Biodiversity Fundamentals for Practitioners

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TotalEnergies

08 - 09 NOVEMBER 2022

OVERVIEW

TODAY

- Fundamentals of biodiversity and conservation
- The big picture - International, national, and sectoral policies on biodiversity
- Introduction to the Proteus Partnership

TOMORROW

- From global- to site-level: Screening for biodiversity sensitivity
- Critical Habitat (IFC PS6)
- The long-term: Monitoring, reporting and verification

proteus

Fundamentals of biodiversity and conservation

Aime Rankin – Associate Programme Officer (UNEP-WCMC)

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TotalEnergies

08 NOVEMBER 2022

ABOUT THIS TRAINING

- This training course was developed by UNEP-WCMC in consultation with TotalEnergies through the Proteus Partnership. It draws on material developed under the Proteus Partnership, and with reference to material co-developed by UNEP-WCMC and other organisations specifically for the energy sector.

- This training course has been created for TotalEnergies and includes material provided by TotalEnergies, including information on TotalEnergies policies and processes, and case studies from current and past operations. The inclusion of this material does not imply endorsement by the United Nations Environment Programme, UNEP-WCMC, or the authors.

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OVERVIEW

FUNDAMENTALS OF BIODIVERSITY AND CONSERVATION

- Defining biodiversity and ecosystem services (BES)
- Key conservation concepts
- The business case for BES management within TotalEnergies

Defining biodiversity and ecosystem services (BES)

Aime Rankin – Associate Programme Officer (UNEP-WCMC)

WHAT IS BIODIVERSITY?

"Biological diversity means the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems…; this includes diversity within species, between species and of ecosystems."

(Convention on Biological Diversity 1992)

Genes (diversity within species)

Species (diversity between species)

Ecosystems (diversity of ecosystems)

WHAT IS A SPECIES?

"Groups of actually or potentially interbreeding natural populations, which are reproductively isolated from other groups."

(Mayr 1942)

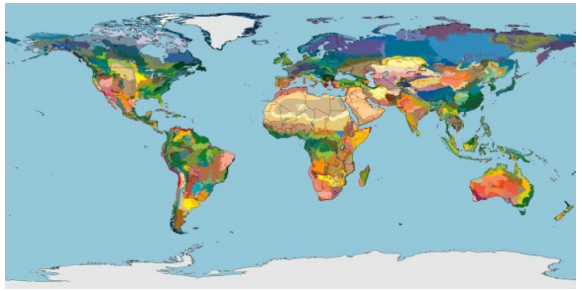
- Species are seen as the fundamental units of conservation.
- Provides a way of quantifying biodiversity, and its loss.
- Many conservation strategies and international Multilateral Environmental Agreements (CITES, CMS) are focused on species.

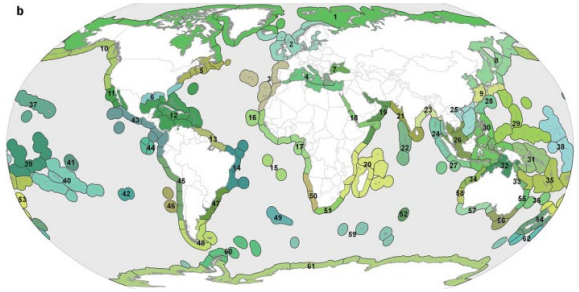
WHAT ARE HABITATS AND ECOSYSTEMS?

Habitat: The place or type of site where an organism or population naturally occurs.

Ecosystem: A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.

(Convention on Biological Diversity 1992)





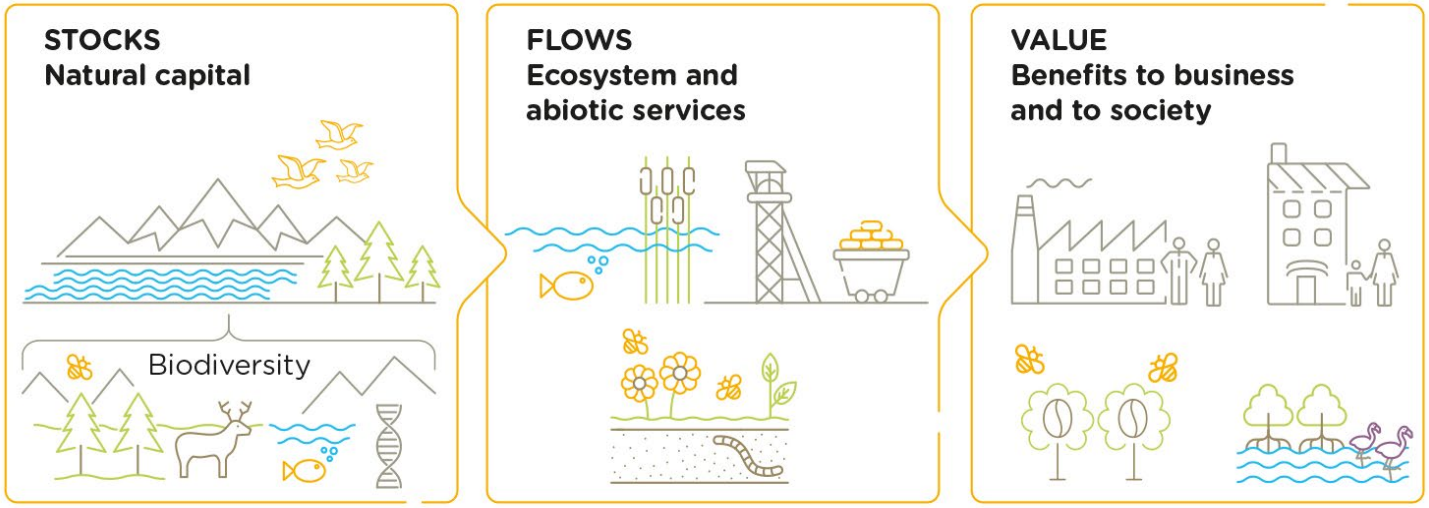
WHAT ARE ECOSYSTEM SERVICES?

"Benefits people obtain from ecosystems."

(Millennium Ecosystem Assessment 2005)

Biodiversity underpins ecosystem services

Ecosystem services link the environment to people



ECOSYSTEMS THROUGH TO BENEFITS

Flow from Ecosystem to Society Benefit

boreal forest	*Ecosystem*	coral reef
trees, animals, soil	*Ecosystem Component*	coral, reef organisms, fish
photosynthesis	*Ecosystem Process*	reef building by corals
tree growth	*Ecosystem Function*	reduction of wave energy
timber (provisioning services)	*Ecosystem Service*	coastal protection (regulating service)
materials for construction	*Benefits*	safety of coastal community

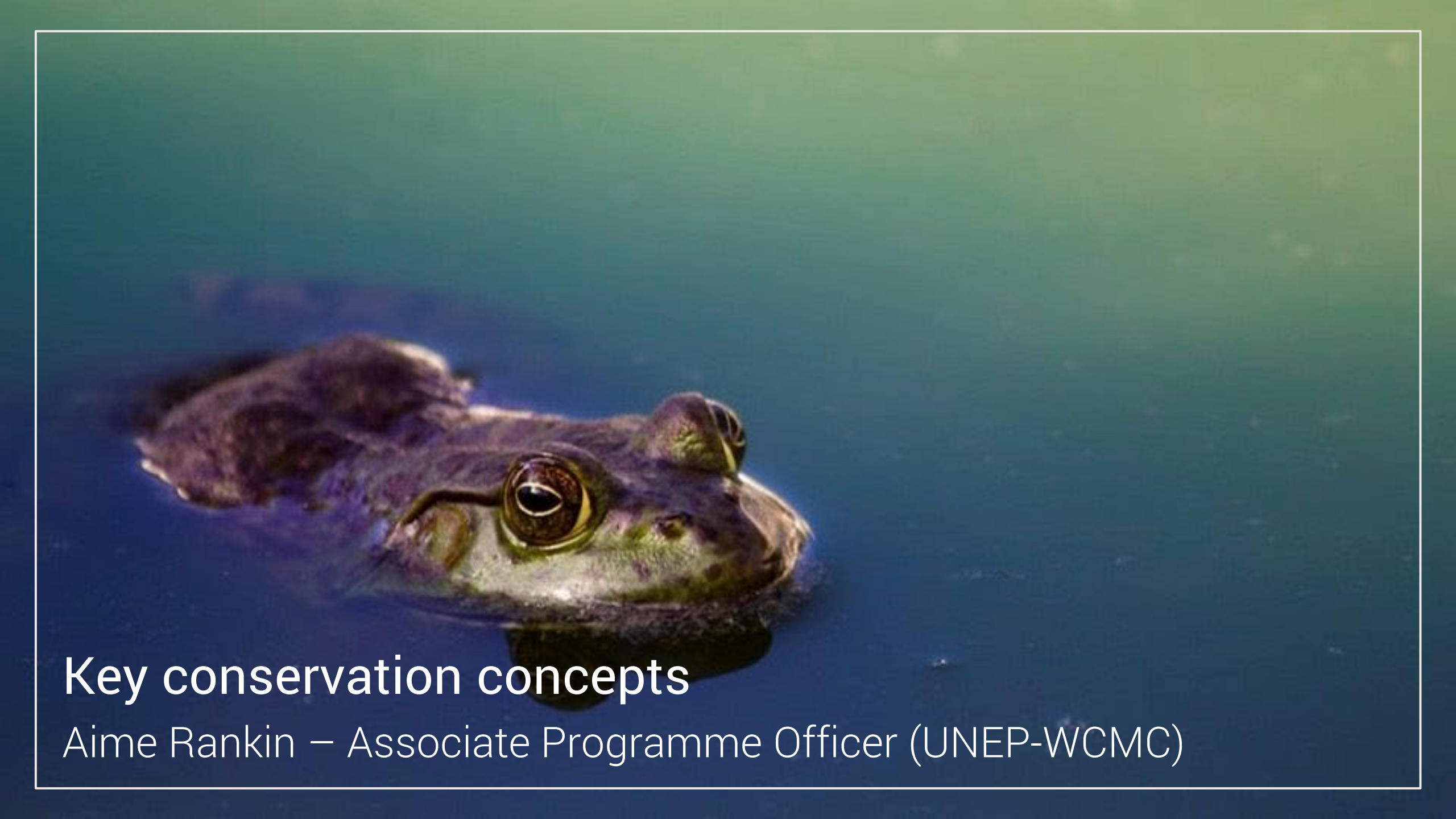
EXAMPLES OF ECOSYSTEM SERVICES?

- Climate regulation
- Water flow maintenance
- Flood and storm protection
- Pollination
- Fibres and other materials (e.g. timber)
- Eco-tourism
- Cultural/spiritual values and experiences







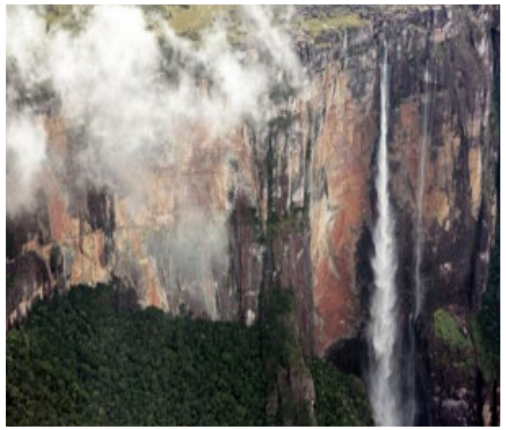



Key conservation concepts

Aime Rankin – Associate Programme Officer (UNEP-WCMC)

CORE CONSERVATION CONCEPTS

Protected areas



Areas that are afforded legal or other effective protection

Areas important for biodiversity

Areas that are identified on the basis of biodiversity values, often using standardised assessment criteria

Threatened species

Species likely to become extinct within the foreseeable future throughout all or part of its range

WHAT ARE PROTECTED AREAS?

"A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values." (IUCN 2008)

Key features

- Ability to delineate
- Management of the area
- Core objective of nature conservation

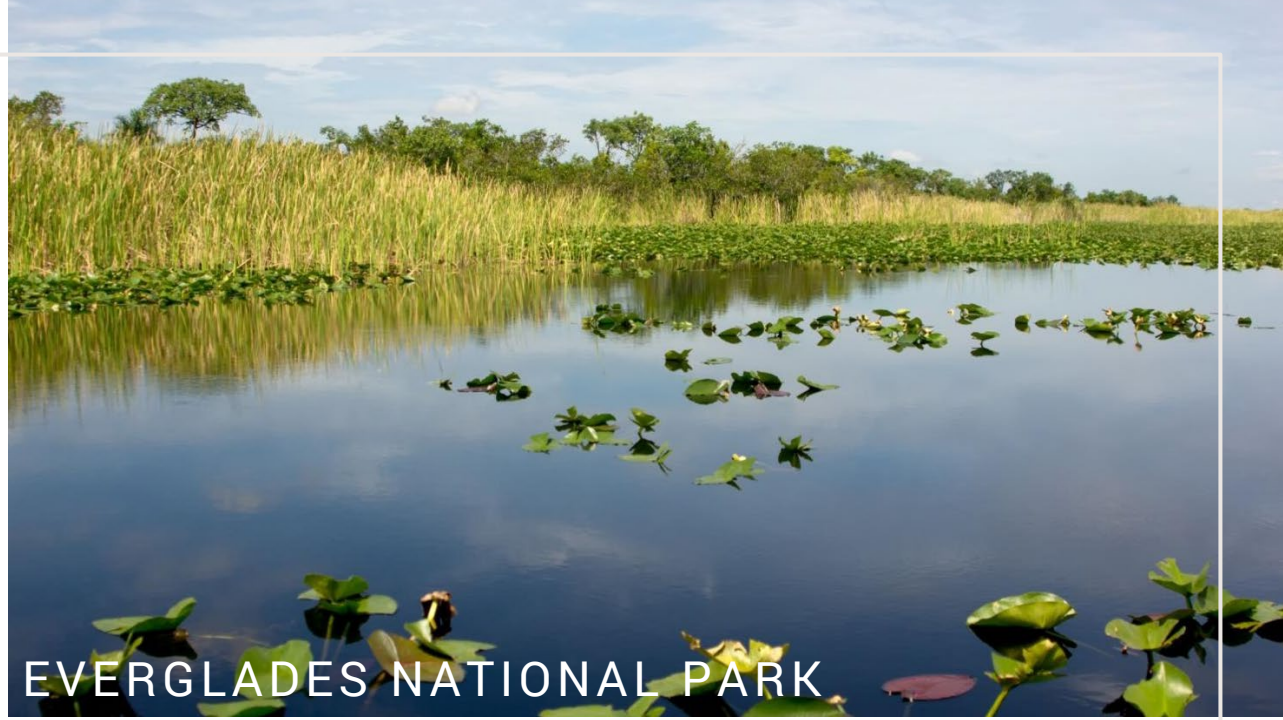
Effective means

- National law
- International conventions & agreements
- Customary law or land tenure

Governance

- Government
- Shared
- Private
- Community


SWISS NATIONAL PARK


EVERGLADES NATIONAL PARK


BIAŁOWIEŻA NATIONAL PARK


YORKSHIRE DALES NATIONAL PARK

WHY ARE PROTECTED AREAS IMPORTANT AND WHY IS IT IMPORTANT TO MAP THEIR LOCATION?

In-situ conservation:

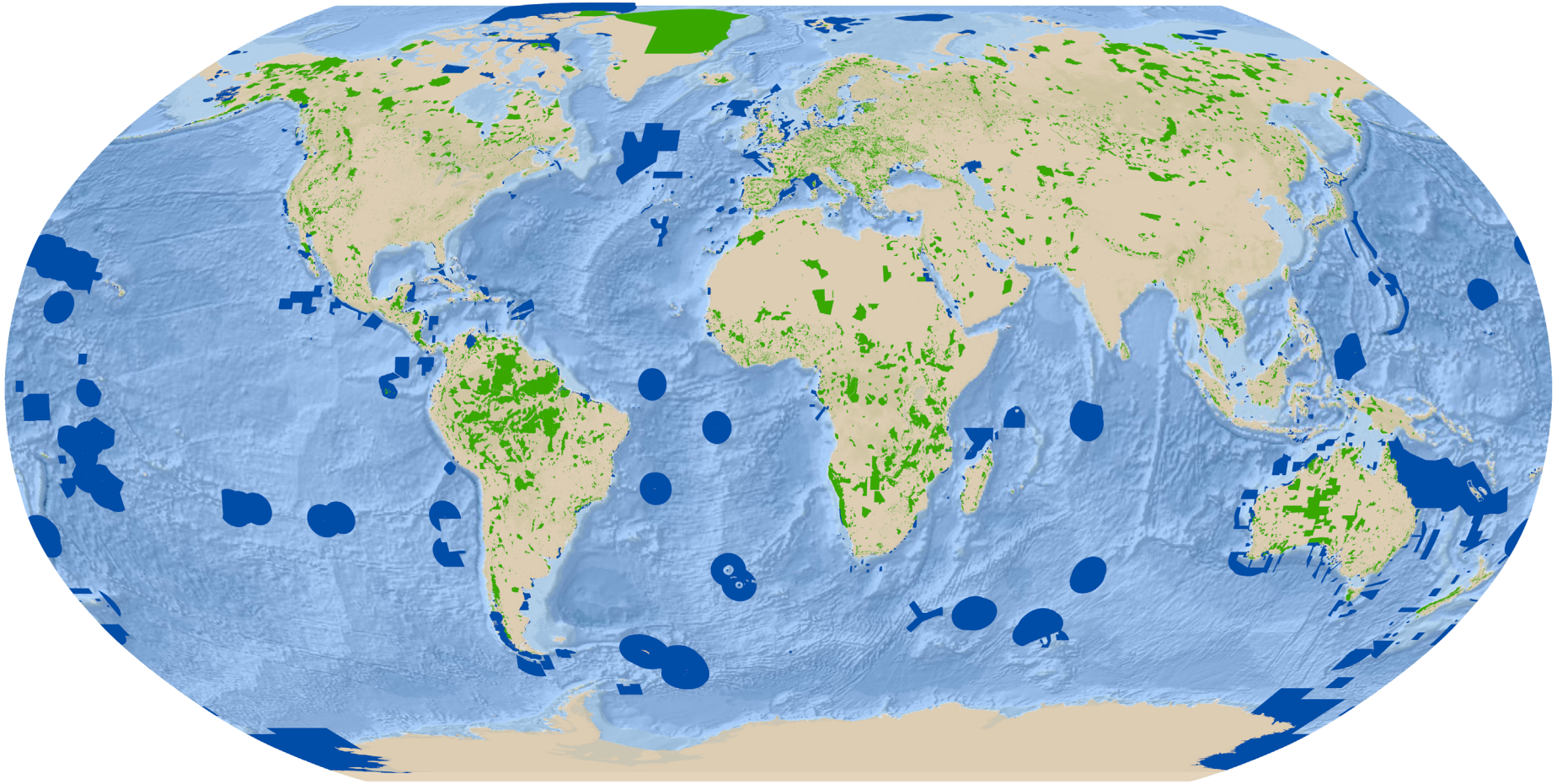
"the conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings" (CBD 1992)

Protected areas are the cornerstone of in-situ conservation

- NGOs, CSOs, investors and the finance sector increasingly requesting O&G companies to disclose and report on data related to location of sites, particularly within or near areas of high biodiversity value

- NGO's pressure to declare some PAs off limits for O&G development. Regulators requesting more stringent mitigation measures (including offsets) within or near protected areas

THE WORLD DATABASE ON PROTECTED AREAS

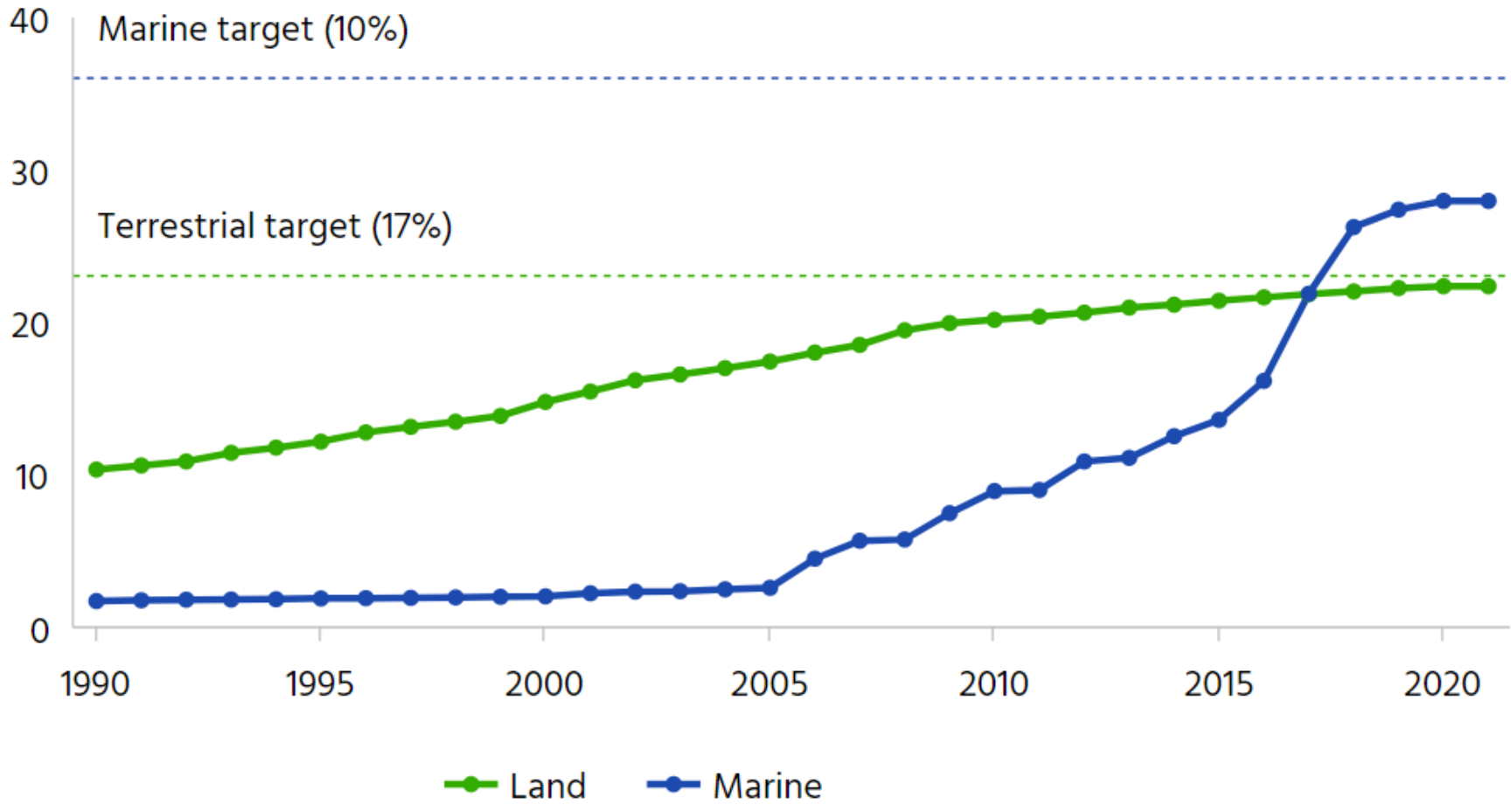


Source: UNEP-WCMC and IUCN (2022). Protected Planet: The World Database on Protected Areas (WDPA) [On-line], November 2022, Cambridge, UK: UNEP-WCMC. Available at www.protectedplanet.net

Terrestrial protected areas **Marine and coastal protected areas**

Terrestrial
Marine and Coastal

INCREASE IN PROTECTED AREA AND OECM COVERAGE SINCE 1990



PROTECTED AREAS ARE DESIGNATED AT DIFFERENT LEVELS

National

- Designated under national law
- Different naming schemes exist in every country
- Often grouped according to IUCN management categories

Regional

- Based on regional conventions agreed by governments
- e.g. Natura2000 in Europe
- e.g. Regional Seas conventions (OSPAR, HELCOM Barcelona etc)

International

- Based on international conventions/agreements between many governments
- e.g. World Heritage
- e.g. Wetlands of International Importance (Ramsar)
- e.g. UNESCO Man and the Biosphere

IUCN MANAGEMENT CATEGORIES

A method for classifying the management objectives of a protected area

Help countries design a system of sites with a range of complementary management objectives

Voluntary system so many protected areas do not have an assigned category

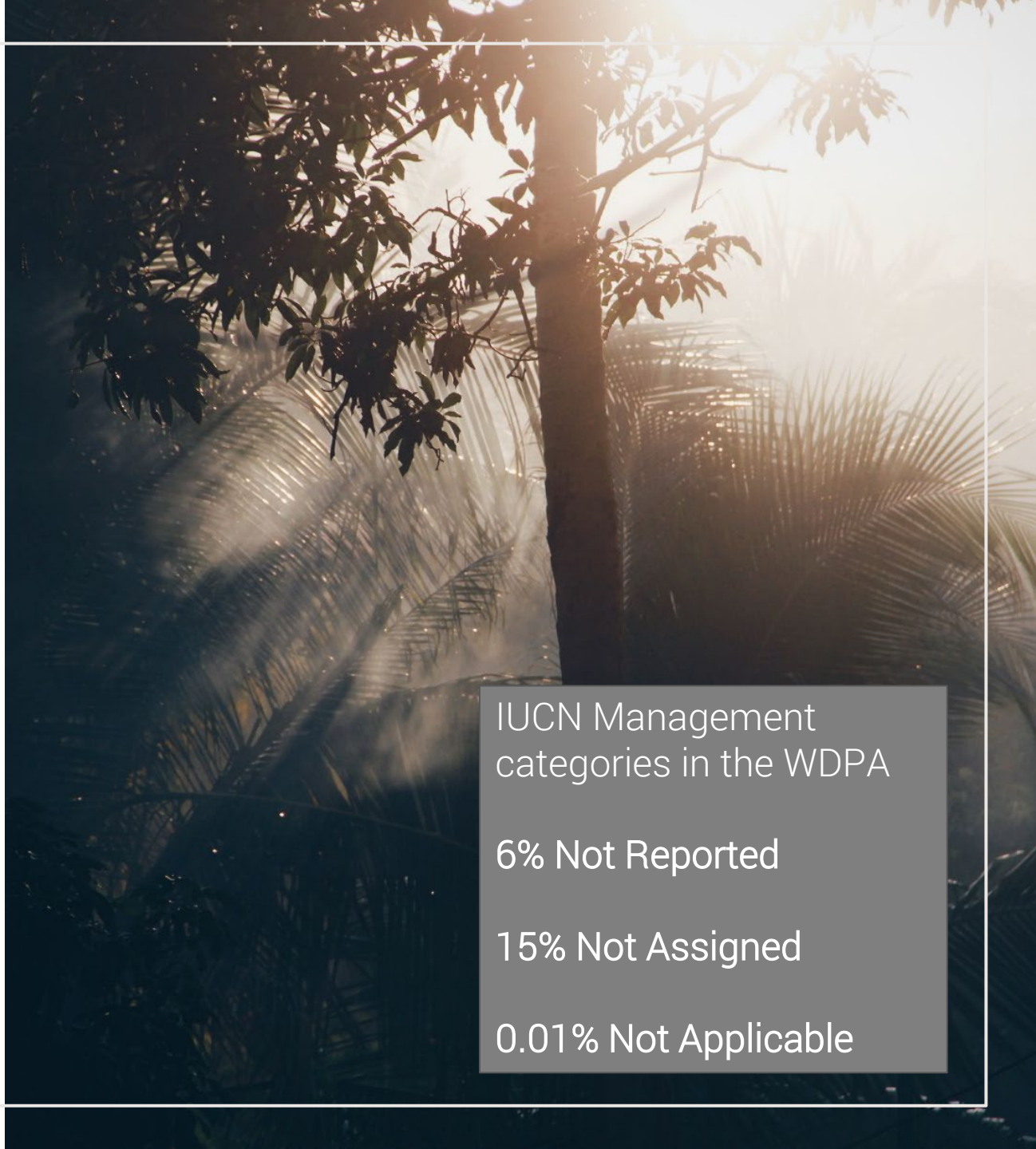
Protected areas without management categories are still protected areas!

