



BHP | Foundation

Insurance Challenges & Opportunities

*Exploring and unpacking the
insurance risks faced by
organizations delivering nature-
based solutions*

OCTOBER 2022

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Foreword

Who we are



The BHP Foundation works to address some of the world's most critical sustainable development challenges. It is a charitable foundation funded by BHP and through its environmental resilience, natural governance and education programs, the Foundation addresses challenges that are directly relevant to the resources sector at a global level.

In addition to supporting partner organizations to do what they are best at, the BHP Foundation also seeks to contribute to removing barriers to this fundamental purpose.

Pollination is a specialist investment and advisory firm accelerating the transition to a net zero, nature positive future.

Nestled within Pollination is the Pollination Foundation which focuses on accelerating nature based initiatives that bring humanity to the heart of climate solutions.

Pollination Foundation and BHP Foundation partner to share learnings and cross-pollinate ideas, facilitated through the Ampliseed learning network.

Ampliseed connects the BHP Foundation Partners to learn from each other and amplify ideas for environmental resilience, globally.

The Project

Fit for purpose, effective insurance is a critical enabler for all business ventures including those which seek to deliver transformative environmental and social outcomes.

Across the BHP Foundation, Pollination and partner networks, we had heard anecdotally how insurance had become a barrier to scaling and implementing community led conservation initiatives.

Partners and organizations within their networks talked about how they were finding it increasingly difficult to obtain appropriate 'fit for purpose' insurance. Concerns raised included increased costs, lack of availability and hard to access information.

To make sense of the issues, BHP Foundation paired up with Pollination to unpack and define the nature of the challenges, as an initial step towards considering potential solutions.

We hope this report provides insights relevant to community based conservation organizations, insurers and the sector more broadly.

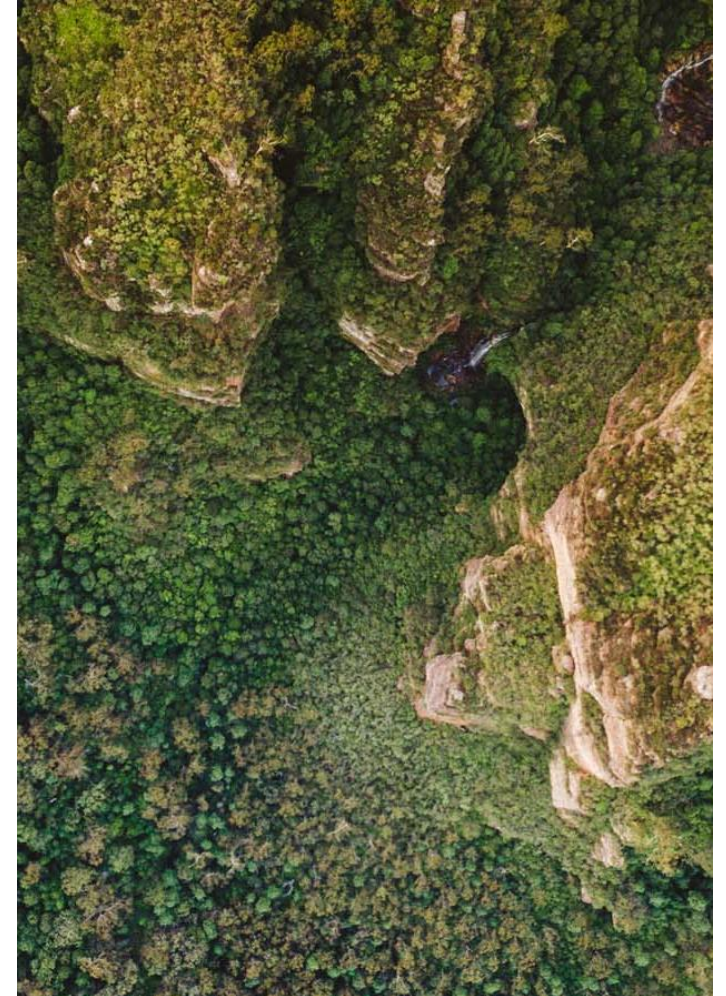
The Story (1/2)

○ Natural healthy ecosystems are critical to human survival and underpin the sustainability of our economy. The loss of biodiversity and decline in ecosystem health is increasingly becoming a focus of governments, corporates, NGO's, and society - with commitments towards a net zero, nature positive future growing daily.

As a result we are starting to see 'nature' emerge as an asset class which includes increased investment flowing to nature based solutions.

What we found is nature needs people. Nature based solutions require active management to address and mitigate threats like fire management, weed control, habitat restoration. Organizations who manage and deliver nature based solutions are raising concerns about the complexities and barriers they encounter when developing risk reduction and mitigation strategies.

To explore and unpack the risks faced by organizations delivering nature based solutions, we surveyed and talked with stakeholders across Indigenous-led and mainstream conservation sectors about the challenges they face, many spoke to the specific issue of insurance. We also engaged with insurers and the sector more broadly to understand the challenges from their perspective. To focus our research in a way that supported a systemic analysis we took a geographical approach with our focus on Australian case studies.



