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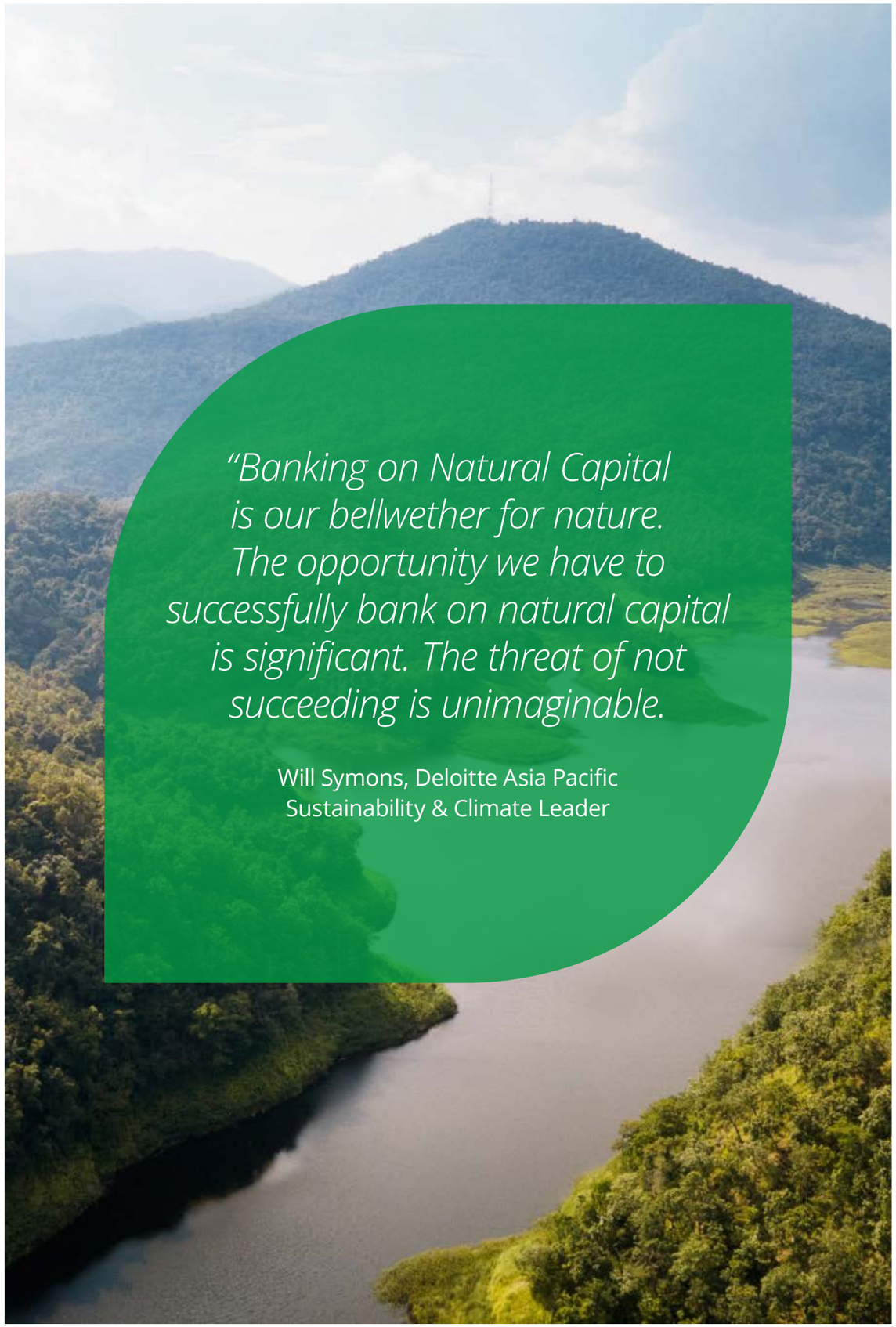
Banking on Natural Capital

Unlock the true value of nature

Deloitte
is working with
WWF-Australia
to amplify the
business case for
investing in nature

WWF
AUSTRALIA



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Introduction

Will Symons, Deloitte Asia Pacific Sustainability & Climate Leader

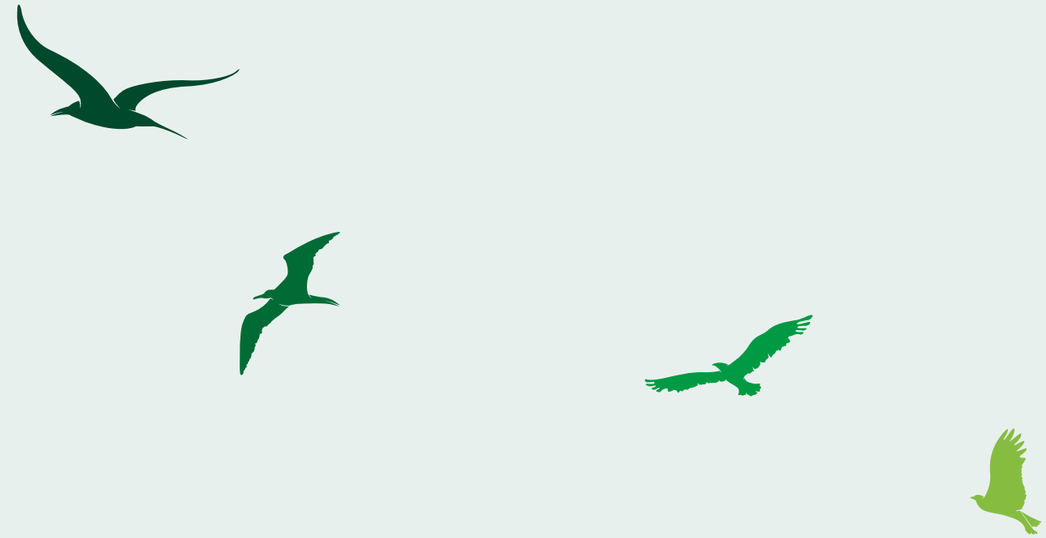
We are acutely aware that nature is in a state of crisis that, if unchecked, will extend to have significant implications for our economy and the wellbeing of generations now and to come.

As a business, we want to be part of the effort to directly address this crisis, to heal our fractured relationship with nature, and to bend the curve of nature loss and decline toward a nature-positive future.

We know that protecting and restoring forests, wetlands and grasslands alone is enough to get us over one-third of the way to meeting global commitments under the Paris Agreement. So, to reach our own goal of net zero greenhouse gas emissions by 2030, we are committed to understanding how nature links with climate change and how it supports society as a whole, and to investing in nature as a key part of our climate transformation.

We are ready to bank on natural capital and to use our role and reputation as an enabler of global markets to help drive the integration of natural capital and its value into financial markets and mechanisms. In this report, we have started to imagine what this market should look like, building on the foundation of the evolving carbon market, the growth in sustainable finance, and emerging payments for ecosystem services, and how to bring these together into a single shared platform of action and investment in nature. We can see the barriers that have come before and are ready for the challenges that come ahead.

Banking on Natural Capital is our bellwether for nature. The opportunity we have of successfully banking on natural capital is significant. The threat of not succeeding unimaginable.



Rachel Lowry, Acting CEO, WWF-Australia

An environmental tragedy of unparalleled proportions is unfolding in Australia. Plants and animals are disappearing. Landscapes prized internationally are deteriorating. Our deforestation and mammal extinction rates are among the highest in the developed world.

Market failures and short-term thinking have led our nation, and our region, towards precipitous ecosystem collapse. This is not just an environmental issue, but an economic and social one. The health of our natural landscapes and species is fundamental to our own. Nature not only sustains economies; it sustains our cultural identity, our traditions and sense of place.

If our natural capital collapses, our economies and societies collapse. To turn around this crisis we need to re-imagine our relationship with nature. If nature were to issue an invoice for use of its goods and services, how would this change the way we do business?

Three key principles underpin the economic shift towards nature-positive – innovation, integration, and integrity.

Innovation: We need to break down our silos, engage with unlikely allies and challenge our long-held assumptions about economic growth and prosperity. We need a better understanding and a clearer narrative on the complex interactions between biodiversity, ecosystem health, economic resilience and productivity.

Integration: Too often the environment is positioned as an inconvenient trade-off to the economy. We need a more holistic appreciation of nature as the very foundation on which society and the economy are built. We need to integrate environmental costs and benefits into economic and corporate accounting in order to reflect this reality.

Integrity: Our natural resource governance fails to safeguard the public goods and services that nature provides; leaving these vulnerable to exploitation and conflicts of interest. We need our leadership to rise above short-term profits and electoral cycle thinking and provide for transparent, equitable and science-based decision-making.

This is a defining moment in our history. Today's investment in securing a nature-positive future is an investment in the wellbeing of all.

01

The business case for banking on nature

1 The business case for banking on nature

Nature is a fundamental, and fundamentally undervalued, part of the economy and of human wellbeing.

Every economy, at every stage of development, is reliant on resources and ecosystem services provided and sustained by the environment, whether directly or through its supply chains. The food we eat, the air we breathe, the clothes we wear and even the recreation we enjoy is rooted firmly in the natural world. But presently, much of this value is an externality, and human impacts and dependencies on nature are not priced into the very economies that inevitably depend upon it.

'Natural capital' is an attempt to better convey the true value of nature.

By presenting natural assets as capital, it becomes clearer to see how the environment is comprised of finite stocks which may be invested in to generate value or degraded to deplete value. This helps to clarify not only the hidden risks associated with nature loss, but also the opportunities associated with its replenishment. Nature is a stock that is essential to a healthy economy, and natural capital paves the way for new markets, mechanisms and instruments which reflect this.

Nature is too big to fail.

The World Economic Forum (WEF) has estimated more than half of the world's economic output (US$44 trillion) is moderately or highly dependent on nature.[1] This gives an indication of the cost of failure, of withdrawing too many of our natural reserves, and investing too little in its replenishment.

