing income source, such as through investment earnings off the fund, or a dedicated environmental levy.

Recommendation 5: Create a national revolving land fund

A revolving land fund is another proven method for achieving direct conservation that already exists in Australia. It is largely self-sustaining and uses the existing real estate market. It allows the purchase, protection and on-selling properties of ecological and cultural significance, and replenishes itself through the proceeds of sale, and potentially periodic top-ups from philanthropy or government (as needed).

Recommendation 6: Strengthen tax incentives to support long-term private land protection

For a range of reasons, the current tax arrangements at the federal, state and local levels provide a disincentive for landholders to invest in managing land for conservation, including permanently protecting their land via a conservation covenant. International tax models demonstrate that tax incentives can dramatically increase the rate of private land conservation, particularly when leveraged against other funding streams.

Recommendation 7: Research & invest in models to test a voluntary biodiversity credit market

A voluntary biodiversity credit market could be a game changer for conservation in Australia. Just like the voluntary carbon market launched with the support of 'early adopter' businesses, a voluntary biodiversity credit market could provide an opportunity for leading-edge businesses to recognise and voluntarily offset their biodiversity impacts. While the regulated biodiversity credit markets in Australia cover entities that directly impact biodiversity, voluntary biodiversity credits would be available for the many businesses and other entities that indirectly impact Australian biodiversity through their supply chain or other operations.

Recommendations to scale-up *indirect* conservation finance flows

Recommendation 8: Support the private sector to develop the conservation finance market

Lessons from other recently developed markets show that market development assistance is critical in proving models and helping take them to scale. Government can play a key role here. De-risking projects, particularly during their start-up or proof-of-concept phase, is critical when encouraging the private sector and NGOs to experiment with new models that are designed to show that conservation and sustainable land management have a tangible business benefit.

Recommendation 9: Accelerate the use of green bonds and outcome-based models

Green bonds and outcome-based models (e.g. environmental impact bonds) are widely perceived as providing untapped opportunities to catalyse activities that can indirectly benefit conservation in Australia, such as sustainable land management, sustainable forestry, and payments to landowners for ecosystem services such as watershed protection and other green infrastructure.

Recommendation 10: Expand the use of program-related investments

Program-related investment occurs when an entity, typically a foundation, uses its investment funds to provide a loan or equity investment with more favourable terms compared to commercial markets, or provides an investment that must be used for charitable purposes to another organisation or project. While program-related investments will not provide the scale of some other approaches considered in this Paper, they do show unmet potential to fund projects that garner a financial return and therefore indirectly benefit conservation.

A comparison of conservation finance approaches is summarised on the following two pages

Comparison of conservation finance approaches, in the Australian context

Criteria	*Philanthropic giving*						*Government funding*							
	Donations by indivs.	Voluntary surcharges	Crowd-funding	Transfer fees	Corporate social respons.	Corporate-Cause marketing	Grants	Environ. levies	Charitable tax deductions	Covenanted land tax deductions	Tax credits (tradable)	State tax concessions	Municipal tax concessions	Municipal rebates
Current use in conservation financing (worldwide)	Limited	Limited	Limited	Limited	Common	Common	Widespread	Common	Common	Common	Limited	Limited	Common	Common
Potential to scale-up & meet conservation finance gaps	Moderate	Limited	Limited	Moderate	Moderate	Limited	Moderate	Limited	Moderate	Moderate	Moderate	Moderate	Limited	Limited
Relative ease of deployment	Simple	Simple	Simple	Moderate	Simple	Simple	Simple	Simple	Moderate	Moderate	Moderate	Moderate	Simple	Simple
Fits within all existing Australian federal, state and local legal frameworks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✓	✓
Currently used in Australia to support conservation and SLM	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓
Predominantly used to **directly** support private land conservation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Can be used **indirectly** to support conservation, via sustainable land management	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Does **not require** standardised metrics and data to leverage private-sector investment	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓
Suited to being included in a blended finance approach	✓	✗	✗	✓	✗	✗	✓	✗	✓	✓	✓	✓	✓	✓
Notes							Dominant conservation finance approach.	Requires political will.		Vary state-by-state.		Vary state-by-state.		

Criteria	*Government funding (cont)*				*Private investment*								
	Regional development incentives	Environ. trust funds	Ballot measures	Debt-for nature swaps	Bridge financing	Revolving land funds	Seller financing	Program related investment	Environ. credit markets	Green bonds	Outcome-based models	Green certification	Impact investing real assets
Current use in conservation financing (worldwide)	Limited	Common	Common	Limited	Limited	Limited	Limited	Limited	Common	Limited	Limited	Widespread	Limited
Potential to scale-up & meet conservation finance gaps	High	High	Moderate	Not applicable	Moderate	Moderate	Limited	Moderate	High	High	High	Moderate	High
Relative ease of deployment	Complex	Complex	Complex	Not applicable	Moderate	Moderate	Simple	Moderate	Complex	Complex	Complex	Moderate	Complex
Fits within all existing Australian federal, state and local legal frameworks	✓	✓	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
Currently used in Australia to support conservation and SLM	✓	✓	✗	✗	✗	✓	✗	✓	✓	✓	✓	✓	✓
Predominantly used to **directly** support private land conservation	✗	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✗	✓
Can be used **indirectly** to support private land conservation, via sustainable land management	✓	✓	✓	✗	✓	✗	✓	✓	✓	✓	✓	✓	✓
Does **not require** standardised metrics and data to leverage private-sector investment	✓	✗	✓	✗	✗	✓	✓	✗	✗	✗	✗	✗	✗
Suited to being included in a blended finance approach	✓	✓	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
Notes	TNC's shellfish reef project on the Yorke Peninsula is an example.	Metrics needed to scale-up with private sector investment.	Common in the US, not used elsewhere.	Developing countries only.						Metrics and de-risking incentives needed.	Metrics and de-risking incentives needed.		Metrics and de-risking incentives needed.

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Acronyms and Abbreviations

ALCA	Australian Land Conservation Alliance
AUD	Australian Dollars
BIOFIN	Biodiversity Finance Initiative of the UNDP
CBD	Convention on Biological Diversity
CF	Conservation finance
CFN	Conservation Finance Network
CPIC	Coalition for Private Investment in Conservation
CSR	Corporate Social Responsibility
ECM	Environmental credit market
EIB	Environmental impact bond
EPBC	Environmental Protection & Biodiversity Conservation (Act)
ERF	Emissions Reduction Fund
FAO	Food & Agriculture Organisation (United Nations)
FSC	Forest Stewardship Council
Ha	Hectares
GHG	Greenhouse Gas
GIIN	Global Impact Investing Network
IUCN	International Union for the Conservation of Nature
NGO	Non-government organisation
NMTC	New Market Tax Credits
NRM	Natural resource management
NRS	National Reserve System
OBM	Outcome-based Models
OECD	Organisation for Economic Co-operation & Development
PES	Payment for Ecosystem Services
PRI	Program-related investment
REDD+	Reduced Emissions from Deforestation & Degradation
SDG	Sustainable Development Goals
SLM	Sustainable land management
SRI	Socially Responsible Investment
SIB	Social impact bond
UNDP	United Nations Development Programme
US	United States
USD	United States Dollars
WRI	World Resource Institute

Glossary[2]

Avoided-cost model	An approach to financing where investments into projects are made based on the assumption that the projects will mitigate expected future costs.
Bond	A fixed-income investment, where an investor lends money to an entity which borrows the funds for an agreed period at a variable or fixed interest rate.
Ballot measures	Instruments of direct democracy, that allow voters to directly shape public policy in the voting booth. Common in the US.
Bridge financing	A temporary loan used to fill a gap in financing between the availability of permanent funding (or take-out funds) and the immediate need to react quickly and fund the purchase of an asset.
Carbon offsets	A reduction in GHG emissions (e.g. via sequestering carbon dioxide in replanted forests) to compensate for or to offset GHG emission made elsewhere.
Concessional loans	Loans that are extended (often by government) on terms substantially more generous than market loans i.e. the loan interest rate is lower.
Conservation covenant	An in-perpetuity legal agreement between landowner and conservation organisation that permanently restricts usage rights of a property e.g. real estate development, commercial and/or industrial uses, or clearing vegetation, and is recorded on the property's title. Known in the United States as a "conservation easement".
Conservation finance	The practice of raising and managing funding to support land, water, and natural resource conservation.
Credit enhancement	Includes various tools (e.g. credit ratings, insurance mechanisms, loan guarantees) which help the project developers leverage capital they could not otherwise access.
Crowdfunding	The practice of funding a project or venture by raising small amounts of money from many people, typically via the Internet.
Debt	(1) A financial obligation to another person/entity; (2) An obligation which is created by borrowing; or (3) The sum of all the financial obligations of a person/entity. Debt financing includes funds that support the purchase of an asset via credit.
Direct finance	Funds flow *directly* from the funder/investor to the conservation project.
Ecosystem services	The ability of an ecosystem to provide goods and services to people, which may be assigned economic value to help in economic decision-making processes.
Environment offsets	Like for carbon offsets, environmental offsets seek to compensate for impacts on the environment or biodiversity at one site through activities elsewhere.
Environmental Impact Bond	A form of bond that provides funding for ecologically sensitive green infrastructure. It is based on a "outcomes-based" or "pay-for-success" model.
Grants	An arrangement for the provision of non-repayable financial assistance gifted by one party to another, usually with the purpose of funding a specific project.
Green infrastructure	A network of natural landscape assets which underpin the economic, socio-cultural and environmental functionality of our cities and towns.
Impact Investing	Investments that combine financial returns with social and/or environmental benefits.
Indirect finance	Funds flow *indirectly* from the funder to the conservation project via an intermediary.
Interest rate	The percentage of the borrowed amount charged by a lender on borrowed funds.
Land banking	Quasi-governmental entities that are established to aggregate, manage and repurpose underused, undermanaged, abandoned or foreclosed land parcels.

Glossary (cont)

Letter of credit	A flexible form of short-term loan in which the lender agrees to make a certain amount of money available to the borrower at a specified interest rate.
Loan guarantee	A legally-enforceable agreement by a third-party to payment on behalf of the borrower.
Non-profit equity funds	An early-stage investment in a non-profit entity that serves as start-up capital until that non-profit's business model can be established. Investments generate a social return on investment from these funds.
Outcome-based Model	A form of performance-based contracting that ensures governments limit their losses in case projects are unsuccessful, which encourages them to try novel solutions like green infrastructure.
Philanthropy	Charitable giving by an individual or organization.
Private equity funds	An aggregated amount of investor capital used to purchase an ownership interest in a non-public entity or entities.
Private land conservation	Land owned by NGOs and individuals and managed for the purpose of biodiversity conservation, including through sustainable land management practices.
Promissory note	A legally binding document representing a promise to pay an agreed upon sum to a specified person on a specified date or upon demand - a legally enforceable IOU.
Real assets	Physical assets that have value due to their properties and substance e.g. precious metals, real estate, agricultural and forestry lands, water rights and machinery.
Revolving fund	A pool of loans made to individuals or small-businesses which self-funds via the proceeds received from loans within the portfolio.
Risk-return ratio	A formula used to assess the expected financial gains of a given investment against the risk of financial loss.
Secondary financing	A broad term for a secondary, junior or subordinated loan which stands behind the first, principal or senior loan.
Seller financing	Funding the purchase of an asset when the seller accepts only a portion of the price upfront and accepts a loan with periodic payments and interest for the remainder.
Social Impact Bond	A contract with the public sector in which the issuer commits to use bond proceeds to fund improved social outcomes that result in public-sector savings.
Subsidies	An economic incentive granted to industry, businesses or the wider community by government to reduce the price of a good or service to encourage utilisation.
Surcharges	A secondary fee or other charge that increase the price of a good or service.
Transfer fees	An additional fee paid into a stewardship account, such as via a land trust.
Transferable tax credits	Tax benefits that can be sold to other individuals or entities that allow the buyer(s) to realize the full advantages of these tax benefits.
Venture capital	Capital invested in a project in which there is a substantial element of financial risk, typically a new business / business model.

1.0 Background

Australia's environmental assets are critical to its economic future, and the health and wellbeing of its people. There are countless individuals and organisations, large and small, across Australia, undertaking important work in sustainable farming, nature conservation, and integrating natural capital into business decision-making. Despite these efforts, the most recent *State of Environment Report*[3] shows that across vast areas of the Australia, many of the nation's environmental assets are continuing to deteriorate. A key contributing factor to this trend is that the scale of environment degradation far exceeds the available funding required to restore, conserve and manage Australia's natural capital.

Conservation in Australia, like many places in the world, is significantly underfunded. Globally, experts estimate that around USD 150-400 billion[4,] is required annually to conserve healthy terrestrial and marine ecosystems on land and in the oceans, and restore the Earth's natural capital stock of clean air, fresh water and species diversity. In Australia, the conservation finance gap is estimated to be around AUD 10 billion per annum[31]. Currently, global annual conservation finance flows are estimated to be in the realm of USD 50 billion per annum[5], with the vast majority of this coming from government sources. If this gap is to be seriously addressed, new approaches to financing are needed to support significant efforts in restoring and conserving the world's natural capital.

As private landholders manage 77% of Australia's land area[6], much of which is managed by indigenous people, including some of Australia's most important ecological areas, it is widely recognised that private land conservation plays a crucial role in protecting Australia's environmental assets. Australia's private land conservation sector is diverse, complex and evolving, and facilitates a collection of activities that contribute to the conservation of ecological processes on private land, and across freehold, leasehold and indigenous tenures. Private land conservation has proven critical in increasing the viability of the protected area estate and the ecosystem services it provides – the most recent comprehensive study estimated that at the end of 2013 around 9 million hectares of privately protected areas spread over circa 5,000 properties across Australia[7].

Deploying and scaling-up existing or new finance approaches to support private land conservation, in conjunction with expanding the national protected area network and other government efforts, is an opportunity that cannot be missed. Internationally, there has been substantial progress in the development of innovative conservation finance approaches that leverage private sector resources, and that can complement traditional government grants and subsidies. Together, philanthropic giving with the public and private sectors can provide a potent mix of funding that can be leveraged through varying approaches to best meet conservation finance gaps.

The Australian Land Conservation Alliance (ALCA), in collaboration with the Australian Government Department of Environment and Energy (DoEE) and the US-based Conservation Finance Network (CFN), undertook this desktop review of both international and domestic conservation finance approaches which may be developed, deployed and/or expanded to support private land managers in restoring, conserving and managing Australia's landscapes, waterways and populations of threatened species.

The goal of this Scoping Paper is to offer information and inspiration, to all those funding and working on private land conservation in Australia, on approaches which have the potential to increase conservation finance flows.

In parallel, ALCA is working with DoEE to establish a network of conservation finance and allied practitioners in Australia as a vehicle for: sharing the findings and recommendations of this Scoping Paper; and fostering critical long-term relationships between government, the private sector, Non-government Organisations (NGOs) and the broader community in order to lay the for foundations for conservation finance to be scaled-up significantly in the future.

2.0 Objectives and scope

It has been wisely stated that 'Conservation without money is just conversation.' The main objective of this Scoping Paper is to undertake a comprehensive desktop review of past, current and emerging finance approaches and associated projects (domestically and internationally), and provide recommendations on which approaches might be developed, deployed and/or expanded to support the conservation and restoration of terrestrial ecosystems in Australia, either directly or indirectly. In other words, the Paper's key objective is to identify the funding streams that will convert conversations into conservation.

This Scoping Paper:

1. Considers the existing conservation finance landscape in Australia and overseas, and investigates recent developments in conservation finance approaches, models and associated projects;
2. Notes the current extent of use, potential scalability, relative ease of deployment and suitability of expanding each major conservation finance approach within Australia – and - which of these approaches are therefore most likely to address the conservation finance gap, and warrant further attention from government, NGOs and the private sector to address any key barriers;
3. Describes the likely barriers to scaling-up conservation finance in Australia, and the key enabling factors required to overcome these (as relevant to government, the private sector, and NGOs);
4. Presents these findings and recommendations for review by recognised experts in conservation financing, and experts from allied fields (e.g. social impact and mainstream investing, ecology, tax and environmental, government policy) to further refine their relevance and accuracy; and
5. Contains a comprehensive stocktake of conservation finance approaches used worldwide.

This Scoping Paper is focused on conservation finance approaches that offer opportunities for the **private land conservation sector in Australia**. Private land conservation can take many forms, from conservation covenants and stewardship agreements to programs such as Land for Wildlife or Landcare. Private land conservation is perhaps best described as encompassing both formal and informal activities that increase the extent, ecological condition and connectivity of habitat conserved on private land. While the focus is on private land conservation, many of the approaches discussed in this report may apply across tenures.

Government funds the lion's share of conservation work. Globally, conservation finance from public-sector sources accounted for 90% of total funding between 2009 and 2015.[34] Thus, government is uniquely positioned to influence future conservation finance flows to conservation in two ways: first through the strategic deployment of its ongoing funding, and second by ensuring that the relevant legislative, institutional and financial **enabling factors** are put in place to support the deployment and scaling up of the conservation financing approaches discussed here. Government support will continue to be critical for some traditional conservation work that cannot otherwise be supported by the alternative models explored in this paper. In doing so, it will need to address the challenges that annual appropriations have posed to the ability to strategically plan and implement long term conservation projects.

This Scoping Paper's findings and recommendations are generally focused on restoring and conserving terrestrial landscapes (agricultural, native vegetation, rivers, wetlands), and do not go into extensive detail for marine ecosystems and urban environments. Having said that, much of the discussion here has relevance to these areas. It is also important to note that many of the approaches assessed here also aid in indirectly increasing finance flows to conservation through supporting the sustainable management of productive agricultural and forestry land, for example: meeting the requirements of green certification schemes (e.g. Forest Stewardship Council); the management of invasive plant and animal species; and, replanting of riparian buffer zones to stabilise stream banks and prevent erosion.

Importantly, the findings and recommendations here also deliver on a key recommendation of the *2017 National Reserve System Stakeholder Forum* (hosted 5 October 2017 by DEE) that "exploring innovative financing models through a financial roundtable and innovation hub" was a key opportunity for supporting and expanding Australia's public and private protected network, namely the National Reserve System (NRS).

The intended audience of this Scoping Paper is therefore broad, ranging from those experienced in conservation finance, to those who know little; be they from government, the private sector, NGOs or the wider community. For this reason, this Scoping Paper also attempts to provide fundamental background knowledge on conservation finance.

3.0 The landscape of conservation finance

3.1 What is "conservation finance"?

"Conservation finance" can be defined as the process of raising, harnessing and maintaining financial capital to support the protection, conservation, restoration and management of landscapes, ecosystems and ecosystem services, and the species which they support[8,9,10]. Broadly, there are two broad categories of conservation finance:

> **Direct conservation financing** i.e. funds flow *directly* from the funder/investor to the conservation project, via instruments such as grants, philanthropic donations, service and conservation payments/user fees, and payment for carbon offset credits; and,
>
> **Indirect conservation financing** i.e. funds flow *indirectly* through an intermediary, such as is the case with tax concessions/incentives (government) and bonds (issued by financial institutions)[11,9].

These two categories encompass various **sources** of conservation finance (philanthropic, public-sector, private sector) and various **approaches and instruments** to conservation finance, such as grants, concessional loans, environmental credit markets, outcome-based models and voluntary surcharges. Each of these sources, models and instruments is discussed in detail in *Section 4* of this Report.

Direct versus indirect finance for conservation

This paper distinguishes between the **direct financing** of conservation on private land – such as support to permanently protect critical habitat of a threatened species – and **indirect financing** of conservation – such as investment in improved farm practices that benefit an adjacent waterway. Put another way, "direct financing" here describes projects where the predominant intent of a project is to gain a conservation outcome. "Indirect financing" describes projects where the primary intent of a project is unrelated to conservation, but a conservation outcome occurs. Likewise, socially-orientated financing, or funding with blended social, climate and/or conservation goals, such as the Aboriginal Carbon Fund's Reducing Carbon Building Communities Fund, or land purchased by the Indigenous Land Corporation, can provide indirect benefits for conservation, and effectively increase conservation financing flows.

Vast amounts of private-sector finance are currently being mobilised to support climate change mitigation and sustainable land management impact investing, as is demonstrated by the rapid increase in carbon farming, organic farming and FSC-certified agricultural and forests land in Australia. These finance flows typically target objectives other than conservation (e.g. climate mitigation, human health and economic benefits from lower fertiliser and pesticide use), but if conservation-orientated objectives and metrics are also considered, these finance flows can meet triple-bottom line objectives (social, economic and environmental), including supporting conservation indirectly.

The distinction between direct and indirect financing is important as some conservation outcomes will never be achieved through indirect financing. Thus, our collective outlook on scaling up conservation finance flows **must focus on both direct and indirect financing approaches** that offer the most promise.

For private land conservation, the various categories, sources and approaches to conservation finance represent **a portfolio of options** through which to replant riparian buffer zones, restore native vegetation communities, and recover populations of threatened native plant and animal species. As mentioned, it is also important to note that conservation finance is not just about supporting "conservation", rather it extends to supporting the on-ground sustainable management of agricultural and forestry land through improving soil condition and dealing with invasive species, where in so doing, "conservation" outcomes can be achieved at the same time as increasing productivity and avoiding further economic and ecological damage done such as via streambank erosion, soil salinification and weed infestations.

In addition, **credit enhancement tools**, third-party certification, metrics, conservation covenants and environmental accounting frameworks are important **complementary tools** that can enabling greater conservation and sustainable land management finance to flows.

The definition of conservation finance can be indirectly extended further to include **supply-chain commitments**, such as where companies that currently utilise forest and resource damaging commodities (e.g. soy, cattle and timber) are increasingly making commitments to reduce or eliminate deforestation in their supply chains. As part of their sustainability strategies, some of these companies are beginning to make their own internal investments in both their operations and their supply chain suppliers, indirectly increasing conservation finance flows through sustainable land management.

Long term versus short term conservation outcomes

Another distinction to bear in mind when discussing conservation is that between long term and short-term outcomes. Long term outcomes include permanent protection of public and private land for conservation purposes, and survive beyond current land ownership. The distinction between direct and indirect financing also plays a role here: indirect financing will rarely fund long term conservation outcomes, because it typically relates to the management of a piece of property at a given time. Direct financing may or may not support long-term outcomes; for example, historically government conservation funding has focused on long-term policy outcomes such as expanding the public and private protected area estate. More recently, its focus has somewhat expanded to also address shorter term outcomes such as pest animal and plant control, while also building long-term capacity through initiatives such as the National Landcare Program. Looking forward, private land provides some of our greatest opportunities for long-term outcomes, given that in highly populated states (such as Victoria) many of our most threatened plants and animals reside on private land[12].

3.2 Why do we need to increase conservation finance flows?

The world is experiencing the most rapid expansion in human history. Over the past 50 years, the human population has more than doubled, and is projected to rise from 7.3 billion in 2015 to 9.8 billion by 2050 (UN 2017). In parallel, global demand for food is projected to double between 2017 and 2050[13], with strong and growing demand for native hardwood products rising by 50% in just 7 years from 2013 to 2020[14]. Population and economic growth are having adverse impacts on Earth's natural capital. One-third of the planet's agricultural landscapes, around 2 billion hectares of land (twice the size of China) were once forested but are now degraded, with little economic or ecological value [15,16]. Between 2010 and 2015, the Earth lost 7.6 million ha of native forest every year[17]. The clearing of habitat and other human-induced actions (e.g. introduction of invasive species and disease, poaching, climate change, more intense and frequent wildfires) has seen IUCN's Red List name 19,817 "threatened" species globally, including: 41% of all known amphibian species, 33% of reef building corals, 25% of mammals, 13% of birds, and 30% of conifers[18]. Persistent overfishing has a severe impact on marine biodiversity and reduced the total biomass of predator fish species by 52% between 1970 and the year 2000[19].

Australia is not immune to these trends in environmental degradation. Since European settlement, approximately 13% of Australia's native vegetation has been cleared completely, with 62% remaining in a degraded state[3]. Some parts of Australia continue to exhibit the highest rates of land clearing in the developed world[20]. In addition to the clearing of habitat, the pollution, over-extraction and blocking of inland waterways (with dams and weirs, for example), the introduction of weeds and feral animals, and unsustainable fire practices, has resulted in the listing of over 1,700 species (and subspecies) as "threatened" under the Commonwealth Environment Protection and Biodiversity Conservation (EPBC) Act 1999[21]. This number of threatened species on the EPBC list has increased from around 1,200 species in 2000 at a net rate of approximately 25 species per year.

On top of this, climate change is progressively affecting Australia's environment. The continent is getting hotter, experiencing changes in rainfall patterns, and higher bushfire risks. Agricultural productivity is likely to decline from decreased rainfall and more droughts, and urban and coastal assets are at increasing risk from more intense storms, sea level rise and floods.

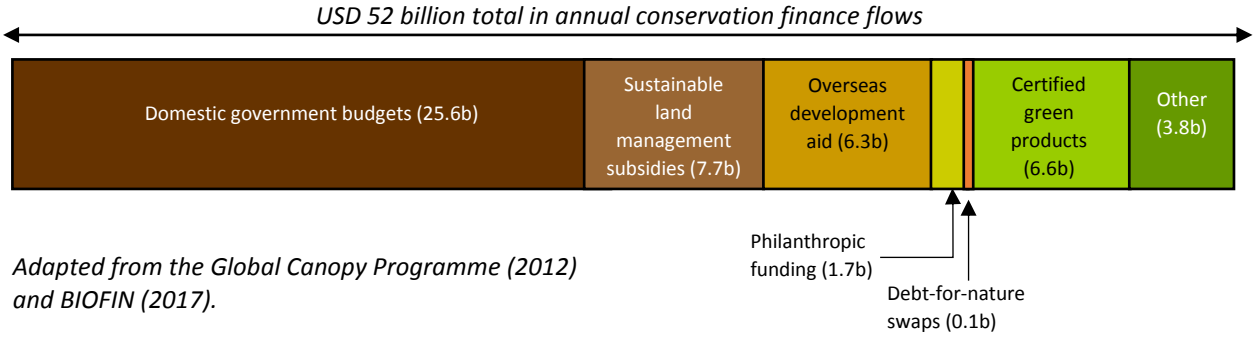
Within 20 years, the growth of the global economy will produce a middle class of over 3 billion people on Australia's doorstep, as this expanding market demands ever increasing levels of minerals, food and tourism experiences. While these changes will place greater pressure on Australia's land, water and biodiversity assets, it also offers an opportunity to repair the damage done to our environment. Annual economic metrics (e.g. terms of trade, tourism arrivals) continue to underscore the need for Australia to maintain its comparative advantage as a clean and sustainable producer of food, a first-class nature-based tourism destination, and a desirable place to live and learn. If Australia loses its healthy landscapes and iconic wildlife, it will lose its comparative advantage, not to mention the cultural, economic, healthy benefits that nature brings to our community. Australia is also a signatory to several international conventions, such as the Convention of Biological Diversity (CBD), where it has a commitment to contribute to the conservation at least 17% of ecologically representative land globally and a few targets related to the conservation of terrestrial and marine species[22]. Failing to achieve these targets also risks Australia's international reputation.

It is possible to restore and conserve Australia's environmental assets, as is evidenced by the thousands of projects that are being undertaken by Landcare, Regional NRM groups and NGOs (including land trusts). Many of these projects are taking place on private land. However, existing conventional public and philanthropic finance sources alone have proven inadequate in supporting such groups to address the extent of conservation issues that exist across the nation. For this reason, highly scalable conserving financing approaches need to be deployed if significant and lasting progress is to be made in restoring and preserving both Australia's and the world's natural capital.

3.3 How much conservation finance is needed?

A top-down study conducted at global level estimated that USD 150 billion to USD 440 billion per year (0.08-0.25% of global GDP) would be needed by 2020 to achieve the *CBD Strategic Plan*[23], noting that some synergies could be achieved by coordinating actions and thus reducing the total amount of funding required. Estimates by other credible experts back this figure up. John Tobin-de la Puente, cofounder of the Coalition for Private Investment in Conservation (CPIC) and a professor at Cornell University, suggested that USD 250 billion to USD 350 billion would be required each year to conserve healthy terrestrial and marine ecosystems on land and in the oceans, and restore the Earth's natural capital stock of clean air, fresh water and species diversity. Other estimates suggest that USD 300-400 billion in annual conservation finance is needed [9,24,25,26]. Currently, around USD 52 billion per year flows to conservation projects, the bulk from domestic government budgets and philanthropic sources, and as a co-benefit to investment in sustainable land management subsidies and green product certification (Figure 1)[27].

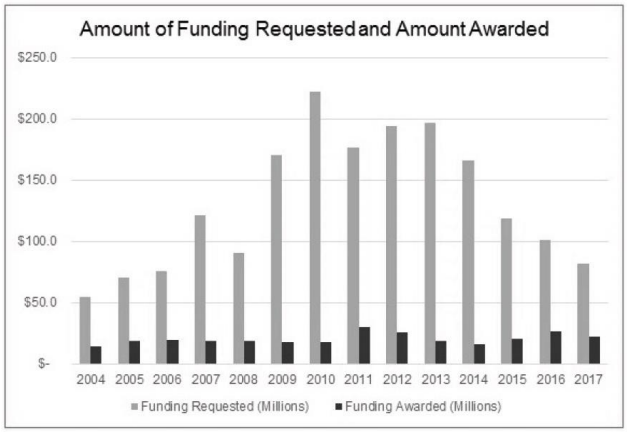
Figure 1 – Estimates of current annual global conservation finance flows, by approach and source



Adapted from the Global Canopy Programme (2012) and BIOFIN (2017).

Filling the conservation finance gap will require around USD 200 billion to USD 300 billion in additional capital per year, with private investment becoming the main source of this additional capital (around 20 to 30 times the funding that currently goes into conservation). Though this is a significant amount of capital, to put this in perspective, **just 1% of total of private investment assets globally would need to be diverted to meet the conservation finance gap**[10]. It is also worth noting that we are approaching an unprecedented transfer of wealth, with USD 30 trillion likely to change hands in the next 30 years. Figure 2 below highlights the extent to which government grant requests for conservation have gone unserviced in the US (alone) between 2004 and 2017[28]. This can be considered a proxy for the extent of the conservation financing gap in the US, and more broadly.

Figure 2 – Conservation grant funding requested versus awarded in the US



Source: USDA, 2018.

Given the issues with using global-level assessments to guide policy and business decision making, there is a need for more accurate bottom-up estimates of conservation finance requirements at the national and sub-national level. Conservation in Australia, like many places in the world, is significantly underfunded. The Commonwealth's current expenditure on the environment is around AUD 500 million per annum – shared between the National Landcare Program, the Green Army, Working on Country, Land Sector Package, the Reef 2050 plan, Great Barrier Reef Foundation, and the Whale and Dolphin Protection Plan[29]. Estimates suggest that this spending must increase considerably if land degradation and loss of our native species is to be arrested, and eventually repaired[30].

In 2000, Virtual Consulting and Griffin NRM estimated that the cost to repairing much of the Australian landscape (excluding marine and specific actions relating to threatened species) to be in the realm of around AUD 100 billion over 10 years (2017$)[31]. Martin et al (2017) more recently suggested that approximately 2% of Gross Domestic Product (GDP), ~AUD 35 billion, would be required each year[30].

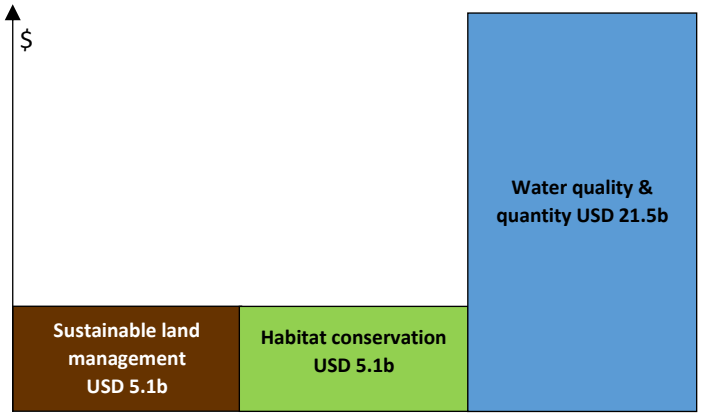
A global study found that Australia, amongst other countries, was substantially underfunding biodiversity conservation, and using statistical models, estimated that the short-fall was around AUD 275 million per annum[32]. It is understood that the Wentworth Group of Concerned Scientists is in the process of completing a more detailed bottom-up estimate, which will further inform these estimates.

3.4 Trends in conservation finance flows

Globally, conservation finance from public-sector sources accounted for 90% of total funding between 2009 and 2015, and totalled USD 31.7 billion. Development finance institutions (e.g. World Bank, Asia Development Bank) are also major players in public financing of conservation, contributing USD 21.5 billion globally in impact investments only between 2009-2013[34]. Of the USD 31.7 billion in public-sector capital, approximately: USD 5.1 billion was channelled to sustainable food and fibre ventures; USD 5.1 billion directly to the conservation of habitat; and, USD 21.5 billion to water quality and quantity projects (Figure 3)[35, 33].

Like for many countries, the magnitude of finance flows benefitting conservation in Australia is difficult to quantify and track – conservation finance can come from numerous sources (commonwealth, state and local government; philanthropic donations from individuals and organisations; voluntary land management for conservation by landowners; and, business investments), and may contribute to conservation outcomes directly and also indirectly through many different programs/projects – from biosecurity controls to weed management, native vegetation restoration grants to funding to incentivise emissions reductions, and subsidies for sustainable agricultural and fisheries. As touched on above, the need for "exploring innovative financing models through a financial roundtable and innovation hub" was identified as a key opportunity for supporting and expanding Australia's NRS at the *2017 National Reserve System Stakeholder Forum*.

Figure 3 – Breakdown of estimated public-sector finance going directly and indirectly to conservation projects globally between 2009 and 2015



Adapted from the Hamrick, 2016[33].

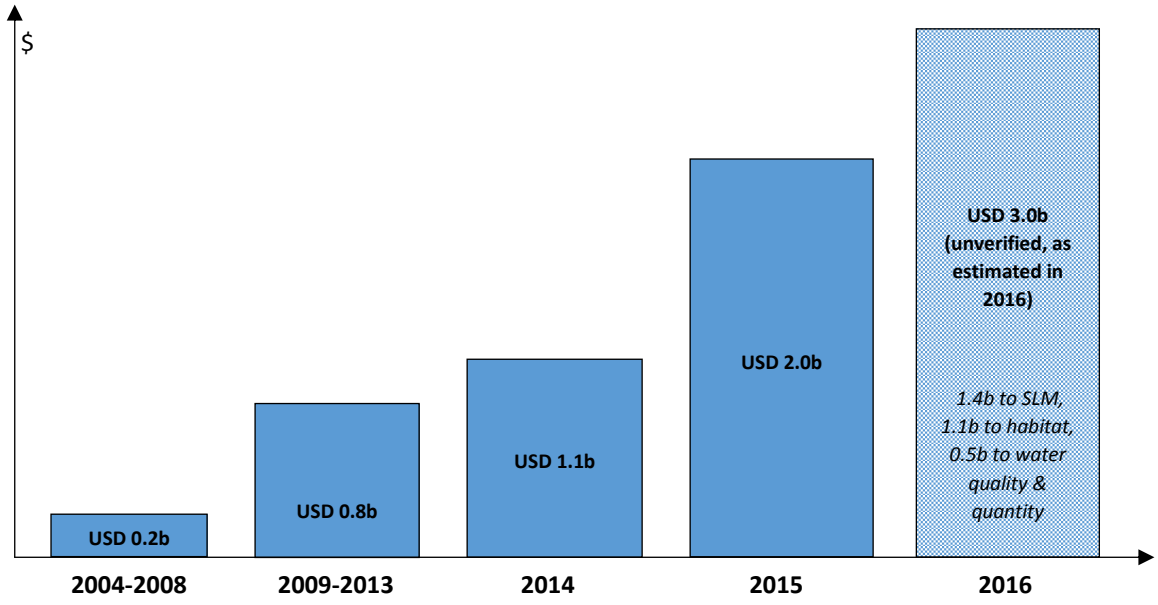
Though public-sector flows are currently the most substantial source of conservation finance globally, contributions by private-sector investors are steadily increasing. According to a *2016 Ecosystem Marketplace Report* "in just two years, the total private capital committed to conservation investments jumped by 62%, to a total committed private capital of USD 8.2 billion tracked from 2004 to 2015"[33]. As at the end of 2016, another USD3 billion was committed to new sustainable land management, habitat conservation and water quality/quantity projects, for development by 2018 (Figure 4).

Importantly, unlike most public funding commitments, the USD 8.2 billion represents *investments* in conservation-orientated projects that are generating a *financial return*. To date, two-thirds of private conservation finance has focused on sustainable land management. This differs from the focus of public funding for conservation (as distinct from agricultural or rural funding), which is mostly geared towards water quality and quantity and habitat conservation outcomes[34].

The focus of private investment on sustainable land management can be attributed to the maturity of these industries (e.g. agriculture), which reduce risk for private investors, as well as these having transparent and reliable financial returns[34].