The Story (2/2)

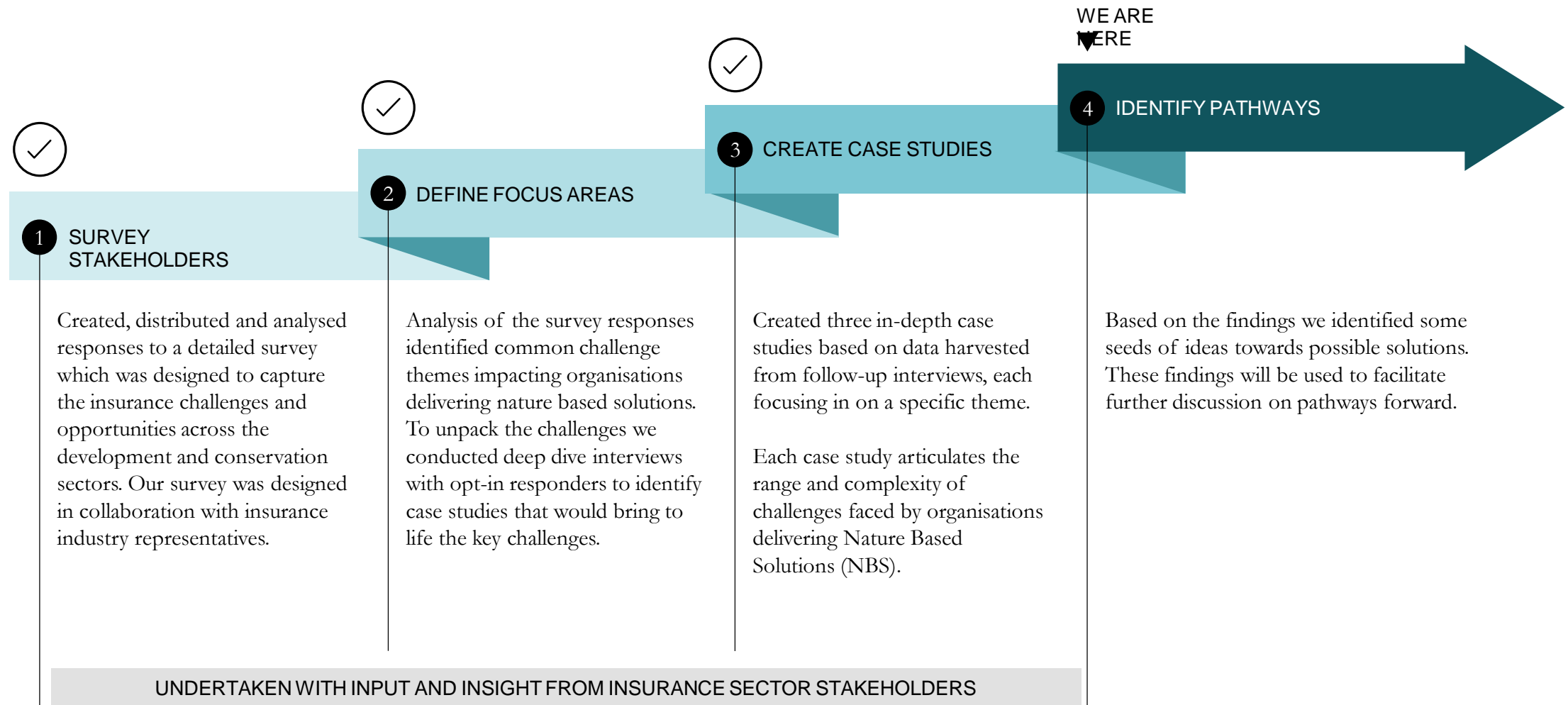
Natural healthy ecosystems are critical to human survival and underpin the sustainability of our economy. The loss of biodiversity and decline in ecosystem health is increasingly becoming a focus of governments, corporates, NGO's, and society - with commitments towards a net zero, nature positive future growing daily.

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THE RESEARCH SURFACED TWO KEY CHALLENGES AND FOUR INDIRECT THAT MUST BE ADDRESSED TO ENABLE NATURE BASED SOLUTIONS TO SCALE:

DIRECT CHALLENGES			
1	High cost and low availability: increasing and unsustainable cost of purchasing insurance products.	2	Limited 'fit for purpose' products: off the shelf insurance products which don't meet the needs of projects combined with a decreasing pool of insurance providers.
UNDERPINNING CHALLENGES			
3	Lack of familiarity with mitigation activities: limited understanding of how 'hard to insure' activities mitigate risk even where techniques based on traditional knowledge may have a long and contextualised oral history.	4	Data Limitations: lack of access to open source data makes it difficult for insurers to assess risk which is compounded by unpredictable weather patterns and increasing number of climate related shocks.
5	Challenge of valuing nature: nascent or not widely accepted tools, frameworks and methodologies for valuing nature (and associated impacts to nature) across different environments.	6	Insurance products not aligned with integrated outcomes: lack of holistic benefit lens that incorporates how 'high risk hard to insure' activities contribute to global goals.