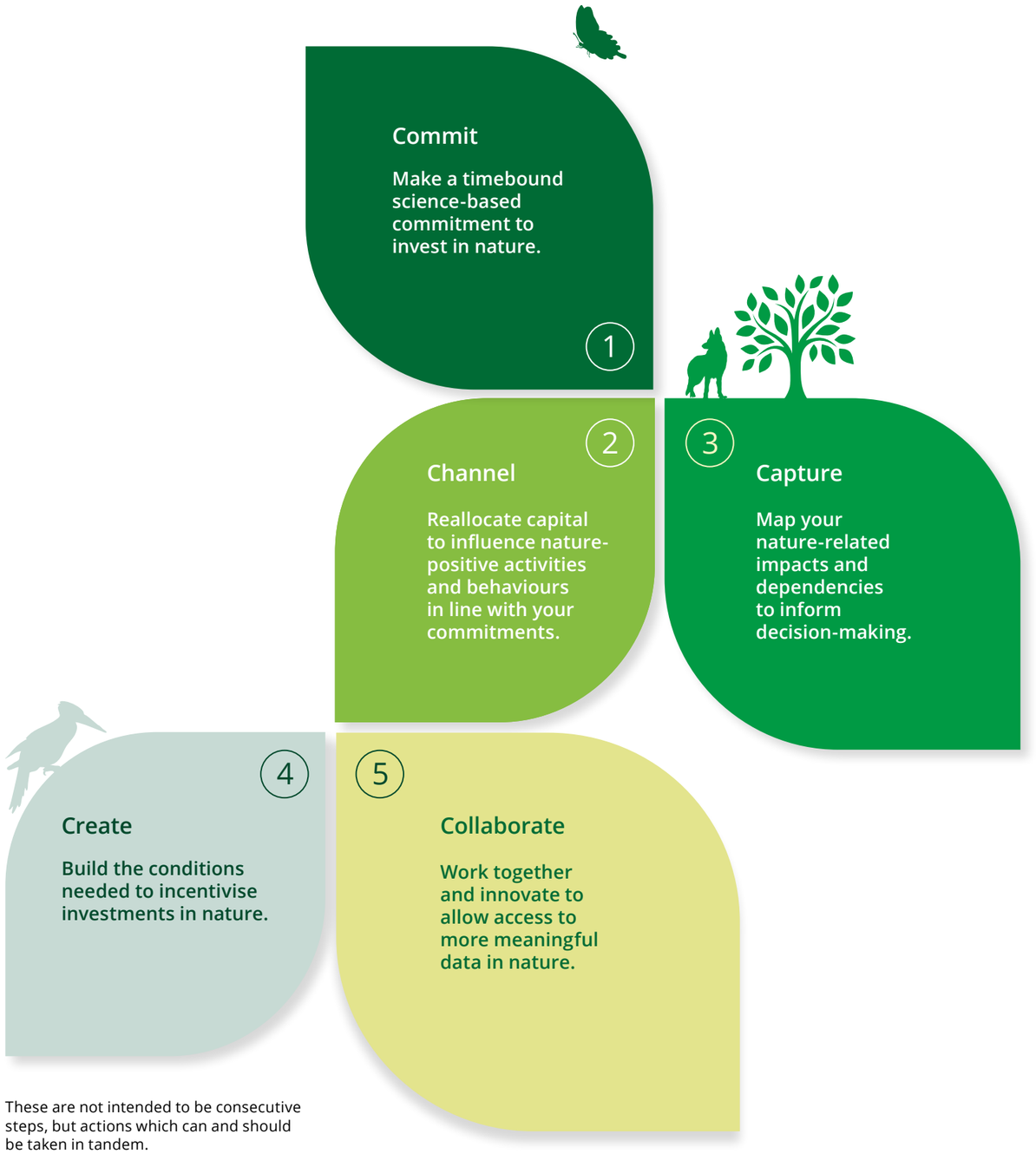
Currently, natural resources are being extracted faster than they can be restored and are used to provide goods and services which result in harmful waste products such as carbon emissions and plastic packaging. Estimates indicate that we would need more than 1.7 earths to make our current rate of consumption sustainable.[2] This has resulted in a global ecological debt representing a real financial liability, that is largely obscured from fovernment budgets, corporate balance sheets, and financial risk frameworks. There is a clear and immediate need to better understand the value of nature and integrate this into financial, economic and political decision-making to avoid both ecological and economic bankruptcy.[3]

Natural capital presents an untapped market opportunity rooted in truly sustainable returns.

The regulatory, market and stakeholder pressure to reduce detrimental impacts on nature and increase positive ones will only continue to grow. With this pressure also comes potential opportunities, as demonstrated through the rise of sustainable finance, impact investments, and voluntary carbon markets. The WEF has estimated that the transition to more nature-positive practices in just three sectors could present an annual business opportunity of US$10 trillion by 2030.[4] As institutions that influence the flow of capital, there is both a great imperative and opportunity for the financial services industry to lead the transition to a nature-positive economy.

The time has come to bank on natural capital

To define a new, nature-positive business as usual (BAU) which is truly economically, environmentally and socially sustainable, we have identified five key actions an organisation can take to pursue this goal:



These are not intended to be consecutive steps, but actions which can and should be taken in tandem.

About this report

Banking on Natural Capital represents a vision for a global economy that is transparent, inclusive and ecologically sustainable. Through this report, we aim to explore how the growing ecological deficit can be addressed by mobilising investment into the conservation, sustainable management and restoration of natural capital assets.

Banking on Natural Capital is primarily written for actors across the financial services industry and seeks to present an overview of what it looks like to invest in nature, the main barriers and enablers to this, and some key actions which can be taken today to progress towards a nature-positive economy.

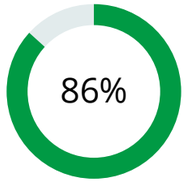
The financial services industry is large and diverse. Whilst this report advocates for all actors within the industry to bank on natural capital, it has been written with a specific focus on the following activities:

- Banking, including corporate and commercial lending
- Investment and active ownership across a range of asset classes
- Insurance and reinsurance

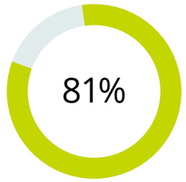
These are referred to collectively as "financiers" or "the financial services industry" throughout the rest of the report.

Listening to the pulse of the market

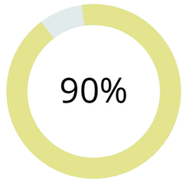
To inform and validate the content of this report, Deloitte has engaged with more than 20 global organisations in the financial services industry via a targeted survey and select interviews. Participants include multinational retail and investment banks, investment and asset managers, and insurance providers. Key insights from the surveys include:



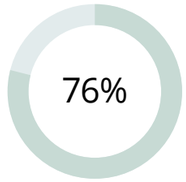
of survey participants agree that the financial services industry has a lead role in reducing biodiversity loss and creating natural capital markets



of survey participants are considering making a commitment to be nature-positive



of survey participants are interested in participating in a natural capital marketplace



of survey participants are currently offering or interested in developing new financial mechanisms that seek to better value nature

annual
business opportunity
By 2030

resulting from a transition to a nature-positive economy in just three socio-economic systems (food, land and ocean use; infrastructure and the built environment; energy and extractives).[6]

cumulative
loss
By 2050

resulting from reductions in just six ecosystem services under a business as usual (nature-negative) scenario.[5]

Nature-negative ⟷ **Nature-positive**

02

The demands and drivers

2 The demands and drivers for banking on nature

The ecological footprint: Understanding an invisible debt

The absence of an equivalent dollar value on nature has plunged the global economy into an ecological debt that is largely obscured from government budgets, corporate balance sheets and strategies, and financial risk frameworks. Until the extent of humanity's impacts and dependencies upon nature are quantified, it remains difficult to fully comprehend the range of financial risks and opportunities which nature presents.

An attempt at quantifying these impacts and dependencies is known as the 'ecological footprint'. **An ecological footprint represents the quantity of natural resources required to sustain an individual, goods or services, population or economic activity**. This measure of natural capital demand takes into consideration all the natural assets required to provide goods and services, as well as those needed to absorb the resulting waste products. When compared to nature's ability to replenish these resources, or its natural capital supply, one has a measure of an ecological budget. The ecological footprint is useful as a simple way to translate the unsustainable utilisation of nature into numerical terms, and start to envisage what it will take to be nature-positive.

Unfortunately, the data shows that the gap between ecological demand and supply is widening globally (refer Figure 1). This results in an **ecological deficit** that can only be made up by importing natural resources or by continuing to liquidate national ecological assets – both of which are finite. This has significant socioeconomic and environmental implications, including **rising commodity prices, job losses, and resource shortages.**

Global ecological footprint vs natural capital supply

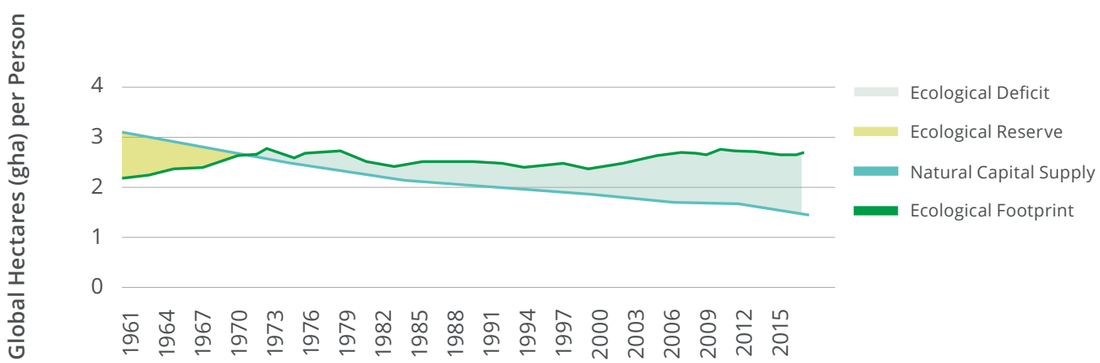


Figure 1 Global Ecological Footprint vs Natural Capital Supply.[7]

Conversely, where a nation or other asset owner's ecological footprint does not exceed its natural capital supply, it is possible for it to have a natural capital surplus, or **ecological reserve**. Given the demand for natural resources will only increase as average ecological deficit increases, this favours those who are able to steward natural resources well and develop methodologies to use them sustainably.

The resulting imperative is to act now - not simply by reducing global demand, such as through increasing recycling or the more efficient use of natural resources, but by investing in nature itself to ensure there remains sufficient supply for generations to come. **The goal is to reduce and reverse the current ecological deficit and transition from a nature-negative to a nature positive economy by 2030.**

Nature-positive: the net zero goal for nature

Nature-positive by 2030 is the global goal for nature and defines what is needed to halt and reverse catastrophic nature loss. This goal is embedded in the Kunming Declaration, which was committed to by over 100 countries at the UN Convention on Biological Diversity in October 2021. This goal calls for urgent action to transform economic, social and financial models to reverse negative trends today, with three key milestones:

Zero net loss of nature from **2020**

Net positive improvements in nature by **2030**

Full recovery of nature by **2050**

It is anticipated that, akin to the Paris Agreement and Net Zero commitment, nature-positive will become a core benchmark which both governments and corporations will be under increasing pressure to publicly commit and adhere to.

Financing nature: What is required?

It is evident from the global ecological deficit that investment in nature to date has been insufficient. But what does it mean to invest in nature, and what scale of financing is required?

Fundamentally, to invest in nature is to commit resources towards the conservation, sustainable management and restoration of natural capital, to ensure nature continues to pay returns in perpetuity.

The predicted finance required for biodiversity conservation alone is estimated at US$722-967 billion annually by 2030. This is notably higher than the estimated US$124-143 billion in biodiversity finance committed in 2019.[8] **This disparity between the required and committed financing for biodiversity suggests a minimum nature financing gap of US$598 billion annually.**

Minimum
US$598
billion
annual nature financing gap

Estimated annual biodiversity financing gap

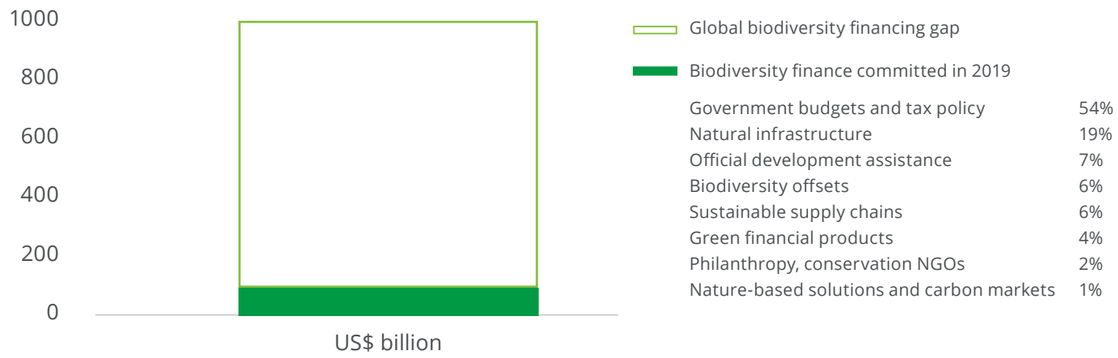


Figure 2 Global biodiversity finance as of 2019 compared to estimated annual global biodiversity financing need. Figures used are the upper estimates.[9]

This research also provides an indication of where investments are currently coming from. In 2019, upwards of 80% of nature-related finance was derived from the public sector for the conservation and maintenance of nature, often as a public good. However, given the scale of the financing gap and universal consequences of failing to meet financing needs, public sector funding is not in itself sufficient.

