

Regenerative Agriculture

BSI Standards Research Report

March 2025



Your partner
in progress

Authors

Leyla Önal (Research & Insight Manager, BSI)

Shona Porter (Research & Data Analyst, BSI)

Contributors

Gill Jackson (Senior Research & Insight Manager, BSI)

Emily Field (Food Sector Lead, BSI)

Finian Makepeace (Co-Founder, Kiss the Ground)

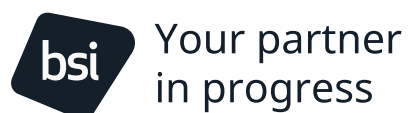
Catherine McCosker (Head of Agriculture and Landscapes, 3Keel)

Acknowledgements

The authors are grateful to all the participants for their contributions and insights.

Disclaimer

This report has been prepared for general information purposes relating to its subject matter only. It does not constitute a definitive or exhaustive advice; it outlines possible courses of action and next steps and is intended to inform further stakeholder discussion and decisions on its subject.



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Foreword

By Finian Makepeace, Co-Founder of Kiss the Ground

Agriculture has been the most destructive human activity on Earth. Yet, regenerative agriculture is gaining momentum as a powerful solution to crises in wellness, water scarcity, climate change, and biodiversity loss. It restores ecosystems—rebuilding soil, revitalizing water cycles, and enhancing biodiversity.

For farmers and ranchers, it reduces input costs, increases land resilience, diversifies enterprises, and boosts profits. Consumers gain access to healthier food, while companies recognize its role in stabilizing supply chains amid climate-related disruptions. Policymakers, too, see its potential as the consequences of conventional agriculture become undeniable.

With a global movement emerging, the question is: How do we create reliable standards that ensure regenerative agriculture's full potential while staying practical and adaptable?

To maintain integrity, we must clarify next steps, develop pragmatic solutions, and ensure this movement leads to lasting change. This is why organizations like BSI are essential. With experience in international standards, BSI has taken an important step in assessing whether a framework could scale regenerative agriculture's impact while preserving its core principles.

In 2013, I co-founded Kiss the Ground to awaken people to the possibilities of regeneration. Through films like Kiss the Ground and Common Ground, along with storytelling, education, and partnerships, we've inspired millions to join this movement.

I was pleased to engage with BSI early in their process and encourage you to read the Regenerative Agriculture Discovery Research Report. While no framework can encompass every perspective, this report is a crucial step in understanding what key stakeholders envision for the future.

Regardless of where you stand on standardization, we are at a critical juncture. Thoughtful discussions like this will shape how regenerative agriculture evolves. As this process unfolds, collective participation will be essential to ensuring any future standards align with the movement's true intent.

To regeneration and beyond,
Finian Makepeace

Finian Makepeace, Co-Founder of Kiss the Ground, is a leading voice in regenerative agriculture, known for his storytelling, advocacy, and policy work. As a presenter, media creator, and producer of Kiss the Ground and Common Ground, he has helped educate and inspire millions through films, training programs, and initiatives that connect people to the power of regeneration.



1 Executive summary

Regenerative agriculture is increasingly seen as a solution to a variety of challenges in farming, environmental conservation and global sustainability. It can facilitate carbon sequestration, increase biodiversity, improve soil health and reduce the risk of flooding, among other benefits. Regenerative agriculture also improves the resilience and security of our future food supply. However, the absence of a universally agreed definition for 'regenerative agriculture' and the lack of a baseline standard raises concerns that the sector might struggle to adopt best practice, which would potentially undermine genuine efforts of regenerative agriculture. Moreover, the lack of consensus on what constitutes 'regenerative agriculture' and its supporting principles risks creating confusion among consumers, and inconsistent claims regarding products and practices might result in accusations of greenwashing.

1.1 Purpose of the project

British Standards Institution (BSI), as the UK's National Standards Body (NSB), has undertaken this discovery research project to understand the key challenges faced by agri-food industry actors as they seek to integrate regenerative agriculture within their supply chains, and to identify if standardization can accelerate the adoption of regenerative agriculture.

The project objectives include:

- exploring the need to define 'regenerative agriculture' and its principles in order to foster trustworthy and verifiable practice
- understanding the current challenges for global stakeholders currently engaging with regenerative agriculture within their supply chains
- understanding if standardization can support widescale adoption of regenerative agriculture and overcome current challenges
- exploring the ways in which the scaling of trustworthy and verifiable regenerative agriculture practices can be facilitated
- building trust and assurance for all market stakeholders to support adoption of regenerative agriculture and guard against greenwashing.

1.2 Stakeholder engagement

We engaged extensively with industry experts, trade associations, regulators, non-governmental organizations (NGOs) and farmers from both the UK and internationally to guide this research on how to support trustworthy and verifiable regenerative agriculture practice and to identify areas where guidance/standardization is needed. The findings and recommendations represent input from these stakeholders and their collective voice, ensuring that the recommendations reflect industry needs regarding the complex challenges associated with regenerative agriculture.

1.3 Recommendations

The following activities should be prioritized to facilitate the widespread adoption of trustworthy and verifiable regenerative agriculture practice.