To define and explore insurance-related challenges we conducted a survey, identified key themes, developed case studies and seeded solution ideas



Definitions & clarifications

NATURE-BASED SOLUTIONS (NBS)

Nature-based solutions are actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits. – *International Union for Conservation of Nature, 2016*

Throughout this report, organizations or projects undertaking conservation activities or involved in environmental resilience focused activities will be referred to as Nature Based Solution providers (NBS).

Nature based solutions require active management to ensure they can sustain and be resilient to threats like wildfire, weed and feral animal invasions, soil erosion and to monitor impact of human induced threats like deforestation or other land uses. This active management is an ongoing activity provided by Nature Based Solution providers.

Insurance providers traditionally pool and distribute risk. Risk is categorised into themes and pooled across geographies, claims are made by a small subset who experience loss (such as damage from natural disasters) which is covered by the premiums paid by the entire group.

When insurance is purchased, the insurer promises to pay an agreed amount (or subset of an amount for replacement) up to the limit of an agreed policy in the event of loss or damage under specific circumstances described within the specific policy.

Insurers deploy actuarial models to underwrite each of these policies – where they analyse statistics to calculate how to charge for each risk they cover (based on the likelihood of a loss event / policy claim and the amount of cover). This process determines:

1	How much the insurer will pay in a loss event / claim	2	Circumstances where a claim can be made	3	The cost of premiums to the purchaser
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The goal of underwriting is to work out a premium that is low enough to attract buyers, and high enough to ensure the pool of funds will cover the expected amount of loss events, plus generate profit for the insurers shareholders.

Insurers inherently are incentivised to undertake activities that minimise the amount of claims generated (i.e. minimize loss events).

Insurers may also utilise reinsurers, who provide cover for certain risks and additional capacity for extreme loss events for an insurer – often through distributing risk across an even larger area (multiple insurance companies and geographic regions).

- Key insights.

Case studies were identified to define and unpack the challenges

IDENTIFIED CASE STUDIES – FOCUSED ON ONE CHALLENGE PER CASE STUDY



World leading Indigenous land management collaboration spanning across Australia’s desert country



National not-for-profit committed to restoring Australia’s diverse landscapes and protecting biodiversity in ways that benefit communities, economies, and nature



An independent not-for-profit that buys and manages land, and works in partnerships with others, to conserve Australia’s magnificent landscapes and irreplaceable native species forever

1

ENABLING CULTURAL BURNING PRACTICES

A circular icon containing a stylized flame.

NBS MANAGEMENT REQUIREMENT

Fire management / cultural burning activities draw on traditional fire practices which are combined with contemporary techniques to maintain and restore diversity in the landscape which has the added benefits of reducing wildfire and improving biodiversity.

CHALLENGE

Gaining adequate (or any) insurance coverage due to the perceived high-risk nature of fire operations.
This is layered with climate change data that predicts wildfire will increase in severity and scale across the Australian landscape.

2

PROTECTING REVENUE DERIVED FROM NATURE

A circular icon containing a dollar sign and a stylized plant.

NBS MANAGEMENT REQUIREMENT

Nature is increasingly registered as an asset to produce carbon units, coupled with increasing demand from regulators and purchases to validate and standardise biodiversity co-benefits.

CHALLENGE

Finding viable insurance and/or other solutions to protect carbon stocks and biodiversity against wildfire or other damage events (e.g. floods, cyclones etc.) alongside carbon specific delivery risks such as 25-100 year permanence obligations which need to take into account the need for inter-generational community based livelihoods.

3

PROTECTING CONSERVATION ASSETS

A circular icon containing a sun and a stylized tree.