IUCN PROTECTED AREA MANAGEMENT CATEGORIES

Category	% records in the WDPA
Ia: Strict nature reserve	6%
Ib: Wilderness area	2%
II: National park	2%
III: Natural monument or feature	10%
IV: Habitat/species management area	35%
V: Protected landscape/seascape	20%
VI: Sustainable use of natural resources	4%
Not Assigned	15%
Not Reported	6%

MAIN CAVEATS

- They focus on management intent, not the current state of biodiversity protection
- Not a scale, i.e. Category Ia not the “best” or “highest protection” and Category VI not the “worst” or “lowest protection”
- Some countries don’t use them, but this does not indicate a lack of management
- Not a legal designation, does not override or affect the national system
- Not harmoniously applied across the world
- Not always linked to particular designation



WHAT ARE AREAS THAT ARE IMPORTANT FOR BIODIVERSITY?

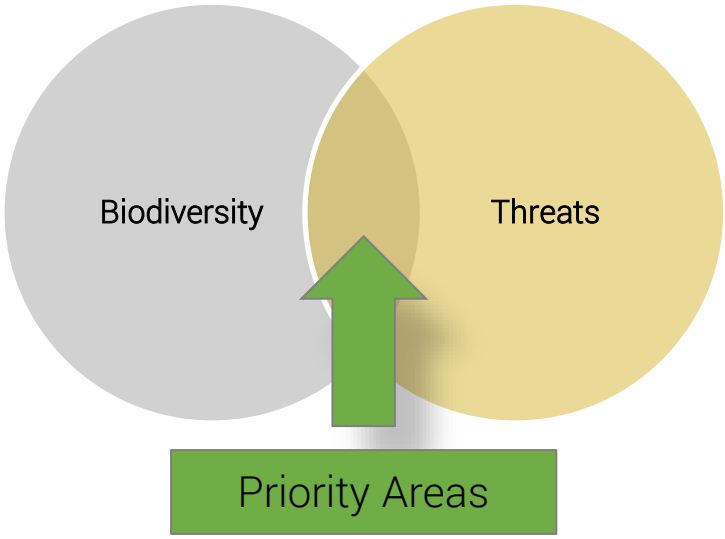
- Can exist at the site or landscape/regional/international scales
- May overlap protected areas, but are not in themselves protected
- KBAs are one among several approaches to designate areas important for biodiversity

Site scale examples

- Key Biodiversity Areas
- Important Bird Areas

Landscape/Regional/International scale examples

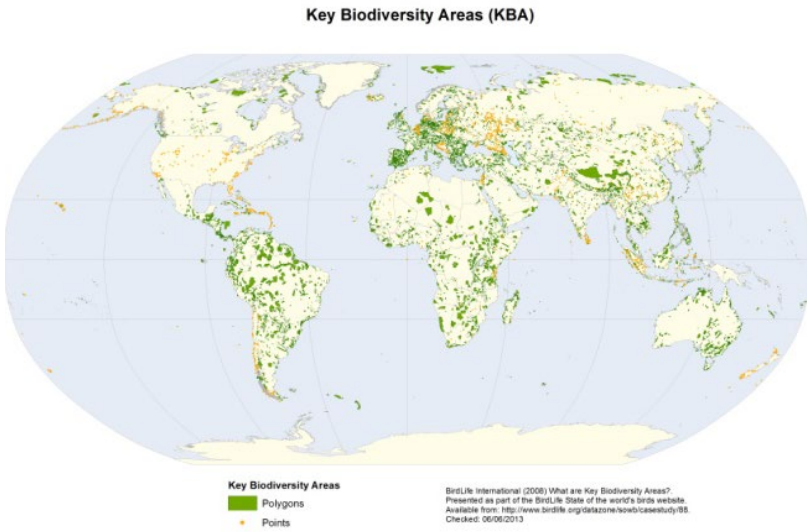
- Endemic Bird Areas
- Biodiversity Hotspots
- Global200 Ecoregions



WHAT ARE KEY BIODIVERSITY AREAS (KBAS)?

"Sites contributing significantly to the global persistence of biodiversity."
(IUCN 2016)

- Originally identified for birds
- Recently expanded to other taxa
- New criteria across taxa and realms promote KBAs as the key biodiversity site designation
- Over 16,000 identified so far



BirdLife INTERNATIONAL · IUCN · asa · CONSERVATION INTERNATIONAL · CRITICAL ECOSYSTEM PARTNERSHIP FUND · gef · GLOBAL WILDLIFE CONSERVATION · NatureServe · RAINFOREST TRUST · rspb giving nature a home · WCS · WWF

KBAS ARE IDENTIFIED ON SCIENTIFIC CRITERIA

A. Threatened Biodiversity

- A1. Threatened species
- A2. Threatened ecosystem types

B. Geographically restricted biodiversity

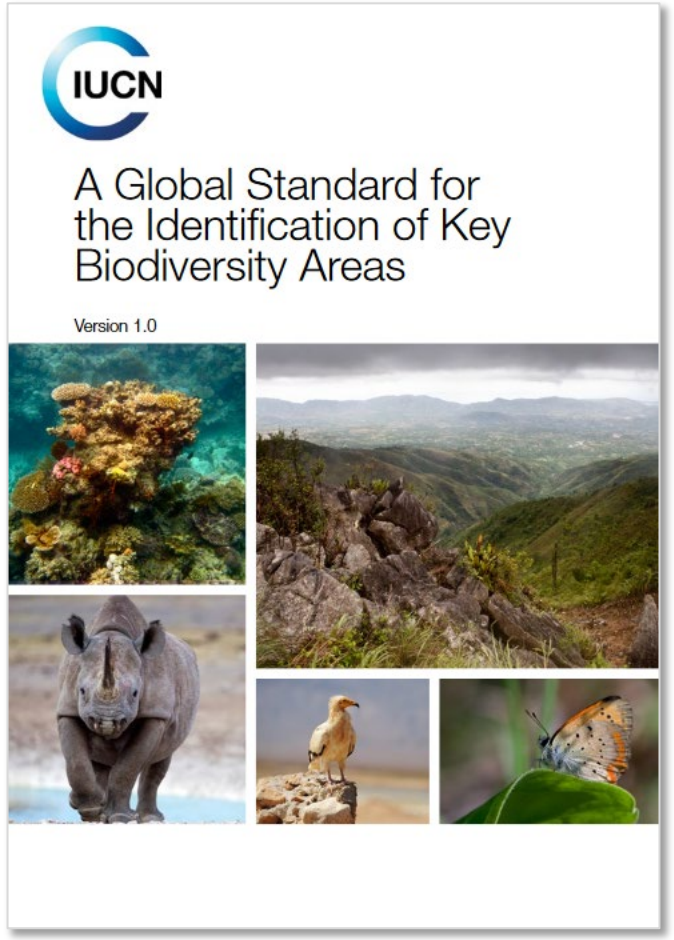
- B1. Individual geographically restricted species
- B2. Co-occurring geographically restricted species
- B3. Geographically restricted assemblages
- B4. Geographically restricted ecosystem types

C. Ecological integrity

D. Biological processes

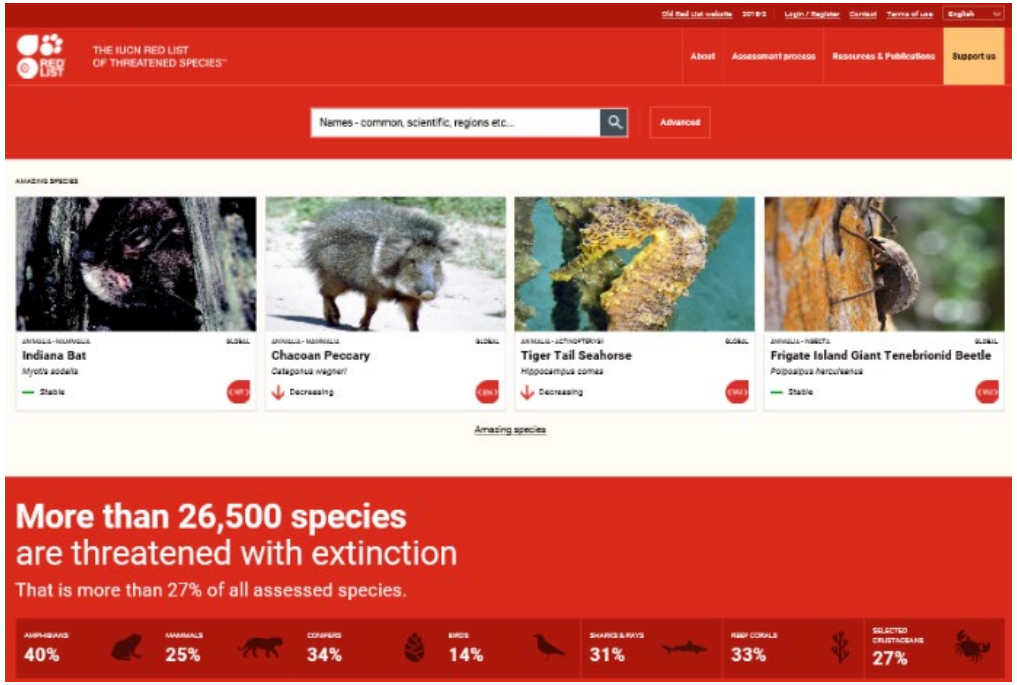
- D1. Demographic aggregations
- D2. Ecological refugia
- D3. Recruitment sources

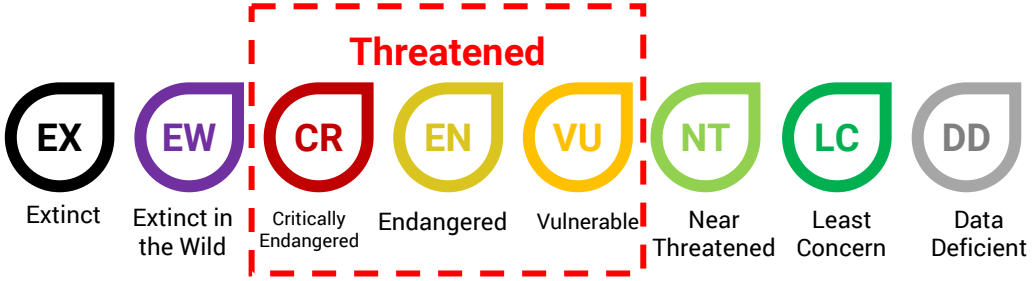
E. Irreplaceability through quantitative analysis



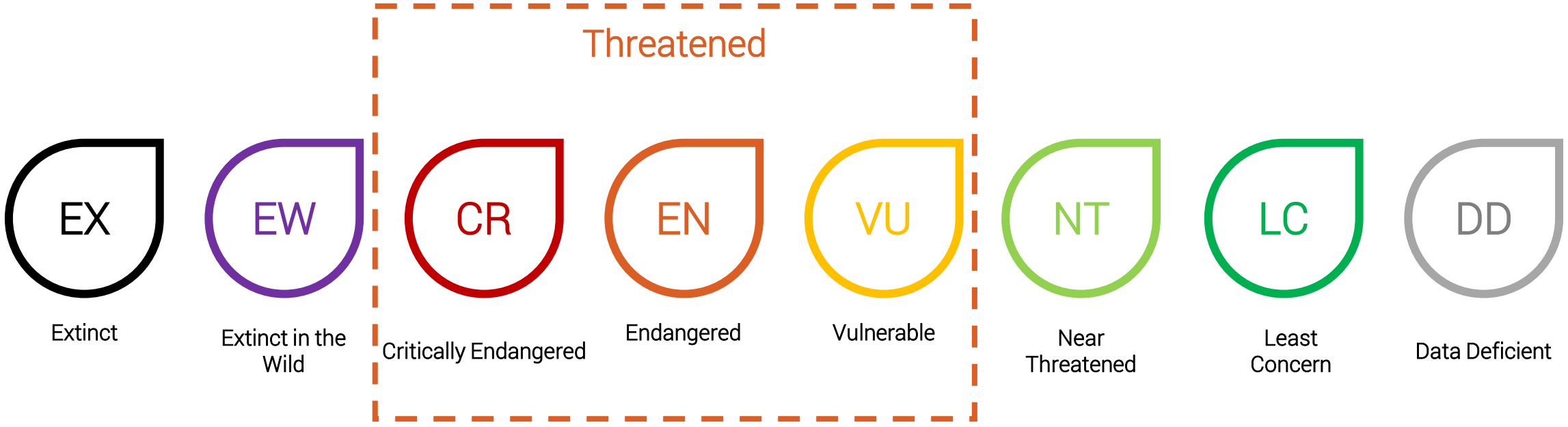
IUCN RED LIST OF SPECIES

- Established in 1964 by IUCN
- >147,500 species assessed as of August 2022
- Information on threats, ecological requirements, habitats and conservation actions to reduce or prevent extinctions
- Standardised assessment process to categorise species
- Re-evaluation every ~ 5-10 years
- Three categories of ‘Threatened’ species: Critically Endangered, Endangered and Vulnerable
- List also includes other categories e.g. ‘Least Concern’ species





ONE WAY WE MEASURE "THREAT" IS THE EXTINCTION RISK OF SPECIES/ECOSYSTEMS

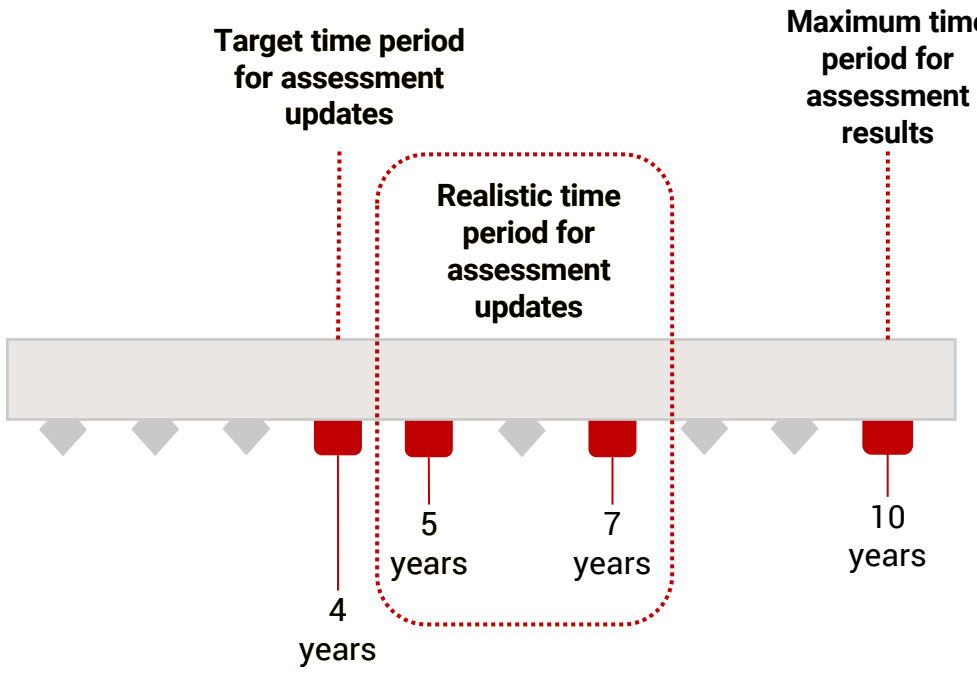


CONSIDERATIONS

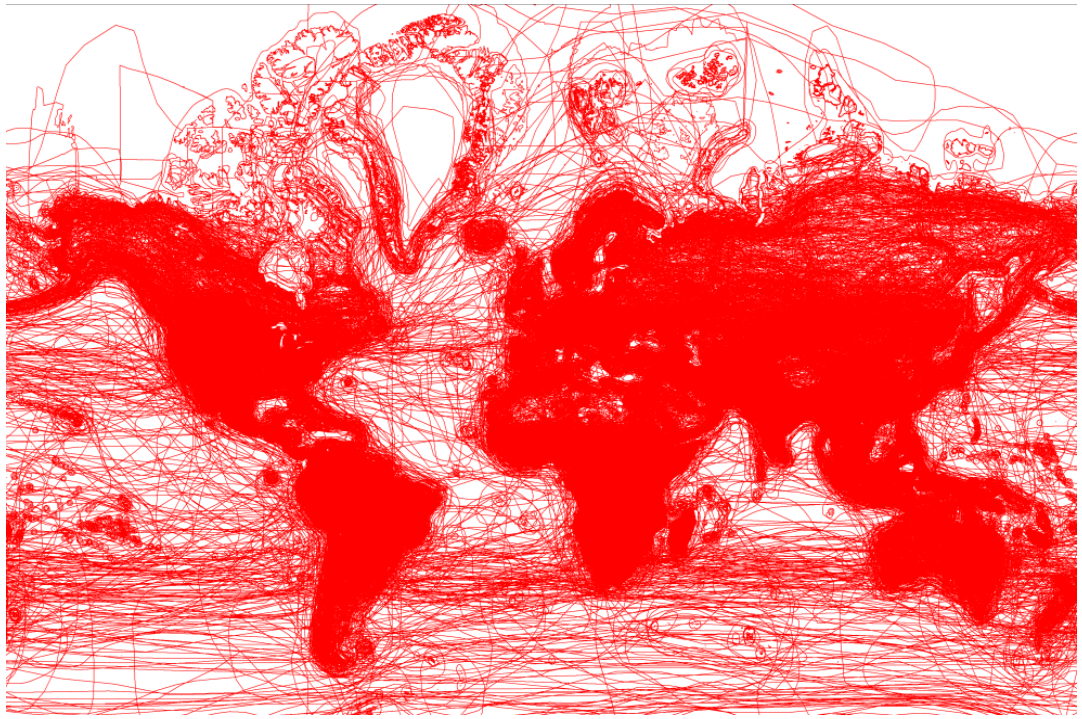
- IUCN Red List 'Least Concern'
  - A taxon that has been evaluated against the criteria and does not qualify as CR, EN, VU or NT at the global level
  - Least Concern does not mean unimportant. Could still be of conservation concern e.g. threatened at the national level, small extent of occurrence
- Potential considerations
  - Legal Protection
  - Global vs National Red List category
  - Relevancy to Critical Habitat e.g. migratory and congregatory species
  - Change in status

IUCN RED LIST OF THREATENED SPECIES

Data update frequency



Range maps



WHO PREPARES THE DATA?

IUCN

Global Species Programme

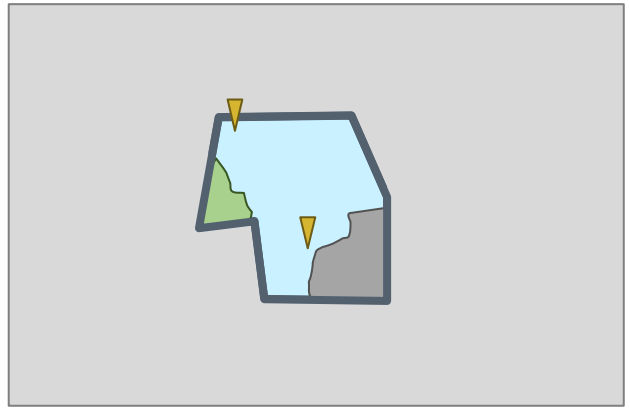
Specialist Groups

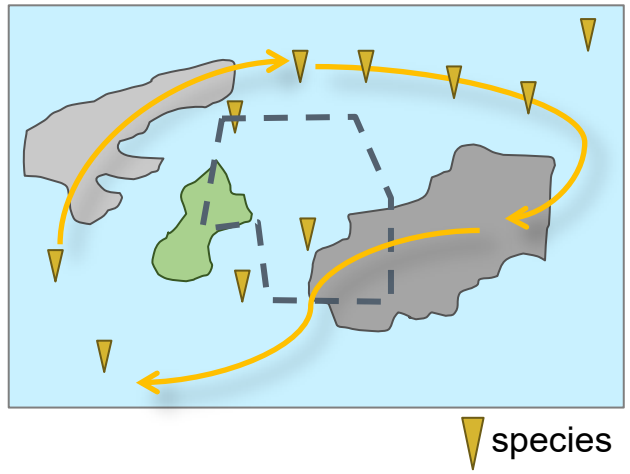
Red List Data Partners

Other Experts

BIODIVERSITY IS SPREAD ACROSS THE WIDER LANDSCAPE OR SEASCAPE

- Biodiversity and Ecosystem Services do not respect arbitrary operational boundaries
- It is critical to consider biodiversity and ecosystem service impacts in their broader spatial context
- Scale is important
- All project lifecycle stages present potential impacts on biodiversity and ecosystem services

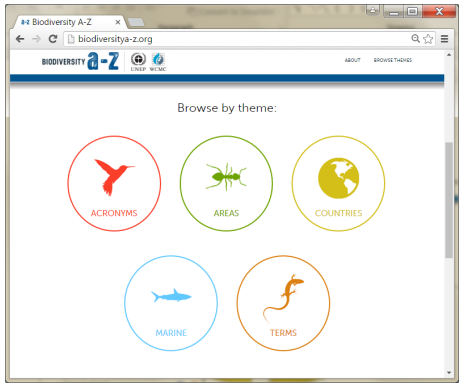


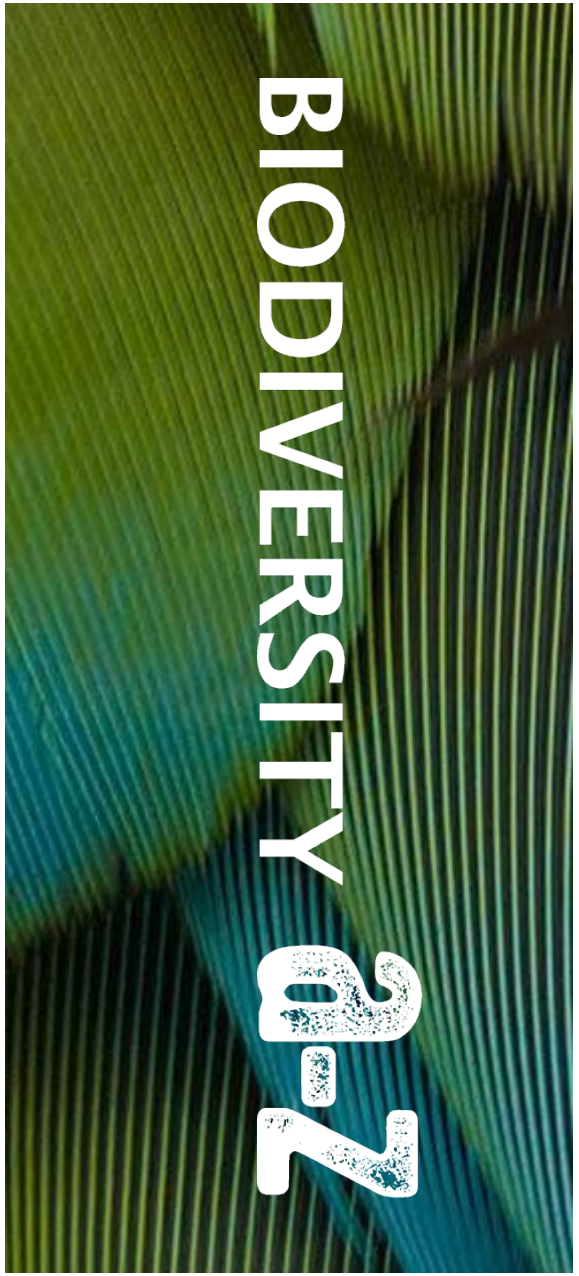


BIODIVERSITY A-Z

Online resources intended to support business users (specialists and non-specialists)

