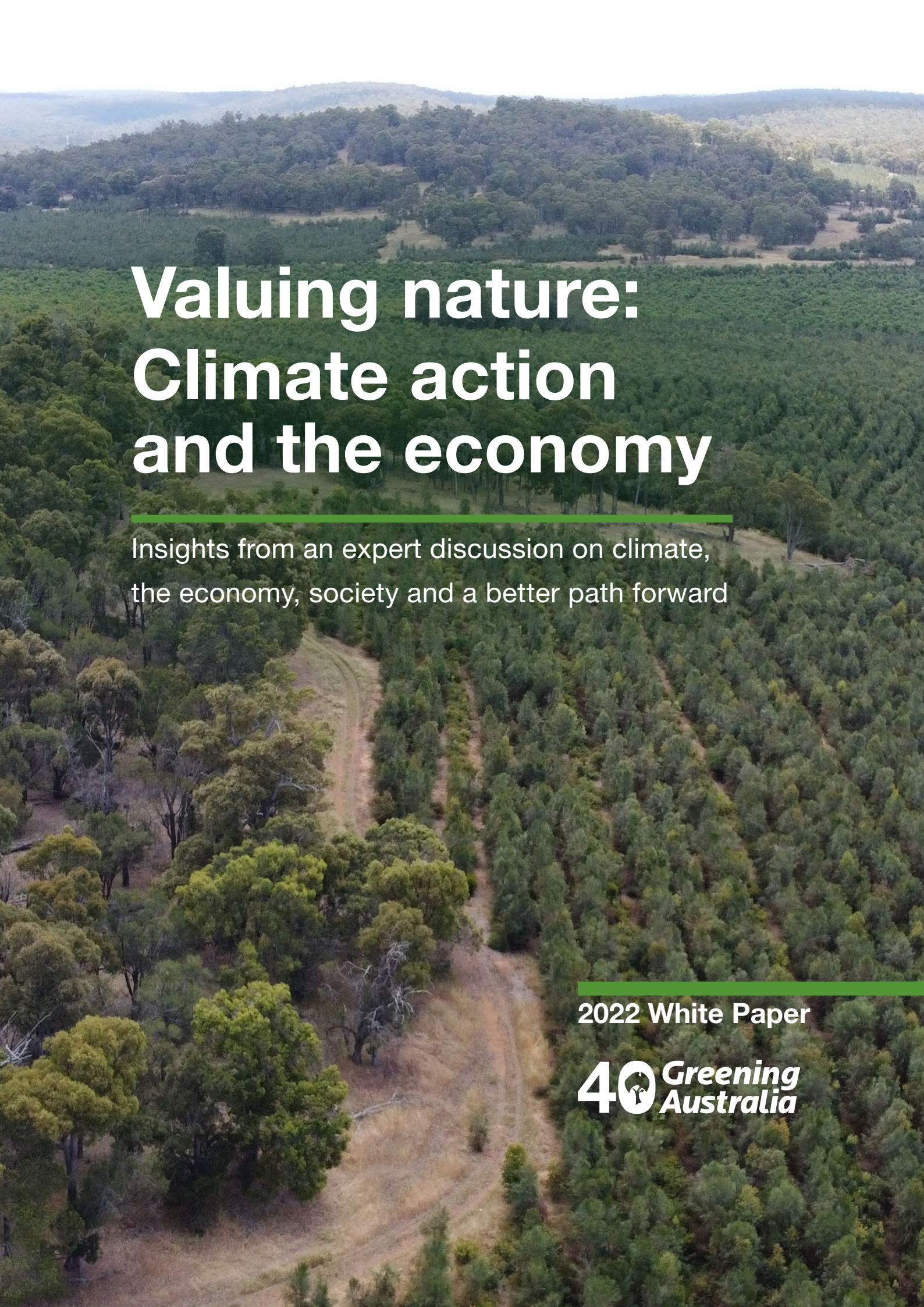

Valuing nature: Climate action and the economy

Insights from an expert discussion on climate, the economy, society and a better path forward

2022 White Paper

40 Greening Australia

We acknowledge the Traditional Owners of Country throughout Australia, and pay our respects to Elders past and present. We honour the deep, continuing connection Aboriginal and Torres Strait Islander peoples have as custodians of lands and waters.

