



Business guidance for deeper regeneration

→ Soil chapter

Regenerative Agriculture Metrics – *guidance for business*

To accelerate regenerative agriculture and transition into agricultural models that work within planetary boundaries, it is essential to drive widespread value chain convergence on an integrated measurement architecture. This includes addressing and overcoming the key challenges to alignment: a lack of cohesion on definition and outcomes, fragmented and siloed data collection and reporting, a need to translate global frameworks into local action plans and a lack of inclusivity of farmers and Indigenous peoples and local communities (IPLC) in the process.

The World Business Council for Sustainable Development (WBCSD) has prioritized strengthening corporate performance accountability systems for carbon, nature and equity. To this end, WBCSD has launched the Regenerative Agriculture Metrics (RAM) joint working group with the One Planet Business for Biodiversity (OP2B) coalition. This collaborative effort involves more than 50 members and 33 business-focused partners, representing more than 1,100 businesses. The group's goal is to drive widespread value chain convergence and align farm-, landscape- and global-level metrics with corporate reporting.

RAM members and partners recognize the need to measure environmental, social and economic outcomes for a holistic approach to regenerative agriculture. It is critical for industry to align at a metric level to measure these holistic outcomes for a consistent approach to regenerative agriculture.

Soil-related metrics *for regenerative agriculture*

Consistent with the growing consensus across current and emerging regenerative agriculture tools and frameworks, environmental outcomes should have an impact on five areas: soil, biodiversity, **water**, **climate** and socioeconomics. RAM members and partners have aligned on one key soil outcome for regenerative agriculture: increased soil health. Identifying several key indicators and metrics to support implementation shown in Table 1. Most aligned metrics are shown in green.

The increased soil health outcome is aligned with leading frameworks, including SAI Platform and Textile Exchange, with connectivity with standards and guidance, including the Global Reporting Initiative (GRI) and Science Based Targets initiative Forest, Land and Agriculture Guidance (SBTI FLAG).

OP2B’s working definition of regenerative agriculture

Related to agroecological evidence and principles, regenerative agriculture is a holistic, outcome-based farming approach that generates agricultural products while measurably having net-positive impacts on soil health, biodiversity, climate, water resources and farming livelihoods at the farm and landscape levels. It aims to simultaneously promote above- and below-ground carbon sequestration, reduce greenhouse gas (GHG) emissions, protect and enhance biodiversity in and around farms, improve water retention in soil, reduce pesticide risk, improve nutrient-use efficiency, and improve farming livelihoods.

Table 1: Global-level indicators for soil-related outcomes of regenerative agriculture

Outcome	Important indicators in many contexts	Possible Metrics
Increased soil health	Soil organic carbon	MT CO2e total [Core climate metric]
		SOC/Area or tons of carbon/ha
		% organic carbon content
	Green water	Soil water holding capacity (%) [Additional water metric]
	Pesticide	Environmental Impact Quotient field-use ratings (EIQ score ecological)
	Infiltration rate	mm/hr
	Bulk density	Dry weight of soil in a given volume, g/cm3
	Availability of soil nutrients to plants	Amount (mg/kg) of plant available macro/ micronutrient in soil sample (N, P, K, SOM)
	Soil invertebrate diversity	Species richness and abundance of macroinvertebrates (incl. earthworms where relevant)
	Soil microbial diversity	Microbial biomass
		DNA-based metrics
	Soil erosion	Tons/ha

Implementing Soil-related metrics

RAM members and partners highlighted key needs to enable the adoption of these soil-related metrics for regenerative agriculture. These include improved data for measuring impacts on soil health, improved evidence base for practices, interoperability of standards and frameworks and more. This guidance provides further detail on these needs and suggestions for how to address them collectively.

How to bridge the data disconnect from farm level to supply shed to global level

We are working to align farm-, landscape- and global-level metrics with corporate reporting to streamline how data travels across the value chain. We are doing this by establishing global-level metrics built on alignment with leading and emerging farm and landscape level tools and frameworks. In this way, the metrics developed through this group incorporate key farm- and landscape-level assessment while connecting to accounting, reporting and disclosure bodies to develop specific guidance for regenerative agriculture.