Though these investments do not focus exclusively on conservation, the criteria and metrics for impact investing generally mean that important environmental (and social) co-benefits must be realised while also making a return on investment. This is evidenced in many case studies presented throughout this report. Like for sustainable food and fibre production investments, as investment models focused exclusively on the restoration and conservation of environmental assets mature (and the risk-return ratios become clearer), private-sector investors are more likely to participate in the market[35]. That said, it should be noted that a key limitation of private sector investment is the typical need for a financial return. A sizeable portion of conservation projects are unable to generate a financial return, which means that they may not be able to take advantage of private sector investment. For this and other reasons, public funding and favourable legislative and policy settings need to continue to be a key part of conservation finance landscape in Australia.

Figure 4 – Trend in annual private-sector investment going directly and indirectly to conservation projects globally between 2004 and 2016



Adapted from the Hamrick, 2016[33].

Given the multiple mounting pressures on government budgets around the world, including here in Australia[36], leveraging expanding private-sector investment flows represents an attractive opportunity to help address the conservation financing gap. Notwithstanding the significant barriers that need to be overcome, credible sources expect that the proportion of conservation finance coming from private sector could feasibly be scaled up from its present contribution of around USD 10 billion per annum to represent a significant proportion of the USD 200 billion to USD 300 billion in additional annual capital required[4].

3.5 Major stakeholder groups and their role in the conservation finance landscape

Conservation finance involves a multitude of stakeholders from a myriad of geographical, business, investment, financial or social and cultural backgrounds, and thus holds a significant untapped potential for growth and diversity of the conservation finance market[9]. Traditionally, the main stakeholders in the conservation finance landscape have been the federal and state governments, NGOs (including the members of ALCA) and Government-aligned institutions (e.g. Landcare and Regional NRM groups) who receive funding from various levels of government, individual philanthropists and philanthropic organisations. However, the evolving landscape of conservation finance is creating more attractive conditions for individual investors, mainstream investment firms, retail corporations and private corporations to take an interest in and engage in the conservation finance sector (including in Australia) Increasingly, the landscape of conservation finance is also extending to indigenous land management, which has been the focus of substantial investment in recent years through (for example) the Aboriginal Carbon Fund. See Figure 5 for more information.

Figure 5. Motivations, advantages and challenges for conservation finance stakeholder groups

Stakeholder	Funding source	Motivations	Advantages	Challenges
Individual philanthropic donors	High (and ultra-high) net-worth individuals, crowd-funders.	Frustration with lack of government conservation support. Ethical mindset. Tax incentives.	Often nimble source of finance.	Traditionally, limited scalability (though this may be changing). Often a lack of accountability, and in proving outcomes.
Government	Favourable tax concessions, environmental levies, grants, regional economic development incentives from the public finance pools e.g. general revenue.	Public and industry pressure, international agreements e.g. Aichi Targets, Paris Agreement, Sustainable Development Goals.	May provide tax relief and concessional funding alongside private investment capital, or technical assistance. Can support financial de-risking mechanisms. Well placed to lead market development and capacity building effort	Demand reporting on non-financial metrics – difficult. May have complex approval processes and reporting requirements. Scope might be thematically or geographically limited. Often highly political.
Private Ancillary Foundations	Private or corporate sponsors.	Mission-related investments. Program-related investments.	May be flexible in the type of funding that can be provided. Can support financial de-risking mechanisms.	Demand performance and reporting on non-financial metrics. Scope might be thematically or geographically limited, reducing ability to support conservation.
Corporates	Revenue from operations is channelled through strategic funds and/or corporate sustainability budgets, etc.	Securing / improving supply chain, including ensuring high quality and high margin products, to potentially maintain a sustainable brand and competitive advantage. Maintaining social license to operate, and marketing, public relations. Complying with government-mandated CSR targets e.g. India.	Have a commercial interest. Association with well-respected conservation organisations brings high visibility and credibility. Can leverage operational & technical know-how. Can de-risk projects, e.g. through off-take agreements. Incentive to transform 'unprofitable' corporate engagement into 'profitable' business case.	Decision making may be complex. Conservation-orientated projects may have low margins. Budgets subject to satisfactory performance of overall business and internal capital allocation strategies. Variable degree / depth of engagement in supply chains.
Private-sector investors	Individuals, directly and through asset managers (banks, super funds, insurance companies).	Financial returns. Mitigation of risk in asset manager's portfolio. Interest in impact investing (due potentially to members). Sustainable Development Goals.	Large and growing pool of capital allocated to impact investing. Relatively quick decision making. Role for intermediaries to bring deals together.	Financial return expected. Fiduciary duty may limit risk appetite (though this is changing). Typically, low familiarity with conservation objectives and methods. Suitable metrics needed.

Adapted from Baumann et al, 2017[37].

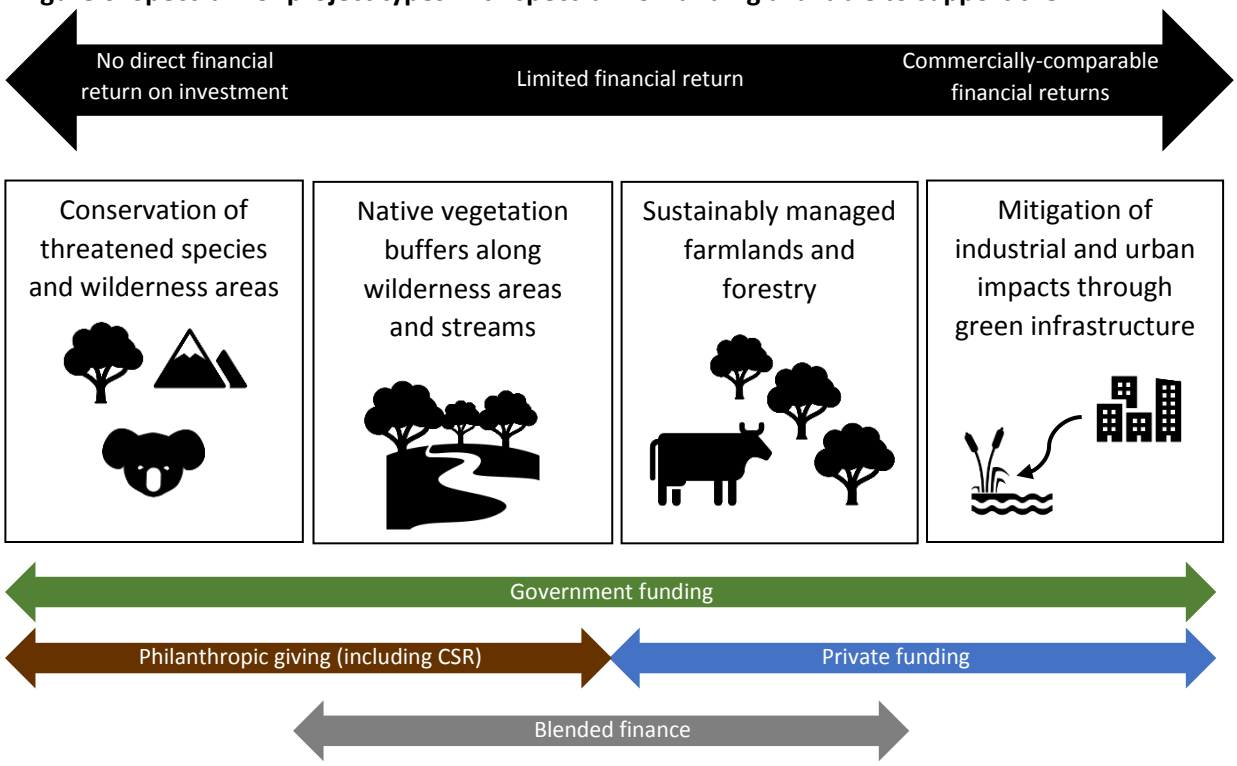
3.6 Relationship between project types and funding types

This paper addresses conservation finance models that can fund a wide range of conservation and sustainable land management projects. While there is no set formula as to which types of model can fund which types of projects, some common themes emerge.

Conservation and sustainable land management projects can be seen as sitting on a spectrum ranging from "pure" conservation in wilderness areas, right through to sustainably managed farms or forestry land and mitigation of industrial and urban uses. Also along the same spectrum, the type of finance available to support such projects generally ranges from governmental and philanthropic finance, through blended finance, ending in purely private finance. The movement along the spectrum essentially reflects projects' ability to provide a financial return, starting from zero (for threatened species conservation) onwards. Figure 6 represents this concept graphically.

It is also worth noting that the word "investment" can be used to represent a spectrum, from the supply of funding with no expectation of financial return (such as a government grant), to a more traditional type of investment where funding is provided with the expectation that a financial return will be provided (such as an investor funding an enterprise with an expectation that the enterprise will generate income from its business with some of that income being returned to the investor).

Figure 6. Spectrum of project types with spectrum of funding available to support them



While this spectrum does not apply universally, it illustrates the important point that certain types of finance are a better fit for certain types of projects, and that some types of projects – such as conservation of remnant habitat for threatened species – may never find private funding sources to support them. Importantly, blended finance – which contains a mix of government, philanthropic or private funding – can be adapted to span a range of project types. Within projects funded by blended finance, the balance as between the different types of finance may differ depending on whether a given market is nascent (more government/philanthropic funding) or more mature (more private funding).

4.0 Conservation finance approaches and models

The following section provides a general overview of the various approaches to conservation finance, including: how each approach works; the extent to which each has been used to finance conservation and sustainable land management; and, the advantages and disadvantages of each. In addition, this section provides a high-level assessment for: the potential of each conservation finance approach to be **scaled-up** and contribute towards the conservation finance gap; and, its relative **deployment complexity**.

Figure 7 provides a summary of the main conservation finance approaches discussed in this section. Each approach is grouped by the principal source of finance, and the expected outcomes of each source. For example: philanthropic sources (NGOs, corporate and individual donors) generally do not expect financial returns, but are focussed on conservation outcomes. Government, which typically does not expect a financial return, may disburse funds to conservation initiatives to manage and maintain public goods (e.g. forests and fisheries), support industry development (including the conservation finance sector) and the financial sustainability of existing nature-based sectors (e.g. tourism and primary industries), and, encourage the private-sector to invest in conservation through issuing grants (etc) to mitigate project risk. Private financing for conservation typically expects both financial returns and conservation outcomes.

While each main approach is presented separately here, in practice many of these approaches can be and are used concurrently. Indeed, it is often the presence of multiple funding approaches working together (**"blended finance"**) in one conservation project that make it a success. Different funding approaches can be leveraged against each other to bring together a conservation 'deal'. As such, when considering the approaches outlined in section individually, it is important to also view these approaches as potentially part of a package of options which can, where suitable, complement each other and serve to increase conservation finance flows. Blended finance, a **key enabling factor** (or tool), is discussed later in this section along with other critical enabling factors such as the availability of **environmental accounting** and **return-on-investment metrics**, **credit enhancement tools** and the provision of **technical assistance, market** and **capacity building** e.g. via government.

Figure 7 – Overview of conservation finance sources and main approaches

Source / Expectation	Conservation Financing Approach / Description		Section No.
Philanthropic giving *No financial return expected. Conservation outcomes expected*	**Donations by individuals**	A monetary gift to a cause or project by an individual donor, with no financial return/repayment expected.	*4.2.1*
	Voluntary surcharges	Places an added charge onto a retail, hospitality or lodging customer's bill on an opt-in or opt-out basis.	*4.2.2*
	Crowdfunding	The practice of funding a project by raising small amounts of money from many people.	*4.2.3*
	Transfer fees	An additional fee paid into a stewardship account, as part of a covenant transaction with a land trust.	*4.2.4*
	Corporate Social Responsibility	A voluntary effort by a corporation to take responsibility for its environmental and/or social impacts.	*4.2.5*
	Corporate-cause marketing	Where a for-profit entity agrees to donate a percentage of its sales or profits to a cause.	*4.2.6*
Government funding *No financial returns expected. Industry development, management of public goods, catalysing of private finance expected.*	**Grants**	An arrangement for the provision of non-repayable financial assistance gifted by one party to another.	*4.3.1*
	Environmental levies	A tax/charge levied against a good or service with the proceeds to being used to fund environmental outcomes.	*4.3.2*
	Favourable tax incentives	An offset or deduction that reduces the taxes owed by a person or entity.	*4.3.3*
	Environmental trust funds	An investment special purpose vehicle (and legal entity) setup to mobilize, blend, allocate, and manage funding for environmental purposes	*4.3.4*
	Ballot measures	Direct democracy instruments voters can use to shape public policy at the voting booth. Common in the US.	*4.3.5*
	Debt-for-nature swaps	An agreement that reduces a developing country's debt in return for the debtor-government to protect nature.	*4.3.6*
Private investment *Financial returns and conservation outcomes expected.*	**Bridge financing**	A temporary loan to fill a finance gap between the availability of permanent funding and the immediate need to purchase an asset, used in public/private sectors.	*4.4.3*
	Revolving land funds	Funds used to purchase, protect and then sell conservation land – proceeds are used for subsequent land purchases.	*4.4.4*
	Seller (vendor) financing	Where a seller accepts a portion of the sales price upfront, and future periodic payments/interest for the remainder.	*4.4.5*
	Program-related investment	Where a privately-run foundation provides a loan/equity on more favourable terms than commercial markets.	*4.4.6*
	Environmental credit markets	Putting a value on the benefits of an ecosystem service via monetizing these benefits as "credits", which may then be sold or traded on a voluntary or compliance market.	*4.4.7*
	Green bonds	A bond where proceeds are utilised for financing environmentally friendly projects or activities.	*4.4.8*
	Outcome-based models	Pay-for-success contracting where a government limits the contractor's losses in case projects are unsuccessful.	*4.4.10*
	Green product and service certification	Using a standardised framework to verify the environmental outcomes of a good or service.	*4.4.11*
	Impact investing in real assets	Real asset investments (e.g. real estate, water rights) that are managed using sustainability practices.	*4.4.12*

Note: References in this report to different sources of conservation finance are colour-coded throughout this report as follows: **Philanthropic Giving**; **Public Funding**; **Private Investment**.

4.1 Critical enabling factors and tools

Conservation finance, no matter whether used to directly or in-directly support conservation, can benefit from several critical enabling factors and tools which can serve to reduce project complexity and investment risk, and ultimately aid in it being scaled-up. In fact, in some cases the need is so strong that without these enabling factors in-place, conservation finance cannot be scaled-up e.g. environmental accounting and suitable financial and conservation return-on-investment metrics.

4.1.1 Blended finance

Blended finance uses a **mix of public, philanthropic and/or private investment.** The term does not refer to any particular blend of finances, but rather the fact of different finances having been blended together to support a project. Blended finance can occur at both the fund and project levels, and can be used to mobilize private capital and increase finance for private sector activities[38]. The blended finance market is currently worth approximately USD 50 billion globally, and is expected to double within 5 years and be dominated by small-scale funds of around USD 100 million[39]. Numerous examples of blended finance have been provided in this report e.g. funds raised by Lyme Timber and Farmland LP.

Blended finance can be used as a gateway finance mechanism when wanting to create a wider conservation finance shift from depending upon public entities, philanthropists and other grant giving organisations, to gradually being fully funded by the private financial market[178]. In becoming self-sustaining based on private finance, projects eliminate the risk of relying on ongoing philanthropic and public funding, the receipt of which may not be certain year-to-year. There will be some types of projects that will always rely on blended finance, but even partial private support of a project that was previously entirely supported by philanthropic or public funding will free up that philanthropic or public funding for other worthy projects.

Blended finance can also be an effective solution for accelerating the conservation finance market and correcting existing market failures[40]. A significant issue of conservation finance is that the risk to return ratio is often not seen as favourable by mainstream investors, especially when a lack of environmental accounting and environmental markets make generating or calculating a return particularly difficult[24,38]. Critically, blended finance can also aid in de-risking conservation finance projects through public funding and philanthropic giving supporting early stage ventures; potentially through new government-initiated institutions focused on stimulating investment in conservation and sustainable land management, such as the Australian Renewable Energy Agency (ARENA) and Clean Energy Finance Corporation (CEFC) did for the climate and energy sectors [10].

Below market debt and equity grants allow project developers to carve out investment tranches with lower risk-return profiles, which can then be funded by capital from public or philanthropic sources. This separation allows other tranches to have risk-return profiles that fit private investors' expectations, making it possible to raise funding for projects whose overall risk-return profiles might otherwise hold little appeal. Fund managers can then explore blended finance models via:

- **Early-stage grant making** by non-government organizations can fund the development of conservation projects. This not only reduces the amount of capital needed from subsequent investors but also lowers the investment risk. Grants from NatureVest, for instance, were essential to the development of the Stormwater Retention Credit Trading Program in Washington, DC;
- **Donor-funded guarantees** are an established mechanism exemplified by the US Agency for International Development's commitment to guarantee 50% of the losses on up to USD 134 million of loans by Althelia Ecosphere's Althelia Climate Fund; and
- **Junior debt or equity** has a lower priority claim to assets and earnings than other loans or securities. With this model, the Global Environment Facility used USD 75 million to mobilize more than USD1 billion of private capital for climate- and environment-related projects.

Lyme Timber Company LP – blending conservation finance approaches

Lyme Timber Company LP ('Lyme') is a privately held forest investment management organization that invests in and manages forests and rural land with important conservation qualities. Its portfolio of assets (worth around USD 650 million) located in the US and Canada consists of FSC and Sustainable Forestry Initiative certified production forests, high value conservation land, and, mitigation banks. These assets generate a variety of revenue streams, such as: timber harvesting; the sale of carbon credits; recreational leasing; the sale of mitigation (biodiversity) credits; and, sustainable energy supply agreements. Lyme also achieves returns through the sale of conservation covenants (often to government entities), and the final sale of the property at the end of its life. Lyme raises capital in pooled private equity funds in which it co-invests and serves as the general partner. Investors include: insurance companies, high net worth individuals and family offices, impact investors, foundations and endowments, and pension funds. Lyme's investment strategy targets land adjacent to protected areas (e.g. National Parks) to positively influence the degree of ecological connectively at the landscape scale.

Through this blended finance approach, Lyme has undertaken sustainable forestry practices on more than 30 properties across the US, permanently conserving more than 323,000 ha of land. For example, of a total of 70,000 ha of ecologically and economically important forest land in New Hampshire US, owned by International Paper: Lyme purchased around 60,000 ha in 2003, selling a comprehensive working-forest covenant for this tract to the state Department of Forests and Lands; and The Nature Conservancy bought the remaining 10,000 ha to establish a wildlife management reserve. Lyme selects investments based on both the respective financial returns and conservation outcomes, the latter being quantified in partnership with a number of NGOs and government departments through the use of Geographical Information System data and IRIS social and environmental impact metrics to streamline measurement and reporting for biodiversity conservation, sustainable land use, regional jobs creation, and water resource management (etc).

4.1.2 Public-private partnerships

Public-private partnerships (PPPs) are a long-term agreement or contract established between a government agency and private-sector entity that can be used to finance, build and operate projects, including conservation and sustainable land management projects[41,42]. PPPs can be used for various initiatives and range from simple to complex management or outcome-based contracts [42, 43]. Typically, it is the private partner(s) that finances and delivers the public services, with the private partner being compensated through unitary payments by the public sector or user charges[44]. A well -known example of a PPP is a private construction company partnering with a government agency to construct a new road; with the private company being compensated through road toll charges[45]. Several PPP examples have been provided by this report e.g. the DC Water environmental impact bond.

An advantage of PPPs in relation to conservation is that they provide the private sector with the conservation finance expertise of the public sector (who are the predominant funders of conservation finance currently), while allowing the private sector to provide improvements to environmentally related goods and services without using public financial capital[46]. Through mobilising private finance, a reduction in the dependency of the conservation finance market on public financing will occur. For PPPs to be used in a conservation context, the inclusion of non-government and non-profit organisations focused on conservation and sustainability is vital to ensure successful outcomes are produced by the partnership[47]. PPPs can be used by conservation groups and land trusts to harness both public and private investment in conservation finance, noting that these partnerships will generally be premised on a project generating an income stream.

4.1.3 Environmental and Environmental-economic accounting

A separate but related development that is critical for measuring the ecological outcomes of conservation and sustainable land management projects is the development of environmental accounts, and by extension, environmental-economic accounts. Environmental accounting typically focuses on the biophysical condition of a particular environmental asset (e.g. a river), while environmental-economic accounting takes this a step further to describe the benefits that these assets provide to society from the associated ecosystem services[48]. The latter can help us understand the relationship between the condition of the environment and economic activity, such as increased water quality and lower water treatment costs caused by, for example, planting riparian vegetation throughout a catchment[49].

The information produced through environmental and environmental-economic accounting can be an effective way to convey complex information to relevant managers and stakeholders, and used in decision-making processes. Businesses, conservation managers, indigenous land managers, farmers and developers alike could utilise environmental and environmental-economic accounting to improve the cost-effectiveness of their management practices and demonstrate the effectiveness of sustainability to shareholders, government agencies or finance institutions. These accounting processes may also assist in conducting environmental valuations and cost-benefit analyses, especially for finance institutions aiming to understand and limit their potential economic risks in a carbon and resource constrained world; therefore, potentially increasing their investment into environmental and conservation related activities.

Currently, there is no consistent national set of standards for assessing the condition of environmental assets in Australia. As a result, it is difficult to assess with precision what investment is required to achieve either a nationally or locally desirable state of the environment. As well as developing environmental-economic acccounting frameworks, a nationally consistent framework for measuring environmental condition must also be achieved. This has been recognised by the business community, including Dr Ken Henry (former Australian Treasury Secretary and currently NAB chairman) who stated:

> *"...there is considerable value in starting with a set of national environmental accounts that provides a clear picture of the physical state, or 'condition', of the environment, recording changes in various environmental resources, and an indication of proximity to dangerous levels of environmental damage."*[50]

One method for measuring environmental condition being trialled at the landscape and property scales is the Accounting for Nature framework[51]. This framework seeks to build biophysical accounts using a common unit of measure (an *Econd*) that describes the condition of any environmental asset (native vegetation, soil, rivers, fauna, estuaries, etc), at any scale. This approach also prescribes a set of standards for determining which indicators are suitable for measuring environmental assets at specific scales and landscapes. For instance, *Accounting for Nature* has been used to produce environmental accounts for: ten NRM regions across Australia e.g. the condition of soil in the Queensland Murray Darling Basin[51]; a 7,000 ha farm-scale account for agricultural fund manager Kilter Rural covering at this stage soil and native vegetation assets; and, the Tasmanian Land Conservancy's 11,000 ha Five Rivers Reserve. These examples of environmental condition accounting show the potential benefits to land managers in tracking the effectiveness of their management actions, and identifying and prioritising which locations or assets need more attention.

Building on environmental condition accounting, environmental-economic accounts can then be used for making valuations across the triple bottom line for both voluntary and statutory requirements. Many of the conservation finance approaches outlined in this report, particularly environmental impact bonds and impact investing in real assets, depend upon accurate economic and environmental valuation systems for ecosystem goods and services or natural capital for their models to be successful - developing reliable environmental-economic accounting practices and accounts can assist in achieving this.

Together, environmental and environmental-economic accounting represent a critical enabling factor for conservation finance, which could serve to collect meaningful data that can be used to support return-on-investment metrics. In April 2018, Commonwealth, state and territory environment ministers endorsed a Strategy and Action Plan for a common national approach to environmental-economic accounting. The Strategy commits to adoption of the United Nations System of Environmental-Economic Accounting (SEEA), agreement on consistent standards and methods for accounting within the framework of the SEEA. As discussed below, the private sector is also taking steps at an institutional level through the Natural Capital Protocol.

Several start-ups, such as the Brisbane-based company Ozius, are trying to increase the cost-effectiveness of environmental-economic accounting (and therefore access for the private sector) by blending cutting-edge technologies (Artificial Intelligence and machine learning, satellite monitoring and remote sensing) to reduce environmental-economic accounting transaction costs.

4.1.4 Third-party return-on-investment metrics

Evidence of both financial and non-financial returns is becoming a critical issue for impact investors.

Third-party metrics are often used by businesses to measure aspects that are outside their scope of understanding or measure in-house. Metrics are used by impact investors to ensure that their investing impacts align with their desired triple bottom line goals or desire to create change[52].

Standardised frameworks to help investors in assessing risk and to measure and benchmark conservation outcomes is critical to increasing conservation finance flows, particularly at an enterprise-scale (as opposed to at a macro level, which the common national approach discussed above is directed at). While there is not yet a standardisation of third-party metrics for impact investors, some leading metrics include:

- IRIS metrics **(Global Impact Investing Network):** Aims to assist in creating common terms, definitions and concepts to help impact investors understand and convey the triple bottom line benefits of their investments. This is done through IRIS, a catalogue of performance metrics that are generally accepted by both impact investors and the wider finance industry. IRIS metrics encourage collaboration between stakeholders to grow the knowledge networks. IRIS can help investors outline their desired impact investing goals and align these goals with the relevant metrics needed to measure success[52].
- Toniic metrics **(Toniic Institute):** A suite of tools to measure, monitor and report impact investing outcomes, and guidance on best practices to investors. These metrics are informed and driven by Toniic members who are all impact investors, assisting in aligning the metrics with current and developmental practices in the impact investing industry[53].
- iPAR metrics: Aims to act as a communication tool for impact metrics to connect investors with capital to entities or projects seeking capital. iPAR contains an impact investing digital database to enable reporting and analysis of investment outcomes across the triple bottom line. Through using this database, it is hoped that investors will be able to overcome the current shortfalls of investing metrics of: being too specific, devoid of context, having unrelated significance and missing targets/goals[54,55].

- The Natural Capital Protocol: A standardised framework designed to help generate trusted, credible, and actionable information for business managers to inform decisions through guiding the identification, measurement, and valuation of impacts and dependencies on natural capital - across a business' supply chain. In Australia, the Natural Capital Protocol has been promoted by the Australian Business & Biodiversity Initiative, a joint initiative between the federal government, business and NGOs.
- Social Investment Analytical Layer **(NZ Government, Social Investment Agency)**: The New Zealand government has created a social investment analytical data layer to help agencies understand the potential return on investment (ROI) before investing in a new service.

In addition to the emergence of third-party return-on-investment metric frameworks, several software platforms that allow the tracking of social metrics (which can potentially be customised for conservation finance) are being developed. This includes SocialSuite, which has been designed in Australia for the specific purpose of outcomes measurement, helping to streamline verification requirements when deploying outcomes-based financing models.

However, it should be noted that impact investing experts interviewed by the US Conservation Finance Network expressed a surprising lack of interest in most impact metrics on their own (aside from carbon sequestration)[2]. These interviews revealed that they instead indicated that they need honest assessments of risk, and to develop an understanding of how an investment opportunity can fit into a larger portfolio – the ability to also measure how a conservation-orientated impact investment can shape a large diversified fund is critically important.

4.1.5 Credit-enhancement tools

Pilot conservation finance projects are considered experimental, and therefore are likely to carry more risk than with more established transactional structures i.e. potential financial returns have not been validated, and are likely to be too small to justify private investment. Projects at this stage are typically funded by public or philanthropic grants, PRIs, impact investors, or a mix of all three i.e. blended finance. During the pilot phase, any tool that reduces risk and uncertainty helps to mobilize investment. Described below are several **credit enhancement tools** which can assist project implementers leverage capital they could not otherwise access (some of which are discussed elsewhere in this report)[10]:

- **Catalytic first-loss capital** - A range of credit enhancement tools which help to improve the recipient's risk-return profile by identifying a provider who will bear the first loss. The provider is often motivated by social and/or environmental outcomes or wants to demonstrate the commercial viability of investing into a new market. The capital is catalytic in that it enables the participation of investors that would otherwise not be able to participate. It includes instruments like grants, equity, and subordinated debt.
- **Credit ratings** - A formal evaluation of an entity's credit history and ability to pay back a loan.
- **Investment disclosure** - A related, but separate development to credit ratings is the rise of voluntary investment sustainability reporting and disclosure, such as through CDP. CDP s a global network of policy makers and investors who represent over USD100 trillion in assets. Each year CDP asks companies, cities, states and regions around the world for data on their environmental performance, and strategic business risks and opportunities (e.g. related to climate change), in order to use this data and insights to make better-informed investment decisions. For instance, the responses may alert them to companies which may be degrading natural capital in their supply chains – which would possibly constitute a riskier investment.
- **Letter of credit** - A letter from a bank, foundation, or other entity that guarantees payment on behalf of a borrower up to a stated amount for a specific time;

- **Loan guarantee -** An agreement where the provider (e.g. government) takes responsibility for paying back a loan if the borrower cannot.
- **Over-collateralization -** A process where a borrower puts up more collateral than is necessary to secure financing. These assets are used to absorb losses if cash repayment falls through;
- **Insurance mechanisms** - Any approach where the cost of potential loss is transferred to another entity in exchange for monetary compensation, or the premium;
- **Buyer-of-last-resort mechanisms** - An approach where an entity agrees to purchase the credits or benefits of a project, often at a minimum price, if no other buyer can be identified; and,
- **Reserve accounts** - Similar to a savings accounts. They are often provided in the form of grants and serve as a first-stop for any losses incurred.

4.1.6 Intermediaries

Structuring conservation finance deals can be complicated. Financial intermediaries and fund managers can play a critical role in structuring and brokering deals for a specific conservation project, and as part of a larger portfolio of managed funds. This includes blended approaches that may interest investors seeking financial returns in addition to conservation outcomes. Trained financial professionals can also connect project developers with investors who are qualified to evaluate the risks and returns associated with complicated investments structures often associated with conservation finance projects.

Intermediaries can help build capacity to identify and source bankable projects so that smaller value projects can be aggregated into commercial / feasible investments. For instance, firms such as GreenCollar and Corporate Carbon have successfully aggregated climate projects, making it possible for landholders to access finance from the Australian Government's Emissions Reduction Fund where individually their projects would be of insufficient scale to do so. In this way, intermediaries could also play a critical role in building scale in the broader conservation and sustainable land management sector.

Intermediaries play a critical role in conservation finance

The Open Space Institute's Conservation Capital Program aims to accelerate "the rate and effectiveness of conservation by providing grants and low-cost loans for land protection in the eastern United States and Canada". It acknowledges that "Land conservation in the U.S. is made possible by a complex blend of private investment and public sources, and yet the total contribution falls far short of meeting our land protection needs" and therefore fills several key intermediary functions, such as facilitating program related investments (PRIs) to design and administer capital grant and bridging loan programs, and with local and regional land trusts to structure and deploy successful deals and transactions. Since 2001, this program has sealed USD128 million in deals across US 13 states and 3 Canadian provinces, and contributed to the Open Space Institute protecting 500,000+ hectares of high-conservation value land valued at more than USD700 million.

Another intermediary is investment firm Encourage Capital, which is working with Blue Forest Conservation and the World Resource Institute to develop the Forest Resilience Bond – a public-private partnership that enables private capital to finance much-needed forest restoration across the western U.S, where investors provide upfront capital with public and private beneficiaries then make contracted payments based on the water, fire, and other benefits created by the restoration activities. As the financial intermediary, Encourage Capital is responsible for the fundraising, financial structuring, and execution of the Forest Resilience Bond.

4.1.7 Market development assistance

There is also a crucial role for government and NGOs, in collaboration with the private sector, to support the development and growth of a conservation finance market in Australia. This can be achieved through a variety of ways, including: the development of synthesis reports (such as this one) and roadmaps such as US Conservation Finance Network's Private Lands Capital for Working Lands Conservation market development framework); financial incentives to encourage the participation of a broader group of stakeholders in the market (see below for more on Impact Investment Australia's market readiness grant) and business innovation incubators; the formation of networks (e.g. the US Conservation Finance Network, see below) and holding of workshops and accredited courses; the production of useful tools and templates, such as CPIC's 2018 Conservation Investment Blueprints Development Guide and processes that help streamline the deal-making process e.g. a standardised checklist of factors to make a deal, including regulator frameworks, metrics, securitisation elements, legal frameworks and contract templates, decision-making trees and industry code-of-conducts (e.g. the Carbon Market Institute's Carbon Market Code of Conduct).

Building organisational capacity to receive impact investments

Impact Investment Australia's Impact Investment Ready Growth Grant provides organisations with grants of up to $100,000 for business, financial, legal and other capacity building support from providers to secure investment. As at March 2018, the program had supported 26 organisations in developing their investment readiness. The grant was established in collaboration with and seed-funded by NAB, in response to the recommendation made in the *Delivering on Impact* report to help catalyse the impact investment market in Australia.

The value of networks

As a diverse network of individuals and organisations from across the private sector, NGOs, government institutions and academia, the US Conservation Finance Network, based in the Yale Centre for Business and Environment, aims to advance "land and resource conservation by expanding the use of innovative and effective funding and financing strategies". It serves to support a growing network of public, private and non-profit professionals through practitioner workshops, intensive training courses, and information dissemination, to ultimately increase the financial resources deployed for conservation. Each year the Conservation Finance Network hosts its 5-day intensive Conservation Finance Boot Camp - a series of courses offering in-depth information about innovative land and resource conservation, covering the latest information on a wide range of conservation financing solutions and tools to "help participants explore the most relevant [finance] strategies for their work and organizational challenges". The model has shown to be very effective in supporting the development of the conservation finance sector in the US, and the Boot Camp regularly attracts international participants.

Such a model could be replicated in Australia, and the Australian Land Conservation Alliance (ALCA) recommends the development a formal Australian conservation finance network in the Recommendations section of this Paper (see Section 5.3.1).

4.1.8 Technical assistance

Technical assistance is critically important for scaling up conservation finance, particularly with respect to informing private investors of the opportunities and business models associated with conservation and sustainable land management projects. Technical assistance for conservation initiatives can be provided by both public and private entities as well as NGOs to support private landholders or conservation/environment groups undertaking sustainable practices[56]. For example, the United Nations, The Conservation Fund and the United States Department of Agriculture all provide technical assistance for conservation initiatives in the form of: best practice information; stakeholder engagement and facilitation practices; access to research and equipment; development of conservation plans and relevant triple bottom line training[56,57].

Technical assistance for conservation

The Conservation Technical Assistance program by the United States Department of Agriculture's Natural Resources Conservation Service encourages private land owners to create conservation plans to implement conservation initiatives with the aims of: reducing erosion, improving water quality and quantity; increasing storm, flood and drought resilience; enhancing habitats; and, creating long-term land sustainability across a variety of ecosystems and environments[56,58]. Conservation plans and initiatives are created through the Conservation Technical Assistance on a case-by-case basis, ensuring effective use of resources to create the most relevant and beneficial environmental outcomes for the landholder and surrounding environment[58].

Financial funding does not guarantee a conservation project's success; hence, technical assistance can be a great asset to conservation finance, as it can support conservation project developers in improving the environmental outcomes of their project while simultaneously ensuring the effective use of finances[59].

Technical assistance has proven critical for Australia's carbon market

In combination with understanding how carbon credits are bought and sold, the success of carbon markets largely relies on landholders, project developers, intermediaries, investors and government all understanding highly complex scientific terms, concepts and interactions related to biophysical and biochemical changes e.g. the amount of CO_2 sequestered in different types of native vegetation and soils under different conditions, and at different spatial and temporal scales. To this end, Australia's state and federal governments have shown extensive and sustained leadership in supporting programs (often delivered by NGOs, NRM groups and private businesses such as the Carbon Market Institute) that provide technical training and resources to carbon market stakeholders, and particularly those participating in the Carbon Farming Initiative and the Emissions Reduction Fund. An example of such a program includes the Australian Government's Carbon Farming Futures Extension and Outreach Program. Similar technical assistance initiatives should be set up for the conservation finance sector, which is arguably more complex than the carbon market, especially where blended finance is being deployed.

4.1.9 Communication and language

The use of technical terms and jargon is often stated as a barrier to many industries – and this is very applicable to both the conservation science and the finance industries. For example, the use of the word "Riparian" (vegetation) by conservationists has been shown to be the least understood word in a survey of 415 community members - only 3% understood it well, and 75% did not understand it at all[60]. Getting these two industries (and the many subsectors) to understand the *language* of each other – as well as what each sector can bring to the table substantively – is a critical challenge if the private land conservation sector is to draw the interest of private investment.

For instance, getting the finance industry to understand that there is money to be made from conservation and sustainable land management, is a key challenge that needs to be addressed. Likewise, when communicating to government and the broader community, it is of critical importance to highlight the job creation, economic and socio-cultural benefits (such as those associated with indigenous land management) provided by conservation and sustainable land management projects, particularly when seeking access to mainstream funding, e.g. The Nature Conservancy's successful bid for funding from a federal government grey infrastructure fund for its South Australian shellfish reef restoration project (see page 60 of this report). Moreover, the use of *highly politicised* and ideologically-entwined words, for example the word "environment", can be a powerful barrier to increasing support for conservation in the mainstream Australian community. And as an extension of this, the terms "sustainable land management" and "conservation" may not resonate with many people living and working in Australia's urban cities and towns – which contain 90% of the nation's population. In this sense, deepening the connection between urban and rural communities and areas of natural significance is a key enabling factor.

The development of communication strategies (including common and simple terms) and training programs to help these sectors to talk to one another to coherently and effectively discuss investment opportunities is a priority. CPIC's 2018 Conservation Investment Blueprints Development Guide provides some further advice on this. Another useful resource is the Brazilian Biodiversity Fund's (Funbio) comprehensive 2012 guide to Communication and Marketing for Environmental Funds.

