March 2023

Soil Health Industry Platform (SHIP)

2022 Progress Report: Conclusions and priorities for 2023

1. Background

The Soil Health Industry Platform (SHIP) was established by the Sustainable Soils Alliance (SSA) in March 2022 with the objective to foster collaboration and cooperation in the field of soil health among major UK food and drink businesses. Members participate according to the following commitment:

"By participating in the Soil Health Industry Platform (SHIP) we commit to knowledge exchange, identification and sharing of best practice and the adoption of proportionate and impactful actions that will contribute to the goal of sustainably managed soils in the UK by 2030".

The SHIP consists of 11 members: Arla, G's Fresh, Kellogg's, Morrisons, Nestlé, Nomad Foods, PepsiCo, Sainsbury's, Tesco, Waitrose, Yeo Valley (January 2023).

The commitment is broken down into six categories – specific areas where businesses can impact on soil health, through their supply chains, customers, internal audiences and other stakeholders:

1. Consistent Metrics

A consistent set of farm soil metrics is established and communicated throughout the industry, providing clarity and consistency to all farmers

2. Risk reduction

Critical soil risks specific to individual crops, geographies and climates are identified and mitigation efforts introduced

3. Communications

Soil becomes a pillar of customer, investor and stakeholder communications - alongside air, water and biodiversity

6. Net Zero

Farming's ability to capture and store carbon in the soil is understood, measured, promoted and rewarded

5. Financial Support

Farmers are rewarded and compensated for management changes that improve or protect the soil

4. Knowledge Exchange

Best soil management practices and techniques are identified and shared throughout the industry

The SSA will use these categories, and the accompanying outcomes, to evaluate and report on progress on an annual basis, and report back to the members. This reporting reflects the menu of actions - examples of projects SHIP members undertake (either unilaterally or collaboratively) to meet the commitment. A list of these projects can be found in Section 6.

This is the first of those reports, it consists of:

- Conclusions about progress made, and barriers against them.
- Relevant context - broader developments in soils policy and public awareness.
- Recommended actions for SHIP to pursue in 2023.
- A breakdown of unilateral/collaborative actions undertaken by SHIP businesses organised according to the six categories.

2. Progress and Barriers:

a) Consistent Metrics: *A universal set of farm soil metrics is established and rolled out across the industry, providing clarity and consistency to all farmers.*

- The need for 'decisions-grade' data – to report against climate and nature targets was one of the main political takeaways from 2022 (COP26, UNEP etc). It will be a prerequisite for both Scope 3 and biodiversity reporting, and a means to safeguard against accusations of greenwashing.
- Many SHIP members already undertake routine soil monitoring throughout their supply chain – both as a means to understand change, and a platform to engage in dialogue with suppliers. This work is sector-specific and carried out among small groups of farmers and the resulting data are not shared or applied.
- There is an ambition to scale this work up, and the need for a consistent/coherent suite of metrics that can be applied vertically throughout individual businesses, and horizontally across a specific crop is now considered urgent. A clear distinction is also needed between soil health data and soil carbon data.
- Businesses look to other stakeholders (government, certification schemes) to take the lead in providing the framework for the measurement of soil health. The AHDB Soil Health Scorecard is widely recognised as a viable mechanism to deliver a uniform approach – although it is noted that lowland peat and subsoils are not covered, and needs to be considered elsewhere.

b) Soil risk reduction and mitigation: *Critical soil risks specific to individual crops, geographies and climates are identified and mitigation efforts introduced.*

- The droughts in the Summer of 2022 and resulting impacts on yield from soil degradation brought widespread attention to soil – specifically where it tangibly impacts on climate change resilience e.g. subsoil compaction restricting water accessibility. Both farmers and internal audiences are more likely to understand the importance of soil degradation when it is explained in connection with long-term security of supply/yield loss.
- As it stands, SHIP members have a poor understanding of how certain sourcing practices can result in farmers and growers increasing risks to soil health. This lack of internal awareness and expertise must be addressed to ensure sourcing practices do not lead to indirect risks to soil health.
- Soil degradation tends to be a) crop/context specific, and b) the sum of a full rotation – rather than one season's practices in isolation. As a result, there needs to be a clear understanding of the cause, effects, long-term impact and remedy – and a narrative that can be understood by individual farmers and the other businesses sourcing from a particular land parcel. Local examples (e.g. catchment-based approaches) are good examples of different stakeholders aligning around a particular action/outcome.

