AENU BIODIVERSITY CHEAT SHEET

The climate and biodiversity crises are **deeply interconnected** and must be addressed simultaneously. The world needs to become nature defined by protecting, managing and restoring nature to ensure it continues to contribute to human needs and wellbeing. To achieve this goal:

1. We have to be able to measure and monitor what we have, what we're losing, and what we're gaining frequently and at specific locations.
2. We need to reward positive outcomes for all and improve ecological economic value of all natural ecosystems (Land, Ocean, Freshwater).
3. We have to adopt high integrity transparency standards which make the value of natural assets visible to all stakeholders.

Thesis: To unlock **sustainable nature management, protection and restoration,** technology-agnostic scalable MRV plays are necessary which:

- Support in **biodiversity baselining, identify biodiversity and nature positive outcomes and unlock climate resilience for companies' supply chains** to support the elaboration of realistic and scientifically informed predictions.
- **Flexibly serve or create nature markets** (intrinsic, offset, derivative) shaped by long-term incentives to preserve and regenerate nature and allow landholders to directly enhance and monetize natural 'assets.'
- **Foster social justice and adequate benefit sharing** and leverage indigenous people and local communities (IPCL) knowledge.

The impact problem

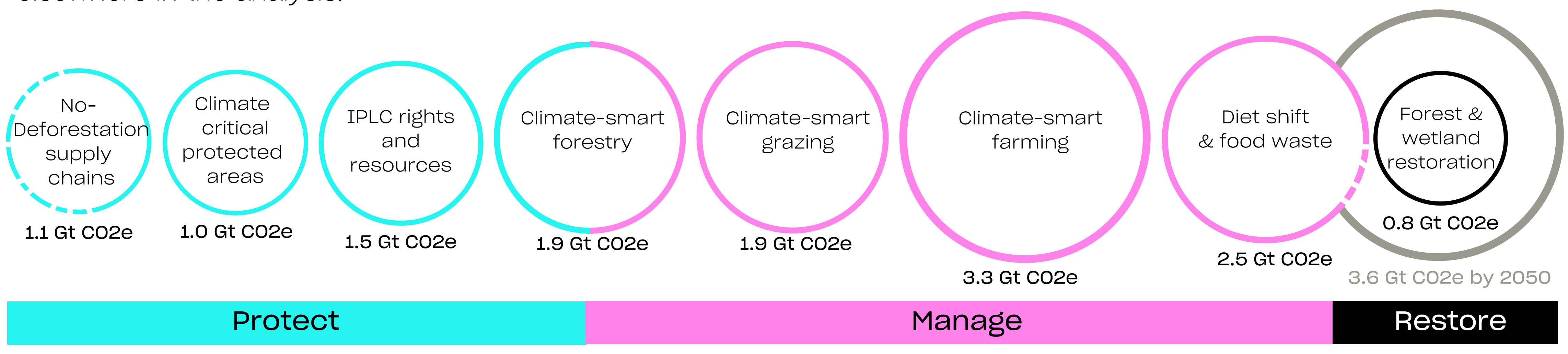
- The World Economic Forum ranks biodiversity loss in the **top 5** global risks over the next 10 years.
- Biodiversity and climate are **inextricably entangled.** We can't save one without the other. Every hectare of forest we lose adds fuel to the climate fire.
- Unlike the climate crisis biodiversity loss is **irreversible.** Ecosystems are moving closer to critical thresholds and tipping points.
- Between 1970 to 2016, **68%** of all monitored wildlife populations (mammals, birds, fish, amphibians and reptiles) were lost.
- Around **1 million** species globally are at risk of extinction.

2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
13 CLIMATE ACTION
15 LIFE ON LAND