About this White Paper

On Friday 4 March 2022, Greening Australia CEO Brendan Foran brought together a diverse group of Australian and global experts in a roundtable discussion on the economic benefits of climate action and the cost of inaction.

This White Paper summarises the discussion, outlining key problems and actions Australia needs to take to shift towards a robust, nature-based economy that responds to the true value of our environment at an economic and human level.

The White Paper covers three core areas – the cost of inaction, the economic benefits of climate action and how to move minds and drive collective action - and concludes with a summary of key points made and actions for the future.

Roundtable participants and White Paper contributors

- **Brendan Foran,** CEO, Greening Australia
- **Jody Gunn,** CEO, Australian Land Conservation Alliance
- **Nicki Hutley,** Economist, Climate Council of Australia
- **Dr. Emma Lee,** Associate Professor Indigenous Leadership, Centre for Social Impact - Swinburne University
- **Dr. Elisabeth Pötzelsberger,** Head of Resilience Programme, European Forest Institute
- **Elizabeth Rose,** Partner Climate Change & Sustainability Services, Ernst & Young
- **James Schultz,** CEO, GreenCollar
- **Pascal Soriot,** Executive Director and CEO, AstraZeneca
- **Damien Walsh,** Managing Director, Bank Australia Limited

Roundtable moderator

- **Sue Neales,** journalist

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Introduction

How do we know the economy versus environment dichotomy is a false one?

There's the science, and there's the economics. There are the clear costs from the damage decades of too little action has done and is doing to our environment, our economies and to our global population. And there are the many case studies and proof points demonstrating the economic opportunities that emerge when we stop considering the environment as an economic externality and value it correctly as an economic input, asset, and blueprint, teaching us the value of diversity, circularity and wasteless production.

The contributors to this White Paper are a diverse mix of Australian and global experts united in the belief that we need to reassess how we value our environment, take action on climate change and biodiversity loss, and seize the economic, social and cultural benefits this will bring.

In these pages there are many examples of innovative and powerful collaborations around the world that are drawing on this imperative and acting on the opportunity for a better future. For example, in the largest privately funded tree planting in Australia's history, Greening Australia and AstraZeneca are collaborating to plant 25 million trees across Australia by 2025.

This partnership – between a global pharmaceutical company investing a billion dollars into tackling climate change and accelerating healthcare's transition to net zero, and an environmental enterprise that has been restoring landscapes for 40 years – is one of many around the world bringing together diverse knowledges and complementary skills to tackle climate change and biodiversity loss.

Working together on these initiatives – putting our hands into the soil as well as our voices into the discussion – it's easy to get excited seeing the tangible impact and the opportunities that exist for organisations and for society to benefit from restoration and enhanced biodiversity, from decarbonisation and from the systems change that enshrines nature and climate-friendly practices.