Government, NGOs and the private sector (and particularly intermediaries, such as the Forest Resilience Bond development team) can play an important role in breaking down the language barriers to conservation finance by providing technical assistance and market development resources (e.g. online guides, courses, workshops and conferences, innovation incubators, networks) that serve to bridge the communications gap in this regard.

The importance of communication

The Forest Resilience Bond development team (Blue Carbon Forests, Encourage Capital and the World Resource Institute) acknowledged (Page 69) that the success of the Forest Resilience Bond "rests on the development team's ability to translate the language of forest restoration, ecology and hydrology, public resource management, and community engagement into the language spoken by investors: finance". It further notes (Page 100) that "one of the most interesting and challenging aspects of this project has been to learn the languages of such diverse stakeholders. In addition to navigating unique languages, understanding and discussing the intricacies of forest restoration and private investment requires substantial technical knowledge".

4.2 Philanthropic giving approaches

This section describes the main philanthropic conservation financing approaches, that is, those approaches that expect conservation outcomes but no financial return. Note that **grants** also play a significant role in philanthropic giving, particularly by charitable trusts and foundations. To avoid repetition grants are dealt with in the public funding section below (see Section 4.3.1), but they equally belong in the philanthropic giving category of conservation finance.

4.2.1 Donations by individuals

Individual monetary gifts are a long-standing form of support for conservation, often, but not always, made in anticipation of an income tax deduction (see Section 4.3.3 for further discussion of tax deductions). In particular a tax deduction may not be sought by some high net worth individuals (who have at least USD30 million), and individuals who provide donations via a charitable bequest i.e. when an individual/s may elect to transfer part of their estate to benefit conservation in the event of their death via a legal will[2].

Large gifts from Australian high net worth individuals have proliferated in recent years, though they appear to have supported social and educational causes rather than environmental ones.[61] Recently, there has been a rise in ultra-high net worth individuals, especially younger wealth (early 30s and 40s) who want to make a results-based philanthropic impact, including funding new technologies and innovative solutions to the planet's key environmental and social challenges. Ultra-high net worth individuals constitute just 0.03% of the global population (approximately 250,000 individuals), however hold 13% (around USD27 trillion) of the world's total wealth[62]. In Australia, there are reportedly around 3,000 ultra-high net worth individuals as of mid-2018[63]. Increasingly, however, there is also a transition of private wealth from one generation to the next (including in Australia), where the younger generations wish to maintain a philanthropic tradition.

Charitable bequests also present an opportunity to source conservation finance flows. However, while a survey by the Department of Family and Community Service found that nearly 70% of adult Australians made a charitable donation each year, only 7.5% of final estates included a bequest to a charity or other not-for-profit. Most Australians left their estate to their spouse in full, or tended to split the final estate equally between any children[64].

Figure 8 – Donations by individuals

Description			
A monetary gift by an individual donor to a conservation/environment-orientated cause or project, with no financial return/repayment expected			
Advantages	Disadvantages		
• High net worth individuals a growing source of philanthropic finance, including for conservation. • Individual donations may increase due to generational transfers of wealth currently underway.	• Large donations by high net worth individuals generally have not supported environmental causes in Australia. • Limited scalability.		
Current extent of use in CF	**Limited**	Common	Widespread
Potential to scale-up & meet CF gaps	**Limited**	**Moderate**	High
Relative ease of deployment	Complex	Moderate	**Simple**
Additional notes (if applicable)	Ultra-high net worth individuals potentially a moderately scalable source of conservation finance, especially as intergenerational wealth transfer grows. Limited scalability likely to remain for charitable bequests, due to preference to benefit families.		

4.2.2 Voluntary surcharges

Voluntary surcharges place an added charge onto the final cost of participating goods and services, which customers can choose to opt-out of (or the reverse i.e. opt-in), with funding being used to undertake conservation activities[65,66,67]. Though, a limited source of finance, voluntary surcharges raise millions of dollars around the world each year for conservation.

Local land trusts and community groups in nature tourism dependent communities are the most appropriate stakeholders to undertake the creation, implementation and monitoring or a voluntary surcharge scheme[67]. Larger public and private sector entities can use voluntary surcharges to raise money for conservation and other causes e.g. Qantas allows consumers to "opt-in" to buy carbon credits to offset their emissions. Voluntary surcharges can take on a number of forms[67], including:

- Programs that add a percentage onto the final bill (e.g. 1% surcharge on the cost of a dinner);
- Programs that add an additional flat fee e.g. $2 per night fee on a hotel room charge;
- Programs that include a single business (e.g. a large hotel chain), versus a program with many companies; and
- Programs of various durations e.g. short term (one-day), long term etc.

In the US, for instance, Oakshire Brewing has partnered with the McKenzie River Trust to give customers the option of being charged an additional one percent of the sales price for each beer. This is set aside for the protection of local watersheds in the territories where the beer is sold, helping to preserve the clean water that is so vital to the community and the beer.

An advantage of this approach is its versatility; voluntary surcharges can take the form of a certain percentage of a bill/invoice's total, or a flat-fee which can be used across varying industries, businesses and timeframes as well as geographical, political and socio-economic conditions[66,67]. However, it does not come without its challenges when scaling-up via government programs, even when an 'opt-in' voluntary surcharge design is chosen.

Several government entities in Australia have tried to introduce 'opt-in' voluntary surcharges in the past. For example, the Queensland Government established the Reverse-the-Effect program (as part of the *Ecofund* initiative), which allowed motorists to voluntarily pay a surcharge on their vehicle registration (which was matched by government funding) to support the planting of trees and effectively offset their vehicle's emissions. However, in these cases, this approach was considered highly political and led to the dismantling of the proposal.

The use of voluntary surcharges to support conservation in Australia, though generally small in value, have been widely used by government, non-government and private-sector organisations. The are no significant legislative, institutional or technical barriers to setting up a voluntary surcharge program in Australia, though such programs must adhere to the laws and guidelines established by the *Australian Competition and Consumer Commission, the Australian Securities and Investment Commission* and *Australian Charities and Not-for-Profits Commission* (for example), and adhere to accepted and verifiable accounting standards.

Figure 9 – Voluntary surcharges

Description			
Places an added charge onto a retail, hospitality or lodging customer's final bill. The customer can opt-out (or alternatively opt in).			
Advantages[66,67,68]	Disadvantages[67]		
• Allows for the inclusion of local businesses, large business, NGOS and government to engage in conservation finance. • The cost of financing is passed onto the consumer/public. • Education and information dissemination is a key advantage of these schemes e.g. land trusts educate businesses and their employees who in turn teach locals and tourists alike who may then take this information back to their home towns. • Evidence shows that customers rarely opt-out (and often chose to opt-in), knowingly choose to support conservation and other socially orientated causes. • Builds durable relationships with local business community.	• Time and capital-intensive to set up and maintain e.g. funding and marketing of scheme to businesses and customers. • Challenges for participating businesses to learn how to alter book keeping methods to include this new surcharge – this may deter some parties. • Need for clear marketing campaign to avoid confusion and distrust among customers. • Do not rely on government regulation to deploy, however do rely on public support. • Locals may become frustrated with always having to pay the surcharge or opting-out for every purchase they make. • Potentially highly political if being introduced by a government entity. • Will eventually reach "saturation" levels among businesses.		
Current extent of use in CF	**Limited**	Common	Widespread
Potential to scale-up & meet CF gaps	**Limited**	Moderate	High
Relative ease of deployment	Complex	Moderate	**Simple**
Additional notes (if applicable)			

4.2.3 Crowdfunding

Crowdfunding is the practice of raising funds for conservation (or other) projects through an open call to potential parties (usually via the internet) using financial mechanisms such as equity purchase (profit sharing), loans, donations or pre-order of products (to fund their production)[69,70]. Crowdfunding generally occurs through digital online websites such as GoFundMe or Kickstarter, that act as intermediaries between projects seeking donations and donors[71]. Crowdfunding, as a general finance mechanism, has gained significant momentum in the past years - it has become so popular that online sites have now been set up to help connect funders and projects related to specific causes. For example, WorthWild aims to connect environmentally conscious stakeholders that want to participate in the financing/support of the environment with projects seeking funding. Other examples include Conserve with Us and Ioby.

Despite the growing interest in this approach, as a way to finance conservation and sustainable land management, evidence suggests that crowdfunding has provided a relatively modest source of conservation finance to date. A wide ranging 2017 study of 577 conservation-oriented projects (across 72 crowdfunding platforms) revealed that just USD 4.8 million in conservation finance has been raised since 2009, with most of this going to research over on-ground conservation activities[72]. However, while the financial contributions to conservation may be modest, the other benefits of crowdfunding extend well beyond dollars and cents.

To date, crowdfunding has generated approximately AUD 1 million towards conservation in Australia[72].

The are no significant legislative, institutional or technical barriers to setting up a crowdfunding program in Australia (and in fact, it is quite easy using readily available platforms such as *Kickstarter*), though such programs must adhere to the laws and guidelines established by the *Australian Competition and Consumer Commission, the Australian Securities and Investment Commission* and *Australian Charities and Not-for-Profits Commission* (for example), and also adhere to accepted and verifiable accounting standards.

Figure 10 - Crowdfunding

Description			
The practice of funding a project or venture by raising small amounts of money from a large number of people, typically via the Internet.			
Advantages[69,70,71,73,74,75]	Disadvantages[71,74]		
• Allows donors to engage in a project via receiving updates about the project. • Crowdfunding can create a sense of 'doing good', catering for environmentally conscious individuals values, and enabling donors to take greater financial risks for projects they morally support. • High potential to spread information in a quick manner and generate thousands of dollars in donations in a short timeframe e.g. within days[76,77]. • Provides a potential financing mechanism for projects that may be considered too risky, small or immature by conventional funding institutions and instruments. • Enables simple electronic donations. • Doesn't require government intervention (e.g. funding, regulations) to deploy.	• Often, no tax deduction benefit. • As for other philanthropic approaches, charitable motivation/capacity is limited. • Unreliable in delivering donor-expected outcomes, as well as lack of accountability for how the funds are spent - if a donor discovers a supported project wasn't successful, they may be less likely to participate in future. • Limits personal connection between donors and projects due to all communications taking place online and via intermediaries. • Involves many small funding parties, which can limit the potential for large scale investors to engage. • Risk of fraud, misleading advertisements, and confusion around how crowdfunding platforms handle the money, has in recent years impacted the reputation (therefore sustainability) of this funding source.		
Current extent of use in CF	**Limited**	Common	Widespread
Potential to scale-up & meet CF gaps	**Limited**	Moderate	High
Relative ease of deployment	Complex	Moderate	**Simple**
Additional notes (if applicable)			

4.2.4 Transfer fees

Every conservation covenant has a "grantee" or holder of the covenant, typically a land trust, whose responsibility it is to monitor the protected land, and work with the landowner to ensure that activities on the land are consistent with the terms of the covenant – collectively known as "stewardship". Stewardship is an expense that each land trust must cover, and can sometimes be a significant organisational cost.

Stewardship payment transfer fees involve specific provisions written into a conservation covenant deed, or a fee deed, requiring the payment of a small percentage (or a specific dollar amount) to the land trust, from the proceeds of any sale of covenanted land. Transfer fees are intended to provide an ongoing income source that offsets the cost of stewardship of the covenanted property, and ideally, create some reserves for enforcement. They work particularly well when used in large subdivisions, where the turnover of land across the subdivision is relatively frequent. For stand-alone properties, land trusts may need to wait many years until the land changes hands and thus triggers the requirement to make a payment to the land trust from the proceeds of sale.

Transfer fees are used widely in the US. For example, the Jackson Hole Land Trust in Wyoming (US) began using conservation transfer fees in 1990 in collaboration with a developer, who created a large open space area within a project abutting Grand Teton National Park[68]. A transfer fee was applied in 2005, and generated a more than USD 1 million for the trust from around 60 transactions relating to the buying and selling of the lots within that development.

Transfer fees do not appear to have been used in Australia to support conservation. However, Homes for Homes uses a similar approach to raise funding for social housing. In this case, vendors of a registered property can make a tax-deductible donation of 0.1% of a property sale price at time of sale (e.g. $100 donation on a $100,000 property sale), which is then used by Homes for Homes to invest to increase the supply of social and affordable dwellings.

While there are no obvious institutional or technical barriers to setting up a voluntary transfer fee program in Australia, it is currently uncertain as to whether federal and/or state-based tax systems may inhibit their use.

Figure 11 – Transfer fees

Description			
Transfer fees are a revenue generating mechanism that pays a percentage of the price of a covenanted parcel of land to the land trust each time the parcel is on-sold.			
Advantages	Disadvantages		
• Creates ongoing (periodic) income stream for land trusts to monitor covenanted properties and support landowners. • Especially useful for large subdivisions where sales turnover is high.	• Legal mechanism to implement transfer fees in Australia is unclear (especially with regard to state stamp duties). • Actual amount generated at each transfer is relatively small.		
Current extent of use in CF	**Limited**	Common	Widespread
Potential to scale-up & meet CF gaps	Limited	**Moderate**	High
Relative ease of deployment	Complex	**Moderate**	Simple
Additional notes (if applicable)			

4.2.5 Corporate Social Responsibility

Corporate Social Responsibility (CSR) involves a voluntary effort by a corporation to assess and take responsibility for its environmental and/or social impacts. This includes providing finance for local conservation projects, with the intention of enhancing the corporation's social licence to operate, particularly with local communities where it may have a project in development. CSR financing for conservation can be channelled through a separately legally established corporate foundation structure (in line with local regulations under the control of the Australian Securities and Investment Commission, the Australian Taxation Office and the Australian Charities and Not-for-Profits Commission) or through an internally funded budget to support community, environmental and/or sustainability initiatives. A derivative of CSR, is that of "workplace giving", where a company may organise for a group of its employees to collectively fund a charity directly (instead of, or in conjunction with, the company).

CSR financing for conservation commonly involves corporations partnering with NGOs. For example: Conservation International has partnerships with Starbucks and Walmart; and, The Nature Conservatory (TNC) has partnered with Boeing, British Petroleum, Shell, Monsanto, and Walmart, among many others. Such partnerships have resulted in substantial flows of finance to the environment: Between 2007 and 2010 the Sierra Club accepted USD 25+ million in donations from the gas industry alone[78]. Corporations also benefit – the WWF/Coca-Cola campaign to "save the polar" bears increased Coca-Cola's sales by over one billion polar bear-adorned cans of Coke.

There are numerous examples of CSR programs supporting conservation, particularly where it is in the businesses' interests to conserve a particular resource on which they rely[79]. For example: "the Apple initiative" aims to conserve 14,500 ha of working forestland in Maine and North Carolina as part of an effort to ensure a steady supply of sustainably harvested timber for its product packaging; Walmart and NFWF established "Acres for America", which describes itself as "one of the most effective public-private partnerships" through protecting more than 520,000 ha of land; and, Coca Cola and the U.S. Forest Service partnership which recognises that Coca Cola's supply chain is dependent on healthy forests and the benefits they provide, and which is working to reach a water neutral goal through funding restoration work through the US Forest Service.

Corporates-NGO alliances reflect a growing interest in CSR donations to pursue environmental objectives. However, while there may be benefits for both parties, they may also pose reputational risks[80]. There are numerous cases where NGOs have been criticised by the public (such as WWF's partnership with Tasmanian salmon producer Tassal), particularly by their primary membership base, for associating with corporations who are perceived to have intentionally (or unintentionally) provided CSR conservation-related finance to greenwash their brand and boost sales.

It is also worth noting that in 2014, India enacted a law requiring businesses with annual revenues of over AUD 175 million to give away 2% of their net profit to charity. By 2016, several reports had estimated that annual CSR / charitable spending in India had increased from around AUD 700 million to approximate AUD 5 billion.

CSR programs that support the environment are relatively common in Australia, however there are no estimates on the dollars contributed nationally. CSR "workplace giving" has reportedly raised around AUD 250 million, across 3,100 employers, for more than 300 charities in Australia.

The are no significant legislative, institutional or technical barriers to setting up a CSR program in Australia, though such programs must adhere to the laws and guidelines established by the *Australian Competition and Consumer Commission (ACCC), the Australian Securities and Investment Commission* and *Australian Charities and Not-for-Profits Commission* (for example), and also adhere to accepted and verifiable accounting standards.

Specifically, potential users should be aware of the potential for "greenwashing" through corporate cause marketing programs, and the ACCC's guidance on green marketing as per the *Trade Practices Act* (Cth).

Figure 12 – Corporate Social Responsibility

Description			
A voluntary effort by a corporation to assess and take responsibility for their environmental and/or social impacts. Often done in partnership with an NGO.			
Advantages	Disadvantages		
• Could provide substantial funding to conservation. • Actions often go beyond what regulators or environmental groups require.	• Requires buy-in from company executive team. • Philanthropic source, limited scalability. • Potential for greenwashing, and potential prosecution by the ACCC. • Potential conflict of interest or reputational risks for NGOs taking funding from corporates.		
Current extent of use in CF	Limited	**Common**	Widespread
Potential to scale-up & meet CF gaps	**Limited**	**Moderate**	High
Relative ease of deployment	Complex	Moderate	**Simple**
Additional notes (if applicable)			

4.2.6 Customer engagement via corporate-cause marketing programs

This conservation finance approach involves a proportion (%) of sales being donated to a cause; a voluntary effort by a corporation to assess and take responsibility for their environmental and/or social impacts. There are several funding mechanisms to achieve this:

- The company donates a % of each product sold (known as a "commercial co-venture");
- The customer voluntarily (opts-in) donates an extra amount during the sales process and the company extends funding by matching the customer's donations by a specified amount; or
- The company donates a specific amount based on a customer's action taken such as a social media post or signing a pledge.

This approach to conservation finance is relatively common around the world. For example, the National Forest Foundation partnered with apparel outlet REI and Mastercard, whereby REI donates 10 cents per credit card transaction to conservation (via the National Forest Foundation) and raising up to USD 1 million per year.

This approach to increasing conservation financing can be relatively effective at the local scale, whereby local businesses, NGOs and the community can benefit from brand marketing. However, it has not been used extensively at a regional/national or global level, where it may have the most impact. Unless it is applied at these scales, its impact as a philanthropic funding source is limited. There are potentially significant challenges in achieving scalability, particularly with regard to ensuring the robust financial management of donations in line with social expectations and government regulations (include tax), particularly where multiple jurisdictions/countries are concerned.

Corporate-cause marketing programs are commonly used in Australia. For example, sales of the Cape Otway Prickly Moses Brewery's "Spotted Ale" beer supports the local Conservation Ecology Centre's efforts to conserve the tiger (spotted-tail) quoll in the Cape Otway region of Victoria.

The are no significant legislative, institutional or technical barriers to setting up a corporate-cause marketing program in Australia, though such programs must adhere to the laws and guidelines established by the *Australian Competition and Consumer Commission (ACCC), the Australian Securities and Investment Commission* and *Australian Charities and Not-for-Profits Commission* (for example), and also adhere to accepted and verifiable accounting standards.

Specifically, in the case of credit card transaction-related donations, potential users should be aware of the ACCC's recent ban on charging excessive payment surcharges on credit, debt and prepaid payments. Users should also be aware of the potential for "greenwashing" through corporate cause marketing programs, and the ACCC's guidance on green marketing as per the *Trade Practices Act* (Cth).

Figure 13 – customer engagement via corporate-cause marketing programs

Description			
A voluntary effort by a corporation to assess and take responsibility for their environmental and/or social impacts.			
Advantages	Disadvantages		
• Creates a marketing boost for participating business. • Is often tied to the business' supply chain.	• Philanthropic source, limited scalability. • Can reach "saturation" level in the consumer market. • Requires robust financial management of funds, and therefore may be subject to government regulations and guidelines. • Due to reporting requirements and fees, sometimes needs to be large-scale to be worthwhile.		
Current extent of use in CF	Limited	**Common**	Widespread
Potential to scale-up & meet CF gaps	**Limited**	**Moderate**	High
Relative ease of deployment	Complex	**Moderate**	**Simple**
Additional notes (if applicable)			

4.3 Public funding approaches

Public funding includes both the provision of monetary and technical support, as well as the creation of legislative and policy settings which can generate direct and indirect financial benefits (such as tax deductions). It should be noted that some approaches here **cross over with philanthropy**, in particular **grants** (which are made by both government and charitable organisations but are covered in this section) and **charitable tax deductions** – where they are generated by individual donations (see Section 4.2.1 above).

4.3.1 Grants

Grants are generally defined as an arrangement for the provision of non-repayable financial assistance gifted by one party to another, usually with the purpose of funding a specific project. The specific projects are proposed in the 'grant writing' process, whereby the party needing the funding (e.g. an NGO) writes an application seeking financial support from another entity, to try securing the grant funding. The issuing party then reviews all grant applications and determines successful candidates and upon issuance of this funding, the receiving party must ensure the money is used effectively to fulfil the goals of the specified project.

Grant programs can be designed in a variety of ways. The simplest designs involve applicants submitting applications for costed projects, with the funding allocated to the set of applicants best able to show how they will meet the grant criteria, up to the collective total of funding available. More complex designs can involve mechanisms such as "reverse auctions", where applicants nominate the price they are willing to be paid for a given project, with the grant funder allocating funding according to the projects offering the best value for money, based upon the grant allocation criteria.

Currently, grant funding is the most utilised funding mechanism for conservation finance and is usually undertaken by governments, NGOs or philanthropic entities donating directly to conservation groups and projects[33,35,81,82]. Grants from public funding bodies play a key role in funding projects that achieve a public good, often in cases where there is no opportunity to achieve a financial return, and thus no opportunity for private funding.

Grants can also be used to encourage innovation, skills training, business start-ups, private investment, project planning, and other actions which benefit society and the economy – enabling factors that are all critical to leveraging private sector finance[29,83,84]. For instance, authorized under the US 2002 Farm Bill, the Conservation Innovation Grants (CIG) program awards competitive grants to incentivise public and private grantees to work together develop the tools, technologies, and strategies to support next-generation conservation efforts on working lands and develop market-based solutions to resource challenges. Private-sector grantees leverage the federal investment by at least matching it. The Victorian government has also recently awarded Climate Change Innovation Grants to support the development of climate-related projects.

Typically, government grant programs are dependent upon recurrent funding, which is in turn dependent upon the current economic climate and government priorities. A way to avoid this constraint is for grants to be funded from an endowment, where the corpus (i.e. the original fund, plus any subsequent additions to that fund) remains untouched and grants are only funded from income earned on the corpus.

Past experiences in scaling-up climate finance have shown how important government grant making (amongst other public finance approaches) is in catalysing private sector finance into climate change mitigation and adaptation projects i.e. where managing the initial financial risk associated with complex projects is taken on board by government. This same strategy can apply to conservation and sustainable land management projects, where government may, for instance, provide a grant on the condition that it be used to attract further investment at a later stage of a project's development.

Government grants are the dominant form of conservation financing in Australia. Though the annual and historical value of these grants, across all levels of government, is very difficult to quantify, it is expected to be significant.

Though relatively simple to deploy, grants are always going to be limited by the fiscal condition of federal, state and local government budgets. Having said that, grants can play an important role to leverage further philanthropic giving or private investment. Direct government expenditure on conservation is also generally expected by the community due to the environment providing a public good, and can play a key role in protecting industry.

Figure 14 - Grants

Description			
An arrangement for the provision of non-repayable financial assistance gifted by one party to another, usually with the purpose of funding a specific project.			
Advantages[24,35,85]	Disadvantages[24,86, 87]		
• Easily understood, simple finance mechanism that most stakeholders in the conservation sector are knowledgeable on. • Fund projects that provide a public benefit where no financial return. • Not dependent on external economic factors e.g. markets/stock exchanges. • Help build the credibility and visibility of start-up or small to medium scale conservation projects. • Often critical in the early stage formation of capacity building related enabling factors e.g. skills training. • Can be used to incentivise private-sector investment and philanthropic giving through government taking on initial project financial risk (the riskiest stage of the project development cycle). • Where based on an endowment, can provide secure recurrent funding that is not subject to annual appropriations and current government priorities. • Can be performance based.	• Projects can struggle to find other funding once grant exhausted. • Government grant programs are typically dependent upon recurrent appropriations, which in turn depend on current economic conditions and government priorities. • The design of some programs has become more complex (e.g. reverse auctions), raising the barrier to participation for less sophisticated applicants. • Dependent upon the political climate, which can be volatile. • High competition, not performance-based. • Funds must be used specifically, as outlined in the grant criteria and proposal/application - this often limits the ways in which the receiving party can utilise the money, and therefore success of the project. • No returns or recapturing of financial capital, and thus not appealing to private corporations focused on capital retention or returns. • Some NGOs may lack the capacity to manage grant programs effectively.		
Current extent of use in CF	Limited	Common	**Widespread**
Potential to scale-up & meet CF gaps	**Limited**	**Moderate**	High
Relative ease of deployment	Complex	Moderate	**Simple**
Additional notes (if applicable)	The dominant form of conservation finance around the world. Significant opportunity to leverage private sector investment with government grants, particularly in early-stage investment models where there is higher risk (as opposed to more mature models for conservation finance, which may come in due course).		

4.3.2 Environmental levies

Environmental levies are a government tax or charge that can be imposed on various businesses, land owners or other entities to create revenue for environmental protection and conservation programs[88,89,90]. The aim of levies is to create positive change in behaviour or values or raise revenue relating to a specific cause; which in the case of environmental levies is environmental protection and conservation[91,88,90]. Environmental levies are versatile, and have been applied to a variety of entities by different levels of government, have different monetary payment requirements and timelines and raise revenue for different environmental issues [90]. Grants, fund matching, sponsorship, fees and donations can all be supplied or supported by government through the revenue created by environmental levies[92]. Governments are the main issuers of environmental levies, however there is potential for businesses to impose levies also (e.g. a plastic bag fee on consumers voluntarily without government mandates) [90].

Examples of environmental levies include: The Queensland Sunshine Coast Council's annual environmental levy of AUD 72 charged to each property within the region, which has allowed this council to spend AUD 10.4 million on environmental activities during 2016-2017 [89]. Of this, AUD 300,000 was given in grants to private landholders undertaking environmental initiatives (including conservation) on their property [89]; Another example is the Irish Government charging retailers a levy of 22 cents per plastic bag used by consumers that is charged at the point of sale [93]. The money raised is placed into an Environment Fund [93]; Guyana has an environmental levy of G$10 per bottle imposed on beverage companies that manufacture or import non-returnable bottles (bottles that can't be returned to the company by consumers in exchange for money); this levy must be paid by the companies and cannot be passed on to consumers[94]; The Fijian Government imposes an environmental levy of 6% on the total bill (excluding other taxes) tourists pay to certain service providers such as hotels, tour operators and rental car agencies [95]. The funding from this levy is used to fund environmental protection programs [95]; The New South Wales Government has imposed a waste levy that requires waste facilities to pay AUD 141.20/tonne in metropolitan areas and AUD 81.30/tonne in regional areas for waste received at their facility [96]. The proceeds of this levy are used to reduce the quantity of waste going to landfill and improve recycling and resource recovery activities [96]; The Queensland Government will also deploy a waste levy in the near future; The Australian Government has also introduced environmental levies, such as the Product Stewardship Levy, which is paid for by oil producers and importers as an incentive to undertake increased recycling of used oil; and, the Victorian Government Park Charge, which is collected once every year on behalf of the Department of Environment, Land, Water and Planning to fund Parks Victoria, Zoos Victoria, the Royal Botanic Gardens and the Shrine of Remembrance for the development, management and maintenance of urban parks, gardens, trails, waterways, and zoos.

In the US, municipalities, counties, conservation districts, and park districts levy taxes for parks and open space – the revenues may be used directly or to pay back bonds. This has shown to be a scalable approach. For example, in Illinois alone, since 1992 voters have approved 60 measures in 43 jurisdictions authorizing over USD 1.46 billion for land conservation. Appendix 2 lists examples of 22 different US States where levies are used to raise funds for conservation and related purposes. A number of these levies relate to real estate and provide a policy nexus between the source and use of the levy (i.e. land and land conservation). These types of levies or "hypothecated funding" provide an ongoing funding source which is not dependent on annual government appropriations.

Environmental levies are a common contributor to conservation financing in Australia, both at the municipal and state levels (e.g. through waste levies), and sometimes at the federal level. Though the annual and historical value of environmental levies collected is difficult to quantify, report ably around AUD50-100 million is being taken annually in the state of Victoria alone[97].

Figure 15 – Environmental levies

Description			
A tax or charge levied against a good or service (e.g. waste collection) with the proceeds to being used to fund environmental outcomes.			
Advantages[88,90]	Disadvantages [88,90,98]		
• Can be used to fund other finance instruments such as grants, and contribute towards environment funds. • Favoured amongst politicians as they are simple and generate price signals to create positive change in behaviours. • Demonstrates government commitment to environmental protection. • Easily creates revenue. Projected revenue can be calculated with relative certainty, especially in the case of property-based environmental levies. This can help governments better manage their budgets. • Cheaper to use than user charges in certain situations. • Environmental levies can have the characteristics of both taxes and user charges, increasing their versatility. • Incentivises environmental stewardship amongst levy payers. • Provide an opportunity to connect with community on locally important conservation projects.	• Dependent upon political conditions to produce meaningful results. • Large and sudden price signals can create high costs to other sectors of the economy. • Potential for levies to not be in proportion to the goods and services received. • Costs associated with administration, enforcement and monitoring. • Limited source of finance - there is only so much environmental tax members of the public are willing to pay.		
Current extent of use in CF	Limited	**Common**	Widespread
Potential to scale-up & meet CF gaps	**Limited**	**Moderate**	High
Relative ease of deployment	Complex	Moderate	**Simple**
Additional notes (if applicable)			

4.3.3 Favourable tax incentives

A favourable tax incentive "is a provision of the tax law that provides a benefit to a specified activity or class of taxpayer that is concessional when compared to the *standard* tax treatment that would apply", which "can be provided in many forms, including tax exemptions, tax deductions, tax offsets, concessional tax rates or deferrals of tax liability"[99]. Generally, favourable tax incentives use some form of tax relief to increase the flow of capital to projects or transactions that deliver outcomes which serves the public interest. This includes for conservation, where favourable tax incentives can be used to encourage conservation practices through reducing the tax burden on those generating conservation outcomes, or raising the costs of producing or consuming items that contribute to environmental degradation (e.g. through a carbon tax), and have been shown as an effective incentive to encourage sustainable/conservation practices[10,13,100,101] .

Incentives and credits can equally apply to corporate and individual taxpayers. Tax incentives are a form of government environmental subsidy. The United States Environmental Protection Agency (US EPA) states that environmental subsidies are most often used to produce conservation impacts in the agricultural, development, waste and energy sectors[102], and it estimates that globally, governments provide subsidies to agriculture worth USD 1 billion per day to create better land-use practices and environmental benefits[103]. Though favourable taxation incentives and government grants are both considered subsidies, the major difference between them is the process for obtaining the benefits. The benefits of taxation incentives, by their very nature, are obtained under the tax system. For a tax incentive to be attractive and potentially change the behaviour of the targeted audience, the transaction costs of obtaining the benefit should be low. There are several types of favourable tax incentives, utilised in Australia and internationally, as described below.

With regards to conservation, numerous options for using subsidies (other than tax incentives and grants) have been widely explored and used around the world. Subsidies are often criticised by economists as mechanisms which distort market allocations. However, they may also assist in addressing 'market failure', such as that which often underpins the undersupply of resources going to support landscapes and biodiversity (both considered public goods)[29]. The other major subsidy options are discussed below.

Importantly, taxation incentives can be used with a combination of other finance mechanisms to catalyse investment in conservation. In the US conservation partners often call upon both taxation incentives and other approaches discussed in this paper to bring a project to fruition.

The use of favourable taxation incentives to effectively increase conservation finance flows in Australia has been the subject of numerous reports [29,104,105]. In summary, these reports have all come to the same conclusion: that the current tax arrangements at the federal, state and local levels generally favour agricultural production while providing a disincentive for landholders to invest in managing land for conservation, including permanently protecting their land via a conservation covenant; and, that tax incentives could be given to landowners of covenanted land as a way incentivise and increase the rate of private land conservation.

Any changes to Australia's tax system to incentivise conservation outcomes will likely require some level of government to forego tax revenue (at least in the short-term) – as a policy response that recognises the valuable public benefits that such changes may generate[105]. In a fiscally challenging environment[36] any change to the tax system will be a tough (political) sell across any level of government. This is evident in the current national debate surrounding individual and corporate tax cuts. This debate occurs despite that fact that Australia's total taxation, across all levels of government, is 27% of GDP - significantly lower than the OECD average of 34%, Canada (44%), the UK (34%) or New Zealand (33%)[229].

Any efforts in this area will likely involve cross-sectoral support for conservation outcomes that such legislative changes could be expected to generate. While challenging, those efforts could be well worth it. In the US, it is estimated that favourable tax deductions for covenanted land played the key role in catalysing significant growth in the number of local, state and national land trusts operating in between 2000 and 2010[106,107]. Consequently, during the same period, land conserved by these trusts doubled from around 10 million to 20 million hectares. The Nature Conservancy alone protected 7 million hectares by 2008, at an up-front cost of USD 7.5 billion[108].

Charitable tax deductions

A charitable donation is a gift made by an individual or an organization to a non-profit organization, charity or private foundation. The tax-deductible value of the incentive is based on the organisation/individual's tax rate versus the donation amount, for example, a AUD 1 million gift multiplied by a tax rate of 30% would be AUD 300,000, which can be deducted from the income on which tax would otherwise be payable. Tax-deductible charitable donations can take many forms when concerning conservation: cash; securities (where the charitable deduction equals fair market value, but the donor doesn't need to recognize gain on appreciated securities - one of the biggest sources of conservation finance in many parts of the world, including the US and Australia); land; and land covenants (discussed below).

In Australia, tax-deductible cash donations are the most common form of charitable donation. However, whether the "tax-deductibility" status provides a strong incentive for individual Australians to make philanthropic donations to charities is debated. According to the Productivity Commission, this behavioural effect is poorly understood[109]. A 2005 survey conducted by the Giving Australia project found that just 1% of respondents indicated that tax deductibility status had impacted their giving of donations[110]. The report also found that "participants mostly agreed that tax incentives did not prompt giving", however for some groups of participants, especially "wealthy individuals", taxation incentives were important in increasing donation amounts. Contrary to these results, a similar study in Canada suggested "that tax incentives [do] have a significant effect" on donations[111]. Even so, Australian's gave approximately AUD12.5 billion dollars in charitable donations during FY2016-17[112]. Though difficult to quantify, around 7% of all philanthropic giving is estimated to go to "animals and the environment" annually[113].

Income tax deductions for covenanted land

Taxation laws can incentivise permanent protection of private land by allowing the landowner to deduct against their taxable income an amount equalling the value by which their land value has decreased by placing a conservation covenant on title. A significant program of this nature exists in South Africa (see below). In the US, this is known as "donating an easement" (covenant) to a land trust, because the landowner has effectively donated the development rights lost by placing a conservation covenant on the land's title. As noted above, this positive tax treatment of covenanting land is regarded to have significantly advanced private land conservation in the US. The US version of this tax benefit was first enacted temporarily in 2006, then was made permanent in 2015. This valuable benefit allows a donor to deduct up to 50% of his or her annual income each year, which can be carried forward for up to 15 years. Farmers and ranchers can deduct up to 100% of their income for permanently protecting their farmland or ranch[114]. This approach supports farmers to ensure the viability of their enterprise for future generations.

South Africa's significant tax incentives

In 2015, South Africa introduced its Fiscal Benefits Package – a remarkable amendment to its tax law that enables a landowner permanently protecting their land to deduct the entire value of their land – not just the lost value due to the protection as is permitted under other countries' laws – against their income over 25 years. Specifically, section 37D of the country's Income Tax Act allows a landowner who declares their land as a Nature Reserve or National Park to deduct 4% of the value of that declared land from their taxable income each year for 25 years. This is a world-leading development in reforming national tax laws to benefit and incentivise private land conservation.

The establishment of 'split-receipting' for ecological services/gifts in jurisdictions such as Canada (via its Ecological Gifts Program) is one method of formally recognising the public interest of private conservation. Under this approach, a landowner can receive a payment for permanently protecting environmentally sensitive land (receipt one) and at the same time receive a tax deduction spread over five years for any unremunerated value of the 'land use and development rights' effectively given up (gifted) in establishing permanent protection (receipt two). The Canadian approach incentivises the establishment of covenants and their transfer to charities at below the regular market value of the land. This enables a landowner selling a conservation property at less than the market value to have the remaining balance deemed to an "ecological gift", and claimed as a tax deduction. Using this mechanism, Canadian land is secured for strategic conservation/ ecosystem services, and the properties on-sold to conservation-minded individuals or organisations that may need to acquire them e.g. water authorities or local governments[104].