Business opportunity

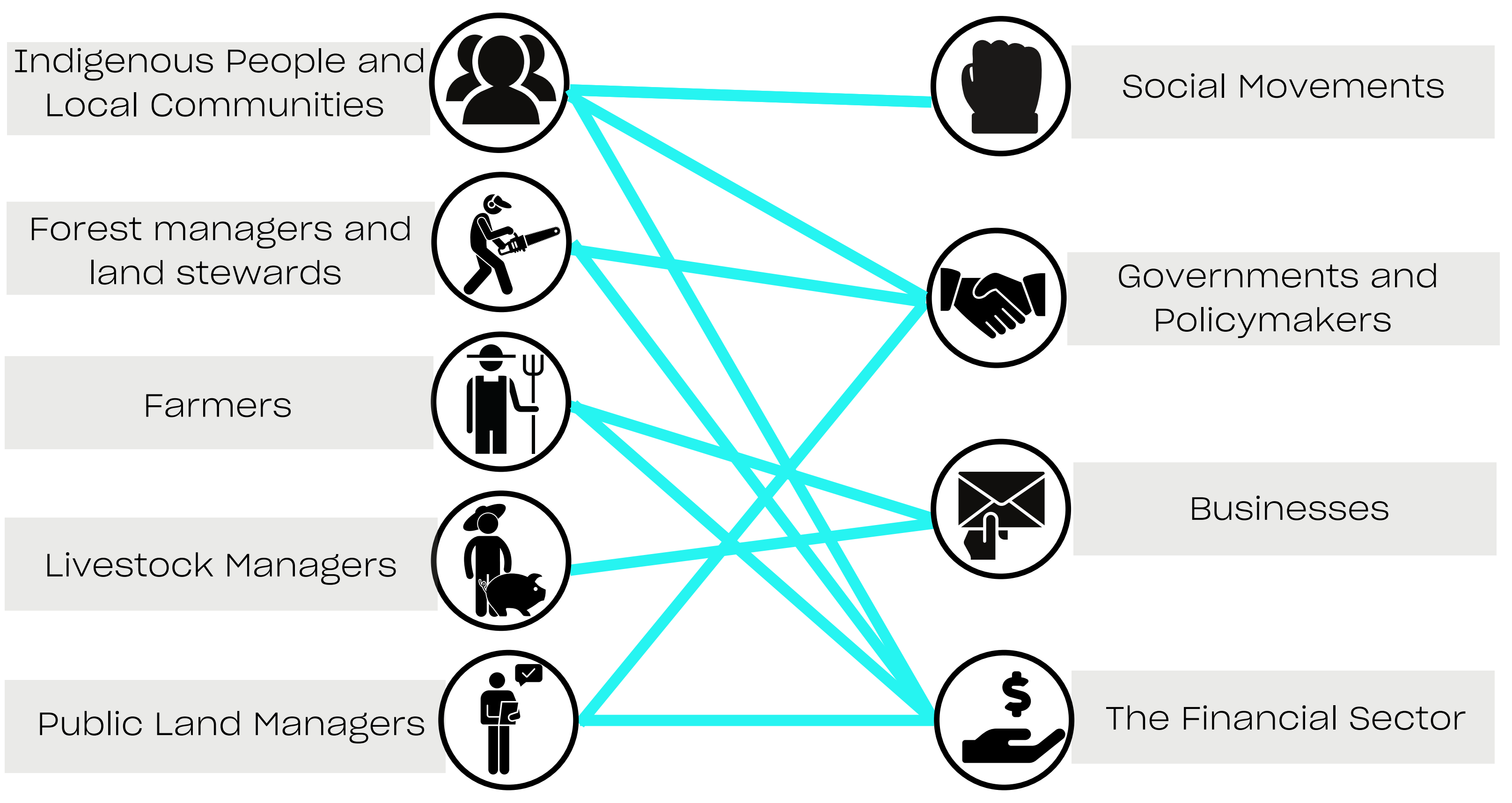
- The UN Environment Programme found that half of the world's GDP **($44T)** is dependent on nature.
- Every $1 invested in restoration creates **up to $30** in economic benefit.
- According to Nature4climate, based on Vivid Economics UNEP report, the nature tech market size will grow to approximately **$6B** in less than ten years.
- Nature reporting is fuelled by the **EU Taxonomy** and the implementation of Taskforce on Nature-related Financial Disclosures **(TNFD)** and Science-Based Targets for Nature **(SBTN)** initiatives.
- The world needs **$598 to $824B** per year to be nature positive by 2030, which cannot be achieved by government and philanthropic investment alone.

Each circle below represents an Action Track – a collection of natural climate solutions with their corresponding annual emissions savings by 2030. Dashed circles indicate "non-additive" emissions reductions, which are also accounted for elsewhere in the analysis.



Stakeholders

Various stakeholders are interconnected and must collaborate to achieve nature protection, management and restoration:



Solutions

- eDNA
- Bioacoustics
- Internet of Things (IoT), Sensor
- Remote Sensing (lasers, radars, electromagnetic radiation sensors & infrared)
- Machine learning and data analytics

Biodiversity MRV supports Nature Technology Plays

Early

- Biodiversity Baselining & Monitoring
- Environmental attribution & nature reporting
- Natural Capital Management
- Supply Chain Traceability

Growth

- Forest Carbon Measurement and Verification
- Sustainable Agriculture productivity

10 key facts

- **High integrity Nature-based Solutions** deployed at scale could save over **11 GT C02/year.**
- Biodiversity measurements are **highly manual, expensive and difficult to scale.**
- There is **little guidance to build tangible and quantifiable biodiversity metrics or proxies** to reasonably represent investment risks and opportunities.
- More than **100 countries** included Nature-based Solutions in their recently updated Nationally Determined Contributions (NDCs) to the Paris Agreement.
- The **TNFD** creates a **"market-led"** framework for reporting and acting on nature-related risks and opportunities.
- **Up to 1.3B** people could benefit from food security though Nature-based Solutions.
- A nature-positive economy can create up to **400 million** jobs and provide an annual business value of over **$10T** by 2030.
- **Digital MRV** reduce costs significantly and fully integrate the three components of measurement, reporting, and validation into the nature value chain.
- Growing and new **nature markets** are set to allow companies, individuals and governments to **go beyond carbon neutrality** and become nature-positive.
- **MRV tools** make up only **3%** of carbon removal venture funding at just $65 million, biodiversity focused being even smaller.

Startups to watch

PIVOTAL
NATURE METRICS
THE LANDBANKING GROUP
BASECAMP RESEARCH
SimplexDNA
CONSERVATION X LABS
FLINTPRO
Revalue Nature

AENU era of #ImpactCapitalism

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