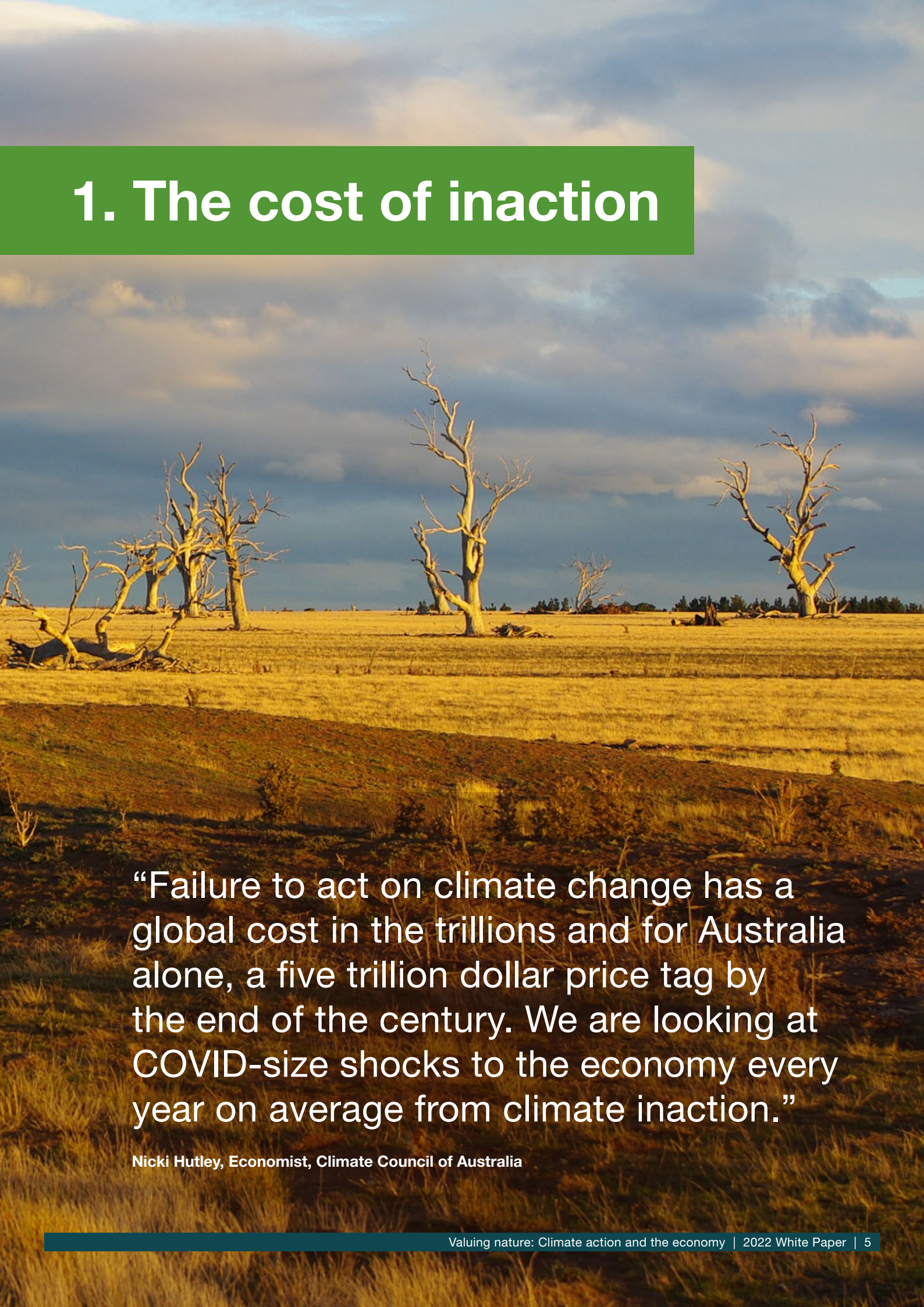
That positivity shouldn't underplay the scale and urgency of our task.

We are challenged to accelerate the change, to drive action at scale with innovation and science-based targets, with policies and investments that recognise the pace of action required ***now***. As this White Paper indicates, we have the knowledge, the systems and the popular will to make those changes and protect the future of generations to come.

But shifting the way we view the relationship between the environment and the economy is key to our success. The reality is, our greatest risk is the economic and human cost of doing nothing to protect and restore nature.

Brendan Foran
Greening Australia CEO

1. The cost of inaction



"Failure to act on climate change has a global cost in the trillions and for Australia alone, a five trillion dollar price tag by the end of the century. We are looking at COVID-size shocks to the economy every year on average from climate inaction."

Nicki Hutley, Economist, Climate Council of Australia

The cost of inaction

For many Australians, understanding the scale of the climate crisis and its effects on their lives, livelihoods and future generations hasn't required deep analysis of unimpeachable statistics.

Communities are witnessing firsthand the devastation wrought by drought, bushfires and floods - tangible symptoms that climate change is already with us.

Unfortunately, this lived experience has not yet generated enough true cross-sector action, either in Australia or globally. So, a clear-eyed view of the environmental and economic risks is called for.

Deloitte Access Economics estimates that natural disasters currently cost the Australian economy about $38 billion a year – a bill set to double by 2060.