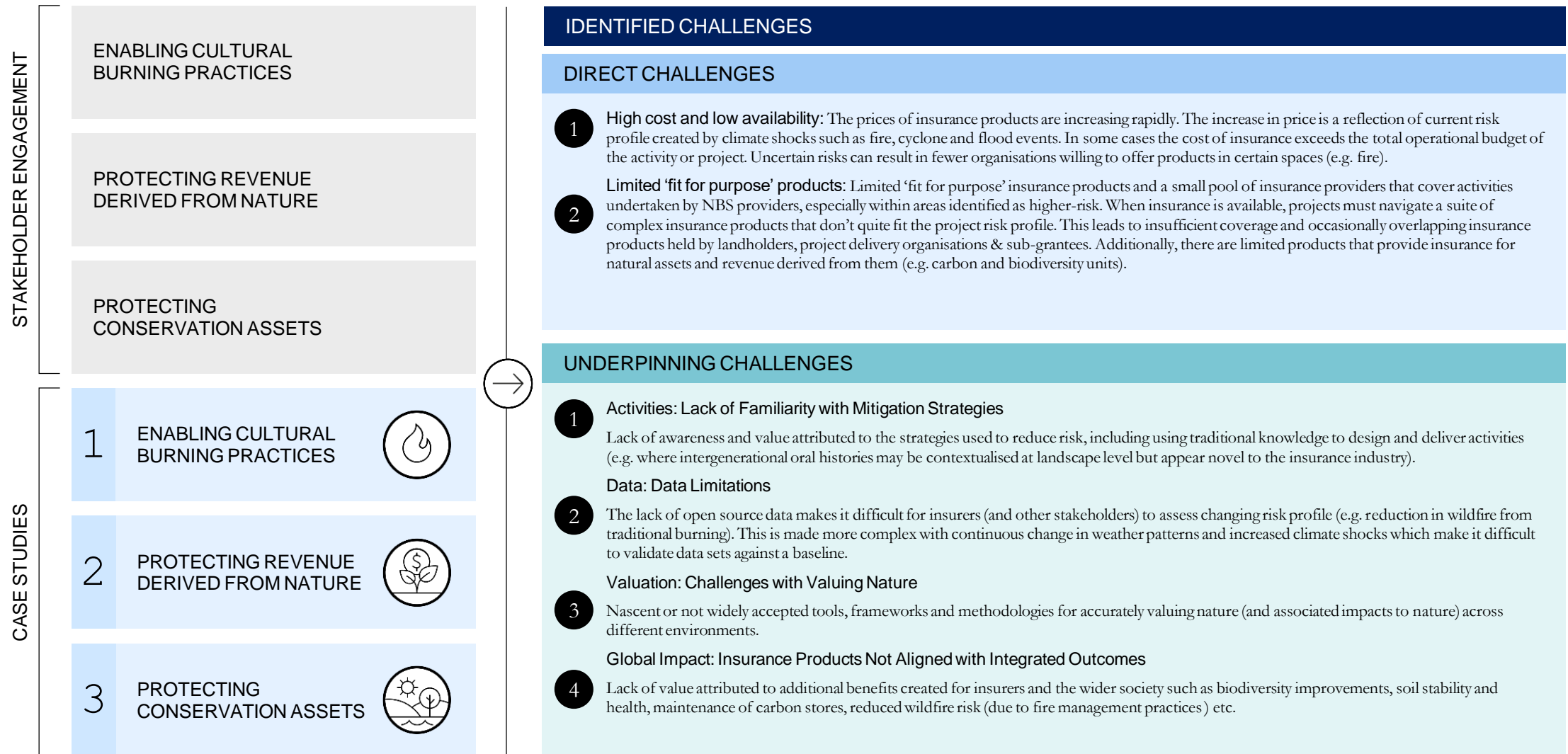
NBS MANAGEMENT REQUIREMENT

Many NBS provider organisations develop portfolios of geographically diverse properties and assets. Due to the aggregate value, financially protecting infrastructure, equipment and land restoration activities within these portfolios is essential to philanthropy-reliant organisations.

