# Nature Positive Initiative State of Nature Metrics: Terrestrial Pilot Case Study – Suzano

**Suzano** is a global paper and pulp manufacturing company. Suzano piloted the State of Nature metrics to showcase their contribution to reversing biodiversity loss. Moreover, the pilot offered an opportunity to test science-based indicators that go beyond compliance, helping them explore how measurable, transparent metrics can guide strategic decisions and align with international frameworks such as TNFD and the Kunming-Montreal Global Biodiversity Framework.

## A) Where Suzano applied the metrics

| | |
|---|---|
| ***Location*** | Bahia and Espírito Santo States, Brazil |
| ***Pilot site*** | Forestry landscapes, Suzano-owned areas intersecting the Atlantic Forest ecological corridor of Suzano's long term commitment in Bahia and Espírito Santo |
| ***Pilot area size*** | 1.2 million hectares, incl. 163k ha of site area, 373k ha of site buffer, 672k ha of surrounding area |
| ***Ecosystems covered*** | Atlantic Forest (Mata Atlântica). The Atlantic Forest has high levels of endemism (60% of its species are endemic) and is under significant threat, highlighting the importance of this corridor. |
| ***Metrics piloted & granularity*** | Ecosystem extent and landscape ecosystem condition were piloted at medium granularity level. Site ecosystem condition and species extinction risk were tested at high granularity level. |
| ***Piloting partner(s)*** | IUCN, TNFD |

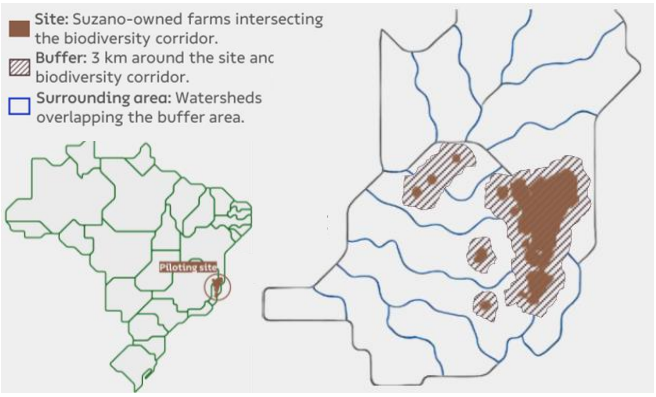


*Figure 1: Suzano-owned areas intersecting the ecological corridor in Bahia and Espírito Santo States*

## B) How and why the piloting project was completed

Suzano joined the pilot to (i) overcome the lack of standardised nature metrics to demonstrate ecosystem enhancement, (ii) align with global frameworks (TNFD, GBF) to support science-based decision-making, (iii) test real-world use of State of Nature Metrics to move beyond commitments to actions and (iv) drive strategic decisions. For assessments, Suzano relied on various datasets and built on its own biodiversity monitoring program. Threat calibration and prioritisation were validated through workshops with over 25 stakeholders, including researchers, NGOs, and government representatives. Metrics were processed using GIS and R-based workflows, adapted to Brazilian biomes and operational realities.

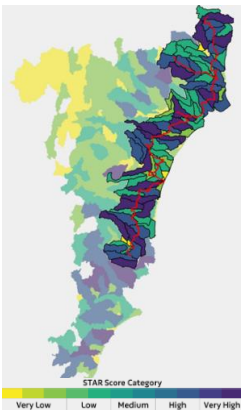


*Figure 2: STAR Score of the Project Area.*

*Note for Figure 2:* The red line represents the Suzano's long term commitment to preserving the Atlantic Forest ecological corridor.

### C) Key measurement approaches and tools used

| | *Ecosystem (condition and extent)* | *Species* |
|---|---|---|
| *Approaches* | - Combined spatial datasets from multiple sources with Suzano's biodiversity monitoring program data;<br>- Correspondence mapping was conducted to align ecosystem classifications from the from available data sources with the Global Ecosystem Typology (GET) Levels 3 and 4, and for classifying natural and non-natural areas. | - Applied the calibrated STAR metric (IUCN) using IBAT data and local fauna records and validated via stakeholder workshops. |
| *Tools / data sources* | - Ecosystem mapping and classification: IBGE, WWF Ecoregions, MapBiomas, SBTN Natural Lands Map;<br>- Site condition: Sentinel-2 derived vegetation indices;<br>- Data from Suzano's biodiversity monitoring program. | - IBAT data;<br>- Data from Suzano's biodiversity monitoring program. |

### D) Key challenges encountered and how the framework was adjusted to ensure practicality

| | | NPI notes: How feedback was incorporated |
|---|---|---|
| All indicators | ▶ *Cross-mapping datasets:* Suzano's main challenge was adapting global methodology to Brazilian datasets. The Group leveraged their long-term monitoring data to complement global sources and invested in internal capacity for spatial analysis and biodiversity assessment. | ▶ The measurement guidance was updated to recommend applying a particular GET Level *or national equivalent* to allow for flexibility in recognised approaches. The Global Ecosystems Atlas also plans to publish global Level 3 maps for terrestrial areas by the end of 2026. |
| All indicators | ▶ *Managing large volumes of data / time for data processing:* Suzano observed that the volume of data analysed often required significant processing time, which could present challenges for the large-scale implementation of these metrics, especially for land-intensive companies. | ▶ Additional guidance has been added to support companies assessing particularly large sites. A call to action will also be shared for tech and tools developers to consider how they can support companies in calculating the metrics. |

### E) Why is it important for companies to measure state of nature metrics

Overall, Suzano found that the State of Nature Metrics provide a science-based framework to translate high-level biodiversity commitments into measurable, actionable targets. They noted that the metrics enabled companies to demonstrate progress transparently to stakeholders and investors. By aligning with global standards, these metrics strengthen resilience, support compliance with emerging disclosure frameworks, and enhance credibility in sustainability reporting.

Through its piloting, Suzano found that steps to improve its existing ecosystem condition indicator were needed to accurately reflect the outcomes of its restoration efforts. The metrics have also enabled

Suzano to confirm the presence of threatened species in the pilot area, underscoring the need for threat reduction actions and collaborative, landscape-level initiatives.

*"Treat the process as iterative – begin with pilots, learn from challenges, and adapt methodologies to your operational context"*

Beatriz Lyra
Sustainability Coordinator, Suzano

Learn more about the State of Nature Metrics: **naturepositive.org/metrics**