- **Form a Strategic Advisory Group (SAG)** – It is recommended that a Strategic Advisory Group (SAG) is established under the auspices of BSI, to provide advice on the most effective strategies and solutions to accelerate the adoption of regenerative agriculture across the industry.
- **Develop best practice guidance** – Our research highlighted that there is a need for an overarching guidance document to be developed that can act as a single reference point for understanding best practice when integrating regenerative agriculture within supply chains. This document would cover global best practice, including formal and informal standards, as well as existing frameworks and schemes (see next recommendation). Actors within the supply chain would benefit from guidance on how to implement these practices. Moreover, the document would help the various supply chain actors to assess their progress and desired outcomes against best practice.
- **Conduct a review of informal standards** – There is a need for a landscape mapping exercise to be carried out, which would extend the presented research on formal standards (see Section 2.3.1) to include all relevant informal standards, frameworks and schemes (.e.g. SAI Platform¹, Regen10², Regenified³). This would help inform the development of a universal framework, convening all best practice into one reference document.
- **Provide monitoring, reporting and verification (MRV) support** – The development of a ‘measurement architecture’ is needed to help organizations measure, monitor, report and verify the outcomes of regenerative agriculture within their supply chains. A harmonized MRV framework would allow for consistency across the sector and further support the widescale adoption of best practice.

¹ <https://saipatform.org/>.

² <https://regen10.org/>.

³ <https://regenified.com/>.

2 Introduction

2.1 Research background

Regenerative agriculture – agriculture that improves ('regenerates') the environment while also producing food or fibre – has been a topic of increasing interest for the past several years. Viewed variably as a method to improve resilience of food production against the changing climate, or just another name for 'sustainable agriculture', among other opinions, regenerative agriculture involves many different stakeholders – from farmers, to supply chain organizations, to investors and the finance sector, to the policy world – all of whom have their own insights into what it is, why it's needed, and how it should be implemented.

While there is increasing convergence on the overarching principles that make up regenerative agriculture, there is no universally or legally agreed definition. Methods of food production vary considerably by region, and even within a region, as a result of the natural environment's intrinsic heterogeneity, as well as varying social, economic and geopolitical contexts, which makes it challenging to identify a single definitive approach.

This lack of mutual understanding/agreement on what regenerative agriculture looks like in practice presents challenges to robustly demonstrating its implementation. This can be a barrier for organizations looking to integrate regenerative agriculture across their supply chains (and in some instances make claims to this end), for farmers wishing to demonstrate best practice production or achieve product premiums related to regenerative agriculture, and for funders seeking to invest in regenerative agriculture at scale. The lack of standardization can increase the risk of greenwashing and create confusion regarding best practice.

The potential solutions to these challenges are equally varied, which means that coming to conclusions on the best way forward is difficult. One consequence of this is that an increasing number of organizations have developed their own definitions and implementation frameworks for regenerative agriculture. While this can be useful in allowing supply chain organizations to cater to the specific needs of their suppliers and growing contexts, it has no impact on addressing other challenges, such as growing customer understanding of and confidence in the term (and therefore increasing demand), or supporting verification pathways that are easily accessible for investors and governments looking to support the scaling of regenerative agriculture. It can also present issues for farmers, such as having to demonstrate progress against multiple different regenerative agriculture guidelines in order to show outcomes of regenerative agriculture, access funding or meet market requirements.

It is against this backdrop that we have undertaken this discovery project to understand what our role as a neutral, trusted standards body could be in addressing these challenges and facilitating a way forward.

2.2 The role of standards in achieving industry leadership for regenerative agriculture

Standards can provide a consistent, trustworthy, and verifiable approach to regenerative agriculture, as well as offer guidance and recommendations to help organizations distil best practice.

Standards also offer an opportunity for various actors within the supply chain to be aligned on expected outcomes and benefits. Rather than farmers and farming organizations having to reinvent the wheel when it comes to supply protocols, standards can improve efficiencies, eliminate confusion and help mitigate future risks.

For organizations, investors and other supply chain actors, understanding the practices and expected outcomes of regenerative agriculture allows for alignment and a harmonized approach to scaling regenerative agriculture that builds trust and consumer confidence.



3 Research overview

3.1 Research objectives

The aim of this research was to explore if, and how, standardization could support widescale, trustworthy and verifiable regenerative agriculture practice. The research objectives included:

- exploring the need to define regenerative agriculture and its principles in order to foster trustworthy and verifiable practice
- developing a deep understanding of the current challenges when integrating regenerative agriculture within supply chains for global stakeholders, as well as the risks, barriers and needs
- understanding if standardization can help overcome current challenges when integrating regenerative agriculture, to enable adoption and identify actionable solutions
- exploring the ways in which the scaling of trustworthy and verifiable regenerative agriculture practice can be facilitated.

3.2 Research scope

This research, informed by the principles and benefits of regenerative agriculture – which encompass every stage of the supply chain, from farmers to retailers and investors – is a high-level, initial exploration into the sector's needs.

The research involved varying types of stakeholder engagement activities for collating the required insights, as well as a supplementary standards landscape review. Specifically, components of the stakeholder engagement included a discovery workshop, one-to-one stakeholder interviews and an industry roundtable. All the stakeholder engagement activities were conducted on an anonymous basis and stakeholders expressed their personal views. Moreover, upon request from the majority of stakeholders, their associated organizations are not disclosed in this report.

For analytical purposes, this document refers to farming/agriculture sector actors as 'farmers', and to other stakeholders in the supply chain (e.g. retailers, manufacturers, financial institutions and certifying bodies) as 'supply chain actors', as presented in Figure 1.



Figure 1: Supply chain actors included in the project scope

The scope of the standards landscape research, which supplements the qualitative findings from stakeholder engagement, is discussed in Section 2.3.1.

3.3 Research methodology

3.3.1 Standards landscape

The standards landscape research methodology consisted of four key stages, as detailed in Figure 2.