- Areas important for biodiversity
- Glossary of biodiversity terms
- Marine-specific glossary
- Acronym buster
- Countries module





MENTI QUIZ

Go to www.menti.com and use the code 8891 5136

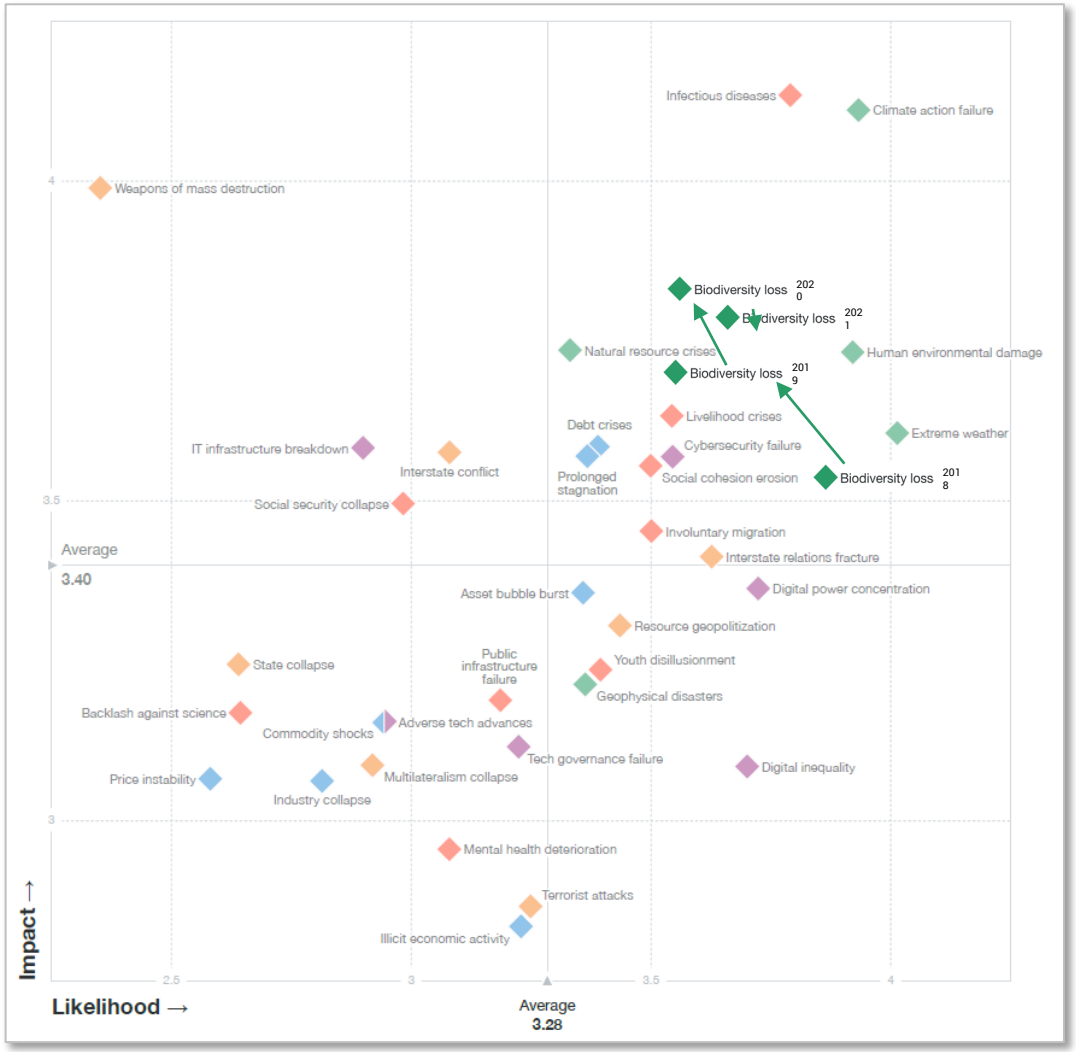
The business case for BES management within TotalEnergies

Bálint Ternyik – Associate Programme Officer

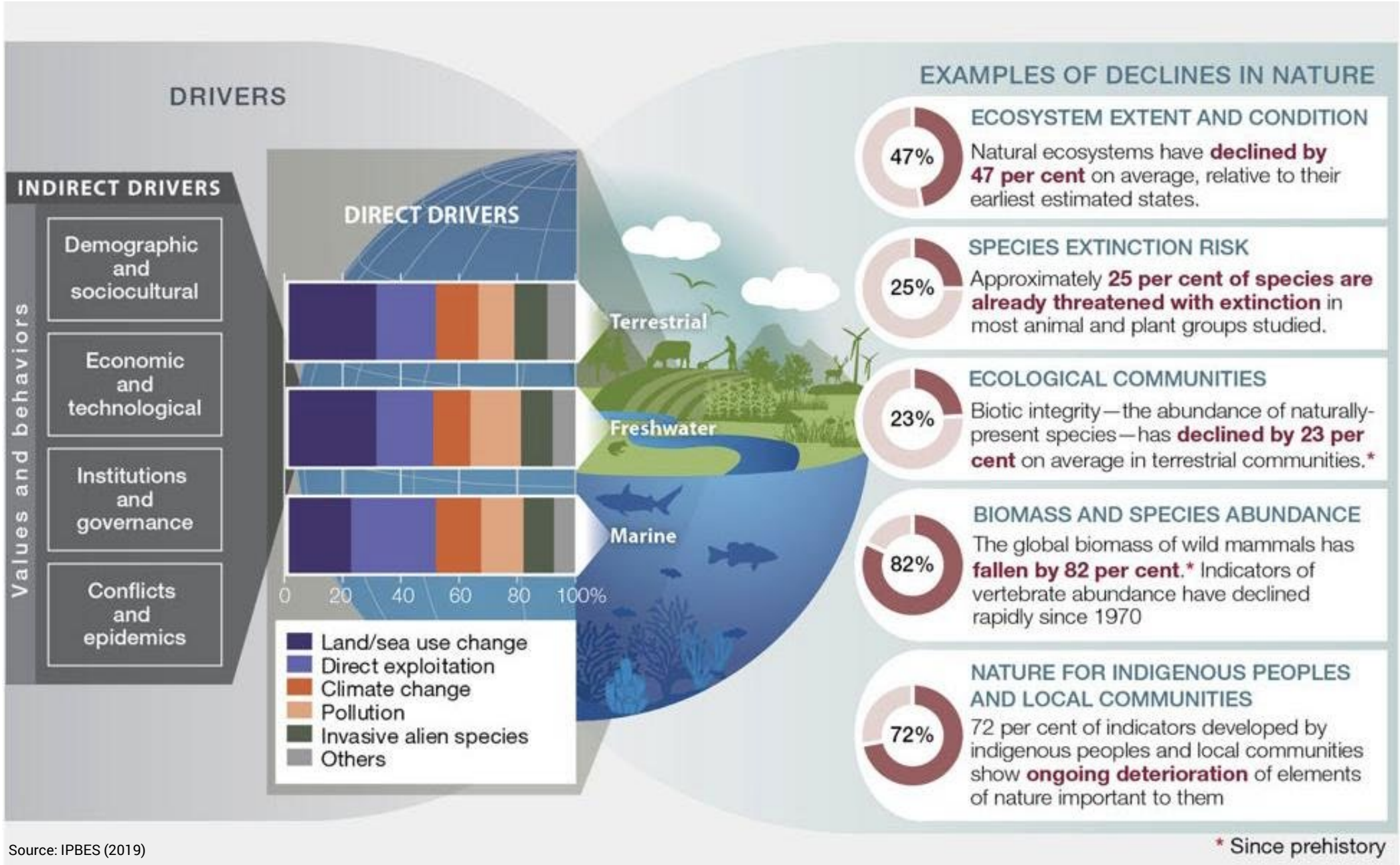
BIODIVERSITY LOSS IS INCREASINGLY SEEN AS A MATERIAL BUSINESS RISK

- Most businesses **impact and/or depend on biodiversity**, either directly or through their supply chains
- Over the past years the biodiversity loss risk consistently gained importance
- Global biodiversity loss now affects the four key areas of risk for any business:
  - **Transitional** inc. reputation risk
  - **Physical** inc. stakeholder relations & operational
  - **Legal** inc. fiduciary duty
  - **Systemic** inc. resource security

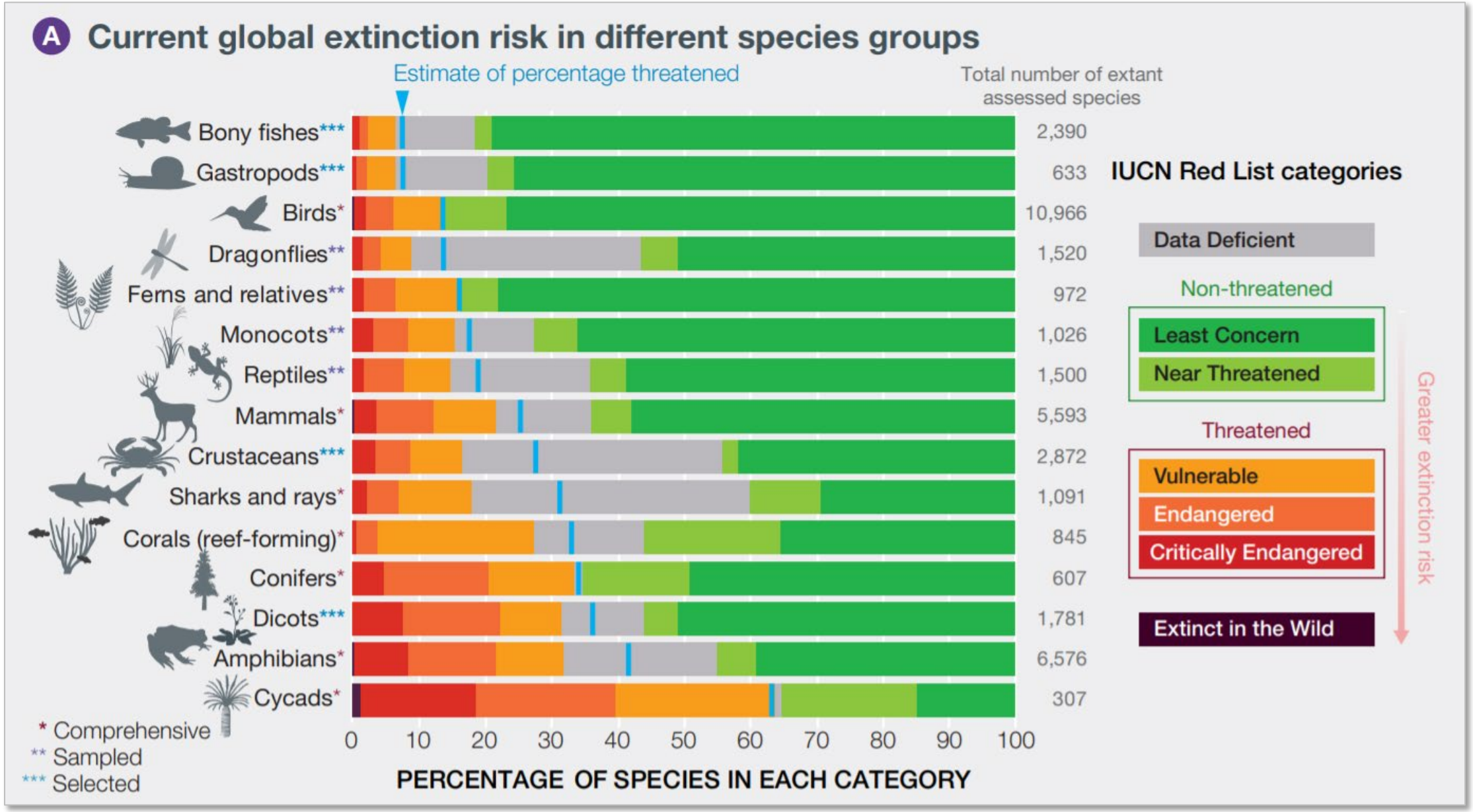
The Global Risk Landscape 2021



Source: Adapted from World Economic Forum (2021)



Source: IPBES (2019)

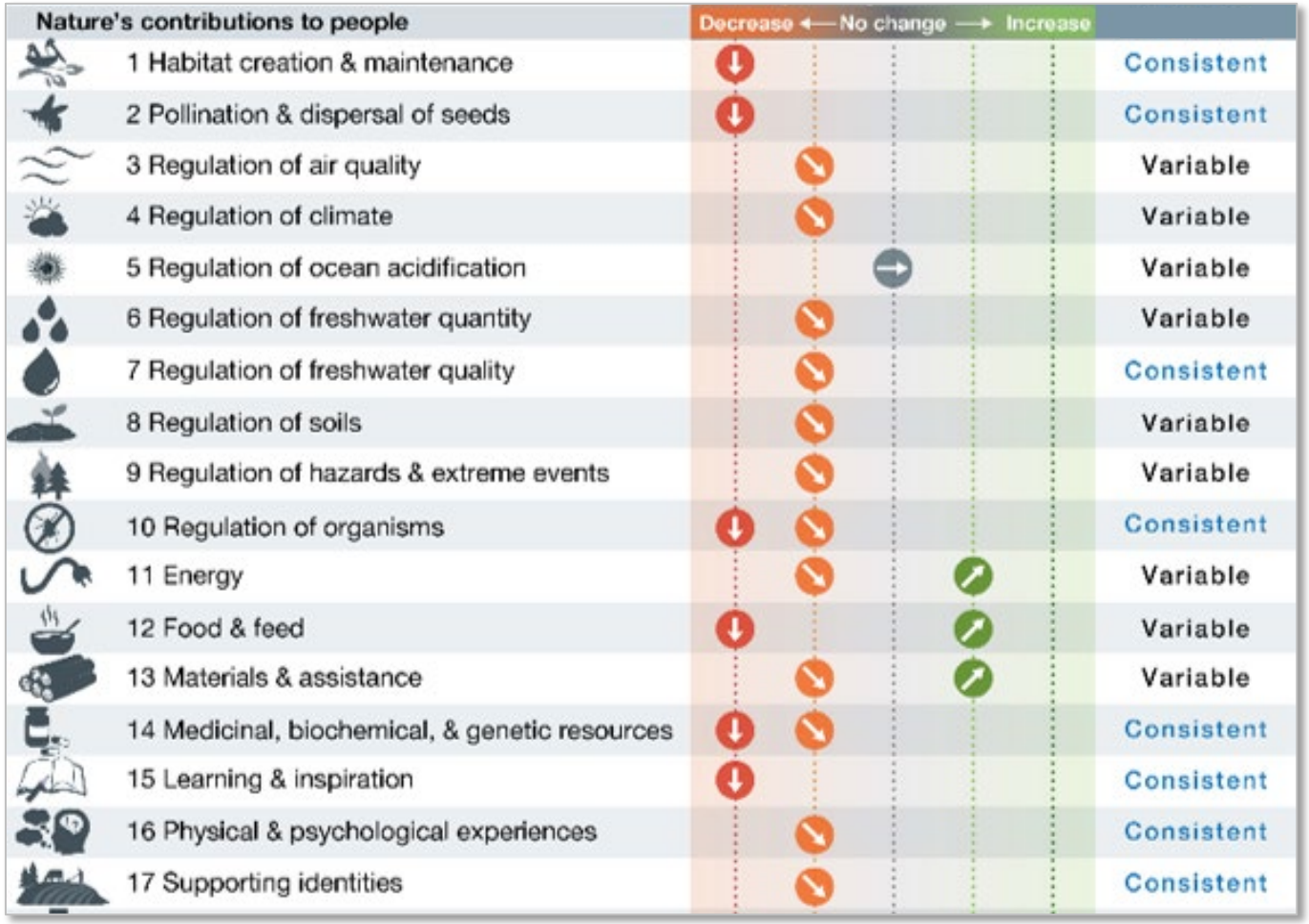


Source: IPBES (2019)

MANY OF THE WORLD'S ECOSYSTEMS SERVICES ARE IN DECLINE

- 17 of 18 categories assessed have undergone decline

- Benefits of nature to people are not easily replaced or replicated when lost



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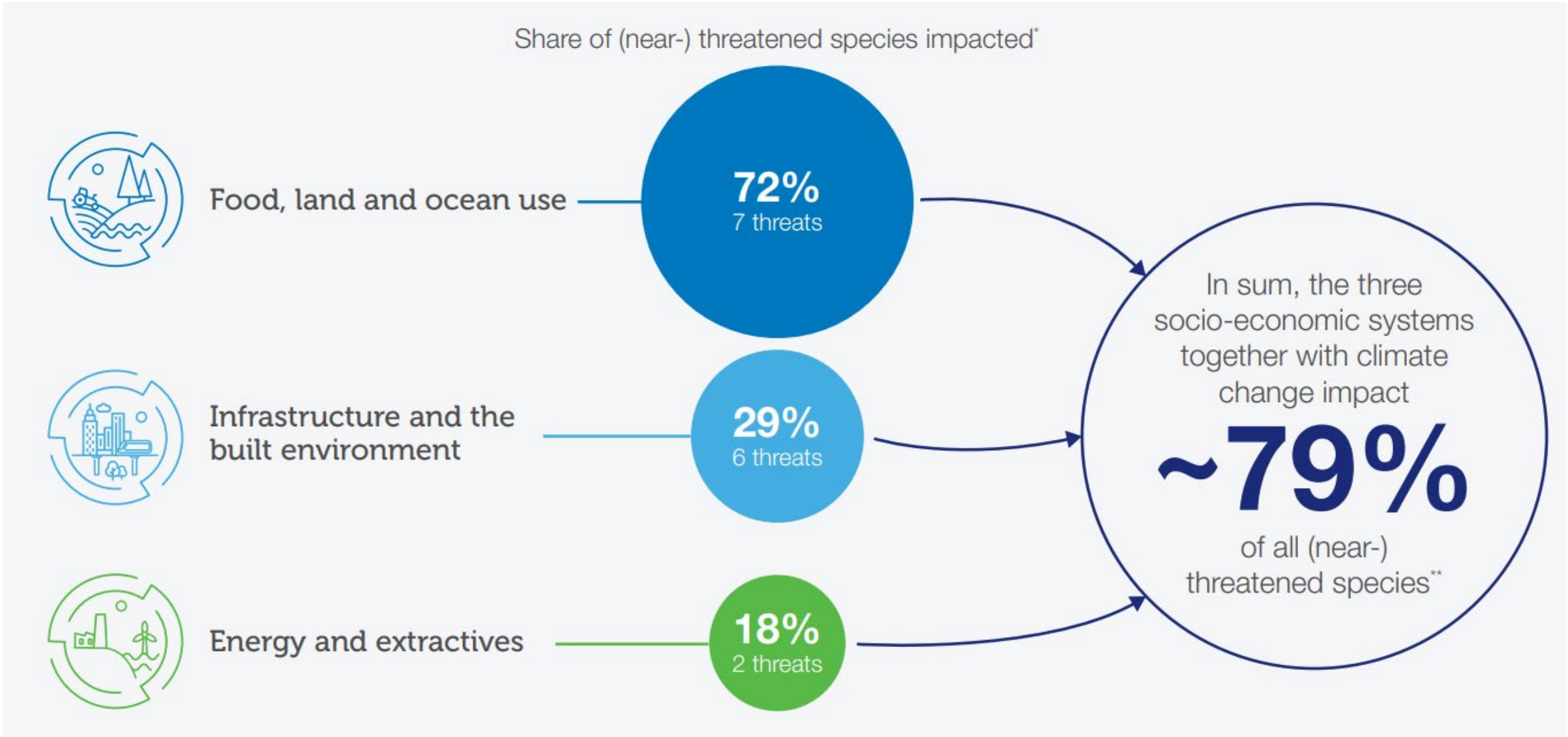
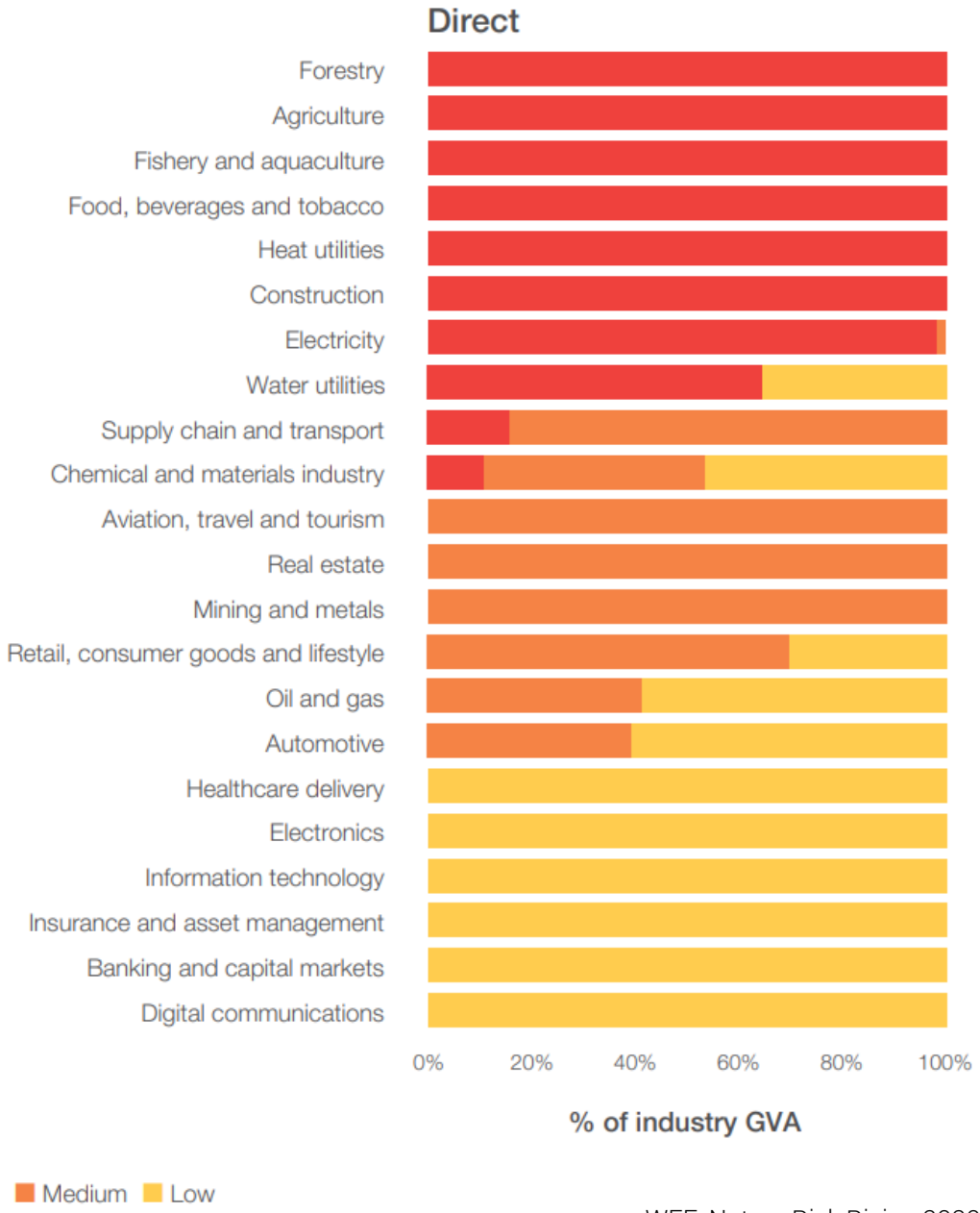


WEF, The Future of Nature and Business, 2020

THIS TRANSLATES TO REAL DISRUPTION RISK FOR BUSINESSES

- Globally, $44 Trillion of economic value generation are at moderately to high risk from nature loss (50% of Global GDP).
- Apart from direct dependencies, businesses still have “hidden dependencies” through their supply chains.



