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Nature Positive Reporting Assessment Intern

veritree

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M I S S I S S A U G A

MScSM
Master of Science in Sustainability Management UofT

About veritree

- Connecting businesses with tree planting sites, to elevate global restoration and unlocks finance in nature-based solutions

- Technology verifies and monitors the impacts of tree planting to ensure visibility and accountainability for business' climate actions

- Monitoring conducted through near real time updates to understand the measurable impact over time relating to carbon, biodiversity, land management, water and people, for restoration

- Uses remote sensing (geospatial, UAV), photography and video (and computer vision), sensor technology - bioacoustics, dendrometers, soil sensors, motion sensors, and social data

Purpose of Internship

- With multiple sustainability standards and frameworks comes a myriad of monitoring requirements, and confusion regarding nature-related reporting, researching the consistencies and gaps across the multiple frameworks

- Assess the overlaps between the frameworks and compare the metrics to veritree's offering to support indicators that align with these standards and frameworks

Nature Positive: halt and reverse biodiversity loss by 2030

Indicators of Biodiversity

FULL RECOVERY BY 2050

2020   2030   2040   2050

NET POSITIVE BY 2030

Legend

Trail Webcam

Bioacoustic Monitor

Dendrometer

Defining Nature Positive

- The emerging term "nature-positive" was created by conservation and business forums to not only stop, but reverse biodiversity loss,[1] in response to the "shortfalls of past agreements"[2]

- The baseline year for achieving nature-positive is 2020, with the nature positive assessment to be achieved by 2030 (net positive), and full recovery by 2050[3]

Why Nature Matters

- 65% of Nature-based Solutions were always more effective at mitigating hazards, compared to engineering based solutions with an additional 26% being partially more effective than engineering based solutions

Nature Positive Metrics

Reviewing metrics across the Taskforce of Nature-related Financial Disclosures, Science Based Targets for Nature (Land), Kunming-Montreal Global Biodiversity Framework, B Corporation, Carbon Disclosure Project, Ecosystem Restoration. Standard, and Sustainable Development Goals, the following metrics have been found in alignment based on themes of Oceans, Land, Biodiversity, Carbon, and People.

Area Restored/Under Restoration (ha)
- SBTN: 1.2: Total area (ha) within the engaged landscape(s) of natural lands converted since 2020
- TNFD C1.0: Total spatial footprint (km2) (sum of): Total surface area controlled/ managed by the organisation, where the organisation has control (km2); Total disturbed area (km2); and Total rehabilitated/restored area (km2)
- GBF 2.2 Area under restoration
- SDG 15.1.1: Forest area as a proportion of total land area

Ocean Health (pH)
- TNFD - C1.1: Extent of land/freshwater/ocean ecosystem use change (km2) by: Type of ecosystem; and Type of business activity
- GBF 8 Complementary Indicator - Index of coastal eutrophication
- SDG 14.3.1: Average marine acidity (pH) measured at agreed suite of representative sampling stations

Red List Species Richness (#)
- TNFD - A5.3: Species Extinction risk
- GBF 4 Headline: Indicatory A.3 Red list Index