The US version of split-receipting is the "bargain sale". In the context of conservation financing, a bargain sale refers to the sale of land for less than its fair market value to a NGO or land trust to serve the public good through outcomes/benefits such as conservation, water provision, recreation and amenity. A bargain sale, like split receipting, allows for a portion of the land value to be is sold, and a portion is donated. The landowner is then able to take a charitable deduction determined by the difference between the sales price and the appraised fair market value against his or her income tax return – the so called "bargain sale"[115].

Under the Australian federal tax system, a taxpayer who enters into conservation covenant with an accredited land trust can claim an income tax deduction over 5 years, equal to the value by which their property has decreased upon entering into the covenant[116]. While this is a beneficial provision in theory, it is rarely used in practice because of a critical limiting factor: the taxpayer must not receive any money, property or other material benefit for entering into the covenant. Thus, where a landowner enters into a covenant as a component of participation in a market-based, grant or incentive program, an income tax deduction is not available. Such payments are increasingly common for landowners as a means of partially compensating landowners for the lost potential uses of the land that covenanting entails. This means that those are entirely disqualified from claiming a deduction, even if the benefit received is far less than the lost market value of the property[117].

This also means that Australian's tax system does not allow for split receipting or bargain sales. As noted, as soon as the landowner receives any benefit associated with the covenanting of their land, that landowner is automatically disqualified from the tax deduction provisions of the federal tax law relating to conservation covenants. These perverse results could be corrected with a relatively simple amendment to the federal taxation law which allows for deductions to be applied up to the value of the uncompensated decrease in land value that the covenant results in. Consideration could also be given to extending the period against which deductions may be applied e.g. from the current period of 5 years, to 15 years.

It should also be noted that several more substantive and innovative proposals were put forward to amend the tax system and encourage investment in conservation and the sustainable land management through reducing tax rates.
For instance, the Henry Tax Review in 2010[118] recommended that a new and more efficient land tax be levied on all urban and rural property owners in Australia, which the Wentworth Group of Concerned Scientists strongly advocated for as a way to raise $3 billion per year to pay farmers and indigenous landowners to restore and maintain their environmental assets for the benefit of the community[119]. The Henry Tax Review also recommended targeted grants programs to increase sustainable land management.

Tax credits & tradable tax credits

Tax credits are a tax incentive that allow taxpayers to offset a prospective tax liability with a credit to the value allowed by the relevant governmental authority. 16 states in the US currently offer some form of tax credit for conservation covenant donations.

Even more powerful than simple tax credits are tradable tax credits, which allow a taxpayer with no tax liability to sell a tax credit to a taxpayer with tax liability, who can then take advantage of that tax credit. [120] Transferable tax credits are offered in 5 US states (Virginia, Virginia, Colorado, South Carolina, and Georgia), which means that if a landowner donates a covenant but doesn't owe enough tax to use the full credit, he or she can sell (or give) the remaining credit to another taxpayer, generating immediate income.

Tradable tax credits have been used for a number of conservation programs in the US, such as the Scenic Rivers Program. Tradable tax credits have been found to be a very strong method for incentivising private land conservation – in the US state of Colorado alone, around USD 1 billion in tax credits have been issued since 2000 which has resulted in the permanent protection of 0.7 million hectares of conservation land[121].

Australia's federal income tax law allows for neither simple tax credits nor tradable tax credits to be granted to a landowner who permanently protects their land. While tax credits may exist at the state or municipal level, there do not appear to be any examples in Australia of tradable tax credits.

State-based land tax concessions & exemptions

State-based land tax concessions and exemptions are another tool used commonly to incentivise private land conservation. States may, for example, designate a special tax or other revenue source expressly for the purpose of open space conservation and/or stewardship. Examples include: sales tax, deed recording fee, real estate transfer tax and state lottery. May fund directly or through repayment of bonds.

Land is subject to land tax under numerous state laws in Australia, unless the landowner is eligible for an exemption. Exemptions apply to a range of land uses, which typically includes a taxpayer's principal place of residence and land used for primary production.

However, the State-by-State treatment of covenanted land is inconsistent. In NSW, Western Australia and Tasmania covenanted land is exempt from land tax, and covenanted land in South Australia is partially exempt. By contrast, in Victoria, for example, covenanted land is subject to land tax. This leads to the perverse public policy result that Victorians who place their land under a covenant, and cease primary production, in combination with the opportunity cost of lost income the landholder will also incur a significant increase in tax liability at the state level. By not having an exemption, Victoria (for example) is lagging the legislative trend and is out of step with contemporary approaches to conservation that promote creative financial incentives.

Municipal and local government taxes incentives and penalties

In around 40+ US states, owners of agricultural land, forestry and/or ecologically sensitive land may qualify for conservation use assessments, which if successful, lower their municipal property taxes. Some states go a step further and collect penalties if the owner then converts the property to an unqualified use, or converts it before the term of the assessment expires. These penalties are often put into dedicated conservation funds. A key advantage of this mechanism is that no funding is required to change hands. The preferential assessment of rural land has become a central feature of local property taxation across the US. This provides an incentive for would-be developers to forego potential urban developments in favour of a devaluation of their land's overall value (due to the existence of a conservation covenant, often in combination with light agricultural use) and lower annual state and/or municipal taxes. As a result, millions of hectares of rural land are now assessed far below fair market value for purposes of reducing local property taxation in return for preserving agricultural and forestry properties "for their open-space amenity values"[122].

In many local councils around Australia, covenanted land may also be subject to municipal rates reductions. For example, in approximately 50% of Victoria's Local Government Areas, municipal rates including service charges (cover the costs directly associated with the provision of council services e.g. waste collection) and general rates (providing budgeted revenue) may be reduced for covenanted land[104]. However, these reductions vary significantly and are subject to the annual budget considerations of each council.

There do not appear to be any Australian municipalities that impose a penalty for converting conservation land to an unqualified use. However, those municipalities that do not offer preferential rates treatment create a disincentive to landholders wishing to protect the biodiversity of their land in perpetuity. Given the disparate nature of municipal application of rates incentives, state action would likely be required to harmonise municipalities' treatment of protected conservation land.

Rebates

Rebates are essentially a partial refund to someone who has paid an amount for tax, rent, or a utility that as a matter of public policy and in recognition of the public contribution is reduced or refunded. Rebates can achieve conservation and sustainable land management outcomes via several ways: differential rating based on different land use zones; remission or exemption from rates; refunding or discount of a proportion of the rate payable on land; and, the alteration of land values through the valuation system. For example, Queensland's Ipswich City Council provides landholders access to rebates as a financial incentive to control environmental weeds in the council area. Another example is in Tasmania, where Kingsborough Council provides a $6 per hectare rate rebate (capped at $600 per property per year) to land subject to a conservation covenant. In South Australia, as part of a recovery plan for the Pygmy Bluetongue Lizard (which is listed as "endangered" under the Commonwealth's EPBC Act, and under sch 7 of South Australia' *National Parks and Wildlife Act 1972),* landholders participate in a Sanctuary Scheme, a voluntary agreement which recognises the landholder's commitment to managing the land for conservation purposes, and which awards rebates for doing so[29].

Rebates to incentivise conservation and sustainable land management are relatively common in Australia.

Regional development incentives

Some conservation projects generate economic benefits (e.g. jobs) for the region communities. In such cases it may be possible for those projects to take advantage of tax incentives and other programs designed to encourage economic development in certain (and often economically depressed) areas prioritised by government. Two relatively recent examples in the US include the New Market Tax Credit (NMTC) and the Opportunity Zones funding programs.

New Market Tax Credits

The US Federal Government's NMTC program[123], administered by the US Department of Treasury, helps disadvantaged areas by providing federal income tax credits to encourage job-creating investments. Tax credits accrue to lending entities, such as Community Development Financial Institutions[124]. The NMTC program can be linked to land conservation purchases by offering low-interest financing to companies in exchange for conservation covenants, on the proviso that there are local employment and sustainable development benefits. The program seeks to leverage private-sector funding, and leveraged private investment at a ratio of 8:1 relative to federal funding provided. In 2016 alone, USD 7 billion was allocated under the NMTC program.

While the New Market Tax Credits program has leveraged significant private-sector investment (see box text), there are a number of barriers to its use, such as requiring: a high level of sophistication and specific qualifications to utilize; a business to have a substantial presence in a low income community which generates revenue and jobs; a lender willing to loan outside of "traditional" NMTC areas of commercial real estate, community facilities and manufacturing; a treasury-imposed limitation in the number of tax credits available; and, the program design catering towards larger (USD 10+ million) transactions.

The New Market Tax Credits Program in action

The NMTC model has already leveraged significant private investment in conservation in the US. For example, the US NMTC Program supported the Lyme Timber Company's purchase of 9,000 ha surrounding the town of Grand Lake Stream, Maine. This transaction not only promoted sustainable forestry in the region, but also preserved the way of life for the residents who support themselves as registered Maine guides, loggers, and truckers, and by running lodges and sporting camps[1]. This project received USD 19.8 million under the NMTC Program. Bangor Savings Bank provided both debt and equity for this deal, while U.S. Bancorp Community Development Corporation provided equity and Lyme Timber Company provided additional debt for it. The Northern Forest Centre, which played a key role in the Grand Lake Stream project, has used the NMTC program to facilitate more than USD 80 million in tax credit finance to acquire 52,000 ha of working forestland and investments in recreation and tourism in the region. Another example is that of NMTC being used to support conservation of 13 Mile Woods.

Opportunity zones funding program

This new community development program was established by the US Congress (via the *Tax Cuts and Jobs Act 2017*) to encourage long term investments in low-income urban and rural communities nationwide. The program provides a tax incentive for investors to re-invest their unrealized capital gains into Qualified Opportunity Funds that are dedicated to investing in "Opportunity Zones" of distressed communities designated by the chief executives of every U.S. state and territory[125]. The immature concept of using opportunity zones to guide additional finance into conservation and sustainable land management projects is very much a new idea in the US, so it remains to be seen how effective it will be in this regard.

There is over USD 2 trillion in unrealised capital gains in U.S. stocks and mutual funds held by entities and individuals across the US. Currently, the proceeds from the sale of such investments would be taxed as a capital gain at an effective rate of 20%, plus a 3.8% surcharge[125]. This new program offers an opportunity for investors to roll unrealized financial gains into an Opportunity Fund, and temporarily defer federal profits taxes. An investor who retains an investment for seven years will pay only 85% of the capital gains taxes that would have been due on the original investment. If the investment is held beyond 10 years, the investor permanently avoids capital gains taxes on any proceeds from the Opportunity Fund investment.

Though still in an early stage of development, this potentially offers a significant opportunity to increase conservation finance flows through its underlying provisions to deliver positive and sustainability orientated benefits to distressed communities, including through Qualified Opportunity Funds targeting investments in regenerative agriculture to meet increasing consumer demand, while improving the health of agricultural soils[126].

Opportunities for green infrastructure conservation financing in regional communities

Since European settlement, around 99.95% of Australia's shellfish have been lost due to overharvesting, disease and damage by boats and fishing activities. Critically, shellfish provide important ecological functions that support fisheries productivity, marine habitat and water quality benefits. A new program led by The Nature Conservancy is rebuilding shellfish reefs in key locations nationally, commencing with a 20-hectare restoration project on South Australia's Yorke Peninsula[127]. The project won AUD 1 million from the Australian Government's former *National Stronger Regions Fund* to rebuild a key piece of 'green infrastructure' for the local community, and will create up to 25 full time jobs in construction, aquaculture, tourism and the service sector with long-term outcomes including "boosting fish numbers by restoring highly productive habitat which is critical for the future prosperity of Yorke Peninsula coastal communities that have steadily developed tourism as an essential component of their economies" [128].

The federal and State governments of Australia have a few programs to benefit economically depressed regions (including rural communities) which can be likened to the US concept of "Opportunity Zones". For example, the AUD 642 million *Building Better Regions Fund* (the successor to the *National Stronger Regions Fund* mentioned above), which will invest in projects "located in, or benefiting eligible areas outside the major capital cities of Sydney, Melbourne, Brisbane, Perth, Adelaide, and Canberra" and aim to create jobs, drive economic growth and support strong regional and remote communities across Australia by funding infrastructure and community investment projects".

Historically, these types of funds have not been used to support conservation projects, although The Nature Conservancy's shellfish reef project (see box above) has been able to successfully tap into infrastructure grant funding. Currently, unlike for Opportunity Zones in the US, regional development programs such as the *Building Better Regions Fund* do not offer favourable tax – if this was to change, then potentially this could be a powerful way to incentivise and leverage private sector investment in region communities, and green infrastructure projects such as The Nature Conservancy's shellfish reef project.

Figure 16 – Favourable tax incentives

Description			
A provision of the tax law that provides a benefit to a specified activity or class of taxpayer that is concessional when compared to the *standard* tax treatment that would apply.			
Advantages[29, 84,100,101,129]	Disadvantages [84,101,103,130,131,132]		
• Governments bear the costs, private-sector entities, NGOs and individuals benefit. • Easily understood finance mechanism by most stakeholders. • Possible for public and private collaboration in development. • Benefits can be passed onto many stakeholders e.g. the public (reduced cost of goods and services), private companies (reduce costs of production) and governmental agencies (political goodwill). • Enhance utilisation of conservation measures by parties that would otherwise not have the financial means to participate. • Can be used in situations where taxes are too difficult to impose, or where it is difficult to allocate responsibility for conducting a conservation measure. • Relatively straight forward incentive to access. • More flexibility in operation than other direct incentives. • The individual, rather than the government, determines how to best expend funding therefore more efficient allocation of resources over other direct subsidies • Can be a significant determinant of investor behaviour • Can be leveraged to encourage private-sector investment in conservation and sustainable land management • Doesn't involve cash transfers.	• There are often caps on deductibility in any given year. • Rely on government foregoing tax revenue, therefore putting added pressure on the budget (can be a tough sell politically). • Taxes rely on strong governmental and societal support and monitoring to be introduced into parliament and to produce positive long-term outcomes once implemented. • Depending on the incentive, can be very complex to implement. • Can be difficult for individuals to quantify the net benefit to their financial position, especially for deductions (as opposed to rates reductions). • Distortion of markets may occur through artificial creation of supply/demand, and limiting access of certain parties to the benefits of the subsidy. • Measuring success is difficult - if the issuer cannot effectively determine if the subsidy was successful, this may produce reluctance to create similar tax subsidies in the future. • Potential inefficient transfer of benefit to intended recipients, especially for government subsidies where the value of the tax subsidy may fail to transfer to the target audience.		
Relative ease of deployment	Complex (depending on the extent to which the tax system is to be changed).		
Current extent of use in CF	Limited	Common	**Widespread**
Potential to scale-up & meet CF gaps	Limited	**Moderate**	**High**
Relative ease of deployment	**Complex**	Moderate	Simple
Additional notes (if applicable)	Widespread internationally, limited in Australia.		

Figure 17 – Favourable tax incentives (specific overview for each major type)

	Overview/extent of use	Advantages	Disadvantages	Scalability	Difficulty	Example/s
Charitable deductions	A charitable donation is a gift made by an individual or an organization to a non-profit organization, charity or private foundation. Includes a reduction in the amount of tax a landholder might pay through deductions that are related to lost income from putting a conservation covenant on an area of land.	• See *Figure 15*. • Charitable tax deductions already exist for individuals giving cash to an NGO.	• See *Figure 15*. • Charitable tax deductions are difficult to access in Australia when permanently protecting land for conservation.	Moderate	Simple Moderate	South Africa's Fiscal Benefits Package allows a landowner permanently protecting their land to deduct the entire value of their land – not just the lost value.
Tax credits & tradable tax credits	Allows a taxpayer to create a tax credit for a spending on a conservation project, and if they have no tax liability, sell the credit to a taxpayer with a liability, who can then take advantage of the tax credit.	• See *Figure 15*.	• See *Figure 15*. • Tradable tax credits do not exist in Australia.	Moderate	Moderate	US Scenic Rivers Program.
State-based land tax concessions & exemptions	Where a landholder receives a state-based tax concession or exemption for land under conservation covenant.	• See *Figure 15*.	• See *Figure 15*.	Moderate	Moderate	SA, NSW, WA, and Tasmania offer a general land tax exemption for land under a conservation covenant.
Municipal and local government tax incentives	Where a property owner undertakes the restoration or conservation of ecologically sensitive land, and get lower municipal property taxes/rates in return.	• See *Figure 15*.	• See *Figure 15*. • Limited by small municipal budgets.	Limited	Simple	In 50% of Victorian local councils, rates may be reduced for covenanted land.
Rebates	A partial refund to someone who has paid too much for tax, rent, or a utility.	• See *Figure 15*.	• See *Figure 15*. • Limited by small municipal budgets.	Limited	Simple	Kingsborough Council (TAS) $6/ha rebate on covenanted land.
Tax incentives and other programs to encourage economic development	Favourable tax incentives for green (and other) infrastructure and other projects that generate economic benefits for the region in which they are located, such as job creation in rural areas.	• Can potentially leverage significant private investment.	• Complex to design. • Difficult to select locations - benefits may occur in one at the expense of another[133].	Moderate	Complex	US Opportunity Zone program.

4.3.4 Environmental trust funds

Government-run environmental trust funds are independent legal entities and investment vehicles designed to help mobilize, blend, and oversee the collection and allocation of financial resources for environmental purposes. There are at least 80 environmental trust funds – also called conservation trust funds – with a biodiversity conservation focus, established around the globe[134]. Environmental trust funds are internationally recognized for their role in channelling global funds to support national conservation priorities[2].

Funding for environmental trust funds comes from a variety of sources, including environmental levies and surcharges, higher taxes and philanthropic donations. Environmental trust funds can be set up at a local, regional, state or national level, and the sources for those funds vary accordingly. Though structures and investment strategies vary between trusts around the world, most are effectively grant-making institutions. Environmental trust funds have a defined: legal (e.g. special purpose vehicle under law), governance (e.g. board) and financial structure (e.g. endowment fund, revolving fund, sinking fund etc); capitalisation and resource mobilisation strategy (i.e. where funding comes from (e.g. government appropriations, sale of carbon offsets, philanthropy etc); and, fund utilization method (e.g. grant delivery and portfolio management). For example, Coast Funds manages a permanent endowment fund of about USD 42 million, with the income generated from the fund being granted to Canadian First Nations groups to undertake conservation activities in the Great Bear Rainforest.

With regard to scalability, the potential financing that a typical environmental trust fund could raise is in the realm of between USD 5 million and USD 100 million[134]. There are however notable exceptions. For example: the Brazilian environmental trust fund 'Fumbio' raised over USD 500 million in capital; Thailand's Energy Conservation Promotion Fund, a revolving fund financed through levies on petroleum, has an annual income of approximately USD 225 million; and, the Madagascar Biodiversity Fund managed to capitalise over USD 50 million in finance, despite the country's volatile security and political situation. In the US, the Massachusetts Environmental Trust resource mobilisation strategy relies on 30,000 local citizens to fund it through state taxes, with a top-up provided through Natural Resource Damage Assessment penalties going into the trust[2].

The Canada Nature Fund – an AUD 0.5 billion investment in conservation

In 2018 the Canadian government announced a new AUD 500 million fund to support biodiversity conservation. Provided over 5 years, the fund aims to leverage an additional AUD 500 million from foundations, provinces, territories, the corporate and not-for-profit sectors and others. The Canada Nature Fund aims to increase the protected and conserved areas in Canada, their connectivity, and their ecological integrity on Canada's Biodiversity Targets. It will include a Private Lands component that has a four-year, third-party, partnership delivery model supporting the acquisition and stewardship of ecologically sensitive private lands, to contribute to Canada's protected-areas target and conserve species at risk.

Generally, environmental trust endowment funds (i.e. those that maintain their capital value and only spend interest earned on the capital sum) demand a minimum investment amount (e.g. USD 5 million) to sustain operations and grant making ability. Sinking funds (i.e. those whose capital is planned to be entirely spent down) and revolving funds do not however have this limitation. Start-up costs (e.g. legal, accounting, consultants) can be significant for any environmental trust fund type. Environmental trust funds provide a transparent investment vehicle for raising, 'ring-fencing', managing and disbursing funds to conservation projects. In this respect, they are also useful in managing the risks posed by political/election cycles.

The Reef Trust

In response to the numerous and growing anthropogenic stressors being placed on the Great Barrier Reef (GBR), and as part of the AUD 2 billion Reef 2050 Plan, the Australian commonwealth and Queensland state governments set up the AUD 700 million *Reef Trust* to "provide innovative, targeted investment focused on improving water quality, restoring coastal ecosystem health and enhancing species protection in the Great Barrier Reef region"[135]. The GBR supports 64,000 jobs and contributes an estimated AUD 6.4 billion to Australia's economy each year – a nationally important piece of green infrastructure. The Reef Trust is seeking to consolidate investment from a wide range of sources to fund NRM activities in the GBR catchments and coastal waterways, such as: coastal habitat and wetland restoration; supporting cane growers to move to best-practice sustainable land management (e.g. through the use of enhanced efficiency fertilisers); gully and stream-bank erosion; and, controlling the crown-of-thorn starfish. The Reef Trust is aiming to play a key part in funding the AUD 8.2 billion required to address critical water quality issues in the GBR catchments[136]. Its investment strategy includes seeking co-investment from third-parties (e.g. NGOS and landholders) to leverage its core funds further towards meeting this funding gap.

Environmental trust funds have been utilised at various levels of government in Australia. For example: at the federal level, the Reef Trust: and, at the state level, Biodiversity Conservation Trust (NSW) and Ecofund's Balance the Earth Trust (Queensland). More recently established environmental trust funds (e.g. Reef Trust) have sought to develop co-investment partnerships with NGOs and private sector participants in order to leverage government funding. This blending finance approach, while complex, if operationalised successfully can serve to deploy a sustainable source of finance (and potentially one that provides government and investors with financial returns, as has been the case with the Clean Energy Finance Corporation) which can offset the political exposure of this approach.

Figure 18 – Environmental trust funds

Description			
An investment special purpose vehicle (and legal entity) setup to mobilize, blend, allocate, and manage funding for environmental purposes.			
Advantages[134]	Disadvantages[134]		

• If designed and executed effectively, have shown to be highly scalable.
• Support national goal setting and programmatic strategies;
• Strengthens national, state, regional/local ownership.
• Strengthens project development, approval and delivery processes.
• Facilitates better management of financial and implementation risks.
• Increases accountability in project execution and orientation to results.
• Reduce political, fiduciary and corruption risks through robust management systems.
• Reduce financial and operational transaction costs through achieving economies of scale.
• A transparent option to 'ring-fence' funding pools for environmental purposes, shielding funds from political/election cycles.
• As independent and light weight institutions (compared with government departments and large NGOs), environmental trust funds can react more quickly and flexibly to emerging challenges.
• A channel for stakeholders to discuss environmental challenges/solutions.
	• The start-up phase often long and political;
	• The announcement to create an environmental trust fund may generate unrealistic short-term expectations over resource mobilization targets.
	• As separate entities, do not build financial management capacity in government, and can discourage donors and the private sector from building trust in government.
	• Can be difficult to generate political will for their creation (other than through citizen-enacted ballots).
	• There are numerous risks:
	  ○ Administrative costs can blow out, due to poor design.
	  ○ Investment loss may result from exposure to capital markets e.g. fluctuations in and economic shocks to the share market can undermine financial returns.
	  ○ Fraud and politics can influence grants allocation.
	  ○ Over-reliance on environmental trust funds may result in cutbacks to general conservation budgets.
	  ○ Lack of organizational capacity and technical expertise may impede access of unsophisticated entities to the fund.		

Current extent of use in CF	Limited	**Common**	Widespread
Potential to scale-up & meet CF gaps	Limited	**Moderate**	**High**
Relative ease of deployment	**Complex**	**Moderate**	Simple
Additional notes (if applicable)	Widespread, however limited use in Australia.		

4.3.5 Ballot measures

Ballot measures are instruments of direct democracy, used in the US, that allow the public to directly shape public policy through voting on propositions to be implemented by local and state legislatures. Used to legislate on issues as varied as smoking bans or taxes, they have also been used to remarkable effect to support conservation.

On average, each year ballot measures generate approximately USD 2.4 billion for conservation in the US, and since 1988 have cumulatively raised USD 76 billion as a consequence of 2,500+ conservation initiatives being voted on at the local and state levels (75% success rate)[137]. In 2016 alone, ballot measures generated USD 6 billion for conservation. Given the budget limitations under which the conservation sector must operate in the US, this figure represents a very substantial contribution.

For example, a 2012 ballot measure was passed by 69% of the voters in the Woodland Hills, Encino, and Tarzan Mountains counties of California, which levied a USD 19 per annum parcel tax, to "protect, maintain and conserve local open space, parklands and wildlife corridors; protect water quality in local creeks and reservoirs; improve fire prevention including brush clearing, acquire open space, and increase park ranger safety and security patrols"[138]. Another example is the Forest Health & Water Supply Protection Project in 2012, where through a ballot in Flagstaff, Arizona (US), citizens voluntarily taxed themselves USD 10 million to fund the reduction of severe wildfire and subsequent flooding risk, across 14,000 hectares, through forest thinning and harvesting, prescribed burns, and biomass removal.

When designing ballot measures, The Trust for Public Land (a key organiser of ballot measures in the US) highlights the importance of a defining the following key design parameters that the ballot measure is seeking approval for: the funding mechanism, amount and duration; the purpose of the ballot measure; choice of election date; management and accountability[139].

While ballot measures are common in the US, and have been shown to be a significant contributor to conservation finance, given the substantial institutional, political and social changes required to support their effective use, ballot measures are not common in other countries.

Setting up and operating ballot measures in Australia would be a very complex endeavour, likely involving constitutional changes at the relevant jurisdictional level. Nevertheless, the model (or perhaps a variation thereof) merits careful consideration to see whether some of its key components could be adapted to Australia, given its success in convincing citizens to tax themselves to benefit the environment, often in political contexts where politicians themselves lacked the political will or support to impose new taxes through the legislature.

Figure 19 - Ballot measures

Description			
Instruments of direct democracy that allow voters to directly shape public policy in the voting booth. Common in the US.			
Advantages[140,141]	Disadvantages[140,141]		
• The potential for conservation funding through ballot measures is significant. • Bring the benefits of conservation outcomes to the local/state levels, and help the wider community relate to conservation and consequently support it. • Ballot measures can be successful regardless of the government in power or the voter's political persuasion. • Historically, ballot measures have high pass rates. • Creates new taxes to support conservation without politicians needing to take political responsibility for them.	• Aren't effective at a national level, best suited to the state and local levels. • Require significant resources, political expertise and marketing to pass. • Need extensive research to determine political and economic feasibility, and judge voter mindsets (to create effective marketing material). • If a measure is passed, the programs must constantly be monitored and defended to ensure no rolling-back. • Require substantial institutional, political and social changes to implement successfully.		
Current extent of use in CF	Limited	**Common**	Widespread
Potential to scale-up & meet CF gaps	**Limited**	**Moderate**	High
Relative ease of deployment	**Complex**	Moderate	Simple
Additional notes (if applicable)	Commonly used in the US, limited elsewhere. Not used in Australia presently. Limited potential in Australia to scale-up, given the short-medium term complexities involved.		

4.3.6 Debt-for-nature swaps

Debt-for-nature swaps are an agreement that reduces a developing country's debt stock in return for a commitment from the debtor-government to protect nature. In exchange for debt forgiveness, the debtor-government commits to invest any savings in conservation-related expenditures. The transaction is enabled through the willingness of a creditor to pardon all or part of the debt, or to sell the debt to a third-party (for example a conservation orientated NGO such as The Nature Conservancy) at a lower price than the debt's face value. Similar swap agreements have been used to finance social expenditures, particularly in education and health[142].

Debt-for-nature approaches to conservation finance have been around for decades. For example, in 1991 over USD 1 billion in credit owned by the US was negotiated via debt-for-nature swaps through the Enterprise for the Americas Initiative (EAI), resulting in approximately USD 200 million of direct finance transfers to conservation projects in Latin America. More recent examples include: In 2017, USD 26 million being directed to conservation projects in Costa Rica through a partnership between Conservation International, and the Costa Rican and US governments; and, a Seychelles Debt Restructuring for Marine Conservation and Climate Adaptation DNS in whereby The Nature Conservancy bought USD 22 million of the Seychelle's sovereign debt in exchange for conserving 210,000km^2 of marine area.

Key design considerations and barriers associated with setting up a DNS are not discussed here, as debt-for-nature swaps are not currently applicable to increasing conservation finance flows in industrialised countries, which include Australia.

Figure 20 – Debt-for-nature swaps

Description			
Debt-for-nature swaps are an agreement that reduces a developing country's debt stock in return for a commitment from the debtor-government to protect nature.			
Advantages[142]	Disadvantages[142]		
• Developing countries can reduce debt, freeing up resources for conservation. • Converting foreign currency debt to local currency payment obligations can lower the debt-service burden. • The value of remaining debt can grow whilst improving environmental credentials. • DNS can leverage private-sector funds for conservation, and if successfully implemented the DNS may generate interest among other donors. • A long-term funding mechanism for conservation, DNS stimulate the creation of environmental trust funds. • Can promote participation by civil society.	• Limited but sustained use since the 1990s for increasing conservation finance flows in developing countries only. • Resulted in limited debt relief and impact in reducing developing countries' debt. • Transaction costs considered high compared to other financing instruments - negotiations can be very time consuming, as can be the design and implementation phase. • Not applicable to Australia.		
Current extent of use in CF	**Limited**	Common	Widespread
Potential to scale-up & meet CF gaps	Limited	Moderate	High
Relative ease of deployment	Complex	Moderate	Simple
Additional notes (if applicable)	Long history, but limited use globally. Not applicable to Australia as it is not a developing country.		

4.4 Private investment approaches

The section outlines the main private conservation financing approaches, that is, approaches where investors require both financial returns and environmental outcomes.

4.4.1 The key challenges in attracting private financing to conservation

The single most challenging aspect of accessing private sector support for conservation is to identify conservation projects that can generate a financial return. Many projects – notably the conservation of remnant habitat – typically are unable to generate a financial return. While there are some exceptions, and the evidence base continues to build linking habitat conservation with improved land productivity, the fact that conservation work is generally not a profit-making enterprise should not be overlooked. By contrast, sustainable land management typically has the ability to generate a return. *Where a financial return is identified*, there are four main challenges to attracting private-sector investment in conservation and sustainable land management.

The **first challenge** is to generate an acceptable cashflow once the project commences. In the case of sustainable land management, many projects only start generating cashflows after several years of investment. Other projects produce benefits that are difficult to monetize e.g. the non-market economic gains from conserving biodiversity, or mitigating risk associated with future losses. For example, restoring and conserving tidal marsh, barrier islands and shellfish reefs can reduce storm damage being done to coastal infrastructure. An added complexity is that when multiple parties benefit from a restoration project it can be difficult to get some parties to provide upfront capital[143]. Critically, conservation and sustainable land management focused investments are often relatively small compared to other private investment opportunities, creating a significant disincentive for fund managers to invest. Face-to-face interviews with several of Australia's largest fund managers suggested that deals need to be in the realm of at least AUD 50 million to AUD 100 million to be worth considering[144]. This is partly because transaction costs tend to cut significantly into small-scale investment opportunities. Associated with this challenge is that conservation-based revenue streams are often considered less competitive compared to competing market opportunities (e.g. the conversion of forests or grassland for agriculture), at least in the short-to-medium term.

The **second challenge** is the unpredictability and inherent complexity of ecological systems - it can be problematic to predict conservation outcomes from managing an ecological system in a particular way, even with robust scientific knowledge. This is important as ecological systems impose changeability for business activities, such as food and fibre production. Subsequently, cash flows from conservation and sustainable land management projects are often uncertain.

A **third challenge** is that conservation and sustainable land management projects are complex, particularly with regard to governance, marketability and defining objectives, often requiring expertise in ecology, economics, project management, law and public policy. This can be a barrier as the majority of conservation and sustainable land management projects depend on defined uses for land and water – scarce natural resources that may be used in a variety of ways. Promoting environmentally beneficial uses of resources can be highly political and unpopular for government, and may result in high opportunity costs through excluding other socially beneficial uses for that land, and therefore, lower profits compared to other land uses (e.g. agriculture and mining).

A **fourth challenge** is that conservation and sustainable land management projects may also generate enhanced risks, such as potential conflicts of interest between multiple stakeholder groups, and regulatory risk. The bottom line is, investors do not like uncertainty, especially where small projects are concerned; conservation and sustainable land management projects inherently create a lot of risk in this respect. However, there are certain ways that this uncertainty can be managed, which will be discussed in this section. Also, project developers and investors can utilise various tools to improve a project's expected risk-adjusted returns. Management and operational risks, for instance, can be mitigated by assembling a team with all the necessary expertise in science, economics, business, policy, cultural affairs, and other areas.

4.4.2 Overcoming challenges in attracting private sector investment

Historically low interest rates and returns on equity, coupled with the progressive introduction of ever-tougher environmental laws around the world and the rapidly growing demand for environmentally friendly goods and services, is serving to underpin a developing interest in conservation finance amongst mainstream investors. It is now critical that the conservation finance sector wins credibility amongst these investors through addressing the challenges set out above. These challenges can be addressed in several ways.

The first way is through establishing standardised protocols, for example, a conservation and sustainable land management investment orientated due diligence screening checklist for evaluating projects. Such procedures help investors quickly remove unfeasible projects from their pipelines, so they can allocate more resources to evaluate those with more promise[24]. Project templates, such as Encourage Capital's blueprints for investing in sustainable fisheries, the Coalition for Private Investment in Conservation's (CPIC) investment blueprints and California's standardised conservation covenant template, can also help accelerate the process of developing and structuring projects while helping investors avoid high-risk projects. These types of procedures and templates are common in some markets in Australia, e.g. the carbon offset sector where Emissions Reduction Purchase Agreements have made it easier and cheaper for private sector investors to purchase carbon offsets.

Secondly, the structuring of larger investment opportunities could also help fund managers, for instance, tap into private capital while spreading out transaction costs. The aggregation, or "bundling" of similar but relatively small projects into a larger investment product, while using standardised protocols and templates, can help bring costs down. Aggregation has been a common feature of Australia's carbon offset market. Other examples include the Forestland Group which has set up several trusts to invest in 1.5 million hectares of sustainable land management projects in 23 US states and 3 other countries South American countries. There is potential for fund managers to aggregate different sized but geographically and return-related project types into a single diversified product e.g. forestry, eco-tourism, and agriculture[10].

Another way is to manage the scalability challenge is to develop investment products with existing and commonly used structures. For example, a private equity–focused conservation fund could direct AUD 100 million, for instance, toward a portfolio of projects in mature markets such as sustainable forestry and ecotourism. Government investment institutions (e.g. Queensland Investment Corporation) could also issue green bonds covering a large area of ecologically sensitive land, then use the proceeds to finance conservation outcomes and also repay the debt with revenues from park entrance fees and other visitor related sources[24].

As part of standardising conservation investment protocols, and applying conservation and sustainable land management projects at scale, conservation project developers will also need to create new investment models that will generate future opportunities. As such, entrepreneurs working on novel approaches to conservation financing often need upfront support to operationalise projects. Both financial support, market development and capacity building (e.g. networks, training, technical assistance) are important at this stage of development, and present a vital role for government and NGOs to work with investors to establish, for example, innovation incubators and incentives to aid start-ups and the formation of networks e.g. NAB's business and technology incubator programs, Impact Investing Australia's Impact Investment Ready Growth Grant (Page 33), and the US-based Conservation Finance Network and CPIC. Such efforts can play a critical part in this regard whereby potential investors are connected with conservation and sustainable land management projects that suit their risk appetite and their expectations for environmental impact and financial returns. Incubators have been shown to be an effective proving ground for new conservation financing ideas such as environmental impact bonds and insurance products which serve to mitigate risk. Other tools that can de-risk projects include those related to environmental accounting and credit enhancement, as is discussed at the end of this section.

4.4.3 Bridge financing

Bridge financing (or "bridging finance") can be used to provide short term financing to assist groups in acquiring assets or completing projects that would otherwise not garner funding before a required deadline[145,146,147]. Philanthropic, private and public entities can provide bridge financing and loans in the forms of external revolving loan funds; internal land trust protections funds (funds used to make internal loans within an organisation); foundations, conservation lenders and guarantors; commercial and farm credit lending and seller financing; and, government revolving loan funds and tax-exempt debt[148].

For conservation groups, bridge financing allows them to undertake conservation initiatives while awaiting other funding sources, such as public grants or fundraising, to be finalised[146,148]. Conservation lenders are a private source of bridging finance, and often consist of a family or individual lender who has an interest in the property being conserved, whom therefore offer a one-off loan. There is moderate potential for bridge financing to be used for conservation finance, however it can be a challenge to design, develop and deploy[145]. Bridge financing requires strong financial management systems and communication between stakeholders, and is perceived by some boards as risky to provide.

Bridging the gap in conservation financing

Bridge financing is not currently utilised extensively in Australia; however, it is used commonly in the US. For example, The Conservation Fund is a mission-aligned lender with a USD 50 million revolving loan fund (largest conservation lender in the US) with loans ranging from USD 12,000 to USD 10 million (average of USD 545,000) with terms ranging from one to three years. The program has helped conservation groups in 37 US states and five Canadian provinces use 350+ loans to conserve more than 56,000 ha, with over USD 190 million leveraged to acquire land valued at USD 250 million. It is worth noting that TCF also offers **technical assistance** for conservation borrowers, where it coaches them through financing strategies, fundraising activities, strategic planning, and other management challenges – a critical and invaluable process that can reveal weaknesses in the borrower's financing plans, and strategies for mitigating risk[149]. Interestingly, TCF reports an extremely low rate of loan defaults.