c) Communications: *Soil becomes a pillar of customer, investor, and stakeholder communications - alongside air, water and biodiversity.*

- Members acknowledge soil's growing profile in the mainstream and social media - and see an opportunity to embed it in their proactive sustainable farming messaging (blogs, in-store magazines). However relevant comms/PR teams aren't familiar with the different hooks (biodiversity, climate change) and so struggle to bring it to life. They are interested in high-profile campaigns (6 Inches of Soil, Kiss the Ground 2, UK Soils Awareness Week) as a means to achieve this.
- There is confusion about where soil sits within proposed third-party consumer environmental information campaigns (claims and eco-labels), and what evidence might be used to underpin it. This raises the threat/fear of greenwashing – a concern shared among investor audiences who increasingly want to see substance behind any claims – e.g. for carbon - primary data rather than emissions factors.
- The term regenerative is considered helpful as well as problematic. In some instances it is being appropriated to suit a particular crop or context. For some crops truly regenerative farming is unrealistic e.g. because of the need for ploughing – here the focus should be on holistic and sustainable farming.

d) Knowledge Exchange: *Best soil management practices and techniques are identified and disseminated throughout the industry.*

- Members agree that the lack of knowledge sharing across the supply chain (on-farm trials and research) means such work is not currently fulfilling its potential and is a core SHIP objective – the scaling up of best practice.
- A focal point for this work might be around the 'transition to regenerative'. A number of businesses are developing toolkits, models or blueprints to facilitate this transition and are willing to share their outcomes and processes. This could act as a focal point to drive consistent expectations (including around core soil health metrics) across the industry.
- It is unclear what the best platform for shared research outcomes should be – or the appropriate mechanism for dissemination. This should be a farmer-focused organisation and incorporate feedback from supplier networks and levy boards, many of whom are the custodians of existing crop and geography specific research.

e) Financial Support: *Farmers are rewarded and compensated for management changes that improve or protect the soil.*

- The war in Ukraine and the introduction of the Sustainable Farming Incentive (SFI) in England has generated considerable economic uncertainty – and volatility for farmers. Members have less understanding than ever of the finances of their supplier businesses – many of their farmers are taking part in public schemes (e.g. ELM schemes), what this means for them (overall farm income), and what kind of support they might need – finance, knowledge etc.
- There is a strong expectation amongst farmers that businesses should take on some of the costs environmental improvements will entail ie. the cost of testing soils and soil health practices.
- Members are interested in exploring how they can support ELM schemes engagement/participation, and learn more about different models for cross-industry, local collaboration behind different ecosystems services (LENs, catchment-based approaches), especially where other businesses (water companies) can be involved.

f) Carbon/Net Zero: *Farming's ability to capture and store carbon in the soil is understood, measured, promoted and rewarded.*

- Members are at differing 'stages' of the journey to Net Zero - e.g. some have already invested in baselining farms or investing in carbon-positive practices, but share an interest in understanding how soil carbon can and must feature in future Scope 3 reporting. They are concerned with the growth in the farm soil carbon marketplace, especially the underlying metrics, contractual obligations, claims being made and likelihood of carbon being 'lost' by the supply chain (through offsets).
- There is a clear value in SHIP researching and discussing this, and uniting behind a set of core messages to farmers. This might include providing farmers with greater clarity around measurement technologies, carbon 'ownership' and the meaning of core principles (permanence etc.). There is a critical window in which to establish trust and confidence among farmers and allay concerns.

3. Broader Context

Industry initiatives in 2022 were accompanied by significant developments in soil health in government policy and public awareness. Highlights are as follows:

Policy

- England was the first of the four nations to launch its post-Brexit farming incentive scheme, (**the Sustainable Farming Incentive**) starting with two soil standards for which applications opened 30th June 2022.
- The Welsh government outlined proposals for its **Sustainable Farming Scheme**, expected to be rolled out in 2025. Farms will be required to undertake basic nutrient accounting and soil testing to receive payments. The new **Welsh Agriculture Bill** has been put before the Senedd for debate.
- Scotland began the first track of its **National Testing Programme** (the first stage of its EU CAP replacement expected to be finalised by 2025). The Scottish government also consulted on a new **Agriculture Bill**.
- Northern Ireland launched its **Soil Health Nutrient Scheme** which will be measuring soil health across farmland in the whole of the nation in the next 4 years.
- A number of initiatives were launched looking at data and reporting of environmental impacts of the supply chain including the **Food Data Transparency Partnership,** launched by the Government following recommendations from its Food Strategy and the Environment Agency's **SEEBEYOND** project (aimed at standardising environmental measurements across the food and drink industry to help monitor environmental actions).

