



proteus

UNEP-WCMC strategy 2022-25: Nature and People

Corli Pretorius, Deputy Director, UNEP-WCMC

Proteus Annual Meeting

2022

A tropical coastal landscape featuring a dark, rocky cliffside covered in dense palm trees. The turquoise water of the ocean is visible, with waves crashing against the base of the cliff. In the distance, a small island with a few palm trees is visible on the horizon under a clear sky. The foreground is framed by large, detailed palm fronds.

Nature 2025: A strategy for UNEP-WCMC

NATURE 2025 : A STRATEGY FOR UNEP-WCMC

4 Impact areas

3 Innovation areas



Nature Conserved

Resilient, connected ecosystems and their species are conserved, sustaining all life on Earth.



Nature Restored

Degraded lands, inland waters and the ocean are restored for the benefit of people and nature.



Nature-Based Solutions

Public and private sectors make effective use of nature to address sustainable development challenges.



Nature Economy

The world transitions to a nature-positive global economy.



Science



Policy



Digital Transformation

Each impact and innovation area will have a set of focal initiatives designed to contribute to the outcomes as shown in Figure B. Focal initiatives may develop and change over the course of the strategy.

FOUR IMPACT AREAS: OUTCOMES BY 2025

Nature Conserved

Outcome 1

Legal, policy and planning frameworks for area-based and species conservation are in place and being effectively implemented, scaling up progress towards area-based, connectivity and species conservation targets.

Outcome 2

Governments are equipped with the knowledge, tools and capacity needed to assess and improve the sustainability of international wildlife trade, and these are used by decision makers to improve outcomes for species and ecosystems.

Outcome 3

Knowledge on the state of biodiversity and its threats is accessible and is driving decision-making across sectors and scales to improve outcomes for nature.

Nature Restored

Outcome 1

The global community is supported via legal, policy and planning frameworks to scale-up efficient restoration action to achieve restoration ambitions at local to global scales.

Outcome 2

An accessible knowledge base allowing planners and practitioners to prioritise effective restoration efforts that deliver measurable, long-term environmental, social and economic benefits.

Outcome 3

A monitoring framework is in place to track and incentivise effective global restoration efforts and enhance adaptive management.

Nature-based solutions

Outcome 1

The benefits of Nature-based Solutions for multiple societal challenges across scales are widely understood and valued in public and private sectors.

Outcome 2

Tools and knowledge required to implement resilient Nature-based Solutions successfully, and monitor their results are effective, available and well-used.

Outcome 3

Legal, policy and planning frameworks are in place to enable the effective implementation of Nature-based Solutions.

Nature Economy

Outcome 1

Businesses and governments have the knowledge, tools and capacity to measure and account for their impacts and dependencies on natural capital.

Outcome 2

Legal, policy, planning and accountability frameworks are reformed to enable nature-positive and carbon-neutral outcomes.

Outcome 3

Financial flows incentivise nature-positive and carbon-neutral outcomes.

IMPACT AREAS



NATURE CONSERVED

Global Wildlife Trade
Protected Planet
Connectivity Conservation



NATURE RESTORED

Restoration for Sustainable Development
Ocean Recovery
Sustainable Agricultural Landscapes



NATURE-BASED SOLUTIONS

Ecosystem-based Adaptation
Ecosystem-based Mitigation
Nature for Health and Well-being



NATURE ECONOMY

Economy Transformations
Proteus Partnership
Nature and Trade
Targets and Metrics
Finance for Nature
Natural Capital Approaches

INNOVATION AREAS



SCIENCE

Futures Modelling
Nature trends



POLICY

International Policy & Conventions
Nature Indicators
National Ecosystem Assessments
Nature, Gender & Rights



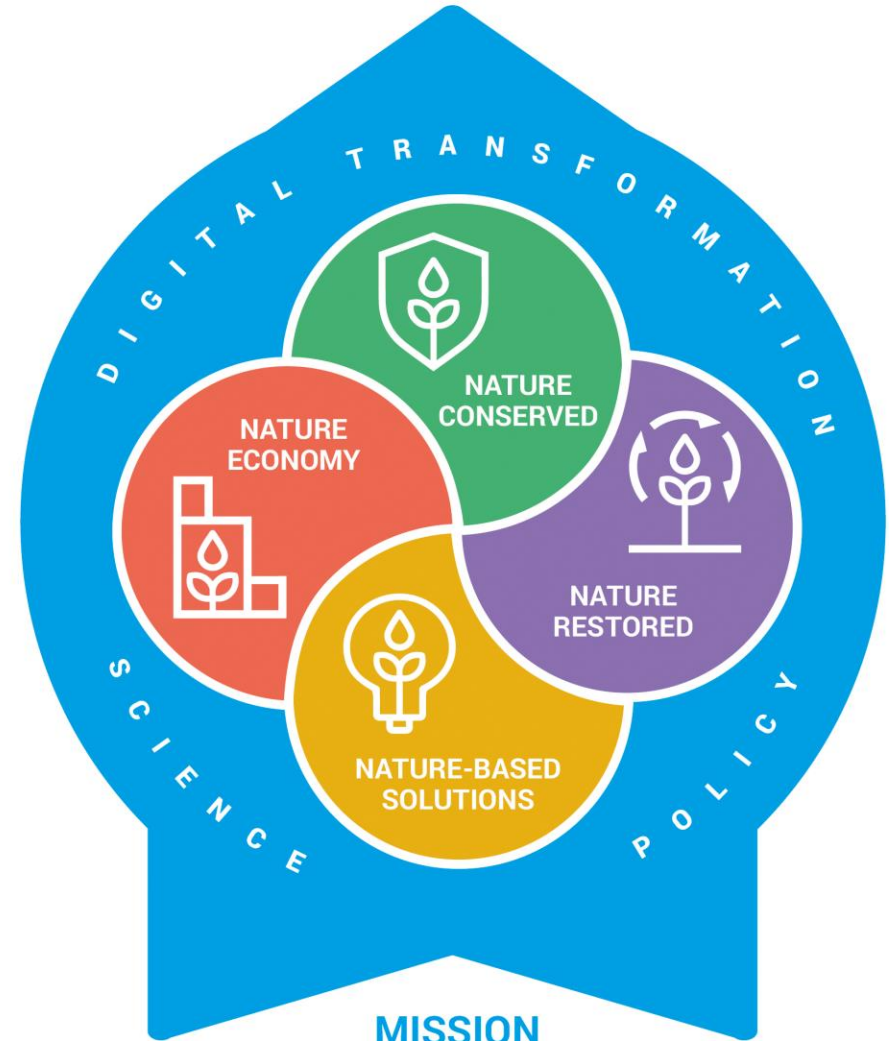
DIGITAL TRANSFORMATION

Planet+
Data Innovation

Focal Initiatives are in black text

VISION 2050

Living in harmony with nature



MISSION

We develop knowledge and capacity for a nature-positive world



Impact Areas

NATURE CONSERVED

KELLY MALSCH

Head, Nature Conserved



Nature Conserved



- Protected Planet Initiative (global platform for knowledge and data on the status and trends of protected and conserved areas)
- Global Wildlife Trade (support efforts to regulate the international trade in wildlife, including CITES and EU wildlife and timber trade)
- Connectivity Conservation (promote ecological connectivity and conserve migratory species, including by supporting CMS, CBD and others)



Nature Conserved

Resilient, connected ecosystems and their species are conserved, sustaining all life on Earth.

Protected Planet

Global Wildlife Trade

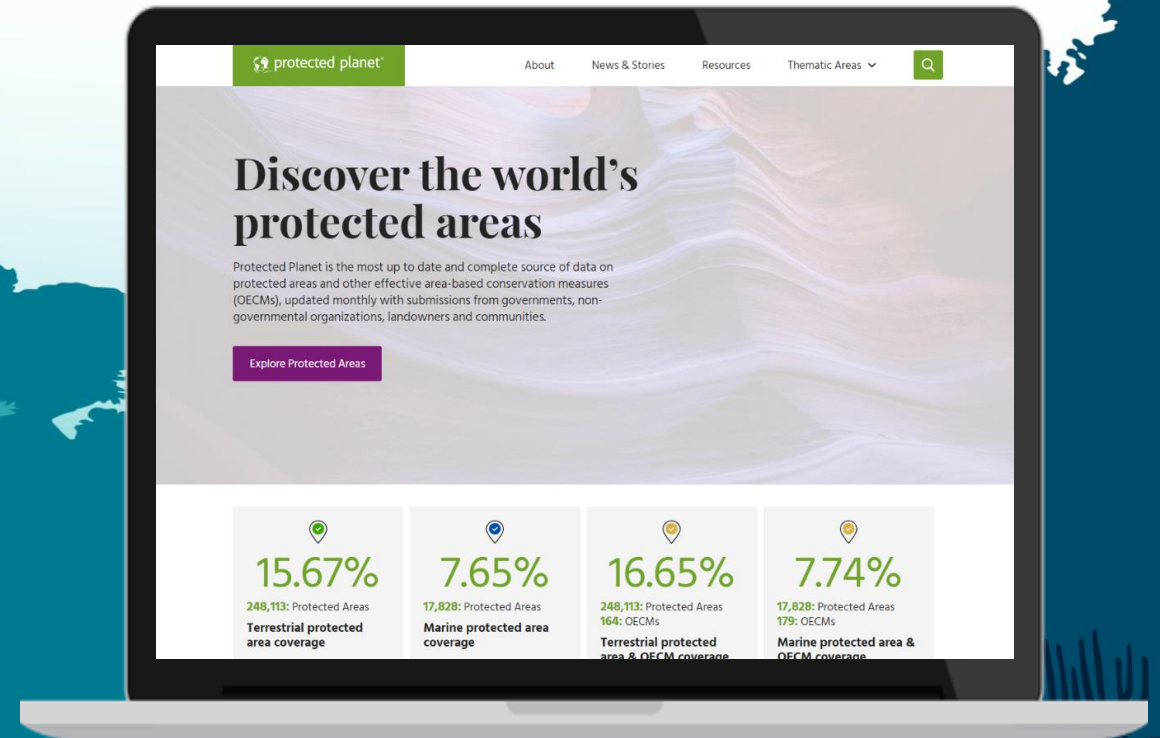
Connectivity conservation



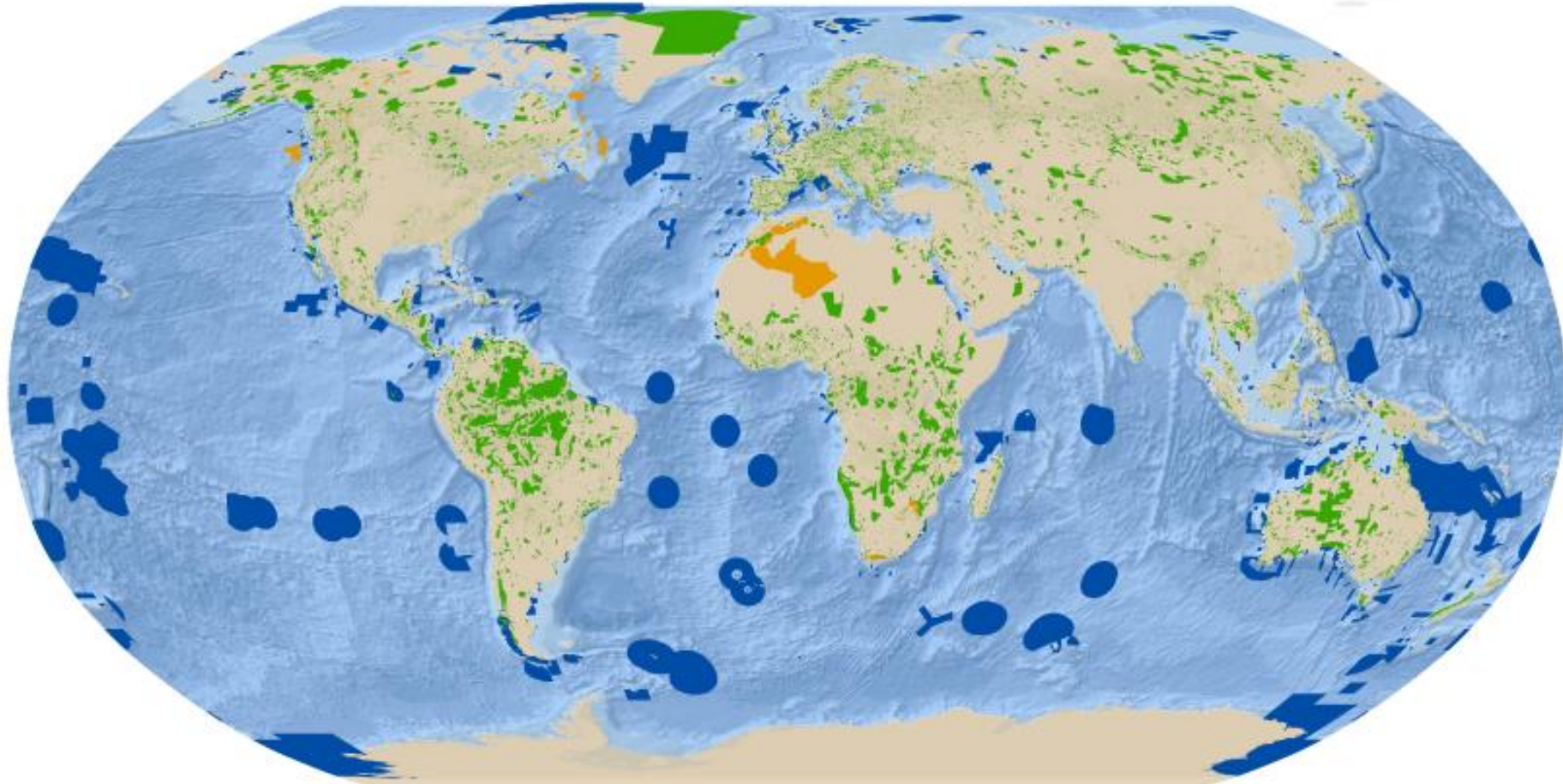


protected planet

- A global platform for knowledge and data on protected and conserved areas worldwide.
- Basis for monitoring and reporting on progress towards international targets.



Protected areas and OECMs of the world



Source: UNEP-WCMC and IUCN (2022). Protected Planet: The World Database on Protected Areas (WDPA) and World Database on Other Effective Area-Based Conservation Measures (WD-OECM) [On-line], April 2022, Cambridge, UK: UNEP-WCMC. Available at www.protectedplanet.net



Terrestrial protected areas



Marine and coastal protected areas



OECMs



Terrestrial protected areas



Marine and coastal protected areas

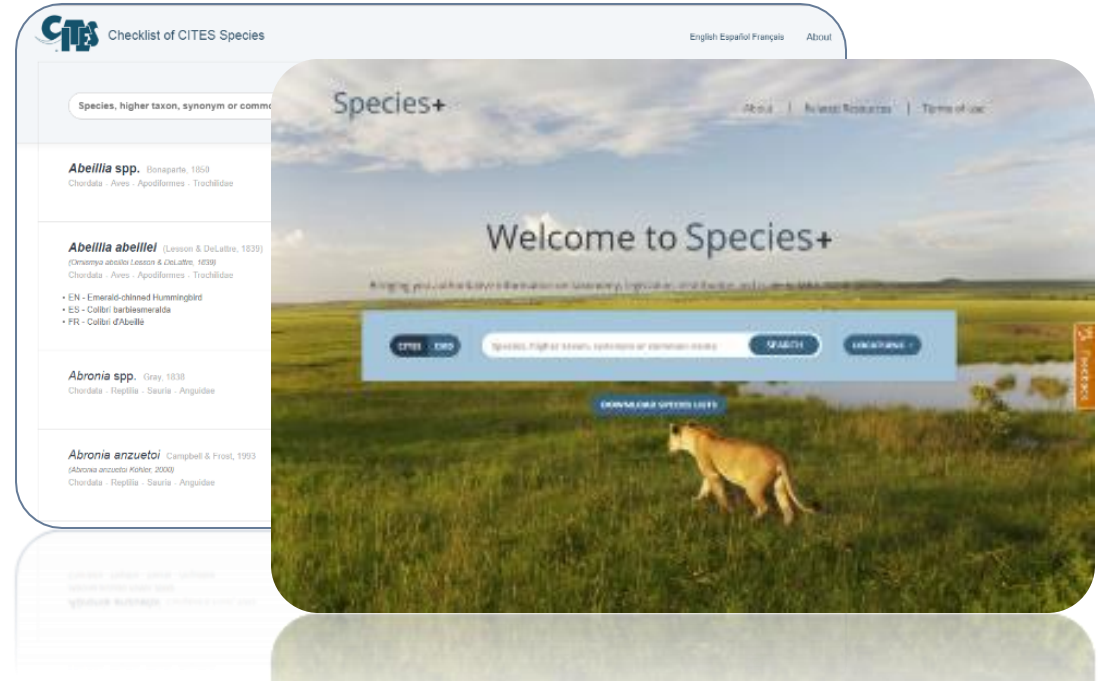


OECMs



GLOBAL WILDLIFE TRADE

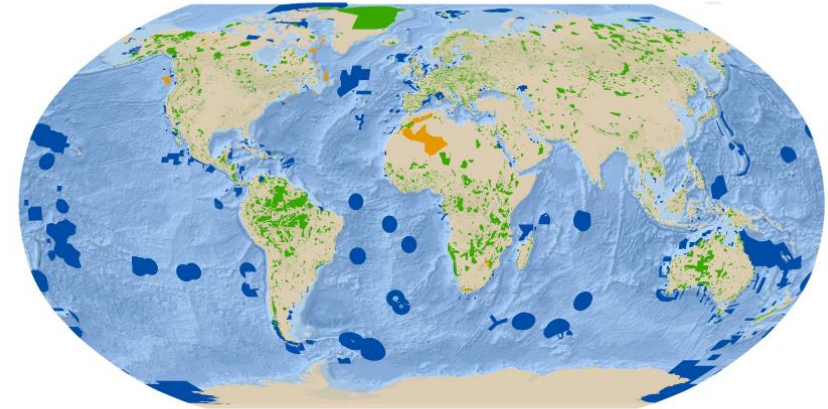
- Support the implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- Support wider efforts to ensure wildlife and timber trade is sustainable



CONNECTIVITY CONSERVATION

- Promote ecological connectivity in decision-making processes
- Migratory species conservation
- Identify ecological corridors and options for transboundary protected areas

Protected areas and OECMs of the world



Source: UNEP-WCMC and IUCN (2022). Protected Planet: The World Database on Protected Areas (WDPA) and World Database on Other Effective Area-Based Conservation Measures (WO-EACM) [Online]. April 2022. Cambridge, UK: UNEP-WCMC. Available at www.protectedplanet.net



Terrestrial protected areas Marine and coastal protected areas OECMs





Nature Conserved

Resilient, connected ecosystems and their species are conserved, sustaining all life on Earth.