The recent 2022 flooding in Queensland and New South Wales alone is estimated to have claimed 20 lives and caused two billion dollars in damage so far. The 2019/20 Black Summer bushfires cost Australia's food system $4-5 billion in economic losses, killed or displaced 3 billion animals and directly claimed 33 human lives (and almost 450 more from smoke inhalation).

The IPCC's 6th Assessment Report says average temperatures in Australasia will continue to increase throughout the 21st century – and it says this is virtually certain. It has the same confidence there will be more extreme weather events in Australia.

Climate change is a major driver of biodiversity loss in Australia and worldwide. The Dasgupta Review states that global biodiversity is declining faster than at any time in human history. This loss of diversity is undermining nature's productivity, resilience and adaptability, which translates into increasing risk and uncertainty for economies and the wellbeing of communities.

"We're a vulnerable country", says Jody Gunn, Australian Land Conservation Alliance CEO. "Climate change is and will continue to drive many extreme weather events, threatening lives and leaving communities and ecosystems exposed to the irreversible risks, including impacts on economic growth and food production."

The dispossession of Country from Traditional Owners is central to the increasing vulnerability of Australia's ecosystems to climate change. Dr. Emma Lee, Associate Professor Indigenous Leadership at Swinburne University's Centre for Social Impact, says, "We lived through an extraordinary crisis of social change when the boats arrived 200 years ago. We were dispossessed of our lands, our waters became polluted, our foods restricted and our people traumatised through the removal of our cultural processes, like burning country. Colonisation for us is an impact that prevents us engaging in these discussions around climate change and resilience."

Failure to move

In Australia and around the world the vast economic and social consequences of inaction are becoming ever clearer – and more measurable. The 2022 Global Risks Report from the World Economic Forum (WEF) ranked 'climate action failure' the number one risk, followed by extreme weather and biodiversity loss. In total, five of the top ten global risks identified were environmental.

What is the price of that inaction? Each year, nature provides around US$125 trillion worth of ecosystem

The scale of the loss

- A 2019 UN report suggests **one million species** are threatened with extinction around the globe.
- According to the Dasgupta Review, current global extinction rates are around **100 to 1,000 times higher** than the baseline rate, and they are increasing.
- **One hundred endemic Australian species** have become extinct since 1788, including **38 plants** and **34 mammals**. According to the NSW Legislative Council, without urgent action, Koalas will be extinct in NSW by 2050.
- Much of this species loss is attributable to land use change, the introduction of new species, and the shift from the rich knowledge embedded in Indigenous land management practices to Western approaches
- The loss of ecosystems will have devastating economic impacts. For example, according to the Australian Bureau of Statistics, the Murray-Darling Basin's rivers, wetlands and flood plains produce an estimated $187 billion in ecosystem services each year - climate change and biodiversity loss puts this value at risk.
- Australia's nature-based tourism is also at risk of being impacted by climate change and biodiversity loss, estimated to be worth $30.4 billion a year.

services through drinkable water, food and pollination, fresh air, heat absorption, and forests and oceans that soak up carbon dioxide – that global businesses and communities benefit from at no extra cost. The WEF says that US$44 trillion of economic value - or half the world's GDP - is at immediate risk due to nature loss.

The Australian deficit

As a nation, it is crucial we consider our unique risks and our relatively poor performance on climate action. The WEF report says extreme weather events and climate action failure are the second and third highest economic risks facing Australia, behind cybersecurity failure.

Australia is one of the world's 17 'megadiverse' countries, and our unique, rich biodiversity is globally significant – we also have some of the highest rates of extinction on the planet.

That puts us into a vicious circle - our loss of biodiversity makes the impact of climate change more severe as it limits nature's ability to absorb and store atmospheric greenhouse gas. At the same time, climate change accelerates biodiversity loss by destroying habitats and narrowing the climate niches that protect individual species.

Australia is already paying the price of a deep inability to account for the value of nature and the ecosystem services it provides - in the widespread, ongoing degradation of the environment on which our primary industries depend, and in crucial and long-run factors around national economic performance.

The controversy around Australia's climate change commitment at the 2021 COP26 summit highlights these risks. The WEF's warning that "Countries continuing down the path of reliance on carbon-intensive sectors risk losing competitive advantage through a higher cost of carbon, reduced resilience, failure to keep up with technological innovation and limited leverage in trade agreements" might have been written with Australia in mind. The World Resources Institute called our 2030 emissions target, "weak".