WEF, Nature Risk Rising 2020

SHIFTING FINANCIAL FLOWS

The cost of stabilising biodiversity intactness now by 2050 is approximately US$7 trillion dollars (~8% of global GDP).

But, delaying action by 10 years would more than double the cost to approximately US$15 trillion (~17% of global GDP)

RISK CANNOT BE MANAGED WITHOUT UNDERSTANDING BIODIVERSITY

- Investor profiles and priorities are changing
- Understanding biodiversity helps interpret metrics, anticipate investor expectations, and understand TotalEnergies approach compared to peers
- Companies need to understand biodiversity to avoid misinterpretations and engage with future investors

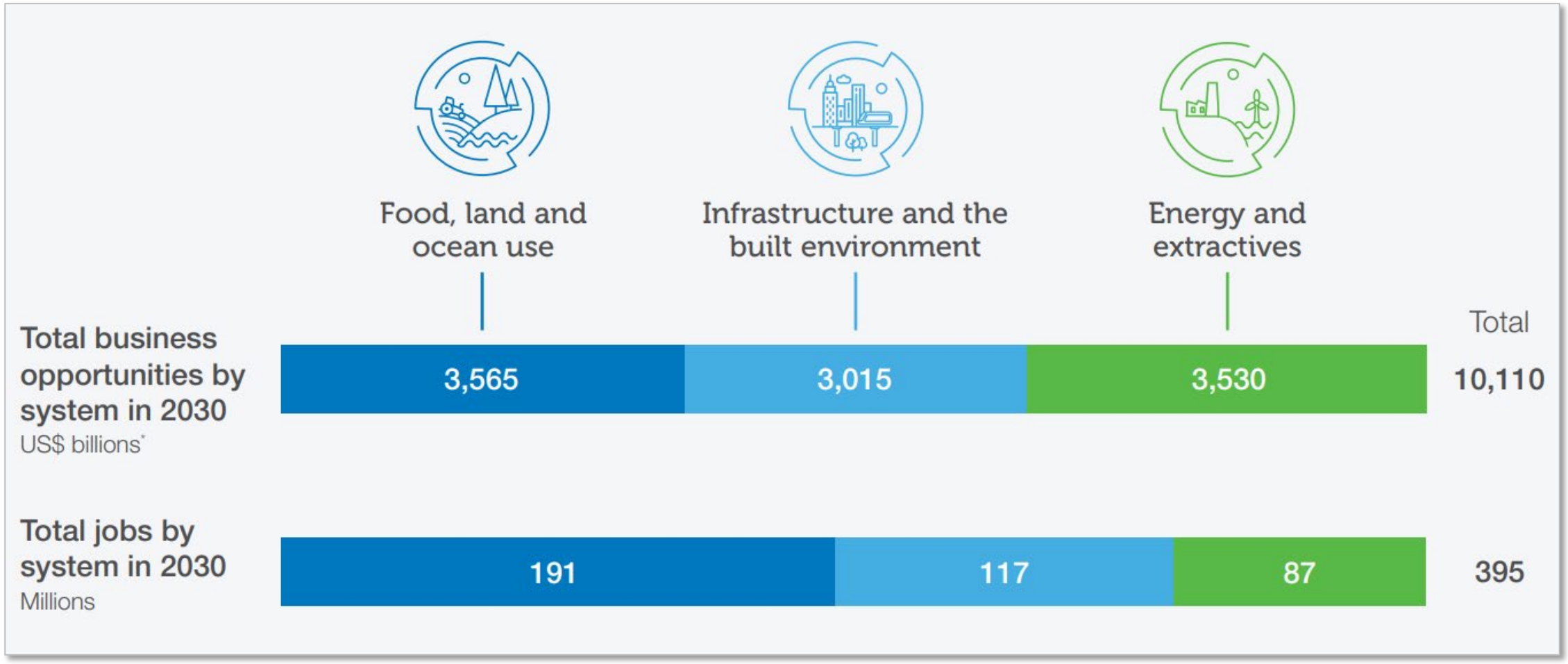
95% of millennials and **85%** of *all investors* are now interested in sustainable investing strategies

Morgan Stanley 2020

Institutions with over $14 trillion in assets have committed to divesting from oil & gas in a movement often led by students

Fossil Free 2021

A NATURE-POSITIVE TRANSITION PRESENTS BUSINESS OPPORTUNITIES



Source: World Economic Forum (2020)

GOOD BIODIVERSITY MANAGEMENT…

…leads to many benefits for business

- Maintained access to finance
- Continued supply of resources
- Resilient operations
- Supporting regulatory compliance
- Increased/maintained reputation

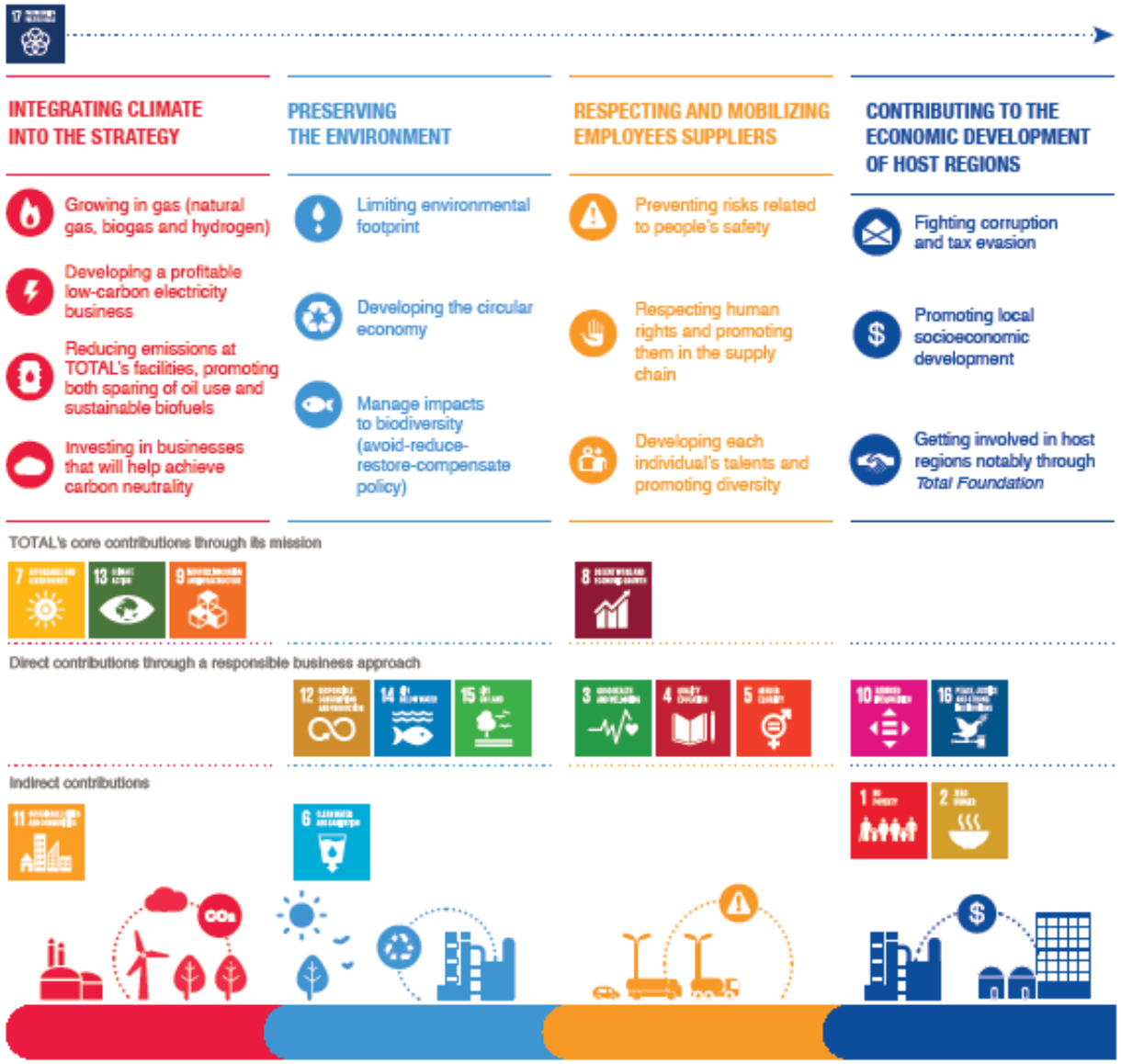
DISCLAIMER

The slides that follow contain material that is not from UNEP-WCMC.

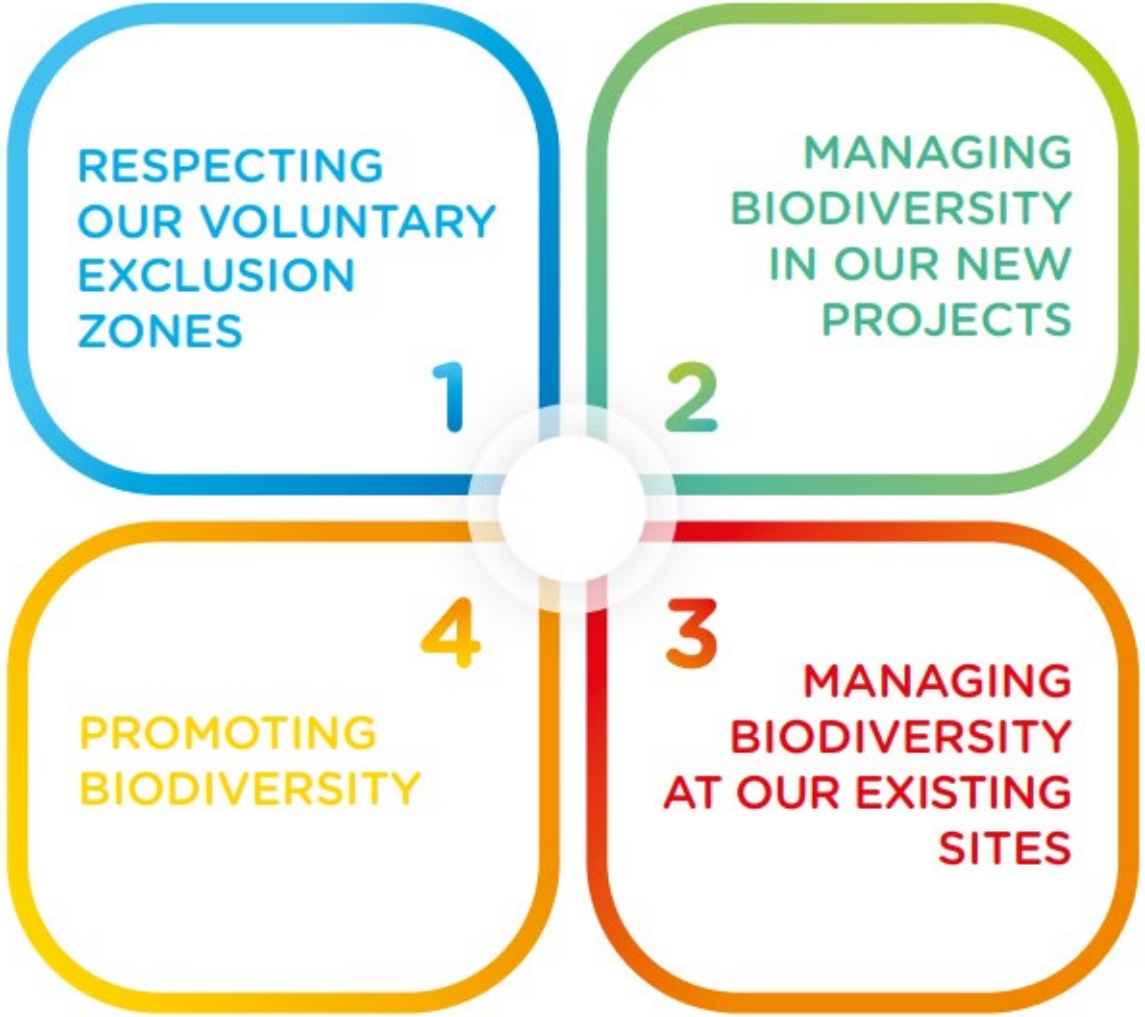
TOTALENERGIES AMBITION: ON THE WAY TO NET-ZERO BY 2050

- “TotalEnergies wants to meet the challenge of the 21st century and play an active role in the **transformation** that is underway in the energy industry, by remaking itself and becoming a broad energy company.”
- “TotalEnergies will become a company that is expanding in the production, transportation, trading and distribution of **responsible** energies to the end customer […].”
- “Being a responsible energy player also means tackling the broader challenges associated with sustainable development.”
- **Environmental excellence**: accelerating progress on environmental stewardship. “TotalEnergies takes care to manage the environmental effects of all its operations according to the Avoid – Reduce – Offset rationale , helping to protect the environment and biodiversity. For that purpose, TotalEnergies promotes the circular economy.”

LINKS TO THE SUSTAINABLE DEVELOPMENT GOALS



TOTALENERGIES BIODIVERSITY COMMITMENTS



GROUP DISCUSSION

- What do you think are the benefits of good biodiversity management within your role / area of business?

- How often does your role / work need you to consider biodiversity?

Summary

Bálint Ternyik – Associate Programme Officer (UNEP-WCMC)

IN SUMMARY

- Biodiversity encompasses all life on Earth. It has 3 main components: genes, species and ecosystems.
- Protected areas are one of the cornerstones of in situ conservation – but they come in many forms, with different designations and objectives
- Key Biodiversity Areas are always identified based on known biodiversity values. They contribute significantly to the global persistence of biodiversity.
- Most businesses impact and/or depend on biodiversity, either directly or through their supply chains.
- Biodiversity and ecosystem services are in decline with far reaching implications for business and society.

Break (15 mins)

proteus

The big picture: International, national and sectoral policies on biodiversity

Bálint Ternyik – Associate Programme Officer (UNEP-WCMC)

TotalEnergies

08 NOVEMBER 2022

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OVERVIEW

INTERNATIONAL, NATIONAL AND SECTORAL POLICIES ON BIODIVERSITY

- Conventions and agreements driving global-scale biodiversity conservation
- Overview of key actors and good practice guidance
- Horizon scan of emerging topics

Conventions and agreements driving global-scale biodiversity conservation

Bálint Ternyik – Associate Programme Officer (UNEP-WCMC)

THE CONVENTION ON BIOLOGICAL DIVERSITY

- A legally binding international treaty designed to govern the conservation and use of biodiversity
- Objectives
  - The conservation of biodiversity
  - The sustainable use of the components of biodiversity
  - The fair and equitable sharing of the benefits arising out of the utilization of genetic resources
- Governance is through the ‘Conference of the Parties' which currently takes place every two years.

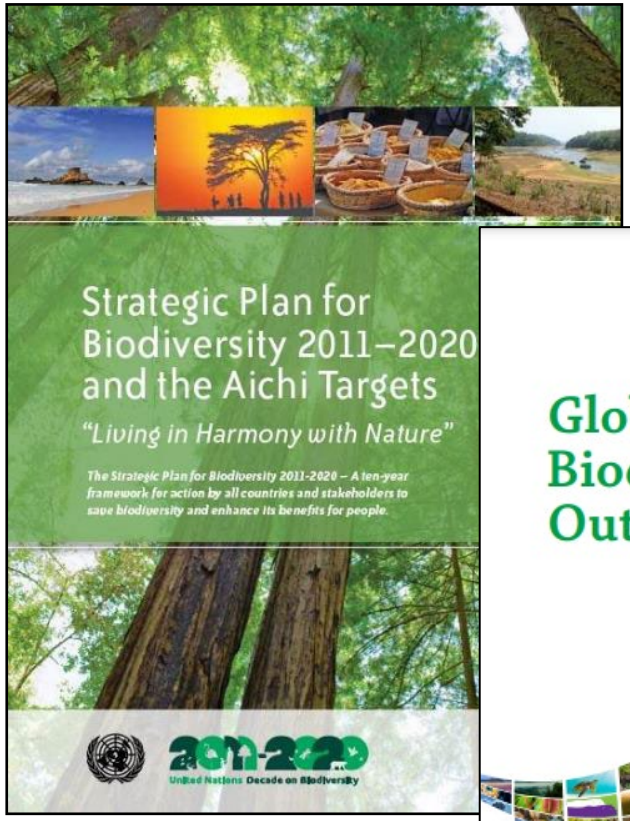
Convention on Biological Diversity

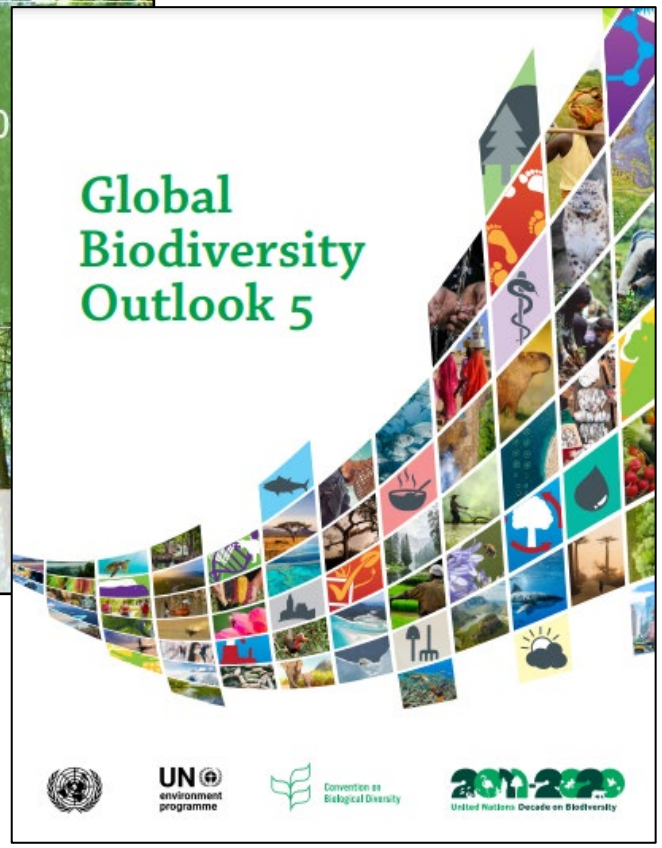
2011-2020 STRATEGIC PLAN FOR BIODIVERSITY

- Framework of 20 “Aichi Biodiversity Targets” setting ambitions for the period 2011-2020

In 2020…

- The timeframe for the 20 Aichi Biodiversity Targets was completed – most targets have been missed
- The timeframe for biodiversity-related targets under the SDGs is completed



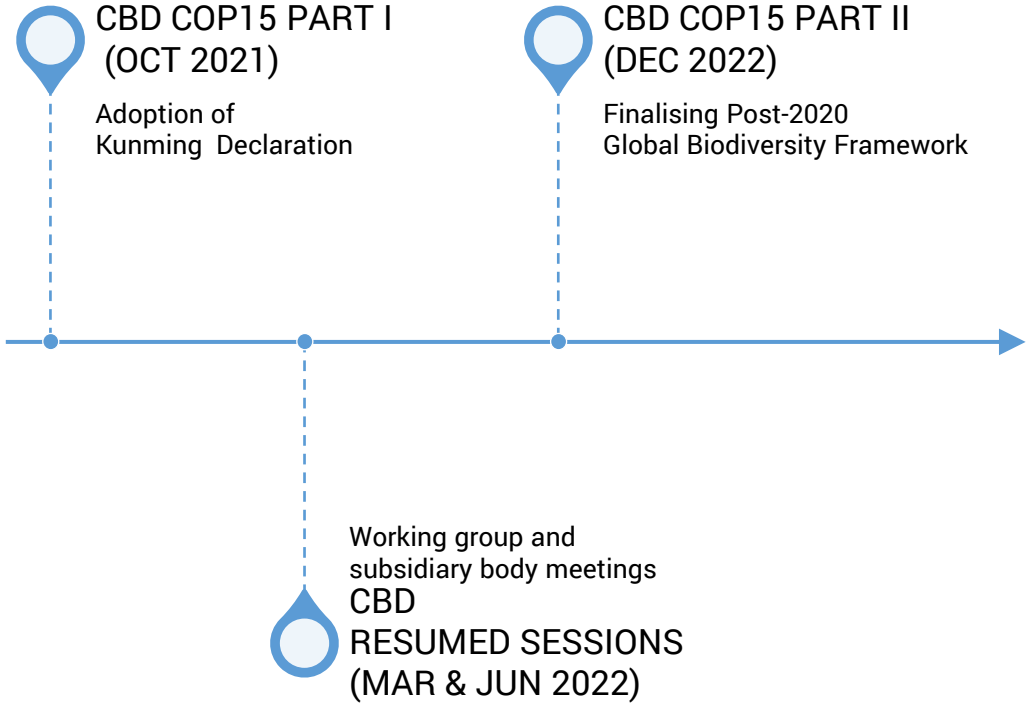


THE CONVENTION ON BIOLOGICAL DIVERSITY

Post-2020 Global Biodiversity Framework

- 21 targets and 10 ‘milestones’ for 2030
- ‘Living in harmony with nature’ by 2050
- Draft Target 15
  - Businesses to measure and report dependencies and impacts
  - Reduce negative and increase positive impacts
  - Full sustainability of extraction and production practices

25 YEARS Convention on Biological Diversity
SAFEGUARDING LIFE ON EARTH



OTHER RELEVANT CONVENTIONS

UNESCO World Heritage Convention

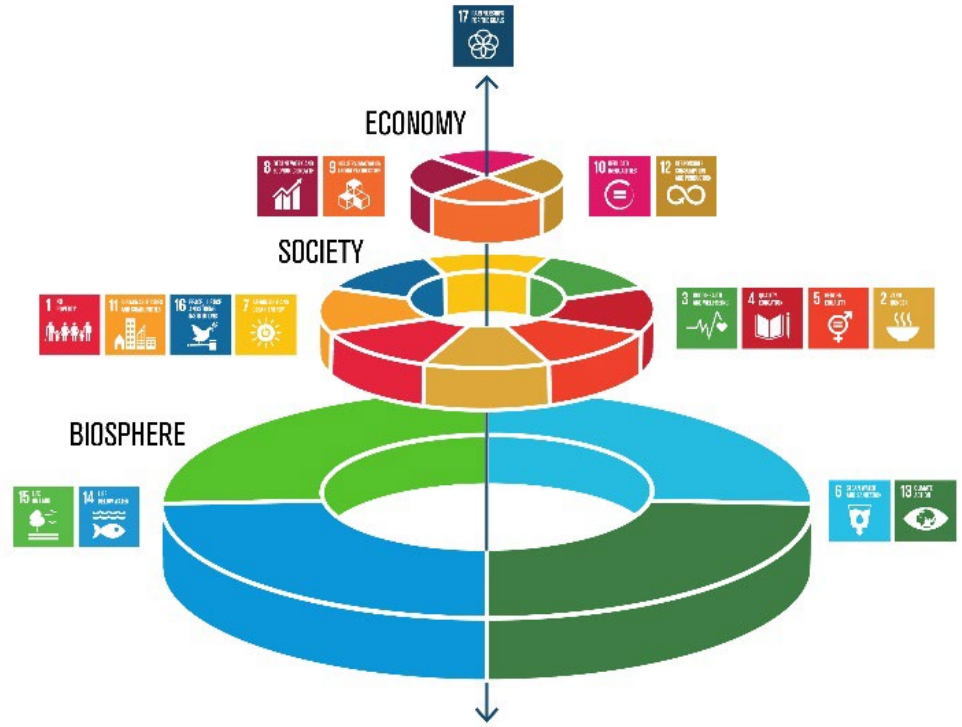
- Clear position that mineral, oil and gas exploration or exploitation is incompatible with World Heritage status

Ramsar Wetland Convention

- Adequate wetland inventory and baseline information in supporting decision-making and permitting procedures related to extractive industries
- Emphasize importance of SEA, particularly in extractive industries

THE SUSTAINABLE DEVELOPMENT GOALS

- A set of 17 highly aspirational goals
- Launched in 2016
- Not legally binding, however, governments are expected to take ownership and establish national frameworks to achieve the Goals