Remaining challenges

Soils vary substantially across different geographies, ecological contexts and agricultural systems. They also differ in their physical, chemical and biological properties. These complexities mean that while there is broad agreement around the components of soil health that can be measured (e.g. physical, chemical, biological), there are many different metrics that can be used. Therefore it can be challenging to define universal metrics for assessing soil health that are applicable globally and across different contexts. This is compounded by the challenges in collecting much of this information which currently requires costly field collection and laboratory analysis for many indicators.

Policy asks

Support the move from practice-based policy to outcome-based approaches

Regenerative agriculture at scale requires agricultural policy to shift from prescriptive, practice-based policy to outcome-based approaches. A holistic, science-driven, outcome-based approach to regenerative agriculture can bridge the gap between stakeholders and empower farmers by being cost-effective, context-specific, transparent and measurable.

For soil-related outcomes it is especially important that policies 1) are harmonized at the global scale for coordinated impact across diverse regions and landscapes and 2) reflect the unique considerations for different landscapes at the regional and local level.

Support the alignment of data collection and reporting guidelines

Standardized data collection and reporting related to on-farm activities for soil-related data requires multistakeholder support to accelerate the transition to regenerative agriculture.

Governments can play a role by:

1. **Holding businesses accountable** for their commitments by strengthening and harmonizing reporting and disclosure.

regulations, incorporating on-farm activities into corporate transparency measures and implementing incentives to support improved outcomes for soil health.

2. **Empowering farmers**, through an inclusive policy on farm data, to actively collect and report data on soil-related outcomes in their on-farm activities by offering financial incentives, technical support and simplified data collection methods.
3. **Supporting research** that fills the existing gaps around measurement and quantification of biodiversity outcomes – and modelling linking these back to farm-level practices – and aggregating the available data to make it publicly available in a readily usable form for businesses.

Moving forward – Call to action

This working group, representing over 1,100 businesses, will finalize and showcase all environmental, economic and social outcomes in December 2024.

This collective effort aims to foster alignment beyond the private sector, with the wider stakeholder space through the [Regen10](#) initiative. Regen10 is developing a farmer-centric guiding framework.

It is time to converge all efforts on how we measure, report and disclose on regenerative agriculture to allow for deeper regeneration. The private sector must align with other stakeholders to safeguard supply chain resilience and transition to agricultural models that operate within planetary boundaries. Join us!

Read the full report and contact Dana Rakha-Michalon at rakha@wbcsd.org to engage in this work.

DISCLAIMER

This publication has been released in the name of WBCSD. It is the result of collaborative efforts by representatives from member companies and external experts. It does not reflect all viewpoints of each company or partner, nor does their engagement in the process necessarily constitute an endorsement of the work.

Contact Dana Rakha-Michalon at rakha@wbcsd.org to engage in this work.

About One Planet Business for Biodiversity (OP2B)

One Planet Business for Biodiversity (OP2B) is an international, cross-sectoral and action-oriented business coalition on biodiversity with a specific focus on regenerative agriculture. We are determined to drive transformational system change and catalyze action to protect and restore cultivated and natural biodiversity within agricultural value chains. The coalition focuses on scaling up regenerative agriculture, developing transparent outcome-based reporting for regenerative agriculture, advocating for positive policy for de-risking the transition for farmers and promoting crop and food ingredient diversification.

Follow OP2B [X](#) and [LinkedIn](#)

About WBCSD

The World Business Council for Sustainable Development (WBCSD) is a global community of over 220 of the world's leading businesses, representing a combined revenue of more than USD \$8.5 trillion and 19 million employees. Together, we transform the systems we work in to limit the impact of the climate crisis, restore nature and tackle inequality.

We accelerate value chain transformation across key sectors and reshape the financial system to reward sustainable leadership and action through a lower cost of capital. Through the exchange of best practices, improving performance, accessing education, forming partnerships and shaping the policy agenda, we drive progress in businesses and sharpen the accountability of their performance.

Follow us on [X](#) and [LinkedIn](#)

www.wbcsd.org

Copyright © WBCSD, August 2024