Concessional loans (also known as "soft loans" or "concessional debt") are often provided as a form of bridge financing by governments or multilateral development banks with terms that are more generous than commercial loans; either through below-market interest rates, longer grace periods, or a combination of both [150,151,152]. However, they can also be provided by the private sector. The conditions of concessional loans can be tailored to suit the specific needs of both lenders and borrowers[153]. Often, concessional loans are given with the purpose of supporting a specific objective; currently most concessional loans are being used to fund development activities in less developed countries[152,153]. There are other forms of concessional lending such as concessional credits, securities and deposits[152]. There is an opportunity through concessional loans for public, philanthropic and private funding entities to provide loans to conservation projects that do not meet the cashflow, collateral or timeline requirements needed to attain a market-rate loan from a conventional bank or other loaning entity [154,155]. As a conservation project matures there is less need for it to utilise concessional funding [156]. Cooperation between multiple donors or loan entities can occur through concessional loans to provide the needed loan amount [153].

There is also high potential for concessional loans to be used as part of a blended-finance approach whereby public and philanthropic entities provide the concessional loan to help a conservation project achieve concept and financial feasibility which will encourage private sector investment[153,156]. Governments use concessional loans as a lower-risk method to harness private capital in blended finance[156]. Concessional loans are economically favourable to investors compared to grants because investors are more likely to see the loan repaid even with below-market interest rates, whereas grants are a -100% loss because the money is never paid back[153].

Bridge finance is used extensively in Australia by government, and even sometimes the private sector, to support mainstream investment in real estate, infrastructure and other real assets. For example, governments in Australia commonly provide concessional loans as a form of bridging finance to infrastructure projects (e.g. road) while they are being constructed, with repayment to occur when the project becomes operational and starts generating revenue e.g. when tolls are being paid by users. Similar bridging finance structures have been provided for renewable energy projects (via the Australian Renewable Energy Agency and the Clean Energy Finance Corporation). Bridging finance has not been used as yet to directly support conservation outcomes in Australia.

Figure 21 – Bridge financing

Description			
Provides short-term financing (e.g. via concessional loans) to assist groups in acquiring assets or completing projects that would otherwise not garner funding before a required deadline.			
Advantages[146,148]	Disadvantages[157]		
• Typically, can process loans quicker to accommodate a fast-paced transaction. • Offer more flexibility regarding loan security requirements and repayment schedules. • Can provide funding to ensure financial requirements are met before a deadline to ensure the conservation initiative goes ahead. • Available from various sectors (public, private and philanthropic). • Revolving funding pool that can be lent out again once repaid – often resulting in excellent leverage ratios. • Concessional loans can be provided as a form of bridge financing to further incentivise conservation investment by government taking on the initial project development risk. • For government (and a limited number of private sector entities), concessional loans are required to be paid back with interest, therefore a sustainable source of revenue. • Can be blended with conventional government grants and tax incentives.	• Requires strong financial management systems and clear communication between stakeholders. • Limited applicability in supporting land management costs. • Some government bodies and boards may perceive it as too risky. • It is only a short-term funding fix. • Loan security, usually in the form of collateral, is often required[146]. • Rates of return from concessional loans are lower than market rates, therefore opportunity cost may discourage private-sector organisations from issuing such loans for conservation projects where the risk/return ratio is uncertain and generally not comparable to market rate loans.		
Current extent of use in CF	**Limited**	Common	Widespread
Potential to scale-up & meet CF gaps	**Limited**	**Moderate**	High
Relative ease of deployment	Complex	**Moderate**	**Simple**
Additional notes (if applicable)			

4.4.4 Revolving (land) funds

The acquisition of private land with significant conservation value can be an expensive exercise, particularly in areas of high land value. An alternative to buying conservation land outright is to enter into a permanent agreement with a private landholder via a conservation covenants that restricts both the current and future landowners from conducting activities that would harm the ecological value of the land[158].

A revolving land fund, or simply revolving fund, uses the real estate market to achieve protection of high value conservation land via an approach known "purchase-protect-resale-repeat". Often held by land trusts, but which can also be held by a government or private sector entity, the fund is a capital sum which is used to purchase, protect (via a conservation covenant) and then sell the land on the open real-estate market. The proceeds of that sale are then used to fund future land purchases. This means that the funding in a revolving fund is used multiple times to fund multiple purchases.

A revolving fund can potentially be self-sustaining if the fund is able to recover its purchase and holding costs when re-selling properties. This will depend upon market conditions, and even if its value diminishes over time, a revolving fund can still leverage its funding significantly by making multiple purchases and sales with the same funding. Depending on its structure it can potentially use private funding and generate a return, particularly if government or philanthropic funding is available to de-risk it.

Although a relatively new approach to conservation financing, revolving funds are currently being used in at least four countries around the world, and have conservatively raised USD 384 million to conserve nature on 684,000+ hectares of private land (66% of which are located in the US)[159,160].

Revolving funds have operated in Australia since 1989, with five currently being operated by several conservation organisations. Trust for Nature (Victoria)'s revolving fund currently stands at about AUD4 million, and has achieved the protection of 6,800 ha of conservation land over its 18 years of operation. The value of land acquired by its revolving fund is conservatively estimated at AUD8.6 million.

Figure 22 – Revolving (land) funds

Description			
A revolving land fund, or simply revolving fund, uses the real estate market to achieve protection of high value conservation land.			
Advantages[160]	Disadvantages		
• Ability to use the funding multiple times as properties are revolved – a distinct advantage over other conservation finance mechanisms. • Potentially self-sustaining way to achieve long-term conservation (though fund my diminish over time) • Already a significant conservation finance approach for protecting ecologically-significant areas on private land. • There may be opportunities for government or the private sector to provide equity or debt to enlarge the available loan pool (to a point of critical mass), where they can potentially share in any financial returns. • Can get land that otherwise might not be available if landowner is not amenable.	• Challenging to set up - land managers need a blend of ecological, social and financial skills to identify suitable properties. • Generally, this approach relies on start-up funds from government. • May not be suitable for all types of private land. • Needs to be of a scale sufficient to compete in the real estate market. • Can't necessarily target priority ecologically-important land, as it may not be for sale.		
Current extent of use in CF	**Limited**	Common	Widespread
Potential to scale-up & meet CF gaps	Limited	**Moderate**	High
Relative ease of deployment	Complex	**Moderate**	Simple
Additional notes (if applicable)			

4.4.5 Seller (vendor) financing

Seller financing (commonly known as "vendor financing" in Australia) occurs when the seller of a property provides a loan to the buyer which allows the buyer to purchase the asset via financial instalments made over-time, according to a predefined payment plan or method[68]. Lease-to-own, All-Inclusive Trust Deed and the formation of a Joint Venture to split ownership and profits are the three most common forms of seller financing[161]. This financial instrument allows the seller and buyer to have financial flexibility to trade the asset. It also allows for the payment of any capital gains tax to be spread out across multiple tax years, allowing the seller to potentially defer the payment of tax[162].

Seller financing is a relatively simple financial instrument as it is an agreement between two parties, which can be altered to suit either party's financial needs[161]. Added risk can occur through this finance method, especially if a buyer is unable to meet the payment schedule, or the seller defaults on their own loan and goes bankrupt[161,162]. If a buyer defaults, they may have broken the terms of the sale agreement, and the seller may have the right to retain ownership of the property and keep any interest payments made[161].

Though limited in its scalability, seller financing holds potential for use in conservation finance as it can be used by conservation groups to purchase land of high conservation value even if they do not hold the adequate funding needed at that exact point in time[162]. It allows conservation groups to secure the land and undertake conservation measures straight away, while allowing time for them to gain funding to meet the payment schedule. Another advantage for conservation groups is the potential to gain financing at a cheaper cost than third-party sources.

Seller financing is a small/boutique market, including in Australia, and is generally only undertaken on a small-scale as the terms of the agreement are unique for each property and can differ depending on the parties involved[161,162]

Figure 23 – Seller financing

Description			
The seller of an asset allows the buyer to purchase the asset via financial instalments made over time according to a predefined payment plan.			
Advantages[161,162]	Disadvantages[68,161]		
• Allows for financial flexibility for the seller and buyer. • Potentially competitive returns for the seller in the current market where bond rate returns are relatively low. • The seller can pay capital gains tax gradually as the instalments are made. • The buyer can possess the property straight away and gradually collect sources of finance to meet the payment plan.	• The risk profile is increased for the seller due to the potential for the buyer to not meet the payment schedule.		
Current extent of use in CF	**Limited**	Common	Widespread
Potential to scale-up & meet CF gaps	**Limited**	Moderate	High
Relative ease of deployment	Complex	Moderate	**Simple**
Additional notes (if applicable)			

4.4.6 Program-related investment

Program-related investment occurs when an entity, typically a foundation (such as a Private Ancillary Fund, as discussed below) uses its investment funds to provide a loan or equity investment with more favourable terms compared to commercial markets, or provides an investment that must be used for charitable purposes to another organisation or project. These funds would otherwise be invested in commercial investment vehicles such as stocks or short-term deposits. Foundations have historically provided loans or investments to projects or organisations that align with their mission[145].

Program-related investments (PRIs) allow for the funding of conservation projects or organisations when there is higher lending risk – such a risk profile will often be more acceptable to PRI issuing foundations than commercial finance lenders[145]. PRI's give foundations the opportunity to: facilitate cooperation between the public and private sectors to share experience, expertise and innovation, engage in blended finance and, leverage their assets to generate more funding[163,164]. A noteworthy advantage of Program-related investments is that issuers do not readily expect the investment to generate market-rate returns, which is currently a significant barrier to investor involvement in conservation finance. In this respect, there are strong prospects for using PRIs as part of a blended finance approach, whereby a Program-related investment might provide upfront capital for conservation projects to leverage private sector investment. Another advantage of PRIs is that when its initial capital investment is repaid the host foundation may consider recycling this money towards another Program-related investment, e.g. a Revolving Land Fund approach.

Program-related investments are not common in the US (although, their collective value amounts to at least USD 400 million across around 244 PRIs). Many of these Program-related investments contribute towards conservation and other environmental outcomes, for instance: the Mitchell Family Foundation Program-related investment to the Trust for Public Land in Galveston Bay; the McKnight Foundation Program-related investment to the Conservation Fund for the Brule-St. Croix forest project; and, the USD5.5 million Seeds Carbon Investment Fund.

As at December 2014, there were 1,240 Private Ancillary Funds (PAFs) in Australia (including University endowment funds) with an estimated combined value of approximately AUD 4 billion[165]. This includes the Ian Potter Foundation. Australian PAFS are subject to a minimum distribution requirement of 3-5% of their net assets per year respectively, which encourages them to provide loans and other PRI investment-based incentives on a regular basis. PAFs also enjoy several other benefits such as financial security, tax concessions (including for donors) and exemptions, and a relatively lighter form of regulatory accountability than organisations captured under the Corporations Act. These factors have driven strong support from a broad range of stakeholders for PRIs to be used in Australia[166]. However, in order to do so, there may need to be regulatory changes made depending on the context in which they are used. The distribution of funding to conservation and the environment from PAFs in Australia has historically fluctuated, from AUD 176,000 in 2002 to about AUD 8 million in 2012, with a peak of AUD 14 million in 2008[167].

Figure 24 – Program-related investment

Description			
A loan or investment from a foundation that often offer more favourable terms compared to going market rates.			
Advantages[145]	Disadvantages		
• Facilitates public and private cooperation. • Can fund higher risk conservation projects. • May leverage private investment. • Revolving of funds upon completed payment enables the funds to be re-invested to benefit a different project. • Can benefit the taxpayer – by enabling foundations to better leverage their assets to further their charitable purposes, effectively providing more 'value' to the taxpayer in return for the tax concession.	• Restricted use as the funding must be used for a purpose that aligns with the issuing organisation's missions. • Investments are generally not expected to generate market-rate economic returns. • Can exclude organisations/projects where no established relationship exists.		
Current extent of use in CF	**Limited**	Common	Widespread
Potential to scale-up & meet CF gaps	**Limited**	**Moderate**	High
Relative ease of deployment	Complex	**Moderate**	**Simple**
Additional notes (if applicable)	Only a small percentage of United States based grant making foundations make program-related investments.		

4.4.7 Environmental credit markets

The concepts and principles related to "ecosystem services" serve to underpin the function of environmental credit markets (ECMs), and can be defined as the "sustainment and fulfilment of human life through the conditions and processes provided by ecosystems, and their inhabiting species"[168,169]. Ecosystem services can be divided into four broad categories: provisioning, regulating, cultural and supporting services, with examples being food provision, water quality, recreational use and nutrient cycling respectively[170]. Figure 26 below provides a list of specific ecosystem services under each of these categories. Most ECMs to date have been focused on trading benefits derived from regulating services.

Figure 25 – Ecosystem Services

Source: Millennium Ecosystem Assessment

ECMs (also known as "ecosystem service markets") allocate economic value to the benefits of ecosystem services through placing monetary or a market value on environmental services and benefits, with the specific amount of environmental benefits being created referred to as a credit [100,101]. Credits represent quantified conservation outcomes. For example, 1 tonne of carbon dioxide sequestered by a tree would equal 1 carbon credit. ECMs can be used to overcome one of the most difficult barriers to conservation finance – creating a tangible marginal financial value for the benefits of ecosystems services, enabling these benefits to be sold and traded in a market as it done for other commodities e.g. gold [168].

Through the protection and restoration of land and waterways, many conservation and sustainable land management projects may be eligible to create a specific volume of environmental credits (amounting to the additional ecosystem service benefits created) under a relevant ECM accounting and verification standard and approved technical methodology, which may then be sold/traded on either a voluntary or compliance (required by regulation) environmental credit market[171].

Participation in voluntary ECMs usually occur by entities who intrinsically value, or want to demonstrate to stakeholders their commitment to, sustainability, CSR or Socially Responsible Investment to their stakeholders.

Australia's Emissions Reduction Fund

Voluntary ECMs are sometimes used by government to meet specific policy goals - Australia's AUD2.5 billion Emissions Reduction Fund (ERF) was rolled out by the Australian Government in 2015 to incentivise landholders to develop carbon offset projects (e.g. replanting of native vegetation, sustainable grazing management). In this ECM, the Australian Government acts as the main buyer of carbon offset credits (via a reverse-auction process), which it will surrender to reduce its compliance obligations under the United Nations Framework Convention on Climate Change's (UNFCCC) Kyoto Protocol (until 2020) and Paris Agreement (2020-2030). Compliance environmental credit market participation, on the other hand, is generally driven by credits being sold and surrendered to a government agency to fulfil a regulatory requirement[172]. For example, prior to the creation of the ERF, a Cap-and-Trade style emissions trading scheme existed in Australia (under the *Clean Energy Act)* which required liable entities to mitigate their GHG emissions; one option for these entities to comply was to buy carbon credits from carbon farming projects and surrender these credits to the Australian Government as part of their compliance portfolio. As at mid-2018, the ERF had contracted around AUD 550 million for conservation and sustainable land management projects[173].

While potentially offering a highly-scalable source of conservation finance (particularly with compliance markets e.g. mitigation banking in the US), environmental credit markets are often complex to design, implement and enforce, have been highly politicised in many western countries such as Australia, the US and Canada. A wide range of environmental credit market types currently exist around the world, and include the following: atmospheric and soil carbon e.g. China's national emissions trading scheme and the Californian emissions trading scheme, and bilateral trading mechanisms such as Reduced Emissions from Deforestation & Degradation (REDD+, for rainforest conservation); species and habitat conservation banking e.g. Queensland biodiversity offset market; water quality and quantity markets e.g. the Murray Darling Basin water-trading market; and, other environmental credit markets concerning non-atmospheric soil carbon and mitigation credits. Each type of environmental credit market has specific advantages, challenges and potentially scalability.

Crediting beyond carbon

The Freshwater Trust works with regulated entities in the US state of Oregon and other states to understand and develop compliance solutions based on quantified conservation actions. The Trust helps wastewater treatment facilities to better understand their discharge obligations and analyse how certain conservation actions would help them meet their compliance obligations under the Clean Water Act. In many cases, the benefits gained from conservation actions, such as the shade created from planting trees along a waterway (reducing in-stream temperatures – important for fish migration and native biodiversity) correspond with the benefit (degrees drop in temperature) being quantified into credits. These credits can then be purchased by these entities through a water quality trading program. If an entity can come to agreement with stakeholders and regulators on the specifics of a program, The Freshwater Trust will develop a credit contract with that entity, and take the lead in recruiting landowners and implementing the conservation actions necessary to achieve these credits. Over time and with mandated third-party verification, these conservation actions will offset water quality impacts at the point of discharge, and create a host of additional benefits for habitat, carbon sequestration and biodiversity. Businesses subject to environmental regulations often find these types of natural compliance solutions to be far less costly for ratepayers than traditional engineered upgrades, especially for complying with limits on impacts such as temperature, phosphorus or nitrogen.

Another environmental credit market derivative is **mitigation banking** which involves taking actions to provide a form of substituted environmental resource to offset the impacts of another, deteriorated, resource[170]. A mitigation bank is an environmentally degraded property that is ecologically restored to its previous condition in exchange for environmental credits that can be traded or sold on an environmental credit market[174,175]. Regulatory bodies release these credits to, and oversee, these banks[174]. If a project will have a detrimental environmental impact on an ecosystem, habitat or species, they may be legally required to produce offset credits[10,174]. Credits can either be produced through the developer undertaking their own mitigation banking, or by purchasing credits from an existing bank[174]. While rarely used in Australia, mitigation banks are heavily utilised in the US. Recent estimates value the trade of mitigation offsets at USD 2.9 billion per annum, with 1,500+ wetland and stream banks created since 1995 and more than 280,000 ha of ecologically-sensitive land approved for banking[2,10].

Connecting carbon with culture – the benefits for Australia's indigenous communities

The Aboriginal Carbon Fund-run Reducing Carbon Building Communities Fund (RCBC Fund), which trades Australian Accredited Carbon Units (ACCUs) with peer-reviewed environmental, social and cultural values. The premise of the fund is that the more benefits a carbon offset project provides, the greater the price-premium that can be paid for associated ACCUs issued. For example, at the highest level, signified by the colour *Ochre*, the ACCU traded is deemed to not only reduce one a tonne of CO^2e, but also indirectly result in: the "sharing of traditional knowledge, young people learning from elders, sacred sites and rock art management"; the "Creation of local jobs, buying supplies locally, supporting the claims for Native Title and Indigenous Land Use Agreements"; and, the "Management of weeds and feral animals and the protection of threatened species and their habitats".

Australia has significant and established expertise in ECMs, though this is limited to carbon (i.e. the Carbon Pollution Reduction Scheme, Clean Energy Act, Carbon Farming Initiative, and Emissions Reduction Fund), water quantity trading (i.e. Murray Darling Basin) and biodiversity offsetting. To date, these ECMs have generated significant conservation finance flows. Under the EPBC Act and the ERF, there is (as has already been demonstrated) an opportunity to create land/biodiversity benefits from biodiversity and carbon offsets respectively. The Aboriginal Carbon Fund's RCBC (see above) offers a way for buyers to identify projects that offer benefits beyond carbon i.e. culturally significant natural areas to indigenous communities (which can indirectly increase conservation finance flows).

There is an opportunity to extend this expertise to other ECMs (e.g. water quality and soil health). Though a complex endeavour, new ECMs are already emerging. For example, GreenCollar recently set up a Reef Credits standard, which aims to issue (tradable) "credits to projects according to expertly designed methodologies that calculate or model the reduction of sediment and/or nutrients and pesticides flowing onto the GBR due to land management change activities such as revegetation, riverbank stabilisation, reduction of nitrogen runoff".

There is a parallel opportunity to spur the growth of a voluntary biodiversity credit market that is stand-alone or builds upon our existing regulated biodiversity credit markets. South Pole has recently released paired carbon and biodiversity credits called 'EcoAustralia credits' that can be used in both the compliance and voluntary market, and use the Victorian Government's methodology for calculating biodiversity credits.

Figure 26 – Environmental credit markets (general overview)

Description			
Environmental credit markets put a value on the benefits of an ecosystem service via monetizing these benefits as "credits", which may then be sold/traded on a voluntary or compliance market.			
Advantages[168, 170 ,176]	Disadvantages[100,170 ,171,176]		
• Places an economic value on ecosystem services, thus creating a clear economic return to the potential investor. • Environmental credit markets allow for credit stacking to occur which is highly appealing to private landowners as the land can produce many ecosystem services that hold value on various environmental credit markets. • There is high potential for agriculture to bring reasonably priced soil carbon credits into environmental credit markets. • Can create a widely applicable crediting methodology to assist in reducing project risks and managing transaction costs. • Environmental credit markets around the world are increasingly becoming appealing to private investors. • Environmental credit markets are backed by substantial, credible scientific basis. • Australia has significant capabilities and industry preparedness in ECMs. • There is increasing demand for hydrological and climate regulation ecosystem services. • Biodiversity and carbon offsets can provide an opportunity for conservation outcomes.	• Ecosystem services are currently not adequately valued in the majority of markets; making it difficult for investors to accurately assess risk-return ratios. • There is often confusion amongst investors about the definitions or practices parties involved both within one environmental credit market and across other ECMs. • Limited standards that address issues of additionality, leakage and permanence. • Limited formal guidance/frameworks for creating and selling stacked credits. • There is considerable debate around credit stacking, and it is 'double-dipping'. • Depend on market prices and conditions, which can fluctuate, and there are difficulties involved in creating pricing mechanisms and determining price. • Can exclude small-scale and one-off participants, therefore potentially alienating private land owners from inclusion (though aggregators can play a key role here). • Depends upon people's willingness to pay and value of ecosystems and environments.		
Current extent of use in CF	Limited	**Common**	Widespread
Potential to scale-up & meet CF gaps	Limited	**Moderate**	**High**
Relative ease of deployment	**Complex**	Moderate	Simple
Additional notes (if applicable)	Carbon, water quantity and biodiversity ECMs are common in Australia. Water quality, non-atmospheric soil carbon and temperature ECMs and mitigation banks are not currently being utilised (though a water quality market may emerge with the Reef Credits program).		

Figure 27 – Environmental credit markets (specific overview for each environmental credit market type)

	Overview/extent of use	Advantages	Disadvantages	Scalability	Complexity	Example/s
Atmospheric carbon	The creation, verification, and sale of one tonne of atmospheric CO2 or CO2 equivalent. Worth at least AUD 28 billion globally[177] (AUD 250 million voluntary markets[178]).	• Quantity-based cap-and-trade system considered most effective/efficient at meeting designated abatement targets. • Creates obligation for conservation. • Can involve a variety of businesses and industries.	• Requires sophisticated modelling and verification. • Approved methodologies not available for many conservation activities, including remnant habitat.	High	Complex	Emissions Reduction Fund in Australia – AUD2.5 billion for carbon offset projects.
Soil carbon	The creation, verification, and sale of one tonne of CO2 or CO2 equivalent from soil, namely the avoided conversion of land.	• Provides cash flow and incentive to keep grasslands as grasslands. • Partnerships can be used to achieve conservation outcomes.	• Requires very large areas of land to be viable.	Limited *Unless compliance market*	Complex	The *Carroll Avoided Grassland Conversion Project* on the Climate Action Reserve.
Species and habitat conservation banking (biodiversity and environmental offsets)	A permanently protected parcel of land that contains natural resource values that can be protected or restored to meet the recovery needs of species which are endangered, threatened, candidates for listing as endangered or threatened, or otherwise species-at-risk. Credits can be created by conserving species habitat and obtaining regulatory approval to sell credits. Worth AUD 3+ billion globally[179].	• Enables regulatory efficiencies. • Transfers compensatory mitigation obligation from permittee to offset landowner. • Promotes sustainable, land-scape scale approach to mitigation planning. • Increases transparency. • A flexible, cost-effective process. • Streamlined environmental review and permitting process.	• Uncertainty around listing and de-listing species. • No agency rule to guide implementation. Need for accredited land trusts to serve as third-party steward once banks are closed.	Limited	Complex	NSW biobanking scheme; Queensland's Environmental Offset Policy and market; Blue Heron Slough Conservation Bank; Carolina Heelsplitter Conservation Bank; Fitzgerald Ranch Conservation Bank; NOAA Central Valley Fish Bank.
Water quantity	Quantity-based water trading markets are typically based on a 'cap and trade' system, where the cap represents the total pool of water available for consumptive use. Users are allocated a portion of the cap, which they can sell to others who exceed their allocation in a given period. The price of water is reflected by this demand and supply.	• Quantity-based cap-and-trade system considered most effective/efficient at meeting designated targets. • Can be replicated and significantly scale-up to meet conservation objectives.	• Complex to setup, monitor and manage. • Like for other ECMs, open to manipulation if not measured and enforced correctly (i.e. water-theft in the MDB).	High	Complex	MDB water-quantity trading markets.

Figure 27 (continued)

	Overview/extent of use	Advantages	Disadvantages	Scalability	Difficulty	
Temperature credits	Where conditions exist such that in-stream temperature is regulated under a state Clean Water Act (e.g. Oregon), units of temperature reduction can be created and sold to a point-source of warm water effluence to meet their compliance obligations. Used in the US.	• Green approach to traditional grey infrastructure.	• Only possible where temperature is regulated e.g. the Clean Water Act. • Some outstanding questions remain about efficacy of green infrastructure performance.	Limited	Complex	See above example regarding the Freshwater Trust. Does not exist in Australia.
Wetland mitigation banking[2]	In the US, when an impact to a designated wetland or stream cannot be avoided, the permit holder must provide an offset equivalent in function and area to what they damage. A mitigation bank is a site or suite of sites that contain resources (e.g. wetlands, riparian areas) that can be restored, established, and/or conserved as compensatory mitigation for impacts. USD 2.9 billion market value - 1,500+ wetland and stream banks created since 1995, with more than 280,000 ha approved for banking.	• Largest environmental credit market in the US; • Reduces risk for project developers to complete compensatory mitigation for unavoidable impacts, and reduces risk of project failure; • Requires less resources for compliance monitoring. Creates economic incentive to restore and protect stream and wetland functions; and • Provides a flexible, cost-effective process.	• Fragmented market in Australia; • Dependent on the regulatory driver; • Required large capital outlays; • Banks may not necessarily be located where aquatic resources are needed most; and • Can be inconsistent between districts and regions.	Moderate	Complex	Ducks Unlimited Wetland Mitigation
In-lieu fees	A permit applicant may make a payment to an in-lieu fee program that will conduct habitat, wetland, stream or other aquatic resource restoration, creation, enhancement, or preservation activities. A large market in the US (USD 2-3.4 billion).	• An alternative where no third-party mitigation banks exist; • Can compensate for a variety of resources, and also take on more difficult/less in demand resources (less market driven); • Sponsor focus is on ecologically valuable projects, compared to banking that is aimed at ROI; and • Fees represent the full cost accounting of a credit for offset in perpetuity.	• Highly fragmented market. Risk of mitigation not being provided; • Potential for migration of functions and services; • Project failure may result in loss of resource area/function; and • Temporal lag between impacts and project implementation.	Moderate	Complex	FL Key Restoration Fund

4.4.8 Green Bonds

Green bonds have the same financial structure as traditional bonds, namely they are a way for an entity to raise capital by borrowing money from other entities on the basis that they money will be repaid with a fixed amount of interest (i.e. 'the coupon rate'). Green bonds are defined as a bond where proceeds are utilised for financing environmental investments, projects or activities[180]. The green bond market was established in 2007, with issuances growing to over USD 155 billion in 2017 (a 78% increase on 2016)[181,182]. Investors are starting to think long-term about climate change impacts, and thus are turning to green bonds as an investment strategy[183]. Currently, majority of green bonds are issued by governments, multi-lateral entities or corporations and are used to fund projects related to renewable energy, green buildings and other low-carbon projects[184].

There are numerous sub-categories of green bonds such as green project bonds, green property bonds, green covered bonds, forest bonds, climate bonds, marine protected area bonds, conservation impact bonds and Environment Impact Bonds (see *Section 4.4.9*). Many of the models rely upon government involvement, either through government underwriting (e.g. expectations of future public health or environment savings), or in creating markets through regulation. All have similar financial structures, with the main difference between them being the specific types of environmental investments they fund. All green bonds hold the same core four principles[181,185]:

- **Use of proceeds:** the issuer declares what the green project the bond will be used to fund;
- **Process for project evaluation and selection:** the issuer determines eligible project(s) it intends to fund, and the decision-making process used to determine this is explained;
- **Management of proceeds:** a sub-portfolio is created to house proceeds; and,
- **Reporting:** reporting must occur at least annually by the issuer on the investments made and their environmental benefits. These benefits can be either qualitative or quantitative.

Green bonds can be used as the stepping stone to fund a conservation finance projects, helping to increase the diversity, quality and quantity of projects and balance supply and demand issues.

Green bonds and conservation

Forest bonds

An example of a green bond being used to fund land conservation is the world's first forest bond that was issued by the International Finance Corporation in 2016, which was backed by large-scale investors such as BHP Billiton[186]. This bond raised USD 152 million and was aimed at increasing private sector investment in sustainable forestry and the REDD+ program[187,188]. Repayment of this bond will include the issuing of carbon credits generated from avoided deforestation to investors, where BHP Billiton have announced they will purchase a total of USD 12 million credits[188,187].

Sustainability bonds supporting conservation-backed residential assets

In August 2018, Bank Australia released Sustainability Bonds, a $125 million bond which will finance/refinance assets that help achieve three of the UN SDGs: reduced inequalities, sustainable cities and communities, and life on land. The bond's proceeds will finance loans including community housing and mortgages for energy efficient homes with an added environmental offset.

Climate change adaptation through environmental restoration

In 2017 Fiji became the first emerging economy to issue a USD50 million sovereign green bond, which will fund projects to help the country adapt to a changing climate. The participation rate recorded in the tender was three times the rate normally associated with Fiji Government Infrastructure Bonds, with the first round of funding being used to fund climate change adaptation projects and environmental programs, including the replanting of coastal wetlands.

Green bonds are a relatively immature finance vehicle in Australia, however in recent years, several state governments have expressed their interest in using them. In 2016, the Treasury Corporation of Victoria, for instance, was the first state agency to issue a green bond[189] (with international Climate Bond Certification) which raised AUD300 million (1.75% coupon rate) to fund investments in transport, water, renewable energy, and low-carbon buildings. In 2017, the Queensland Treasury Corporation issued an AUD 750 million green bond (3% coupon rate)[190], also with Climate Bond Certification, to fund low-carbon transport and renewable energy projects in the state. Green bonds are also increasingly being used by private sector financial institutions, such as ANZ. Green bonds have not been used to directly fund conservation or sustainable land management projects in Australia, as the main challenges in doing so are generating and quantifying financial returns and achieving scalable impact investment opportunities. The Climate Bond Initiative is developing new criteria in land conservation and restoration[191] - it is now critical to lead a discussion to ensure biodiversity/conservation outcomes are squarely mandated within such standards. While green bonds are unlikely to **directly** benefit conservation, criteria mandating what constitutes a "green" bond can include provisions to protect and/or enhance the ecological health of environmental assets, and therefore have an **indirect** benefit for conservation and biodiversity.

Figure 28: Green bonds

Description			
A bond where proceeds are utilised for financing environmental and conservation projects.			
Advantages[192,193,181,184]	Disadvantages[181,184,192]		
• Can indirectly finance environmental and conservation projects where there is a financial return to investors. • Positive marketing for entities. • Diversification of investor base (can include environmental, social and governance investing, socially responsible investing and regular focused investors). • Institutional investors are eager for green bonds as demanded by clients. • Insurance sector will favour green bond projects that meet climate change resilience standards, thus reducing the investment risk of investing in green bonds for investors. • 'Green' label can receive a premium. • Can be issued by the private and public sector. Varying levels of government can be issuers. • Green bonds can provide issuer access to a wide range of partners/finance.	• Potential for greenwashing: there is currently no universal definition what a 'green' bond is. • There is no universal framework for assessing the non-financial benefits of green bonds. • High transaction costs (e.g. tracking, monitoring). • Regulatory uncertainty can reduce investor appetite for green bonds. • Investors want clear proof of returns, tangible cash flow and collateral which can be difficult to define for environmental investments. • The regulations relating to green bonds can alter between countries and jurisdictions which can create confusion among investors and conservation project developers. • Not enough supply of green projects of a suitable scale for large-scale investors.		
Current extent of use in CF	**Limited**	Common	Widespread
Potential to scale-up & meet CF gaps	Limited	Moderate	**High**
Relative ease of deployment	**Complex**	Moderate	Simple
Additional notes (if applicable)			

4.4.9 Outcome-based models

Outcome-based models involve funding being paid only when pre-arranged outcomes have been achieved[10]. "Pay-for-Performance", "Payment-for-Ecosystem-Services" (PES), "outcome-based financing", "performance contracting", and "avoided-cost models" are examples of terms used to describe outcome-based models. Outcome-based models are an alternative approach to traditional public or philanthropic funding, which typically support a project's actions, rather than its outcomes[194]. These models can be funded through government, philanthropic or private funds; or a combination of these[195].

In simple terms, outcome-based models involve a payor borrowing or receiving money for a project from an investor. The payor can be a government agency or private organisation, that is seeking to realise the (proven) benefits from the project, which are hopefully greater than the cost of paying back the loan.

Private finance is commonly used to initially fund OBM projects and the achievement of these desired outcomes, with the outcome-based funding coming from the 'purchaser' of the beneficial outcomes which is most frequently public entities[196]. Outcomes can be qualitative or quantitative, and the required timelines for achievement can vary; leading to the high versatility of outcome-based models[197]. For conservation finance, the successful delivery of verified conservation outcomes is linked to financial payments - without the delivery of these conservation outcomes, the project developer and investors will not be paid[198].

There are four key design features necessary to ensure success of a conservation-focused OBM[199]:

1. Be specifically adapted to best **suit the environmental or contextual conditions**;
2. Have **clearly defined outcomes** that can be either qualitative or (ideally) quantitative;
3. Have the ability for **measurement and reporting** to occur. For the outcomes of this model to be accurately measured it is important that base-line data be collected prior to commencement of the conservation project. Without accurate evaluation of benefits and costs, immature financial models cannot be proven to be economically or environmentally viable, and this may deter potential investors[197]; and
4. Allow for timely identification of, and solutions for, any problems that may arise to ensure adequate delivery of outcomes.

It should also be noted that outcome-based models are not just limited to paying-out a share of a successful project's additional financial returns, and can also geared to recognised the effective financial return of avoiding future costs. As climate change and land degradation is expected to impose direct and indirect annual costs onto business, outcome-based models represent an emerging tool that the private sector can use to minimise the likelihood or severity of these impacts[200]. Outcome-based model investments can essentially create three types of avoided cost: direct costs (capital and operational), indirect (externalities) and opportunity cost. Entities susceptible to environmental-economic impacts can in some cases justify paying for ecosystem services (discussed below) and the benefits they provide - this may be less than costs otherwise incurred through a lack of these services or other environmental issues[201,202].

Two major types of outcome-based models are discussed below: Payment for Ecosystem Services (PES) and Environmental Impact Bonds (EIBs).

Payment for ecosystem services

The central concept behind payment for ecosystem services is that landholders or managers are paid for the successful provision of certain ecosystem services by users or beneficiaries of these services[203]. Payment for ecosystem services (PES) type outcome-based models have been around for decades. For instance, in 1997, Costa Rica was the first country to use payment for ecosystem services mechanisms via its national *Pago por Servicios Ambientales* program, which aimed to reverse deforestation[204]. Similar programs have been deployed in China (as part of its nationwide environmental protection strategy[205]) and Mexico, and in the early 2000, payment for ecosystem services mechanisms were expanded through other South and Central American countries[206]. Since this time, a considerable increase in payment for ecosystem services mechanisms has been observed – as of the end of 2017, there were over 550 active programmes around the world, with an estimated value of USD36-42 billion[1] in annual transactions[207]. Of the 550 active payment for ecosystem services programmes, around 120 are focused on biodiversity and habitat, and include the bilateral UN REDD+ programme. PES mechanisms can be classified into three categories[207]:

- **User-financed PES,** where ecosystem service users (e.g. individuals, companies, NGOs or public agencies) agree to compensate landholders for activities that conserve or enhance the delivery of ecosystem services. For instance, where hydroelectric and drinking water bottling companies provide payments to landholders in the upper watershed for the restoration and maintenance of forests and grasslands for erosion control (resulting in higher water quality, thus lower turbine maintenance costs and higher electricity output). An example of this type of PES can be found in Vittel Water.
- **Government-financed payment for ecosystem services**, where a third-party acts on behalf of users, and compensates landholders for activities that maintain or enhance ecosystem services delivery. The buyer is a public or private entity (e.g. conservation-orientated NGO) that does not directly use the ecosystem service. For example, government-led projects in China, such as the USD 13 billion Sloping Lands Conservation Program (reportedly covering 32 million farmers and 120 million households) and Quito's USD 500 million Water Conservation Fund, pay landholders for reduced deforestation or afforestation activities that enhance flood protection, water quality or other ecosystem services; and
- **Compliance PES**, where entities facing regulatory obligations compensate other stakeholders for activities that conserve or enhance comparable ecosystem services in exchange for a standardised credit or offset (e.g. carbon, water of biodiversity) as part of an environmental credit market that satisfies their mitigation requirements. This includes Murray Darling Basin water trading markets and wetlands mitigation banking.