Alignment on 4+ Nature positive frameworks

Alignment on 3 Nature positive frameworks
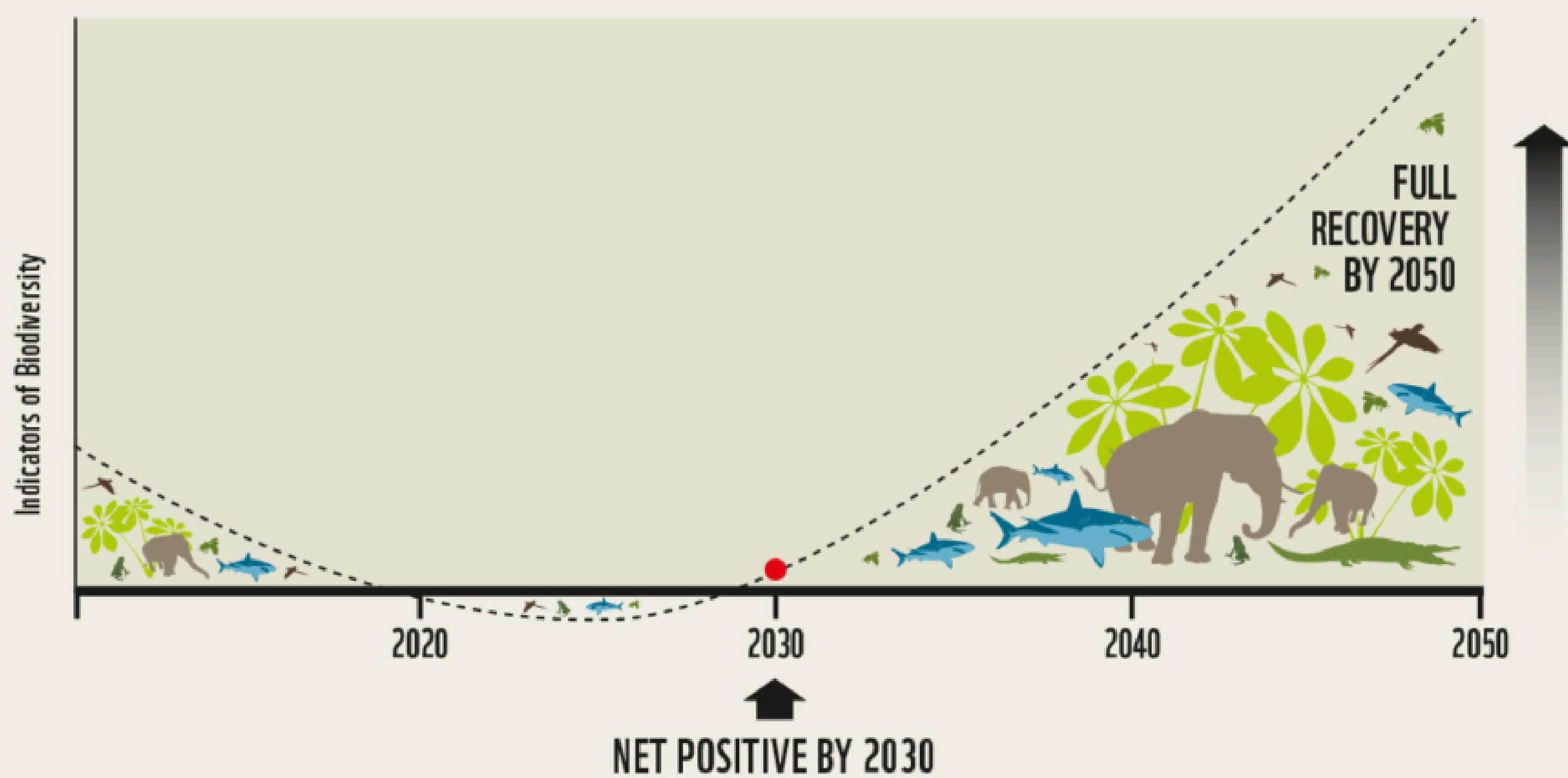
Alignment on 2 Nature positive frameworks

Key Outcomes

- B Corp submission, TNFD case study for sister company tentree, conducted internal Materiality Assessment, Began GHG Accounting for Scope 1 & 2 Emissions