Protected Planet

Global Wildlife Trade

Connectivity conservation

Kelly Malsch
Head, Nature Conserved
Kelly.Malsch@unep-wcmc.org



NATURE RESTORED

JOHN TAYLEUR

Head, Nature Restored



Nature Restored



- Restoration for Sustainable Development (contribution to the UN Decade on Ecosystem Restoration, supporting efforts to restore functioning ecosystems)
- Ocean Recovery (supporting processes that improve national and international governance of oceans to scale up the restoration of coastal and ocean ecosystems)
- Sustainable Agricultural Landscapes (help understand trade-offs between different objectives in agricultural landscapes and improve policy coherence)

NATURE-BASED SOLUTIONS

VALERIE KAPOS

Head, Nature-based Solutions



Nature-Based Solutions



- Ecosystem-based Adaptation (support decision makers and practitioners on the role of ecosystem management in adaptation and resilience to climate change)
- Ecosystem-based Mitigation (support decision makers and practitioners on the role of ecosystem protection, restoration and sustainable use in mitigating climate change)
- Nature for Health and Well-being (strengthen the understanding how human health and well-being is dependent upon and linked to the health of nature)

NATURE ECONOMY

MATT JONES

Head, Nature Economy



Nature Economy



- Economy Transformations (work with governments, businesses and finance institutions to create an enabling environment for a nature-positive economy)
- Proteus Partnership (support best practice private sector decision-making towards nature-positive outcomes)
- Nature and Trade (identify leverage points to shift global supply chains towards nature-positive outcomes)
- Targets and Metrics for Business (measuring performance by businesses seeking to address their impacts on biodiversity)
- Finance for Nature (mobilise financing for nature-positive outcomes through tools such as ENCORE)
- Natural Capital Approaches (provide tools to promote the adoption of natural capital approaches at national level and within the private sector)

A photograph of a herd of deer in a field during a golden sunset. The deer are silhouetted against the bright, hazy sky. The scene is captured from a low angle, with some dark, out-of-focus vegetation in the foreground. The overall mood is serene and natural.

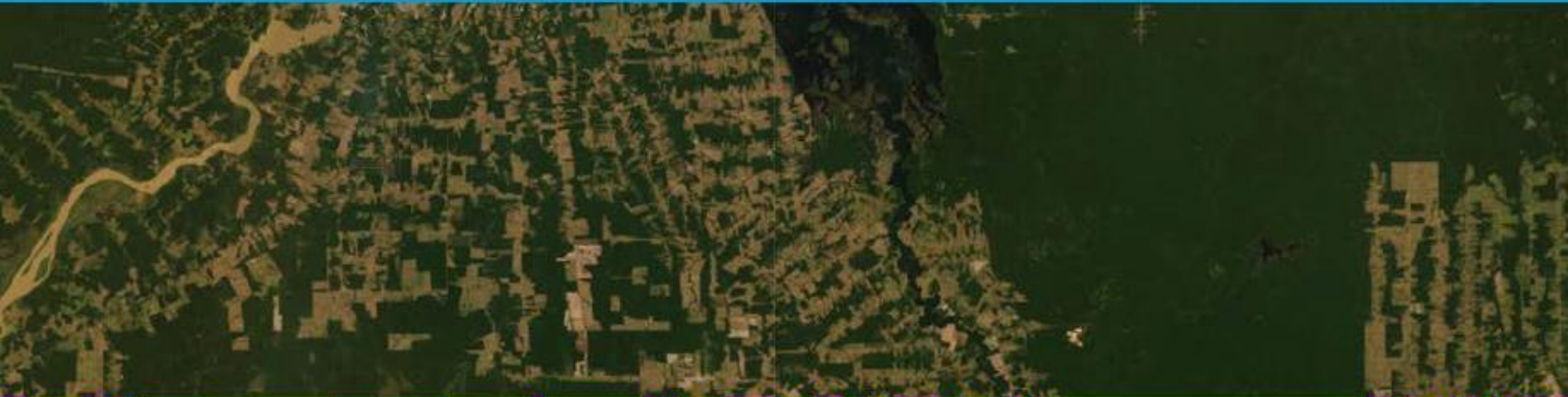
Innovation Areas

SCIENCE

SAMANTHA HILL

Deputy Head, Science





- Futures Modelling (use scientific innovation to develop scenarios and map pathways for sustainable futures and societal transformation)
- Nature Trends (use cutting edge research, including remote sensing and models, to explore changes in biodiversity and nature's contributions to people and their interactions with human well-being)

POLICY

MARIA JULIA OLIVA

Head, Policy



Policy



- International Policy and Conventions (support intergovernmental conventions and processes, including the UN Common Approach to Biodiversity and the post-2020 global biodiversity framework)
- Nature Indicators (support intergovernmental processes in developing and using biodiversity indicators, and building capacity for their adoption and use)
- National Ecosystem Assessments (support decision makers to assess biodiversity and ecosystem services and their contributions to society and human well-being)
- Nature, Gender and Rights (promote equitable and ethical approaches in policy and governance, and for the conservation and use of biodiversity)

DIGITAL TRANSFORMATION

BEN TREGENNA

Head, Digital Transformation



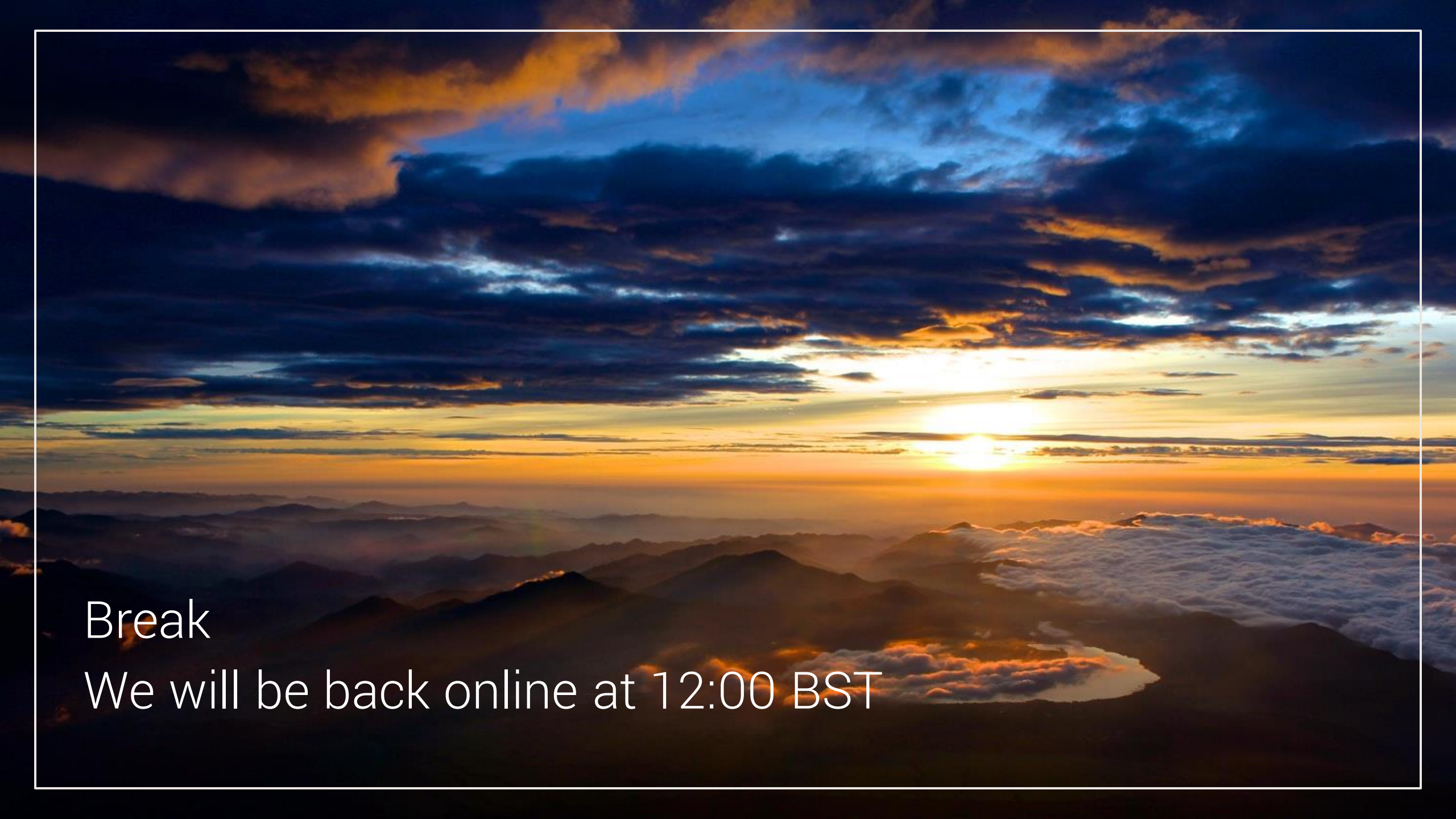
Digital Transformation



- Planet+ (provide leadership towards a digital transformation in the way data and knowledge on biodiversity is collected, analysed, accessed and used)
- Data Innovation (develop workflows and data pipelines to ensure the timely delivery of data and insights that assist decision-making)



Thank you



Break

We will be back online at 12:00 BST



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Proteus Partnership

Stacey Baggaley
Senior Programme Officer, UNEP-WCMC

Proteus Annual Meeting

2022

AGENDA

- Overview of 2021 finances
- 2022 workplan
- Proteus discussion areas





Overview of 2021 finances

PROTEUS 2021 FINANCIAL OVERVIEW

INCOME

Proteus income in 2021 is the total value of Partner MoUs*. Since 2020 was the last year of the previous phase, no funding was carried forward to 2021.

Total income: **£983,213**

*Discounting Additional Technical Assistance



PROTEUS 2021 FINANCIAL OVERVIEW

COFINANCE

Proteus is committed to leveraging financial contributions made by Partner companies at least one-to-one against other sources of funding.

Total 2021 cofinance: **£1,162,677***

Leverage ratio of
£1 : £1.18
for total
Partner
contributions**

Leverage ratio of
£1 : £29.6
for individual
Partner
contributions***

* based on UNEP-WCMC 2022 standard exchange rates

** calculated as: leveraged funding / total income

*** calculated as: (leveraged funding + total income – average Partner income) / average Partner income



PROTEUS 2021 FINANCIAL OVERVIEW

EXPENDITURE

Expenditure is all Proteus income used, including UNEP-WCMC staff time, expenses, and sub-contracted consultants*. Expenditure is calculated based on the Proteus 2021 workplan, which includes costs between January 2021 and March 2022.

Total expenditure: **£947,129**

Final balance: **£36,084**

*Discounting Additional Technical Assistance



Proteus 2022 workplan

PROTEUS 2021-2025 STRATEGY

Vision

A planet where business contributes to a clean, healthy, resilient environment for all.

This vision will not be achieved through Proteus alone. We recognise that Proteus is one part of a global push for transformative change. This vision represents the future to which Proteus aspires to contribute.

Mission

Support companies to be nature-positive.

The mission of Proteus will be achieved through clear goals, underpinned by annual work plans and deliverables. These goals recognise the imperative for sustainable development pathways and will be achieved not only through direct benefits to partners but through the wider outcomes of the Partnership. The results and impact of investment in Proteus are also delivered to governments and civil society in tackling the challenge of biodiversity loss.

Goals



1. Help companies recognize their responsibilities for nature and communicate the business case for its management. Proteus will secure buy-in and commitment within partner companies to change the way they manage their relationship with biodiversity.



2. Accelerate and scale decision support tools and capacity building to help improve corporate performance. Proteus will help companies address biodiversity-related risks, and to understand and manage their impacts and dependencies on biodiversity.



3. Strengthen and increase business engagement in the global policy agenda on nature. Proteus will help build shared understanding and alignment of objectives between global biodiversity policy at government and at private sector level. It will help facilitate implementation of the Global Biodiversity Framework.



4. Sustain a viable mutually beneficial partnership through cross-sectoral collaboration. Proteus will expand to new sectors to deliver sufficient resources for a lasting, sustainable and overwhelmingly positive impact for biodiversity conservation and corporate decision making.

PROTEUS 2022 WORKPLAN SUMMARY



1. Help companies recognize their responsibilities for nature and communicate the business case for its management.



2. Accelerate and scale decision support tools and capacity building to help improve corporate performance.



3. Strengthen and increase business engagement in the global policy agenda on nature



4. Sustain a viable mutually beneficial partnership through cross-sectoral collaboration.



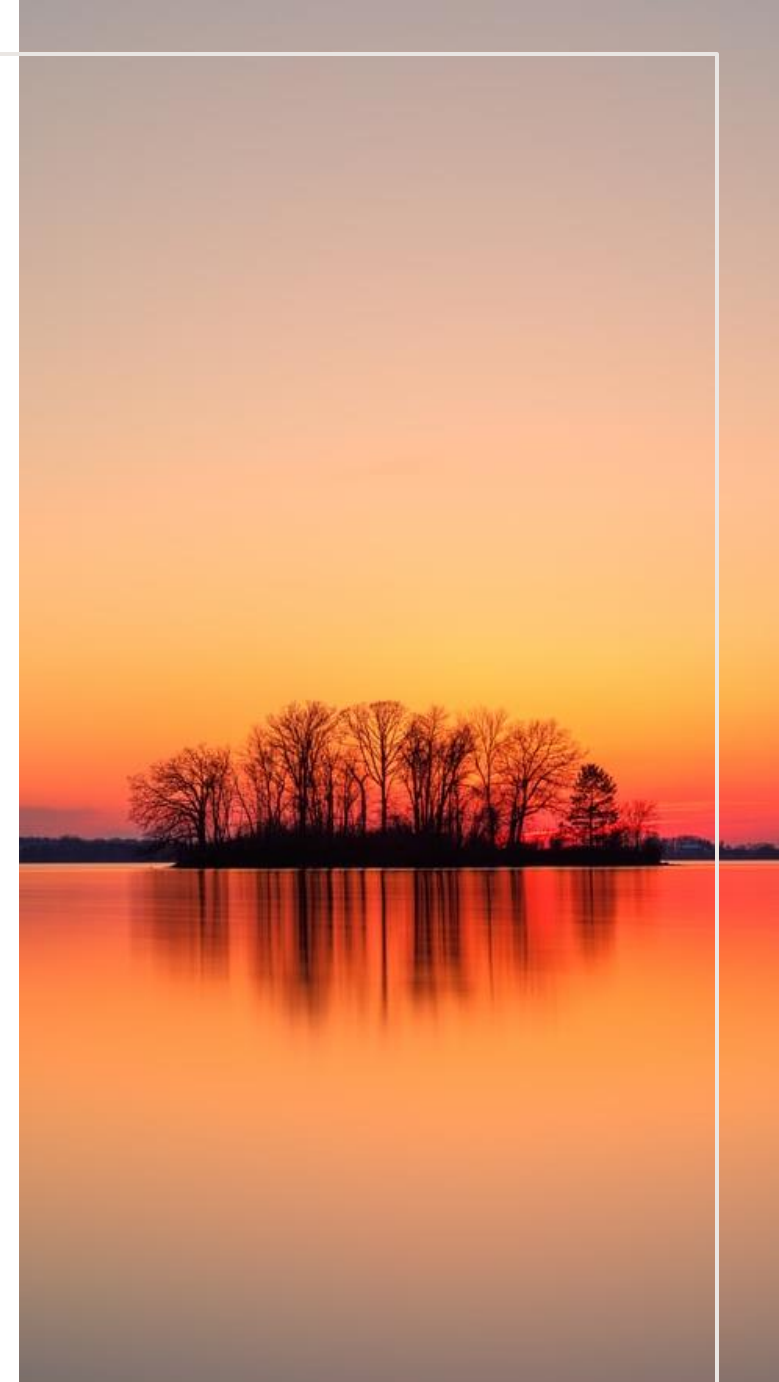
Some budget has also been held back as contingency to allocate based on Partner priorities after the Proteus Annual Meeting in June

