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

Holcim is a global firm with operations spanning two business segments: building materials and building solutions. Within the building materials division, Holcim operates several cement plants and quarries. Holcim participated in the NPI state of nature metrics piloting program as part of its commitment to nature conservation, aiming to support efforts to standardise corporate measurement of nature impacts and reinforce its ambition to lead on nature action.

A) Where Holcim applied the metrics

Location	- Macuspana, Mexico - Cartago, Costa Rica
Pilot site and area	- Buenavista (Macuspana): cement plant and quarry, 1.3km^2 - La Chilena (Cartago): cement plant and quarry, 0.2km^2
Ecosystems covered	- The Buenavista site is located in a patch of tropical rainforest surrounded by agricultural land - To the east, La Chilena's site borders the Agua Blanca Nature Reserve and is otherwise surrounded by tropical rainforest
Metrics piloted & granularity	- Ecosystem extent was measured at high granularity level - Site condition, species extinction risk and species population abundance were all measured at low granularity level
Piloting partner(s)	IUCN

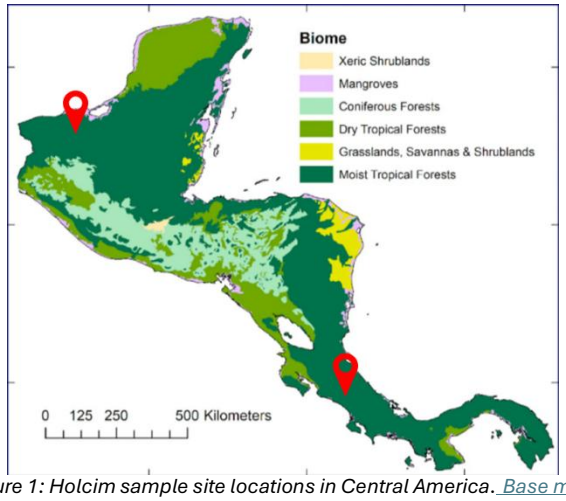

Figure 1: Holcim sample site locations in Central America. Base map: Harvey et al. 2021.

B) How and why the piloting project was completed

Holcim's main objectives of the pilot were to (i) test the Species Threat and Abatement Risk threat (STAR-t) indicator as a metric of species extinction risk and (ii) to test the compatibility of the Biodiversity Indicator and Reporting System (BIRS), which was developed by IUCN for the cement and aggregates sector in 2014, to measure ecosystem extent and site condition.

Figure 2: Image of sample site landscape. Credit: Holcim

Holcim used existing data as much as possible. The company requires quarries located in areas of high biodiversity importance to develop a Biodiversity Management Plan and has conducted BIRS assessments across all of its quarry sites. As a result of these requirements, both sites utilized existing ground-truthing on data on species presence and abundance, habitat extent and classification and site conditions. These assessments were carried out with the support of local ecological consultants. The remaining data gaps were addressed using available literature and site-specific knowledge from local employees. For the species indicators, Holcim worked closely with the site's employees and their piloting partner, IUCN.

C) Key measurement approaches and tools used

	Ecosystems (extent and condition)	*Species*
Approaches	- Following the BIRS assessment methodology for identifying habitat types and calculating condition classes, with the support of local ecological consultants	- Calculating calibrated STAR-t scores for the sites following IUCN's methodology - Estimated STAR-t scores were cross-checked with biodiversity and threat data to calibrate
Tools / data sources	- Primary data, observations in the field - GIS mapping of ecosystems already conducted by the company - Available literature - Knowledge of the sites from local employees	- Integrated Biodiversity Assessment Tool (IBAT) - Estimated STAR-t layer - STAR calibration methodology - Biodiversity inventory data and threat scope and severity data from on-site surveys

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

All indicators

- *Adopting new metrics:* integrating these new indicators requires time to fully understand them and to find reliable data sources. Holcim therefore prioritised low granularity levels. Holcim considers that local teams will need to familiarise themselves with the metrics and receive adequate training. Securing reliable local data and technical expertise will likely require a staggered approach to reporting.
- Related to this, it would be useful to prioritise sites to focus on robust measurement where it is most needed. This would also ensure that resources are allocated as efficiently as possible.

NPI notes: How feedback was incorporated

- The low granularity level metrics have been revised into a "Preparatory" level. These are simpler to calculate, requiring minimal manipulation of globally available data, and are designed to provide an accessible on-ramp into understanding the nature on the site and starting to establish reporting practices.
- The draft Measurement Guidance has been updated to refer companies to established frameworks and standards for prioritising measurement efforts, e.g. from TNFD, SBTN and GRI. This allows flexibility for companies to align with frameworks they are already using (thus reducing duplicated effort), whist ensuring good practice is followed.

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

According to Holcim, the metrics offer a comprehensive view of the state of nature at a site, as well as a broad understanding of the improvements required, how they should be prioritized, and how they can be delivered. Holcim further states that the metrics provide a standardized approach to assessing the state of nature, enabling comparability not only across sites within a company but also between companies and across sectors.

"Through our pilot with the Nature Positive Initiative, in collaboration with the IUCN, we demonstrated how our BIRS methodology can measure biodiversity in a practical and decision-relevant way. This work confirms the critical role of such initiatives in harmonizing biodiversity metrics across industries and advancing the development of state-of-nature indicators under the TNFD framework."

Renata Pollini
Head of Sustainable Construction and Nature, Holcim

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