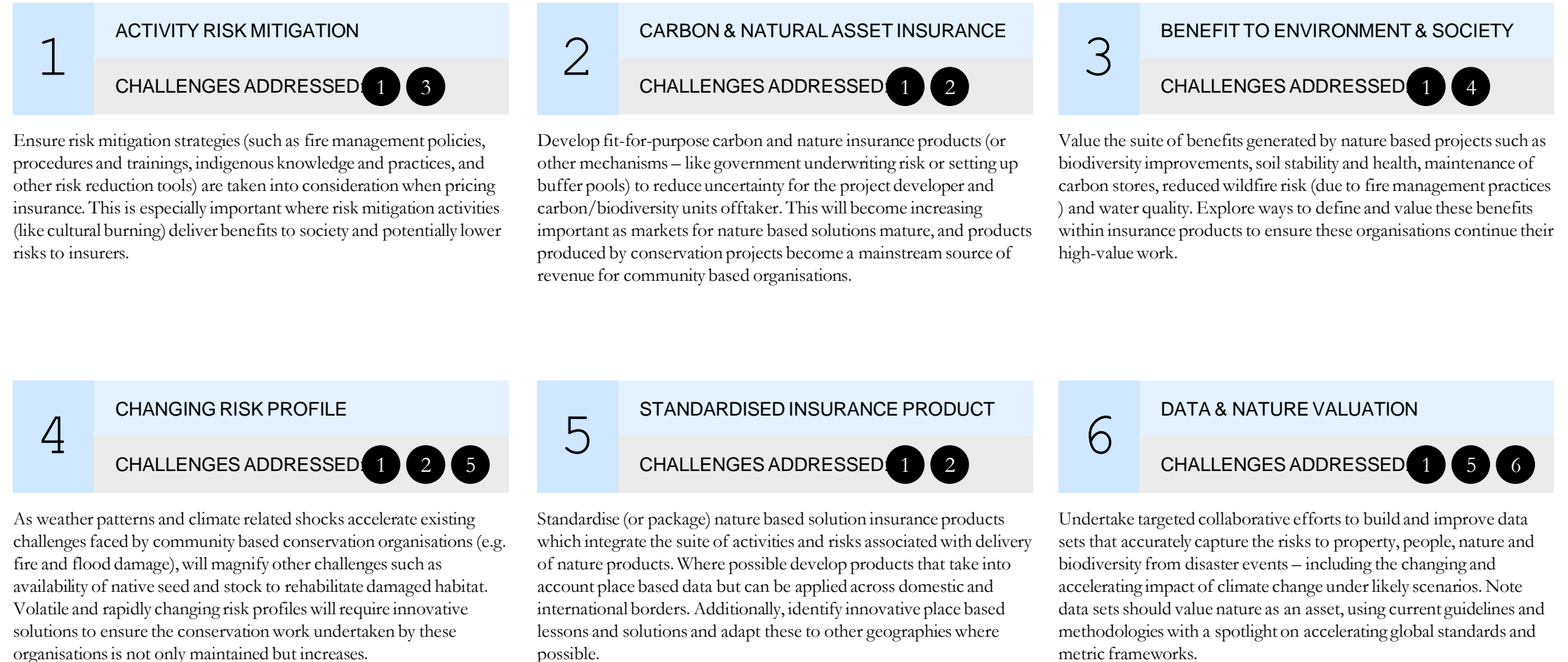
CHALLENGE

Obtaining continuous, cost-effective and fit-for-purpose insurance with reference to a diversity of activities distributed across multiple, geographically-diverse properties. Due to relatively low individual property values, insurers apply pooled assumptions to exposure and risk, not taking the time to understand the mitigation measures in place.

Survey responses, interviews and case studies surfaced two direct challenges and four underpinning challenges



We identified six themes to inform next steps in the pathway towards solutions



Innovative place-based insurance solutions provided seeds of ideas

EXAMPLE INNOVATIVE NATURE BASED INSURANCE PROJECTS (NOT EXHAUSTIVE)

USA

FEMA Community Rating System

Parties employing risk-reducing actions against floods can receive discounts on their insurance premiums based on a points system.



MEXICO

Yucatán Peninsula – Mesoamerican Coral Reef

The insurance of the coral reef is managed through a trust fund that also invests in resilience and maintenance of the reef. The policy is based on parametric cover, where payouts are triggered by weather metrics such as wind speeds hitting certain thresholds. This enables trained community members to quickly start restoration actions and minimize coral damage, protecting livelihoods and tourism assets related to the reef



THE NETHERLANDS

Prince Hendrik Sand Dyke

To protect the island against rising sea levels and prevent the risk of dyke failure, local authorities reconstructed and enhanced the natural habitat with sand and marram grass planting. The innovative project was covered through a traditional CAR (Construction All Risks) policy.



EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT

Climate Resilience Bond

Capital for the dedicated resilience bond with proceeds from the five-year bond being used to finance EBRD's existing and new climate resilience projects. Resilience bonds can tap into the pool of funds used for recovery from disasters to reduce the economic consequences of those disasters, for example using flood recovery funding for lower cost pre-recovery resilience-building initiatives.



PHILIPPINES

Global Innovation Lab for Climate Finance

The Restoration Insurance Service Company (RISCO) is a social enterprise model which aims to integrate mangroves' risk reduction value into insurance products and monetises the climate mitigation potential of mangroves through blue carbon credits.



The themes and international examples surfaced potential actions to be explored with a diversity of cross-sector stakeholders

POTENTIAL ACTIONS TO BRING SOLUTION PATHWAYS TO LIFE

Not exhaustive

RISK MITIGATION ACCEPTANCE	GOVERNMENT INVOLVEMENT/ INTERVENTION	PARAMETRIC / INNOVATIVE INSURANCE PRODUCTS	POOLED SECTOR INSURANCE PRODUCTS
Identify ways to capture risk mitigation activities undertaken by projects. This would include policies and procedures for prescribed burning operations, monitoring activities, accredited training, traditional knowledge and management practices. Templates and a structure to capture the suite of project risk reduction activities could be designed with the aim of: better understanding mitigation strategies; more accurately pricing risk and exploring ways to value the suite of benefits provided by Nature Based Solutions. Essentially creating artefacts to help educate underwriters, and help professionalise the service operators.	Explore options for government to guarantee, underwrite, provide insurance, or take first loss in public/private insurance schemes for organisations that generate public goods such as nature, biodiversity improvements and carbon stores. Note there is a commonwealth based scheme which applies exclusively to Australia’s Northern Territory which demonstrates a material difference in how fire management activities are supported or not by governments across different jurisdictions: ComCover under PGPA Act	Design innovative insurance products to support Nature Based Solutions to mature. For example test how parametric insurance products could shift a portion of natural damage insurance risk to a mitigation focus like payments to implement fire-reduction activities after an agreed season of high rainfall (which translates to increased fuel loads). E.g. Swiss Re Mesoamerican Reef ‘Protecting Nature’ initiative	Pooling common risks across similar organisations may reduce the cost of purchasing insurance. The increased diversification in location, risk categorisation, historic impacts and other factors can lower the risk to an insurer when there is a larger group policy. E.g. Caribbean Catastrophe Risk Insurance Facility Other examples of pooled risk reduction include CAR, Verra, Gold Standard and the Australian Carbon Farming Initiative, which require a contributing a percentage of credits into a buffer pool to mitigate risk.

Note: exploring potential actions to bring solutions to life is the focus of ongoing work and targeted discussions between insurance sector, NBS producers, and other relevant stakeholders (e.g. government)

- Macro Trends.

The twin and linked crises of climate change and nature loss are increasingly becoming areas of focus that will fundamentally reshape the entire economy

Nature is part of the solution to the climate crisis



Private sector actors are increasingly considering nature-based solutions as part of their efforts to mitigate and manage climate risk.

Deforestation is a major contributor to climate change. At current deforestation rates, 289 million ha of forest will be lost by 2050.