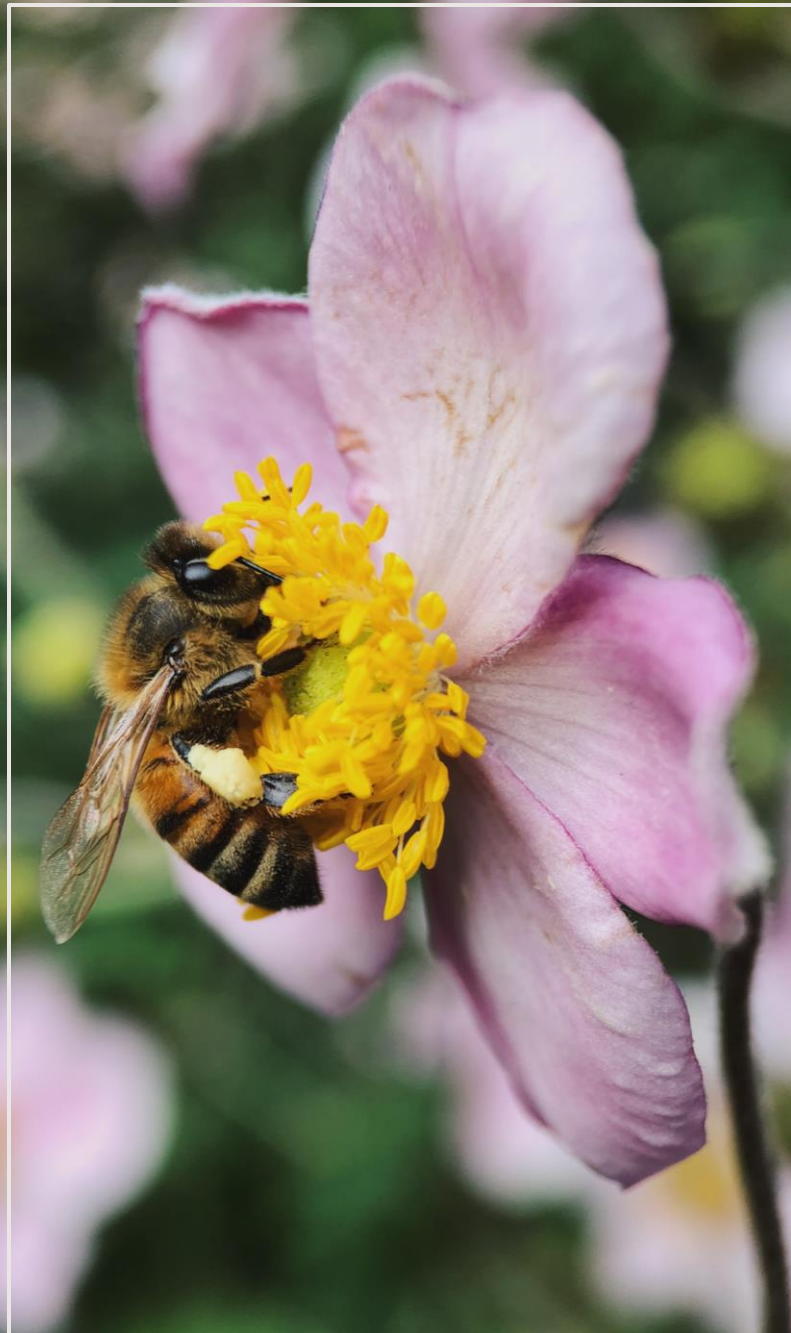


Proteus discussion areas

PROTEUS EXPANSION

- Across 2021 and 2022 (to date), three new partners have joined the Partnership. Entering advanced negotiations with one new partner.
- Progressing with the renewables expansion. Exploring options to expand to infrastructure and land-use.
- How can current partners help us to reach new sectors and businesses?
- What are the key events that we can use to engage with business?
- How would you like us to communicate with you about expansion progress and potential new partners?





WEBINARS AND TECHNICAL BRIEFS

- AM webinars average at 16 attendees and PM webinars average at 22 attendees.
- How do we increase attendance rate?
- How do we maximise opportunities for peer learning and engagement?
- Are there any other events you have engaged with that you've found impactful that we could learn from?
- Slightly revised approach to Technical Brief sharing to simplify the current process

IMPACT TRACKING

- Previous approach was an annual survey sent to partners. However response rate was low.
- Demonstrating the impact of Proteus and how it supports partner organisations to manage biodiversity is important to secure buy-in and shape the Partnership in future.
- What are the best ways to gather feedback on:
 - How you are currently using Proteus?
 - Stories of success?
 - Value of Proteus





PROTEUS ANNUAL MEETING

Feedback welcome across the meeting, please us know if you have any ideas/suggestions!

- How can we best structure future meetings to allow for hybrid attendance?
- Current format of a closed day for partners and remaining days open to observer companies. Do you find this format works well? What types of observer organisations do you value being involved?
- Is our approach to gathering partner feedback on the agenda and offering opportunities to speak working well?



Thank you



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Scaling up ambitions:
corporate approaches to
achieve biodiversity net gain

Sharon Brooks
Principal Specialist, UNEP-WCMC

Proteus Annual Meeting

2022

AGENDA

- Introduction
- Partner case study: Anglo American
- Partner case study: BP
- Peer-to-peer sharing and discussion





Introduction



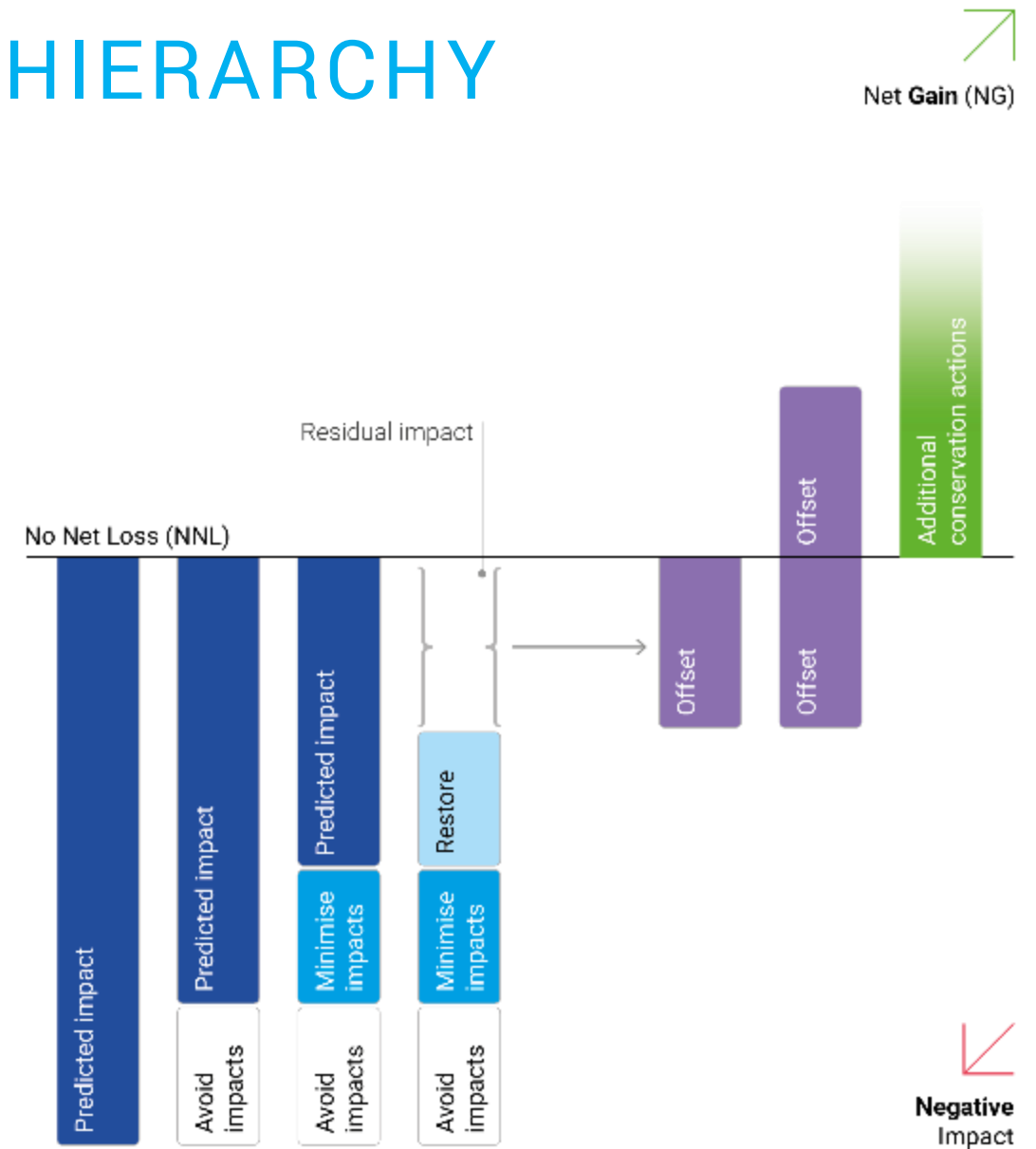
BIODIVERSITY NET GAIN / NET POSITIVE IMPACT

Net gains may be achieved through the development of a biodiversity offset and/or the implementation of programs to enhance habitat, and protect and conserve biodiversity. (IFC 2012)

A target for project outcomes in which the impacts on biodiversity caused by the project are outweighed by the actions taken to avoid, reduce, rehabilitate, and offset impacts. (IUCN, 2015)

APPLYING THE MITIGATION HIERARCHY

- Sequential steps to minimise negative impacts on biodiversity and achieve NNL or BNG/NPI.
- Additional Conservation Actions (ACAs) refers to a wide range of interventions intended to be positive for biodiversity and ecosystem services (BES).



GROWING PARTNER COMMITMENTS TO NPI/BNG

“Our new projects in areas rich in biodiversity...will have a net positive impact on biodiversity...”



“Our nature-based solutions projects...will have a net positive impact on biodiversity...”

From 2023, require new Equinor operated development projects located in protected areas or areas of high biodiversity value¹ to develop a plan including additional measures aiming to demonstrate net positive impact.



“To deliver net positive impact (NPI) across Anglo American through implementing the mitigation hierarchy and investment in biodiversity stewardship.”



“We will aim to achieve a net positive impact on biodiversity in our new projects.

From 2022 onwards, new bp operated projects...[that] have the potential for significant direct impacts on biodiversity will be required to develop net positive impact action plans for those activities”



LINKS TO NATURE-POSITIVE

Systematic application of the mitigation hierarchy to achieve biodiversity net gain can be a part of a suite of actions towards nature-positive, but achievement of nature-positive requires wider transformations, commitments and actions.

ASSESS & PRIORITIZE

Assess realms of nature (biodiversity, freshwater, land, oceans) potentially relevant to operations and the value chain, and prioritize impacts, dependencies and opportunities for regeneration.

COMMIT

Set a baseline* and commit to ambitious, time-bound, science-informed goals and targets to both halt and reverse the loss of nature.

*The Global Goal for Nature suggests a baseline of 2020 for zero net loss of nature

MEASURE & VALUE

Use validated, inter-related indicators to measure nature outcomes that inform decision-making.

ACT

Systematically apply the mitigation hierarchy within and beyond corporate operations to reduce pressures and have positive contributions across your value chain.

TRANSFORM

Collaborate to achieve nature-positive outcomes across all spheres of control and influence, including policy, financing and capacity building.

DISCLOSE & REPORT

Prepare to disclose material nature-related information



Partner Presentations



Delivering Net Positive Impact

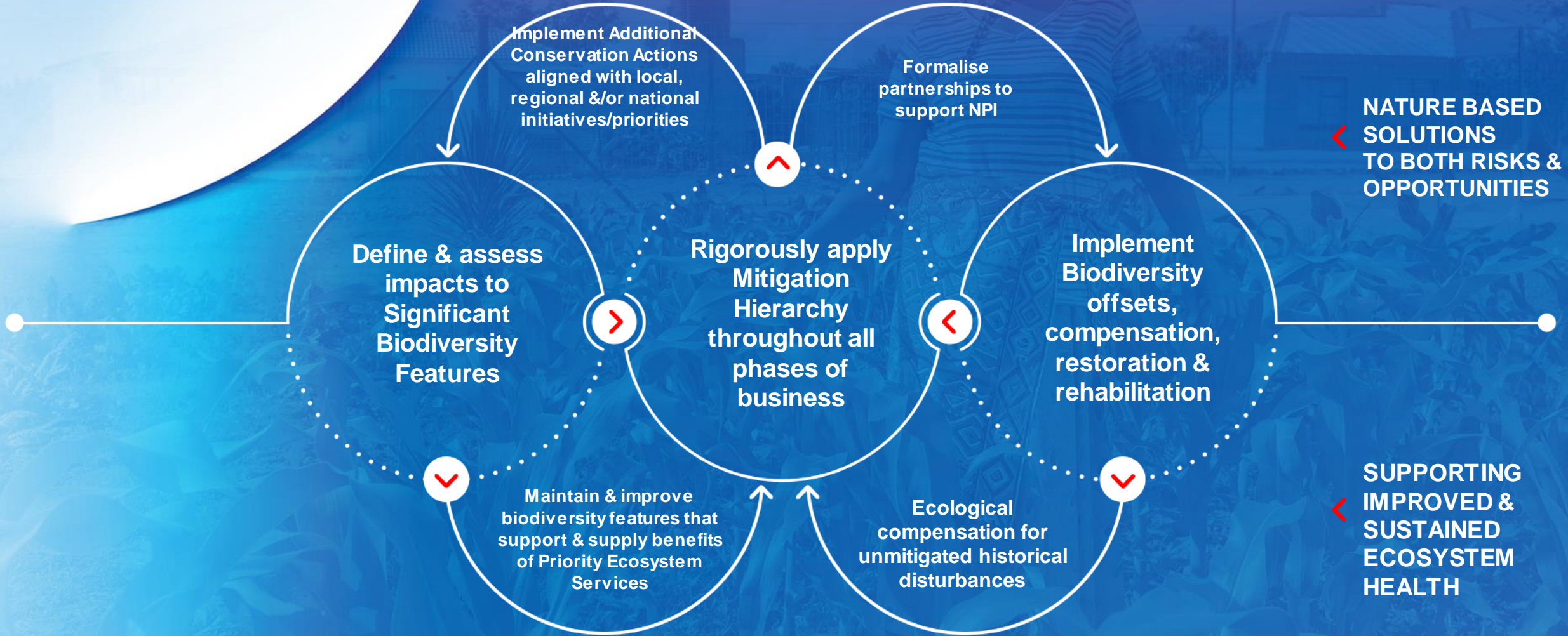
Proteus Annual Meeting

June 2022





MINIMUM REQUIREMENTS FOR DELIVERING NPI



Deliver Net Positive Impact across Anglo American through implementing the mitigation hierarchy and investment in biodiversity stewardship

The need for a Spatial Approach

Asses

Use spatial data to identify significant biodiversity features

Measure, set & disclose

Use baselines & meaningful indicators, set bold targets & share progress

Track

Report on progress, use power of big data, adapt, share & advocate for nature positive action

Interpret & prioritise

Prioritising where and who to partner with for collaboration

Act

Committing to NPI @site and then deliver nature positive outcomes within landscape

Acting with more ambition at a Landscape level



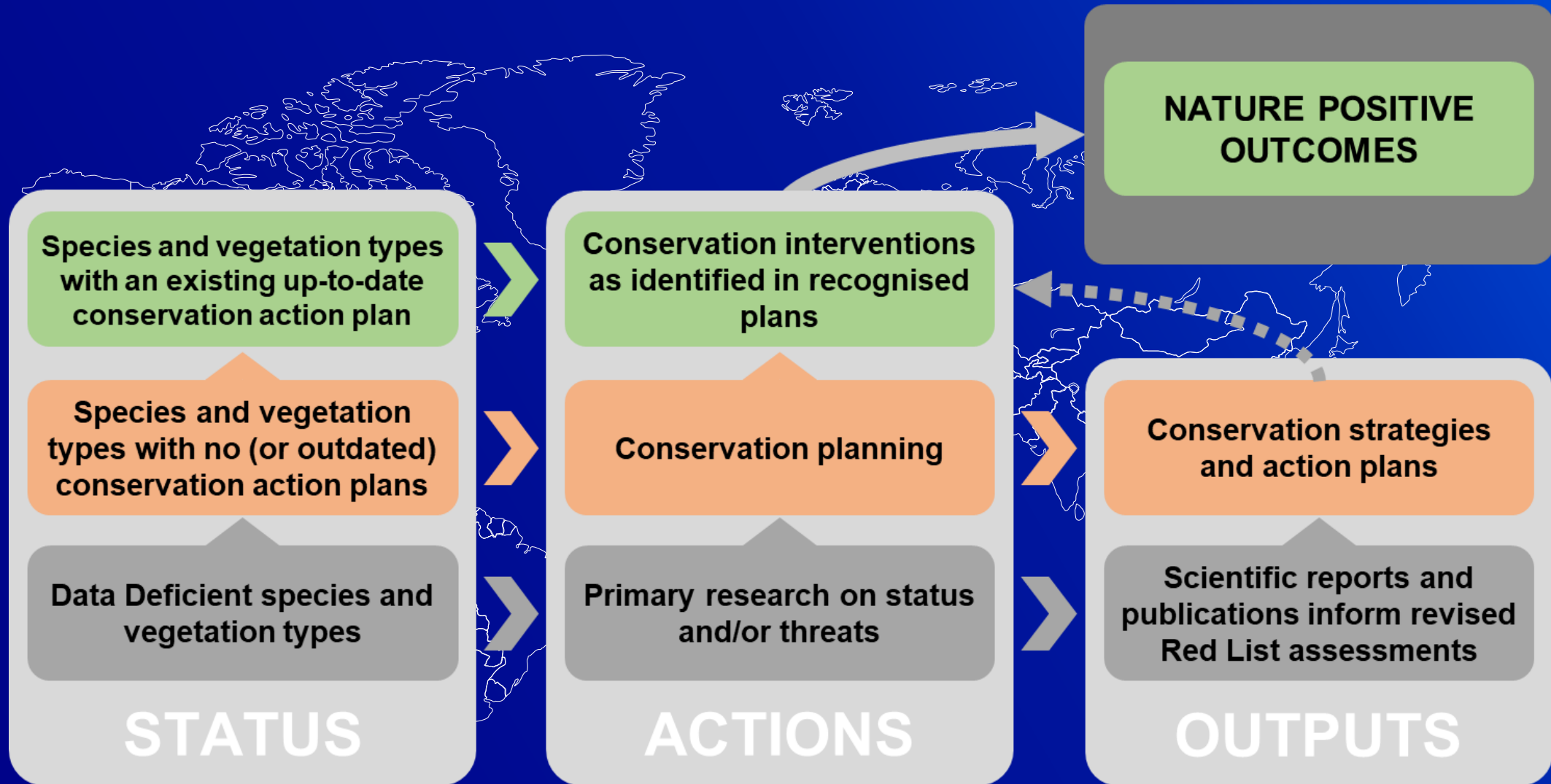
Nature loss needs scale just like Climate Change & Carbon Reduction so we need to act beyond our boundaries