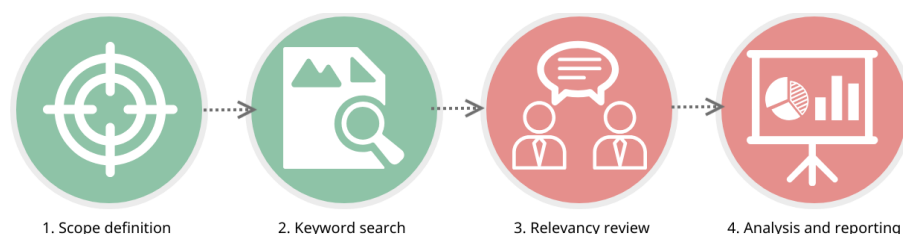


Figure 2: Standards landscape – research methodology

- **Standards landscape – scope definition**

The issuing bodies, jurisdictions and geographies of the standards development organizations (SDOs) and NSBs within the scope of the standards landscape were identified, as presented in Figure 3 and Figure 4.

- **Issuing bodies and jurisdictions by geography**

UK (BSI) standards are of clear interest, as are European standards developed by SDOs such as the European Committee for Standardization (CEN) and the European Committee for Electrotechnical Standardization (CENELEC), and international standards developed by SDOs such as the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC).



Figure 3: Jurisdictions

- **Formal standards**

The scope of the standards to be included in the standards landscape review were defined as formal standards only, i.e. standards published by NSBs and SDOs. The standards from these organizations that met the geographical criteria were included in the results.

Throughout the project, there was awareness of the proliferation of private standards and frameworks. However, at this early stage of the project, given the complexity of the landscape and limitations – in terms of time, budget and access – only formal standards were considered in the standards landscape research.

Following the desk research, a search matrix was developed in consultation with the sector lead and with input from a technical consultant. This matrix, shown in Figure 4, aided the identification and systematic classification of relevant standards.

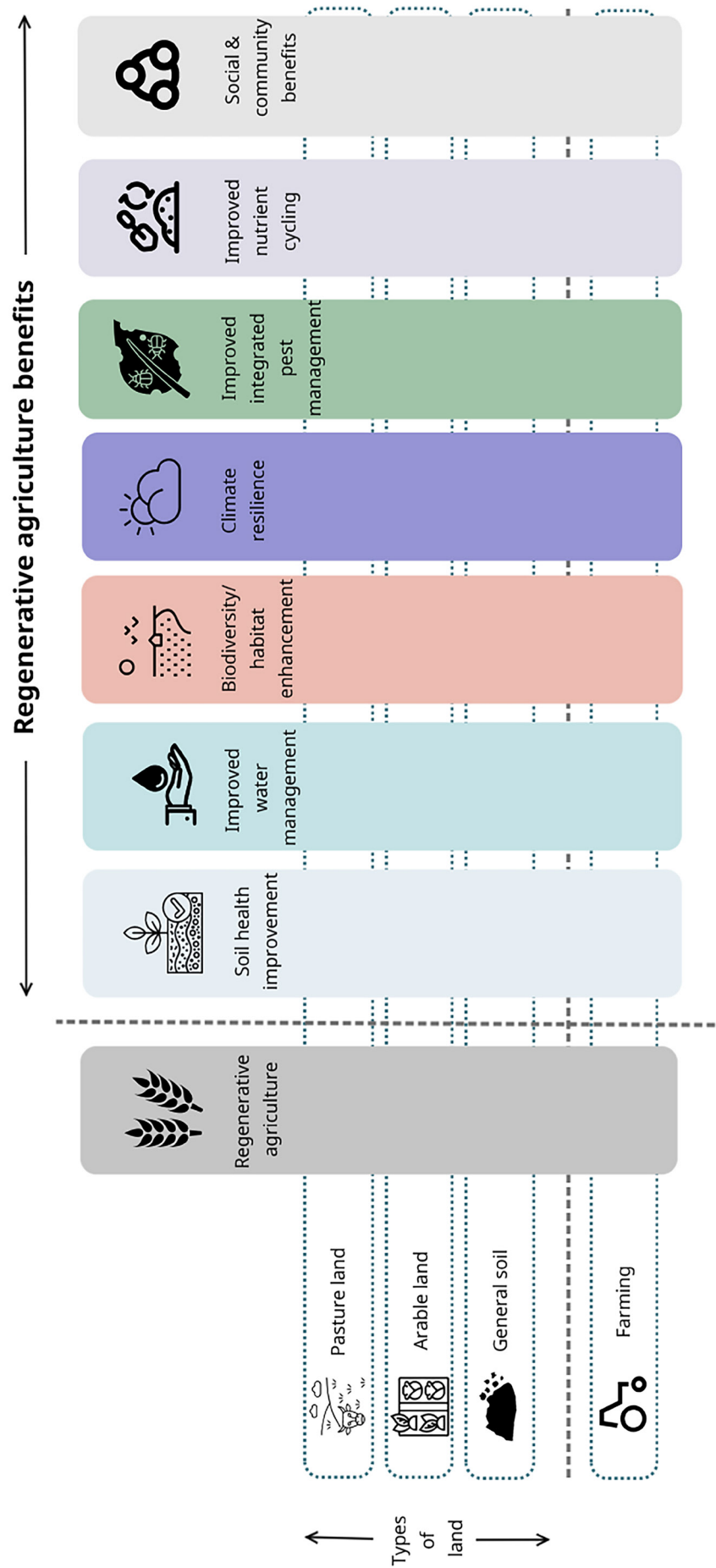


Figure 4: Standards landscape research parameters

- **Search matrix**

The keywords in relation to the ‘types of land’ and ‘regenerative agriculture benefits’ identified for the matrix were validated via workshops and interviews with industry stakeholders. Keyword searches were carried out and the results went through a relevancy review process (see Table 1 for details) to inform the analysis.