- Assessed the overlaps between the frameworks and compare the metrics to veritree's offering to support indicators that align with these standards and frameworks
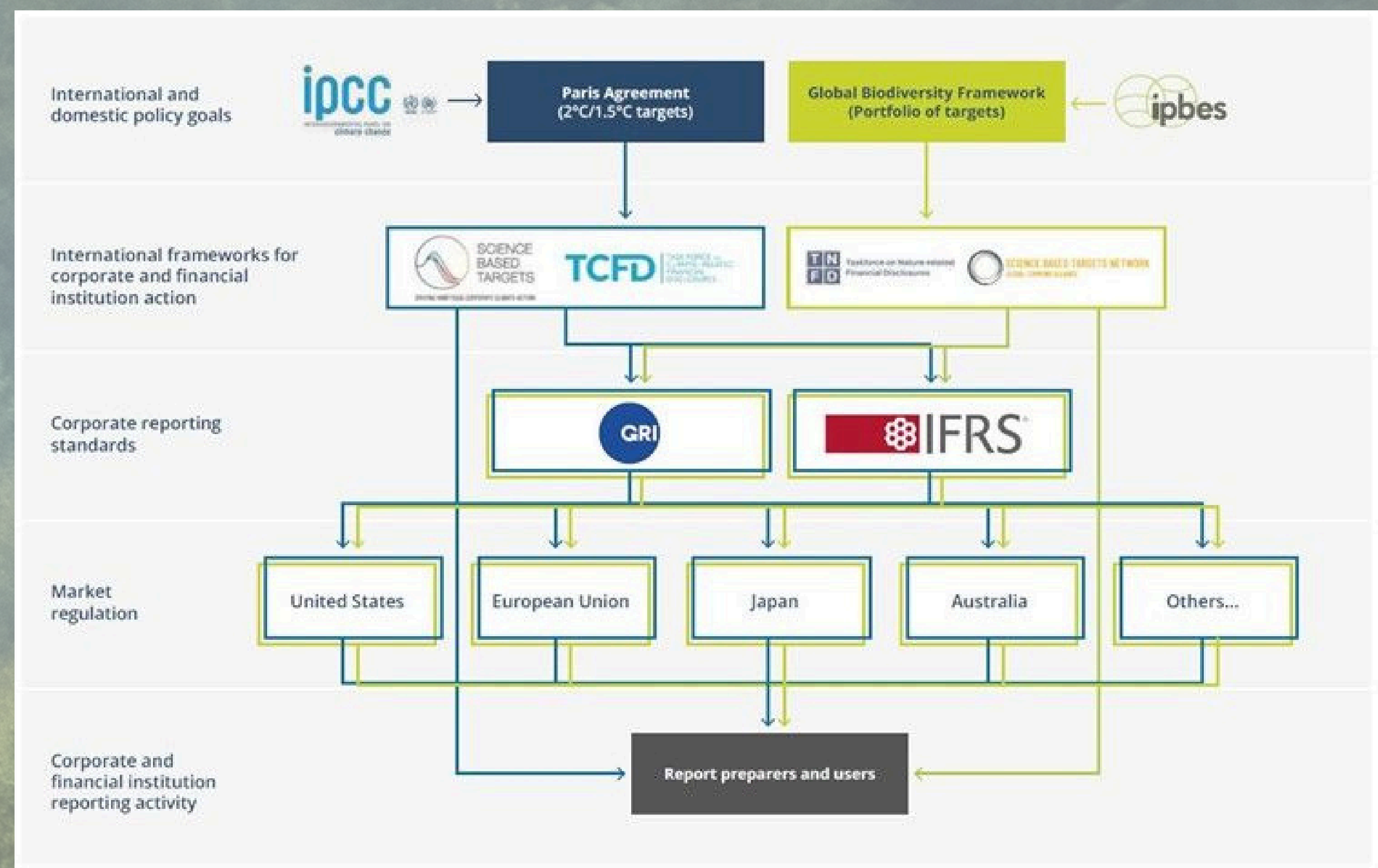
Nature Positive Themes

- SMART Goals: Organizational biodiversity goals should be SMART to track progress towards and incentivizing achievement of overarching biodviersity goals (zu Ermagassen et al., 2022)

- Materiality Assessments: involving stakeholders from all levels of the business to determine value chain impacts

- **DIROs**: Understanding and acknowledging a business' **D**ependencies, **I**mpacts, **R**isks (physical, transition, acute, chronic), and **O**pportunities associated with nature

International and domestic policy goals — ipcc — Paris Agreement (2°C/1.5°C targets) — Global Biodiversity Framework (Portfolio of targets) — ipbes

International frameworks for corporate and financial institution action — SCIENCE BASED TARGETS — TCFD — TNFD

Corporate reporting standards — GRI — IFRS

Market regulation — United States — European Union — Japan — Australia — Others...

Corporate and financial institution reporting activity — Report preparers and users

References

1. Locke H, Rockström J, Bakker P, Bapna M, Gough M, Lambertini M, et al. A Nature-Positive World: The Global Goal for Nature. 2021.

2. zu Ermgassen SOSE, Howard M, Bennun L, Addison PFE, Bull JW, Loveridge R, et al. Are corporate biodiversity commitments consistent with delivering 'nature-positive' outcomes? A review of nature-positive definitions, company progress and challenges. Journal of Cleaner Production. 2022 Dec 15;379:134798.

3. Vicarelli M, Sudmeier-Rieux K, Alsadadi A, Shrestha A, Schütze S, Kang MM, et al. On the cost-effectiveness of Nature-based Solutions for reducing disaster risk. Science of The Total Environment. 2024 Oct;947:174524.