Connecting Nature & Biodiversity Goals to National Agendas

Knowing how our land assets tie-up with others to create scale and impact

Understanding more about natural capital at the microscopic level means we can drive more integrated outcomes

Nature positive outcomes



Questions?

bp biodiversity

#for nature

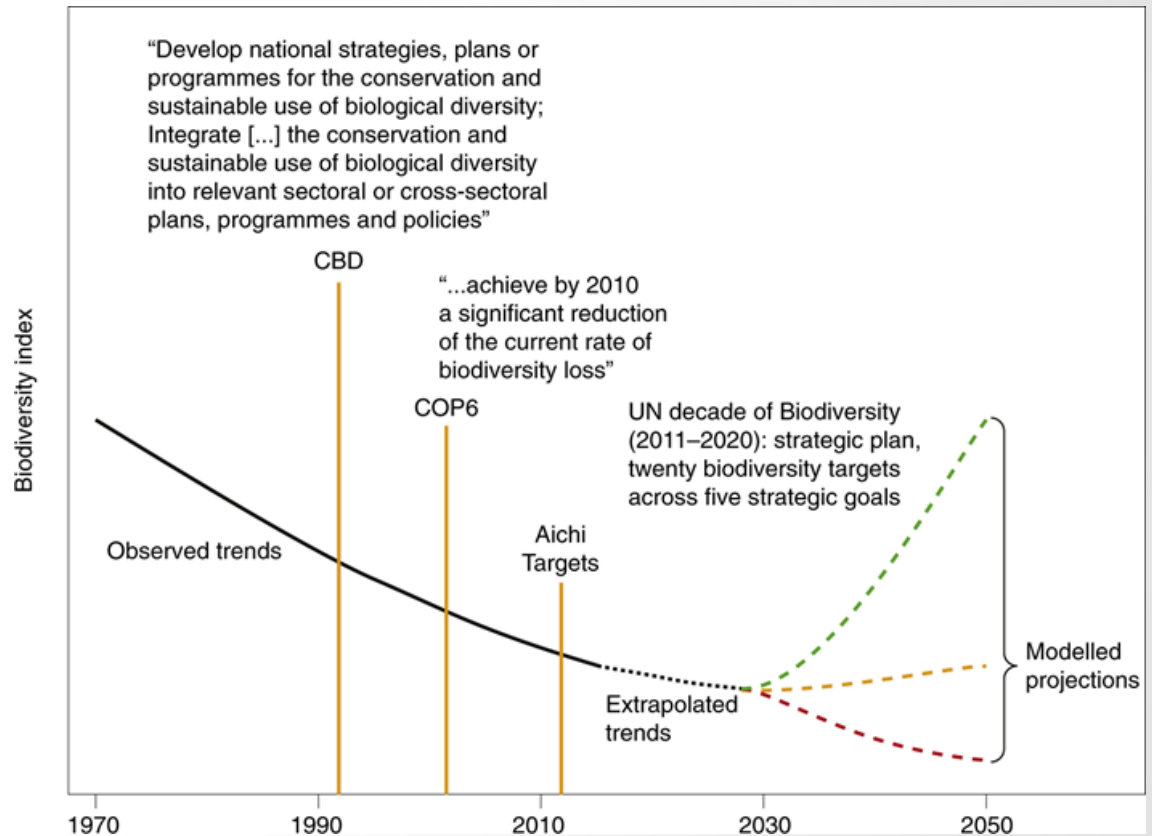
#for people



Why is biodiversity important for bp and why now?



- Intrinsic links between the need for **global action on biodiversity and climate change**
- ...and **biodiversity is essential for communities**, their livelihoods and economic stability (i.e. water, food & cultural values).
- UN CBD draft **post-2020 global biodiversity framework** is expected to set out five goals (for 2030 & 2050) and specific targets to halt and then reverse the decline in biodiversity - “bending the curve”
- ...and to include explicit **reference to the private sector having a role** in addressing biodiversity decline (i.e. mainstreaming).



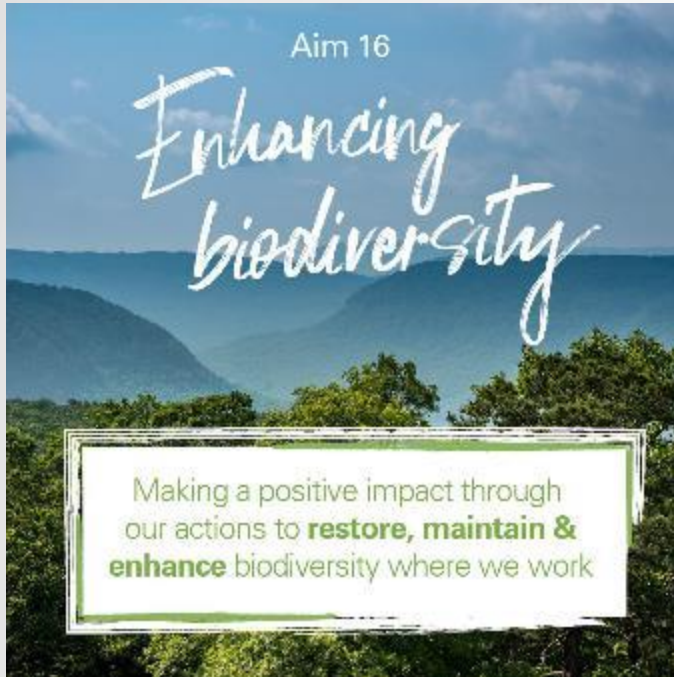
bp sustainability frame & biodiversity position

In support of our purpose – to reimagine energy for people and the planet, and the wider sustainability frame.

We are taking action - to help restore, maintain and enhance biodiversity.



Aim 16: Enhancing biodiversity



From 2022 we will be implementing three new biodiversity objectives, which build upon our existing practices:

- **Objective 1:**
We will aim to achieve a net positive impact on biodiversity in our new projects
- **Objective 2:**
We will aim to enhance biodiversity around our existing major operating sites.
- **Objective 3:**
We will support biodiversity projects in countries where we have existing and growing investments.

No-go commitment

We commit not to operate any new oil and gas exploration or production activities inside the boundary of:

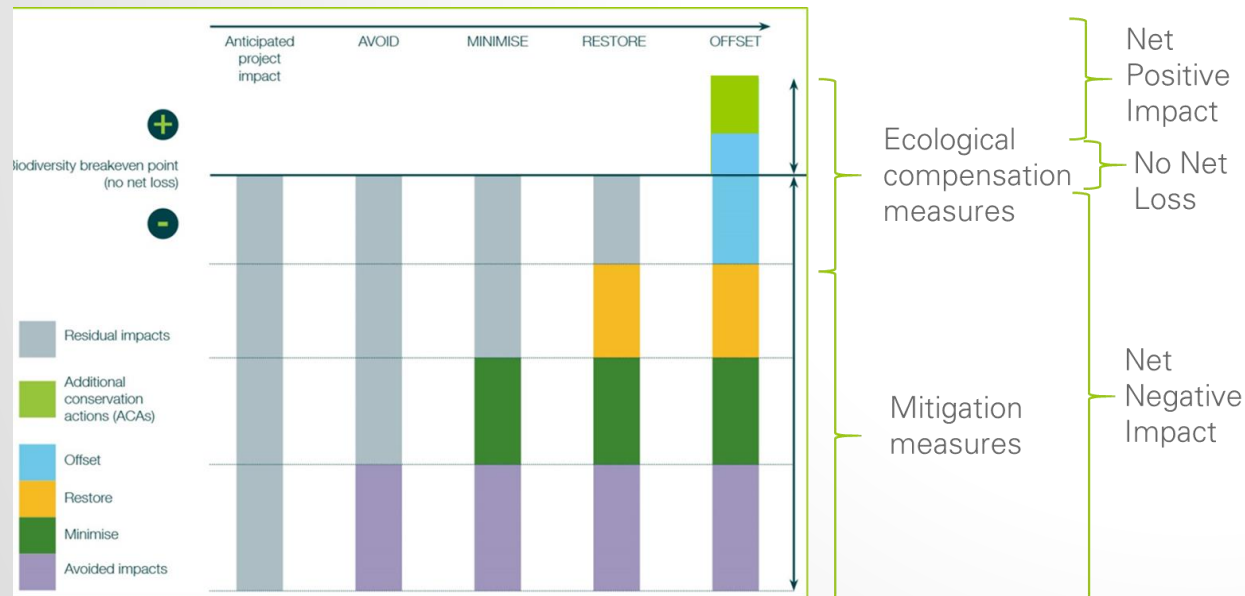
- officially inscribed UNESCO World Heritage sites;
- Strict Nature Reserves (IUCN Ia) or Wilderness Areas (IUCN Ib) as listed by IUCN on 1 January 2020



Objective 1: Net positive impact in new projects



- Aim to achieve a net positive impact on biodiversity at the **project-level** through the application of the **mitigation hierarchy**.
- “The biodiversity gains are evaluated against a **baseline** (i.e. a reference point or trajectory without the project occurring, or prior to the project occurring) of the relevant biodiversity features being impacted by the project.” (IUCN, 2016)



Net Positive Impact:

A target in which the negative impacts on biodiversity caused by a project are outweighed by *measurable* outcomes from actions taken in accordance with the *mitigation hierarchy* to achieve *socially sustainable* biodiversity gains.

The **NPI methodology** will be appropriately scalable and adaptable for individual projects, including flexibility in the application of the mitigation hierarchy.

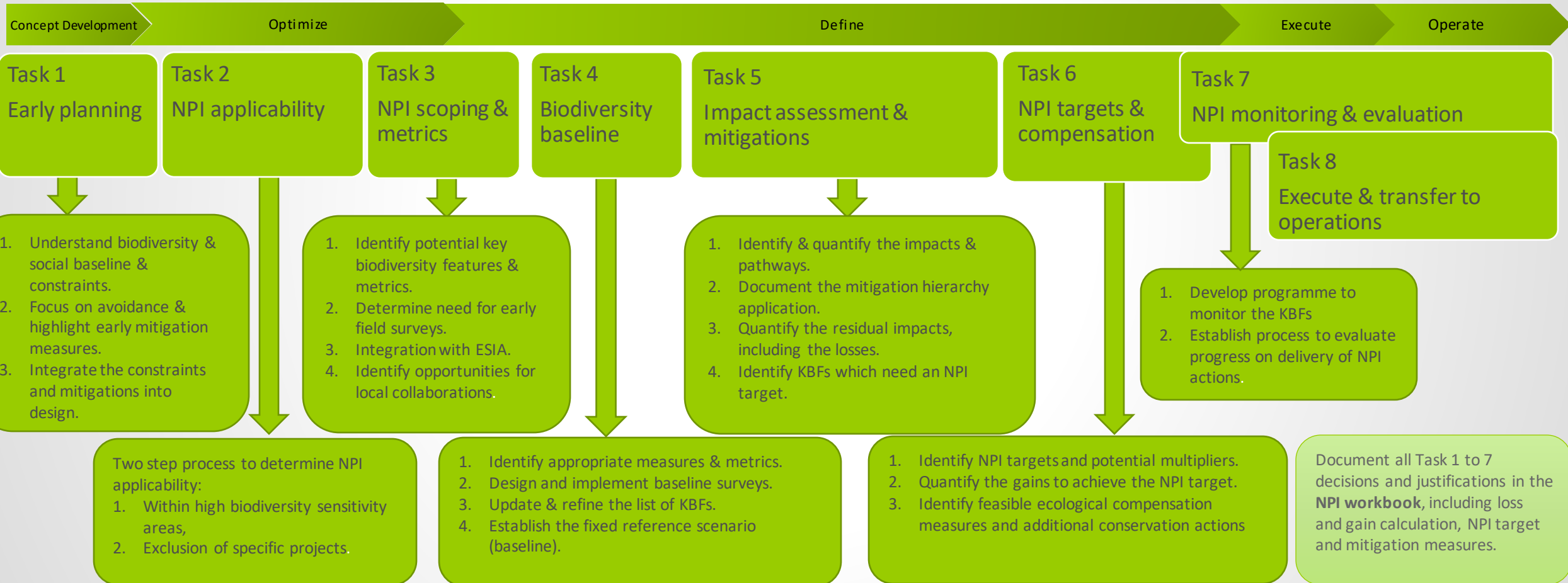
NPI principles



- 1. Understand the biodiversity baseline** – Assess and periodically review the state and the pressures on biodiversity in the landscape/seascape in which the asset is located.
- 2. Avoidance** - Focus on avoiding impacts to biodiversity early on and throughout the asset lifecycle.
- 3. Apply the mitigation hierarchy** – Adopt the mitigation hierarchy throughout but recognise some impacts cannot be avoided and therefore need to be minimized, restored, or offset.
- 4. Lasting positive impacts** – Aim for the actions taken to deliver gains to last for at least the duration of the impacts, and longer where feasible.
- 5. Wider landscape/seascape** - Take into account the area in which the asset will operate and understand any implications that this may have on biodiversity.
- 6. Additionality** - Deliver positive outcomes that would not have otherwise been achieved in the absence of the action being undertaken.
- 7. Equivalence** – Mitigation and ecological compensation measures (e.g., biodiversity offsets) need to aim to be ‘like or better’.
- 8. Engagement** – Consult, engage and involve local communities and affected people. Where relevant seek to apply the principles of Free, Prior and Informed Consent (FPIC).
- 9. Use of nature by people** – Seek to incorporate actions that not only benefit biodiversity, but also help to improve people’s lives, and promote inclusion, equality, equity, and sustainable livelihoods.
- 10. Traditional and local knowledge** - Recognise traditional knowledge and use of natural resources by local communities, including indigenous peoples and other groups whose livelihoods depend on biodiversity.

NPI methodology

Eight tasks applicable projects work through to develop the NPI action plan



Iterative process



1

Understand the biodiversity sensitivities and features which are within the area of influence of the project (Task 1 & 3)



2

Assess the baselines, identify those features in the area (Task 4) – **potential Key Biodiversity Features**



3

Re-assess the potential KBF, based on additional data from the impact assessments (Task 5) – **Key Biodiversity Features**



4

Into operations
Continuously review the KBF during monitoring (Task 7 & 8)



Continued review (annual) of NPI workbook
Monitoring may show KBFs are no longer impacted



Early learnings



- Technically challenging, new terms and concepts will take time to understand & embed
- Applicability of NPI (i.e. not all projects)
- More effort required in (baseline) monitoring, and earlier
- Metrics, what to measure and how?
- Need for a realistic timeframe and action plan (resourcing)
- Planning for cost implications
- Documentation of decisions and assumptions
- Globally agreed targets?
- Not just Oil & Gas



Objective 2: We will aim to enhance biodiversity around our existing major operating sites.

- From 2022 we require bp major operating sites to have plans to enhance (restore, conserve and improve) local biodiversity...starting with sites in biodiversity sensitive areas (e.g. Tangguh, Indonesia).
- NPI for existing operations is not required.
- Enhancement measures which are not mitigations for the impacts from the operations.
- Measures may include, creating new wildlife habitats, improving existing areas for biodiversity, planting native trees, research and outreach for conservation, etc.



Objective 3: We will support biodiversity restoration and the sustainable use of natural resources in countries where we have existing and growing investments.

- Conservation projects to deliver practical solutions and measurable benefits for the conservation of biodiversity and sustainable use of natural resources.
- Projects are to be identified and managed in collaboration with global and local conservation organisations, based on agreed selection criteria and process (to be developed).
- Conservation projects that will need to seek socially acceptable opportunities to enhance biodiversity – consultation, engagement and participation of local communities being key.

Thank you

For further details contact:
Maarten Kuijper
Maarten.Kuijper@uk.bp.com





Discussion Questions

PEER-TO-PEER DISCUSSION

- How is your organisation currently approaching BNG/NPI and what is the scope of your commitment (e.g. site-level, corporate-level)?
- What challenges are you experiencing and what solutions are you putting in place to address these?
- How are you currently using biodiversity data, including Proteus data / tools, in prioritisation, implementation and screening to support BNG/NPI/NNL?