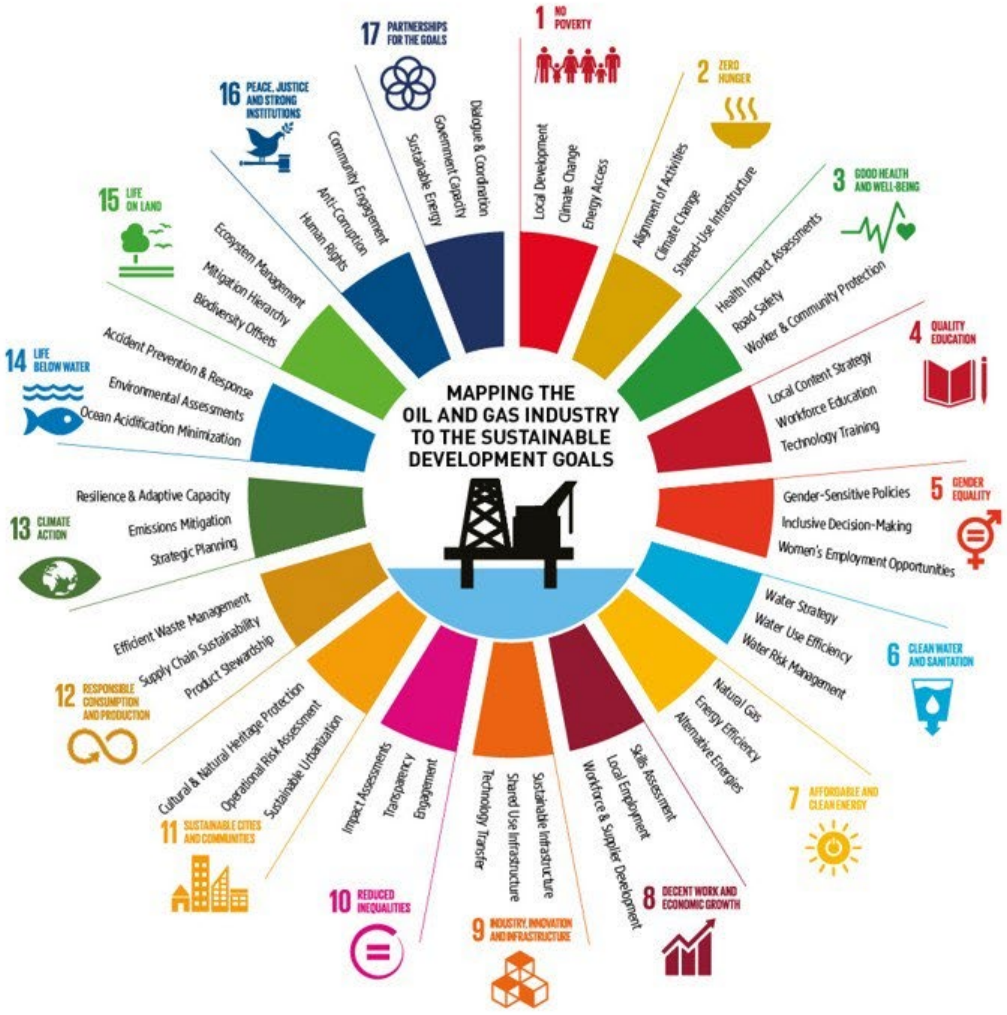


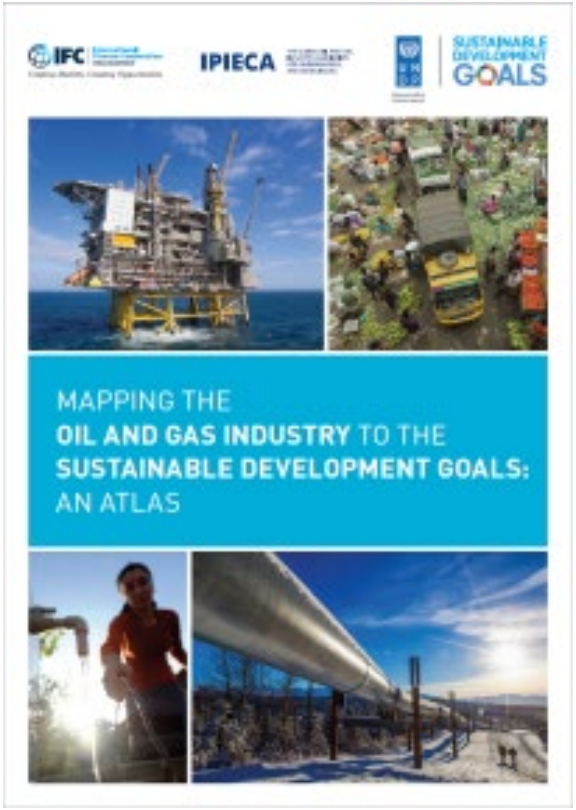
SDGS AND THE OIL AND GAS INDUSTRY

MAPPING THE INDUSTRY TO THE SDGs

The oil and gas industry is committed to responsible and sustainable business, as well as serving as an essential partner to meet the challenge of achieving the SDGs.

The oil and gas industry has the potential to contribute to all 17 SDGs.





IPIECA 2017 *Mapping the oil and gas industry to the Sustainable Development Goals: An Atlas*

INTERNATIONAL UNION FOR THE CONSERVATION OF NATURE (IUCN): GOVERNANCE MECHANISMS

The IUCN World Conservation Congress brings together a range of different stakeholders from governments, business and conservation.

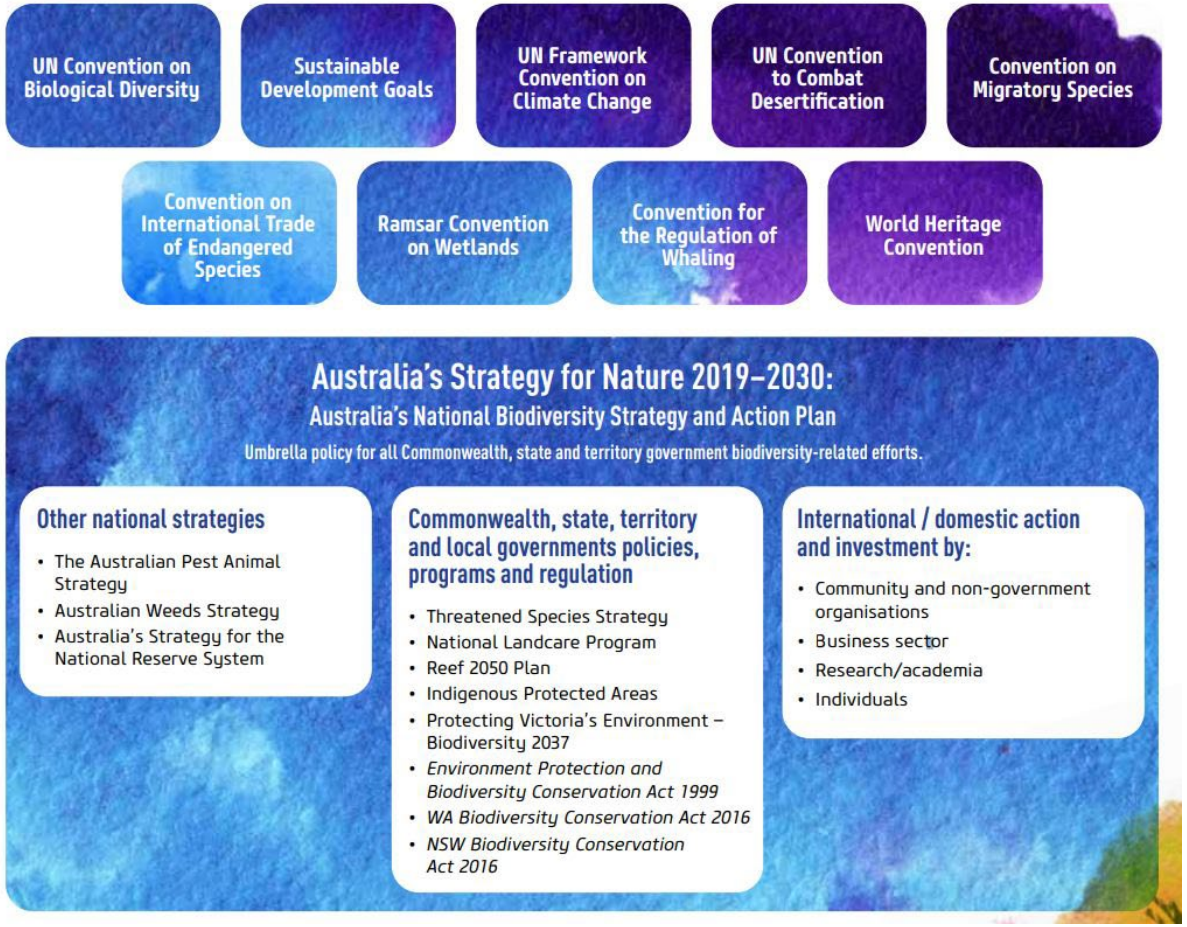
- Propose moratoria on harmful practices
- Discussion, debate and sharing of views across different stakeholder groups
- Providing authoritative documents that influence the way businesses engage e.g.
  - Protected areas
  - KBAs
  - Biodiversity offsets

IUCN WORLD CONSERVATION CONGRESS Marseille

NATIONAL STRATEGIES AND VOLUNTARY INITIATIVES

- National Biodiversity Strategies and Action Plans (NBSAPs) e.g. Australia
- National Ecosystem Assessments

NATIONAL ECOSYSTEM ASSESSMENT INITIATIVE



Overview of key actors and good practice guidance

Bálint Ternyik – Associate Programme Officer (UNEP-WCMC)

KEY ACTORS AND INITIATIVES

- IPIECA
- Cross-Sector Biodiversity Initiative (CSBI)
- Biodiversity and Ecosystem Services Network (BES Net)
- Business for Nature Coalition
- Science Based Targets Network (SBTN)
- Taskforce on Nature-related Financial Disclosures (TNFD)
- Proteus Partnership

ipieca

Cross Sector Biodiversity Initiative

BESNet
Biodiversity and Ecosystem Services Network

BUSINESS FOR NATURE

SCIENCE BASED TARGETS NETWORK
GLOBAL COMMONS ALLIANCE

TNFD Taskforce on Nature-related Financial Disclosures

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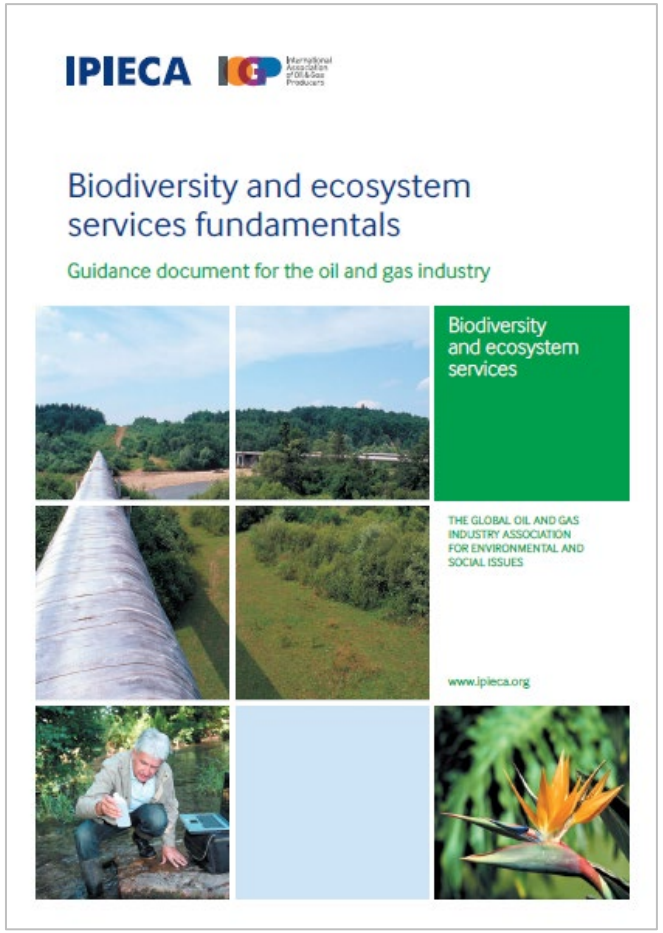
INDUSTRY GUIDANCE

- IPIECA Biodiversity and Ecosystem Service Fundamentals (access)
- CSBI Cross-sector guide for implementing the Mitigation Hierarchy (access)
- KBA business guidance (access)
- NPI on biodiversity: The conservation case (access)
- Good practice guidance for oil and gas operations in marine environments (access)
- Mitigating biodiversity impacts associated with solar and wind energy development (access)

IPIECA BES FUNDAMENTALS

Provides guidance on managing biodiversity and ecosystem services. 6 management practices:

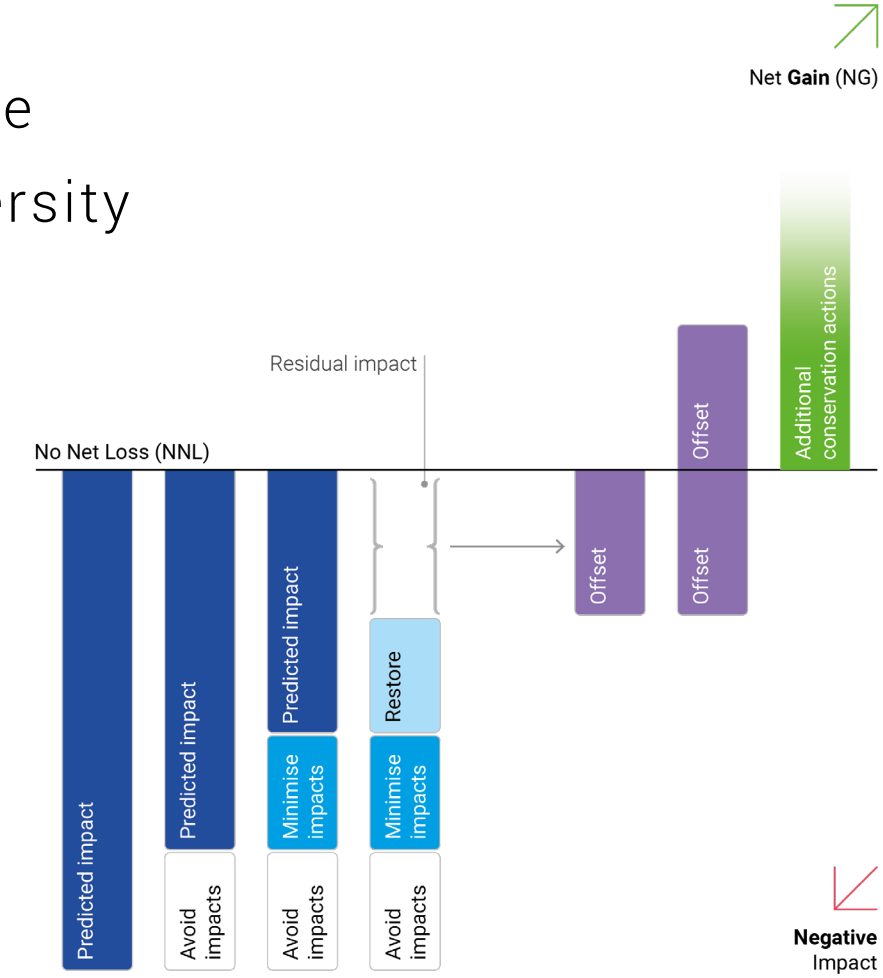
1. Build BES into governance and business processes
2. Engage stakeholders and understand their expectations around BES
3. Understand BES baselines
4. Assess BES dependencies and potential impacts
5. Mitigate and manage BES impacts and identify BES opportunities
6. Select, measure and report BES performance indicators



MITIGATION HIERARCHY

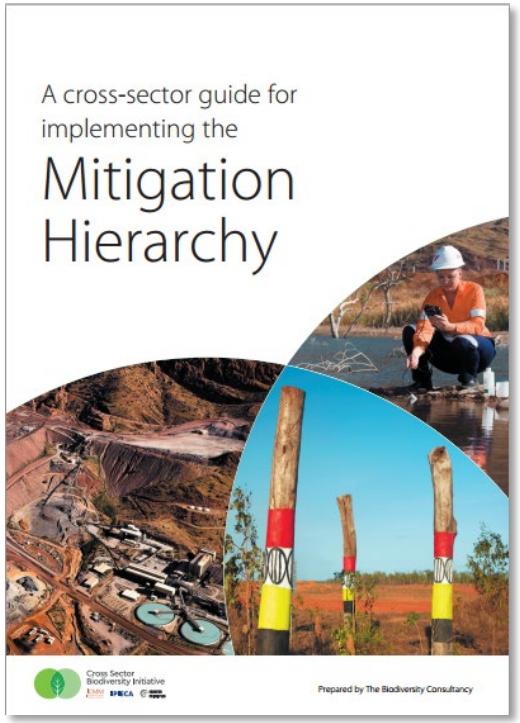
Sequential steps to minimise negative impacts on biodiversity

1. Avoidance
2. Minimisation
3. Restoration
4. Offsetting



Cross Sector Biodiversity Initiative

ICMM IPIECA EQUATOR PRINCIPLES



STANDARDS

Finance and business standards

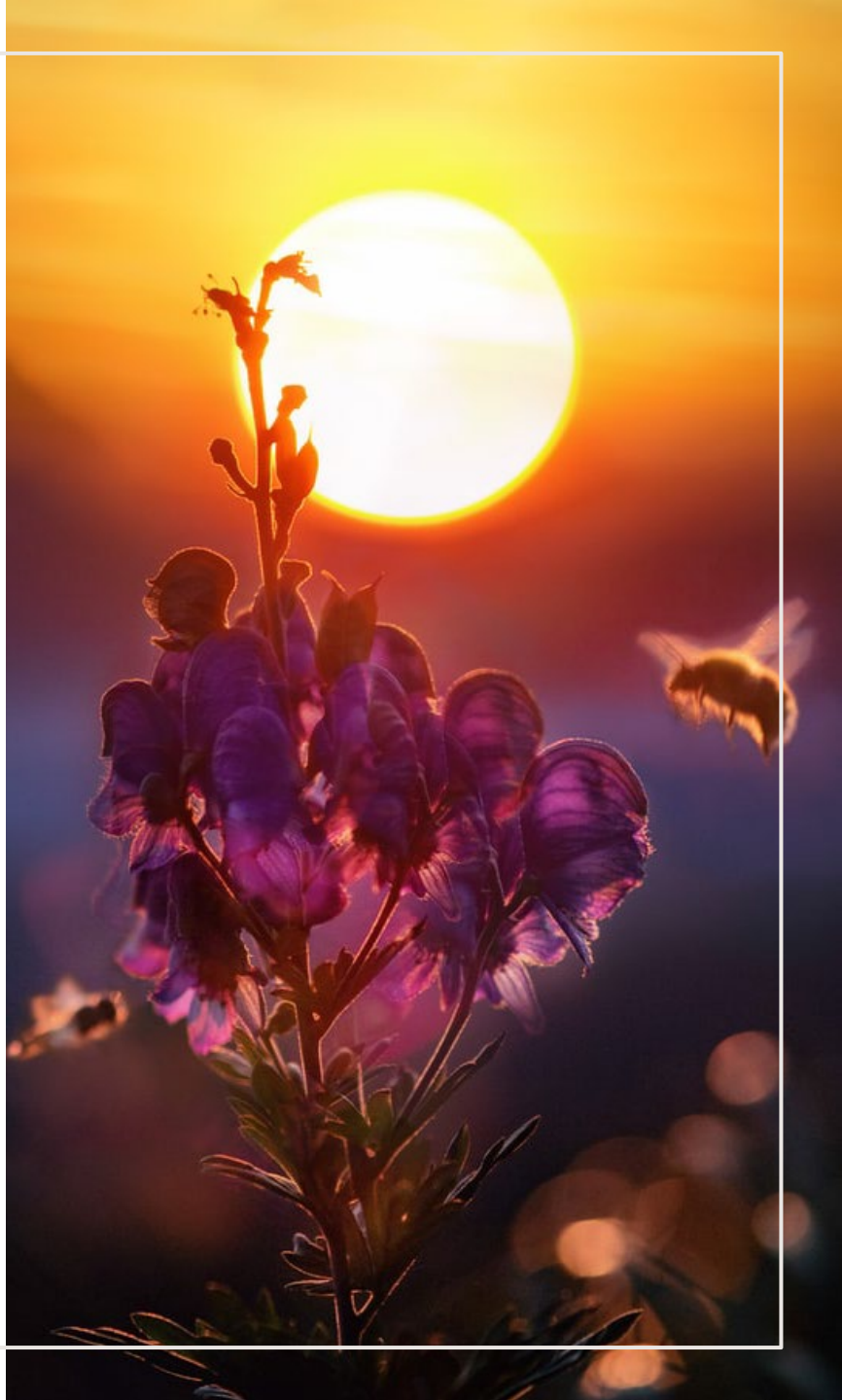
- International Finance Corporation (IFC) Performance Standard 6 (access)
- World Bank Safeguards policies (ESS6) (access)
- EU Taxonomy (access)
- ISO standards (e.g. 14001:2015) (access)
- Global Reporting Initiative (GRI) Oil and Gas Sector Standard (access)

Conservation standards

- IUCN Red List
- IUCN Green List
- KBA and AZE

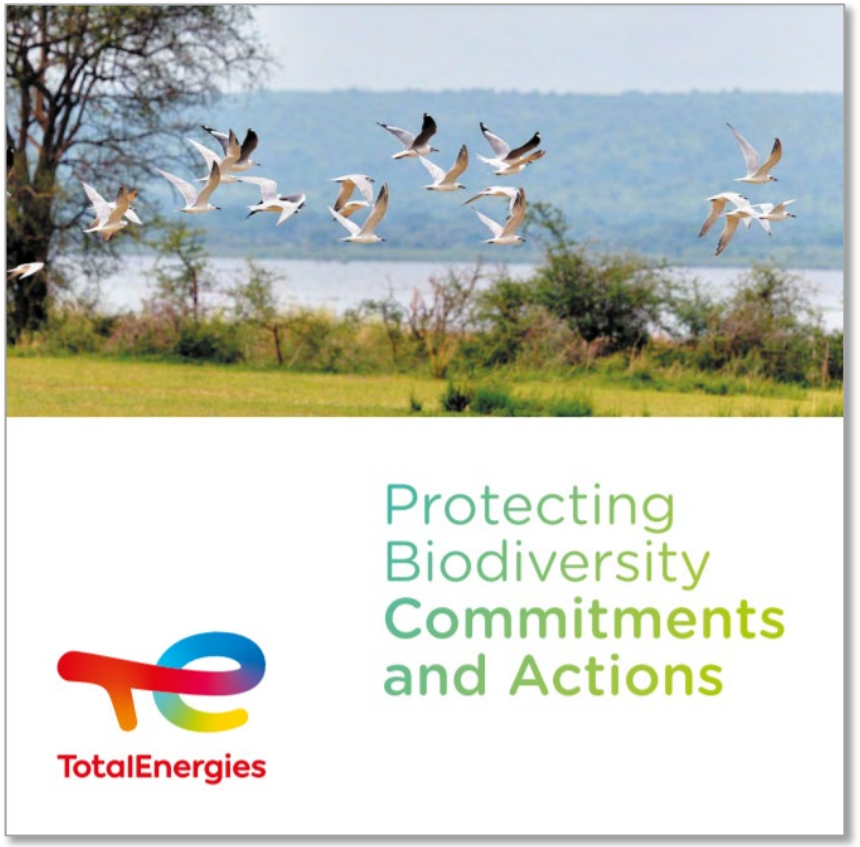
GOOD PRACTICE APPROACHES

- Risk-based approaches
- Mitigation Hierarchy
- No-go commitments (e.g. UNESCO World Heritage sites)
- No Net Loss of biodiversity and Biodiversity Net Gain
- Natural Capital Protocol



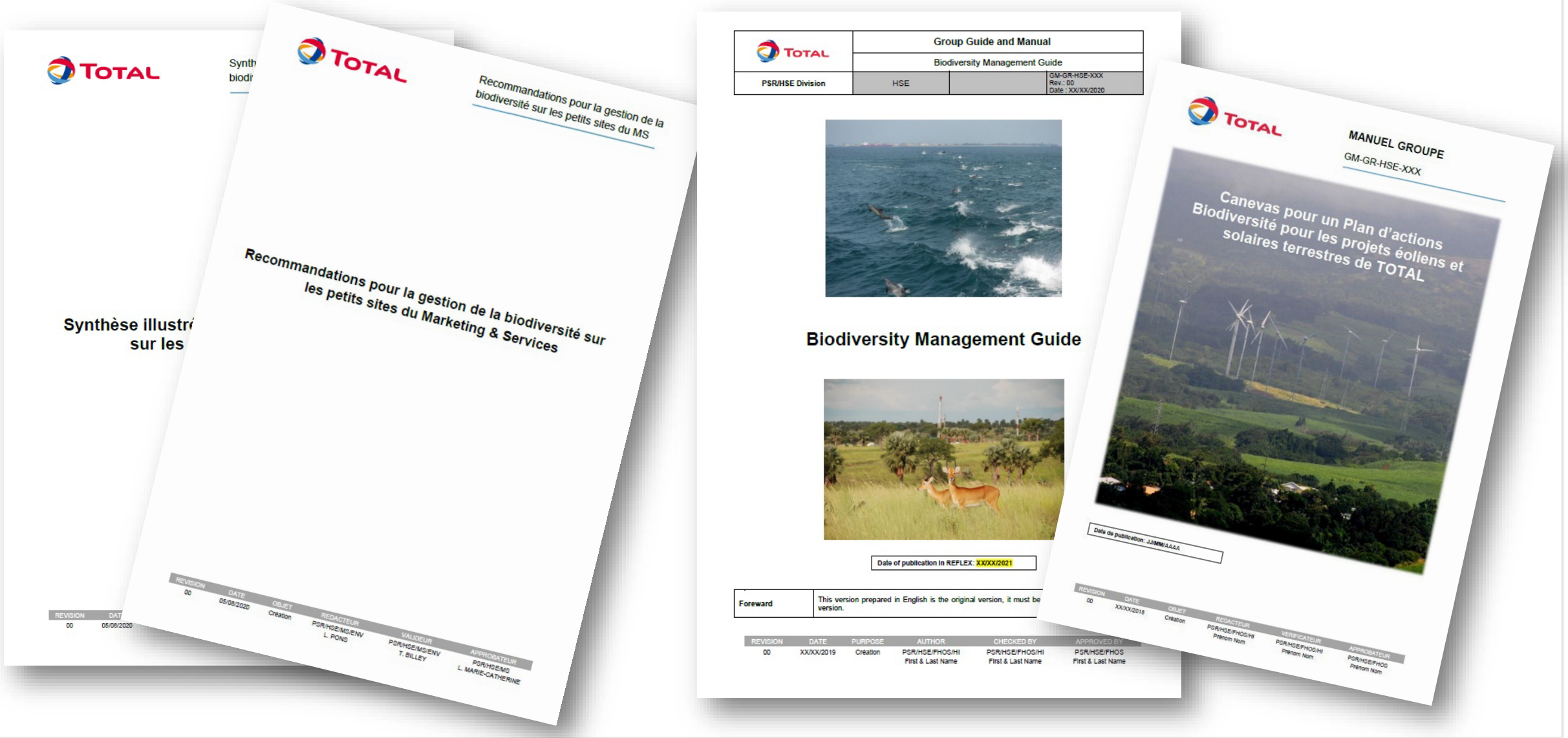
GOOD PRACTICE AND GUIDANCE AT TOTALENERGIES