Demand for high quality carbon credits, and in particular nature-based carbon credits, is increasing as more companies commit to net-zero and is expected to outstrip supply.

NATURE-BASED SOLUTIONS

Nature-based solutions (NBS) involve conserving, restoring, or better managing ecosystems, or natural capital, to address the dual climate change and nature loss crises



Nature-related risk is becoming a high profile issue

Nature-related risk has become a high profile issue for corporates and investors.

The release of the Dasgupta Review and the formation of the Taskforce for Nature-related Financial Disclosures (TNFD) signal that nature-related risk is rising in prominence in capital markets.

The conclusions of COP15 of the UNCBD will add further policy and regulatory impetus to efforts to manage natural capital and resource use with habitat net gain a key focus of the draft framework for the built environment.

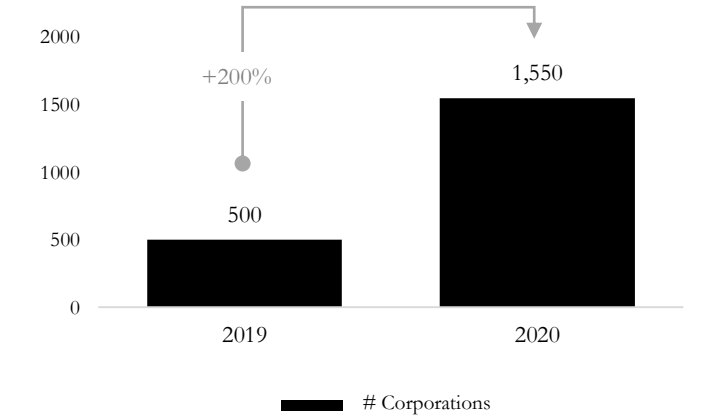
Between now and 2030, addressing nature risk and climate risk together will be a global priority and fundamentally reshape the economy.

Natural capital is likely to become a focus of management, and even a tradeable and priority asset class in its own right.

Financial commitments towards our transition to a net zero emissions nature positive future are accelerating rapidly

Global private markets are the dominant source of capital and they are committing to and investing in the transition...

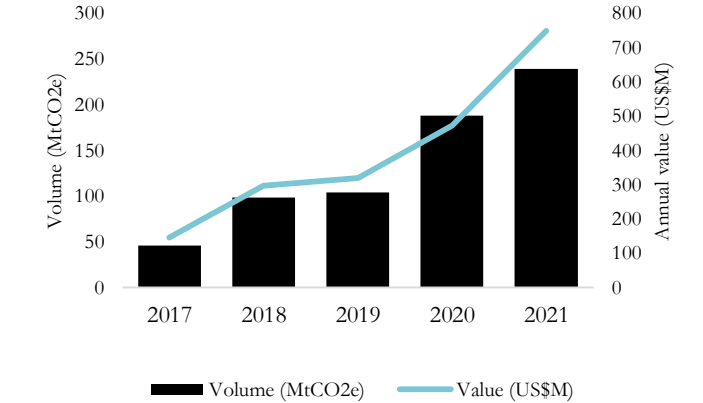
NUMBER OF GLOBAL CORPORATIONS WITH NET ZERO TARGETS, 2019 TO 2020



Source: United Nations Framework Convention on Climate Change, Ecosystem Marketplace Voluntary Carbon and the Post-Pandemic Recovery 2020

...driving rapid growth in voluntary carbon markets...

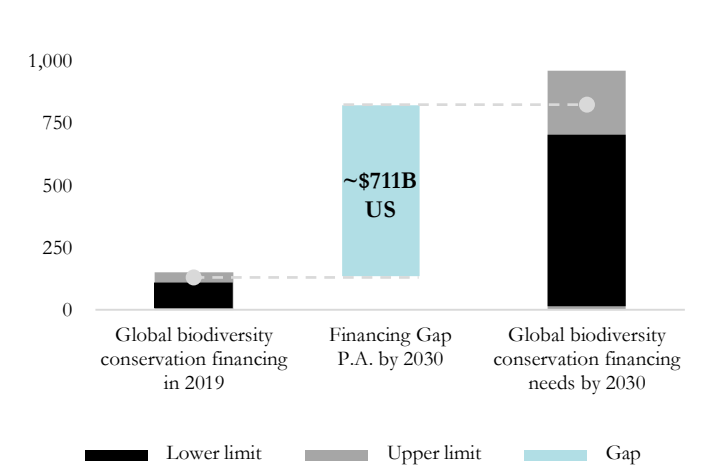
MARKET SIZE BY TRADED VALUE AND VOLUME OF VOLUNTARY CARBON OFFSETS, JAN 2017 TO OCT 2021



Source: Ecosystem Marketplace, Markets in Motion: State of the Voluntary Carbon Markets 2021, Instalment 1.