Where to now?

As Jody Gunn of the Australian Land Conservation Alliance says: "We need to start dealing with climate change and biodiversity loss together in policy, legislation, regulation and resourcing for initiatives. And the transition needs to be fair and equitable for local communities who are most impacted by the changes."

> "Australia is at the forefront of the climate crisis and yet we are consistently ranked as one of the worst performers on climate action, even when we have the knowledge, technology and the natural resources to be a leader in this space."
>
> Brendan Foran, CEO, Greening Australia

2. Economic benefits of climate action

"We're in the midst of an enormous transition where nature has moved from an externality to a risk, and now to an economic opportunity for businesses."

Elizabeth Rose, Partner Climate Change & Sustainability Services, Ernst & Young

Economic benefits of climate action

For too long, the climate action debate in Australia has been framed around the costs imposed on those in, or benefiting from, unsustainable industries.

But this is a short-term and short-sighted approach that does not factor in the true value of nature. Increasingly, the debate must be centred on a holistic view of costs – but also a deep understanding of the opportunities that arise from innovative, science-led climate action.

Putting a price tag on 'priceless'

In his work on accounting for nature, economist Sir Partha Dasgupta highlighted that the way we treat nature is a 'blind spot' in economics, distorting policy decisions and hindering progress in addressing climate change.

As Dasgupta suggests, we are embedded in nature, not apart from it. When we think of 'nature' as an asset we can see the danger of chasing short-term production goals while allowing that asset to depreciate - with all the 'side-effects' that has on sustainable human health, societal wellbeing and longer-term economic output.

For decades climate change has been viewed as an externality. Greenhouse gas emissions have been considered a by-product of business. Fortunately, that view is changing, and Australia has all the necessary attributes to flip from being part of the problem to driving solutions. We are, says Elizabeth Rose, Partner Climate Change and Sustainability Services at Ernst & Young, "uniquely positioned to capitalise on opportunities in a decarbonising world."

Australia is blessed with significant natural assets, including the rare earth elements which are crucial to transitioning the global economy and decarbonising energy and manufacturing sectors. We also have extensive wind and solar resources, a strong research sector and a highly skilled workforce. We have a modern and efficient agriculture sector and vast resources in terms of biodiversity.

But what we need more than all these advantages, says Greening Australia CEO Brendan Foran, is "to change this perception that you need to make a choice between the environment and economy."

An example of shifting mindsets away from thinking about cost to instead think about value is a 2017 study by Deloitte. They looked at traditional economic values associated with the Great Barrier Reef (most notably tourism) but also at what economists call 'non-use values' such as cultural significance. To calculate this, surveys asked Australians what they would pay for the continued existence of an asset. In the case of the Great Barrier Reef, the figure was an average $67 per person – giving the Reef an estimated value of $56 billion.

The value generated by prioritising the environment can be immense. The United Nations Environment Programme found that for every dollar spent on nature restoration, at least $9 of economic benefit can be expected. A recent WEF White Paper suggests nature-positive policies could generate US$10 trillion in annual business revenue and create nearly 400 million new jobs by 2030.

The Waldron Report is a working paper analysing the economic implications of the proposed science-based target to protect 30% of the planet for nature. It argues it would cost $US140 billion a year to protect and manage

some 30% of the world's land and ocean resources. That sounds expensive – but it's only 0.16% of annual global GDP and represents less than a third of the value of subsidies paid to activities that harm nature.

EY's Elizabeth Rose says, "We have found consistently that there are actually greater opportunities for almost every sector under a state of higher climate ambition."

The opportunity for landholders

One example of that opportunity is very close to home. Journalist Sue Neales says the National Farmers Federation estimates 15-30% of Australian farm incomes will come from biodiversity, land stewardship, carbon credit and soil carbon farming initiatives by 2030. Traditional agriculture and environmental markets are melding together with benefits for all. For landholders, those benefits include reduced farm income volatility, increased asset values and better agricultural practices.