Economic transitions are required to shift nature-negative financial flows to nature-positive ones, not only to address the risks associated with nature loss, but also to amplify the opportunities afforded by healthy ecosystems. **There is an imperative and opportunity for the private sector to increase investments in nature and lead the shift to an economy which banks on natural capital.**

In 2019
Upwards of.....

of nature-related finance was derived from the public sector for the conservation and maintenance of nature, often as a public good.

Addressing both supply and demand for natural capital

Banking on Natural Capital seeks to explore how we can address the ecological deficit by mobilising investment into the conservation, sustainable management and restoration of natural capital assets. This involves increasing the supply of natural capital, increasing the demand for conserving natural capital and establishing the enabling conditions to ensure both supply and demand are enduring, credible and at scale.

The call to invest in nature should not be read as simply a call to offset BAU activities and prolong the viability of the status quo. Rather, investing in nature should mean facilitating flows of capital to enable an effective transition to a new, nature-positive BAU. Following this principle, organisations which are taking real and ambitious steps to reduce negative impacts and highlight and value dependencies on natural capital become prime targets for investment.

Scaling up demand for investments in nature

Currently, substantial private investments in natural capital are being directed through carbon markets and development offset schemes, as a means to compensate for the negative impacts of BAU activities. Much of this investment has been through regulated behaviour which requires the purchase and retirement of offsets where harmful impacts cannot be avoided, or would be more expensive to avoid. However, we expect greater demand for a broader range of nature-related investment options beyond regulated offsets going forward.

This is in large part because successfully meeting global net zero commitments and related decarbonisation goals by 2050 requires a substantial uplift in nature-positive investments.

There is a very clear case to bank on natural capital, to invest in the natural assets which have been successfully sequestering carbon for millennia.

Protecting and restoring forests, wetlands and grasslands
can get us more than
one-third
of the way to limiting global warming to below 2°C
By **2030**

Properly protecting, managing and restoring forests, wetlands, and grasslands can lead to the removal of 11 gigatons of carbon every year, which is enough to get us more than one-third of the way to limiting global temperature increases to well below 2°C by 2030.[10] Similarly, the ocean is one of the world's largest carbon sinks, sequestering 30% of the carbon emitted by humans each year.[11] It is clear that a significant portion of the global net zero pathway lies in investment in nature. Further, the value of nature-based carbon credits is expected to increase significantly due to the demand for high-quality carbon offsets which meet the standards set out in Article 6 of the Paris Agreement. It has been estimated that nature-based climate solutions will provide more than half of the carbon credits traded in the voluntary market by 2030[12], or up to US$25 billion annually.[13]

Market and regulatory pressures to shift to nature-positive are set to increase in the coming years, particularly following regulatory levers such as the release of the Post-2020 Global Biodiversity Framework targets in 2022 and TNFD framework in 2023. This will in turn increase the demand for natural capital investments.

COP15 Summit on the Post-2020 Global Biodiversity Framework (GBF)

The UN Convention on Biological Diversity's (CBD) Conference of the Parties (COP15) is set to take place in two halves over 2021 and 2022. Held in October 2021, the first event saw over 100 countries becoming signatories to the Kunming Declaration, which contains 17 ambitious targets for the restoration and protection of biodiversity. This is intended to form the basis of the GBF, which will be finalised and adopted during the second half of COP15 in 2022. This framework is considered a critical aspect of the CBD's vision for people to live in harmony with nature by 2050.

The Taskforce on Nature-Related Financial Disclosures (TNFD)

The TNFD was launched in 2021 to help companies and investors make informed and robust decisions. The TNFD's mission is to provide a risk management and disclosure framework for organisations to report and act on evolving nature-related risks, and support a shift in global financial flows away from nature-negative outcomes and toward nature-positive ones. The first draft of this framework was released in March 2022, and the final is due to launch in September 2023. Intermediate draft frameworks will be developed in response to industry feedback to ensure the TNFD is market led and informed, and guidelines are also being developed to provide further direction to specific sectors. This includes dedicated finance sector guidance, to be released mid-2022.

We expect the demand for nature-based investments to increase significantly in future. However, the current rate of nature loss raises legitimate questions as to whether there will be enough natural capital supply left to meet this demand.

The urgency of action in this regard cannot be understated. Immediate steps are required from a range of actors to not only fuel the supply and demand for natural capital, but also to facilitate the investments and exchange.

Understanding the drivers for investing in nature

The leading driver for private sector investment in nature is the growing need to map, manage and disclose nature-related risks and seize nature-related opportunities. These nature-related risks and opportunities for financiers will be realised in several different ways, as described below, leveraging the risk and opportunity categories contained in the TNFD framework.

Physical	**Defend against operational disruption resulting from physical risks, which may be acute (e.g., increased flood damage and supply chain disruption due to loss of mangroves impacting asset values) or chronic (e.g., loss of crop yield due to decline in soil quality and pollination services impacting ability to repay agribusiness loan).**
Resilience	**Diversify an investment portfolio, as well as portfolio company or borrower business activities and natural resource use, to mitigate risks of disruption or default. E.g., use of new plant species in clothing fibre blends. This highlights the emergence of interest rate discounts for 'green' performance and rate increases for 'brown' (fossil fuel based) performance.**
Policy & legal	**Anticipate the introduction of and enable compliance with regulation or policy which could lead to increased operational costs and restrictions, in turn mitigating associated counterparty credit and liquidity risks. E.g., delays and additional expenses in obtaining project permits due to strict biodiversity offset requirements.**
Financing	**Defend existing and unlock new access to capital, as well as specific nature-related financing (e.g., green indexes, bonds or deposits) and markets (e.g., markets with green border tariffs, sustainable sourcing due diligence legislation).**
Market	**Defend existing and unlock new revenue streams arising from shifting supply, demand and financing, particularly through consumer and investor preferences for nature-positive businesses, products and services. E.g., green funds, carbon credits and certified sustainable commodities.**
Social licence	**Meet changing societal, customer or community expectations of governments and businesses, particularly with regards to nature, climate and social development commitments and strategies. E.g., avoiding controversial activities such as deforestation, engaging in impact investment to increase the population of an endangered species.**
Technology	**Reduce risk of substitution of products or services which are considered too impactful or dependent upon nature. E.g., by transitioning from chemical to organic fertilisers.**
Resource efficiency	**Transition to more efficient services and processes requiring fewer natural resources to reduce costs and risks arising from volatile commodity prices. E.g., sustainable agricultural practices which reduce land and water use.**

"The urgency of action cannot be understated. Immediate steps are required from a range of actors to not only fuel the supply and demand for natural capital, but also to facilitate the investments and exchange."

Guy Williams,
Deloitte Asia Pacific & Global Nature Lead

Mapping the roles of key actors investing in nature

There is a **need for a range of actors to collaborate to create, activate and support** investments in natural capital which enable the transition to nature-positive economies. Financial institutions are able to play multiple roles in a nature-positive economy with legitimate drivers towards acting in supply, demand and enablement roles. The figure below illustrates what some of these roles could look like for a range of key actors.

Natural capital supply	Enablement	Natural capital demand
Creation of nature-positive investment targets to increase and safeguard an ecological reserve.	Facilitation of nature-positive investments, including support to value, trace, and trade natural capital.	Provision of capital to nature-positive investment targets to address an ecological deficit.

Development actors/lenders

Governments, NGOs, multilateral development banks, impact investors, philanthropists, and private companies with corporate social responsibility funds, as well as regulators and central banks

Role: facilitate transactions as part of blended finance; design novel financial products (e.g., green bonds); support the development and adoption of an investment taxonomy and other certifications; develop and enforce legal standards for environmental performance and disclosure.

Role: provision of strategic catalytic capital through blended finance mechanisms; engage with novel financial products.

Government

Regional, national and subregional agencies, including treasury

Role: provision of public lands for projects and facilitation of broad-scale collaboration among landowners. Establishing legal frameworks and fiscal incentives to stimulate private investment in nature.

Role: government acts as a key enabler in driving market interest and uptake in natural capital through regulated offset schemes, application of nature-positive through impact assessment, as well as through the provision of better data and incentives to stimulate market action.

Role: governments are developers, owners and investors in a range of built infrastructure and all forms of natural capital assets, spanning property, transport, and primary production.

Institutional investors and financial institutions

Pension funds, sovereign wealth funds, insurers and banks

Role: pilot, test and expand credible projects to protect and restore natural capital, both at a group/house and portfolio company level through active management.

Role: influence investee organisations to provide nature-related financial disclosures and strengthen management of nature-related risks and opportunities (including through KPIs and targets); include ESG scorecards/require nature-positive taxonomy alignment when underwriting/reinsuring green debt; develop nature-positive financial products and fund.

Role: consider nature-related risks and opportunities in capital allocation decisions and active ownership strategies, with reference to green indices and ratings; provide capital to scale cashflow activation projects.

Scale of actors ▲

Financial capital demand	Enablement	Financial capital supply

Figure 3 The supply, demand and enablement of natural capital investment. **Source:** Authors.

Natural capital supply	Enablement	Natural capital demand
Creation of nature-positive investment targets to increase and safeguard an ecological reserve.	Facilitation of nature-positive investments, including support to value, trace, and trade natural capital.	Provision of capital to nature-positive investment targets to address an ecological deficit.

Corporates

Private sector companies across all sectors of the economy, especially a large company or group

Role: corporate action on natural capital can involve exploring opportunity to bring supply of projects existing within their current and emerging assets. Further activity to identify this supply both within and outside their own value chains can help uncover this by assessing the value of the natural capital under management, prioritising areas of greatest value to be monetised or managing for improvement.

Environmental experts

Environmental groups, certification bodies, Indigenous communities, academics and the scientific community

Role: support the design and implementation of credible nature-based projects; development of an investment taxonomy, certifications, and efficient methodologies to credibly measure, report and verify natural capital and nature-positive.

Corporates

Role: develop and implement science-based targets to become nature-positive; align internal KPIs/incentives/bonuses with these KPIs; disclose and manage nature-related risks and opportunities, including through adoption of internal shadow prices for carbon and nature (integrated into decision-making).

Individual land managers

Primary producers and Indigenous communities

Role: provision of land for nature-based cashflow activation projects; transitioning to new nature-positive activities and processes.

Rating agencies, financial data, space solutions and infrastructure providers

Stock exchanges, digital currency platforms, security analysts and index providers, blockchain and remote sensing services

Role: develop platforms and market infrastructure to host a transparent global exchange; enable cost-effective access to measurement, reporting and verification (MRV) and exchange data through use of technology such as machine learning and satellite imagery.

Retail investors

Families and small businesses

Role: offtake commitments to purchase sustainable commodities; provision of crowd-funded commercial impact capital to scale cashflow projects (e.g., through green deposits).

Scale of actors ▲

Financial capital demand	Enablement	Financial capital supply

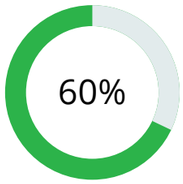
The critical role of Asia Pacific: Supply, demand and enablement.

There is strong rationale and opportunity for the global market response to valuing natural capital to be led out of the Asia Pacific – the region is well positioned to act in supply, demand and enablement roles. However, to date, most natural capital initiatives and platforms have been designed and led out of Europe. Whilst any progress in this space is welcome, this trend does not reflect the true global spread, risk and supply of natural capital.