- UNESCO World Heritage sites and Arctic sea ice no-go areas
- Biodiversity Action Plans for new projects*
- Net Positive Impact for new projects*
- Applying the Mitigation Hierarchy
- Public reporting on progress towards commitments



*For project on sites located on an area of interest for biodiversity

TOTALENERGIES' GUIDANCE AND TOOLS



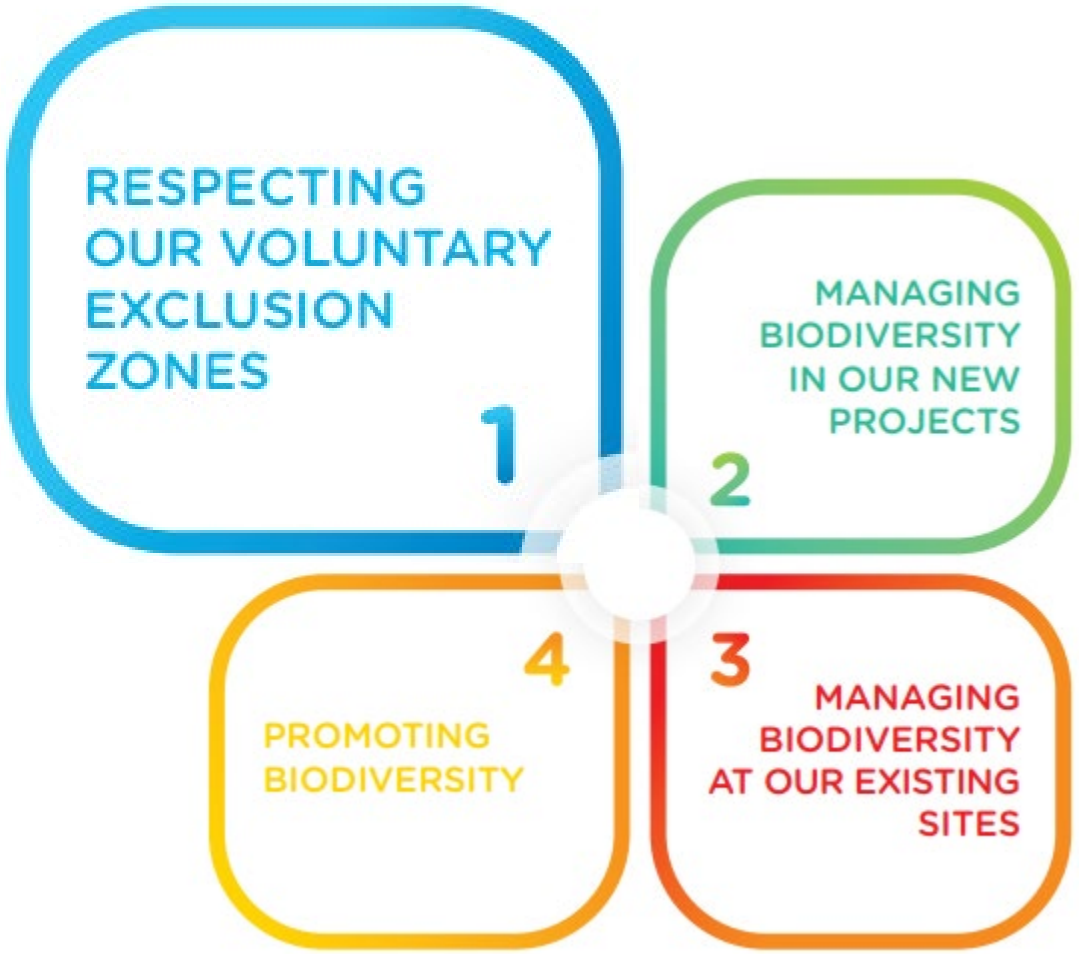
BIODIVERSITY ACTION AT TOTALENERGIES

Protecting Biodiversity

Commitments and Actions

TOTALENERGIES BIODIVERSITY COMMITMENTS

- Zero non-compliance to commitments and reporting publicly
- Only broad energy company with the arctic commitment.
- Annual UNESCO & Sea Ice Atlas to assist branches project teams for ensuring prospects meet commitments.



TOTALENERGIES BIODIVERSITY COMMITMENTS

- Biodiversity Action Plans (BAPs) for all projects located in IUCN categories I to IV or Ramsar protected areas.

IUCN

Ramsar

1 RESPECTING OUR VOLUNTARY EXCLUSION ZONES

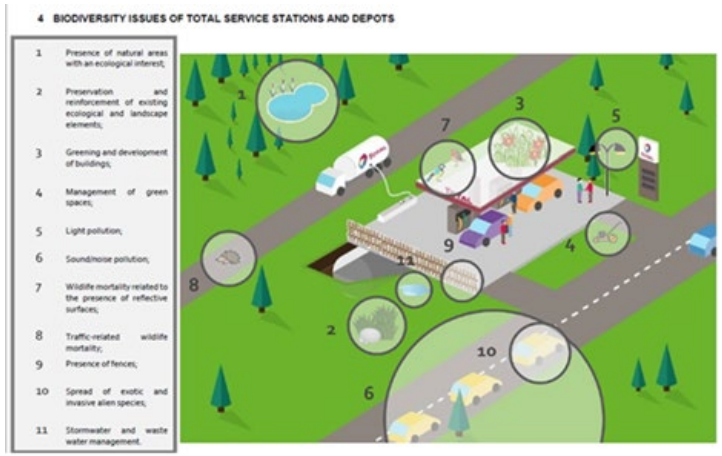
2 MANAGING BIODIVERSITY IN OUR NEW PROJECTS

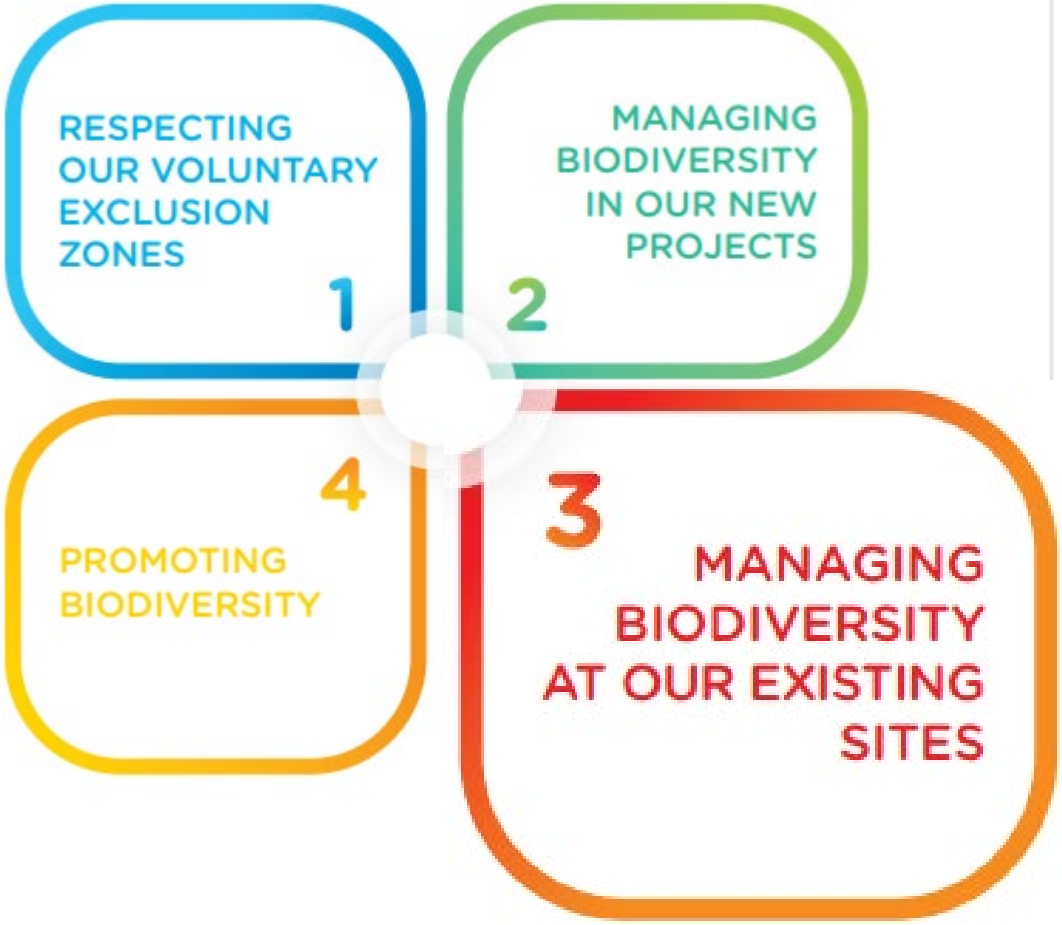
3 MANAGING BIODIVERSITY AT OUR EXISTING SITES

4 PROMOTING BIODIVERSITY

TOTALENERGIES BIODIVERSITY COMMITMENTS

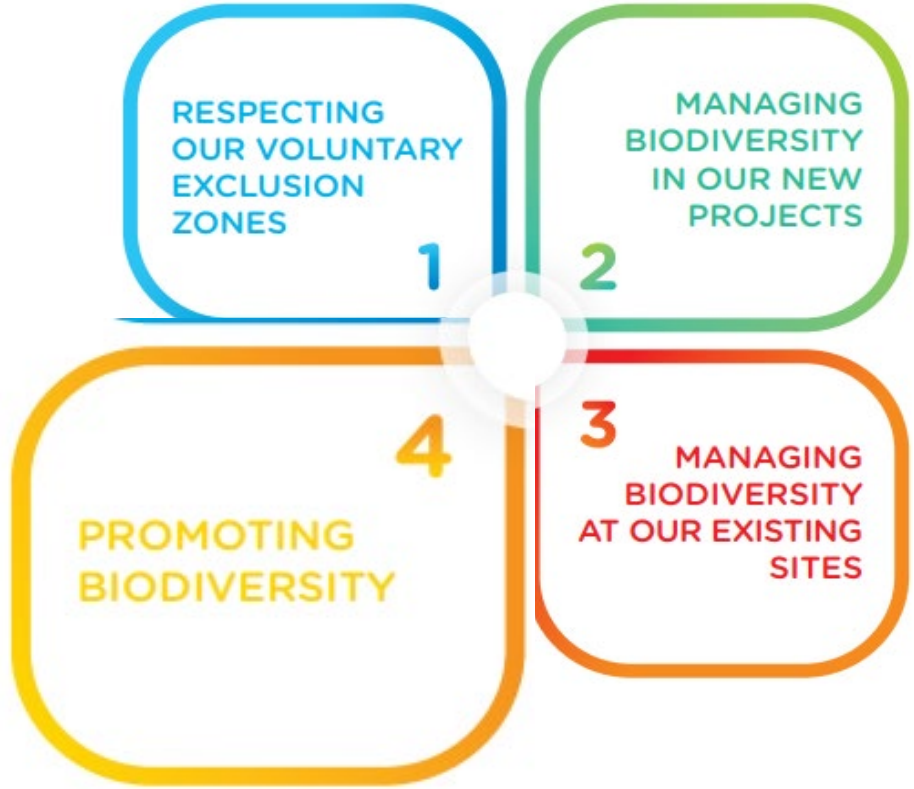
- Biodiversity surveys
- Identification of candidate closed sites for biodiversity restoration objectives
- Develop Biodiversity Road map for petrol stations





TOTALENERGIES BIODIVERSITY COMMITMENTS

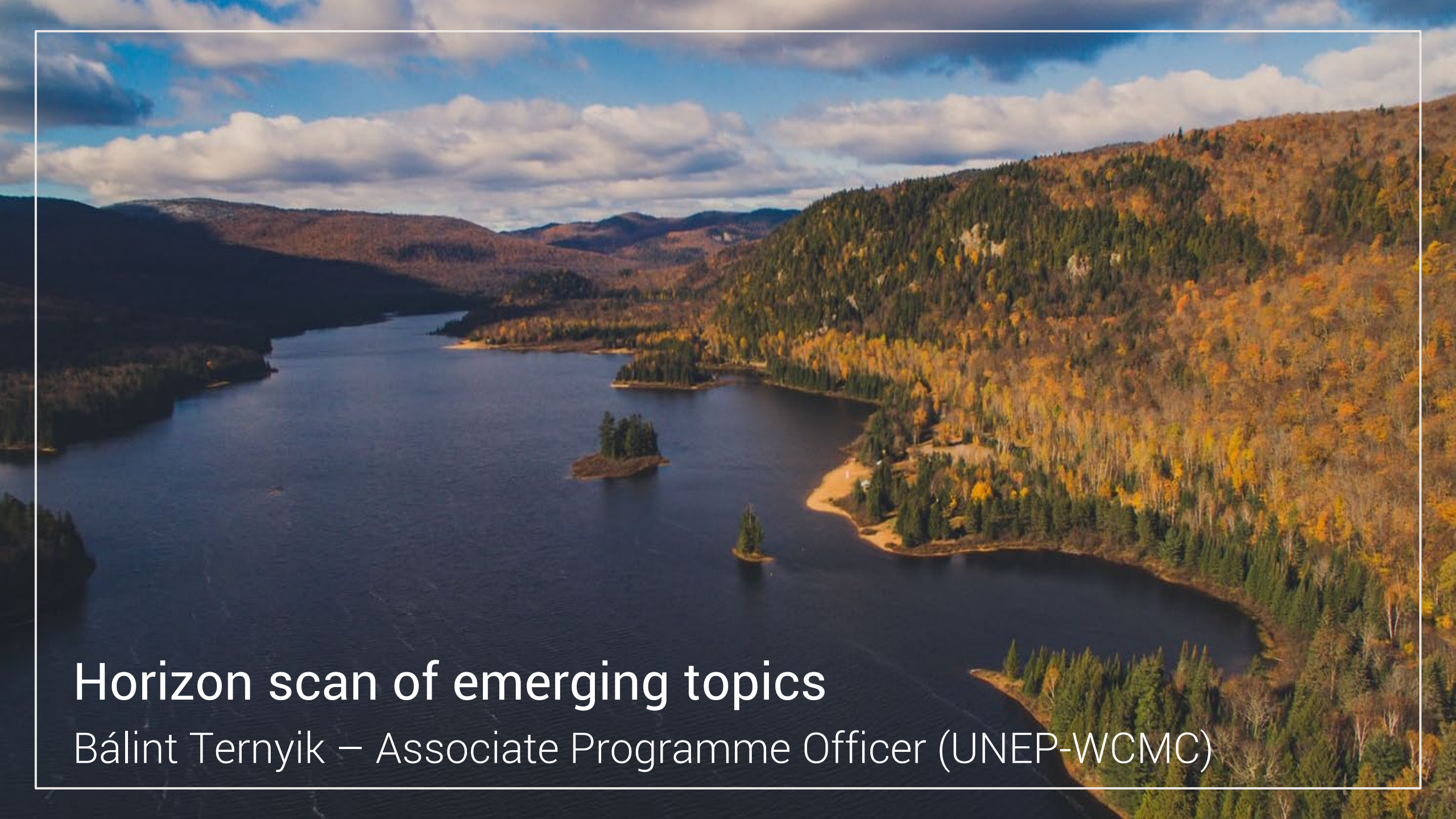
- 1200 initiatives in support of biodiversity
- Sharing data to the Global Biodiversity Information Facility
- R&D: environmental-DNA for monitoring, ecological connectivity modelling, Mitigation Hierarchy & NbS decision making tools
- Complete modules Lizzy Biodiversity Training programme
- Industry associations and community of practices: IPBES, UN-CBD, TNFD, IPIECA, CSBI, AFNOR…



TotalEnergies FOUNDATION · GBIF Global Biodiversity Information Facility · TNFD · Convention on Biological Diversity · ipbes Science and Policy for People and Nature · Action! · afnor · Cross Sector Biodiversity Initiative · lizzy · ICMM · IPIECA · Equator Principles

MENTI QUIZ

Go to www.menti.com and use the code 8891 5136

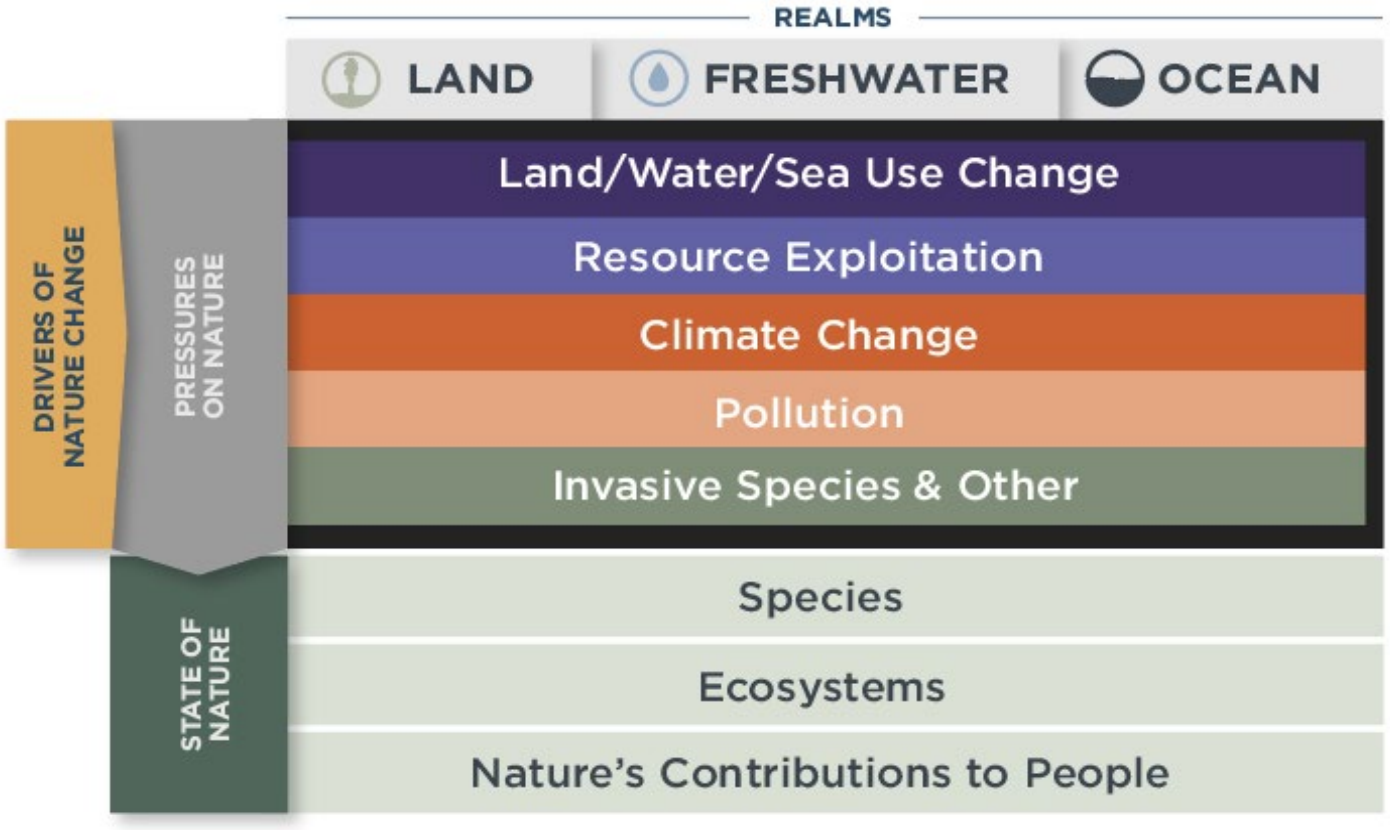


Horizon scan of emerging topics

Bálint Ternyik – Associate Programme Officer (UNEP-WCMC)

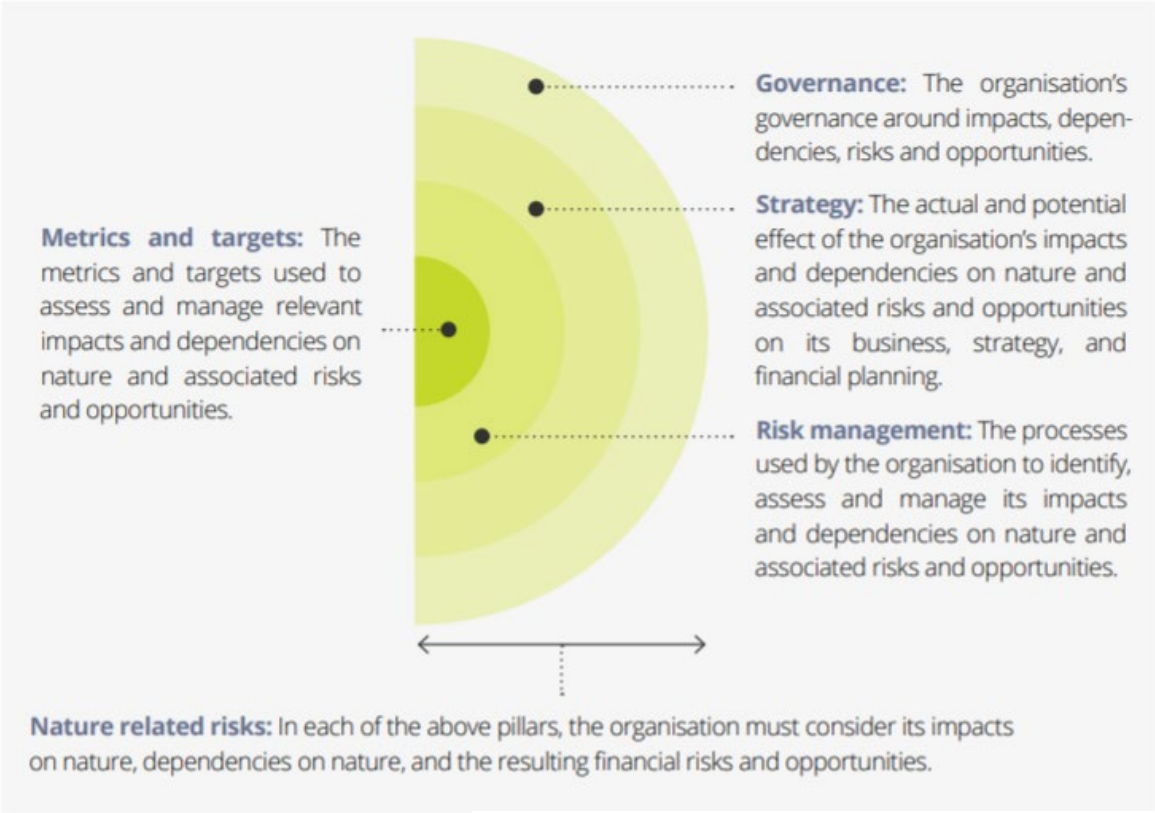
SCIENCE BASED TARGETS FOR NATURE

- Developing methods and resources for science-based targets for nature
- Draft guidance for companies launched in 2020. V1.0 guidance expected in early 2023
- Targets that address a number of pressures and states of nature



TASKFORCE ON NATURE-RELATED FINANCIAL DISCLOSURES (TNFD)

- Launched in 2021 with support from financial markets and governments
- Disclosure framework for companies to report and act on nature-related risks
- Ability to report and disclose on impacts and dependencies will be key to maintain investor buy-in