Public Awareness

- The year was marked by a number of public facing initiatives, with the launch and rollout of **'Save Soil'**, the most extensive and ambitious international soils awareness initiative ever undertaken, the first **UK Soils Awareness Week** taking place in October and a number of books published highlighting the importance of soil health in the food system including George Monbiot's *Regenesis*, Sarah Langford's *Rooted*, and Jake Fiennes's *Land Healer.*

Business Initiatives

- The **AHDB Soil Health Scorecard** project was completed and published. Plans to digitise it and develop it further have since been underway.

- The **NFU** published their vision for soil health - calling for economically viable and regular soil testing, robust data collection, better knowledge exchange and developing a soil carbon marketplace.
- The former Prince of Wales's **Sustainable Markets Initiative** launched their Agribusiness Taskforce to collaborate across the value chain and develop scalable business models that will enable regenerative agriculture to move from a niche to the mainstream.

EU

- The EU built on its **Soil Strategy 2030**, with a public consultation on the potential impact of a Soil Health Law. It is expected that the EU commission will adopt the law in the second quarter of 2023. The law aims to place soil on the same level of protection as air and water.

Carbon/Net Zero

- The Environment Agency funded **Fam Soil Carbon Code Consortium** published its Minimum Requirements for High Integrity Farm Soil Carbon Projects in December 2022. It is hoped that these will be reflected in government policy through the expected Ecosystems Market Framework, and established as the baseline for on-farm soil carbon projects.
- The **Science-Based Targets Initiative** published its guidance for companies in land-intensive sectors to set targets that include land-based emission reductions and removals. This document clarified the opportunities and limitations for embedding soil in corporate net zero reporting.

4. Observations:

- Based on the actions businesses have underway (listed in Annex 1) and the policy overview, 2022 has seen slow and incremental progress against the goal shared by SHIP and the government (England) of *Sustainably Managed Soils in the UK by 2030*. Both political and corporate initiatives emerged that measured, incentivised and promoted the transition towards sustainable soil management practice throughout the industry – although these continue to be piecemeal and fragmented.
- Of arguably greater importance are wider political and economic developments that impact on widespread perceptions and understanding of soil as follows:
    - The summer droughts which brought into stark focus the issue of climate change resilience, and the soil's continued ability to deliver both food production and other services under extreme weather.
    - The war in Ukraine which highlighted farming's dependence on inputs and the urgent need for the industry to identify more economically and environmentally sustainable farming methods as well as new income streams.
    - The emergence of the farm soil carbon marketplace which has the potential to improve farmer incomes, but raises questions about the soil carbon management, ownership and data – all of which have implications for supply chain relationships.
- How politicians and industry respond to these developments will go a long way to determining the long-term trajectory for UK soil health. The need for corporate leadership is especially critical given the recent decision by the government (England) to abandon its plans to publish a Soil Health Action Plan for England (SHAPE), and to water down its target of all soils sustainably managed by 2030 to just 60% of agricultural soils.
- The government clearly sees a role for the Environmental Land Management (ELM) schemes to achieve many of its Net Zero and biodiversity targets – without being prescriptive of how. Low payment rates (SFI) and a hands-off approach to standards, measurement etc. means a great deal of onus is placed on both farmers and industry to deliver results.

- The cost of living and inflated food prices means limited available funds for businesses to invest directly in farmers – or their soil. Consumers, shareholders and stakeholders want to see action, but not greenwashing. Where money is invested in agriculture, it has to be targeted and against clear, measurable outcomes.

The priority actions/recommendations for SHIP in 2023 are set by these observations, specifically the final one – the need to make efficient and effective use of available resources – not just farmland, but also data, research, advice and available investment.