While for many years the concept of PES has been discussed with much enthusiasm, one of the key uncertainties that continue to hold it back from being scaled-up significantly is whether (or not) certified lands are *actually* conserving and enhancing the ecosystem services paid for. The second uncertainty, according to the Yale Environment Review, is "whether the appropriate people are receiving the payment. In other words, are the people who actually own the land and caring for it receiving the PES payments, or are the wealthy and well-connected exploiting the system?"[208]. Payment for ecosystem services mechanisms are also significantly complex to develop and deploy.

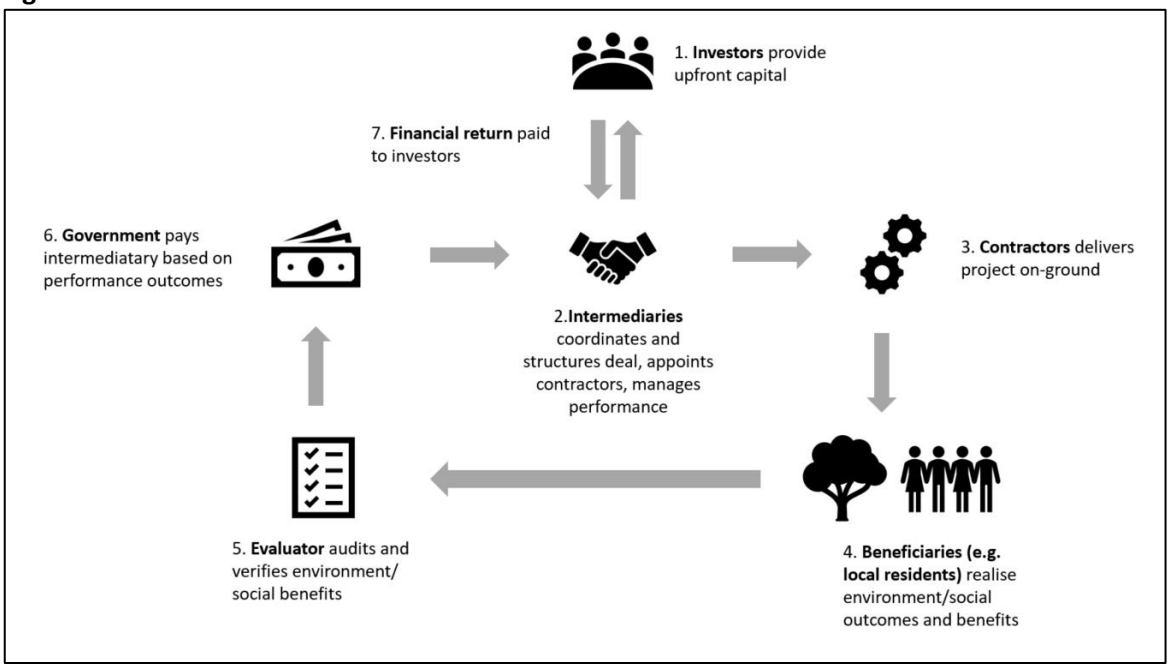
Though large-scale government-led PES programs exist (e.g. in China and to some extent in the US via mitigation banking), payment for ecosystem services models have been criticised widely for not delivering verifiable conservation outcomes at scale. Unless the key concerns and uncertainties mentioned above are addressed, significant scale-up with the private sectors involvement will remain illusive. Critically, PES programs are often technically complex to setup, and require careful stakeholder negotiation – other key reasons why PES markets have remained relatively boutique.

[1] This figure may include a proportion of ECM value.

Environmental Impact Bonds

Environmental Impact Bonds are a relatively new finance vehicle being used in the conservation finance sector[209], and feature as a sub-category of a broader category of debt-instruments called "green bonds" (see section 4.3.8). Impact bonds, in general-terms, are essentially a public-private partnership where an investor provides upfront capital to support a public-benefit projects that is expected to generate verifiable social and/or environmental outcomes. Typically, a government agency will contract an intermediary ("project sponsor") to implement a project in exchange for a promise of a financial payment that is contingent on social/environmental outcomes being delivered by the project. The intermediary is responsible for raising project capital from commercial, and potentially, philanthropic investors e.g. PRIs. The intermediary is also responsible for contracting a service provider to deliver the project. If the project fails to deliver the expected outcomes, the government agency does not pay and the investors will lose part/all of their capital. If the project successfully delivers on the outcomes, the Government pays the intermediary (who then pays the investor). If the project exceeds expected outcomes, the investor and intermediary may get a bonus payment.

Figure 29 – How Environmental Bonds Work



Adapted from Hall et al, 2017[211].

Environmental impact bonds came from the Social Impact Bond terminology started in the UK. Despite the name, social impact bonds are not usually actual "bonds" (as per the common definition), instead they are contracts between the parties involved to deliver a financial and/or social outcome. Social impact bonds are designed to raise private capital for support and preventative programs which address areas of pressing social need e.g. avoiding economic and social costs through decreasing rates of juvenile detention in favour of intervention programs that change behaviour in a positive way.

At the end of 2017, globally there were a total of 108 contracted impact bonds, with a value of USD 300 million (and growing rapidly). However, just one of these contracted impact bonds can be attributed to environmental impact bonds – the DC Water environmental impact bond[210]. Having said that, while it is currently the only contracted environmental impact bond, the DC Water environmental impact bond has the greatest number of beneficiaries of all contracted impact bonds i.e. the 650,000 local residents in Washington DC whom will be positively impacted by the stormwater green infrastructure project this environmental impact bond will fund. The DC Water IEB is further discussed below. Another US example (currently being developed by Blue Forest Conservation) is the Forest Resilience Bond, where investors provide upfront capital to fund native forest restoration, with public and private beneficiaries (such as the US Forestry Service) making contracted payments back to the investor based the decreased risks and costs of severe wildfire, and the associated benefits of protecting air quality, water supply, rural communities, and habitat. The use of environmental impact bonds to support land restoration is also being investigated outside the US, such as in New Zealand[211].

Social impact bonds have been rapidly gaining traction around the world, including in Australia through successful social impact bond issuances such as the Newpin Social Benefit Bond (NSW Government and Uniting Care Burnside), which raised $9 million for a family restoration program in NSW. Other social impact bond examples in Australia include Victoria's first social impact bond, which is aimed at supporting a program to end homelessness in the state by 2018.

DC Water environmental impact bond - Environmental Impact Bonds in action[212]

Like in many urban centres, Washington DC's stormwater system receives too much stormwater and overflow, causing major water quality and environmental issues for local residents. To fix this problem, DC Water could build a new pipe infrastructure to fix this problem – this is however a time consuming, costly and locally disruptive option. Alternatively, it could install and test a new engineered green space area's ability to absorb stormwater, which may potentially reduce runoff into the existing stormwater system. If this green infrastructure does reduce stormwater runoff, it would be proven to be a less expensive and more environmentally attractive solution compared to installing a conventional pipe-based system. Given it is somewhat of a novel idea, the green infrastructure option is a somewhat riskier proposition than the piping option for investors.

The USD 25 million DC Water environmental impact bond was the world's first environmental impact bond, and was issued by the Calvert Foundation (NGO), the DC Water and Sewer Authority (government) and Goldman Sachs (private sector) in 2016, with the funding going towards green rather than grey infrastructure for water runoff[213]. The DC Water environmental impact bond is similar in many respects to a social impact bond - it is a contract between parties, where a portion of the repayment to investors is based on the outcome of a particular intervention. In the case of the DC Water environmental impact bond, the outcome is the efficacy of green infrastructure in reducing stormwater runoff, versus conventional grey infrastructure options.

There are a few differences between this environmental impact bond and social impact bonds however. Firstly, the bond issuer is government-run DC Water – as a tax-free bond, this environmental impact bond functions as debt security issued to finance capital expenditure. The associated scheduled payments of interest and full repayment of principal (made at the end of the term), are therefore backed by DC Water. Second, this example is financing environmental outcomes instead of social outcomes (e.g. education, juvenile detention etc). Lastly, unlike many social impact bonds which finance an intervention through cost savings, the DC Water environmental impact bond was structured to incentivize innovation through risk sharing between the payor (DC Water) and the private investors, allowing DC Water to test an innovative and (potentially) more cost-effective method to reduce stormwater runoff.

Continued from previous page.

How will the DC Water environmental impact bond work in practice? Stormwater runoff reduction will be measured at two points in the 5-year plan to first create a baseline, and then to evaluate the intervention. If runoff flow is reduced as expected, DC Water will pay full principal and an effective return of 3.43% to the investors (Calvert Foundation and Goldman Sachs) at maturity. If runoff reduction is more effective than expected, DC Water will pay investors a bonus "outcome payment" of USD 3.3 million (an effective return of around 6.4%). DC water will then work to scale up green infrastructure implementation across the District. If, on the other hand, runoff reduction underperforms expectations, investors will pay a "risk-sharing payment," meaning they will have a lower effective return from the investment of just 0.5%. If this was the case, DC water will consider stopping all future green infrastructure projects and continue to invest in grey infrastructure.

For environmental impact bonds to be successful there must be standardised measuring frameworks and metrics, consistent annual repayments and the ability for the environmental impact bond to survive without government intervention[209]. Environmental accounting (i.e. monitoring trends in ecological condition as a consequence of investment, and the associated economic benefits) can make a big difference in reducing transactions costs and proving the viability of outcomes.

Environmental impact bonds also require sufficient scale and financial sophistication[214]. While it is beneficial to have government regulations creating demand, cashflows and environmental markets for environmental impact bonds, it is important that an environmental impact bond sustain itself until the maturity date without government involvement[209]. Environmental impact bonds hold significant potential to fund large-scale conservation projects, but smaller projects may not be at a suitable scale for investment with this instrument unless multiple projects are bundled together. Different environmental impact bond structures can influence the risk-return profile, which in turn may affect which investor types this instrument appeals to[209]. A benefit of environmental impact bonds is that the economic returns may be higher if the environmental initiative produces better outcomes than expected[215].

Outside environmental credit markets (e.g. Emissions Reduction Fund), both government and user-financed PES mechanisms are not currently used in Australia. Due to their complexity, PES mechanisms globally have generally only been provided at the local-scale, and have largely failed to attract private investment. Environmental impact bonds have not been used to finance conservation or sustainable land management in Australia either. However, compared to PES mechanisms, interest amongst Australian investors in impact bonds (particularly social impact bonds) is growing. If the high transaction costs associated with environmental accounting can be addressed, as is scalability (e.g. through aggregation), then environmental impact bonds could be considered as a natural/future extension of the social impact bond market.

Figure 30 – Outcome-based models

Description			
Payment of project funding only occurs once predefined outcomes have been achieved.			
Advantages[2,10,194,196,199,216]	Disadvantages[2,24]		
• Project must be able to generate measurable environmental outcomes as compared to a baseline. • Creates a favourable risk-return as the financial viability of a conservation project shifts from the public to private sector, from investors to project developers. • Sharing of risk allows for more experimental and potentially more successful technology and methods to be used. • Leverages private funding into conservation activities when public funding is not available; and can potentially be used as a tool in blended finance and environmental credit markets to encourage private participation and economic returns. • Can increase economic efficiency as well as governance, transparency (regarding use of funds and impacts) and accountability. • Provides recipients with autonomy on financial decisions (unlike grants or private-related investments). • Aligns incentives, shifts risk of performance to private sector, creates engagement for multiple stakeholders. • Allows funders and investors to pay for quantified outcomes, not project inputs. • Because compensation is based on outcomes, this model puts the most significant focus on delivering environmental benefits. • Rapid, large scale conservation can be enabled through this model. • Allows for inclusion of triple bottom line costs and benefits across a time. •	• Requires detailed monitoring, accounting and reporting framework, which can require substantial financial and human capital to create and implement. • Can be difficult for new projects to be funded through this mechanism without a proof of concept and financial viability study done. • Need financial sophistication due to the model framework needing to be unique for each project. • Outcome-based models may fail if the timeline for outcomes/ delivery are not realistic. • Creates potential to overpay if the projected conservation outcomes are significantly less than actual outcomes. • Relies on accurate environmental accounting systems that may not be developed or mature enough yet. • Conservation projects and funding through this method may not be directed to where they are most needed. • Some outcome-based models may not be suitable to fund smaller conservation projects.		
Current extent of use in CF	**Limited**	Common	Widespread
Potential to scale-up & meet CF gaps	Limited	**Moderate**	**High**
Relative ease of deployment	**Complex**	Moderate	Simple
Additional notes (if applicable)			

4.4.10 Green product and service certification

Certification provides a standardised framework by which to quantify and verify the environmental and economic outcomes of a good or service[2,10,101]. It also attempts to value and incorporate the ecosystem services of a good or service into its market price[10]. Certification can be undertaken internally within an organisation or project, or externally by a third party, and can be used across various investment instruments and can hold differing processes or principles; ensuring the certification standard is appropriate to the line context to produce accurate findings[33].

Third-party green product and service certification programs can be applicable to whole supply chains, specific procedures or practices and involve assessing, measuring and monitoring procedures, practices or outcomes against the relevant externally set requirements of the certification standard. Non-compliance results in no certificate being issued[217]. Through third-party verification, the reliability, accuracy and credibility of the certification standard and the environmental activity undertaken is guaranteed - this is especially important for consumers and shareholders who use certification standards to determine which businesses, goods or services they wish to support [224,218]. Certification effectively acts as a guarantee to stakeholders that the business or activity is producing verified environmental benefits[224].

Certification schemes can be used by conservation finance stakeholders to meet regulatory reporting requirements or investor and industry expectations on conservation outcomes. For example, organic certification may be used in sustainable agriculture to prove conservation outcomes of reduced fertiliser usage (leading to less water pollution) to impact investors[33]. Certification programs can also help investors increase their economic and environmental returns through price premiums and increasing consumer confidence in certified products[219]. Consumer confidence can result in long-term consumer loyalty and support of goods and services, translating to increased likelihood of economic stability of the goods or services.

Third-party standards and certification schemes most commonly used in conservation investments are in the areas of carbon offsetting and sustainable forestry and agriculture. For example, over 180+ million hectares of forests worldwide were managed according to Forest Stewardship Council (FSC) standards at the end of 2014. This includes boreal, temperate and tropical forests, owned publicly, privately and by communities[220]. Certification schemes also cover agriculture, tourism and other sectors. Surveys also suggest that around 75% of investors are motivated to use certification schemes due to legal requirements[33].

The Verified Carbon Standard and Climate Bonds Initiative, Fair Trade and International Organisation for Standardisation and Environmental Management Systems Certification (ISO) are other examples of environmental certification standards that certify products and services that mitigate climate change an ecological damage through reduced carbon outputs, sustainable farming and forestry practices and environmentally conscious and inclusive business practices respectively[221].

In conjunction to creating the benefits of reduced environmental, social and governance risk, increased CSR relations and improved company image and credibility, gaining environmental certification also produces significant financial advantages[222,223,224]. These financial advantages are realised through reduced costs and improved efficiencies, as well as a price premium that can be charged for certified goods and services[224]. This price premium can be charged as it incorporates the ecosystem service values into the market price of the good or service[222]. Therefore, it is evident that third-party certification can provide a host of benefits that can encourage entities to invest in environmental or conservation activities to achieve certification.

Third-party certification standards for sustainable forestry and cropland management are commonly used around the world, including in Australia. Currently, around 26.7 million hectares of forest are certified under the Responsible Wood Certification Scheme (Australian Forestry Standard), and 1.2 million hectares under the FSC[225]. Organic farming in Australia has grown by around 17% per annum since 2012[226], demonstrating an increasing market preference for nutritious food grown with less chemicals and less impact on the natural environment[227]. Australia now has the largest certified organic land mass in the world — around 27 million hectares or 53% of the world's certified organic farmland[228].

Currently, there is no third-party green product standard covering sustainable grazing and/or farms that undertake landscape restoration and biodiversity conservation. However, growing demand in international markets (such as Europe and Asia) for sustainably grown food and fibre products has galvanised the need for verifying and promoting Australian agriculture () as clean, green and sustainable. As such new third-party green-product certification schemes (and supporting frameworks) are currently in development. For example, the National Farmers Federation's Australian Beef Sustainability Framework.

Significant efforts to build food, farm and tourism certification systems that recognise landscape restoration efforts have taken place over the last 20 years, however these efforts have delivered limited outcomes with respect to increased financial rewards or improved market access[229]. Producers of sustainably certified products also often face higher production costs and increased compliance complexity - with little additional financial reward and evidence of positive outcomes for land, water and biodiversity. Another issue is that the proliferation of Australian-based certification schemes has confused consumers both domestically and internationally[229].

Figure 31 – Green product & service certification

Description			
A standardised framework by which to quantify and verify the environmental and economic outcomes of a good or service, and incorporate the ecosystem services into its market price.			
Advantages[10,33,100,101]	Disadvantages[2,10]		
• Validate conservation outcomes and increasing triple bottom line project credibility to potential investors. • Drives continuous improvements and sharing of conservation practices. • The ability of certified goods and services to charge a premium can increase the economic value of investing in certification as well as establishing clear cashflows. • It is not dependent upon governmental support and can be undertaken voluntarily. • A simple marketing opportunity.	• Rely on having a product or service to sell – so not applicable to many conservation projects • A lack of consistency between certification standard's principles and criterion can create confusion among consumers. • Verification costs can be high when gathering evidence of ecological improvement, particularly at the farm scale. • Need market maturity before sustainability certification standards can be marketed and validated. • Gaining certification can be expensive and exclude small conservation organisations or producers from the opportunity.		
Current extent of use in CF	Limited	Common	**Widespread**
Potential to scale-up & meet CF gaps	Limited	**Moderate**	High
Relative ease of deployment	Complex	**Moderate**	Simple
Additional notes (if applicable)			

4.4.11 Impact investing in real assets

Impact investing involves investing in organisations, projects or funds with the intention of generating verifiable social and environmental outcomes, in combination with an acceptable financial return. The impact investing sector is expected to grow tenfold from USD 77 billion to about USD 700 billion by 2020[230], and with it, opportunities to increase sustainable land management and conservation finance flows through investing in real assets – that is, tangible assets such as sustainable timber plantations, agricultural lands, fisheries and even water rights[231,232]. This growth in impact investing is being driven in-part by large multilateral targets such as the GHG mitigation goals of the Paris Agreement on Climate Change and the Sustainable Development Goals (SDGs), a global agenda signed by 193 Member States to end poverty by 2030 (and achieve progress on underlying drivers e.g. biodiversity conservation) has spurred business to deepen its investment in business models that do less social and environmental harm[233].

This approach brings an environmental sustainability lens to timber and agricultural production, and creates favourable risk and return conditions to assist these investment approaches in being competitive with conventional, often environmentally degrading, approaches to forestry and agriculture[232]. This is done through: the sale of conservation covenants, mitigation and offset credits; certified sustainable timber and agricultural practices and harvests; and, low interest debt and tax incentives [232]. These provide low cost capital and diverse income streams and therefore can create both economic and environmental capital that can improve the risk-return profile of these investments[232,234]. According to The Global Impact Investing Network's 2017 Annual Impact Investor Survey, sustainable real assets account for 22% of impact investing, which indicates that there is investor interest in sustainable real assets[235,236]. Frameworks and standards that facilitate impact investing in real assets, such as sustainably managed forests and fisheries, allows investors to invest with more certainty and reduced risk[237].

Impact investing in sustainable forestry

Similar to Lyme Timber, Ecotrust Forest Management (EFM) is a US timber investment management organisation with a specialized regional approach to investing that accelerates the transition of strategic high priority forestland assets to long term, local owners while improving forest management outcomes in the interim period through its ecological forestry practices. The local owners may include indigenous tribes, public agencies, and local conservation entities. Its practices are certified by the FSC. In addition to FSC-certified timber harvesting, EFM uses: forest carbon credit; working forest conservation covenants; New Market Tax Credits; and, conservation sales as part of its business model. EFM is focused on the acquisition and transition of working forests to long-term, permanent ownership and to improved forms of management. EFM has over USD 80 million in assets and has managed over 17,000 hectares to FSC standards by using ecological forestry practices in Oregon and Washington.

EFM focuses its work in the US Pacific Northwest due to global investor demand for the quality timber from this region, in addition to the ecological and social significance of these natural forests, which act as carbon sinks and protect drinking water. Interior and dry-side forests cover millions of hectares, but the lack of milling infrastructure, markets for low value wood, and incentives for restoration forestry have limited the applicability of investment models for both traditional and conservation oriented forestland. Large regional gaps also exist for public funding in these regions. These challenges have given rise to differentiated models for conservation impact investing in the Pacific Northwest. Many approaches seek to "stack" conservation covenants with carbon offsets in the same transaction to compete against the value of timber on the open market. Also, revenue generated from the sale of tax credits (in lieu of easements) and low financing costs with low cost debt provides examples of creative financing solutions to support conservation outcomes and job creation.

Responsible management of natural resources and improvements in environmental conditions can ensue due to sustainable management of real assets[238]. An example of a sustainable land management real asset may be an agricultural farm's conversion to organic farming practices which may create increased short-term financial costs but provide improved soil fertility and garner price premiums for organic produce in the future[238]. In 2017, Sonen Capital closed their first 'sustainable real assets fund' after its creation in 2014 and raised USD 75 million to be invested in sustainable real assets; indicating that substantial amounts of money can be procured for sustainable land management projects through investment funds[239].

Impact investing is not just about funding projects that generate verifiable environmental and financial returns, but also those that have social and cultural returns, and therefore meet multiple Sustainable Development Goals. For example, there is a substantial opportunity to conserve and restore land that generates carbon revenue, while also enhancing the health of environmental assets that have important cultural significance for indigenous Australians.

Impact investing in sustainable agriculture

Established in 2009, Farmland LP is an investment fund manager with USD 120 million of farmland under management. The firm seeks to increase the value of crops grown and the value of the underlying farmland by converting commodity cropland to certified organic using sustainable farming practices. Its mission is to demonstrate that sustainable agriculture is superior to traditional commodity crop production. Farmland LP is classified within the early market phase, and it aims to scale to reach the mainstream market. It draws upon multiple revenue streams and financing tools to compete in a mature asset class.

Farmland LP utilises crop and livestock rotations to increase revenue and ensure the long term financial and environmental sustainability of the entire ecosystem. In the first several years of the rotational pattern, perennial pastures are planted and sustainable livestock grazing occurs, making best use of the pasture, improving soil fertility, and enhancing biodiversity.

In 2016, Farmland LP received a grant through the USDA Conservation Innovation Grants (CIG) program, with the Delta Institute and Earth Economics creating the tools and metrics to calculate the added environmental benefits and potentially leverage capital. The quantified environmental benefits have created a more comprehensive value for organic agriculture, that can be assessed transparently throughout the supply chain. Farmland LP's intent is to leverage public funding through the CIG program to create an easy to use protocol that would be made accessible to all farmland owners. The development of new metrics and protocols to quantify the environmental benefits of sustainable farming practices will make Farmland LP and other sustainable farmland organizations inherently more competitive in the marketplace.

Challenges for Farmland LP include the time and resources required to educate potential investors (not to be underestimated). This requires a differentiated approach, and the relatively nascent status of sustainable agriculture investing prevent some investors from deploying capital. Conventional agriculture production also receives government subsidies, which supports a relatively stable rate of return. Farmland LP and other producers of natural and organic agriculture have limited access to the USD 25 billion that the US Federal government spends on these agricultural subsidies. Further, they do not receive income from soil carbon or other environmental service markets that are still being formed and defined. However, in order to attract institutional investment, Farmland LP must still generate financial returns that compete against conventional agricultural production.

According to the Benchmarking Impact: Australian Impact Investment Activity and Performance Report 2018 there were 51 Australian impact investment products active at 31 December 2017, with a total product value of $5.8 billion (up from $1.2 billion at 30 June 2015).

Impact investing in Australian-based real-assets that have conservation and sustainable land management benefits is relatively immature compared to the US and other countries. This is likely due (but not limited) to: the lack of favourable tax incentives applicable to giving up revenue in favour of conservation covenants; a lack of understanding of how such models may work in Australia; and, a lack of investment opportunities at significant scale. However, there are two examples which demonstrate an increasing appetite for impact investing in Australian-based real assets.

In 2015 The Nature Conservancy in conjunction with specialist asset manager Kilter Rural established the Murray Darling Basin Balance Water Fund which is designed to invest in water security for Australian farming families while protecting culturally and ecologically significant wetlands, and support associated threatened species. The fund invests in water entitlements (assets), which are issued by government and bought, sold and leased on the AUD10 billion Murray Darling Basin water trading markets.

The fund operates as follows. When water is scarce and agricultural demand is high, more water entitlements will be made available to agriculture. When water is abundant and agricultural demand is low, more "environmental" water will be allocated to wetlands. Hence, the balancing of water allocation, made possible through the funds holdings which so far have raised AUD22 million in equity and AUD5 million in debt, and resulted in around a 2.3% return for investors[240].

Another example is that of New Forests' Australia New Zealand Forest Fund (ANZFF), a AUD 4 billion fund, that at the end of 2017 had invested in a diversified portfolio consisting of more than 650,000 hectares of timberland properties and forestry-related investments in Australia and New Zealand. Most of this timberland are being either FSC or PEFC certified, and is monitored through the company's Sustainable Landscape Investment performance framework (which utilises the IRIS metrics)[241].

Across its Australia-NZ portfolio, New Forests has restored around 10,500 hectares of native forest; has almost 300 kms of streams under restoration management; designated 30,000+ hectares of land as ecological restoration management area; and, protected almost 150,000 hectares of land (with around 50,000 hectares being permanently protected). According to the Responsible Investment Benchmark Report 2017, New Forests' sustainable forestry funds constitute more than 10% of the Australian market for sustainably themed investment[241].

Figure 32 – Impact investing in real assets

Description			
Real asset investments that are managed using sustainability practices.			
Advantages[232,234, 237,242, 243]	Disadvantages[237,244,245]		
• Enables a differentiated approach to a mature asset class that institutional investors understand. • Creates conditions for sustainable management practices to produce outcomes that are competitive against conventional approaches. • Can be used across large areas of land and in conjunction with certification. • Long term capital gains and predictable cash flows can be secured. • Can enhance the risk-return ratio. • Increased demand for sustainable products will simultaneously increase usage of this asset class to meet demand. • Can provide multiple revenue streams: timber or agricultural product and asset sales, conservation credits and user fees. • Has a clear exit strategy -likely to be appealing to private investors. • Blended finance can be utilised to provide funding. • Does not rely on a claim to another asset like stocks or bonds do. • Provide inflation protection, meaning income from the asset will increase, not decrease. • Can be funded by various investment instruments such as: equity, debt, shares, investment funds and bonds. • Holds potential to be replicated across various industries and investment portfolios. • The financial model allows for sustainable management to be competitive against conventional investment approaches	• Relies on public funding for some methods of ensuring conservation outcomes such as conservation covenants. • Conservation covenants may be limited in their ability to finance sustainability initiatives. • Potential for greenwashing to occur. • Requires a high degree of sophistication that increases transaction costs. • Exclusion may occur as both these costs and sophistication may not be possible for all timber and agricultural producers. • Impact investors hesitant to participate due to the absence of high quality performance data. • Lack of: accurate environmental accounting, historical accounting (due to relative infancy of this asset class) and value and risk analysis models make it hard for investors to determine environmental and economic sustainability impacts.		
Current extent of use in CF	**Limited**	Common	Widespread
Potential to scale-up & meet CF gaps	Limited	**Moderate**	**High**
Relative ease of deployment	**Complex**	Moderate	Simple
Additional notes (if applicable)			

4.5 Comparison of scalability versus deployment complexity for each conservation finance approach

Figure 33 - Comparison of all criteria for each conservation finance approach, in the Australian context

Criteria	*Philanthropic giving*						*Government funding*							
	Donations by indivs.	Voluntary surcharges	Crowd-funding	Transfer fees	Corporate social respons.	Corporate-Cause marketing	Grants	Environ. levies	Charitable tax deductions	Covenanted land tax deductions	Tax credits (tradable)	State tax concessions	Municipal tax concessions	Municipal rebates
Current use in conservation financing (worldwide)	Limited	Limited	Limited	Limited	Common	Common	Widespread	Common	Common	Common	Limited	Limited	Common	Common
Potential to scale-up & meet conservation finance gaps	Moderate	Limited	Limited	Moderate	Moderate	Limited	Moderate	Limited	Moderate	Moderate	Moderate	Moderate	Limited	Limited
Relative ease of deployment	Simple	Simple	Simple	Moderate	Simple	Simple	Simple	Simple	Moderate	Moderate	Moderate	Moderate	Simple	Simple
Fits within all existing Australian federal, state and local legal frameworks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✓	✓
Currently used in Australia to support conservation and SLM	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓
Predominantly used to **directly** support private land conservation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Can be used **indirectly** to support conservation, via sustainable land management	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Does **not require** standardised metrics and data to leverage private-sector investment	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓
Suited to being included in a blended finance approach	✓	✗	✗	✓	✗	✗	✓	✗	✓	✓	✓	✓	✓	✓
Notes							Dominant conservation finance approach.	Requires political will.		Vary state-by-state.		Vary state-by-state.		

Figure 33 - Comparison of all criteria for each conservation finance approach, in the Australian context (cont)

Criteria	*Government funding (cont)*				*Private investment*								
	Regional development incentives	Environ. trust funds	Ballot measures	Debt-for nature swaps	Bridge financing	Revolving land funds	Seller financing	Program related investment	Environ. credit markets	Green bonds	Outcome-based models	Green certification	Impact investing real assets
Current use in conservation financing (worldwide)	Limited	Common	Common	Limited	Limited	Limited	Limited	Limited	Common	Limited	Limited	Widespread	Limited
Potential to scale-up & meet conservation finance gaps	High	High	Moderate	Not applicable	Moderate	Moderate	Limited	Moderate	High	High	High	Moderate	High
Relative ease of deployment	Complex	Complex	Complex	Not applicable	Moderate	Moderate	Simple	Moderate	Complex	Complex	Complex	Moderate	Complex
Fits within all existing Australian federal, state and local legal frameworks	✓	✓	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
Currently used in Australia to support conservation and SLM	✓	✓	✗	✗	✗	✓	✗	✓	✓	✓	✓	✓	✓
Predominantly used to **directly** support private land conservation	✗	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✗	✓
Can be used **indirectly** to support private land conservation, via sustainable land management	✓	✓	✓	✗	✓	✗	✓	✓	✓	✓	✓	✓	✓
Does **not require** standardised metrics and data to leverage private-sector investment	✓	✗	✓	✗	✗	✓	✓	✗	✗	✗	✗	✗	✗
Suited to being included in a blended finance approach	✓	✓	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
Notes	TNC's shellfish reef project on the Yorke Peninsula is an example.	Metrics needed to scale-up with private sector investment.	Common in the US, not used elsewhere.	Developing countries only.						Metrics and de-risking incentives needed.	Metrics and de-risking incentives needed.		Metrics and de-risking incentives needed.

5.0 Summary and key recommendations

5.1 Recap

This Scoping Paper, supported by discussion at the Conservation Finance Roundtable, assessed 26 major finance approaches – spanning philanthropic giving, government financing and private sector investment – as to their relative deployment complexity, scalability and suitability in addressing the conservation finance gap in Australia.

There is no silver bullet to closing the conservation finance gap. Research to prepare this Paper and the discussions at the Roundtable confirmed that a blend of approaches is required – both within individual transactions, and for the sector overall. The optimal type of approach utilised in any given circumstance will depend heavily on the objectives (e.g. restoration versus protection versus stewardship), prioritisation of threats to a specific environmental asset, and the socio-cultural context.

Philanthropic giving has and will continue to provide an important role in supporting conservation in Australia, in particular projects that directly benefit conservation where there is no or little prospect for a financial return. It can also support innovations and capacity building that are working toward more financially sustainable models, and de-risk blended finance projects.

Overwhelmingly, as is the case in many places around the world, the various levels of **government** in Australia currently provide the dominant source of conservation financing. Like philanthropic funding, government funding is a key supporter of projects that directly support conservation, as well as of projects that indirectly support conservation such as through sustainable land management and climate change mitigation. Two major limitations of government funding are its scale, and its ability to provide sustained funding streams for conservation. There are powerful conservation finance approaches that can alleviate some of those challenges: these include environmental levies, environmental trust funds and tax incentives for private landowners. Of course, implementing those approaches will pose their own significant political challenges.

The private sector has a scale of funding available beyond both the philanthropic and government sectors, and there are growing opportunities to use philanthropic and government sources to leverage **private sector** investment as part of a blended-finance approach. This is particularly the case for opportunities to achieve indirect conservation benefits from impact investment in sustainable agricultural and forestland real assets, or via urban green infrastructure and regional development funding. Various international targets and agreements to which Australia is a party and to which companies and investors are increasingly seeking to align their investments, such as the Sustainable Development Goals and the UNFCCC Paris Agreement, have spurred the private sector's interest in investing in social and environmental outcomes, alongside market returns. The business case for conservation has also been enhanced by Australia's strengthening brand as a global supplier of clean, healthy and sustainably grown food and fibre products, and of nature-based and (often entwined) indigenous cultural tourism opportunities.

Leveraging additional investment will require a number of **critical enabling factors** to be put in place: these are the building blocks needed before some of these approaches can be scaled up to reach their full potential. The most significant of these is a series of well-accepted metrics that can quantify and measure conservation, financial, and social returns on investment.

5.2 Conservation finance roundtable

On 9 August 2018 ALCA convened a Conservation Finance Roundtable in Melbourne. Around 35 participants from a range of sectors attended (see page 5 of this Scoping Paper for a list of participants). The purpose of the Roundtable was threefold: (1) to provide a "reality check" on the draft Scoping Paper, including providing advice on what content is missing or incorrect; (2) help prioritise a short-list of conservation finance approaches for further action/support/promotion, based on their suitability to the Australian context and potential scalability in meeting the national financing gap to conserve natural capital; and (3) discuss and provide recommendations on what needs to be changed in order to enable the preferred short-list of conservation finance options to be scaled-up. Participants were arranged into cross-sector groups, and their responses recorded individually and collectively via feedback sheets – these were then used to revise the content and help develop the recommendations in this Scoping Paper.

5.3 Key recommendations

The original intent of this Paper was to research and present a global stocktake of conservation finance approaches, consult with expert conservation and finance practitioners individually and through the Roundtable, and then compile a short-list of approaches that offer the most promise for accelerating conservation finance in Australia. Having completed the stocktake and engaged in consultation with many of Australia's leading conservation finance experts, we have found broad consensus on some of the enabling factors required to move forward on conservation finance for private land conservation in Australia, though less consensus on any particular approaches to pursue. Perhaps the conservation finance market in Australia is not yet mature enough for practitioners to be able to predict the approaches that will bring the most success.

Another overarching theme that emerged is the distinction between approaches that *directly* benefit conservation and restoration (where conservation is the main objective), and those approaches that *indirectly* benefit conservation on private land such as through sustainable land management and practices and socio-cultural support i.e. where conservation was a secondary objective, or co-benefit. Both sets of approaches have inherent value for our work to conserve our natural capital, but the types of activities that contribute to each generally involves a different (if overlapping) set of approaches. Therefore, the recommendations in this Paper are divided into three categories: enabling factors, scaling up direct conservation, and scaling up indirect conservation.

5.3.1 Recommendations to create the enabling factors for further investment

Many of the enabling factors identified in this Scoping Report, and subsequent expert consultation, pertain to the ability of the private sector to incorporate the benefits of conserving natural capital into their business practices. The key drivers for insurers, banks and investors to value natural capital are to ensure that companies: a) better capture productivity improvements (e.g. via healthier soils) and tap into environmental markets (e.g. organic and sustainable land management certification) to increase overall profit; and, b) better manage risk through avoiding activities that might damage productive capacity in their supply chains, their brand and sales volumes (e.g. deforestation leading to biodiversity loss), and/or create insurance losses".

The increased investor appetite for projects that achieve social and environmental returns along with financial returns is evidence of a cultural shift toward this approach, supported by an increased focus across all sectors on actions that can help achieve the Sustainable Development Goals (SDGs). The recommendations below are aimed at harnessing and accelerating this shift.

While several of these recommendations focus on government-led action, there are also many opportunities to share the responsibility of these actions with NGOs and the private sector.

Recommendation 1: Create an Australian network of conservation finance practitioners

The formalisation and ongoing commitment to support a growing network of Australian conservation finance practitioners, as has been established in the US, will play an important role in accelerating conservation finance. All indications from those engaged in the development of the Scoping Paper suggest there is significant interest and energy to develop such a network, and to create real opportunities to connect the private sector with those who have spent much of their careers thinking about how to best conserve our natural capital. In the end, projects come together not through abstract theories and scoping papers but through personal relationships, and the importance of facilitating the development of those relationships cannot be underestimated.