TNFD Taskforce on Nature-related Financial Disclosures

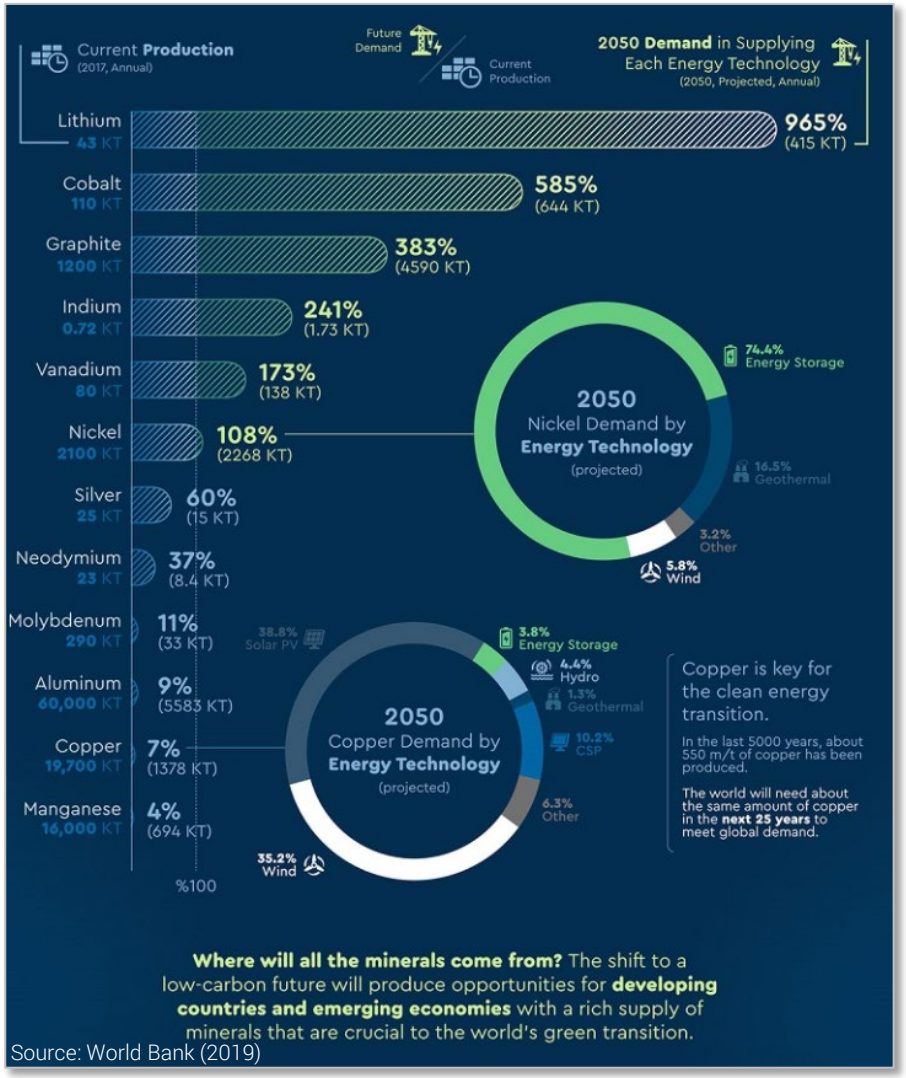
BES HORIZON SCANNING

Risks and issues

- Proximity to areas of biodiversity importance
- Weak and inconsistent national or international regulations
- No net loss or net gain policies
- Nature-based solutions
- Reporting and disclosure

MINERAL INTENSITY OF THE ENERGY TRANSITION

- Renewable energy technologies can carry a high environmental footprint due to their mineral intensity
- Energy companies need to track environmental impacts along supply chains and ensure responsible sourcing of renewable energy technologies



Source: World Bank (2019)

UN DECADE ON ECOSYSTEM RESTORATION

- Aims to prevent, halt and reverse the degradation of ecosystems, and restore them to achieve global goals
- Building capacity and collaboration for implementing restoration initiatives globally
- The private sector has a key role in supporting and championing restoration

NATURAL CAPITAL APPROACHES

- Natural capital thinking is gaining traction
- Natural Capital approaches enable organisations to identify, measure and value their direct and indirect impacts and dependencies on natural capital.
- The UN is developing a System of Environmental Economic Accounting to ensure natural assets are included in economic reporting
- Recent publication: The Economics of Biodiversity: The Dasgupta Review

NATURAL CAPITAL COALITION

NATURE-BASED SOLUTIONS

"Actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems, which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services and resilience and biodiversity benefits"

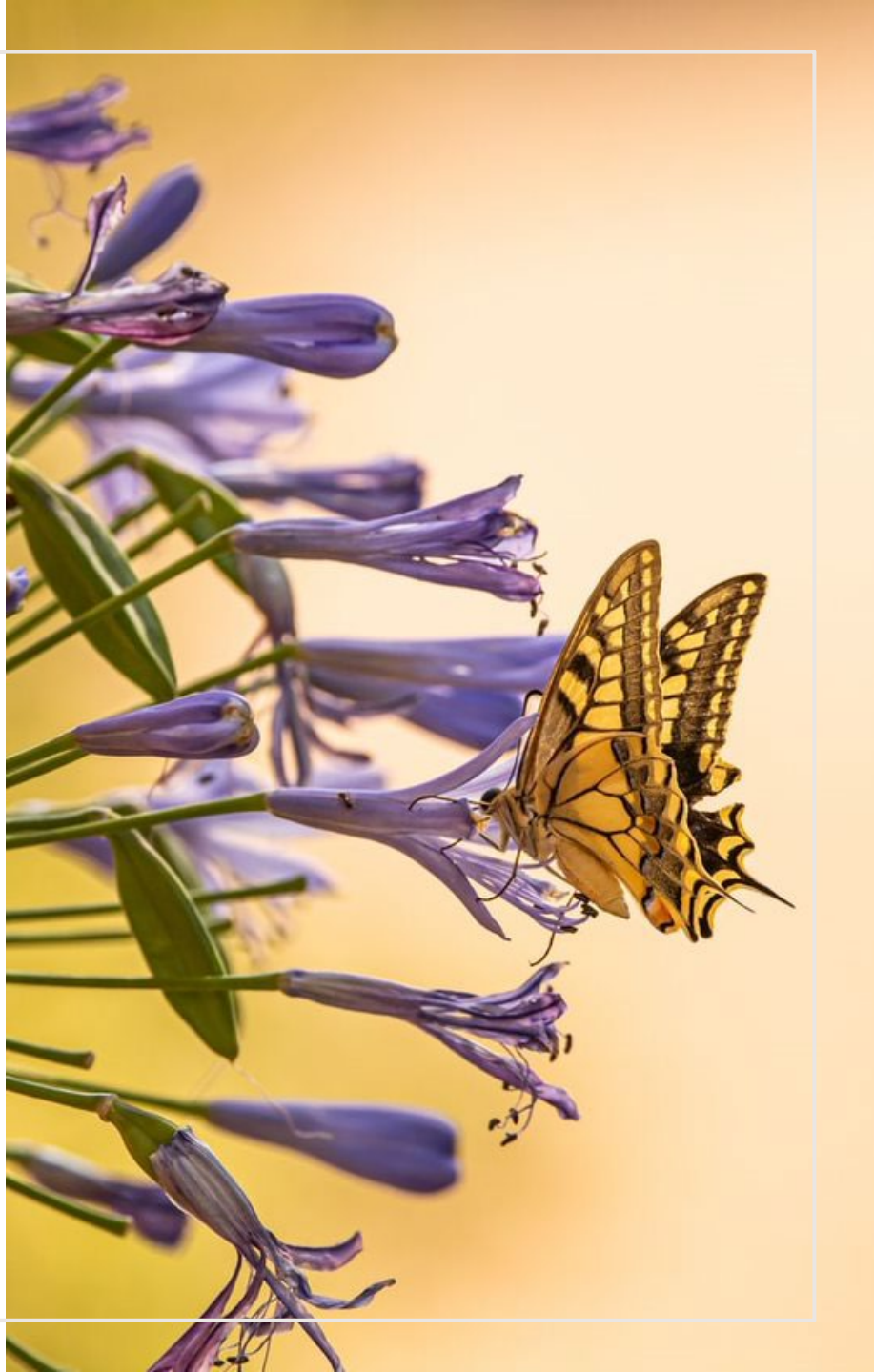
UNEA-5, 2022

Source: Seddon et al. (2021)

RELEVANCE FOR TOTALENERGIES

Nature-based Solutions can help to:

- Mitigate and reduce climate change risk
- Reduce costs (often)
- Contribute to internal objectives (through multiple benefits)
- Align with external commitments and targets
- Prepare for potential future regulatory requirements



GROUP DISCUSSION

10 mins:

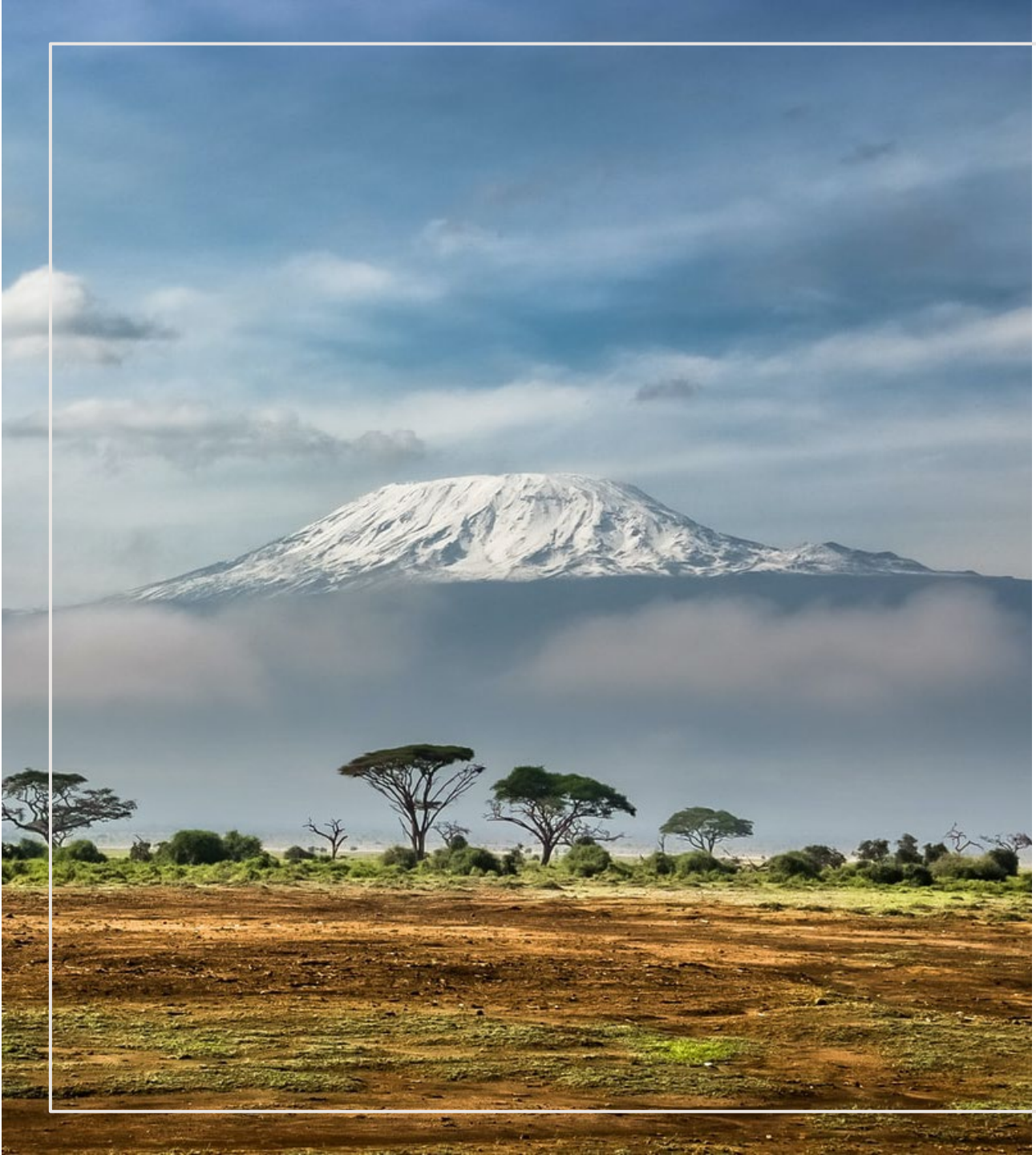
- What are you experiencing as the key drivers for biodiversity conservation in your role?
- What do you see as some of the key opportunities for TotalEnergies based on the emerging frameworks, initiatives and approaches?

Summary

Bálint Ternyik – Associate Programme Officer (UNEP-WCMC)

IN SUMMARY

- Key conventions and agreements driving global-scale biodiversity conservation are the **Convention on Biological Diversity**, **UNESCO World Heritage Convention** and **Ramsar Wetland Convention** and **UN Sustainable Development Goals**.
- There are a number of actors and initiatives that support businesses to manage biodiversity.
- TotalEnergies has developed a number of approaches and initiatives in support of the biodiversity commitments.
- There are a number of emerging opportunities and initiatives that businesses can engage with (e.g. **SBTN, TNFD, NbS, Ecosystem Restoration** and **Natural Capital)**.



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Introduction to the Proteus Partnership

Aime Rankin – Associate Programme Officer (UNEP-WCMC)

TotalEnergies

08 NOVEMBER 2022

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PROTEUS – A LONG-TERM COLLABORATION BETWEEN THE PRIVATE SECTOR AND UNEP-WCMC

Vision:

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

Mission:

- Support companies to be nature-positive.

GOAL I

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

Written and visual materials helping Partners to communicate the business case for nature in accessible terms for the C-suite/board level through to site level managers.

GOAL II

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

Under this goal the Proteus work programme will deliver data and tools, data analytics, and capacity and support to Partners

UNDER GOAL II

Data and tools

- Data on protected areas and Other Effective area-based Conservation Measures
- Marine and coastal data via Ocean+
- Integrated Biodiversity Assessment Tool and ability to provide feedback on new and improved functionality
- Ability to nominate priority countries for data update

Data analytics

- Technical Briefings on challenges and questions raised by Partners
- Web services delivering data directly into partner systems
- Data queries and support

Capacity and support

- 30 hours of technical assistance from UNEP-WCMC's expert team per year (with ability to commission additional support)
- 3 days of online and in person training and access to training resources (includes preparation and development time)
- Access to a specialist cross-Partnership data forum supporting peer-to-peer learning with other technical experts
- Access to and influence over development of the Biodiversity A-Z
- Access to horizon scanning webinar on emerging themes and topics of interest

PROTEUS TECHNICAL BRIEFS

UNEP-WCMC Technical Briefing
December 2021

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The Global Energy Transition

The role of mining and energy companies in enabling a nature positive energy transition

Key Messages

- The global energy transition will significantly increase demand for key metals and minerals.
- The surge in demand will open up new frontiers of mineral extraction and has the potential to exacerbate existing environmental and social risks in operations and along supply chains for mining companies and their customers such as renewable energy companies.
- If left unchecked, these material risks may slow clean energy deployment and imperil the nature positive transition needed to halt climate change and biodiversity loss.
- Recommendations on where Proteus Partners must act to minimise biodiversity-relevant risks within their operations and supply chains and enable a nature positive energy transition include:
    1. Integration of circular design principles and closed loop efforts in the production of energy assets
    2. Accelerate the adoption of net-gain approaches to mitigate site-based impacts
    3. Contribute to closing the knowledge gap on the ecological impacts of operating in new frontiers such as deep-sea mining
    4. Disclose footprint and adopt transparent, responsible supply chains supported by verified certification schemes and due diligence procedures
    5. Underpin biodiversity commitments with meaningful indicators based on sound and scientific criteria
    6. Gain more control over the compliance of social and environmental standards along the supply chain through e.g. vertical integration and partnerships
    7. Decarbonise operations and portfolios and divest from fossil fuels

UNEP-WCMC Technical Briefing
November 2021

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The Area of Influence of site-based operations – Direct Impacts

Assigning buffer distances for high-level screening of biodiversity exposure based on direct impacts

Key Messages

- Defining an appropriately scaled 'Area of Influence' is integral to high level screening processes that aim to identify important biodiversity features that may generate risk.
- Area of influences should include the extent of expected pressures that stem from the site and consider potential for indirect impacts on biodiversity.
- To date however, there lacks consensus or quantitative guidance on appropriate buffers to be applied in different contexts. Understanding the factors underlying variation in the distances impacted by sites forms the foundations of a decision-making framework, presented here, to address this knowledge gap.
- Available literature to create generalised rules is disparate, and there is a lack of research that compares pressures between sectors and habitats systematically. However, best available information suggested that the following approach should be applied for direct impacts:
    - A 10km buffer is likely to cover the majority of direct impacts of terrestrial mines in most habitats, and, applying a precautionary approach, a 5km buffer likely to cover the impacts of terrestrial oil and gas, whose impacts are generally shown to impact smaller distances than mining. These should be taken as a minimum starting point when deciding on buffers to apply during screening.

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PROTEUS DATA FORUMS

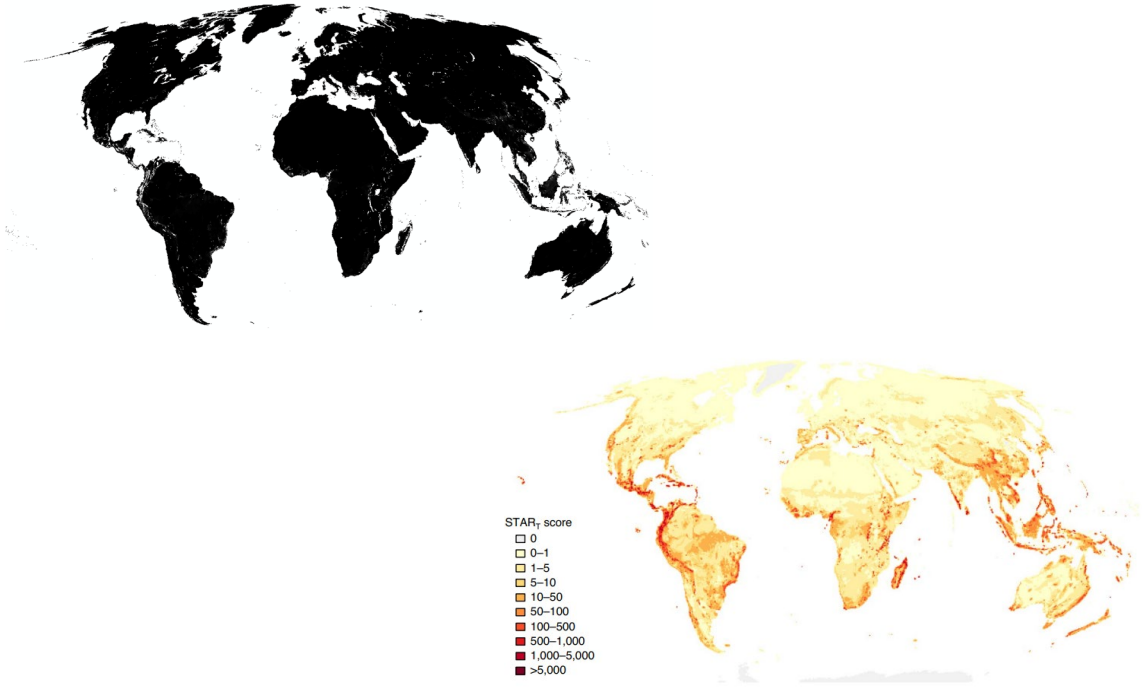
A series of webinars for Proteus Partners that provide a venue for direct communication between data users and technical experts, help increase familiarity with Proteus resources and support identification of common challenges & finding solutions

DATA VERIFICATION AND TECHNICAL SUPPORT

Data verification – clarifications on data quality and interpretation

Technical support – assistance or guidance on technical work

Example query - Potential protected area (green) boundary discrepancy when compared to satellite imagery



Example query – Visualisation of the global STAR Threat Abatement score layer

GOAL III

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

Under this goal the Proteus work programme will help Partner companies engage with and navigate the global biodiversity policy arena

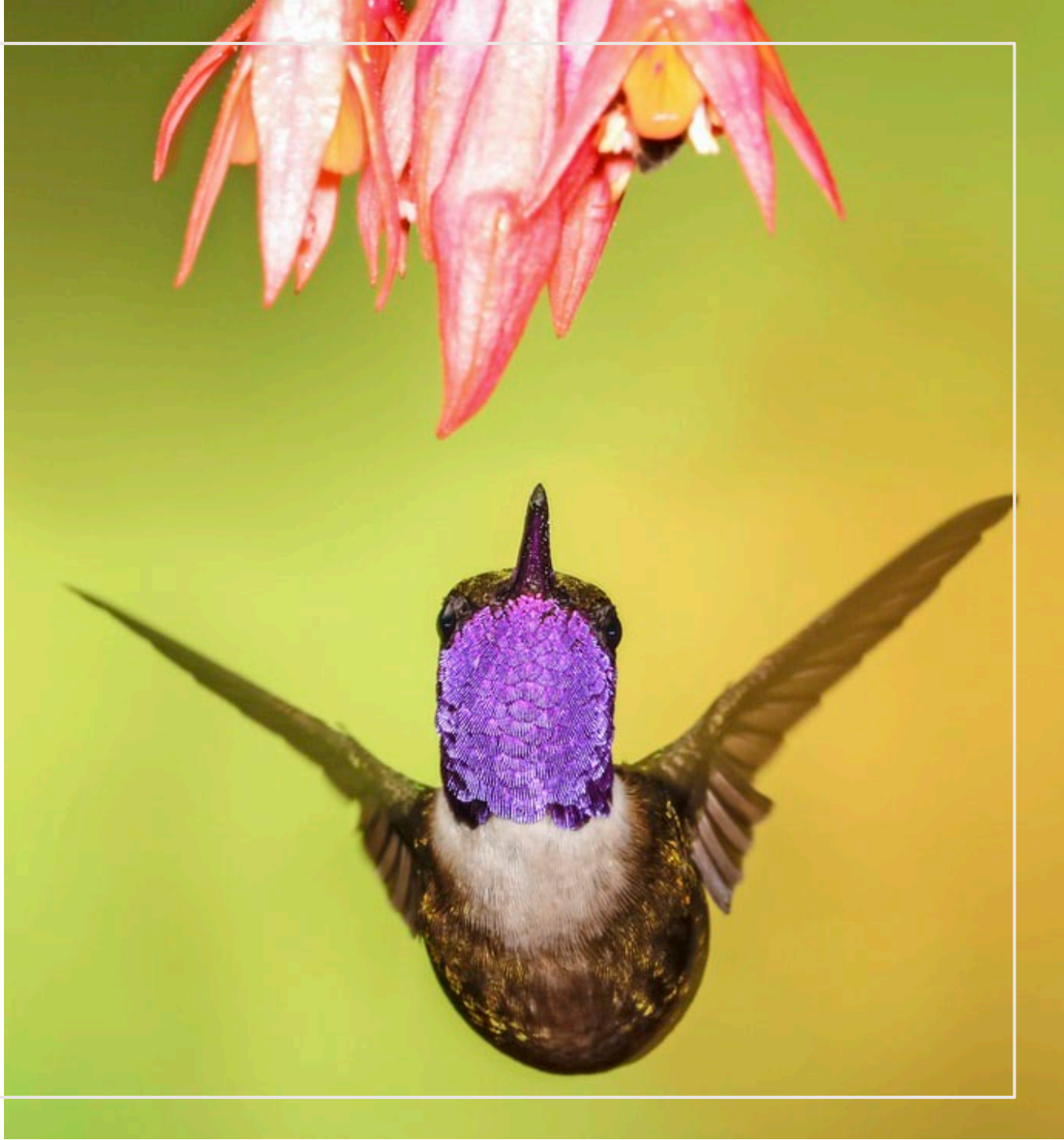
UNDER GOAL III

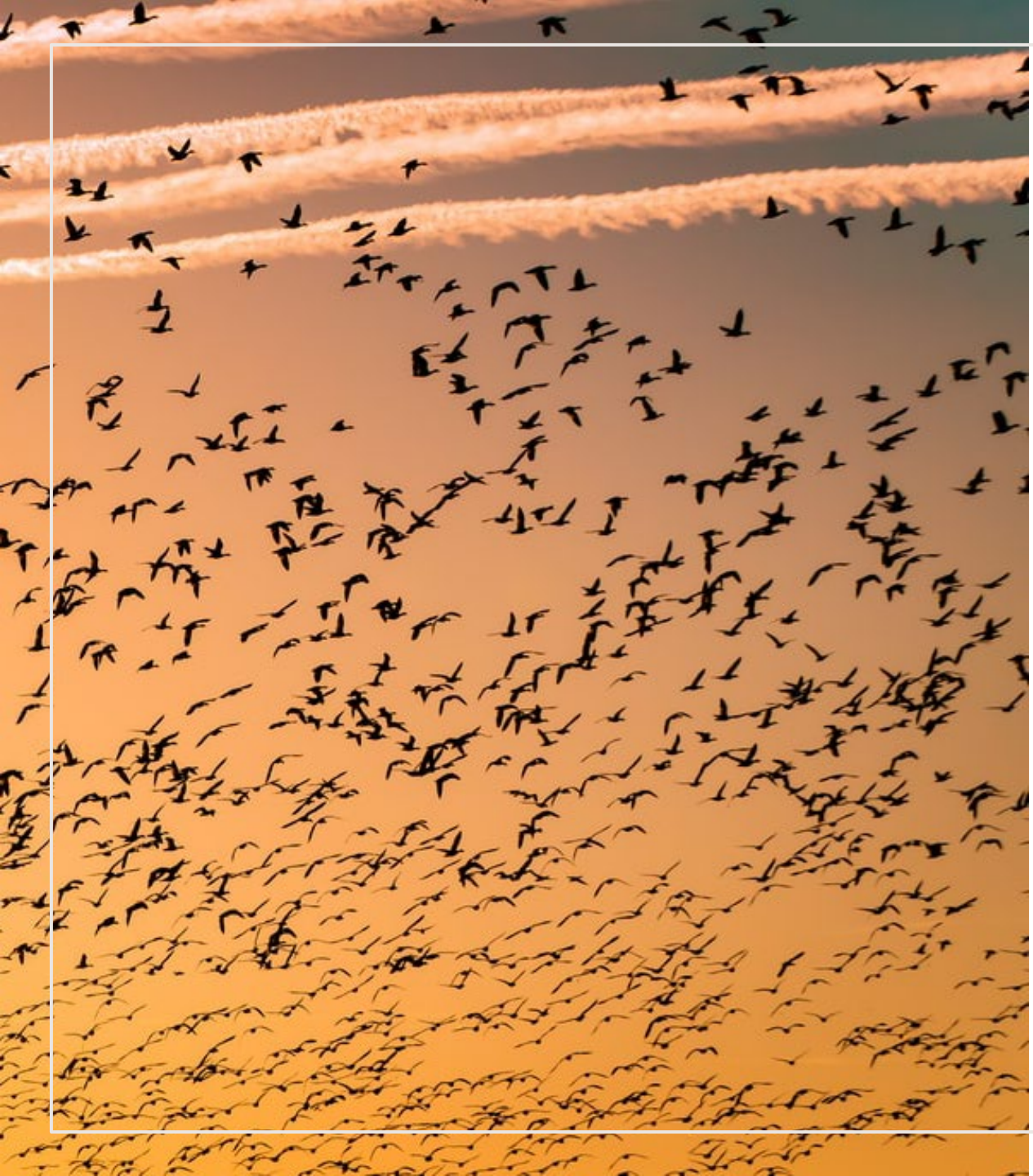
Proteus Partner companies get:

- Regular updates from our team participating in the global policy arena (including the Convention on Biological Diversity Conferences of the Parties and subsidiary meetings, UN Environment Assembly, IUCN World Conservation Congress and related events)
- Horizon scanning webinars and briefings, helping companies track progress, upcoming events and potential business implications
- Opportunities to engage with policy makers and other stakeholders through side events, pavilions and meetings in the margins
- Ability to engage with leading experts in a neutral forum, through the Annual Proteus Partners' Meeting

PROTEUS HORIZON SCAN WEBINARS

A series of webinars for Proteus Partners sharing information and insights into the latest trends and developments in biodiversity and ecosystem services policy, initiatives, data and tools.