Thank you



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Location-based biodiversity performance measurement

Jacob Bedford
Programme Officer, UNEP-WCMC

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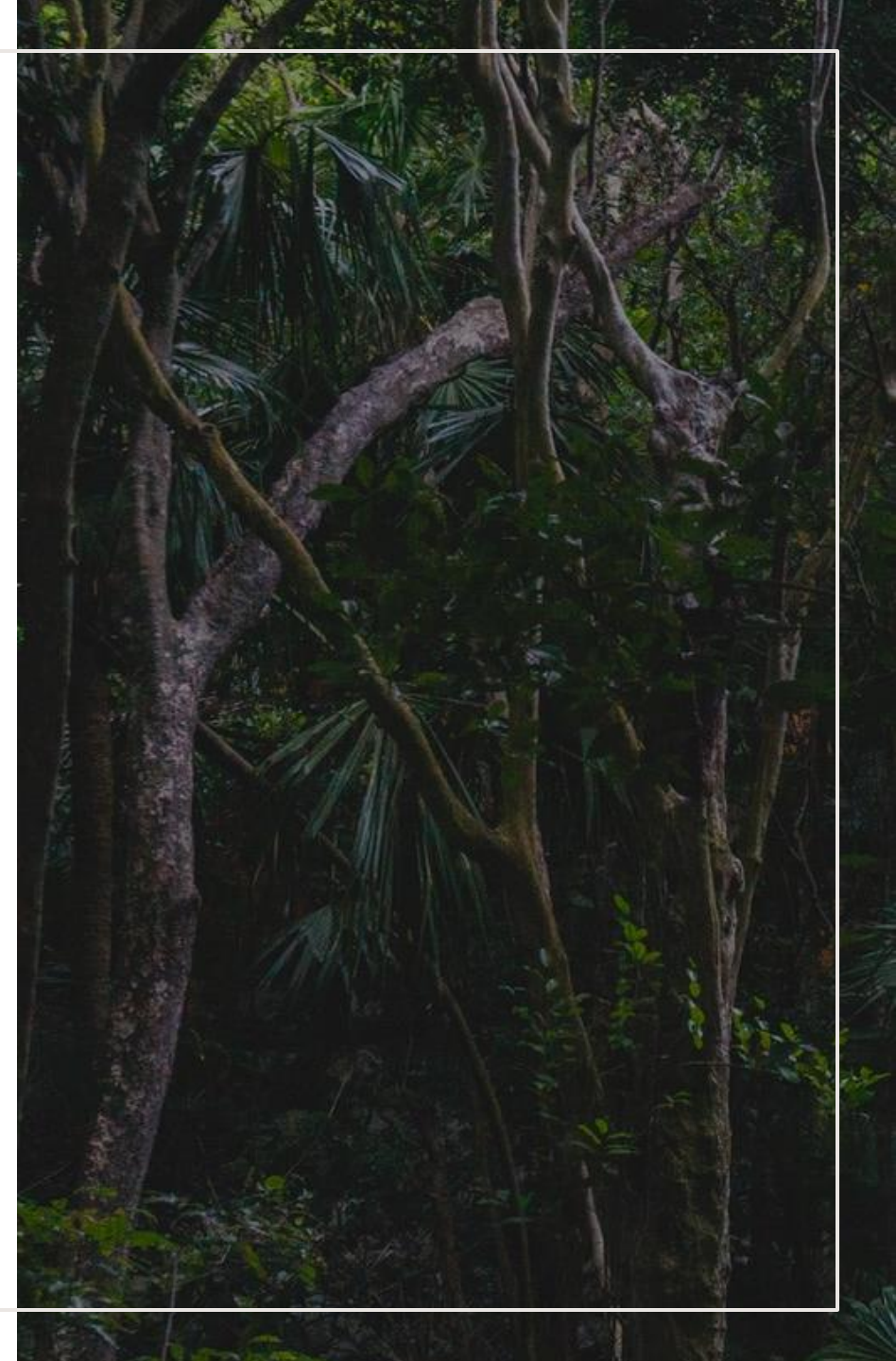
2022



Overview of Biodiversity Measurement

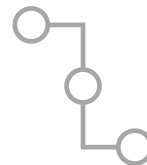
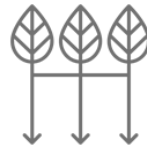
CORPORATE BIODIVERSITY MEASUREMENT - A COMPLEX LANDSCAPE

- Multiple drivers for performance measurement, including increased momentum around reporting and disclosure
- Multiple initiatives and standards emerging
- Multiple metrics, tools and frameworks available/in development

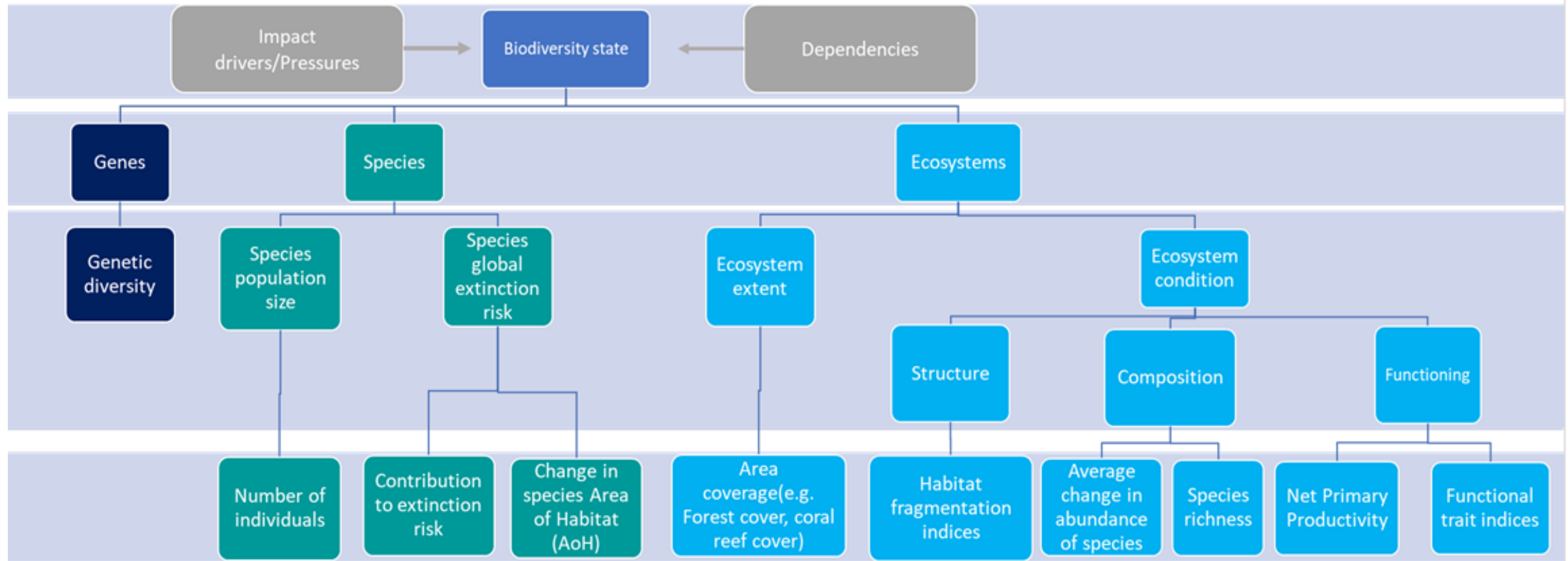


CUTTING THROUGH THE COMPLEXITY

- Screening risks and opportunities
- Measuring biodiversity impacts and tracking performance
- Direct operations (site/project level)
- Outside of direct control (value chain)



ASPECTS OF BIODIVERSITY TO MEASURE



Methodology characteristics



Align

Aligning
accounting
approaches
for nature



Spatial precision
of state
measurement



Accuracy of
measurement

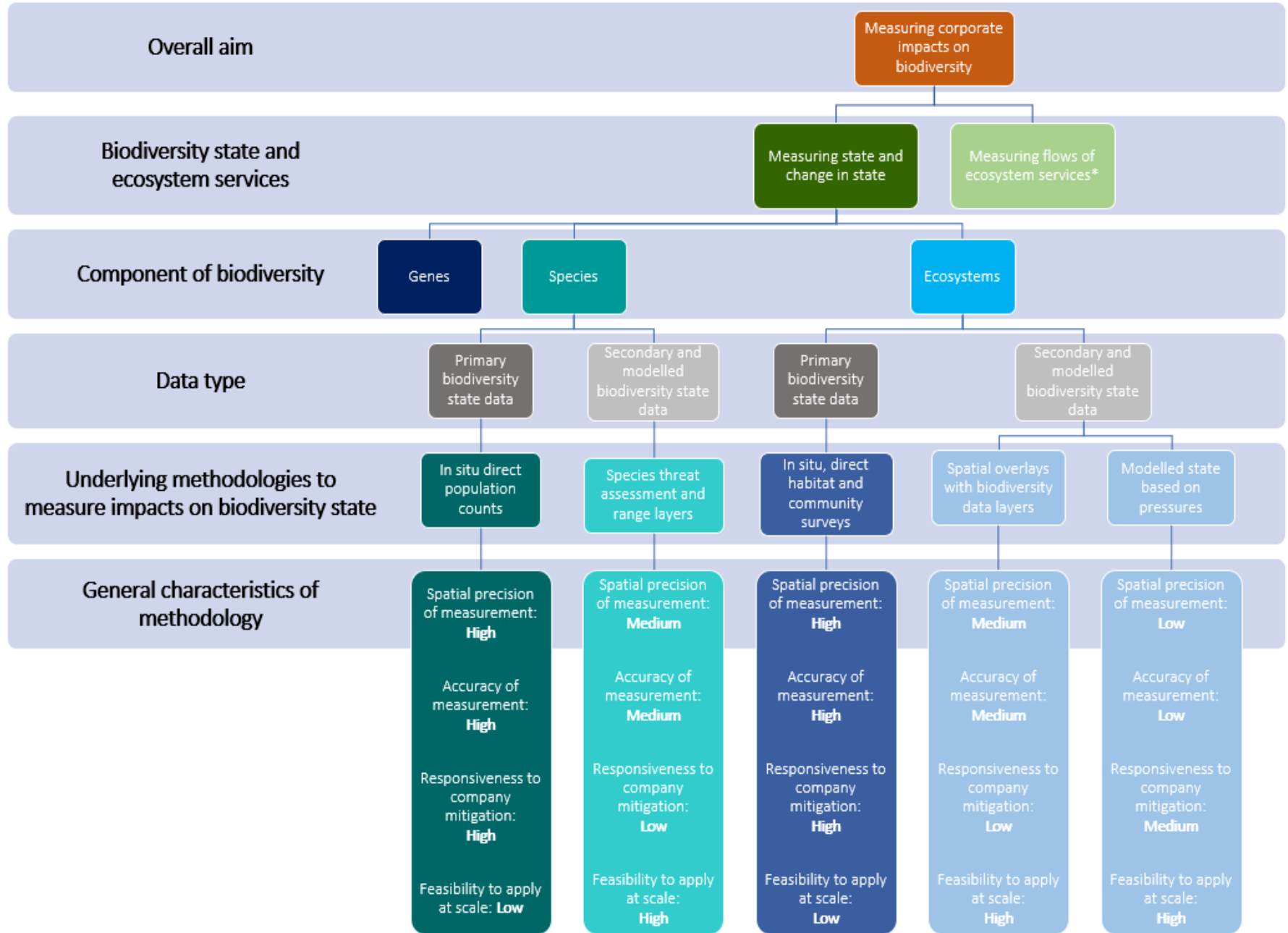


Responsiveness of
measurement to
mitigation



Feasibility to
apply at scale

OVERVIEW



EXAMPLE - BIODIVERSITY INDICATORS FOR SITE-BASED IMPACTS

- Pressure – state – response indicators
- Risk screening and impact measurement
- Covers material ecosystems and indicator species
- Assessed through primary data (field surveys/remote sensing) and secondary data (geospatial data layers)

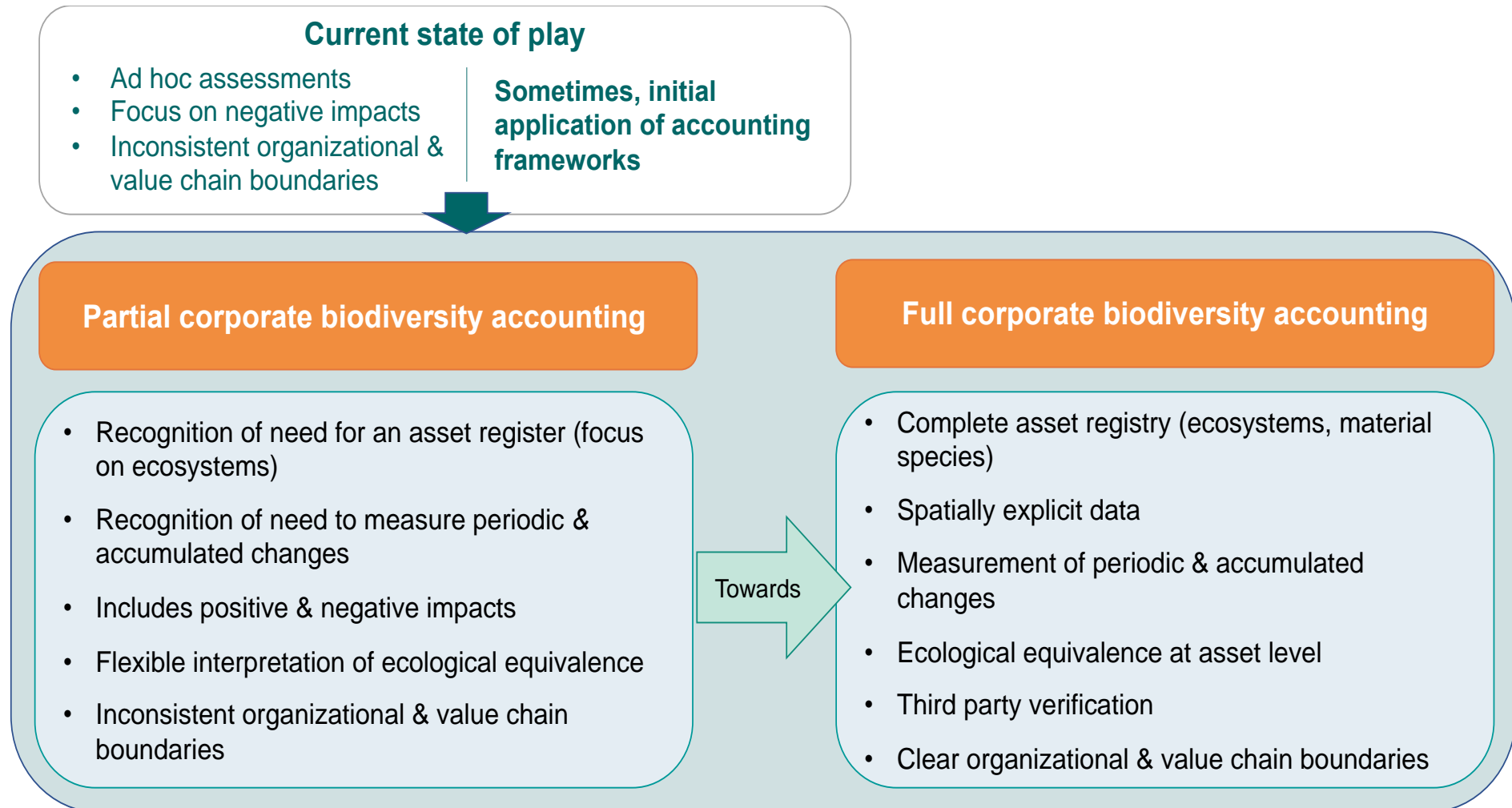


Biodiversity indicators for site-based impacts

Methodology Document



MOVING TOWARDS BIODIVERSITY ACCOUNTING



A large, gnarled Joshua tree stands prominently in the center of a desert landscape. The tree has a thick, textured trunk and several arms reaching out, each topped with clusters of spiky green leaves. The ground is covered with dry, yellowish-brown grasses and small shrubs. In the background, there are rolling hills and mountains under a bright blue sky with scattered white clouds. The overall scene is a classic representation of a desert environment.

Site-based Technical Criteria

Site and project level

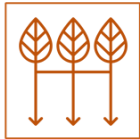
Good practice

Best practice

Screen



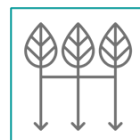
Measure



Screen



Measure



What to measure

- Potential presence & proximity to material species & ecosystems
- Potential impacts based on **sector-average impact drivers**

- Ecosystem extent & condition indicators; or
- Measurement of material impact drivers (at least land use change)
- Periodic measurements that start from a baseline, & measurements that reflect changes in state resulting from company-specific impact drivers

- Potential presence & condition of material species & ecosystems, results **ground-truthed**
- Species extinction risk indicators
- Potential impacts based on **company specific impact drivers**

- Ecosystem extent & condition for **individual ecosystem assets**
- Species extinction risk indicators
- Periodic measurements that start from a baseline, & measurements that reflect changes in state resulting from **site-level mitigation measures**
- Based on primary data on **material impact drivers**

Characteristics of measurement approach

- **Feasibility (screening) – High** (able to apply screening at multiple sites)
- **Spatial precision– Medium**
- **Accuracy– Medium** (measures reflect potential presence & impacts on species and ecosystems, but are not ground-truthed)

- **Responsiveness - Medium** able to reflect how changes in pressures affects biodiversity state
- **Spatial precision– Medium**
- **Accuracy– Medium** (measures reflect potential presence & impacts on species and ecosystems, but are not ground-truthed)

- **Feasibility (screening)– High** (for screening, able to apply for screening at multiple sites)
- **Spatial precision– High** (captures species and ecosystems at site level)
- **Accuracy– High** (measures reflect actual, ground-truthed presence of/ impacts on species and ecosystems)

- **Responsiveness (measuring impacts)-** reflects effects of site-level mitigation measures
- **Spatial precision– High** (captures species and ecosystems at site level)
- **Accuracy– High** (measures reflect actual, ground-truthed presence of/ impacts on species and ecosystems)

Most applicable methods

- ✓ Spatial overlays with static biodiversity data layers (ecosystem extent/condition)
- ✓ Species threat & range layers
- ✓ Screening using modelled state based on pressures

- ✓ Primary data based on surveys
- ✓ Measuring using responsive biodiversity data layers
- ✓ Measuring using modelled state based on pressures

- ✓ Modelled state based on pressures (**using company specific impact driver data**) for screening only
- ✓ Species threat & range layers

- ✓ Primary data based on surveys



Partner Presentations



Isaac Najera Cuenca
Respol

Reads

Valuing and accounting
impacts on natural capital



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Context

Reads

The increasingly important need to measure environmental impact, and its repercussion on the economy, is leading to the establishment of standards and methods that incorporate the concept of **Natural Capital valuation** into decision-making at all levels.