Asia Pacific has some of the most significant biological diversity on earth, from critical hotspots such as the rainforests of Southeast Asia and the reefs of the Coral Triangle.[14] However, the region also faces the highest rates of biodiversity loss; globally, 60% of biodiversity loss is attributable to just seven countries, six of which are in the Asia Pacific.[15]

This region is among the most vulnerable to declines in natural capital, in part because its economies are more likely to be production-based, with high levels of dependency on nature. As a result, 63% of GDP in the region is at risk of disruption from nature loss.[16] The region is also particularly vulnerable to the impacts of climate change and natural disasters, with 99 of the 100 cities determined to be facing the most environmental risk located in Asia Pacific.[17]

Even large economies like Japan and Australia are predicted to suffer significant GDP losses, associated with climate change and nature loss, primarily due to the loss of coastal infrastructure and agricultural land through flooding and erosion.[18] The 2019-2020 bushfires in Australia provide a stark illustration of this reality. The fires, which burnt more than 24 million hectares and killed or displaced an estimated 3 billion native animals, cost Australian agriculture between AU$4 billion and AU$5 billion (6-8% of agricultural annual GDP) in damage to infrastructure, loss of crops and livestock, and a reduction in farmland values.[19]



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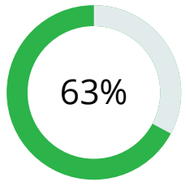

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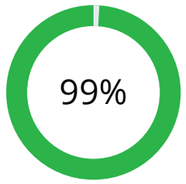

99 of the 100 cities at highest environmental risk are in the Asia Pacific.

The decline in Asia Pacific ecosystems has been largely enabled by flows of finance. A recent report on the nature-related risks of development bank investments identifies lending in Asia Pacific as putting the largest quantities of nature at risk, in part due to relatively weak regulation.[20] Similarly, another report found that banks in the region performed the worst in a review of lending policies which sought to restrict negative impacts on biodiversity.[21]

As an important global financial hub, it is a clear imperative that financial institutions more proactively manage flows of capital towards nature-positive outcomes.

As nature has underpinned economic growth in the region for decades, ensuring that nature is responsibly managed and restored also presents some attractive opportunities. For example, a study co-authored by Temasek found that investing in just 59 nature-positive business opportunities in the region could generate US$4.3 trillion and 232 million jobs annually by 2030 – equivalent to 14% of the GDP of the region.[22] The business opportunities assessed included direct investment in natural capital projects as well as projects to reduce Temasek's impact on nature relative to a BAU baseline.

59
nature-positive
business opportunities
in the region

could generate
US$4.3 trillion
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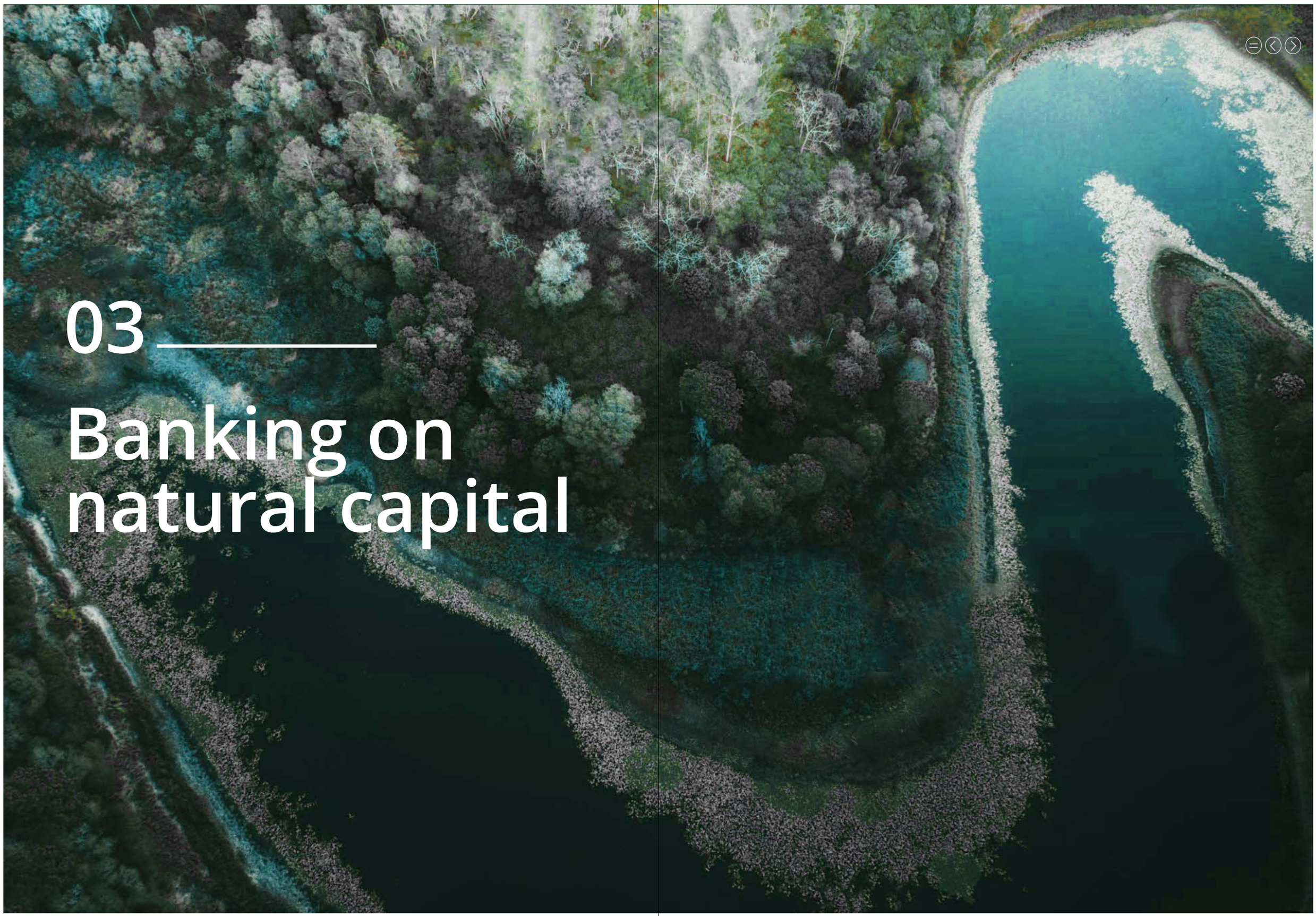
2030



03

Banking on natural capital

3 What does it look like for the private sector to bank on natural capital?

To bank on natural capital means to invest in the natural world by integrating nature and its true value into financial markets and mechanisms.

This is about more than just impact and reputation – rather, it's about consideration of the full breadth of nature-related risks and opportunities, and using this to inform decisions to enable truly sustainable, for-profit returns.

Nature is inherently diverse, and as a result there is a wide range of ways for a financier to bank on natural capital. This chapter unpacks several examples, each of which may be categorised as either:

- Financing mechanisms: ways in which standard approaches to raising finance may be applied to direct capital towards nature-positive outcomes. These typically allocate capital from multiple sources to enable large-scale investment, and may be leveraged alongside non-nature-related products for diversification.
- Market-based mechanisms: ways in which the environmental, social and economic values of natural capital can be mobilised and monetised. These may include public environmental policies or private voluntary initiatives established through partnerships between private sector actors and governments, NGOs or local communities, and give financiers more control over the outcomes, including financial returns and impact reporting narratives. Financiers may provide financing directly to either or both of these categories of natural-capital investment.

Figure 4
shows how the different elements of natural capital investment interact.

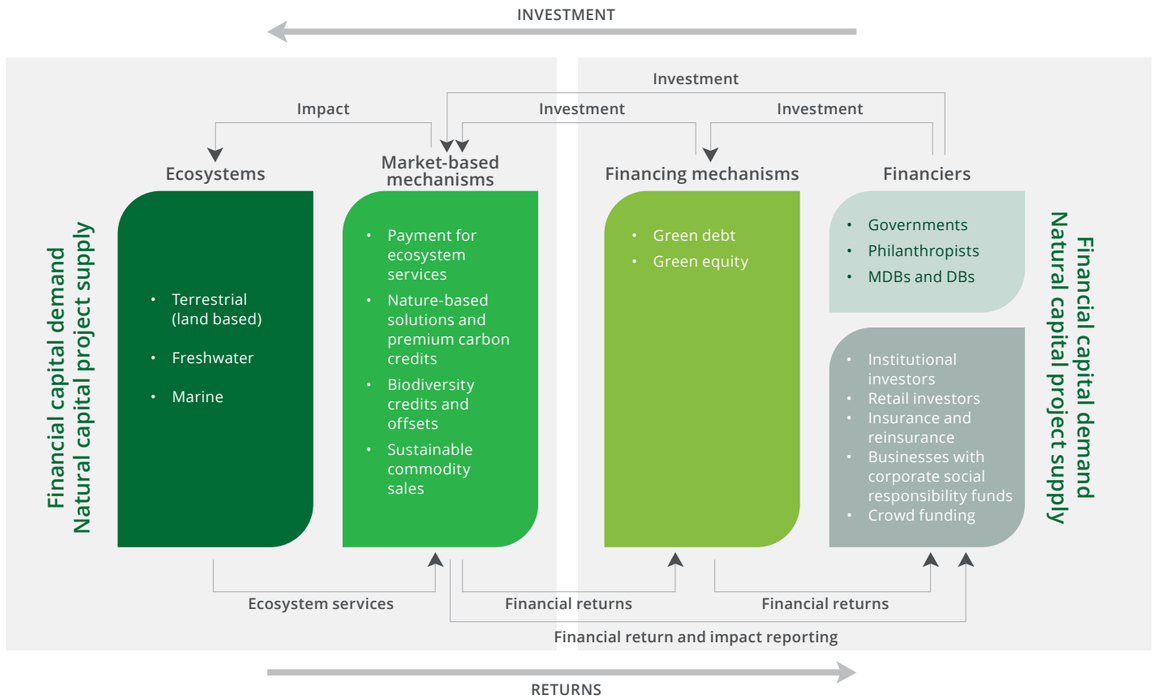


Figure 4 Natural capital investment framework, adapted from source. [23]

Estimated global biodiversity financing in 2030[24]

The table below depicts the estimated increase in financing for a range of products with biodiversity benefits over the next decade. Biodiversity is just one aspect of nature and does not represent the full opportunity associated with nature-based investments, but is used here as an indication of scale.

Market size (US$ billion)	Market-based mechanisms			Financing mechanisms	
	Nature-based solutions and carbon markets	Biodiversity credits	Certified sustainable commodities	Green debt	Green private equity
2019	0.8 - 1.4	6.3 – 9.2	5.5 – 8.2	1.6 - 3.3	2.3 - 3.0
2030	24.9 – 40.0	162.0 – 168.0	12.3 – 18.7	18.7 - 75.6	12.3 – 16.9
	• Voluntary and regulatory carbon markets • Payments for REDD+ • Natural climate solutions to meet Nationally Determined Contributions (NDCs)	• Voluntary and regulatory biodiversity markets	• Sustainable forestry products, agricultural products, fisheries and seafood, and palm oil	• Green bonds and loans • Sustainability-linked bonds and loans	• Positive and negative investment screening • Nature-themed funds

Financing mechanisms

Green debt

Debt represents the largest pool of global capital and is essential in addressing many of the environmental challenges of the 21st Century.[25] Typically, there are two main categories of sustainable debt instruments:

Use of proceeds bonds or loans

Funds raised are allocated directly to eligible sustainable projects or assets.

Where funds are committed to environmental projects or assets, these are often labelled as a 'green bond' or with 'green loan'.

Sustainability-linked bonds or loans

Funds raised may be used for general corporate purposes.

Finance terms such as interest rates are linked to the achievement of predetermined sustainability performance targets (SPTs).