...which is expected to be mirrored across biodiversity as corporations seek to close the financing gap

BIODIVERSITY CONSERVATION FINANCING GAP PER ANNUM, 2019 TO 2030



Source: Financing Nature: Closing the global biodiversity financing gap. The Paulson Institute, The Nature Conservancy, and the Cornell Atkinson Center for Sustainability (2020)

There are calls for a new set of global goals for nature which include achieving a “nature positive” economy by 2030

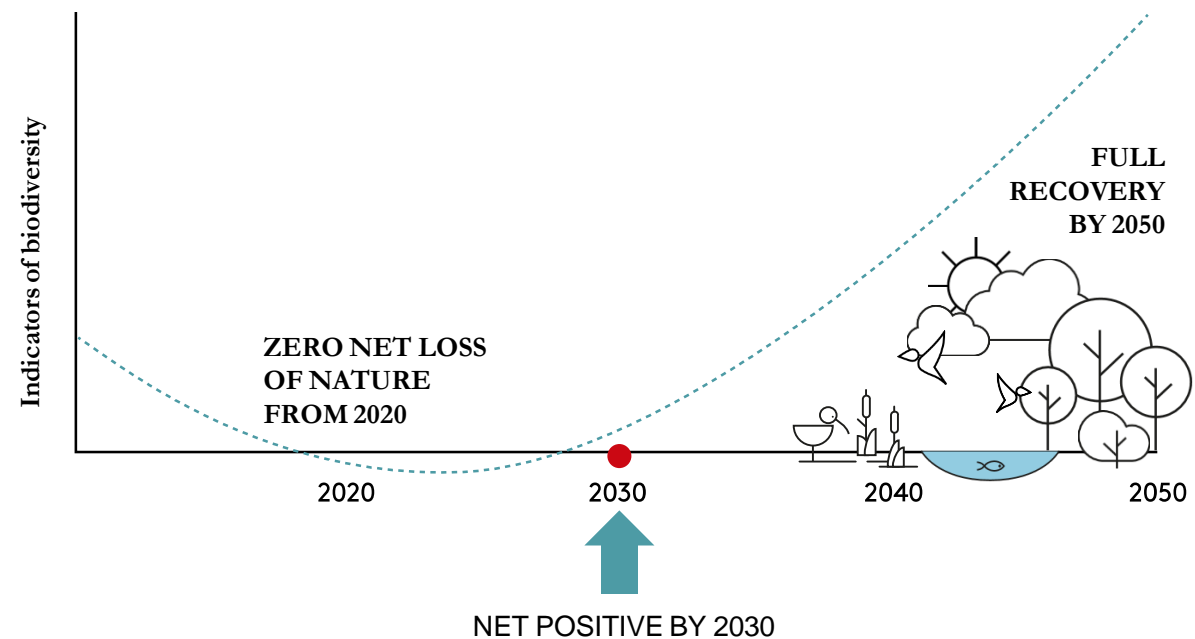
To get to a nature positive world, the World Business Council for Sustainable Development and a consortium of NGOs are advocating for the adoption of a set of global goals with three measurable temporal objectives:

- ① zero net loss of nature from 2020;
- ② net positive by 2030; and
- ③ full recovery by 2050.

The “net positive” by 2030 target for nature is analogous to the “net zero” by 2050 target for climate.

These global goals for nature would sets clear ambitions for public and private sector action to address the nature loss crisis.

GLOBAL GOAL FOR NATURE: NATURE POSITIVE BY 2030



Nature is emerging as a stand-alone asset class with Nature Based Solutions (NBS) forming a key part of the global transition

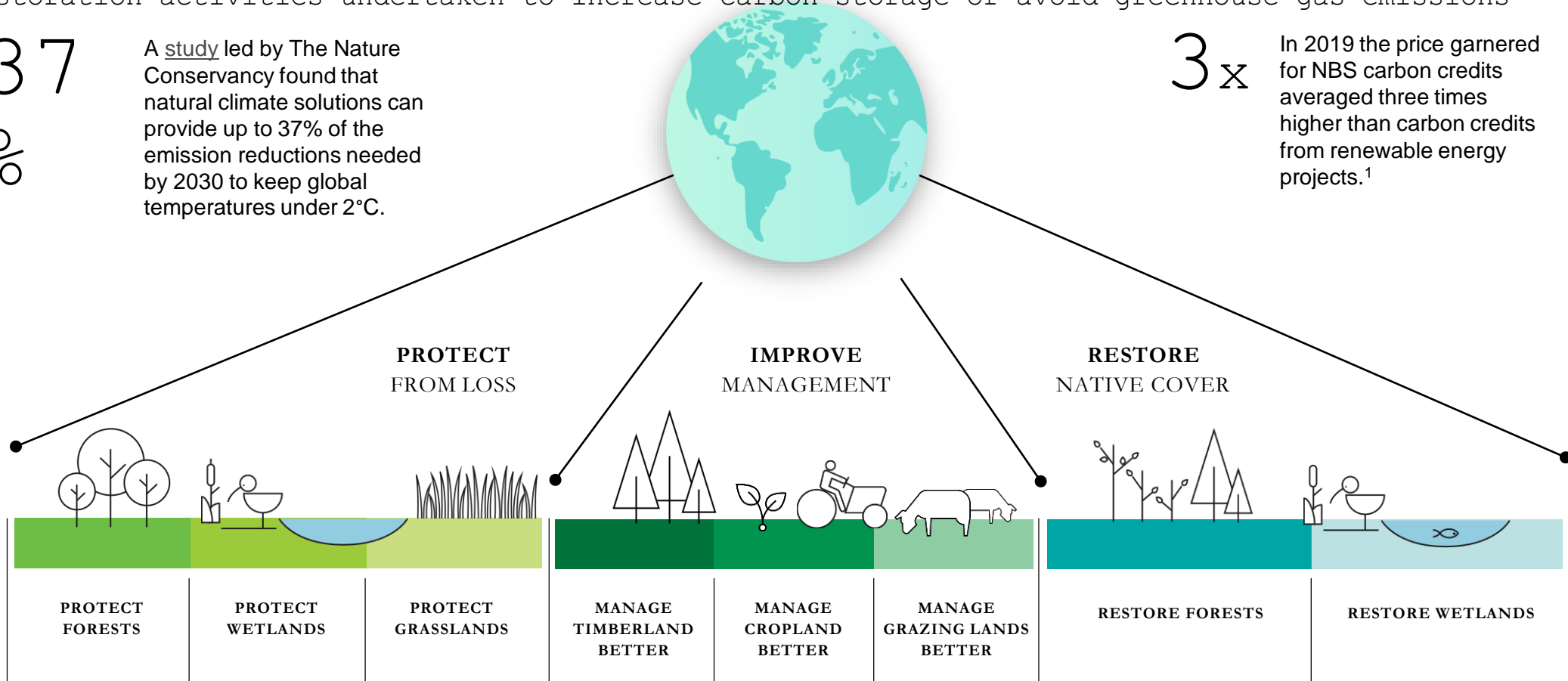
Nature based solutions are conservation activities, improved land management practices or restoration activities undertaken to increase carbon storage or avoid greenhouse gas emissions