Consequently, Global Leaders are beginning to **measure and report** their impacts using **natural capital metrics**. This approach allows to answer questions from partners, financial institutions, NGOs and governments.

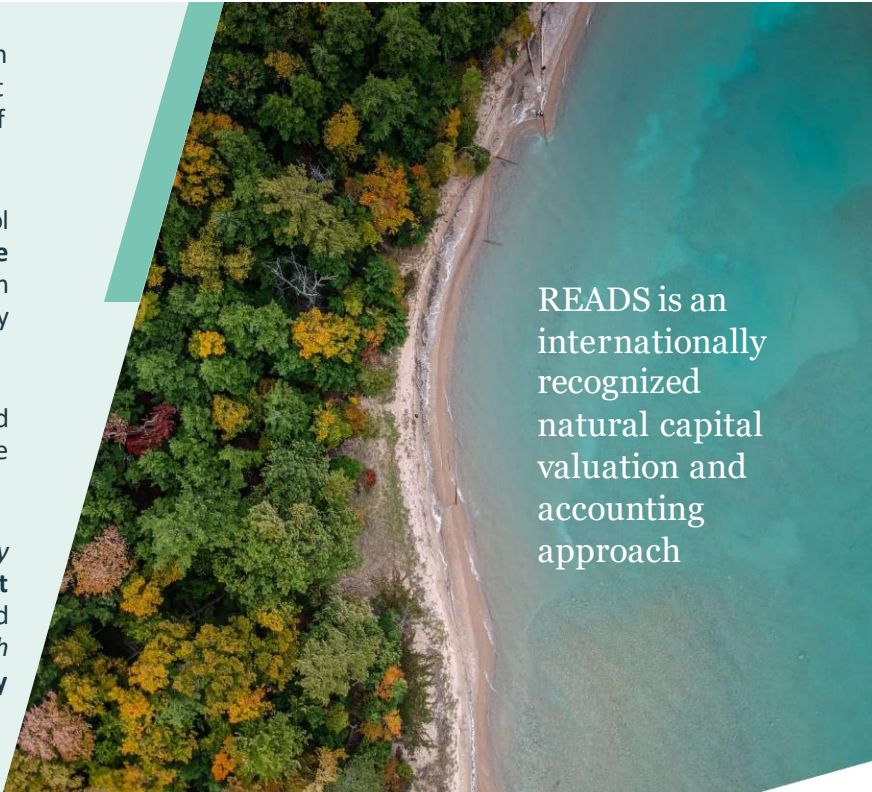
Natural capital is the stock of natural resources (e.g., air, water, biodiversity) that **bring value to society**. Value can be expressed in **monetary terms**, but also in quantitative/ qualitative terms.

Natural capital assessments can provide actionable information about the total value/net impact of individual entities and of portfolios.

READS is an innovative digital tool **designed to improve corporate decision making** by valuing impacts on Natural Capital. It is 100% owned by **Repsol** and commercialized by **Indra**.

Our approach has been peer-reviewed by the **Capitals Coalition** and the **UNEP-WCMC**.

READS is being accepted as a *highly relevant method* for the **Transparent Project** and considered as a valid *biodiversity measurement approach* by the **EU Business @ Biodiversity Platform**.



READS is an internationally recognized natural capital valuation and accounting approach



READS enables improved management by providing several KPIs (Key Performance Indicators) for the economic analysis of projects and assets, focusing on 4 main pillars:

- Ecosystem services
 - Water resources
 - Climate change
 - Social well-being
- Intrinsically linked with biodiversity*

READS conforms to the **Natural Capital Protocol** and its **Biodiversity Guidance**, as well as the **ISO 14008:2019** on Monetary valuation of environmental impacts.

The Natural Capital Protocol

The Protocol is a standardized framework for business to identify, measure, and value their direct and indirect impacts (positive and negative) and dependencies on natural capital.

It is designed to help generate trusted, credible, and actionable information that business managers need to make informed decisions.

ISO 14008:2019

This document provides a framework that includes principles, requirements and guidance for the monetary valuation of environmental impacts.

Monetary valuation methods on this Standard can also be used to value real or potential impacts on natural capital, for example, abiotic resources, biodiversity and ecosystems services. It includes environmental and risk management methods, such as cost-benefit analysis, risk and life cycle assessments.



Methodology

Reads 



Identify material environmental aspects and impacts

Physical presence <ul style="list-style-type: none">▪ Occupation▪ Disturbance & nuisances▪ Territory fragmentation▪ Collisions and electrocutions▪ Lighting	Emissions <ul style="list-style-type: none">▪ Dust▪ Vehicles▪ Combustion processes▪ Fugitives▪ Venting▪ Flaring	Discharges <ul style="list-style-type: none">▪ Drainage▪ Sewage▪ Cooling▪ Drilling▪ Process and production chemicals
Resources use <ul style="list-style-type: none">▪ Water▪ Energy	Noise <ul style="list-style-type: none">▪ Transport road, marine, air▪ Industrial processes▪ Civil works	Materials and waste <ul style="list-style-type: none">▪ Hazardous▪ Non-hazardous▪ Contaminated sites



The approach is flexible and configurable. The user selects and combines the environmental aspects and impacts according to the conceptual model of the site.

Methodology

Reads



Quantify Biophysical Impact Units (BIUs)

Ecosystem services	Climate change	Water resources	Social well-being
Ha, dB, t	T CO ₂ eq	m ³	t

BIUs amount the potential magnitude of impacts with:

- **Direct inputs**
- **Calculations**
 - Emissions: stacks, flares
 - Discharged to sea: produced water, drilling waste
 - Discharged to rivers: process and production chemicals
 - Onshore noise: roads, helicopters, industrial sources
 - Offshore noise: vessels, airguns
 - Visual: power lines, windmills, facilities
 - Wildlife: collision, electrocution



Calculations are only for ecosystem services & biodiversity. Outcomes are based on screening models that estimate upper bound impacts



Methodology

Reads



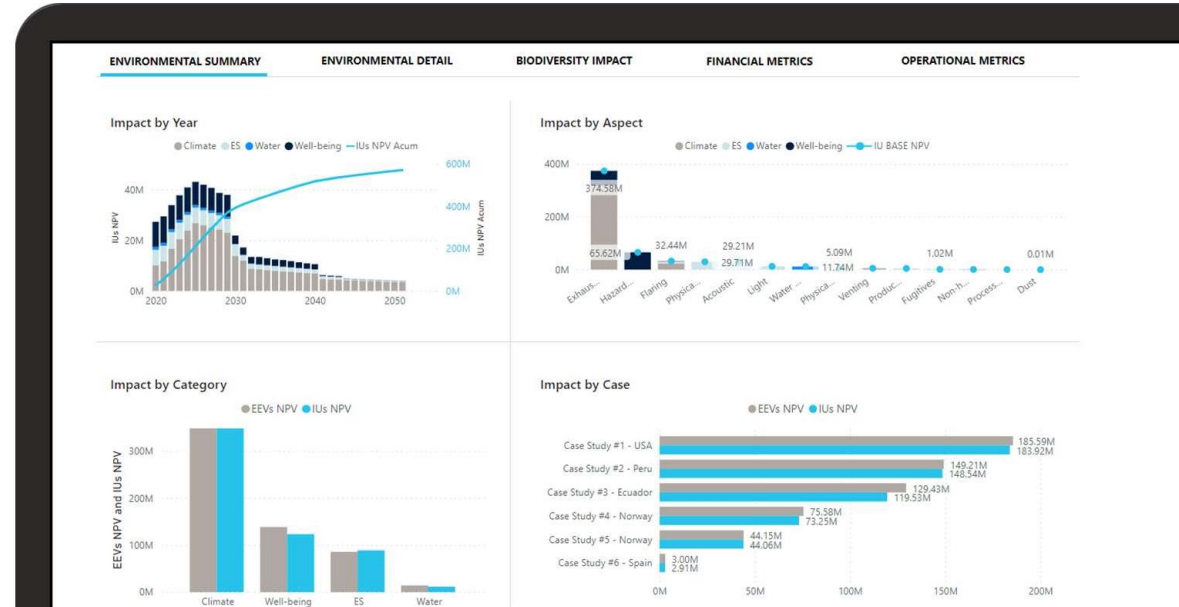
Valuation of impacts Metrics

Natural capital gain/ loss is measured in:

- **Environmental Economic Values (EEVs)**, monetized as US\$ (2018)
- **Impact Units (IUs)**, calculated from the EEVs to improve the valuation accuracy/ representativeness by using local adjustments that cannot be subjected to monetary valuation

EEVs/IUS are expressed in **Net Present Value (NPV)** so that the valuation considers the time value of money and better informs decision-making.

This information helps to focus on most material aspects and to simulate mitigation measures from a CBA standpoint.



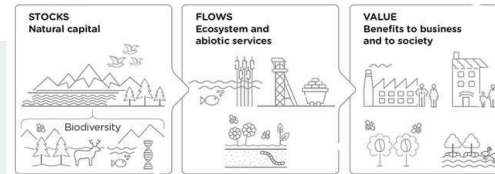
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Methodology

Reads 



Valuation of impacts Biodiversity



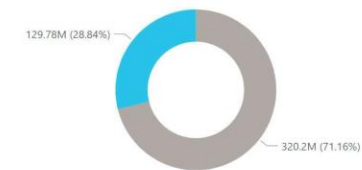
Cambridge Conservation Initiative & Capitals Coalition. 2020.

READS produces **biodiversity-inclusive natural capital assessments** to avoid that business's impacts on biodiversity are underappreciated and mismanaged. It includes negative and positive impacts.

- Acknowledges that, in general, higher levels of biodiversity generate a greater quantity and quality of goods and services, and more resilience to change.
- Includes specific biodiversity features to evaluate the condition of the stock, including number of species, threatened species' extinction risk, habitats status and protection categories.
- Considers that impacts on ecosystem services, water resources, and climate ***are intrinsically linked with biodiversity*** → a ***direct valuation relationship is established between the impact on ecosystem services, water resources and/or climate.***
 - **Ecosystem services:** variable for three (3) provisioning and four (4) regulating services.
 - **Water resources:** variable for surface and groundwater resources.
 - **Climate:** fixed at global scale.

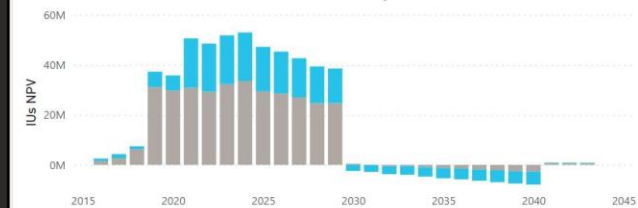
Biodiversity Impact vs Other

● Other IUs NPV ● Biodiversity IUs NPV



Biodiversity Impact by Year

● Other IUs NPV ● Biodiversity IUs NPV



Methodology

Reads



Cost-Benefit Analysis for Impact Mitigation/Compensation

Natural Capital

- Conduct comparative assessment of scenarios
- Appraise mitigation alternatives for specific impacts
- Quantifies offsets, including potential CO2 sequestration and generation of ecosystem services (positive impacts)

Performing a **BAT assessment** for the purpose of implementing READS is an effective means of evaluating an operation - at the project, process or site level - to find a suitable solution that has the least environmental impact, given a set of cost and benefit constraints.

It is a stepwise process as follows:

1. Identify impact mitigation options (avoid, reduce, restore, offset)
2. Assign overall performance, expressed as impact reduction (%) for negative impacts.
3. Perform cost-benefit appraisal: CAPEX, OPEX, and ABEX costs are brought to Net present value (NPV)
4. Appraise KPIs/ metrics and select the BAT.

Simulated management measures

Management Measure	Total expenditure (\$)	Efficiency %	Efficiency tU/\$
Injection into a dedicated well	6,501,000.00	0.96	13.37
Reduction of land use	5,070,000.00	0.64	0.10
Low NOx burners (90%)	1,341,000.00	0.33	21.05
LDAR program / El metano se ha medido como CO2 eq	1,100,000.00	0.13	9.51
Use of efficient energy sources and savings	805,000.00	0.29	29.53

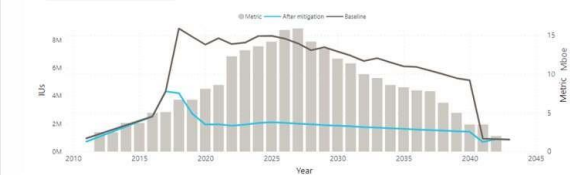
Select management measure to simulate

Select the period of data to be displayed for the report

All Start year: 2020 End year: 2025

SUMMARY FIN & OP

vs Hydrocarbon production (Mboe)



SUMMARY FIN & OP

KPIs

ILUs (NPV) vs Metric

Type	METRIC	Baseline	After Mitigation
Financial	Operating income (k\$)	41.78	13.12
Financial	Total Expenditure (k\$)	21.55	6.77
Financial	Capital Expenditure (CAPEX) (k\$)	30.04	9.43
Financial	Operating Expenses (OPEX) (k\$)	76.20	23.93
Financial	EBITDA (k\$)	34.98	10.98
Operational	Hydrocarbon production (Mboe)	664,984.04	208,796.90



Value

Reads



SUSTAINABLE DEVELOPMENT GOALS

6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND

Differential Value

Practical 	Embed sustainability within business strategy and improve decision-making	Relevant 	Support climate change, biodiversity and water mitigation initiatives and goals
Scalable 	Programmed in robust and recognized environments, complying with the highest standards from Microsoft	Verifiable 	Enable investors and stakeholders to assess the company's approach and progress toward action plans to manage natural capital risks
Consistent 	It adheres to state-of-the-art protocols in sustainability, which have been reviewed and endorsed by independent organizations.	Measurable 	Calculate offsets and compensation measures of commitments to the society and stakeholders.

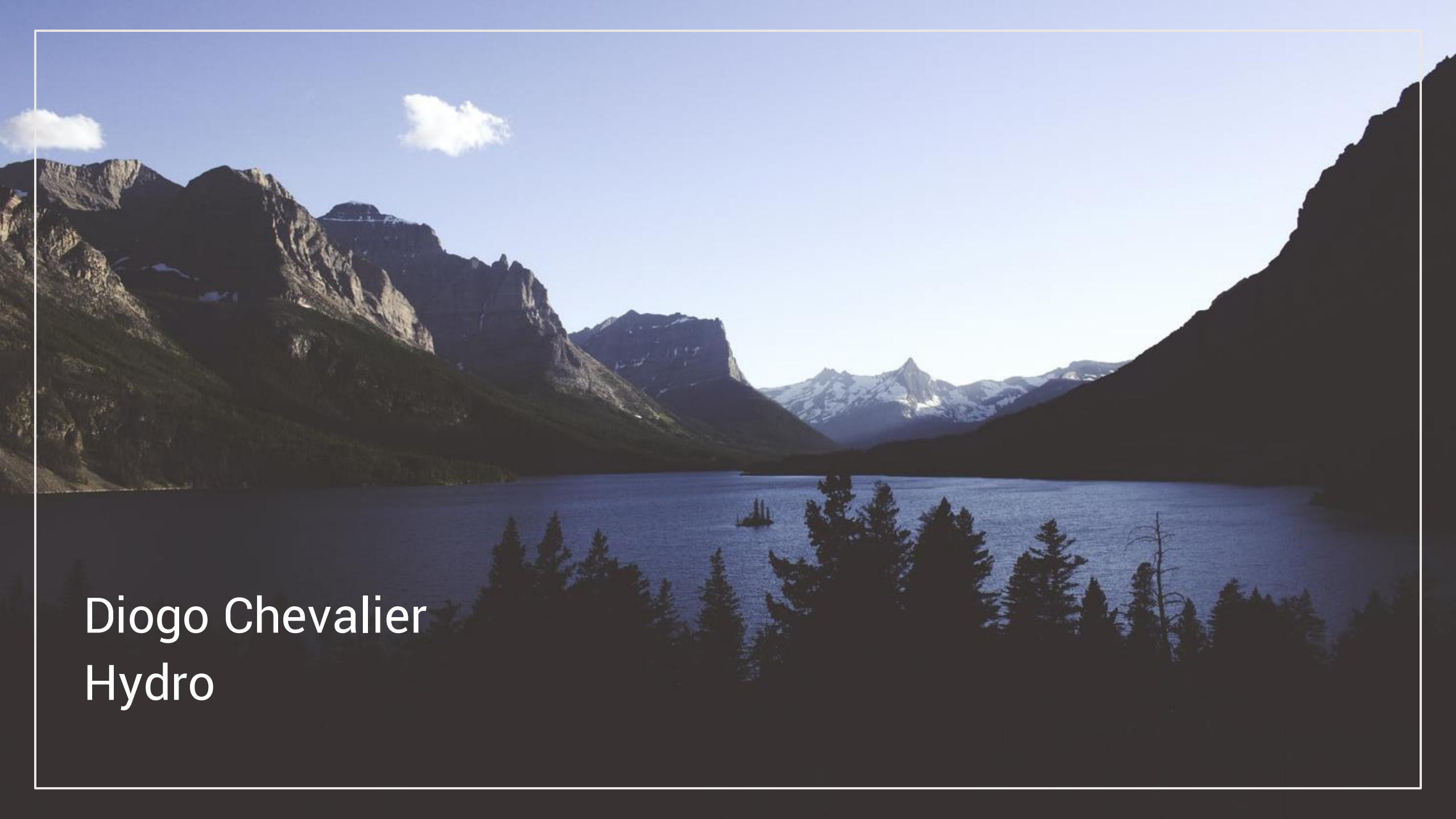
Widely applicable & transparent



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Steven Dickinson
TotalEnergies

A wide-angle landscape photograph showing a deep mountain valley. In the foreground, the dark silhouettes of evergreen trees are visible against a bright blue sky. A calm, blue lake occupies the middle ground, reflecting the sky and the surrounding mountains. In the background, rugged, rocky mountain peaks rise, some with patches of snow. The lighting suggests a clear, bright day.