Following the identification of the standards, they were assessed by a technical consultant to determine their relevancy to the overall project objectives. The relevancy assessment was based on the categories defined in Table 1.

Table 1: Relevancy definitions

Category	Definition
Highly relevant to regenerative agriculture	Standards directly related to sustainable farming practices, including regenerative agriculture, or those specifically addressing the practice of regenerative agriculture.
Partially relevant to regenerative agriculture	Standards that to some extent relate to elements of sustainable farming or regenerative agriculture, such as soil health, biodiversity, net gain and carbon sequestration.
Low relevance to regenerative agriculture	Standards that might relate to agriculture or food products but are not specific to the principles of regenerative agriculture. Note: Standards categorized as ‘Low relevance’ were not considered for the analysis of the standards landscape.

3.3.2 Discovery workshop

We held a discovery workshop with over 45 international participants representing various sectors, such as farming/agriculture, NGO/advocacy, consultancy, academia/research, government, certification, supply chain and investors/finance.

The objectives of the workshop were to:

- explore participants’ experiences of implementing regenerative agriculture, as well as their understanding of the associated risks and challenges
- understand support requirements for trustworthy, verifiable and scalable practice.

3.3.3 Stakeholder interviews

A total of 12 in-depth stakeholder interviews were conducted with representatives from farming/agriculture, finance, academia/research, manufacturing, retail, certification and philanthropy sectors.

The objectives of the interviews were to:

- explore the differences in terminology and industry needs around clarification of terminology
- identify the greatest barriers preventing widescale adoption of regenerative agriculture
- investigate the best approach, and the most critical considerations that support harmonization needs.

3.3.4 Industry roundtable

In response to the findings of the standards landscape, discovery workshop and stakeholder interviews, we conducted a roundtable with 12 representatives of various supply chain actors within the industry, from manufacture, retail, financial institutions and certification bodies. During the previous activities, the latter were identified as the key beneficiaries of a potential harmonization/standardization solution.

The main objective of the roundtable was to validate the research findings and assess organizational priorities where harmonization/standardization is needed. Further objectives supporting the validation of the research findings were to gather participants' feedback on the harmonization of regenerative agriculture practices, to understand business drivers in the supply chain for regenerative agriculture; and to understand support needs for MRV.



4 Key findings

This section presents the key overall findings from the research, including the standards landscape review.

4.1 Alignment and harmonization

Participants agreed that there is a need for harmonization and alignment of existing guidance and frameworks to better support widescale adoption of best practice. Harmonizing existing standards and schemes would help prevent a disconnect between the standards that farms are using for the different products or commodities they are trading, and the varying requirements from the supply chain actors they are trading with. In addition, participants suggested that there is a need to establish an overarching framework and convergence of all existing best practice into one key reference point.

Participants stated that there needs to be clarity around the principles of regenerative agriculture, as well as around terminologies and categorizations. This would allow for consistency to ensure that all actors in the value chain operate in cohesion.

4.2 Principles versus outcomes

Participants' views about the best approach for creating a unified understanding of regenerative agriculture can be loosely grouped under 'principles-led' versus 'outcomes-based' preferences.

The balance of a principles-led versus outcomes-based approach is an important consideration for standards development. Any potential principles-led standard should be broad enough to prevent it from being niche and out of reach; while an outcomes-based approach might be preferable in the long term, due to short-term challenges such as the availability of data, continuous monitoring or varying weather conditions impacting the success of outcomes.

As the principles of regenerative agriculture are well established and considered universal in terms of theoretically being applicable to farming practices anywhere, around half of the participants indicated that they would prefer a principles-led approach. They noted that regenerative agriculture requires a wholesale application of five principles, with contextual adaptation. It is worth highlighting that while the principles are widely known and understood, there is divergence around whether there are five or six principles.

Moreover, participants highlighted that the mere application of some of the principles does not mean that farming has been done regeneratively and might be open to accusations of greenwashing.

Participants noted the need for clarity around the principles, as well as terminologies and categorizations. The principles of regenerative agriculture are well disseminated and, despite variances, they serve as a common frame of reference. UK-based organizations, such as Groundswell⁴, The Royal Agricultural Society of England⁵ and Roots of Nature⁶, along with various international organizations, refer to these principles.

⁴ Groundswell. *5 principles of regenerative agriculture*. <https://groundswellag.com/principles-of-regenerative-agriculture/>.

⁵ The Royal Agricultural Society of England. *The principles of regenerative agriculture*. <https://www.rase.org.uk/news/the-principles-of-regenerative-agriculture/>.

⁶ Roots of Nature. *The principles of regenerative agriculture*. <https://rootsofnature.co.uk/the-principles-of-regenerative-agriculture/>.

Participants mentioned six principles (or five principles plus ‘context’), as listed in Table 2.