Debt-based sustainable finance instruments have enjoyed near exponential growth in recent years. For example, green bonds experienced a 49% growth in value annually between 2016 and 2020, with total market annual issuance expected to exceed US$1 trillion by 2023.[26]

However, the increase in debt-based green loans has corresponded with a decrease in the proportion of funding allocated as grants.[27] The trend towards only focusing on debt-based instruments has limited application to natural capital for the following reasons:

1 Conventional investments currently offer higher financial returns:

It's easier to demonstrate a financial return on investment in proprietary man-made technological and infrastructural solutions than in the natural world. For this reason, sustainable investments focused on nature are funded significantly less than those that do not. In 2019, less than 0.7% of the green debt market was allocated towards biodiversity conservation, with 81% directed towards the energy, building and transportation sectors.[28]

2 Debt can further disadvantage already at-risk communities:

The areas of the world which are richest in natural capital are typically also home to some of the poorest communities, many of which are Indigenous. Similarly, the economies most vulnerable to climate change and nature loss are those that are the least equipped to be able to maintain the natural capital values of their environmental assets.[29] These nations are typically already in substantial debt, the servicing of which subtracts from budgets that may otherwise be allocated to nature conservation, climate adaptation and social development. Addressing global ecological debt by requesting that the poorest countries and people groups shoulder more financial debt is inherently inequitable. Innovative approaches such as restructuring debt in debt-for-nature swaps will be essential in helping to ensure that debt-based instruments are both effective and equitable (see Case Study 2).

These concerns are in addition to the ongoing concern around green instrument credibility, arising from a lack of consistent and rigorous standards to define and verify eligible 'green' investments. It is expected that this concern will be addressed as standards continue to be developed, scrutinised and refined, but it will require ongoing attention. An additional concern is where green labelled instruments, particularly those which focus on energy and emissions, may have obscured nature-negative impacts, such as the construction of 'green' infrastructure using unsustainably sourced materials or in proximity to vulnerable ecosystems.

For these reasons, there is a need to expand out the sustainable finance conversation and excitement to also include consideration of non-debt asset classes as a means to address the nature financing gap. Regardless, green debt has an undeniably important role to play in the transition to a nature-positive economy, and being cognisant of the potential pitfalls in designing a deal can help to mitigate any limitations or adverse impacts. An example of this is demonstrated in Case Study 2 below.

Case Study 1:
Rhino Impact Bond, Kenya[30]

Investment size: US$150 million
Investment period: 5 years

Target growth rate of black rhino population across five sites: 5.95%

Black rhinos are under immense stress from poachers and the illegal wildlife trade and have been classed by the International Union for Conservation of Nature (IUCN) as a Critically Endangered Species. The Rhino Impact Bond is a scalable, outcomes-based financing mechanism developed by United for Wildlife with the aim of mobilising funding to prevent the extinction of the black rhinos. Capital raised under the bond will be used for critical conservation activities such as targeted training, improved infrastructure, and ranger salaries. Investor returns will be paid by the Global Environment Facility Trust Fund and comprise the principal and a possible payout linked to an increase in rhino populations in the target areas. This incentivises stakeholders to critically analyse and understand conservation issues and focus on measurable, long-term positive impacts.

Case Study 2:
Blue Bond for marine conservation, Belize[31]

Investment size: US$364 million
Investment period: 2021-2034

Increase Biodiversity Protection Zones to cover 30% of Belize's ocean area

In November 2021, the Government of Belize, the US Development Finance Corporation (DFC) and The Nature Conservancy finalised the largest bond for ocean conservation seen to date. This deal included a debt-for-marine conservation element, whereby Belize's existing sovereign debt was restructured with a 45% reduction in value on the condition that Belize implements a series of marine conservation commitments and direct a portion of the savings to a US$23 million conservation trust fund to protect its coral reefs. Credit Suisse acted as the sole structurer and arranger of the blue bond, and DFC provided political risk insurance to enhance the repayment prospects of this new debt and enable it to have an investment grade rating.

Green equity

There are three ways of leveraging equities to finance nature, each of which are further explored below.

1. Nature-positive finance: Integrate natural capital considerations to redirect away from harmful financial flows

Many public and private equity investors are already employing screening tools and standards to identify ESG risks and inform investment decisions. Increasingly, investments deemed to have a high risk of negative ESG impacts are being avoided, with capital redirected to investments likely to have positive impacts. Given the trillions invested in high nature risk exposed industries like extractives and agriculture, the mainstreaming of these risk management practices are likely to have a significant impact.

For example, BlackRock Investment Stewardship's 2022 Engagement Priorities includes a Natural Capital KPI which requests that companies disclose detailed information on their approach to managing natural capital-related risks and opportunities.[32] This follows its 2021 Natural Capital commentary stating that it may not support the re-election of directors where companies have not effectively managed and disclosed natural capital-related risks and opportunities. Additionally, BlackRock expressed that it was willing to support shareholder proposals which could enable better management of natural capital risks.[33]

> *"As a long-term investor on behalf of our clients, BlackRock has increasingly considered climate and nature-related risks and opportunities in the context of companies' ability to generate durable shareholder returns. Businesses which impact or depend on natural capital are expected to experience increased financial risks and opportunities as ecosystems come under stress. As a result,* **we view the careful management of natural capital as a core component of a resilient, long-term corporate strategy for companies that rely on the benefits that nature provides**. *Investors are increasingly interested in contributing capital to companies that not only mitigate nature-related risks, but consider natural capital opportunities aligned with their strategy."*
>
> **Jessica McDougall,** Director BlackRock Investment Stewardship

In addition to supporting the redirection of capital away from nature-negative activities, Environmental, Social and Governance (ESG) indices also provide a means to direct capital towards nature-positive targets at scale. For example, the Euronext ESG Biodiversity Screened Index is the first investable biodiversity index, launched by HSBC in late 2021.[34] Whilst ESG indices can oversimplify matters and rely on insufficient data or subjective analysis, leading to distorted target scores, they nevertheless have an important role to play in providing an accessible screening tool to assist investors in avoiding nature-negative investments.

Investor appetite to integrate natural capital into investment decision-making is expected to increase following the release of disclosure frameworks such as the TNFD, which provides investors with a greater degree of assurance in ESG outcomes.

2. Greening finance: Incentivise and invest in new nature-positive products and services

One of the earliest sustainable finance mechanisms, thematic funds, value environmental and social returns in addition to financial ones, commonly referred to as the 'triple bottom line'. Sustainable funds have been demonstrated to match or outperform traditional funds over multiple time horizons, including during the COVID-19 pandemic. They're also available to a range of investors through private equity funds, venture capital, and Exchange-Traded Funds (ETFs).[35]

While many equity funds do not have a specific focus on nature, natural capital funds are becoming more prominent. Key examples include HSBC and Pollination's Natural Capital and Nature-based Carbon Funds, New Forests' Tropical Asia Forest Fund (refer to Case Study 3) as well as Mirova's Land Degradation Neutrality fund (refer to Case Study 4).

Case Study 3:
Tropical Asia Forest Fund, Malaysia[36]
31

Investment size: US$170 million
Investment period: 2013 – ongoing

Projected impacts:
Timber planted: 25,000 hectares

The Tropical Asia Forest Fund (TAFF) was the first sustainable forestry fund for institutional investors in Asia. Managed by sustainable real assets investment manager New Forests, TAFF is a closed private equity fund that seeks to leverage best-in-class land management and forestry practices to improve the social, economic and environmental outcomes of hardwood timber plantations and enable them to attain FSC certification. The fund has taken equity positions in four forestry businesses in Malaysia, Indonesia and Laos, and expects to realise financial returns through the sale of FSC-certified timber, latex and credits generated through increased carbon sequestration. In 2020, New Forests announced that it was developing a second TAFF fund to leverage a two-tiered blended finance structure to build on the climate, biodiversity and social development aspects of TAFF, with a goal of raising US$300 million. In March 2022, New Forests announced the first close of TAFF2, with US$120 million of capital commitments. New Forests' objective is to demonstrate that asset management integrating commercial forestry investments with activities such as ecosystem restoration, reforestation, and community forestry will lead to better returns, long-term sustainability outcomes, and operational resilience.

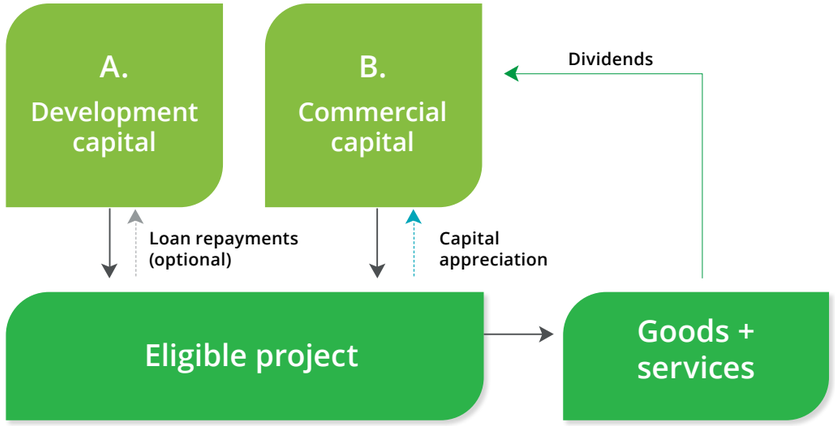
3. Blended finance: Unlocking investment in nature at scale

Blended finance is "the strategic use of public finance for the mobilisation of additional finance towards sustainable development". [37] By strategically applying public or philanthropic funds, development actors can rebalance the risk-reward profiles of investments that would not initially be viable on strictly commercial terms. This has been identified as one of the key means to overcome the barriers to investing in natural capital, where direct investments do not always result in a profitable financial return and/or where the return takes more time to be realised.[38]

The Global Environment Facility, for example, reported that a public investment of US$175 million for blended finance operations in 2013-2014 mobilised about US$1.1 billion from the private sector.[39]

Given that a significant proportion of natural capital financing is already derived from public and philanthropic sources (see Section 2 above), blended finance need not require the injection of new capital. Rather, **blended finance is an opportunity for development actors to strategically redeploy existing funding to catalyse commercial capital towards nature-positive outcomes.**

Blended finance may be structured in a variety of ways. A common structure is described below:



A. Development capital

Development capital is an initial strategic injection of funding to develop and implement an eligible project or project pipeline. This may take the form of grants, concessional loans, venture capital, junior equity, off-take agreements and guarantees. This initial funding may also be used to set up a pilot project to use as a proof of concept for the viability of the project to attract further capital to scale.

B. Commercial capital

Commercial capital will typically be provided by financiers who require higher returns for risky projects. Different investment classes can be used to represent different risk profiles and attract a broader range of financiers. Commercial capital investments may also be further de-risked through the addition of other mitigation instruments at a project level, such as parametric insurance which will trigger a payout in the event of a natural disaster.

Case Study 4:
Café Selva Norte, Peru[40]

Investment size: US$14.7 million
Investment period: 15 years (2019-2034)
Expected Internal Rate of Return (IRR): 12%

Projected impacts:
Land restoration: 8,250 hectares
Emissions reduction: 1.3 million tCO_2
Livelihoods impacted: 2,000

The Café Selva Norte project aims to mitigate land degradation and climate change by empowering coffee cooperatives in the Amazonas and Cajamarca regions in Peru to increase the sustainability of their coffee value chain. This is done by providing micro-credit and technical assistance to smallholder farmers to support the transformation of their degraded land into productive agroforestry systems, as well as strengthening the value chain through capacity-building, infrastructural improvements to the processing plant, and commercialisation services to improve product marketing and traceability.

The project was financed through the URAPI Sustainable Land Use Vehicle with capital provided by Mirova's Land Degradation Neutrality (LDN) Fund. URAPI provides debt to the farmers' coffee cooperatives and holds an equity stake in the processing plant. The cooperatives also own shares in the processing plant, and the farmers retain their original land rights.