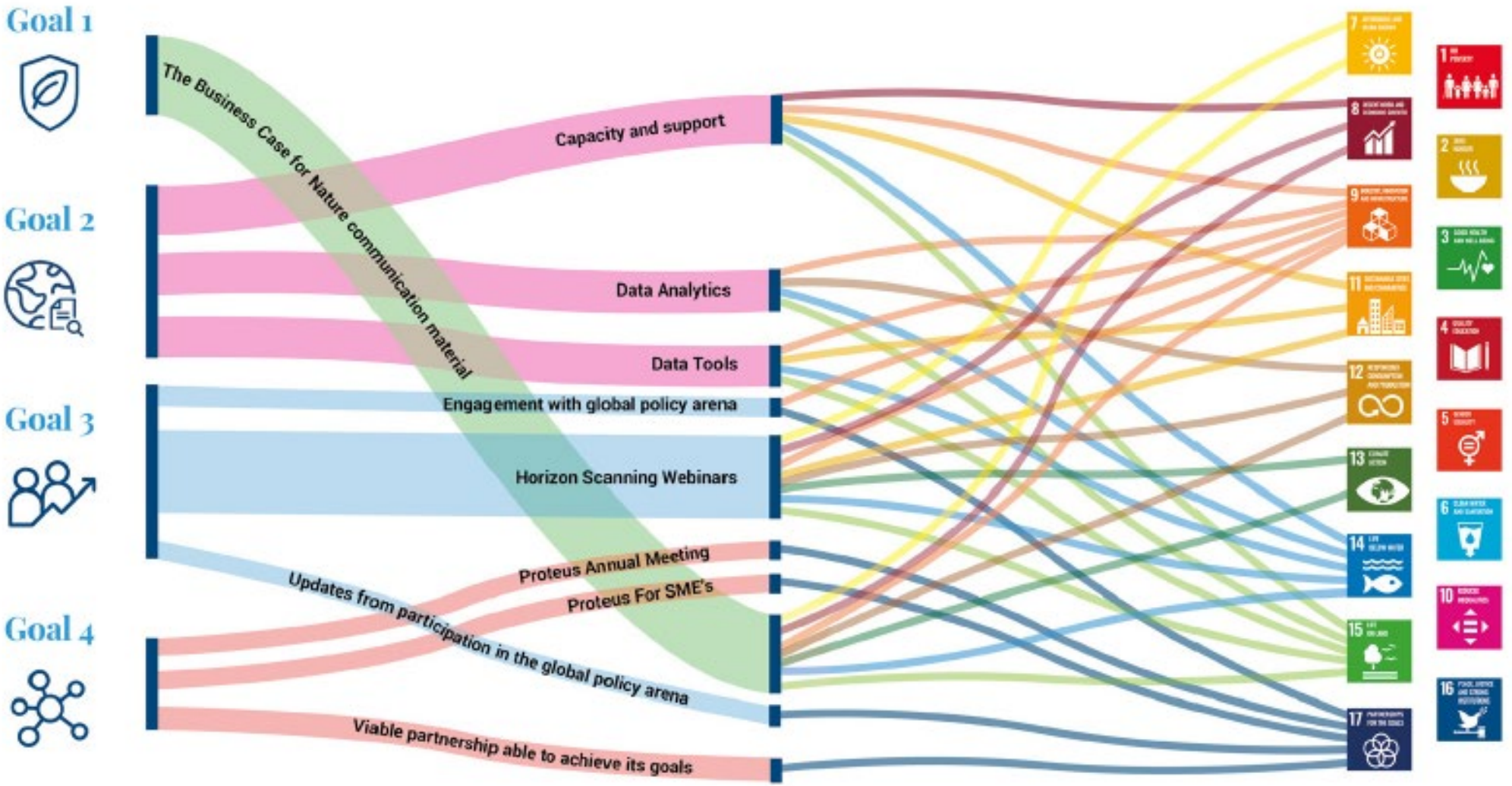


GOAL IV

To sustain a viable mutually beneficial Partnership through cross-sectoral collaboration

Under this goal the Proteus work programme will deliver a financially viable and mutually beneficial Partnership for UNEP-WCMC and Partners

PROTEUS & THE SUSTAINABLE DEVELOPMENT GOALS



HOW PROTEUS RESOURCES CAN SUPPORT TOTALENERGIES

Project level

Policy level

- Complement project-level risk assessment and site selection
- Environmental Impact Assessments (EIAs)
- Application of the mitigation hierarchy
- Biodiversity action planning
- Site closure / decommissioning
- Alignment with performance standards
- Screening potential investments
- Supply chain management
- Development of biodiversity management strategy
- Portfolio analysis and reporting on global footprint

DELIVERING TRAINING AND TECHNICAL SUPPORT

Over 50 training sessions delivered

Over 700 participants in webinars and training sessions

Over 250 technical assistance requests and data queries answered

PROTEUS TOOLS AT A GLANCE

Protected Planet

The online interface with the World Database on Protected Areas (WDPA)

Access: www.protectedplanet.net

The Integrated Biodiversity Assessment Tool (IBAT)

Access to site- and landscape-scale datasets

Access: https://ibat-alliance.org/

Biodiversity A-Z

Online glossary of terms

Access: www.biodiversitya-z.org

Ocean+

Access to metadata for over 190 datasets

Access: https://oceanplus.org/

Ocean Data Viewer

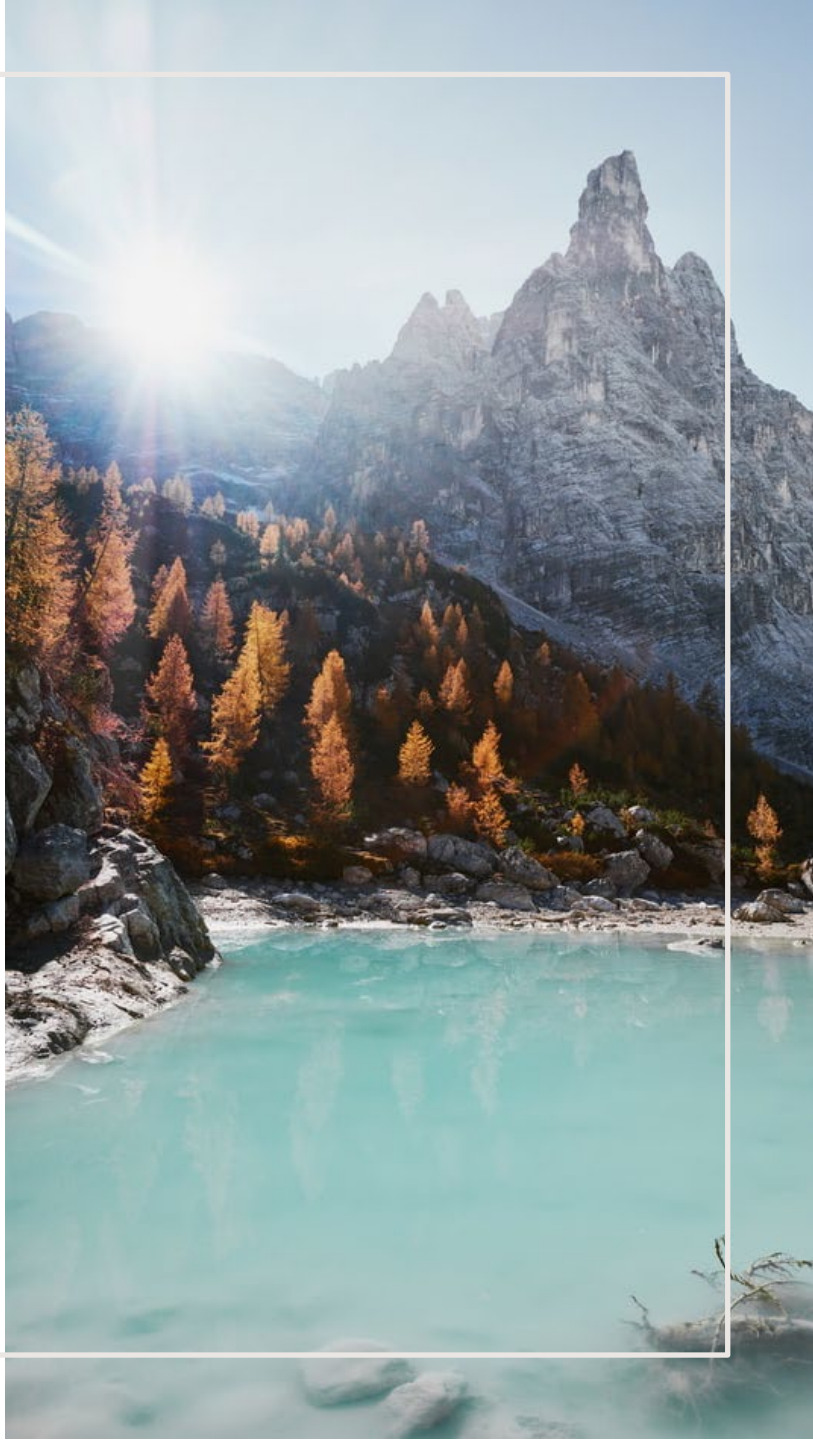
Access to over 30 marine and coastal datasets

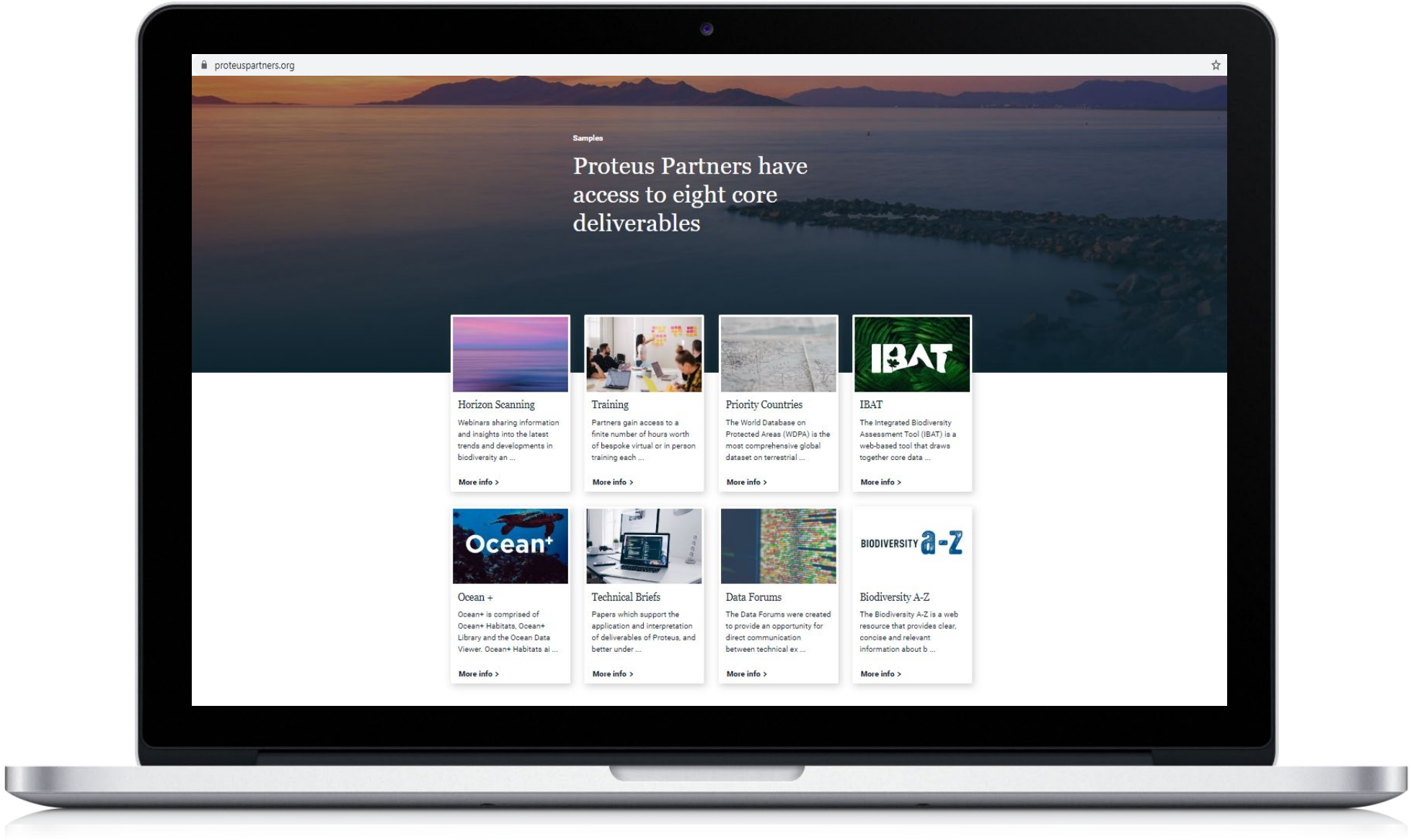
Access: http://data.unep-wcmc.org

Proteus website

Access all information resources offered through Proteus

Access: www.proteuspartners.org

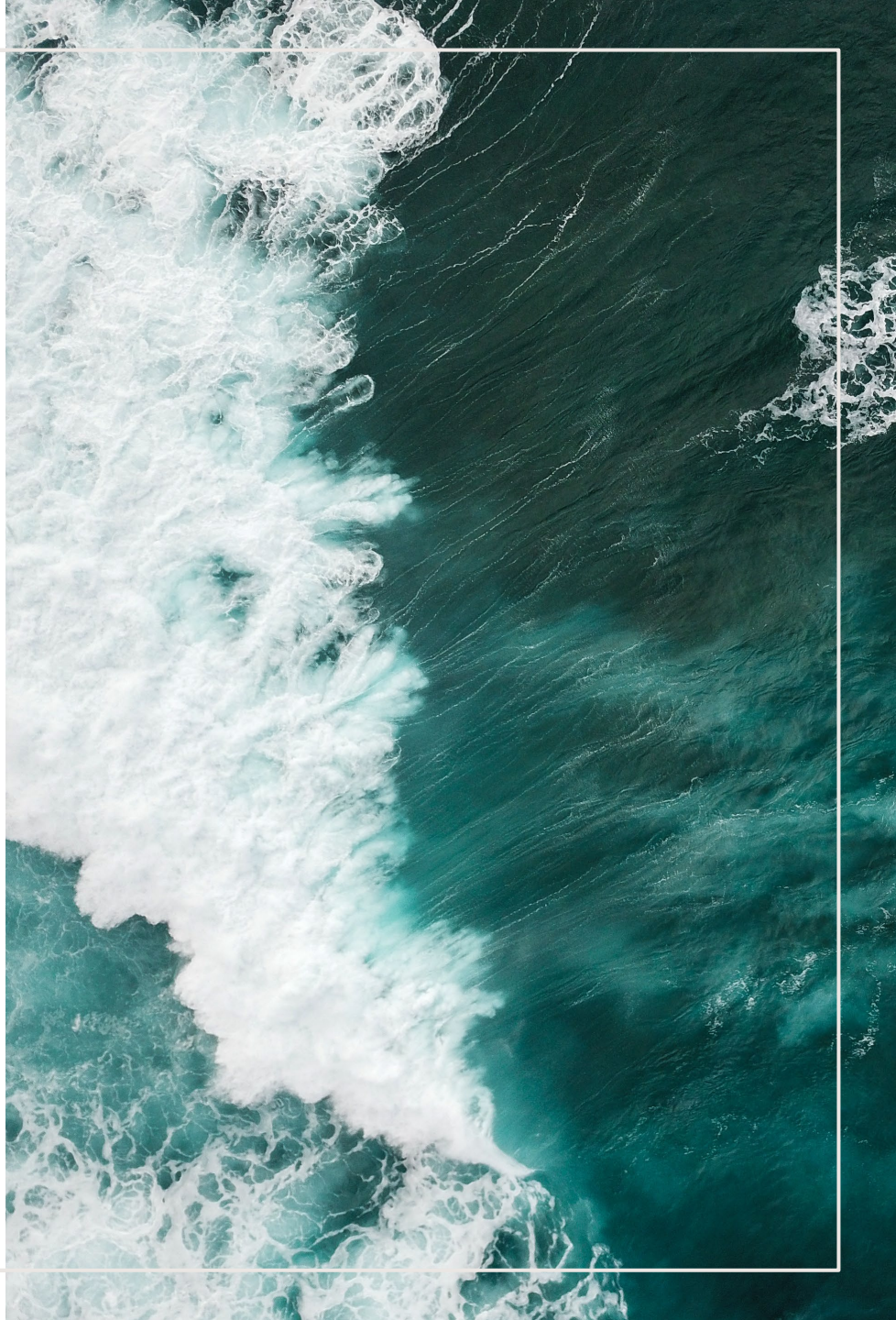



proteuspartners.org
Samples
Proteus Partners have access to eight core deliverables
Horizon Scanning
Webinars sharing information and insights into the latest trends and developments in biodiversity an ...
More info >
Training
Partners gain access to a finite number of hours worth of bespoke virtual or in person training each ...
More info >
Priority Countries
The World Database on Protected Areas (WDPA) is the most comprehensive global dataset on terrestrial ...
More info >
IBAT
The Integrated Biodiversity Assessment Tool (IBAT) is a web-based tool that draws together core data ...
More info >
Ocean+
Ocean +
Ocean+ is comprised of Ocean+ Habitats, Ocean+ Library and the Ocean Data Viewer. Ocean+ Habitats ai ...
More info >
Technical Briefs
Papers which support the application and interpretation of deliverables of Proteus, and better under ...
More info >
Data Forums
The Data Forums were created to provide an opportunity for direct communication between technical ex ...
More info >
BIODIVERSITY a-Z
Biodiversity A-Z
The Biodiversity A-Z is a web resource that provides clear, concise and relevant information about b ...
More info >

GROUP DISCUSSION

5 mins:

- What data, tools and support from the Proteus Partnership have been the most useful to your role / area of business?
- How do you see Proteus resources being useful to you in future?

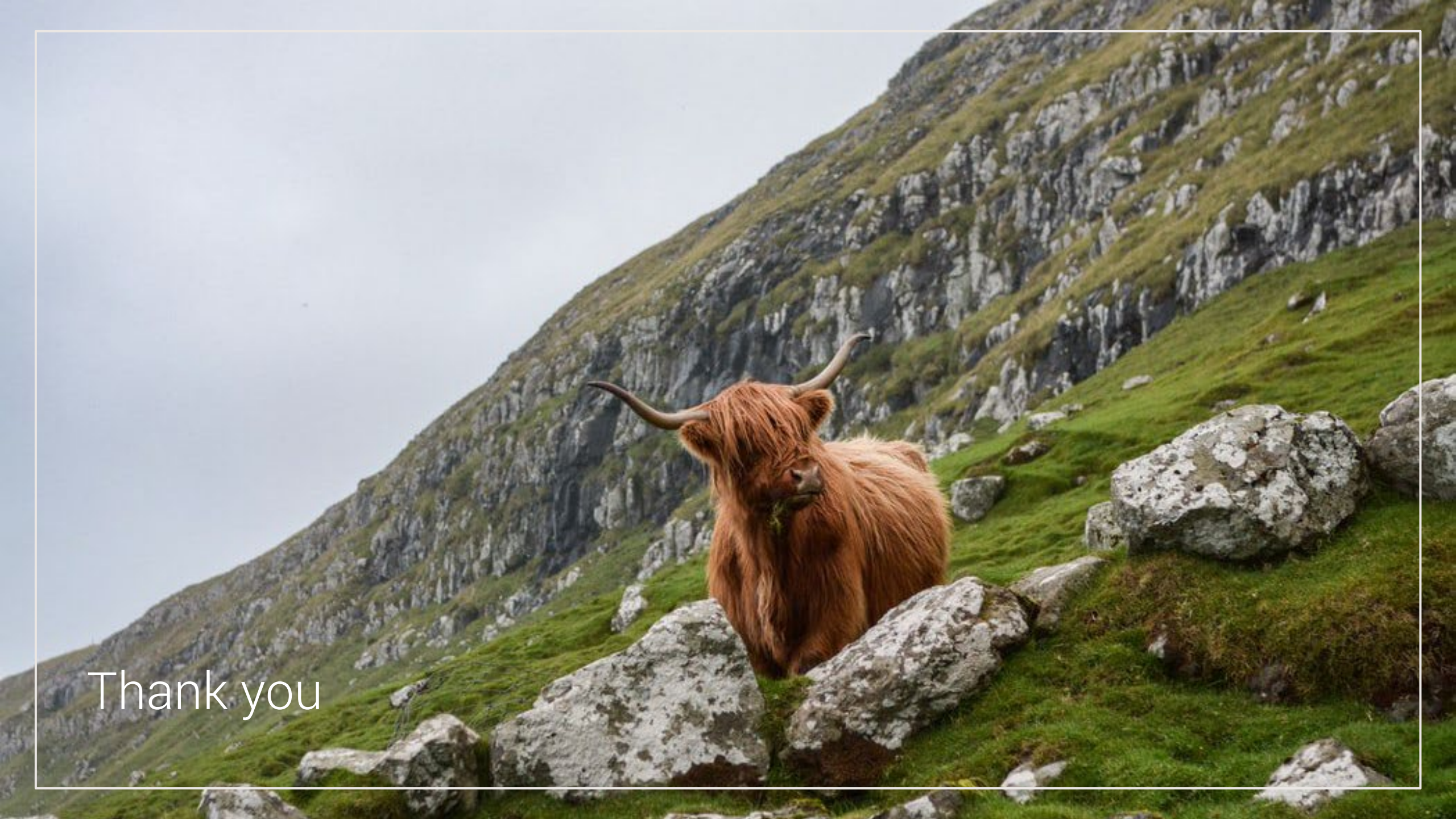


END OF DAY SUMMARY

- Key Biodiversity Areas are always identified based on known biodiversity values.
- Biodiversity and ecosystem services are in decline with far reaching implications for business and society.
- Most businesses impact and/or depend on biodiversity, either directly or through their supply chains.
- TotalEnergies has developed a number of approaches and initiatives in support of the biodiversity commitments.
- Key Proteus tools are **Protected Planet**, **IBAT**, **Biodiversity A-Z**, **Ocean+**, **Ocean Data Viewer** and the **Proteus website**.

MENTI QUIZ

Go to www.menti.com and use the code 8891 5136


Thank you

UN environment programme

WCMC