Table 2: Regenerative agriculture principles

Minimize soil disturbance
Reducing or eliminating tillage and other similar practices disrupts the soil structure. By minimizing soil disturbance, the natural soil ecosystem, including microorganisms and soil organic matter, can thrive, leading to healthier, more resilient soil.
Keep the soil covered
Maintaining a cover on the soil, whether through cover crops, crop residues or mulches, protects the soil from erosion, conserves moisture, and helps regulate soil temperature. Soil cover also reduces the impact of heavy rain and wind, preventing erosion and nutrient loss.
Maximize crop diversity
Growing a variety of plants in the same area, either through crop rotation, intercropping or polycultures, enhances biodiversity. Diverse plant species contribute to healthier soil by supporting a wider range of beneficial insects and microorganisms and reducing the risk of pests and diseases.
Maintain living roots year round
Keeping living plants in the ground as much as possible ensures that roots are continually feeding soil microorganisms. This practice improves soil structure, enhances nutrient cycling and increases carbon sequestration, all of which are key to maintaining soil health.
Integrate livestock
Incorporating animals into the farming system through managed grazing practices helps mimic natural ecosystems, where herbivores play a vital role in nutrient cycling. Livestock can help manage plant growth, spread seeds and contribute organic matter to the soil, all of which promote soil health.
Contextual adaptation
Regenerative practices should be tailored to the specific context of the land, including its climate, geography and the needs of the local community. What works well in one region might not be effective in another, so farmers should adapt their practices to the unique conditions of their environment.

Despite the general consensus around the principles and the necessity of a whole-farm approach, considerations around the main focus and boundaries of regenerative agriculture varied.

The majority of the participants underlined the importance of the integration of livestock, referring to the use of different grazing systems, e.g. holistic planned grazing or rational grazing, and the transformational processes of transitioning to smaller and more native species of livestock.

However, due to the specificity of the UK environment, in-depth conversations led to the realization that the context which immediately comes to mind in terms of regenerative farming in the UK is arable farming. Moreover, the conversations highlighted that there is varying emphasis on the integration of livestock, with the tendency to see this principle as less of a priority, or a next step *after* the application of the two soil-based principles.

There was also significant variance around the understanding of the principle of contextual adaptation. While some participants referred to ‘context’, mainly on the basis of variance in geography and climate, other participants highlighted the importance of the social/cultural context as closely linked to agricultural practices.

Philanthropy organization

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Until recently, people have been focusing mainly on climate and carbon, and more recently on nature. It's only now that people are beginning to realize that perhaps the biggest impact of all of agriculture is social, because it impacts public health, from both the mental and the physical health point of view.

Around half the participants stated that they preferred an outcome-led understanding of regenerative farming, which is closely linked to scientific evidence in relation to the application of the principles. Participants referred to the necessity of the observation of desired outputs (benefits) of regenerative farming as their preferred approach, i.e. increased soil health and fertility, carbon sequestration, increased biodiversity, better water management, environmental stewardship, farm resilience and economic benefits. They indicated that as long as there is evidence for the existence of these outputs in the form of scientifically measured outcomes, the agricultural practice should be accepted as regenerative, regardless of the number of principles applied.

4.3 Flexible approach

The research findings indicated that a one-size-fits-all approach is not practicable due to the diversity of agricultural systems. A hybrid model that combines principles and outcomes, while allowing for local adaptation, was recommended by the participants regardless of their preferred approach. They stated that there needs to be a downstream approach (an approach that emphasizes 'how organizations report on regenerative agriculture' rather than 'what practices farmers should be following') in the harmonization process.

Workshop, interview and roundtable discussions highlighted that the principles of regenerative agriculture need to be clear, flexible and inclusive to be applicable to a variety of production systems, and cater for widespread adoption based on variability of context (soil type, climate, biodiversity, scale of the farm, labour availability and so on), which should also be balanced with an outcome-based approach. Moreover, participants mentioned the necessity of a whole-farm approach for the implementation of regenerative agriculture practices, which also presents challenges in terms of the classification and governance of different farm components.

4.4 Measuring, reporting and verification (MRV)

The considerations of research participants around an outcome-based approach were closely linked to the question of measurement. Standardized measurement, reporting and verification (MRV) frameworks are vital to build trust and enable organizations to make credible claims about regenerative agriculture practices. Participants highlighted a need for baseline measures and suitable metrics to support reporting and verification of best practice. It was noted that the harmonization and alignment of existing schemes and frameworks would help support a set of measurable indicators. Participants concurred that establishing a consistent set of metrics covering numerous touchpoints is essential. As data collection and data management are existing challenges,

harmonization support is required to support MRV, which in turn would reduce costs, increase efficiency and prevent farmer fatigue.

Participants mentioned that even though they would like to see scientifically measured outcomes, the processes of collection and management for consistent MRV are not yet well understood. It was recognized that there needs to be an established and accepted methodology to present the process of continuous improvement of the ecosystem. This would require the continuous monitoring of outcomes and the establishment of thresholds along the continuum. There is a need for a 'measurement architecture' to create a baseline at the farm level with the participation of the various organizations carrying out MRV, following different methods, to different depths and at different frequencies, producing different results.

Furthermore, participants stated that information around what is being measured, reported on and verified should be communicated to farmers. From the farmers' perspective, harmonization and simplification of data collection would help prevent audit anxiety and audit overload.

While there was consensus that standardizing MRV practices is critical for transparency and comparability, it was also mentioned that the framework must be flexible enough to allow regenerative agriculture to act as a tool to improve farm resilience. One participant highlighted the increasing demand for verified greenhouse gas emission (GHG) methodologies and called for similar rigour in regenerative agriculture metrics. While work on carbon measurement can provide learnings for regenerative agriculture, defining baselines is still at an early stage. Standards, such as BS EN ISO 14064 on GHG reporting, were given as examples to emulate.

Financial institution

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As a bank, we would like to understand how regenerative farming practices are assessed. We would like to ensure that we offer products that help build up farmer resilience towards withstanding risks of meeting future supply chain requirements, e.g. carbon. But we also would like to ensure that our products are used in the right way.