The Australian Land Conservation Alliance (ALCA) could be well-placed to host the nascent network as it develops, working with cross-sector partners to resource its development and identify steps to be achieved through 2019. At that time, due consideration as to whether this would best serve the community as a stand-alone entity, or housed within ALCA, could be given.

As a source of inspiration, the US Conservation Finance Network has three main goals which could equally be adopted here and used to guide the development of our own network, namely:

1. Expand the use of innovative and effective conservation finance strategies
2. Build a networked community of practice
3. Increase the funding available for conservation

As part of the development of this paper the US Conservation Finance Network provided a roadmap of its development and its successes and lessons learned; this can be drawn upon as Australia's network develops.

Recommendation 2: Identify and support the development of intermediaries

Intermediaries are critical to connecting project developers with investors, structuring finance, aggregating smaller deals, and ultimately bringing scale to the market. Our consultation highlighted the relative lack of intermediaries in Australia who can capably cross the philanthropic, government and private sectors, speak each of their languages and readily identify the areas where their interests align in order to plant the seeds of a 'deal'. In some ways, the identification and development of intermediaries will be a natural offshoot of the development of an Australian conservation finance network, recommended above. However, it was clearly identified by participants in this process as a separate and important need.

Government could precipitate this by continuing to support conservation finance efforts such as this which seek to develop the capacity of all sectors to improve conservation finance literacy and connecting self-identified intermediaries with sector members. With the philanthropic and private sectors, Government could also support conservation innovation and capacity building grants which could fund intermediaries to work with those developing conservation projects, potentially drawing from the model of the Impact Investment Ready Growth Grant (discussed in Section 4.1.7 above). In addition, within the nascent conservation finance network, ALCA could host a list of intermediaries with a proven track record to act as cross-sector mentors. The intermediaries could potentially meet at the annual ALCA private land conservation conference at an invitation-only workshop to keep the group alive and share their latest projects and learnings.

Recommendation 3: Nationally consistent environmental accounting and standardised metrics

The development in Australia of a set of nationally consistent metrics to quantify and measure conservation, financial, and social returns on investment was identified during consultations as an important factor. Therefore, we recommend that, in consultation with NGOs, project developers and the finance sector, the federal government continues to develop a nationally consistent standard for environmental-economic accounting (including environmental condition accounting) to underpin the development of a standardised set of metrics that are clearly understood by both the conservation and finance sectors. These metrics need to operate at both the enterprise and landscape scale.

Without credible metrics, backed by robust, cost-effective data sources and nationally consistent government-backed standards, leveraging further investment, in particular private sector investment, will be very difficult. This also extends to the public sector, where in the absence of such consistent environmental accounts and metrics, future government investment in natural resource management and conservation (which is likely to remain substantial) may or may not represent the best return-on -investment to taxpayers – purely because consistent and national data is not available to inform government departments of where public funding (e.g. grants) should be best directed to realise maximum conservation and social gains.

Furthermore, environmental condition accounting and environmental-economic accounting could be used to support a national green product and service certification scheme that, for example, provides farmers with a way to be credibly recognised domestically and overseas for sustainable land management and conservation practices – opening new markets, and commanding price premiums for sustainably produced food and fibre. This was another key idea endorsed during the consultations undertaken as part of this Paper. Other work that hinges on development of standardised metrics includes impact investing in real assets, identifying co-benefits in environmental credit markets, green bonds and green product/service certification.

While standardised metrics are seen as a key enabling factor, working through them will take time and collective will - progress on other items highlighted here should, however, not be delayed pending their establishment. Australia's federal and state governments recognise that they can play a crucial role in facilitating and coordinating the creation of databases for this purpose, and are currently progressing efforts in this area.

5.3.2 Recommendations to scale-up direct conservation finance flows

Government is a key player in supporting direct conservation, which typically does not provide a financial return. As noted above, however, there are two major limitations to government support of direct conservation projects: a lack of scale; and, insufficient and sustained dedicated funding sources that support long-term planning and implementation of conservation projects. Philanthropy is also an important direct contributor to conservation projects and should continue to play a role, and help leverage other funding sources. The following recommendations are targeted at addressing those issues.

Recommendation 4: Create a major Australian environmental trust fund

Environmental trust funds are a proven method around the world for creating a dedicated, sustained funding source for long-term environmental projects. The Canadian government has recently shown a major commitment to conservation by creating its AUD 0.5 billion Canada Nature Fund, with the aim to double that to AUD 1 billion by leveraging contributions from other sectors. The Fund includes a specific stream for long-term protection of private land, recognising the important contribution private land can make to achieving the country's national and international biodiversity commitments.

Likewise, Australia has the opportunity to demonstrate its commitment to biodiversity conservation through contributing a major capital amount to a new Australian environmental trust fund. It could ensure that the funding is leveraged against other funding sources by imposing matching requirements, replicating one of Australia's most successful private conservation programs – the National Reserve System program of the early 2000s.

Importantly, the design of the fund would need to identify an ongoing income source. This could be achieved by creating an endowment fund that only draws upon the income generated by the capital sum used to create the fund, and/or through an environmental levy that draws from an existing or new income source. The levy could be drawn from a part of our economy that has a logical policy nexus to land conservation such as real estate – the US gives us many examples of dedicated environmental levies that draw upon real estate and other sources (see Appendix B). The levy could come from federal or state sources or a mix of both, acknowledging that significant political leadership would be required to achieve this.

Recommendation 5: Create a national revolving land fund

A revolving land fund is another proven method for achieving direct conservation that already exists in Australia. It is largely self-sustaining and uses the existing real estate market. It allows the purchase, protection and on-selling properties of ecological and cultural significance, and replenishes itself through the proceeds of sale, and potentially periodic top-ups from philanthropy or government (as needed). Depending on the structure, it could also potentially use private sector funding to generate a return with government or philanthropic funding de-risking it.

Recommendation 6: Strengthen tax incentives to support long-term private land protection

For a range of reasons, the current tax arrangements at the federal, state and local levels provide a disincentive for landholders to invest in managing land for conservation, including permanently protecting their land via a conservation covenant. International tax models demonstrate that tax incentives can dramatically increase the rate of private land conservation, particularly when leveraged against other funding streams. In the US between 2000 and 2010, favourable tax deductions for covenanted land played a key role in doubling the land conserved by national land trusts from around 10 million to 20 million hectares.

Recommendation 7: Research & invest in models to test a voluntary biodiversity credit market

A voluntary biodiversity credit market could be a game changer for conservation in Australia. Just like the voluntary carbon market launched with the support of 'early adopter' businesses, a voluntary biodiversity credit market could provide an opportunity for leading-edge businesses to recognise and voluntarily offset their biodiversity impacts. While the regulated biodiversity credit markets in Australia cover entities that directly impact biodiversity of national or state significance (depending on the project), voluntary biodiversity credits would be available for the many businesses and other entities that indirectly impact Australian biodiversity through their supply chain or other operations.

Two key issues need to be solved before a voluntary biodiversity credit market can be established: the metric by which the credit would be measured (on both the impact and offset side), and testing of the market. Considerable work has been done on metrics which may be used, including by the Wentworth Group of Concerned Scientists, and work on metrics under Recommendation 3 above would take it further. Government and/or philanthropy could fund the additional research and testing necessary to launch a functioning voluntary biodiversity credit market.

5.3.3 Recommendations to scale-up indirect conservation finance flows

Development of this Scoping Paper and subsequent consultations revealed strong interest by the private sector to engage in projects that indirectly benefit conservation. This reveals the growing recognition that projects that are good for the environment are often good for business too, both in terms of risk management and the market power of consumers and investors who are increasingly valuing social and environmental project benefits. That said, there is still an acknowledged gap between the intuitive business benefit of these conservation projects and their proof. Recommendation 3 above is designed to help bridge that gap, as well as the recommendations below.

Recommendation 8: Support the private sector to develop the conservation finance market

Lessons from other recently developed markets show that market development assistance is critical in proving models and helping take them to scale. Government can play a key role here. De-risking projects, particularly during their start-up or proof-of-concept phase, is critical when encouraging the private sector and NGOs to experiment with new models that are designed to show that conservation and sustainable land management have a tangible business benefit.

A national institution for conservation and sustainable land management is critical to scaling up conservation finance. Just as the climate sector relies on the Australian Renewable Energy Agency (ARENA) and the Clean Energy Finance Corporation (CEFC), a national conservation body could provide critical opportunities to prove concepts and de-risk projects, provide technical and capacity building assistance, and act as an innovative conservation finance start-up incubator in collaboration with the private sector. Similarly, innovation grants issued by the government or philanthropic organisations (such as Conservation Innovation Grants in the US) can serve those same purposes.

The identification and development of intermediaries (Recommendation 2 above) would also support market development.

Recommendation 9: Accelerate the use of green bonds and outcome-based models

Green bonds and outcome-based models (e.g. Environmental Impact Bonds) are widely perceived as providing untapped opportunities to catalyse activities that can indirectly benefit conservation in Australia, such as sustainable land management projects, sustainable forestry, payments to landowners for ecosystem services such as watershed protection and other green infrastructure.

While the specific opportunities in this area are still somewhat undefined, practitioners consulted as part of this project sensed that the opportunity for the private sector to respond to economic incentives set by government could help scale up conservation funding in Australia. Given that these models do require some form of economic return (for the private sector to participate) they typically will only involve indirect rather than direct conservation.

Both these models rely on the development of standardised metrics (Recommendation 3); hence the importance of that recommendation as an enabling factor.

Recommendation 10: Expand the use of program-related investments

Program-related investment occurs when an entity, typically a foundation, uses its investment funds to provide a loan or equity investment with more favourable terms compared to commercial markets, or provides an investment that must be used for charitable purposes to another organisation or project. Typically, the entity provides loans or investments to projects or organisations that align with their mission.

While program-related investments will not provide the scale of some other approaches considered in this Paper, they do show unmet potential to fund projects that garner a financial return and indirectly benefit conservation. This is an area where the philanthropic community in particular can help catalyse conservation, given that many philanthropic institutions have large corpuses that need investing. By investing in projects that align with their philanthropic purposes yet still provide an economic return, philanthropic organisations can broaden the ways in which they achieve an impact.

Some Australian organisations are already providing program-related investments to projects with social and/or environmental benefits as part of their overall investment strategy. Those organisations could help spur others to do the same, by sharing their experience and lessons learned, potentially via an Australian conservation finance network or existing philanthropic networks. Government could also support efforts to publicise and further develop this approach, to help unlock investment funds for environmentally beneficial projects that would otherwise be invested in traditional vehicles such as stocks or short-term deposits.

Appendix A - Stocktake of conservation finance examples around the world

Description	Model / Tool	Status	Key Stakeholders	Region	Summary of Model	$ raised for Conservation	Conservation Outcomes
Komaza	Conservation & sustainable land management (hybrid and blended finance).	Current	Novastar Ventures, Mulago Foundation, Dutch Development Finance Bank and local smallholder farmers.	Africa (Kenya)	Aims to provide an alternative source of sustainable wood while augmenting farmers' incomes and generating environmental benefits. Funded by blended finance and hybrids.	$10m equity, $1m debt and $3m grants.	Planted over 2 million trees on farmland with more than 9,000 farmers involved. Made a revenue stream of $12,000 in 2016 with profits expected to occur by 2020.
Singita	Conservation and sustainable land management.	Current	Singita, Grumeti Fund, tourists, local government and communities.	Africa	Singita is a conservation company that undertakes conservation throughout Africa funded by eco-tourism, with some initiatives in partnership with the non-profit Grumeti Fund.	$260,000 per year is paid directly to a local agricultural co-op founded by the Singita Grumeti Fund to promote sustainable practices.	Almost 404,685 hectares of land are cared for by Singita. There has been four-fold increase in wildlife on their concession site in the Western Serengeti since 2003. Coversion of 100 poachers into game scouts has occured and over 1,700 students have attended the Environmental Education Centre.
Madagascar-France Debt-for-nature	Debt-for-nature swap (bi-lateral)	Current	Government of Madagascar and Government of France.	Africa (Madagascar)	France forgave a debt owed by Madagascar, with the intention that the money will be used for conservation instead.	$20 million.	Money to be used to fund the Foundation for Protected Areas and Biodiversity. Aiming to contribute towards Madagascar's goal of tripling the size of its protected areas.
Madagascar, Coinservation International, Missouri Botanical Garden and WWF Debt-for-nature	Debt-for-nature swap (commercial)	Past (1989)	Government of Madagascar, World Wildlife Fund, Missouri Botanical Garden, USAID, and Conservation International.	Africa (Madagascar)	WWF, CI, USAID and MBG negotiated 9 swaps where they purchased the Government of Madagascar's debt for a discounted rate of over 50%. This allowed them to charge a lower interest rate. The Government of Madagascar was required to use these savings towards conservation efforts.	$2.1 million.	Three-year conservation program occurred across three protected areas. Training and equipment for 400 employees of the Ministry of Water and Forests to act as "nature protection agents" was provided.
South African Renosterveld Conservation Easement	Conservation covenant (NGO)	Current	WWF South Africa, Overberg Renosterveld Conservation Trust, Table Mountain Fund and land owner MG Lötter.	Africa (South Africa)	Conservation covenant between a private land owner and NGO's; the very first conservation covenant in South Africa.	Total value not defined.	370 hectares of a critically endangered renosterveld plant community protected in perpetuity.
Cash for Carbon	Outcome-base model (payment for ecosystem services)	Past (2011-2013)	National Bureau of Economic Research, villagers in Western Uganda, UNEP and National Environment Management Authority.	Africa (Uganda)	For each hectare of intact, non-deforested land, farmers were paid an annual reward. Funding was provided via a grant by the UNEP.	Farmers were paid $28 per year for each hectare of forest that was not cut down.	Rates of deforestation decreased from 7-10% to 2-5%.
African Wildlife Foundation	Bond (conservation bond)	Current	African Wildlife Foundation and Rungwe Avocado Company.	Africa (Tanzania)	AWF used a conservation bond to provide funding for a conservation covenant. AWF provided loan funding to Rungwe Avocado Company on the condition that the farmers undertook better farming practices and agreed on conservation covenants.	AWF provided a $950,000 loan raised through a conservation bond.	Sustainable land management practices meant the farm increased yield value without expanding growing fields onto the neighbouring natural habitat. The farm engaged in a conservation covenant with AWF, and mandated their out growers to do the same.
Kasigau Corridor REDD Project	Bonds (forest bond)	Current	BHP Billiton, International Finance Corporation and Conservation International.	Africa (Kenya)	The funds from the bond are used to invest in REDD elegible projects. Through REDD, landowners are incentivised to preserve forest land to gain carbon credits and sell them as a source of income. The carbon credits produced will bought from farmers annually and given to investors or if an investor desires, BHP will give them cash for the equivalent value to purchase the offsets from them.	US$152 million.	Protects a land area of 200,000 hectares that offsets 1.4 million tonnes of CO_2 emissions annually. Ensures the protection of the dryland Acacia-Commiphora forest and the restoration of original biodiversity.

Appendix A - Stocktake of conservation finance examples around the world (cont')

Description	Model / Tool	Status	Key Stakeholders	Region	Summary of Model	$ raised for Conservation	Conservation Outcomes
EcoPlanet Bamboo	Conservation & sustainable land management	Current	EcoPlanet Bamboo and local forestry farmers.	Africa and Central America	Uses blended finance to fund conservation and sustainable land management in bamboo plantations.	$31m in equity and $17m in debt.	Restoration of 5,400 hectares has occurred in the last three years, with a goal of an additional 1,200 hectares in 2018. By full maturity in 2024, 1.5 million tonnes of carbon will have been removed from the atmosphere.
Xinjiang Uygur Autonomous Region Grassland Subsidies	Subsidy (government)	Current	Xinjiang Uygur Autonomous Region Government and local landowners.	Asia (China)	Subsidies are used to fund grassland conservation in China. It prohibits herdsmen from allowing their cattle to graze on severely damaged grasslands, instead giving them each an annual subsidy of 6 yuan for every 0.067 hectares of preserved grassland.	7.4 billion yuan.	Funding has benefitted 300,000 local nomad households. Aims to cover 8 million hectares of grasslands in Inner Mongolia in coming years.
Green Growth Compact	Blended finance	Current	The Nature Conservancy, the government of Indonesia's East Kalimantan Province, 25 private companies, government agencies, communities and NGOs.	Asia (Indonesia)	The Nature Conservancy established this public-private partnership to protect Indonesia's deteriorating tropical forests.	Total value not defined. This partnership was established in 2017.	10 public and private program partners have been provided with best practices to conserve critically endangered orangutans across more than 364,217 hectares. Compact partners are successfully establishing a framework for similar efforts across in Indonesia and around the world.
KRIBHCO Indo-British Rainfed Farming Project (KRIBP)	Subsidy (bi-lateral)	Past (1999)	KRIBHCO Indo-British Rainfed Farming Project (KRIBP), UK Department for International Development (DFID) and the Government of India (GoI).	Asia (India)	Funded the subsidisation of labour costs for farmers to stay on their land to undertake soil and water degradation remediation in the dry season instead of finding off-farm work. It was voluntary for farmers to participate.	Total value not defined. Subsidies were set at 50 per cent of the nominal cost of labour for work done.	These subsidies helped farmers install sustainable land management practices and infrastructure such as tree planting, pasture rehabilitation and irrigation improvements.
Nature Works Hong Kong	Conservation and sustainable land management	Current	The Nature Conservancy and Hong Kong youth.	Asia (Hong Kong)	The Nature Conservancy Hong Kong office has create the Nature Works program to engage youth in conservation education.	Total value not defined.	Over 300 environmental youth leaders have launched over 20 community projects.
Kochi Prefecture Subsidies for the Management of Private Forest	Subsidy (government)	Current	Prefecture, Municipal and National level Government, local land owners.	Asia (Japan)	Aims to improve multi-functional forestry to protect natural capital by providing subsidies for reforestation activities.	10,000 yen per hectare.	Encourages farmers to use mixed-species forestry practices which increase vitality and robustness of the forest.
China Green Bond Market	Bond (green)	Current	Government of the People's Republic of China.	Asia (China)	China's green bond market encourages investment in environmentally focused projects both within China and internationally. This market accounts for almost 40% of the global green bond market.	USD$37.1 billion in 2017.	There are no clear q+K17uantified conservation outcomes yet as the market was only established in 2016. Investments in projects related to: energy, low carbon transport, water, agriculture, forestry and land-use have occurred.
Watershed Protection and Conservation Fee	Outcome-base model (payment for ecosystem services)	Proposed	University of Philippines.	Asia (Philippines)	Creation of a watershed protection and conservation fee to reduce land degradation and increase water quantity within an environmental reserve. Use the fees to create revenue that would be channelled through a new reserve trust fund that is to be overseen by a multi-stakeholder management board. Acceptance of payments as both cash and in-kind payments would occur.	Total value not defined.	The trust fund would allocate funds to farmers for soil and water conservation activities. There are approximately 1000 households or farmers living in the watershed, so this holds potential for conservation outcomes.

Appendix A - Stocktake of conservation finance examples around the world (cont')

Description	Model / Tool	Status	Key Stakeholders	Region	Summary of Model	$ raised for Conservation	Conservation Outcomes
Rewarding Upland Poor for Environmental Services (RUPES)	Outcome-based model (payment for ecosystem services)	Past (2002-2012)	Indonesian Community Forestry Programme, International Centre for Research in Agroforestry and World Agroforestry Centre.	Asia (Indonesia)	RUPES integrated rewards for environmental services into development programs to alleviate rural poverty and protect the natural environment. The funding received by stakeholders undertaking erosion, sedimentation or water quality and quantity improvements varied depending on the results produced. Reducing sediment by 10-20% was worth US$550 and upwards of 30% was worth US$2,200.	Total value not defined.	Reduced sedimentation, planting of trees and enforced protection of remaining forest occurred.
Payment for Ecosystem Services National Program	Outcome-based model (payment for ecosystem services)	Current	Government of Mexico, water utilities, private companies and local landowners.	Central America (Mexico)	Government and private businesses undertake blended finance to provide payments for ecosystem services produced by hydrological and forest ecosystems to landowners that voluntarily participate.	Cash payments to land owners undertaking sustainable land practices to provide ecosystem services range from US$28-100 per hectare per year.	Preservation of more than 3.2 million hectares of forests and direct compensations to more than five thousand landowners.
NATNET Life+	Conservation covenant	Past (2012-2017)	Lapland ELY Centre, Metsähallitus, Natural Resources Institute Finland, Finnish Forest Centre and The Forest Owners' Association of Länsi-Pohja.	Europe (Finland)	Undertook conservation covenants to promote, maintain and preserve biodiversity. Landowners received a tax-free compensation for the profit loss but land ownership stayed unchanged.	Total value not defined. Funding of the conservation covenants was covered from the national Forest Biodiversity Programme	61,153 hectares of private land conserved across Finland.
The Land Trust UK	Land Trust	Current	The Land Trust UK	Europe (United Kingdom)	This particular land trust undertakes purchasing and management of land with high conservation values (including sometimes on-selling to environmentally conscious parties), sustainable management of their own open green spaces and other spaces on behalf of other parties (e.g. council).	Total value not defined. Between 2016-2017 their investment portfolio had increased by £20 million and fundraising had raised £380,000.	Sustainably managing over 2,300 hectares across 63 sites. The Trust plant trees, create habitat and protect pollinators across their green spaces. Community engagement with green spaces to foster conservation values occurs through education, work experience, volunteering, and community events such as park runs.
European Union Emissions Trading Scheme	Environmental credit market	Current	EU member countries, private sector and businesses.	Europe	A cap and trade scheme. A cap is set on the total amount of certain greenhouse gases that can be emitted by installations covered by the system. The cap is reduced over time so that total emissions fall. Companies receive or buy emission allowances which they can trade with one another as needed. They can also buy limited amounts of international credits from emission-saving projects around the world. After each year a company must surrender enough allowances to cover all its emissions, otherwise heavy fines are imposed.	Trade of permits is worth over €150 billion annually.	By 2020, emissions from sectors covered by the system will be 21% lower than in 2005 and 43% lower by 2030.
Green Climate Fund	Blended finance	Current	194 UNFCCC member countries, private entities and environmental project developers.	Global	Developed member countries of the UNFCCC donate money to the fund. Organisations can receive funding directly from GCF. Aims to catalyze a flow of climate finance to invest in low-emission and climate-resilient development, driving a paradigm shift in the global response to climate change. Use public investment to stimulate private finance. The Fund's investments can be in the form of grants, loans, equity or guarantees.	US$10.3 billion provided in the Fund's first resource mobilisation effort in 2014. The public sector provided 60% and 40% was from the private ssector.	The Fund started developing a project portfolio in 2016 of 35 projects, worth over US$1.5 billion. Now the Fund has 76 projects that are anticipated to abate 1.3 billion tonnes of CO2e, directly benefitting 217 million people.

Appendix A - Stocktake of conservation finance examples around the world (cont')

Description	Model / Tool	Status	Key Stakeholders	Region	Summary of Model	$ raised for Conservation	Conservation Outcomes
EcoEnterprises Fund	Fund (private)	Current	EcoEnterprises Fund; investors and participating businesses.	Global	EcoEnterprises Fund offers tailored growth capital and strategic guidance to innovative impact businesses in order to scale and optimize their financial, environmental and social performance.	Total value not defined. Each fund has closed at a higher value than the last. Fund 2 closed at 5x the value of Fund 1; Fund 3 has closed with 2x the value of Fund 2.	Fund 1 and 2 have financed 34 companies across 11 countries; with Fund 3 closing in May 2018. They have invested in sustainability conscious compaies that are invovled in: fair-trade fresh fruits, bio-ingredient technology, organic farming, eco-tourism and floristry. The protection of 4,258,174 hectares of land has occured through these investments.
World Land Trust	Land Trust	Current	World Land Trust and conservation organisations.	Global	An international conservation charity that protects the world's most biologically significant and threatened habitats through a network of partner organisations. Creates reserves and provides permanent protection for habitats and wildlife.	Income of £3.3 million in 2016 with total fund value at £4.519 million.	In 2016 the Trust saved almost 23,472 hectares and planted 11,125 trees. The Trust also funded constant ranger protection of endangered species in Armenia and extension of a wildlife coridoor in Inida to ensure safe passage for elephants.
Amphibian Survival Alliance Crowdfunding	Crowdfunding	Past (2014)	Amphibian Survivial Alliance and Worthwild.	Global	Crowdfunding via the platform WorthWild was used to harness funding from the general public.	$10,000	Funded the purchasing of 10,000 fooball fields worth of land for conservaion of 900 species in the Phillipines, Equador and Madagasar.
REDD+	Outcome-based model (payment for ecosystem services)	Current	UNFCCC, FAO, Glocal Climate Fund and local forestry organisations and communities.	Global	REDD+ attempts to reduce emissions from deforestation and forest degradation, promote forest conservation and carbon stocks and sustainable forest management, primarily focused in developing countries. Blended finance is used to fund REDD+. Private sources usually invest in REDD+ as a carbon offset mechanism.	$271,662, 000	Over 70 developing nations partake in the REDD+ program and undertake projects to sequester carbon.
Vitel Water	Certification	Proposed	Vitel Water (owned by Nestle), Alliance for Water Stewardship Standard and local communities.	Global	Alliance for Water Stewardship Standard globally promote best practice in water stewardship that benefits communities and preserves local watersheds.	Total value not defined.	Vitel Water aim to have all factories and sites across various countries certified by 2025. They are already taking water reduction initiatives through water re-use at bottling sites, optimising processes and installing new equipment. Through this, Vitel Water have voluntarily reduced their water widthdrawls from an at-risk of depletion aquifer by 25% of their legal allowance equal to 250,000 cubic meters.
Wildlife Habitat Council Conservation Certification	Certification	Current	Wildlife Habitat Council	Global	The only voluntary sustainability standard designed for broad-based biodiversity enhancement and conservation education activities on corporate landholdings. Applicable to various industries: construction, chemicals, waste management, energy, oil, and pharmacy.	Total value not defined as the certification scheme was launched in 2016.	Not defined.
FSC Certification	Certification	Current	Forest Stewardship Council, businesses and forestry farmers.	Global	FSC offer a variety of certification labels that companies can use on their products to indicate the sustainability credentials of the wood. Only products that use FSC-certified materials can carry the on-product label. This certification proves it is sourcing materials from FSC-certified forests, and following FSC-defined best practice throughout the production process and supply chain.	Total value not defined.	FSC certification can help reduce unsustainable land management practices.

Appendix A - Stocktake of conservation finance examples around the world (cont')

Description	Model / Tool	Status	Key Stakeholders	Region	Summary of Model	$ raised for Conservation	Conservation Outcomes
ISO 14001	Certification	Current	International Organisation for Standardisation, third party certificaiton bodies, and participating businesses	Global	The ISO 14000 family of voluntary standards provides practical tools for companies and organizations looking to manage their environmental responsibilities. Using ISO 14001:2015 can provide assurance to company management and employees as well as external stakeholders that environmental impacts are being measured and improved.	Total value not defined.	Not defined. There are more than 300,000 certifications to ISO 14001 in 171 countries around the world.
The World Bank Group Green Bonds	Bond (green)	Current	The World Bank Group including member group International Finance Corporation and public and private sector investors.	Global	The World Bank Group is among the world's leaders and largest issuers of green bonds.	Over $16 billion across 18 currencies.	Over 200 green bonds issued since 2008 for climate and environment-related investments.
ING Bank 2015 Green Bond Issuance	Bond (green)	Current	ING Bank and investors.	Global	ING issued two green bonds in 2015 with different amounts and maturity dates.	€1.315 million.	Proceeds are being used to finance and refinance loans for projects relating to: renewable energy, green buildings, public transport, waste management, water management and energy efficiency. These projects are resulting in 657 kilotonnes of carbon equivalent reduced annually.
Community Investment Note	Note	Current	Calvert Capial and investors.	Global	The Note is how you invest in Calvert Capital's portfolio of financial intermediaries, projects, and funds that are financing high-impact organizations.	Current Note balance at the end of quarter one of 2018 is $391,870,019.	Provided $2 million towards the first US Environmental Impact Bond. The projects funded exist across 97 countries. Approximately 6% of their portfolio exists in renewable energy, environmental sustainability and sustainable agriculture.
IKEA	Certification	Current	IKEA.	Global	Undertook environmental inititiaves to ensure IKEA meet certification requirements for FSC, as well as to create self-sufficiency in sustainable forestry suppliers and hedge against pricing fluctuations.	€3 billion invested in resource and energy programs that aim to grow and protect the future of its natural capital beyond what it needs for sourcing. €1 billion allocated for future investing into forestry and other sustainable raw materials.	350,053,080 million hectares of FSC-certified forests and adding almost another 10 million hectares by 2020.
The Lyme Timber Company LP	Blended finance	Current	Lyme Timber Company LP, Conservation Fund and investors.	North America	Lyme Timber Company is a private timberland investment management organization. Lyme raises capital in pooled private equity funds in which it co-invests and serves as the general partner. Investors include: insurance companies, high-net-worth individuals and family offices, impact investors, foundations and endowments, fund of funds and pension funds.	More than $650 million.	Lyme has undertaken sustianable forestry practices on more than 422 hectares across 30 properties. Permanently conserved more than 323,000 hectares in North America through the sale of working forest conservation easements and fee-simple sales to government agencies and conservation NGO's.
XL Catlin	Avoided-Cost model	Proposed	XL Catlin insurance company and Nature Conservancy.	North America	Creation of 'blue carbon resilience credits' will value the combined carbon sequestration and resilience benefits provided by coastal wetland ecosystems and reduce the negative impact of natural disaster on coastal areas. This will then reduce the economic damaged caused and therefore the economic payouts insurance	Total value not defined.	Restoration and conservation of wetlands and coastal ecosystems to reduce degradation and increase coastal resilience to natural disasters.

Appendix A - Stocktake of conservation finance examples around the world (cont')

Description	Model / Tool	Status	Key Stakeholders	Region	Summary of Model	$ raised for Conservation	Conservation Outcomes
Forest Resilience Bond	Bond (environmental impact)	Proposed	Encourage Capital, US Forest Service and Blue Forest.	North America	The Forest Resilience Bond team will work with USFS to identify projects needing funding. The metrics of success will be determined and contracts signed. Once investors provide capital, restoration is undertaken and outcomes are evaluated and measured. Beneficiaries then will make payments on the FRB and investors will be repaid.	Approximately $5 million for a proof of concept pilot project is needed.	Reducing risk of wildfire, increasing carbon sequestration and improvement of water quality and quantity.
Conserve With Us Crowdfunding Platform	Crowdfunding	Current	Conserve With Us, conservation projects and donors.	North America	Conserve With Us is an online crowdfuning platform that acts as an intermediary to connect conservation projects that are backed by land trusts and conservation agencies with willing donors.	Total value not defined.	Not defined.
1% for Open Space	Voluntary surcharge	Current	Gunnison and Crested Butte businesses, customers and the 1% for Open Space Non-Profit.	North America (America)	Local businesses add a voluntary 1% surcharge onto the bill of business transactions. Customers can choose to opt-out. All the funds go into high interest bearing accounts. They are then used by the 1% for Open Space non-profit to undertake conservation activity.	Between 1997 and 2014, the surcharge program raised $1.9 million for land conservation and trail projects in the area.	Grants from the funds have been disbursed for conservation projects that have protected over 2063 hectares.
State of New York Environmental Protection Fund	Fund (public)	Current	Government of New York State agencies, conservation groups and donors.	North America (America)	The Fund is a source of funding for capital projects that protect the environment and enhance communities. The Fund also supports the stewardship of public lands, including state parks and millions of acres of public lands throughout the state.	Over US$2.7 billion since inception in 1994.	Through partnerships with volunteer organizations, state agencies use the Fund to manage trails and lands, protect natural resources, preserve wildlife habitats, make critical capital improvements at parks and campgrounds, educate students about conservation and provide access to persons with disabilities.
§ Forest Health & Water Supply Protection Project	Conservation ballot measures	Past (2012)	Government of Arizoa State, City of Flagstaff, Navajo Nation and voters.	North America (America)	Voters in Arizona voted to tax themselves to fund forest thinning and harvesting, prescribed burns, and biomass removal to reduce wildfire and flooding risks.	US$10 million.	Approximately 5666 hectares of land has received treatment.
Trust for Public Land	Conservation ballot measures	Current	Trust for Public Land, election voters, government.	North America (America)	The Trust for Public Land helps state and local governments design, pass and implement legislation and ballot measures that create new public funds for parks and land conservation.	US$76 billion in voter approved funding.	Conservation outcomes of ballot measures can differ depending upon the issues being voted on but can positively impact land restoration or reserve creation.
Big River And Salmon Creek Forests	Environmental credit market (carbon)	Current	The Conservation Fund, California's State Revolving Fund, Coastal Conservancy and Wildlife Conservation Board.	North America (America)	The Fund purchased forestry land in California in 2006 to undertake sustainable land management and to engage in the developing concept of carbon credit and trading. Blended finance facilitated the purchase of the land as both loans and grants were used.	US$25 million loan from California's State Revolving Fund as well as the Coastal Conservancy and Wildlife Conservation Board giving grants of US$7.25 million each.	The Fund purchased 6474 hectares of land surrounding two rivers. Sustainable forestry practices were undertaken and an improvement in land and water quality has been seen. The forested land traps more than 3 million tonnes of carbon dioxide from the atmosphere and protects 37 miles of streams.
New Market Tax Credit Program	Tax	Current	Northern Forest Centre.	North America (America)	The Centre helps projects secure financing through the federal New Markets Tax Credit program, which provides substantial subsidies necessary to make these major forest-based projects possible.	US$80 million in funding has been facilitated through the Centre.	The projects funded work towards creating jobs, sustainable working forests and community benefits on over 127,476 hectares of land.

Appendix A - Stocktake of conservation finance examples around the world (cont')

Description	Model / Tool	Status	Key Stakeholders	Region	Summary of Model	$ raised for Conservation	Conservation Outcomes
McKnight Foundation private related investment to the Conservation Fund	Private Related Investment	Past (2015)	McKnight Foundation and the Conservation Fund	North America (America)	The MF provided a private related investment to the Fund. This loan held more favourable conditions than a commercial market loan. The loan was issued in 2011 and paid back in full in 2015.	US$6.5 million loan with interest at 2% per annum.	Through this loan, the Fund was able to purchase and protect 45,929 hectares of land with high ecological benefit worth a market value of $61.3 million.
The Conservation Fund's Conservation Loans Program	Bridge financing	Current	The Conservation Fund.	North America (America)	The Fund provides loans to projects that align with its mission. Loan values can range from$12,000 to $10 milllion and have a duration of one to three years. The money provided by the Fund is often used by the recipients to leverage further funding from other sources.	A US$50 million revolving land fund has been used to provide US$190 million to projects that was leveraged to acquire land valued at US$250 million.	350+ loans have been used to acquire 56, 656 hectares of land for conservation projects.
Ohlone Preserve Conservation Bank	Mitigation Banking	Curent	Fletcher Conservation Properties, CDFG and and the U.S. Fish & Wildlife Service.	North America (America)	Ohlone Preserve was established in 2005 through a Conservation Bank Agreement between Fletcher Conservation Properties, CDFG, and the U.S. Fish & Wildlife Service (USFWS). It is a permanently protected parcel of land that contains natural resource values that can be protected or restored to meet the recovery needs of species which are endangered, threatened, candidates for listing as endangered or threatened, or otherwise species-at-risk. In the US, credits can be created by conserving species habitat and obtaining regulatory approval to sell credits to offset impacts occurring elsewhere to the same resource values within a service area on non-bank lands. Since there are multiple species on the Preserve that can accure credits, this opens up potential fro credit stacking.	Total value not defined.	259 hectares of land has been secured as part of the Ohlone Preserve to act as a conservation bank through the garnering of credits.
From Forests and Faucets Partnership	Blended finance	Current	Denver Water,Colorado State Forest Service, Natural Resources Conservation Service and US Forest Service.	North America (America)	This is an example of a public private partnership being utilised to provide blended finance for conservation measures. The partnership began in 2010 as a response to the costly impacts from a series of wildfires.	An initial $33 million memorandum of understanding expired on Aug. 11, 2015. A renewed and expanded five year, $33 million partnership program was signed on Feb. 27, 2017	More than 19,424 hectares of National Forest System lands have been treated so far accomplishing important fuels reduction, restoration and prevention activities through the use of the first round of funding. The goal of the new program is to treat approximately 16,187 hectares within critical watersheds and to maintain, as needed, the 19,424 hectares previously treated under the original memorandum.
Working Forest Fund	Conservation and sustainable land management	Current	The Conservation Fund and Apple.	North America (America)	The Conservation Fund and Apple have partnered together to help protect working forests in the United States through the Fund's Working Forest Fund.	Total valued not defined.	This partnership will help protect 14568 hectares of forest land.
EcoTrust Forest Management	Conservation and sustainable land management	Current	EcoTrust Forest Management (EFM).	North America (America)	EFM invest to accelerate the transition of strategic high-priority forestland assets to long-term, local owners while improving forest management outcomes in the interim period through its ecological forestry practices. EFM uses FSC certification, forest carbon credits, working forest conservation covenants and conservation sales as part of its business model.	EFM has over US$80 million in assets.	EFM has managed over 14,164 hectares to FSC standards by using ecological forestry practices in Oregon and Washington states.