Jody Gunn of the Australian Land Conservation Alliance says, "There are great examples across Australia showing that the more landholders put into restoring and recovering landscapes, the more direct and indirect returns they generate."

"With more than 60% of Australia privately managed, there is a significant opportunity to strengthen our efforts to protect, conserve and restore our biodiversity and build resilience to climate change by resourcing and supporting private landholders to deliver effective nature-based solutions."

GreenCollar CEO James Schultz agrees: "If we manage our natural resource base well, we can continue to value add, renew it and develop it. If we were to have this conversation in 10 years' time, we will be in a very, very different world where natural resource management or ecosystem services is every bit as large as the extractive industries."

Visibility – measuring up

The economic benefits of climate action must become more measurable. That means using the right science-based metrics to assess the success of a reclamation project or environmental investment.

Once again, parallels to commercial practice are instructive. Fund managers use a range of metrics to value and discount different investments, metrics that are appropriate to the nature of the investment. The same approach is now developing with environmental assets. This will provide a true picture of the investment and its performance – it's return on environment investment - and guide future management improvement.

Accountability is crucial. James Schultz from GreenCollar says, "We positively welcome scrutiny of our methods and governance. We freely share the data we collect in our projects with the CSIRO, universities, government and others – it's all about improving the models and the science that underpins the schemes – schemes that will continue to mature and evolve over time."

> The ultimate objective is a diverse, sophisticated environmental markets economy that supports jobs as well as the environment.

Private investment – the power of many

At COP26, the financial sector turned out in numbers, and they bring vast resources into play in the battle for effective climate action. For example, the Glasgow Financial Alliance for Net Zero (GFANZ) – an alliance formed for the Glasgow summit – manage over US$130 trillion in assets.

To get this capital into the game, all players in the climate space need to focus on 'creating products', as a merchant banker might do – developing discrete, understandable and valuable environmental initiatives that can be packaged for investment.

One example is GreenCollar's Reef Credits – a tradeable financial instrument that provides land managers with an income stream whilst supporting projects that reduce water pollutants flowing into the Great Barrier Reef.

Government – regulator, backstop, partner

Unleashing the power of private capital does not diminish the importance of governments. Their power lies in asserting political will to make the case for change, establishing necessary policies and incentives and funding a wide range of ecosystem services.

The global government balance sheet needs to be mobilised in the right direction. According to one report, subsidies for potentially damaging agricultural activity amounted to US$100 billion in the OECD alone. Fossil fuel subsidies were worth between US$300 and $680 billion per year. In broad terms, governments spend ten times more on subsidising damaging environmental behaviour than they do on preserving biodiversity. This needs to change to unlock the social, economic and environmental opportunities to be found in nature-based solutions.

Governments also play the crucial role of regulator and standard setter. They help develop markets by partnering with private and social sectors to both guide and leverage private investment and incentives.

Governments are also able to build synergies between different sectors within our societies and our local communities. Their goal should be to ensure these efforts directly improve people's health and wellbeing, and ultimately drive greater social, economic and environmental prosperity.

> "I see a huge bottom-up effort across the economy and across industries. And sometimes I feel the politicians are going to be left behind by this huge movement that is happening."
>
> Pascal Soriot, Executive Director and CEO, AstraZeneca

3. Move minds, drive collective action

"In a nature-based economy, there would not be any waste as a final leftover that is gradually polluting our planet, like CO_2 does, because nature does not know waste. Everything gets recycled."

Dr. Elisabeth Pötzelsberger, Head of Resilience Programme, European Forest Institute

Move minds, drive collective action

What will underpin the success of a nature-based economy?

While governments continue to debate climate policy, businesses and environmental organisations are leading the way.

AstraZeneca's Executive Director and CEO, Pascal Soriot, says the company has doubled its sales over the past six years while cutting Scope One and Two emissions by nearly 60% and water use by nearly 20%. The reason? "It's clear to us that climate change is impacting the environment and is hurting us as human beings. We are always thinking about health so this is an issue we just could not ignore," says Soriot.

While many business leaders have grasped the importance of a proper valuation of nature – and the opportunities that provides – a further mindset shift is developing.