Diogo Chevalier Hydro

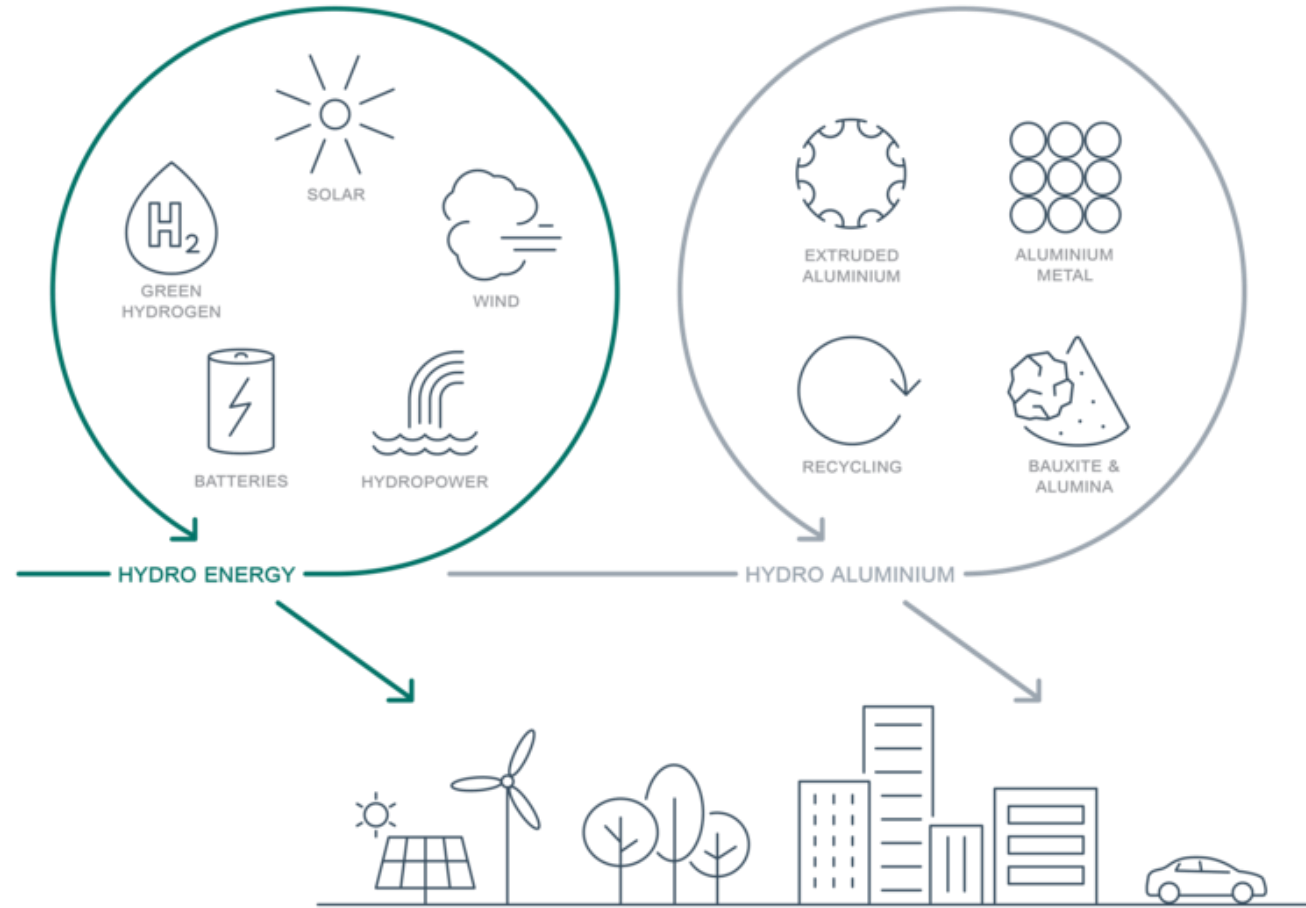


Hydro Biodiversity Ambition – No Net Loss

Proteus - June 2022

This is Hydro

Hydro energy



Bauxite and Alumina

Primary Metal

Extruded Solutions

No-net-loss ambition on biodiversity

Rolling target from Q4 2022

Hydro has a target of **‘No Net Loss’ of biodiversity in new projects**

New Projects is defined as any CAPEX or OPEX project that either *creates new infrastructure or operations* where none existed before or *expands or materially changes an existing operation*.

The No-Net-Loss outcome is only applicable to **material** impacts to biodiversity, and is a risk-based approach.

We define **materiality** based on the value of the biodiversity at risk of being impacted, also known as **priority biodiversity features**

Use of the biodiversity mitigation hierarchy to achieve the target
High relevance for our mining, and renewable energy projects





Dry Tailings Backfill (mining best practice)

Proteus - June 2022

Dam's risks

Trends

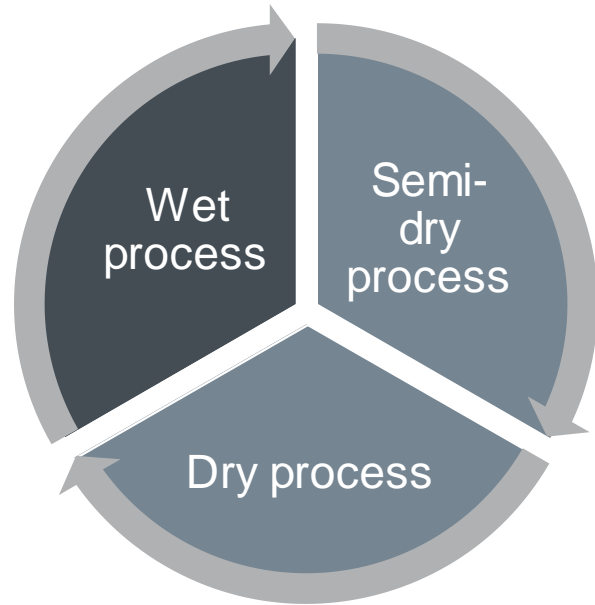
- Higher demand on mineral assets
- Lower mineral concentration
- Increasing of tailings generation – **biodiversity impact**

Industry demand

- Improvements on Safety Management
- Use of more eficiente Technologies
- + Biodiversity care value

Tailing's Disposal

Tailing's Disposal Methods



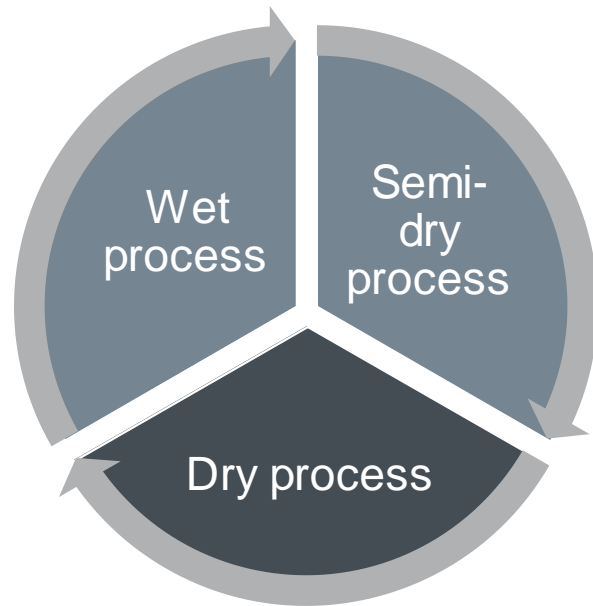
Wet processes

- Mud on dams (traditional)
- Low permeability earthfill
- In 2017, 95% of tailings disposed on wet process dams (FEAM, 2018)
- Sat. tailings
- Less storage capacity
- Slower closure processes
- Higher operational risks



Tailing's Disposal

Disposal Methods



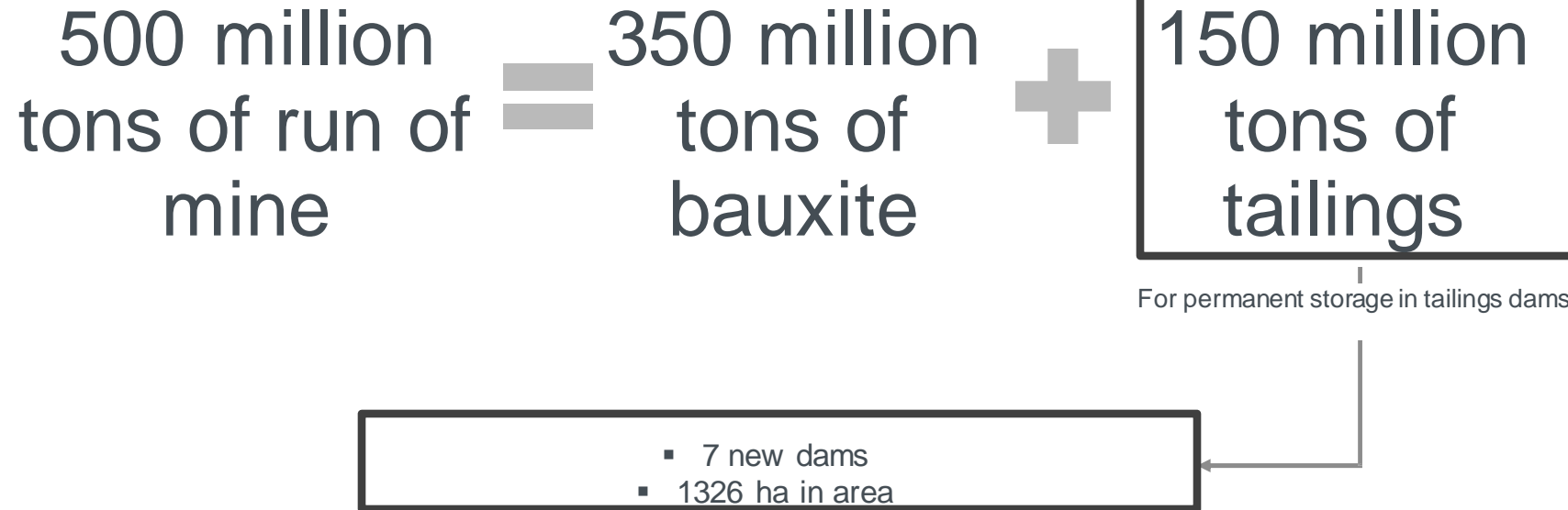
Dry processes

- Dry stacking
- Intense filtration
- Water and insume return
- Tailing's compaction
- Higher storage capacity
- Reduces environmental impact and promotes progressive closure



Hydro Paragominas Background

Paragominas life of mine plan 2050



Hydro Paragominas background

Challenges for the unit

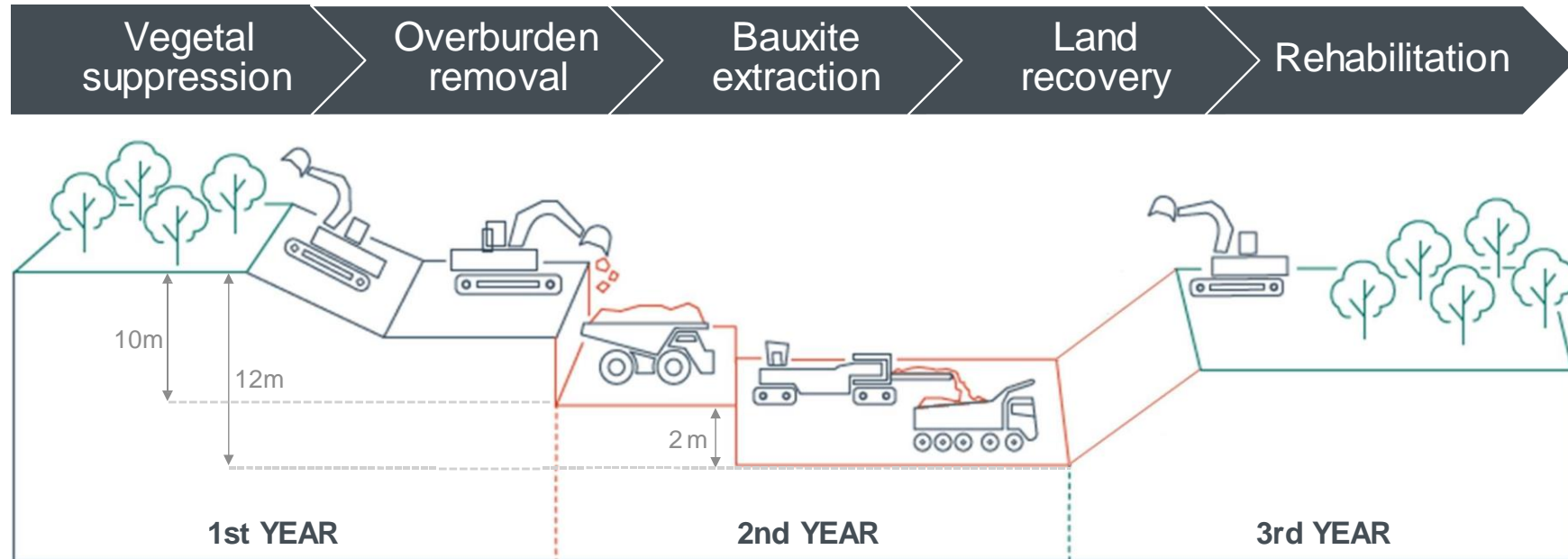
Tailings dams

- Tailings generation: 150Mt
- Long-term environmental footprint: 1326 ha
 - Capital cost to build and raise new dams: USD 500M+