The research participants stated that metrics and methods need to be defined to create a standardized, yet flexible, MRV framework for outcomes. These should include 'core metrics' such as soil health indicators (e.g. soil organic carbon percentage, soil biodiversity/microbial activity, biodiversity, vegetative cover and diversity, presence of key indicator species), carbon outcomes (e.g. emission reductions, CO₂-equivalent per hectare), water retention indicators (e.g. field saturation levels post-rainfall) and 'supplementing metrics' (e.g. farmer satisfaction and return on investment from adopting regenerative practices). The priority areas and potential gaps in measurement requirements should be identified. Moreover, measurements should be carried out using methods that incorporate advancing technologies, such as remote sensing for biodiversity,

on-farm testing for soil health (e.g. soil organic matter tests) and automated data collection (e.g. satellite imagery, soil monitors).

The participants suggested a 'tiered system' for measurement, with levels such as 'entry', 'intermediate' and 'advanced' – or similar – allowing farmers to progress at their pace, and for granting recognition of such progress.

As a future consideration, participants mentioned that regenerative agriculture metrics need to be aligned with corporate Environmental, Social and Governance (ESG) reporting to ensure compatibility with net-zero and sustainability targets. Moreover, metrics should also be adapted to ESG frameworks, such as GHG Protocol Scope 3⁷ and Science Based Targets Network (SBTN)⁸ for nature.

4.5 Understanding drivers

Climate mitigation remains the primary driver for many organizations seeking to engage with regenerative agriculture, rather than the focus on food resilience. Many organizations, including retailers, see regenerative agriculture as a pathway to achieving net-zero targets and sustainability goals for climate change. Leveraging regenerative agriculture's alignment with these broader goals is key to unlocking funding and mitigating greenwashing risks.

4.6 Farmer engagement

Farmer engagement remains critical to ensure the effective and widescale adoption of regenerative agriculture. A recurring theme in the research findings was the need to support farmers through education, financial incentives and simplified reporting mechanisms. Farmers' apprehension about the costs and risks of adopting regenerative agriculture was noted as a significant barrier. Public funding for public goods (e.g. the UK governments Sustainable Farming Incentive scheme⁹) is a motivator for farmers.

Retailer

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The mindset around how farms are viewed needs to change. Farms used to be judged based on how neat and tidy they were. But when running a farm for nature, hedges will look scruffy and the farm might not be neatly tilled. Building farmer confidence to accept these things is quite important.

⁷ <https://ghgprotocol.org/corporate-value-chain-scope-3-standard>.

⁸ <https://sciencebasedtargets.org/about-us/sbtn>.

⁹ [Sustainable Farming Incentive: guidance for applicants and agreement holders - GOV.UK](#).

Participants highlighted the need for guidance and training to address the gaps in farmers' knowledge regarding the implementation of regenerative agriculture in their context and the understanding of its impact on yield and profitability. Sufficient guided choices should be provided for farmers, and knowledge sharing between the farming/agriculture community and other actors in the value chain should be facilitated. Training and information exchange might accelerate culture change towards the understanding and adoption of regenerative agriculture practices.

4.7 Formal standards

The standards landscape review (see Section 2.3.1) identified 1,033 standards in total. The majority of the standards were deemed either irrelevant or of low relevance to regenerative agriculture. Standards classified as having low relevance were those that pertain to agriculture or food products in general, but do not specifically address the principles of regenerative agriculture in any way. These standards were excluded from the analysis and were not investigated further.

Following the analysis of the standards landscape, it became evident that there are no 'highly relevant' standards specific to regenerative agriculture or sustainable farming practices.

A total of 225 standards were considered 'partially relevant' (see Figure 5), indicating that certain elements within the standards' content relate to aspects of regenerative agriculture, such as soil health, biodiversity net gain and carbon sequestration, which are elements integral to sustainable farming and regenerative agriculture but not specifically relating to the practice of regenerative agriculture. Examples include standards on carbon footprinting, measuring soil quality and conducting life cycle assessments (LCAs). Standards on nature markets, biodiversity net gain and voluntary carbon management are likely to have significant overlaps with areas of regenerative agriculture and might require alignment to ensure the practicality of implementation.

4.7.1 Arable and pasture land

The findings from the workshop and stakeholder interviews indicated that the primary emphasis of regenerative agriculture to date has been on arable land. As a result, the standards landscape review included standards that refer to specific types of land, as well as general soil and farming. The review suggests that there are very few standards addressing 'pasture land' and 'arable land' in relation to the benefits of regenerative agriculture.

4.7.2 Cross-sector standards

Regenerative agriculture intersects with several other critical topics, such as sustainability, climate change and environmental impact. It is important to note that the standards landscape review examined these topics and identified several cross-sector standards in a broader context. For example, 'environmental management' standards refer to impact on the environment more broadly, including elements such as technology and LCAs. These standards were categorized as 'low relevance', since they do not align closely with regenerative agriculture practices and were deemed unlikely to have much practical overlap with the adoption and implementation of regenerative agriculture.