Dr. Elisabeth Pötzelsberger, the European Forest Institute's Head of Resilience Programme, argues the next step is towards a nature-based economy as part of a circular bioeconomy. She says, "A nature-based economy does not mean replacing fossil fuels with biofuels, plastic fibres with wood-based fibres, but otherwise doing business as usual and clinging to the paradigm of constant growth."

The move towards a nature-based economy requires a rethink of consumption and the growth paradigm. It requires us to discard the old-fashioned view of efficiency – as Dr Pötzelsberger argues, we need to replace concepts of efficiency with the development of a multipurpose economy that supports multiple ecosystems – keeping the ecosystems intact and not exploiting them and investing in the power of local communities and their practical experiences with restoration.

> "What's really pleasing around businesses that are driving profit for purpose is, not only are they attracting customers who are values aligned, they are empowering people to be part of the change."
>
> Damien Walsh, Managing Director, Bank Australia

Thinking big, thinking differently

A mindset shift is not just part of the solution, it underpins all the changes we need to make as we evolve towards a nature-based economy. Below are some practical solutions driving lasting change.

◗ Collaboration

The role of collaboration in tackling climate change is paramount. HRH The Prince of Wales' Sustainable Markets Initiative (SMI) is but one example, and its impact is unfolding fast because it drives climate-focussed, best-practice collaboration within and across private and public industry streams (health systems, banking etc). That innovation and collaboration drives operational changes that result in lower water use, decarbonisation and other outcomes. But much of SMI's work is on measuring and incentivising policies and investments so those positive activities can be scaled at pace. For example, SMI's Health Systems Task Force works with public and private sector partners to accelerate the delivery of net

zero, sustainable healthcare to improve the health of individuals, society and the planet. It does this by focusing on concrete opportunities to drive a low carbon focus in digital health, supply chain, and patient care pathways.

Empowerment

The 2021 Dasgupta review suggests biodiversity decline is 30% less in areas managed by Indigenous people. This supports the importance of empowering local communities – especially Indigenous landowners and communities — to collaborate on biodiversity solutions that respect local traditions and rights and draw on knowledges from the longest continuous cultures in the world. Dr Emma Lee says that there are powerful lessons to be learned from Indigenous people who have cared for Country as stewards and custodians for over 60,000 years.

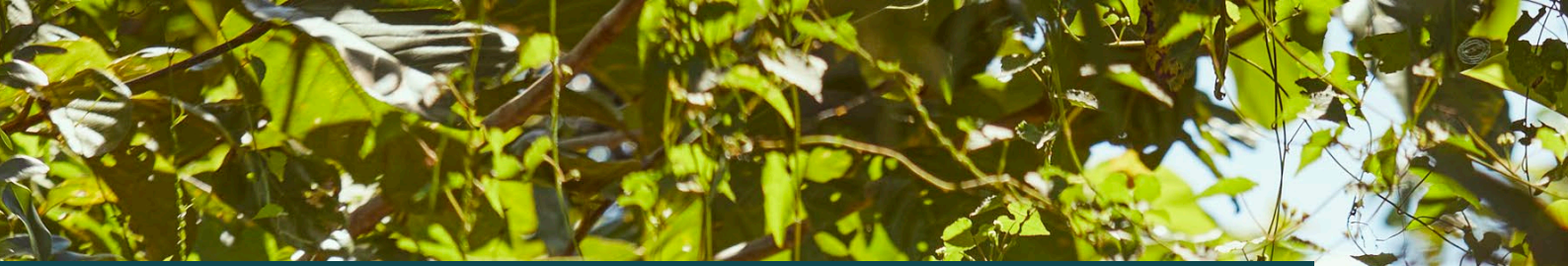
> "Today, Indigenous people represent just 3-4% of the Australian population but we manage 40-50% of our continent. Yet we are invisible sitting around the tables in the discussions where the big decisions are made. I want to change that. I want to create a place of welcome for all of us where we come to this place of cultural humility and modesty towards caring for Country."
>
> Dr Emma Lee, Associate Professor Indigenous Leadership, Centre for Social Impact - Swinburne University

Damien Walsh, Managing Director, Bank Australia, says a focus on empowering people can reap rewards fast and that a push for behavioural change need not only come from government via taxes and 'nudges' but from listening to the wants and needs of customers and Australians more broadly. As a customer-owned bank, Bank Australia not only regularly consults with customers to determine what projects to support through its Impact Fund, it also provides customers with everyday banking products that include features that help contribute to a more sustainable future for people and the planet.