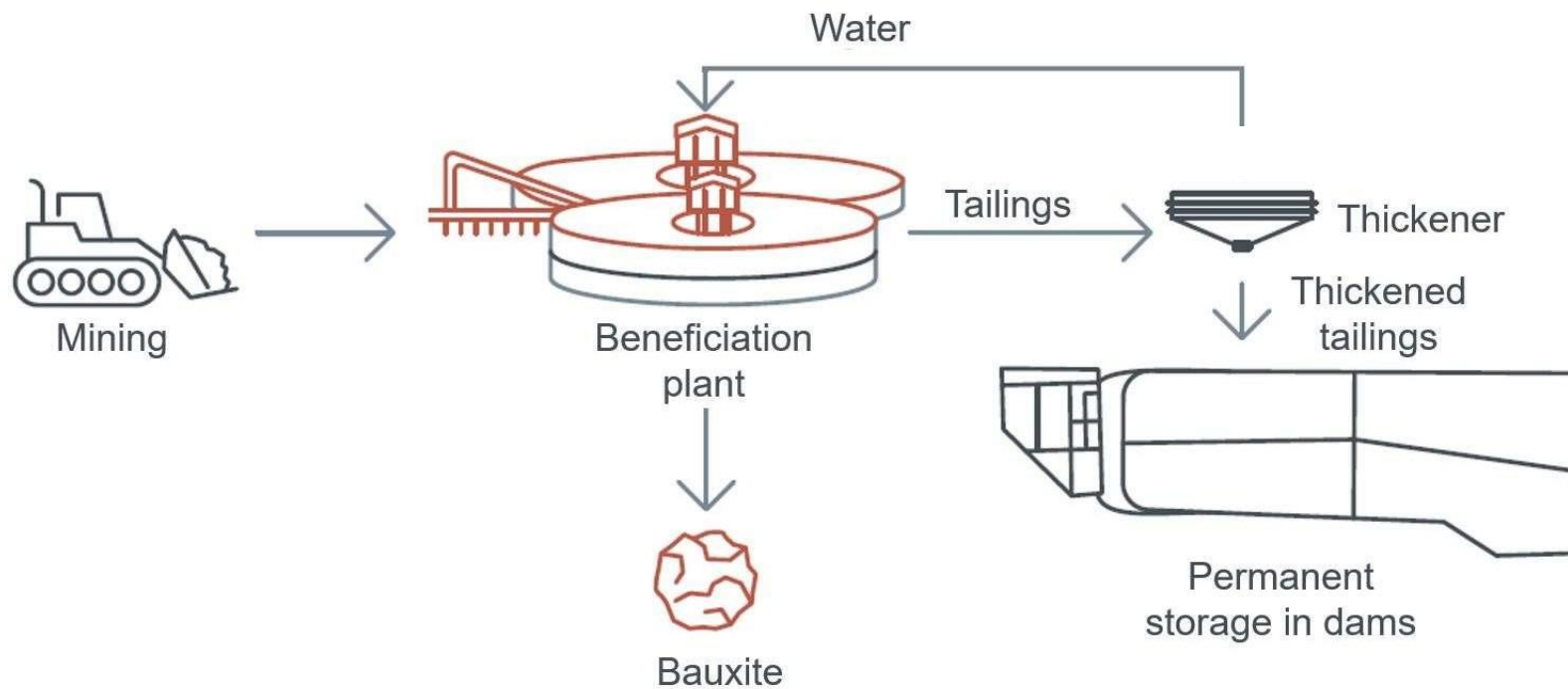
Strip mining

Sustainable bauxite mining



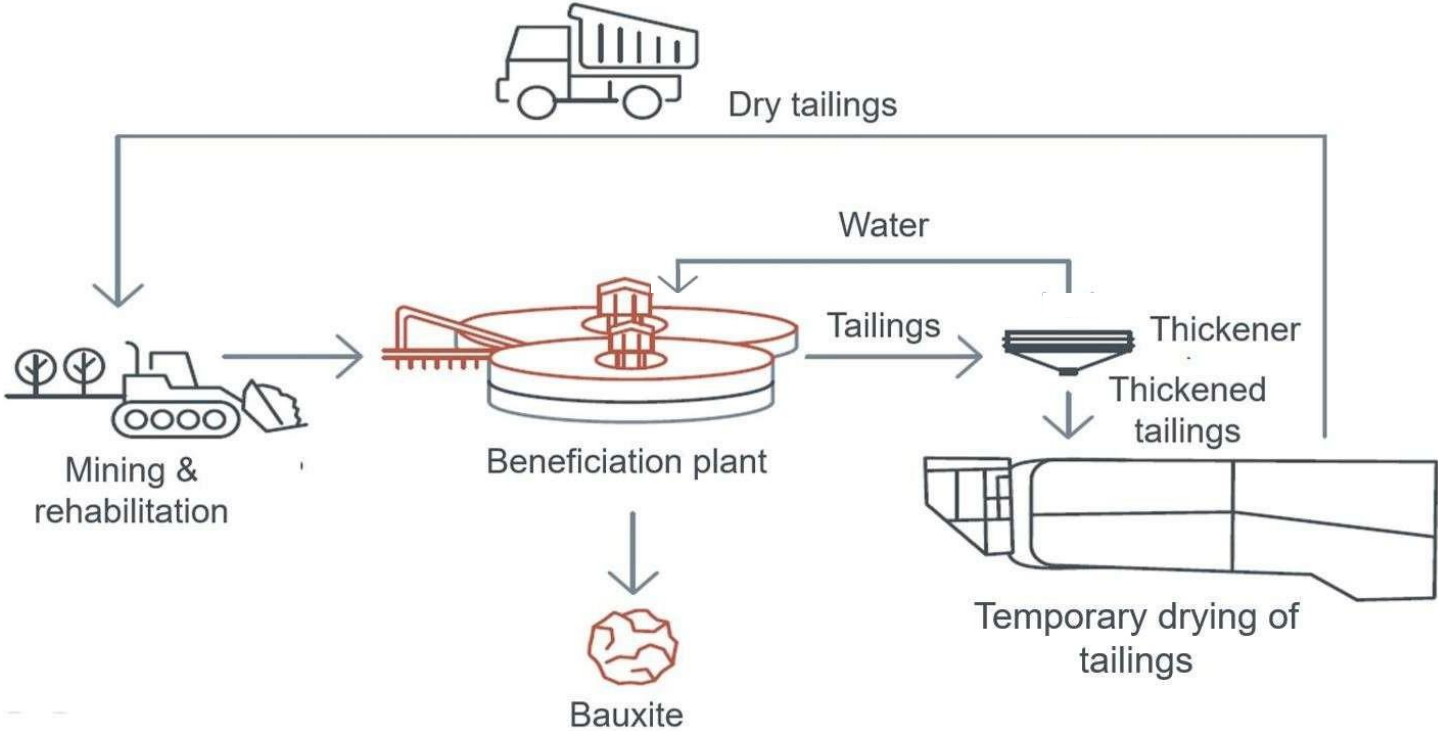
Previous technology

Ore beneficiation and permanent tailings disposal



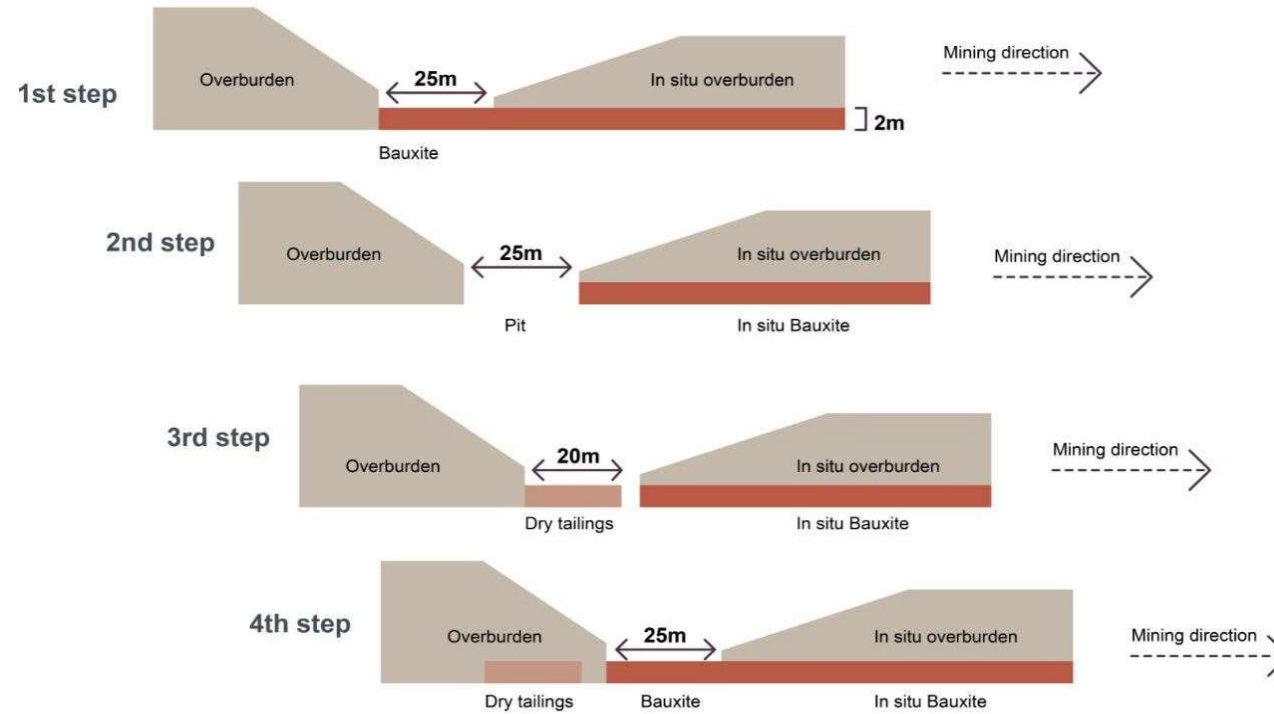
The innovation

Temporary drying of tailings and backfill in mined-out areas



The innovation

Return of dry tailings to its original place



The innovation

Dry backfill method: a paradigm shift

1. Tailings are disposed at RP1 dam and desiccated to 60% solids



2. Tailings are mechanically removed and transported to mine pits

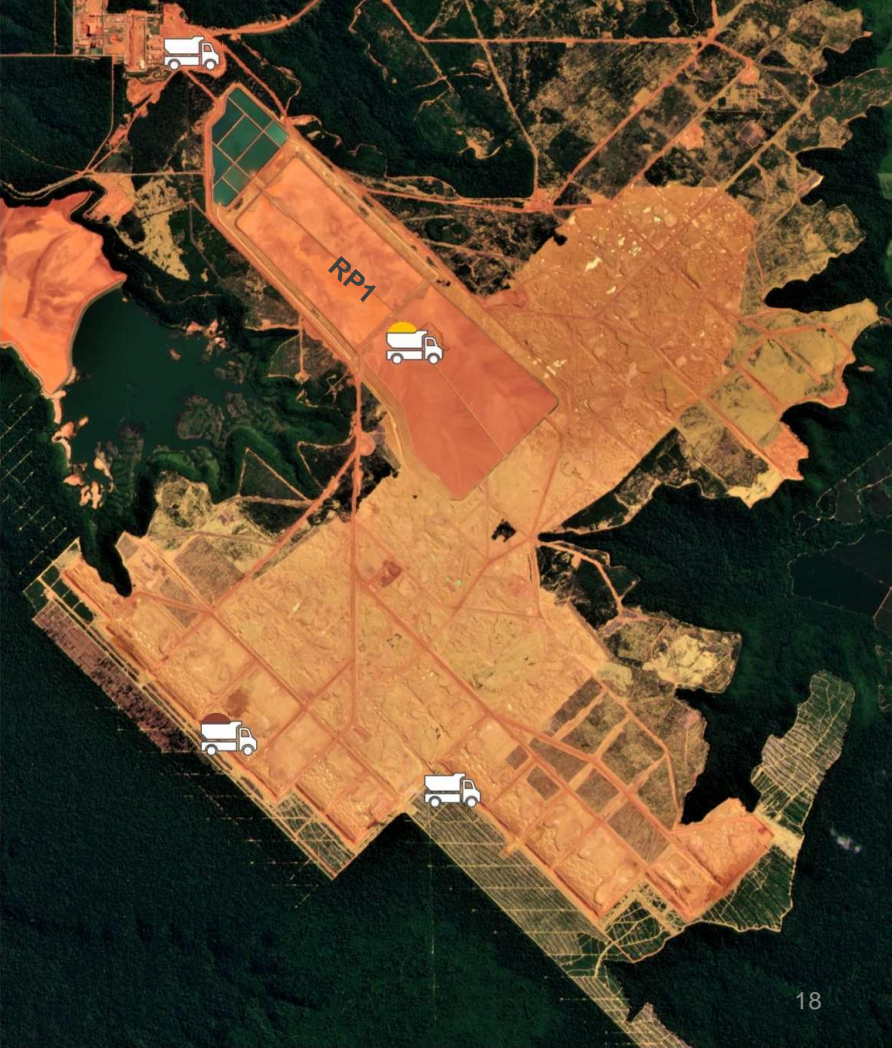
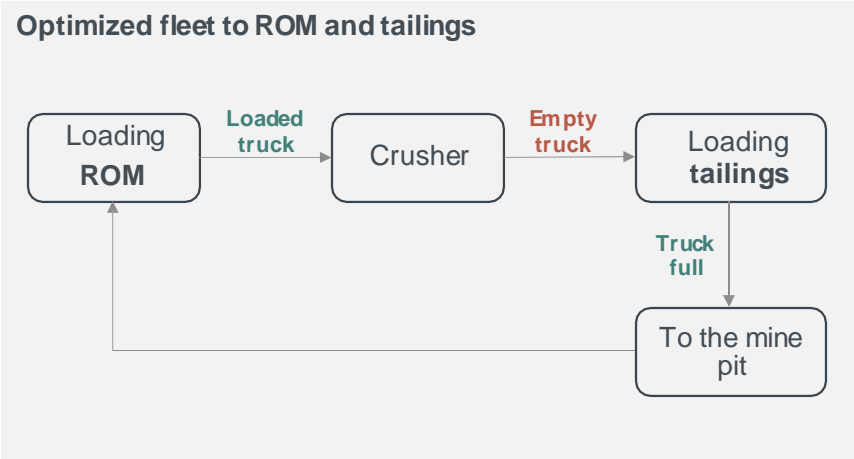


3. Tailings are backfilled into mine pits and area is rehabilitated



Fleet management

Optimized method

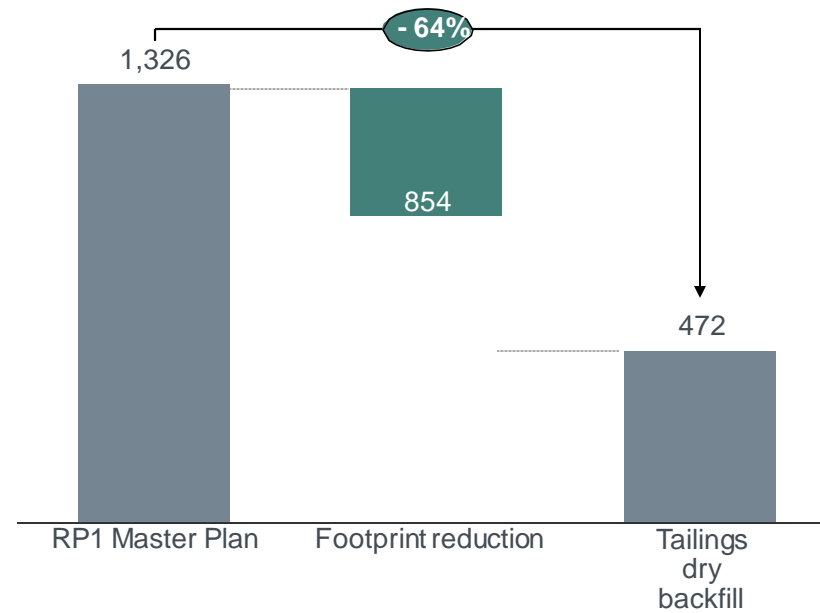


The benefits

Driving sustainability...

Reduced environmental footprint and operational risk: no new tailings dams built or raised in Paragominas.

Values in hectares



The benefits

Reduced environmental footprint



BEFORE



Total area = 1326 ha

NEW TECHNOLOGY



Total area = 472 ha

Environmental footprint
64%reduction



Tailings storage
100%elimination

Capital cost
reduction

Profitability &
sustainability



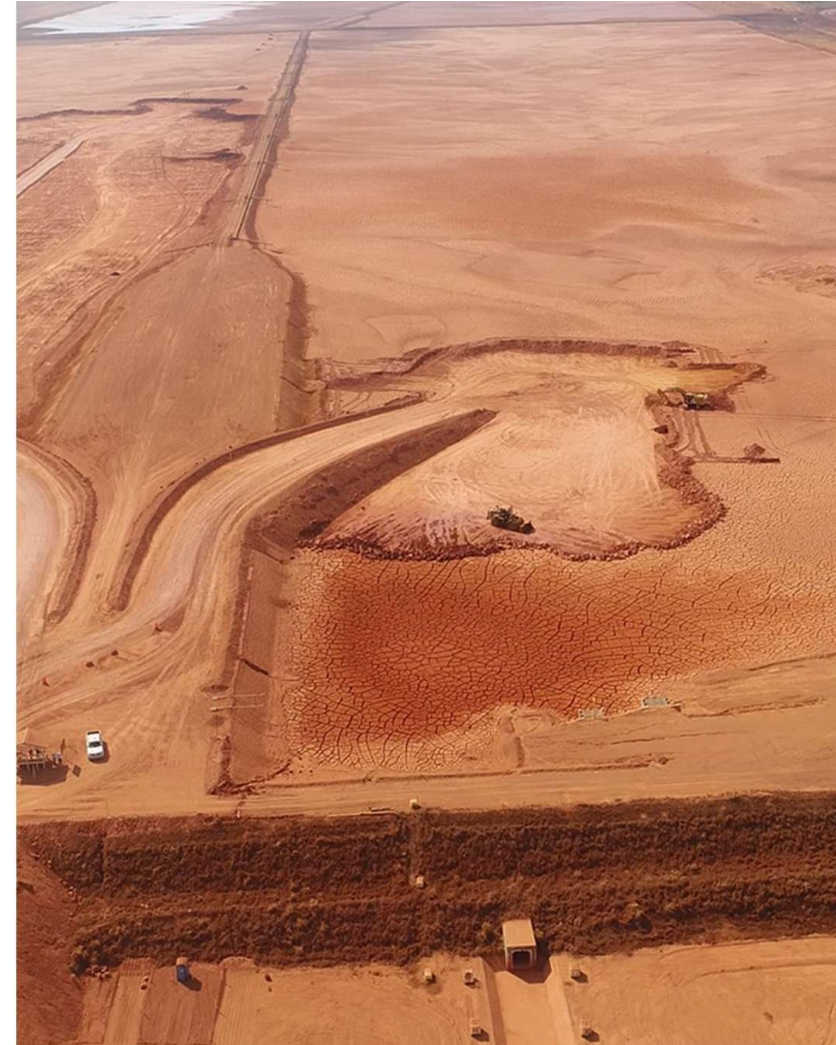
Tailings dry backfill

The achievement

- Reduced environmental footprint
- Reduced operational risk
- Most sustainable method on tailings worldwide
- Tailings disposal cost reduction

Technical status

- Since July 2019, tailings dry backfill has been used as the disposal method for Paragominas.
- Over 6M tons of tailings have already been backfilled





The Biodiversity Research Consortium - BRC

Brazil Norway Biodiversity Research Consortium

Alliance between Academy, Mining and Industry for scientific development, biodiversity conservation and rehabilitation of mined areas

- Mined areas rehabilitation with scientific support: biodiversity, ecosystem services and synergy.
- Integration and complementation of technical area with academic area.
- Fostering education and science.
- Exchange of information and knowledge.
- Encourage scientific production at national and international level.
- Increasing knowledge of Amazon Biodiversity.

Objective: State of the Art in Rehabilitation Areas.



Scientific Support - BRC





Hydro



Break-out Rooms

DISCUSSION

- What tools and approaches do you currently use for understanding / measuring site-based impacts? Do you focus more on screening risks or measuring impacts?
- How are you currently approaching aggregation and reporting of your site-based impacts?
- Feeding back on the criteria for site-based measurement under the Align project
 - What is feasible to do?
 - What might be the barriers to their implementation?
 - Any other feedback on the criteria?
 - What further support or guidance could be provided

UN 
**environment
programme**

WCMC