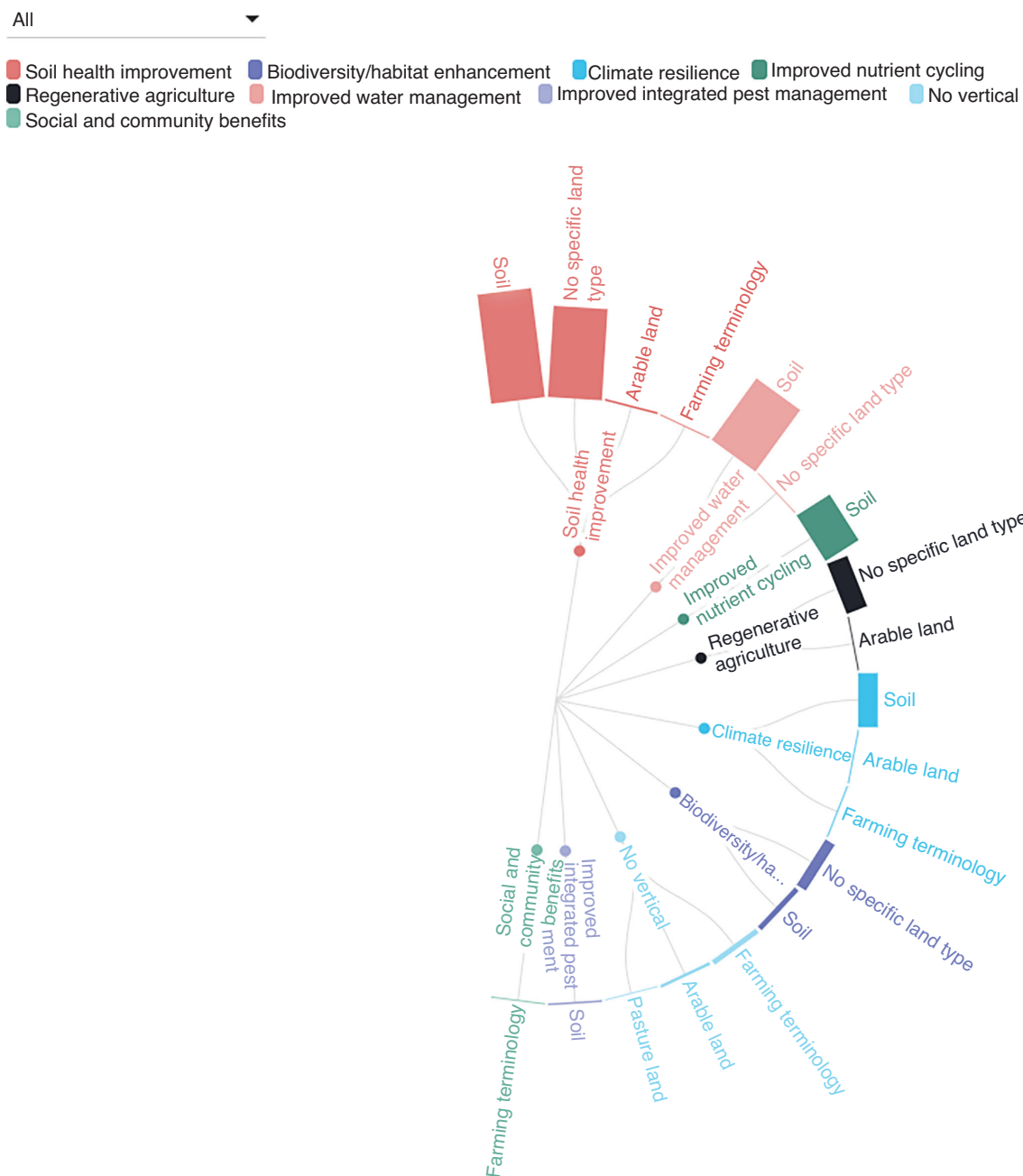


Figure 5: Proportion of partially relevant standards by area of focus and type of farmland

To interact with Figure 5, click on the following link: <https://public.flourish.studio/visualisation/19627857/>

- Click on the area of focus, e.g. 'Soil health improvement', to discover standards relating to that benefit.
- Hover the cursor over any standard, e.g. ISO 11265; the details of the standard, such as the document identifier and title, will be displayed.

5 Potential areas for new standardization

The overall research findings of the project identified several potential areas for new standardization.

- **Best practice guidance** – Due to the growing number of schemes, frameworks and principles on regenerative agriculture and the diverging practices and requirements, the findings indicate that a general guidance document would be welcomed and well received by industry stakeholders. This guidance document would harmonize all existing best practices and collate them in one overarching resource. The absence of a universal regenerative agriculture framework is causing confusion and inefficiencies across the supply chain. Developing international guidance, with clear definitions and baseline metrics, is essential to drive consistent adoption and build credibility of regenerative agriculture claims.
- **Monitoring, Reporting and Verification** – Metrics and methodologies need to be defined to create a standardized, yet flexible, MRV system for understanding outcomes. The majority of the participants recognized the importance of MRV best practice and highlighted that standardizing this process – with a clear baseline, touchpoints and thresholds – is essential for transparency and comparability.
- **Data collection and management** – To aid MRV processes regarding regenerative agriculture outcomes, participants examined the considerations around the challenges related to data collection and management. Farm data are often collected sporadically, using different methods, and the collection of data itself is currently time consuming and inefficient. Moreover, the sensitivity around data collection – stemming from a lack of trust and confusion over data ownership – needs to be addressed in any potential standardization.

There is a need for data collection, storage and management to be harmonized. This would provide trust and assurance to all actors in terms of the quality of the data being collected, how data is stored and maintained, and how data can be used to support MRV best practice.



6 Recommendations

Regenerative agriculture offers a promising solution to many of the environmental challenges facing the world today. However, throughout the research it was clear that the lack of clarity and consistency regarding the implementation of regenerative agriculture is causing confusion and possibly hindering wider adoption. Based on the research findings set out in Section 3 and 4, we have articulated four key recommendations to help the ongoing development of this work, to continue engaging with stakeholders, and help address the key challenges preventing widescale adoption of regenerative agriculture practice.