37
%

A study led by The Nature Conservancy found that natural climate solutions can provide up to 37% of the emission reductions needed by 2030 to keep global temperatures under 2°C.

3x

In 2019 the price garnered for NBS carbon credits averaged three times higher than carbon credits from renewable energy projects.¹



Source: IPBES-IPCC Co-Sponsored Workshop Report on Biodiversity and Climate Change (2021)

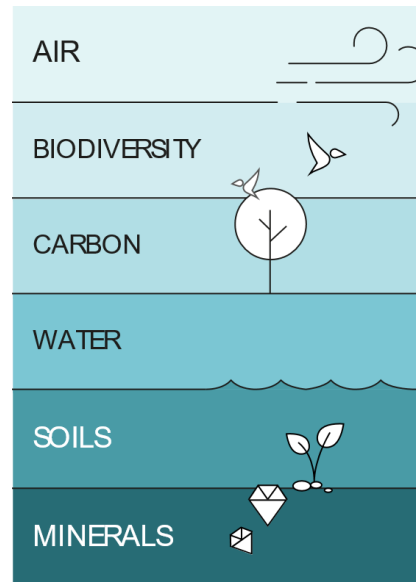
1. Ecosystem Marketplace, State of the Voluntary Carbon Markets 2020

Nature-based solutions require active management to address risks

Nature is asset that requires active management. Undertaking management activities comes with risks that if not mitigated may impact the ability of projects to deliver NBS products like carbon and biodiversity units. Historically, insurance has been one tool that has helped reduce the impact of these risks, but there are substantive barriers to it being effective in the current market. What can we learn from Indigenous communities and conservation organisations that have been delivering NBS over a long time period to identify solutions that will deliver inter-generational benefits?

Protecting & restoring nature across the full natural capital asset stack...

ILLUSTRATIVE NATURAL CAPITAL ASSET CLASS STACK



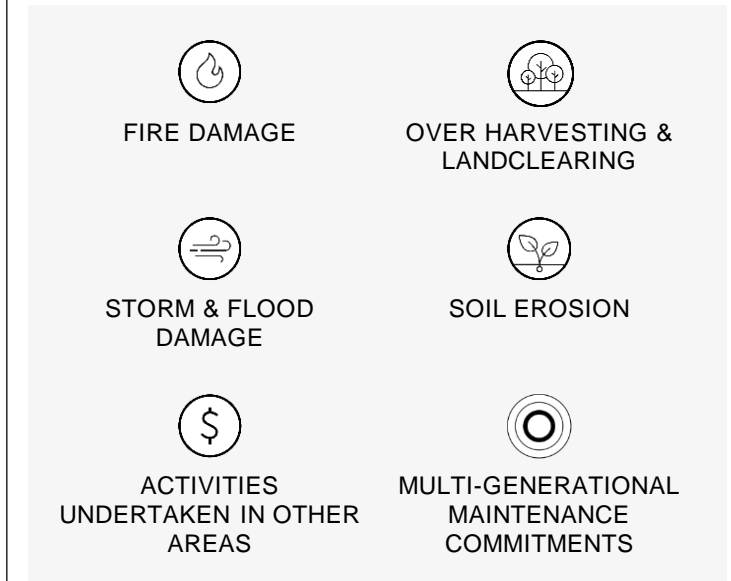
...requires active management activities...

ILLUSTRATIVE NBS MANAGEMENT ACTIVITIES



...to address associated risks that may impact the ability to deliver NBS

ILLUSTRATIVE MATERIAL PROJECT RISKS





o Thank you.