Other organisations use simple but effective incentives to drive change (such as the promotion of electric company cars). Like many businesses with a visible focus on climate, they reap a reward in their ability to attract quality staff who count the environment and its protection as a purpose and so a key driver of their employment choices.

Government

Governments have a role in building a new playing field where environmental degradation is minimised and authentic action on climate change and biodiversity loss is rewarded. Greening Australia CEO Brendan Foran says, "Governments must do more joined-up thinking to stop perverse policy outcomes and inefficient use of taxpayer funds – for example, subsidising activities that impact the environment, then paying for remediation. Such outcomes are counter to our future prosperity and global commitments. Instead, ambitious solutions that protect people, nature and the economy need to be incentivised to support the scale and pace of action that's required in this decade, for the future of generations to come."



Case study: Resilience and the bioeconomy

Dr. Elisabeth Pötzelsberger is the Head of the Resilience Programme at the European Forest Institute. She leads a project across 12 European countries, funded by the European Commission (Grant Agreement 101036849), that targets forest and forest landscape restoration and climate change adaptation. The project aims to increase the resilience of forest landscapes and protect biodiversity, and to deliver carbon sequestration and low-carbon materials for the bioeconomy.

The power of this project is not just the environmental effects – it's the knowledge base this demonstration project creates by working across an array of different regions and multiple dimensions including financing, governance, regulation and connections to communities. As Elisabeth says, "The aim is not just to restore 12 forest landscapes, but to build a multi-stakeholder network that can completely transform forest restoration approaches."

Similarly, the Circular Bioeconomy Alliance (established by HRH The Prince of Wales in 2020) seeks to accelerate the transition to a circular bioeconomy that is climate neutral, inclusive and prospers in harmony with nature. Its Living Labs project – ranging from river restoration in South Africa to mangrove preservation in Indonesia and many more - is building a global network of landscape restoration projects. The aim is to create more resilient communities and regenerative landscapes by capitalising on traditional knowledge, new research and innovation, and by building public-private partnerships that place local communities at their centre.

Altogether, a better future

This White Paper has drawn on the views of experts to break down the false dichotomy between economic progress and environmental action.

It has outlined the changes in approach and mindset required to better value nature, understand the true costs of climate inaction and put our society on a path to sustainability through a nature-based economy.

The following lessons have become clear.

The time for talk is over

The scientific facts and the lived experience of communities in Australia and across the globe are now in complete convergence. There is no climate debate. This is a climate emergency, and the costs of inaction are too heavy for our society to sustain.

Opportunities abound

Climate change and biodiversity loss are inextricably linked. With government support and direction, and by mobilising private landholders, business and consumers, we can address both issues simultaneously, moving to a nature-based economy that will create profitable businesses, more jobs, better environmental outcomes and a more sustainable future.

Value matters

Protecting biodiversity and mitigating the impacts of climate change requires a rethink of how we value nature and a shift towards a nature-based economy. This shift in mindset is the key to unlocking a range of opportunities. Business becomes more accountable for the damage it does to nature and is incentivised to minimise that damage and invest in restoration. Part of that accountability is regulation that has a focus on real visibility and standards – transparency and measurement are crucial to ensuring accountability is more than box-ticking and meeting minimum standards. Proper valuation also ensures capital (whether private or public) can flow into projects that heal ecosystems.

Care for Country

In seeking to restore our environment it is crucial that we include the voices of Indigenous peoples worldwide, and of Aboriginal and Torres Strait Islander peoples here in Australia. We need to recognise their multi-generational insights and skills for building reciprocal relationships with Country and with each other, respect their leadership in restoring Ancestors' Country, and collaborate to build a truly inclusive nature-based economy.

Powerful collaborations

Throughout this paper are examples of the impact a diverse range of collaborations can make. We need to broaden and deepen those collaborations – between business, government, environmental organisations and local communities – to create a nature-based economy that enables communities and nature to thrive.

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