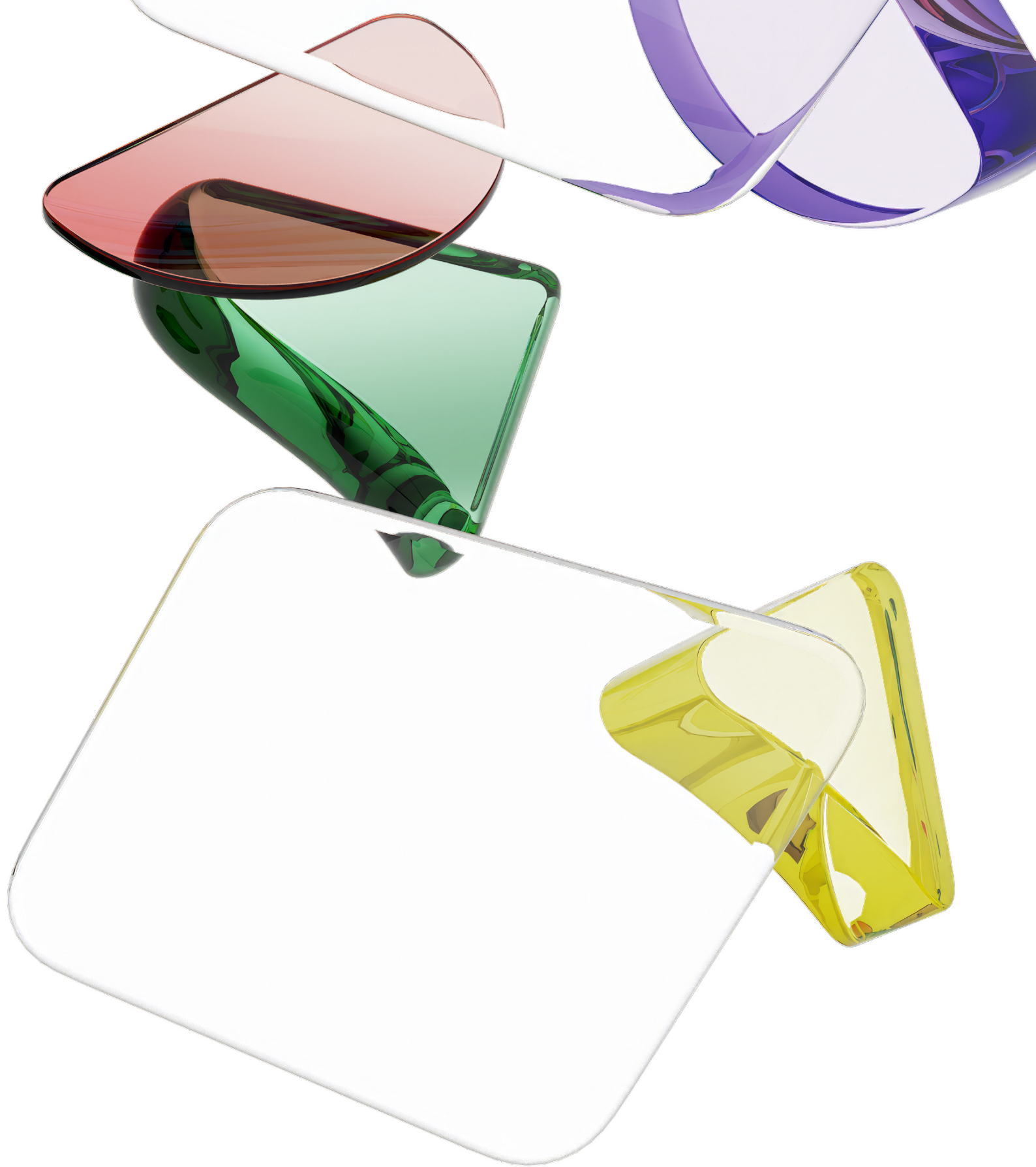
- **Form a Strategic Advisory Group (SAG)** – A Strategic Advisory Group (SAG), under the auspices of BSI, should be established to provide advice on the most appropriate solutions to support and facilitate best practice when integrating regenerative agriculture into supply chains. The SAG's activities would include articulating industry requirements, policy ambitions, and providing guidance to ensure BSI standards and solutions support regenerative agriculture and wider work on nature recovery.
- **Develop best practice guidance** – There is a need for a guidance document to act as a reference point for understanding best practice when integrating regenerative agriculture within supply chains. This document would act as a common reference point by collating global best practice in one place. The document would also help various actors to assess their progress and desired outcomes against best practice. In addition, dissemination of best practice via training and knowledge sharing was highlighted as a key requirement to help build trust for the regenerative agriculture movement.
- **Conduct a review of informal standards** – There is a need to carry out a landscape mapping exercise. The exercise would include a full review of existing standards, guidance, frameworks and certification schemes for a deeper understanding of both the formal and informal standards landscape. This would enable a comprehensive understanding of the information and guidance that already exists to facilitate the development of a universal framework that helps organizations integrate regenerative farming into their supply chains. Future work should also analyse any gaps in existing standards and schemes to add further value to any guidance that is developed.
- **Provide MRV support** – A 'measurement architecture' is needed to support organizations when measuring, reporting and verifying the outcomes of regenerative agriculture practices. Harmonization of MRV metrics and methods would allow for transparency and consistency across the sector, help deliver access to funds and markets, and help mitigate reputational and greenwashing risks.

These recommendations should be considered as the first steps towards tackling the complex challenges currently impacting the implementation of regenerative agriculture within supply chains.

7 Stay in touch

If you'd like to stay updated with our work on regenerative agriculture, or you'd like to provide feedback on the work currently underway, you can do so at <https://pages.bsigroup.com/regenag>.





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