Financial returns on the project are generated from a diversified income stream comprised of:

- Sale of premium certified coffee and sustainable timber
- Sale of carbon credits generated by the regeneration and reforestation of degraded land
- Fees for delivering processing plant and commercialisation services to cooperatives

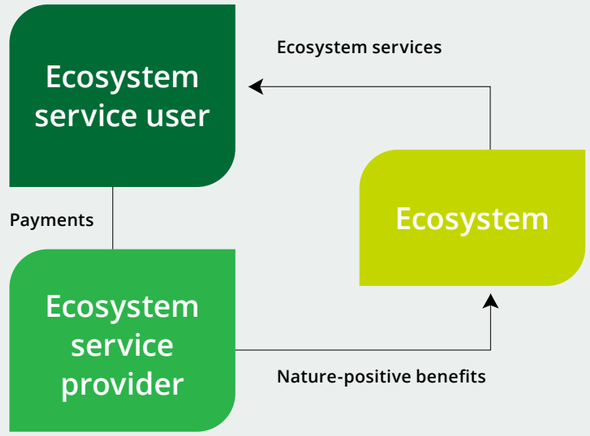
As an exit strategy, URAPI has agreed to sell its shares in the processing plant to the coffee cooperatives at a fixed price. It is expected that the cooperatives will purchase these shares using the project dividends.

Market-based mechanisms to activate capital

Payment for Ecosystem Services schemes

Payment for Ecosystem Services (PES) models are an innovative approach to nature conservation. Under a PES arrangement, an interested party provides a reward for the good stewardship of natural resources and ecosystems, usually as subsidies or direct payments. Interested parties are typically users or beneficiaries of the ecosystem services provided by the land, such as fresh water, fertile soil and natural hazard regulation. For example, Nestle subsidiary Vittel provided incentives for farmers to adopt more sustainable agricultural practices. This helped to reduce the leaching of fertiliser and pesticides into nearby springs, enabling Vittel to label its product as "natural mineral water", which by legislation was required to be untreated.[41]

Whilst the majority of the schemes to date have been funded by governments on behalf of their citizens, there is an increasing imperative for private sector actors to participate, particularly those with direct reliance on certain ecosystem services. There is evidence that businesses located in the same region as the PES projects are willing to invest significantly more for most ecosystem services than businesses that are not, with the exception of carbon sequestration. This is because the benefits of carbon sequestration are felt on a global, rather than local, scale.[42]



PES can be structured in a variety of ways, from a direct contract between a private buyer and seller, to broader schemes where funding is committed indirectly through funds. Public-private partnerships are considered more likely to result in self-sustaining schemes but have historically proven difficult to establish, due to challenges in engaging buyers of ecosystem services.[43] This is in part due to high transaction costs and the lack of an accessible, transparent and credible marketplace. To facilitate more private investment in PES schemes, it may then be effective to build off existing government schemes. For example, the Australian Government launched an Agriculture Biodiversity Stewardship Package in 2021, the first stage of which is comprised of a series of PES pilots. The Carbon + Biodiversity Pilot provides incentives for farmers to engage in native plantings that deliver both carbon abatement and biodiversity benefits. Rewards for eligible plantings include payments to cover upfront costs, additional payments linked to biodiversity improvements, and Australian Carbon Credit Units. To facilitate private sector investment, the Australian Government has also developed a National Stewardship Trading Platform to facilitate trades of biodiversity services by connecting farmers with corporate or philanthropic organisations.

Nature-based solutions and premium carbon credits

Climate and nature are inextricably linked. The destruction of natural ecosystems is a significant source of greenhouse gas emissions, and climate change is already a major driver of nature loss. Similarly, nature plays an essential role in combatting climate change, just as a stable climate is essential for reversing nature loss. Healthy ecosystems and natural infrastructure not only help to mitigate the onset of climate change but also enables communities to better adapt to its impacts. It follows that climate change and nature loss should be tackled concurrently, not only because they are interrelated, but also because investing in nature-based solutions to climate change – such as reforestation – can afford key efficiencies in addressing these dual crises, whilst also delivering tangible societal benefits. However, only 3% of all climate finance is currently directed towards nature-based solutions.[44]

A nature-based solution for climate (frequently abbreviated as 'NbS') is a project which harnesses the power of nature to reduce greenhouse gas emissions whilst simultaneously delivering a range of additional social and environmental outcomes, or 'co-benefits'. There are a wide variety of co-benefits that can be delivered through NbS, including disaster risk reduction, increased water and food security, urban cooling, pollution mitigation, mental health and wellbeing and job creation.

Despite this, most carbon accounting has historically not considered the additional social and environmental impacts of a project. Not only does this neglect the value derived from any co-benefits a project may have, but it also fails to reflect any negative social or environmental impacts of a project. A model that purely values carbon sequestration values quality. For example, this approach would detrimentally incentivise large monoculture tree plantations with little regard to the biodiversity of the region, and any impacts this may have on native ecosystems or other aspects like fire risk. There is a clear need to better value the co-benefits and potential perversities of a project and price this into the resulting product, so that it may be marketed as a **premium carbon credit** to incentivise higher quality solutions and dissuade projects with detrimental social or environmental impacts. Carbon reduction projects with real, measured co-benefits, including conservation, restoration and fair and equitable benefits to local communities, should be rewarded with a price premium.

Case Study 5:
Yarra Yarra Biodiversity Corridor [45]

Investment size: US$30/ ton

Projected impacts:
Land restoration: 18,000 hectares
Emissions captured: 1.3 million tCO_2-e

Carbon Neutral's Yarra Yarra Biodiversity Corridor was the first project to achieve premium Gold Standard certification in Australia. Gold Standard was established in 2003 to integrate the highest levels of environmental integrity and sustainable development outcomes within carbon emission reduction projects. Founded in 2008, the Yarra Yarra project aims to strategically reforest parts of the Western Australian Wheatbelt, where over 90% of land has been cleared for agricultural use resulting in impaired soil and water quality which has impacted the potential productivity of the land. The goal of the project is to create a 200km long biodiversity corridor connecting remnant vegetation 'islands' with nature reserves, creating a pathway from inland to the coast. Since its inception, the project has resulted in more than 30 million trees and shrubs planted across 18,000 hectares and has sequestered over 1 million tCO_2-e.

A detailed economic valuation was conducted in 2021, finding that the project has contributed up to US$47.3 million in biodiversity value and US$22.5 million in regional economic impact over the project lifetime. Forecasts of the added economic value of the co-benefits from the project are:

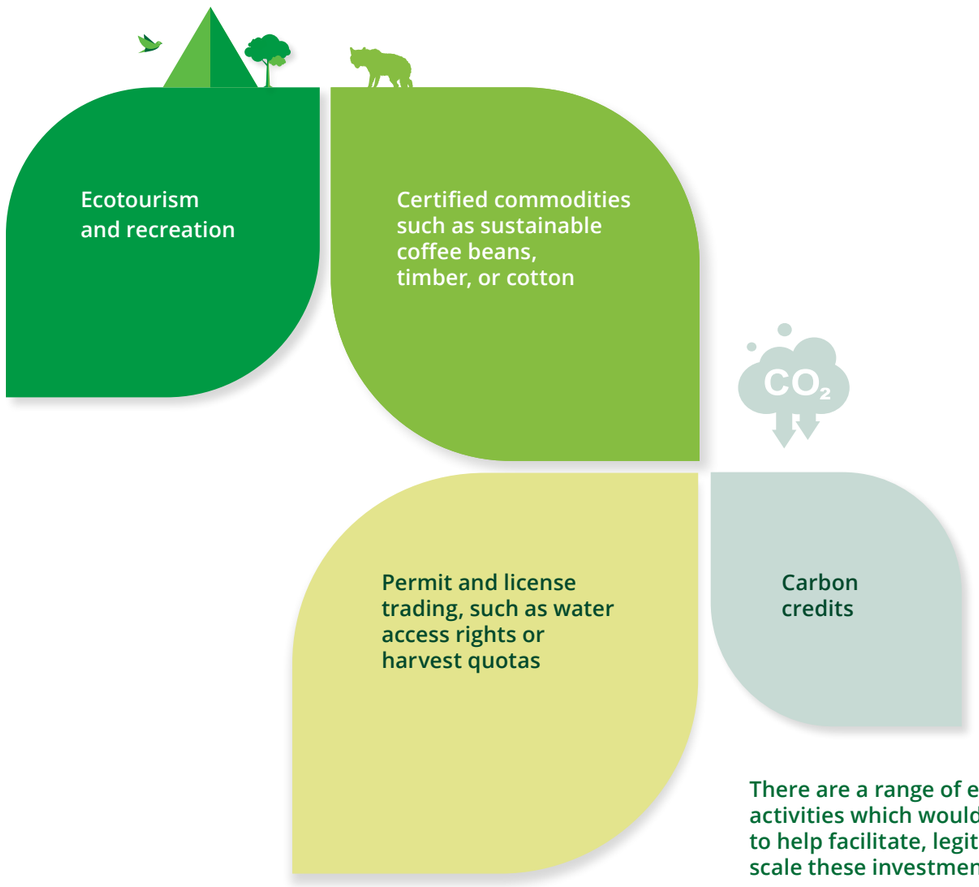
Carbon	+ Biodiversity	+ Regional economic impact	+ Soil and water quality	+ Indigenous cultural heritage	= TOTAL $USD/ CARBON CREDIT
$24	$22 - $49	$39 - $62	Not yet qualified	Not yet qualified	$85 - $135

$AUD values have been converted to $USD per tCO_2-e,

Envisioning a new nature-based investment market

Banking on Natural Capital is an invitation for all parties, particularly those in the financial services industry, to step up involvement in driving innovation and unearthing opportunities associated with the nature-positive transition. We have sought to envision a potential future natural capital marketplace by the trends discussed in this chapter and applying the natural capital investment framework described in **Figure 3.**

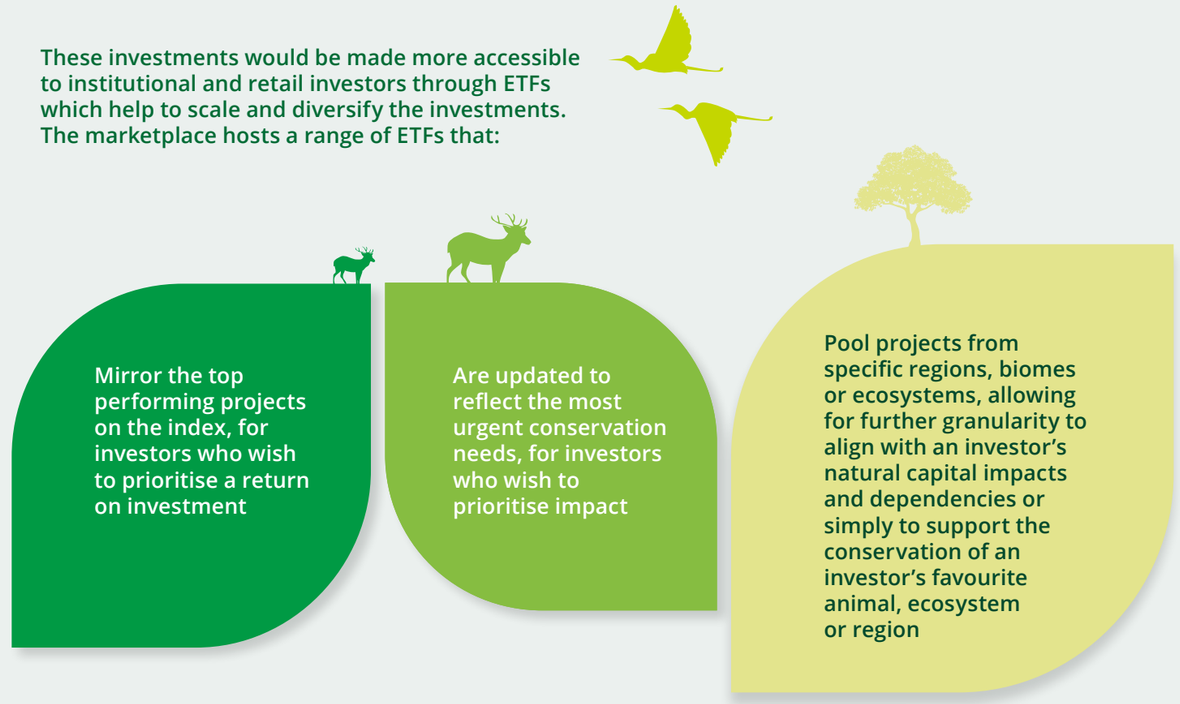
In this potential future, **financiers** can directly invest in nature just like they could in a company or other tradeable equity. A nature-based equity exchange would create a natural capital marketplace and trades in shares that represent ownership of a proportion of natural capital within the scope of an accredited project, providing a clear and scaled **financing mechanism**. These shares would entitle the owner to dividends generated from the flourishing of the ecosystem, realised most often from the sale of goods and services generated from the ecosystem. This may include proceeds from:



There are a range of enablement activities which would be needed to help facilitate, legitimise and scale these investments.