Appendix A - Stocktake of conservation finance examples around the world (cont')

Acres for America	Conservation and sustainable land management	Current	National Fish and Wildlife Foundation and Walmart.	North America (America)	This public-private partnership was established in 2005. Walmart partnered with the National Fish and Wildlife Foundation to support various environmental initiatives as a form of marketing material for the brand.	Total value not defined. The partnership has funded US$4 million in emergency response funding after ecological disasters. US$1.8 million has been put towards connecting the youth and outdoors through investing in community-based projects.	526,091 hectares of land has been protected, with 4.04 million hectares of protected land now being joined to support landscape-scale land conservation.
1% for Watersheds	Voluntary surcharge	Current	Oakshire Brewing and McKenzie River Trust	North America (America)	Since 2013, Oakshire Brewing has partnered with the McKenzie River Trust. One percent of Watershed IPA sales revenue is set aside for the protection of local watersheds in the territories where the beer is sold, helping to preserve the clean water that is so vital to the community and the beer.	Total value not defined. 1% of 'Watershed IPA' beer sales revenue goes towards funding clean water initiatives through the McKenzie River Trust.	The McKenzie River Trust acquires property interests in land with clear public benefits, undertakes projects to enhance and re-establish native vegetation, water cycles and other ecosystem services and encourages community engagement with outdoor areas.
National Forest Foundation Ski Conservation Fund	Voluntary surcharge	Current	National Forest Fund (NFF),conservation groups, local businesses and members of the public.	North America (America)	The Ski Conservation Fund provides funding for projects that improve forest health and outdoor experiences on National Forests. Award funds come from opt out guest donations on lift tickets, seasons passes, or lodging nights at ski areas and lodges in the National Ski Area Association.	Total value not defined. The NFF matches these contributions 50 cents on the dollar and gives them out to local nonprofits to implement conservation and restoration work on National Forests.	The NFF has been able to: provide grant funding to local conservation groups, engage school children in trail restoration, improve wildlife habitat, secure riverbanks, plant native seeds and fix hiking trails.
DC Water Environmental Impact Bond	Outcome-based (environment impact bond)	Current	District of Columbia Water and Sewer Authority (DC Water), Goldman Sachs Urban Investment Group, Calvert Foundation and individual investors.	North America (America)	This bond is a 30-yearpay for sucesses based, tax-exempt municipal bond with a mandatory tender in year five. The bond issue was placed with two institutional investors, Goldman Sachs Urban Investment Group and Calvert Foundation. The bonds were issued at a $25 million face value and an initial 3.43% interest coupon, payable semiannually, for the first five years.	US$25 million.	The proceeds of the bond will be used to construct green infrastructure and practices designed to mimic natural processes to absorb and slow surges of stormwater during periods of heavy rainfall, ultimately reducing the incidence and volume of combined sewer overflows that pollute waterways.
Louisiana Coastal Wetland Restoration and Resilience Environmental Impact Bond	Outcome-based (environment impact bond)	Current	Environmental Defence Fund, The Nature Conservancy, Quantified Ventures and Louisiana's Coastal Protection and Restoration Authority.	North America	This bond is proposed to finance coastal restoration and resilience solutions. This project is currently in the development stage, with Environmental Defence Fund undertaking a pilot study that will be finalised by the end of 2018. Scaling up will occur if the pilot project is successful.	Total value not defined. Pilot study results will be made available later this year.	Not defined.
Environmental Quality Incentives Program	Conservation and sustainable land management	Current	United States Department of Agriculture, National Resources Conservation Service and farmers.	North America (America)	The program provides financial and technical assistance to agricultural producers to address natural resource concerns and deliver environmental benefits. Payments are made to participants after conservation practices and activities identified in an EQIP plan of operations are implemented. Contracts can last up to ten years in duration.	The payments made to farmers differ depending on the conservation activity undertaken but can range from US$67,670 for an electric motor vehicle to US$0.07 for every cubic foot of an earthen water storage facility constructed. The funding farmers can receive under this program is capped at $450,000.	Improved water and air quality, conserved ground and surface water, reduced soil erosion and sedimentation or improved or created wildlife habitat have all resulted from projects undertaken through the program.

Appendix A - Stocktake of conservation finance examples around the world (cont')

Description	Model / Tool	Status	Key Stakeholders	Region	Summary of Model	$ raised for Conservation	Conservation Outcomes
Agricultural Conservation Easement Program	Conservation covenant	Current	United States Department of Agriculture, National Resources Conservation Service, American Indian tribes, governmental and non-governmental agencies.	North America (America)	This conservation covenant program aims to protect working agricultural land, limit non-agricultural uses of the land and restore, protect and enhance wetlands. Participation is voluntary and landowners are compensated for enrolling	NRCS plans to invest US$250 million in conservation covenants in fiscal 2018.	121, 406 hectares of land was protected by the convenants in 2017 alone.
Regional Conservation Partnerships Program	Conservation and sustainable land management	Current	United States Department of Agriculture, National Resources Conservation Service, conservation organisations and farmers.	North America (America)	Through this program, conservation organisations are encouraged to join in efforts with producers and other private landowners to increase the restoration and sustainable use of soil, water, wildlife and related natural resources on regional or watershed scales.	US$220 million for 2018.	This program has funded 91 conservation projects in 2018. Projects funded have contributed positively towards: water quality and quantity, soild quality, fish and wildlife habitat, air quality, plant conditions, energy and climate change.
Maine Coast Heritage Land Trust Stewardship Contribution	Land Trust (transfer fee)	Current	Maine Coast Hertiage Trust and private landowners.	North America (America)	An additional fee (called a stewardship contribution as a sub-type of a transfer fee) can be voluntarily paid to the Trust, or demanded by the Trust to private landowners participating in a conservation covenant. This is used to fund the on-going maintenance of the covenant land, or to improve the financial stability of the Trust and ensure the long term success of the covenant program.	Total value not defined.	The Trust works on protecting islands, rivers, marshes and many other ecosystems found along the Maine coastline.
Jackson Hole Land Trust Transfer Fee	Land Trust (transfer fee)	Current	Jackson Hole Land Trust and private landowners.	North America (America)	The Trust utilises a transfer fee scheme that generates revenue for the Trust. Revenue is generate by a percentage of the sale price being paid to the Trust if the land is sold. It is usually included as part of the conservation covenant agreement.	Total value not defined.	The Jackson Hole Land Trust works to protect and steward the treasured landscapes of Northwest Wyoming. They have protected over 22257 hectares of land.
Conservation Innovation Grants	Grants (blended finance)	Current	United States Department of Agriculture, National Resources Conservation Service, grantees and private donors or investors.	North America (America)	Conservation Innovation Grants (CIG) are competitive grants that drive public and private sector innovation in resource conservation. Public and private grantees develop the tools, technologies, and strategies to support next-generation conservation efforts on working lands and develop market-based solutions to resource challenges. A grantees CIG funding request must be matched at least 1:1 with non-federal funding.	US$10 million for 2018, with previous funding since 2004 being US$286.7 million.	Approximately 711 conservation projects have been given CIG funding since 2004.
Open Space Sales Tax Ballot Measure	Land Conservation Ballot Measure	Past (2017)	The Trust For Public Land and voters.	North America (America)	This ballot measure was undertaken at the municipal level in Lafayette, Colorado to permanently extend the open space sales tax. 82% of voters voted 'yes' to pass the measure.	Over US$17 million for conservation funding.	Not defined. This ballot measure was only passed in 2017 so it will take time to see the conservation outcomes.
1% Sales Tax for Environmental Protection Ballot Measure	Land Conservation Ballot Measure	Past (2017)	The Trust For Public Land and voters.	North America (America)	Voters in Pinellas County, Florida passed a ballot measure to ensure the 10 year continuation of the 1% sales tax for capital improvements including environmental protection. An 83% pass rate was achieved.	US$64 million.	Not defined. This ballot measure was only passed in 2017 so it will take time to see the conservation outcomes.
General Obligation Bonds Ballot Measure	Land Conservation Ballot Measure (to fund bonds)	Past (2017)	The Trust For Public Land and voters.	North America (America)	A ballot measure was undertaken in Dallas, Texas to allocate funding towards government issued bonds to improve park and recreation facilities. It had a success rate of 73%.	US$30.5 million was approved to go towards the parks and recreation focused portion of the US$262 million worth of	Not defined. This ballot measure was only passed in 2017 so it will take time to see the conservation outcomes.

Appendix A - Stocktake of conservation finance examples around the world (cont')

Description	Model / Tool	Status	Key Stakeholders	Region	Summary of Model	$ raised for Conservation	Conservation Outcomes
Guatemala-USA Debt-for-nature	Debt-for-nature swap (bi-lateral)	Current	Guatemalan and United States Governments.	North and Central America	The United States Government forgave a debt owed to it by the Guatemalan government on the proviso that the money was to be used for conservation measures over a 15 year period. Blended finance was used to provide funding towards the instrument as it was sought through governments ($15 million from the USA), The Nature Conservancy ($1 million), as well as private and public companies and individuals.	$24 million.	The conservation of biodiverse areas, reserves and national parks which home habitats for endangered or significant species such as jaguars, ocelots, scarlet macaws, and howler monkeys can be funded.
Emissions Reduction Fund	Fund (public)	Current	Australian Government, Department of Environment and Energy, Clean Energy Regulator and participating businesses.	Oceania (Australia)	The ERF credits domestic reductions in greenhouse gas emissions to help meet Australia's international emissions reductions targets. The ERF combines crediting of emissions reductions with Government purchase of the resulting carbon credits. Participation is voluntary.	AU$2.23 billion has been spent with another AU$300 million in the fund.	The creation of 189 million tonnes of emissions reductions has occured.
Trust for Nature	Land Trust	Current	Trust for Nature Victoria, private investors and Australian governmental agencies.	Oceania (Australia)	Trust for Nature focuses on conservation or private property. This is done by purchasing and on-selling of land with high conservation values. They sell the land to environmentally conscious owners with conservation covenants in place or encourage existing owners to engage in conservation covenant agreements to protect the land from future direct degradation. They also provide management and education tools to private land owners. Blended finance is utilised to fund the Trust.	Trust for Nature have a revolving fund valued at $3,798,602.	100,000 hectares of land are under protection. They have implimented 1,385 voluntary conservation covenants across 63,117 hectares, and 44 Trust for Nature reserves across 36,216 hectares. Weed control has been done on almost 10,000 hectares. Federal predator control measures are in place on 49,000 hectares. Ninety ecological surveys and assessments along with 30 new nesting boxes on protected species sites have been funded.
Operation Orange Bellied Parrot	Crowdfunding	Past	Australian National University and Pozible.	Oceania (Australia)	Crowdfunding via the platform Pozible was used to harness funding from the general public to support bird conservation.	A total of $140, 400 was raised through 1600 supporters in two weeks (the goal was $60,000).	Raised funds to boost rates of wild born Orange Bellied Parrots. Aligned with the Tasmanian Government to release more female birds for breeding season to fix the skewed ratio. Undertook monitoring of nests every 3 days. As a result, 20 birds were bred in the wild.
Murray-Darling Basin Balanced Water Fund	Fund (private)	Current	Kilter Rural, The Nature Conservancy Australia, Murray-Darling Wetlands Working Group and local landowners.	Oceania (Australia)	Investor-funded solution to water scarcity that will create financial returns to investors through the annual lease of Water Entitlements, trading of Water Allocations and long-term capital appreciation of the Fund's investments.	Initial capital raised in 2015 was $22 million in equity and $5 million in debt.	Better water management practices have ensured both farmers and wetlands receive the water needed through replicating the natural wetting and drying cycles of the basin. Habitats for waterbirds and native fish, wetlands, floodplains have all improved.
Devil Ark	Crowdfunding	Past (2017)	Devil Ark Tasmanian Devil Sanctuary at Barrington Tops.	Oceania (Australia)	Online crowdfunding supported by blended finance from individuals as well as The Foundation for Australia's Most Endangered Species and Global Wildlife to assit in the preservation of the Tasmanian Devil species.	AU$375, 000.	Aim to use funding for increasing the size of a mainland breeding sanctuary for Tasmanian Devils. Intend to upgrade from 30 hectares and 150 Devils to 460 hectares by the end of 2018. Breeding of healthy, disease free Devils to release into the wild once the deadly tumour has runs its course in the native population will also be funded.

Appendix A - Stocktake of conservation finance examples around the world (cont')

Description	Model / Tool	Status	Key Stakeholders	Region	Summary of Model	$ raised for Conservation	Conservation Outcomes
Awaroa Bay Beach	Crowdfunding	Past (2016)	New Zealand Government and donors.	Oceania (New Zealand)	A piece of private land that is situated within a National Park in New Zealand was up for sale. The local community was worried about it being bought by developers that may exploit the pristine natural environment. The Government could not justify the cost of the property so two citizens started a crowdfunding campaign that went viral on the internet. Blended finance of private and public capital was used to purchase the land.	Over NZ$2.2 million.	The 7 hectare property which has 800 meters of pristine beach frontage was donated to the Department of Conservation and became part of the Able Tasman National Park.
Crowdfunding Grants under the Biodiversity On-ground Action Initiative	Crowdfunding	Current	Victorian State Government.	Oceania (Australia)	The Victorian State Government will provide funding to crowdfunding projects foused on threatened species and biodiversity, as well as for conservation groups to improve their crowdfunding experience and skills.	AU$116,000.	To be advised, as the expression of interst period has closed and successful applicants are being chosen.
Arkaba Private Wildlife Conservancy	Conservation and sustainable land management	Current	Native Vegetation Council, South Australian Government, Wild Bush Luxury and Arkaba Conservancy.	Oceania (Australia)	Native Vegetation Council provides funding for the on-ground restoration of native vegetation on the Arkaba property in South Australia.	Total value not defined.	Severly degraded cattle land is being restored. 3148 goats, 363 foxes and 248 feral cats have been removed from the 24281 hectare private wildlife conservancy, allowing for over 5 million native animals to be recorded living on the property.
Project Catalyst	Conservation and sustainable land management	Current	The Coca-Cola Foundation, World Wildlife Fund Australia, farmers, and natural resource management groups.	Oceania (Australia)	This partnership aims to provigin funding and actions towrds reducing the environmental impact of sugar farming on the Great Barrier Reef.	The Coca-Cola Foundation has donated over AU$6 million.	The initiative has grown from 15 to 78 farmers and has improved the quality of over 150 billion litres of water.
Ten Deserts Project	Conservation and sustainable land management	Current	The Nature Conservancy, BHP and Indigenous organisations or conservation groups.	Oceania (Australia)	BHP and the Nature Conservancy joined forces with 10 mostly indigenous-led organisations to launch the Ten Deserts Project in March 2018 to undertake conservation and sustainable land management. The Project supports the largest Indigenous-led connected conservation network on Earth.	AU$21 million from the BHP Billiton Foundation.	This project covers 270,000,000 hectares, equivalent to one third of the Australian mainland. Ecologically sensitive traditional burning practices, control of feral animals, rehabilitation of waterholes and protection threatened species has occured. Funding has been used for Indigenous ranger training programs.
Coles Corporate Social Responsibility	Grants (private)	Current	Coles Nurture Fund, Farmers' Fund, Victorian Farmers Fund.	Oceania (Australia)	Coles Nurture Fund is a grant giving sub-organisation of the Coles supermarket empire. Coles supermarkets sell Farmers' Fund brand milk in their supermarkets, with twenty cents a litre from all sales directed to an independent fund established by the Victorian Farmers Federation (VFF). Through this partnership grants of up to $20,000 have been provided to more than 100 farmers.	Through this partnership the Coles Nurture Fund donated AU$1 million and grants of up to $20,000 have been provided to more than 100 farmers.	Not defined.
Indonesia-USA Debt-for-nature	Debt-for-nature swap (bi-lateral)	Current	Indonesian and United States Governments, KEHATI, Conservation International and local conservation groups.	Oceania (Indonesia)	The USA forgave a debt of $30 million. Instead, this money would be deposited into a separate account at the same rate as the original debt repayment scheme, which KEHATI (a local environmental NGO) would access to provide funding to local conservation NGO's.	Funded by $20 million by the US Government and $2 million from Conservation International and KEHATI.	Funding is aimed towards protecting 13 areas of tropical forests on the island of Sumatra through local conservation groups.

Appendix A - Stocktake of conservation finance examples around the world (cont')

Description	Model / Tool	Status	Key Stakeholders	Region	Summary of Model	$ raised for Conservation	Conservation Outcomes
Removal of Agricultural Subsidies in New Zealand	Subsidy (government)	Past (1984)	New Zealand Government and farmers.	Oceania (New Zealand)	The New Zealand Government removed its substantial agricultural subsidies in 1984.	Total value not defined. Rather than directly raising funds for conservation, the dismantling of agricultural subsidies reduced the perverse incentives that were in place that encouraged farmers to exploit the environment. It can be argued that the	The whole agricultural sector had to undertake better farming practices. Pesticide use decreased by 50%. Soil erosion, land clearing, and overstocking also declined. Livestock farming was relocated away from erodible hillsides to more sustainable pastures.
Caring for Our Country.	Subsidy (government)	Past (2008-2013)	Australian Government, Natural Resource Management organisations, private land owners, land managers, community groups, Indigenous groups and Traditional Owners.	Oceania (Australia)	Aimed to address issues of national priority such as: the natural reserves system, biodiversity and natural icons, coastal environments, sustainable farm practices, natural resource management and community engagement.	AU$2 billion.	Increased the area that is protected within the National Reserve System by 25%.
The Afforestation Grant Scheme as part of the Sustainable Land Management and Climate Change Plan of Action	Subsidy (government)	Past (2007)	New Zealand Government and landowners.	Oceania (New Zealand)	Landowners can receive a government grant for establishing new forests on Kyoto-compliant land (land that was not forested as at 31 December 1989). Recipients of the grant own the new forests and earn income from the timber, while the Crown retains the Kyoto removal units generated during the 10-year period of the grant agreement.	$23million	Approximately 12,500 hectares of trees were planted across 170 projects, creating an estimated 1.6 million tonnes of CO_2 to accrue to the Crown over 10 years.
Brian and Chris Rance Covenant	Conservation covenant (Trust)	Current	Land owners Brian and Chris Rance, QEII National Trust, YMCA Cons Corp, NZTCV and local schools.	Oceania (New Zealand)	Land owners Brian and Chris entered into a voluntary conservation covenant with the QEII Trust.	Total value not defined. This covenant did not directly raise funds for conservation. Rather, it created an agreement whereby the landowners undertook conservation in exchange for support and funding from the QEII trust.	The covenant area of 5 hectares created restored wetland that grades into densely planted shrubland, buffering the remnant tōtara forest beyond. It also facilitated Kahikatea remnant restoration and pond creation and treatened species plantings. A local nursery was created that produces native plants for community restoration projects, propagates threatened species and is an education facility.
Private Land Conservation Program	Conservation covenant (government)	Current	Tasmanian Government and local private land owners.	Oceania (Australia)	The Private Land Conservation Program (PLPC) of the Tasmanian Government works with landowners to sustainably manage and conserve natural values on private land; with conservation covenants being utilised as a mechanism.	Total value not defined. Rather, it facilitates the sharing of information and practices relating to conservation.	PLCP have 867 covenants covering an area of 109,121 hectares.
Lake Taupo Diffuse Source Nitrogen Trading Program	Environmental credit market (nutrient trading, compulsory)	Current	Waikato Regional Council, local farmers and Lake Taupo Protection Trust.	Oceania (New Zealand)	A compulsory nutrient cap and trade shceme at the local district level in New Zealand. Farmers are allocated individual nitrogen discharge allowances which they can trade amongst themselves and sell to a public fund while remaining within the overall catchment cap. There are penalties for exceeding allowance amount.	NZ$81.5 million.	Due to the long lag times between nutrient release and its arrival in the lake, the environmental benefits of the policy will not be visible for a number of years. The cap has limited further increases of nitrogen discharges in the catchment. Additionally, the trust has successfully purchased 128 tonnes' worth of nitrogen, equivalent to 14 percent of its 20 percent reduction goal. 5,002 hectares of afforestation has resulted from the policy.

Appendix A - Stocktake of conservation finance examples around the world (cont')

Description	Model / Tool	Status	Key Stakeholders	Region	Summary of Model	$ raised for Conservation	Conservation Outcomes
The Biodiversity Offsets Scheme by New South Wales Government	Environmental credit market (biodiversity offsets, compulsory)	Current	New South Wales Government, land owners, land developers and the New South Wales Biodiversity Conservation Trust.	Oceania (Australia)	A State level framework to avoid, minimise and offset impacts on biodiversity from development and clearing, and to ensure land that is used to offset impacts is secured in-perpetuity. Developers and landowners who undertake development or clearing, create a credit obligation which must be retired to offset their activity. Landowners can establish a biodiversity stewardship site on their land to generate credits to sell. The land owners that hold credits must surrender them to the Biodiversity Conservation Trust and will get paid out annually over 20 years for the value of the credits so long as the annual report of the property's conservation conditions are satisfactory.	Total value not deinfed. It was introduced in late 2017 so statistics about financing and conservation outcomes are not yet available.	Not defined.
Carbon Farming Initiative	Envrionmental credit market (carbon, voluntary)	Current	Australian Government, farmers, Clean Energy Regulator and Department of Environment and Energy.	Oceania (Australia)	Allows farmers and land managers to earn carbon credits by storing carbon or reducing greenhouse gas emissions on the land. These credits can then be sold to people and businesses wishing to offset their emissions.	$2.55 billion as of 2014.	Reduced emissions of 10 million tonnes of carbon equivalent as have occurred as of the last review in 2014.
Fiji Sovereign Green Bond	Bond (green)	Current	Government of Fiji, Fiji's Reserve Bank, the World Bank and the International Finance Corporation and Australian Government.	Oceania (Fiji)	Fiji has become the first emerging market to issue a sovereign green bond.	US$50 million	Intend to use funding for projects supporting climate change adaptation and mitigation, Fiji's commitment to achieve 100% renewable energy and reduce carbon dioxide emissions in the energy sector by 30% by 2030.
Permanent Forest Bond	Bond (environmental impact)	Proposed	Investors, intermediary, contractors, land owners, evaluators and New Zealand government agencies.	Oceania (New Zealand)	The funds provided through the bond will be used to establish sustainable practices regarding forestry or the out-right conservation of forest landscapes. Investors will receive a return on investment once the bond issuer is assured by third-party evaluators that a newly established forest has met agreed-upon environmental impacts.	Total value not defined. Theoretically it could raise millions of dollars through sources of income of forest bonds such as: carbon credits, honey production, timber revenue and recreational usage fees.	Avoided costs through improved soil conditions water quality and quantity, air quality, biodiversity and ecotourism could be achieved through this bond.
New Forests	Conservation & sustainable land management	Current	New Forests Pty Ltd and investors.	Oceania and Asia	New Forests assists institutional investors to place capital in forestry through managing sustainable timber plantations, rural land, and conservation investments related to ecosystem restoration and protection.	AU$4 billion of assets under management.	Their assets cover 780,000 hectares; 213,000 of which are managed for ecological restoration (mainly carbon sequestration). Protected land for conservation makes up 39% of New Forests' land estate. 96% of their 6.3 million tonnes of timber produced by New Forests in 2016 was certified to FSC and/or Program for the Endorsement of Forest Certification (PEFC) compliance schemes.
Ikea Sow-a-Seed Foundation	Sustainable land management.	Current	IKEA and its founder Ingvar Kamprad, Swedish University of Agricultural Sciences, the forestry organisation Yayasan Sabah and the Malaysian forestry company RBJ.	Oceania (Borneo)	The foundation started with funding from IKEA customers, but now IKEA has taken sole responsibility.	Total value not defined. Rehabilitation cost per hectare of lowland tropical rainforest is about US$700.	The Foundation aims to rehabilitate Borneo rainforest devastated by logging and forest fires through planting a diverse range of indigenous tree species to reach 18,500 hectares by 2020. Currently they have 8,800 hectares replanted with over 1 million trees.
The Brazilian Biodiversity Fund	Fund	Current	Brazilian Biodiveristy Fund, the World Bank.	South America (Brasil)	The Fund offers transparent funding for companies to reduce and mitigate their environmental impacts while fulfilling legal obligations.	US$593 million.	Supports 256 projects and 310 protected areas covering approximately 67 million hectares.

Appendix A - Stocktake of conservation finance examples around the world (cont')

Description	Model / Tool	Status	Key Stakeholders	Region	Summary of Model	$ raised for Conservation	Conservation Outcomes
Socio Bosque Program	Outcome-base model (payment for ecosystem services)	Current	Government of Equador and local communities.	South America (Equador)	Delivery of economic incentives to poor and indigenous communities who voluntarily commit themselves to the conservation and protection of their native forests, páramos or other native vegetation. Landowners receive $30 per hectare per year for the first 50 hectares of their land, and smaller amounts for larger sized parcels. Socio Bosque has its own fund in the National Environmental Fund	US$22 million since 2008.	The conservation of 1,116,000 hectares of native forests and páramos', dry, montane and humid tropical forests and scrub brush has occured. Approximately 2,002 agreements have been signed and more than 123,000 citizens involved.
Floresta Bolsa Program	Outcome-based model (payment for ecosystem services)	Current	Amazonas Sustainable Foundation, local communities living in the Amazon rainforest, Government of Amazonas (a state of Brazil)	South America (Brasil)	The program create rewards via cash payments for communities living in the Amazon rainforest who maintain the environmental services provided by the forest through sustainable farming and forestry	Average annual investment of R$ 990.11 per family across 9,610 participating families or R$140,000 per conservation unit	Created 10,975,078 hectares of protected areas.
Reciprocal Water Agreements in Los Negros	Outcome-based model (payment for ecosystem services)	Current	Natura Foundation Bolivia, local government and local landowners.	South America (Bolivia)	Protection of a buffer zone around Amboró National park through in-kind payments (e.g. farming supplies or crops) to land owners initially funded by donor funds at its inception in 2002. Now, downstreram farmers pay US$0.5 on each water bill into a fund account that is also supported by he Municipal Government and Natura Foundation. This money is then invested in alternative farming and development projects for upstream farmers.	US$3 per hectare payable in beehives or farming supplies or support. One beehive and training in apiculture per 10 hectares of cloud forest protected.	Instead of paying cash, landowners are given other assets that will provide them with economic and environmental benefits continually over time. 4,500 hectares of forest are now under conservation in Los Negroa. Across Bolivia 200,000 water-users have signed agreements with 3,200 upstream landowners to conserve 180,000 hectares of water-producing forests using this model.
Costa Rica's PES Program	Outcome-based model (payment for ecosystem services)	Current	Government of Costa Rica and FONAFIFO.	South America (Costa Rica)	This program supports carbon storage, hydrological services, and the protection of biodiversity and landscapes through monetary payments for ecosystem services. Land managers are paid to conserve and sustainably manage forested areas, or to reforest degraded land. Protection and regeneration is paid at US$64/hectare/year, management is paid at US$50/ha/year and reforestation activities receive US$196/ha/year.	US$280 million since its inception in 1997.	Approximately 13,000 contracts have been signed with land owners; covering nearly 800,000 hectares of forests.
Tradeable Hunting Permits	Outcome-based model (tradeable hunting permit).	Current	Government of Mexico.	Central America (Mexico)	This scheme gives permit holders the right to hunt borrego cimarrón.The scheme applies in Baja Califonia Sur, but hunting permits can be traded nationally and internationally. Permits are allocated through action, after which they can be sold by the buyer to other parties.	US$300,000 annually.	There has been an improvement of the ecological situation of the species.
Municipality of Solidaridad Eco Tourism Tax	Tax	Current	Municipality of Solidaridad Government, local hotels and tourists.	Central America (Mexico)	A tax of 20 pesos per room per night has been introduced to help maintain the beaches and ecosystems in Riviera Maya and maintain and conserve the natural beauty of the destination.	Total value not defined. The tax was only introduced in late 2017.	Not defined.

Appendix B - Examples of US hypothecated (dedicated) funding for conservation purposes

Based on research conducted by Trust for Nature (Victoria) in 2016; information current as of that date

State	Funding Mechanism/s	Revenue and purpose of spending	Relevant Legislation/Regulation
New England			
Connecticut (population 3.6 million) info at: http://www.conservationalmanac.org/secure/almanac/newengland/ct/programs.html#ssi006	Land document fee imposed by Community Investment Act (2005) (CIA) **$30 fee** for recording of all municipal land records documents **$26** of which is distributed to state bodies. Dep of Environmental Protection get %25 cut of that.	The dep. uses its %25 portion of CIA revenue to fund: 1. Recreation and Natural Heritage Trust Program for expanding parks, forests and natural areas 2. A Land Acquisition Grant Program, which funds land acquisitions for the purposes of conservation The first program has massive variations in funding, ranging from $0 in 2014, to $4.5 million in 2015, to over $15 million in 2008. The second program is funded more consistently with an average expenditure of approx. 4.3 million a year since 2011.	Community Investment Act (2005)
Maine (population 1.3 million)	State bonds approved by voters to fund Land for Maine's Future (LMF) 26 % proceeds from lottery tickets	Funds allocated to Department of Agriculture, Conservation, and Forestry and Dep. Of Inland Fisheries and Wildlife as well as specific conservation programs.	6 voter-approved bond referendums between 1987 and 2012 are the primary funding source for LMF
Massachusetts (population 6.7 million) Info at: http://www.conservationalmanac.org/secure/almanac/newengland/ma/index.html	Document recording fees collected at the states Registries of Deeds funding a Community Preservation Trust Fund and voter-approved surcharge of up to 3 percent on local property tax bills	Almanac states that revenues vary widely for trust fund over 15 years, ranging from $20 million to high of $53 million. Trust fund is set up for supporting open space preservation, outdoor recreation, historic preservation, and affordable housing (Almanac states that funds are "split" between these purposes, but is unfortunately silent on affordable housing vs conservation proportions)	State legislation in the form of the Community Preservation Act 2000 both establishes the trust fund and empowers municipalities to establish "local dedicated funds"
New Hampshire (population 1.3 million)	$25 fee charged on documents recorded at county registries of deeds $6 fee on sale of conservation license plate	New Hampshire Land and Community Heritage Investment Program (LCHIP) $1.38 mil yearly average 2007-2011 (unclear how much from hypothecations specifically)	LCHIP sunsets on a ten-year basis after which it requires reinstatement by legislature

State	Funding Mechanism/s	Revenue and purpose of spending	Relevant Legislation/Regulation
Vermont (population 630,000) Info: http://www.conservationalmanac.org/secure/almanac/newengland/vt/index.html	Real estate transfer tax .5% of first $100,000 of value for principle residence and 1.25% for transfers above $100,000 threshold Half of proceeds go to Vermont Housing and Conservation Board (VHCB)	Vermont Housing and Conservation Board then divides funds between housing and conservation (again, proportions not available on almanac) Spent $3-7 million per year b/w 2000-2005 (data yet to be updated to more recent info)	State legislature established VHCB in 1988
Mid Atlantic			
Maryland (population 6 million) Info: http://www.conservationalmanac.org/secure/almanac/midatlantic/md/programs.html	State real estate transfer tax, 0.5% of purchase price of home or land distributed to counties by population State agricultural transfer tax, imposed on value of land receiving an agricultural use assessment, %3-5 percent based on land size %25 surcharge on existing agricultural tax when land taken out of agricultural use, surcharge for rural land preservation efforts paid by buyer/developer (nb: unclear if these taxes contribute to consolidated revenue)	Taxes fund mainly the Program Open Space and Maryland Agricultural Land Preservation Foundation. Hard to isolate contribution of hypothecated funds due to multiple revenue streams and lack of recent data (but spending for Maryland Ag Land preservation ranged from 10-25 million between 98 and 05)	General Assembly Legislation
New Jersey (population 8.9 million)	Open space tax	250 municipalities have established open space taxes No specific data provided on almanac	Voter legislation, municipalities have authority to levy taxes
New York (population almost 20 million) Info: http://www.conservationalmanac.org/secure/almanac/midatlantic/ny/programs.html tax rate info: https://www.tax.ny.gov/bus/transfer/rptidx.htm	Real estate transfer tax, $2 for each $500	Primary revenue source for New York Environmental Protection Fund, which spends tens of millions each year. Expenditure averaged $40 mil annual spending between 2001-2011	State Legislation

State	Funding Mechanism/s	Revenue and purpose of spending	Relevant Legislation/Regulation
Pennsylvania Info: http://www.conservationalmanac.org/secure/almanac/midatlantic/pa/programs.html Tax info: http://www.revenue.pa.gov/GeneralTaxInformation/Tax%20Types%20and%20Information/Pages/Realty-Transfer-Tax.aspx#.V4w45pN94_U	Real estate transfer tax at rate of %1 buyer and seller jointly liable $4.25/ton municipal waste disposal fee (Cigarette tax)	%15 of the revenue from real estate tax funds Pennsylvania Keystone Recreation, Park and Conservation Fund Not clear whether additional portions of tax fund conservation efforts Waste disposal fee contributes to a Pennsylvania Stewardship Fund, which b/w 2000 and 2011 spent an average of $2.5 million per year	State Legislation
West Virginia (population 1.85 million)	$10 deed recording fee	Divided evenly between Outdoor Heritage Conservation Fund and West Virginia Agricultural Land Protection Authority Very limited data available – Protection Authority spends in the range of $100-300 thousand dollars based on available years	State Legislation
Southeast			
Arkansas (population 3 million) Info: http://www.conservationalmanac.org/secure/almanac/southeast/ar/programs.html Tax info: http://www.dfa.arkansas.gov/offices/exciseTax/MiscTax/Pages/realEstate.aspx	Real estate transfer tax, $3.30 per $1000	Real estate transfer tax: - %80 to Natural and Cultural Resources Council, which has an average annual expenditure of $2.1 million between 2007-2011 - %10 to Natural and Cultural Resources Historic Preservation Trust Fund	Combination of state legislation and voter-approved tax hikes

State	Funding Mechanism/s	Revenue and purpose of spending	Relevant Legislation/Regulation
Florida (population 19.9 million)	Documentary stamp tax, 70c per $100	Revenue split b/w general revenue, state and local housing trust funds, land acquisition trust funds and water management trust funds The state program Florida Forever is supported in part by the tax. - recent expenditure data not available, but the spending is significant, ranging from b/w $100 million to almost $600 million between 2000-2008	State legislature
Kentucky	Unmined mineral tax Environmental penalties Sale of environmental license plates	Revenue goes towards Kentucky Heritage Land Conservation Fund, which spent between $3-4 million annually between 2008-2011	State legislature
North Carolina Info: http://www.conservationalmanac.org/secure/almanac/southeast/nc/programs.html	Real estate transfer tax ($2 per $1000 of property value) Vanity license plate sale	%25 of real estate transfer tax funds Natural Heritage Trust Fund Of every $2 generated through property tax, $1 goes to conservation, which is then split b/w the Natural Heritage Trust Fund and the Parks and Recreation Trust Fund The Natural Heritage Trust Fund varies its expenditure from $10-65 million dollars per year between 2001-2008 (no recent data available)	State legislature
South Carolina (population 4.8 million)	Real estate transfer tax ($1.30 per $500)	10c of the $1.30 goes towards the Heritage Land Trust Fund The South Carolina Conservation Bank also receives most of its funding from the tax. It spent b/w $10-35 million a year b/w 2004-2008 (no recent data)	State legislature
Tennessee (population 6.5 million)	Real estate transfer tax ($0.37 per $100 of value)	$0.0175 goes to Local Parks Acquisition Fund $0.015 is placed in State Land Acquisition Fund But Heritage Conservation Trust Fund is funded through budgetary appropriations	State Legislature
Midwest			
Illinois Info: http://www.conservationalmanac.org/secure/almanac/midwest/il/index.html	Statutorily dedicated state real estate transfer tax (fee of $1 per $1000 for property sold)	%50 of funds from tax go to affordable housing, 35% to Open Space Lands Acquisition and Development, and %15 to Natural Areas Acquisition Fund. Natural Areas Acquisition Fund varies its expenditure e.g. it spent over $13 million in 2006 and only $140,000 in 2011 (no more recent data available)	State legislature

State	Funding Mechanism/s	Revenue and purpose of spending	Relevant Legislation/Regulation
Indiana	Sale of environmental licence plates	Almost $32 million spent between 1998 and 2011 (not clear how much from plates)	
Missouri	1/8 of one-cent sales tax for conservation projects	According to almanac, the tax brings in approximately $90-100 million a year	State legislature
Southwest			
Arizona	Lottery distributions	Heritage Fund and Parks Board	State Legislature
Texas	Sporting goods tax	Lucrative tax with estimated revenues of $265 million over 2014-15. Most of the revenue goes to the Texas Parks and Wildlife Department.	State legislature
West			
Hawaii	Real estate transfer tax (bracketed, 10%-30% based on land value)	10% of tax revenue funds Hawaii Legacy Land Conservation Program, which spent b/w $3-5.5 million annually b/w 2008-2011	State legislature

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