Nature Positive Initiative State of Nature Metrics: Terrestrial Pilot Case Study - Dow

Dow Inc. is an American multinational corporation, amongst the largest chemical producers in the world. The company piloted the metrics to retrospectively analyse one of their restoration projects.

A) Where Dow applied the metrics

Location	Midland, Michigan, United States of America
Pilot site	Man-made ash pond once part of Dow Chemical's Michigan Operations (built in the 1950s) along the Tittabawassee River and adjacent to area owned by the city of Midland
Pilot area size	The pilot area was comprised of 23 acres total, which includes an adjacent property of 14 acres owned by the city of Midland
Ecosystems covered	Manmade pond turned into a functioning wetland
Metrics piloted & granularity	Ecosystem extent, proportion of natural or semi-natural habitat and site ecosystem condition were measured at all three granularity levels; landscape condition was measured at the high granularity level
Piloting partner(s)	Global Reporting Initiative (GRI)

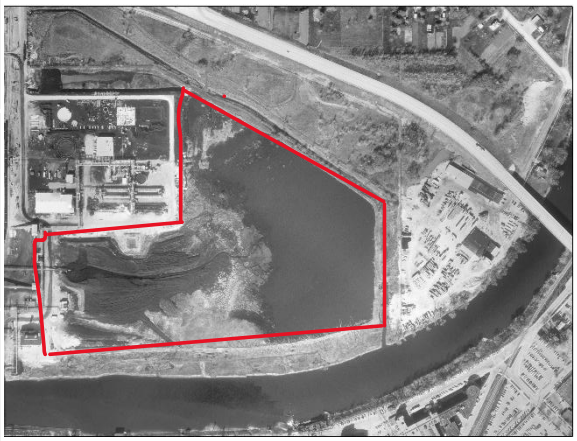

Figure 1: Project Area (Dow)

B) How and why the piloting project was completed

Dow sought to restore an ash pond and initially considered two remediation options (cap & treat or full restoration). To inform the decision and design the preferred solution, Dow developed a tailored ecosystem services–based approach using the Ecosystem Intelligence tool (developed by Dow, the Nature Conservancy and EcoMetrix Solution Group). The selected nature-based restoration design was then used as a pilot case for a retrospective application of the state of nature metrics.

Figure 2: Site to be mapped using Ecosystem Intelligence

Dow's approach to calculating nature-related indicators utilized both the Ecosystem Intelligence tool and direct field observation. Indicator calculation was spatially explicit, with the site divided into discrete polygons that reflect meaningful variation in ecological attributes influencing ecosystem functioning.

Dow also carefully considered the use of the metric outputs, applying an iterative process in which site context, observed conditions and functional performance together informed how indicators were calculated and interpreted, ensuring their decision relevance.

C) Key measurement approaches and tools used

	Ecosystem (condition and extent)	*Species*
Approaches	- Ecosystem classification: applied the Global Ecosystem Typology (GET) levels and then used datasets including vegetation/structure, soil structure, water regime and topography to further refine ecosystem types in line with their functional processes - Landscape condition: additional abiotic contextual aspects were added, such as flood risk, to expand this assessment	- Map of Life was used to identify protected species present within a 20km buffer surrounding the site with data available - A local expert also provided information on the species known or expected to be found in riparian areas around the site - No at-risk species were located on the site itself, therefore habitat change was used as a proxy metric
Tools / data sources	- Ecosystem classification and condition: On the ground ecosystem service valuation and Ecosystem Intelligence tool at high granularity involving multi-stakeholder engagement and scientific validation - Landscape condition: Map of Life, Floodplain Mapping, Historic Landcover Mapping, IBAT	- Map of Life tool

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

		NPI notes: How feedback was incorporated
All indicators	▶ *Appropriateness of datasets:* Dow found the datasets suggested, especially GET levels for ecosystem classification, difficult to work with and of limited utility – particularly for smaller sites located in more urban areas. It noted more flexibility in methods, tools and/or baseline years could be helpful.	▶ Flexibility relating to the use of GET classifications or other national equivalents was included in the guidance. Similarly, while a baseline of 2020 was advised, flexibility was incorporated based on data availability and other contextual factors, providing the methodology is made transparent.
Ecosystem Extent ⟷	▶ *Natural vs semi-natural classification:* Dow considers that classifying ecosystems as 'natural' or 'semi-natural' introduces complexity without necessarily addressing the key factors needed to assess ecosystem extent and condition in the context of land use change.	▶ The requirement to categorise ecosystems into natural and semi-natural was removed, instead focusing on breakdowns by ecosystem type and land use categories.

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

Dow's assessment found that ecological restoration of the ash pond to provide wetland habitat was faster, lower cost and provided strengthened ecosystem service delivery compared to the traditional cap and treat remediation method. The State of Nature metrics were integrated into the project design and delivery, complementing additional measures, to inform robust decision-making, as well as supporting external reporting against the GRI 101: Biodiversity Standard.

Dow noted that the State of Nature Metrics help address the lack of clear and consistent measurement, which had been a major barrier to meaningful corporate engagement on biodiversity. They felt ambiguity and inconsistency in metrics can undermine credibility and decision-making; whereas robust, aligned metrics provide the foundation companies need to track progress, demonstrate impact, and move biodiversity action from aspiration to implementation.

I think this work will have great impact. I could see that all of the participants and NPI community are passionate about this piece of work and we all want to finally be able to say: "Yes, biodiversity can be assessed. Let me show you how we can do this".

France Guertin
Senior Manager Environmental Resilience, Dow

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