Eligible projects would need to meet the standards of a globally accepted taxonomy on natural capital investments. Alongside ensuring credible nature-positive outcomes, this would require that each project is co-designed and implemented in partnership with local communities. This would include a commitment to actively consult and seek partnerships with Indigenous groups, in acknowledgement of the critical role they play in a just transition and as custodians of knowledge regarding tried-and-tested sustainable land management practices. As equity conveys a stake in the project and not in the underlying real asset, the original landowners would retain their ownership rights. Projects would also drive additional socioeconomic benefits including job creation, capacity building, and poverty alleviation.

These investments would be made more accessible to institutional and retail investors through ETFs which help to scale and diversify the investments. The marketplace hosts a range of ETFs that:



Technically and financially successful projects become proofs-of-concepts, with learnings and a track record of viability leveraged to expand the projects into neighbouring or other analogous regions. Investors may responsibly exit financially viable projects by selling equity back to the local landowners, or to other interested parties such as government agencies who wish to maintain the project long term.

Case Study 6:
Natural asset companies[46]

A Natural Asset Company (NAC) is a nature-based asset class developed by the Intrinsic Exchange Group (IEG) in partnership with the New York Stock Exchange, the Inter-American Development Bank, the Rockefeller Foundation and Averdare Ventures. NACs are publicly traded equities that hold the rights to the ecosystem services of a given natural asset. In monetising and trading a natural asset's productivity, NACs seek to capture the positive externalities of conservation and sustainable projects and practices. IEG is collaborating with the government in Costa Rica to form a NAC from one or more of its national parks to generate new fundings streams to maintain and improve the park.

This market we envision is founded on the following principles:

Connected
Direct access to real-time evidence of improvements and interventions

Community
Enabling an open conversation between investors, communities and delivery partners

Liquid
Direct access to tradeable price on related secondary markets

Located
A spatial platform that brings together generators and customers, to explore changes at a landscape scale

Verified
Direct, open access to third-party verified reports, results and disclosures

04

Making nature-positive a reality

4 Making nature-positive a reality

The journey to a nature-positive economy where banking on natural capital is commonplace is not without difficulty. Making this vision a reality will require an understanding of the barriers to investing in natural capital, and the actions required to address these.

Some examples of these actions, or 'enablers', are provided in Figure 3 earlier in this report. This section will provide further detail on the role of governments in enabling natural capital investment, with a view to identifying what financiers can expect and advocate for, to assist in the nature-positive transition.

Barriers to investing in natural capital

Disconnected demand

Nature is one of the foremost examples of the market failure of public goods: where you cannot prevent an entity from benefiting from a good or service, you cannot incentivise them to pay for it. As the majority of ecosystem services are free and non-exclusive, in the absence of regulatory liability or stakeholder pressure, there is no market impetus to invest in nature. It is evident that nature needs its 'net zero moment' – a tipping point of stakeholder attention to accelerate regulator and industry responses towards a nature-positive trajectory. The increasing visibility of nature decline, coupled with increasing clarity on nature dependency, are rapidly converging to provide this impetus.

1

Shortfall in supply

2

Currently, there is a shortfall in the supply of high-quality, market-ready natural capital products. Not only have the goods and services that nature provides generally not been monetised (as per the point above), establishing a project to do so is time consuming and often cost-prohibitive. For example, although there are a number of respected third-party verification programs for carbon and nature offsets such as the Gold Standard, Climate Bonds Initiative, and Climate Community and Biodiversity Initiative, these have high transaction costs which often extend project development timelines. Further, this insufficient supply and scale of investment options result in higher investment risks, in turn impacting investment demand. This demonstrates a need for financial mechanisms which can balance risk and catalyse investment at scale.

Data and technology

3

If there were a single solution to the nature crisis it may well lie in accessing better biodiversity data, relevant data sets and the harmonisation of indicators. The absence of complete and up-to-date data on the existing state of natural capital impedes project design and valuation as well as ongoing monitoring, reporting and verification (MRV). Currently, the costs of MRV and ensuring compliance can eliminate gains from trade. Technological improvements and innovative collaborations have the potential to significantly improve the availability of reliable data, which would assist in reducing costs and increasing market confidence in making natural capital investments.

Communicating complexity

4

Typically, currencies are defined by a standard, homogenous, fungible unit, such as a dollar or tonne of carbon. In contrast, natural capital is heterogenous, comprised of biodiverse, complex, inter-dependent ecosystems. This presents an inherent difficulty in creating a standard metric or currency to adequately encapsulate the value of nature, as well as in clearly attributing causality between actions and outcomes. Additionally, imposing homogeneity would fail to adequately value the costs and benefits associated with natural capital, and may even pose hidden risks to more fragile ecosystems. Hence, while the development of a single fungible unit is desirable, it may not be attainable for natural capital, and should not be pursued at the cost of dangerously oversimplifying nature's complexity. In any case, complexity cannot be used as an excuse for inaction. We must find a middle ground between these two extremes that delivers a viable way forward, providing fungibility and ecological integrity.

Struggling standards

5

At present there is no global regulatory or industry standard to define natural capital investments, making it unclear for investors or governments which instruments work best. There is a need for a globally accepted and transparent taxonomy to enable investors to verify whether a project or asset class is credible and to combat the risk of being accused of greenwashing.

Capability gaps

6

Nature-related financial risks are typically not well understood. This is both the cause and result of a lack of natural capital expertise and capability, particularly within organisations. It is expected that this capability will grow once the business case for investment in natural capital is better understood, as it has with other ESG issues such as climate change.

Fairness

7

Investment inherently carries with it a power imbalance. Given the importance of ensuring natural capital projects are designed and implemented with consideration as to the needs and agency of the local community, including Indigenous groups, there may be added difficulty in ensuring that capital allocation and project management are equitable. This is especially relevant given that many of the most valuable and vulnerable ecosystems on the planet – where investment in natural capital is most needed – are characterised by poverty, inequity and weak resource governance.

The role of government in helping to address these barriers

Governments play a key role in catalysing and scaling private sector investment in natural capital, both through fiscal and regulatory means. Policymakers can choose from a long menu of proven market-based solutions to internalise environmental values in economic decisions and harness latent demand for natural capital. Although not silver bullet solutions, the potential impact of these levers in accelerating and smoothing the nature-positive transition should not be underestimated.

Due to the growing global awareness of the need to shift to nature-positive economies, evidenced through the signing of the Kunming Declaration by over 100 countries at COP15, it is anticipated that governments will increasingly apply these levers to stimulate change. It is therefore pertinent for the financial services industry to be **aware of the changes that could come down the pipeline**, and how this is likely to impact them. This list of government levers is also included in this report to provide a view as to **what actions should be advocated for**, to address the barriers identified in the previous section, and ultimately better enable actors within the financial services industry to bank on natural capital.

Environmental disclosures

One of the simplest levers is to provide information to enable investors, corporate buyers and consumers to assess and compare environmental performance across different firms or products. Such disclosures might be voluntary or mandatory. Governments incentives or mandates for environmental disclosures impose little or no burden on public finances and improve the efficiency of markets by reducing information asymmetries between producers and consumers. Any such requirements need to be targeted, transparent and calibrated to deliver maximum benefit whilst not imposing too severe cost requirements on the private sector.

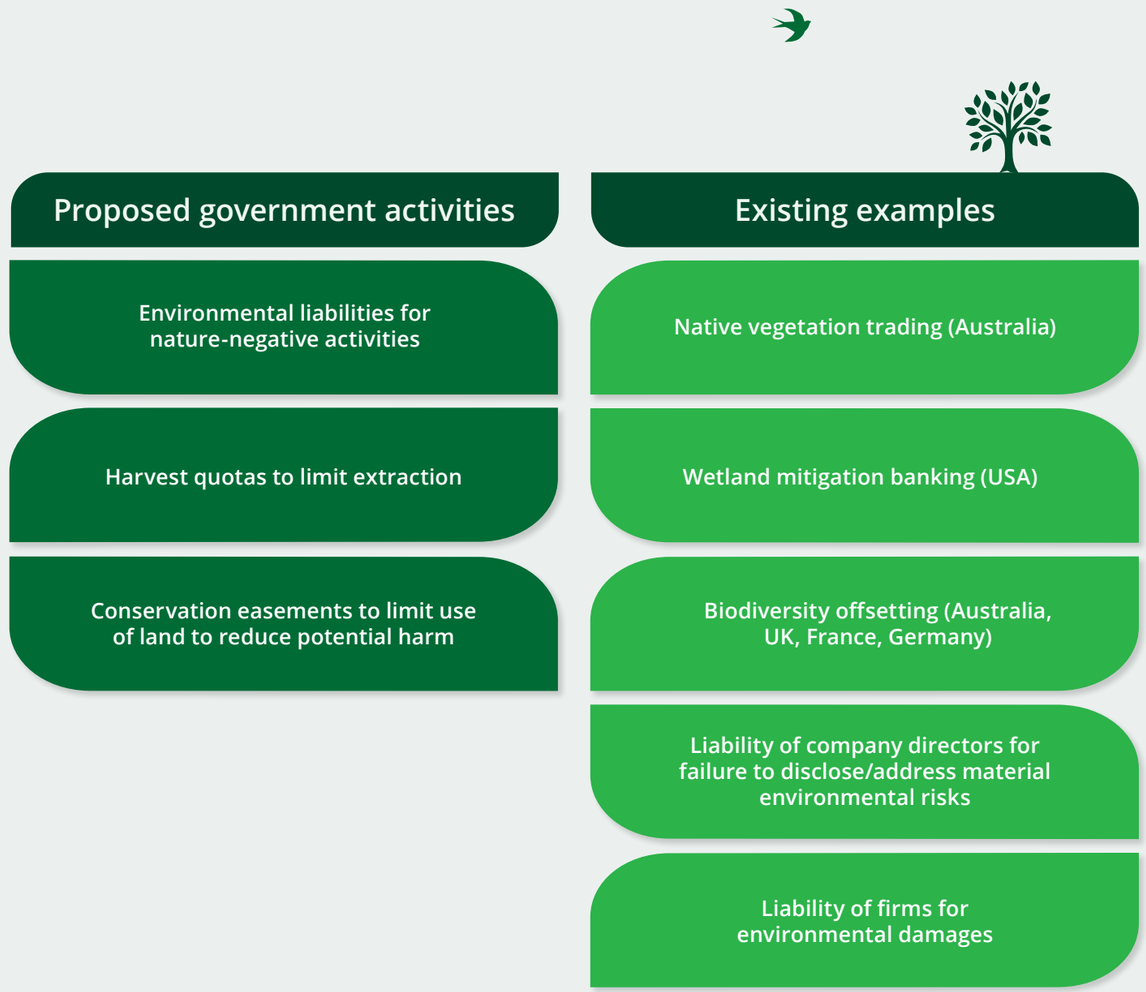
Proposed government activities	Existing examples
Support the development and adoption of an investment taxonomy	Greenhouse gas emission reporting requirements (Australia)
Support the development and adoption of sustainability certification and eco-labelling to encourage competition	Standard taxonomy for green investing (EU)
Support disclosures through capacity building and the provision of nature-related data	Mandatory disclosure against the Task Force on Climate-related Financial Disclosures (TCFD) framework (various, including UK, NZ, China, Japan)
Recommend or require environmental disclosures	Mandatory disclosure against the TNFD
	Mandatory energy efficiency labels on vehicles and white goods
	Government sustainability certifications such as Climate Active (Australia)

The ‘so what’ for financiers

As identified in above, the lack of accurate, accessible and appropriate data and the absence of globally accepted indicators and standards are significant barriers to natural capital investment. Government action to require and support companies to disclose their nature-related impacts, and to promote an investment taxonomy for financiers, would reduce these barriers and enable credible and cost-effective natural capital investments. This would also enable financiers to estimate the natural capital or biodiversity ‘footprint’ of their investment activities for their own disclosures, and to more easily develop nature-related funds.

In the meantime, financiers can also refer to credible third-party certifications and eco-labels to reduce the onus of primary data collection around the nature-related impacts of a product, service or company. Investors may also incorporate nature-related considerations into ESG scorecards, and strengthen the management of nature-related risks and opportunities by setting KPIs and timebound, science-based targets.

See especially recommendations 1, 3, 4 and 5 in Section 5 below.



Property rights and liabilities

Another way to create markets for natural capital is to establish new tradable property rights and/or liabilities. This includes carbon credits, which recognise the legal ownership and right to trade carbon (such as Australian Carbon Credit Units, ACCUs) or biodiversity offsets (such as those traded under the NSW Biodiversity Offset Scheme). Further, the inverse of the principle that underpins PES schemes, namely recognition of private action that delivers public benefit, is private accountability for environmental damage to negate residual public costs, such as through the liability of firms or individuals for environmental damage claims.

Creating new environmental property rights and liabilities is one of the most effective regulatory measures available to governments. However, as with all regulatory interventions, there may be opposition from vested interests and potential pitfalls.

For example:

- Whilst schemes may be successful in preventing unabated damage, behaviours with nature-negative consequences are nonetheless still permissible, merely restricted or disincentivised.

- Schemes are often operated on a 'no net loss' basis, in which harm caused by an activity is required to be offset elsewhere. Whilst this can theoretically work for a homogenous unit such as carbon, this has limited application to other aspects of nature which do not reasonably have equivalents to offset with. The benefits of nature are highly location-specific and difficult to offset reliably. In addition, as with all offset schemes, there is a risk that no net loss policies may be used to justify BAU by developers, resulting in no net gain to nature.

The 'so what' for financiers

Nature-related property rights and liabilities are already in force in many jurisdictions. The prevalence and extent of these are expected to increase in line with government ambitions around the climate and natural capital agendas, increasing operational costs and the risk of stranded assets. Financiers should measure and mitigate their exposure to nature-related risks by conducting a nature-related risk assessment of their operations and broader value chain, including lending and investment portfolio. Areas of higher nature-related risk, which may be determined with reference to activities, sectors or high value or vulnerable geographies, should be reduced through close management, or otherwise avoided. Many financiers have already taken steps to do this through dedicated biodiversity policies and exclusion lists.

See especially recommendations 1, 2 and 3 in Section 5 below.

Fiscal policy reform

Fiscal policy is a powerful tool that can have an immense impact in diverting financial flows from nature-negative outcomes to nature-positive ones. The first priority is for governments to reduce and quickly eliminate subsidies for environmentally-harmful activities, such as building new access roads in environmentally sensitive areas, or below-cost pricing of irrigation water.

Whilst environmental taxes for organisations can be politically controversial, these help to reduce the cost to individual taxpayers that could arise from fiscal incentives such as subsidies and stewardship schemes. Additionally, as discussed in Section 3, governments can also directly enable and leverage private investment in natural capital through the strategic use of public funds under blended finance arrangements.

Proposed government activities	Existing examples
Reform harmful subsidies	Pollution taxes (Sweden, Japan)
Impose taxes on nature-negative activities	Tax credits for energy efficiency (USA)
Provide subsidies to incentivise and reward nature-positive behaviours	Agri-environment subsidies (Australia, UK, Netherlands)
Implement and support Payment for Ecosystem Services or stewardship schemes	Payments for watershed protection (USA)
	Investment risk guarantees linked to environmental performance

The ‘so what’ for financiers

As above, financiers should measure and mitigate their exposure to nature-related risks by conducting a nature-related risk assessment of their operations and broader value chain, and actively manage areas of high risk. Financiers can also leverage opportunities associated with the competitive advantage afforded to more nature-positive companies by integrating nature into positive investment screening procedures, or provide products which incentivise nature-positive operations such as biodiversity linked agribusiness loans.

See especially recommendations 2, 3 and 4 in Section 5 below.

05

Next steps for the financial services industry

5 Next steps for the financial services industry

Included below are five key steps which can be taken today towards more sustainable, nature-positive operations. Each is accompanied by examples of practical actions to assist in that journey.

These five steps should be taken in combination wherever possible, as each enables further progress towards an economy which banks on natural capital to build market momentum and maximise returns.

Commit:

Make a timebound science-based commitment to invest in nature

- Require investee companies and clients to set Science Based Targets and disclose their environment-related risks consistent with frameworks such as TCFD and TNFD. For example, a public commitment could be to allocate X% of turnover to restoration initiatives.
- Where possible, strategies and commitments should align with existing strategies and commitments on climate change and broader ESG issues to leverage the social and environmental co-benefits of nature and existing momentum on these issues.
- Work towards disclosing your nature-related risks and opportunities against a credible framework such as the TNFD and consider obtaining independent assurance over these disclosures.

1

Channel:

Reallocate capital to influence nature-positive activities and behaviours in line with your commitments

2

- Start with insetting rather than offsetting, by avoiding and minimising nature-negative impacts in your value chain, and engaging in restoration activities for degraded land you impact and/or depend on.
- Investigate gateway finance to enter and expand your natural capital portfolio, including guarantees, concessional pricing, and grants.
- Increase pipeline of investable projects covering initial capital injection, capability building and co-investment in natural infrastructure, nature-based solutions, conservation and restoration projects.
- Engage companies across your investor ecosystem to reduce nature-negative outcomes and conservation stewardship approaches to deliver positive outcomes.
- Prioritise sectors, companies and activities which have a high dependency and/or high impact on nature.

Capture:

Encourage investees and clients to map their impacts and dependencies on nature

3

- Map, measure and monitor risks, impacts, and dependencies using an established risk assessment and disclosure framework, relevant to your sector and footprint, taking advantage of existing standard metrics, KPIs and criteria.
- Conduct an initial nature-related stress test of your current and projected balance sheet, examining your role in shaping nature-positive outcomes in policy and portfolio construction, fund design and company selection.
- Undertake deep dives into your value chain to uncover unknown risks and opportunities.
- Consider working directly with existing land and sea stewards, notably Indigenous traditional owners to help you map and measure the value of taking an expanded stake in nature.

Create:

The conditions needed to incentivise investments in nature

- Drive adoption of taxonomies with harmonized terminology, standardised performance metrics and appropriate safeguards.
- Support creation of new policies to warehouse natural capital investments, as well as the expansion of existing market mechanisms which function as capital activators, such as carbon markets, biodiversity offset policy or water trading.
- Actively engage policy makers on reforming incentives, including reduction of harmful subsidies and the integration of biodiversity into sustainable finance policy.
- Streamline and rapidly increase the use of financing mechanisms, blended finance strategies and nature-positive financial products to ensure capital today is invested in conserving what would otherwise be scarce tomorrow.

4

Collaborate:

And innovate to allow access to more meaningful data

5

- Experiment with new tools and approaches to understand how investments at portfolio, company and asset levels shape biodiversity outcomes.
- Invest and build internal capacity in data collection, analysis and sharing, to increase awareness of the importance of incorporating biodiversity into investment and operational decisions.
- Engage with new and existing data service providers to enable the provision of more meaningful, cost-efficient and consistent biodiversity data.
- See new solutions for data access and sharing as smart investments in their own right, whilst also being willing to share to build out the available body of data to support the shift to nature-positive.

06

Conclusion

6 Conclusion

To achieve this future where nature is properly valued and where the diverse range of benefits are equitably enjoyed requires a collective charge through some age-old barriers.

The financial services industry, with its ability to influence and enable the flow of capital, has a critical role to play in making nature-positive a reality. This role is not one born solely of risk-mitigating obligation; rather, banking on natural capital affords a world of diverse opportunities that accompany a greater understanding and acknowledgement of the true value of nature to our societies.

But the change required is not a small one. The transition to a nature-positive economy will require every sector to take science-based steps to transform operating models to enable them to continue generating business value while decoupling activities from negative environmental and climate impacts. This change is not without its challenges; however, it is a change for the better and a change we must be a part of.

BAU is no longer an option – the unavoidable economic consequences of nature loss will ensure this. So it is time to define a new, nature-positive BAU.

It is time to create the markets and instruments which allow direct investments in the natural world; to reward behaviors that conserve, sustainably manage and restore natural assets, and dissuade those which do not. It is time to realise that human flourishing cannot be separated from the flourishing of the natural world and to know that this can mean a wealth of opportunity for new businesses and innovations which pay both financial and environmental dividends. It is time to bank on natural capital – on the ecosystems, species and natural processes which have sustained every human economy and fuelled every human endeavor to date – so that these may continue to pay out returns for generations to come.

07 Key terms and references

7 Key terms

	Key Terms
Biodiversity	The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.[47]
Ecosystem	A dynamic complex of plant, animal, and microorganism communities and the nonliving environment, interacting as a functional unit.[48]
Ecosystem services	Ecosystem services are the benefits people obtain from ecosystems. These include provisioning services such as food and water; regulating services such as flood and disease control; cultural services such as spiritual, recreational, and cultural benefits; and supporting services, such as nutrient cycling, that maintain the conditions for life on Earth.[49]
Natural capital	The stock of renewable and non-renewable natural resources (e.g., plants, animals, air, water, soils, minerals) that combine to yield a flow of benefits to people.[50]
Nature	The natural world, with an emphasis on the diversity of living organisms (including people) and their interactions among themselves and with their environment.[51]
Nature-positive	A high-level goal and concept describing a future state of nature (e.g., biodiversity, ecosystem services and natural capital) which is greater than the current state.[52]

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Deloitte contacts

We would also like to thank everyone who participated in the survey.
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Lead Authors:

Guy Williams
Deloitte Asia Pacific & Global Nature Lead
guymwilliams@deloitte.com

Chloe Fisher
Deloitte Australia
Senior Analyst – Climate & Sustainability
chfisher@deloitte.com.au

Co-Authors:

Will Symons
Deloitte Asia Pacific
Partner – Sustainability & Climate Leader
wsymons@deloitte.com.au

Joshua Bishop
WWF-Australia
Conservation Economist

Tim Cronin
WWF-Australia
Senior Manager – Landscape Restoration & Protection

With special thanks:

Chi Woo
Deloitte Australia
Partner – Climate & Sustainability

Rachael Micallef
Deloitte Australia
National Marketing Manager – Priority Client Issues

Lucy Salmon
Deloitte Australia
Analyst – Climate & Sustainability

Anne-Claire Van den Wall Bake - Dijkstra
Deloitte Netherlands
Partner – Risk Advisory

Florence Arke
Deloitte Netherlands
Senior Consultant – Risk Advisory

Ferk de Kroon
Deloitte Netherlands
Consultant – Risk Advisory

Libby Lang
Deloitte Asia Pacific
Director – Sustainability & Climate

Joshua Hyde
Deloitte Asia Pacific
Senior Manager – Sustainability & Climate

Janice Chiang
Deloitte Asia Pacific
Consultant – Sustainability & Climate

Sarah Kerrigan
Deloitte Global
Senior Manager – Sustainability & Climate

Christopher Ewing
WWF-Australia, Program Manager Landscape Restoration and Protection

Margaret Kuhlow
WWF International, Finance Practice Leader

Deloitte.