5. 2023 Priority Actions

a) Consistent Metrics: *Establish the AHDB Soil Health Scorecard as a universal tool for on-farm soil health measurement and benchmarking, applicable for numerous purposes throughout the supply chain.*

- **Outputs:** Co-signed industry/stakeholder announcement, workshop, internal toolkits.
- **SSA Actions:** Engage with Defra (SFI), other stakeholders, media outreach, host launch 'workshop'.
- **Member Actions:** Co-sign joint statement indicating support for the scorecard and willingness to promote through supply chains.
- **Partners:** AHDB, LEAF, Red Tractor, Soil Association, NFU.

b) Soil risk reduction and mitigation: *Identify and highlight crop and context-specific soil risks and their causes for dissemination to internal (corporate and sourcing) audiences and other supply chain stakeholders.*

- **Outputs:** Multi-format (text, infographic, video) content – to reflect audience needs.
- **SSA Actions:** Continue risk mapping exercise.
- **Member Actions:** Engage (crop-specific) internal experts, advise on toolkit format, disseminate throughout business.
- **Partners:** Environment Agency.

c) Communications: *Exploit available channels to communicate about the importance of soil health to customers and public, including awareness weeks, labelling and certification schemes.*

- **Outputs:** Brand-owned instore/online content.
- **SSA Actions:** Develop materials for PR teams including messaging, infographics, images and opportunities.
- **Member Actions:** Introduce SSA to PR and comms teams.
- **Partners:** PR agencies, UK Centre for Ecology and Hydrology, WWF.

d) Knowledge Exchange: *Identify appropriate mechanisms for knowledge and guidance dissemination to signpost to farmers research and best practice.*

- **Outputs:** Report summarising existing and potential platforms for soils knowledge and research, and recommendations for industry role/partners.
- **SSA Actions:** Research and draft report.
- **Member Actions:** Share existing research, introduce SSA to research partners.
- **Partners:** AHDB, LEAF, University of Leeds, University of Plymouth.

e) Financial Support: *Better understand the different economic drivers (ecosystem services) and identify opportunities to involve and engage supply chains.*

- **Outputs:** Regular reports on the emerging non-productivity payment rates for farmers (SFI, ecosystem services etc).
- **SSA Actions:** Map, analyse and report.
- **Member Actions:** Share details of non-productivity financial support (where available).
- **Partners:** Catchment-based schemes, LENS.

f) Carbon/Net Zero: *Better understand how soil carbon can and should be included in Scope 3 Reporting, inform and educate supply chain and internal audiences of business plans and expectations.*

- **Outputs:** Briefing note on the parameters of including soil in scope 3 reporting; pan-industry statement on soil carbon for benefit of farmers/other stakeholders.
- **SSA Actions:** Develop briefing note on soil carbon marketplace.
- **Member Actions:** Introduce SSA to internal Net Zero experts for consultation.
- **Partners:** Farm Soil Carbon Advisory Board.

6. What businesses are doing (2022)

a) Consistent soil health metrics

Arla: Working with FAI on six regenerative pilot farms. Soil health is being measured to inform their regenerative transition and their Sustainable Incentive Model. Arla's 360 Programme also pays for soil sampling (no specific metrics are required other than Soil Organic Matter).

G's Fresh: Developing their Regenerative Agriculture Blueprint for all supplying farms. The aim is for them to have started transitioning by 2030, and will in time include soil health metrics.

Morrisons: Involved in the early stages of trialling Red Tractor Greener Farm Commitment which will include soil metrics.

Nestle: Robust primary data has been collected for their supplying dairy farmers and Nestle is now developing a toolkit for the regenerative transition on their supply chain - which will include soil health metrics in the future.

PepsiCo: Using the AHDB Scorecard, Stenon and soil biometer kit to measure soils in their rotational programme for potato fields in the UK.

Sainsbury's: The AHDB Soil Health Scorecard trials in orchards has been completed and it is now up to the growers to use the Scorecard. Soil testing on livestock farms is in its early stages.

Tesco: Fresh produce suppliers are required to have soil management plans under LEAF Marque. Tesco's six Sustainable Farming Groups must also complete a soil management plan. Involved in the Red Tractor Greener Farm Commitment trials which will look at measuring soil health in livestock farms.

b) Soil Risk Mitigation and Reduction

G's Fresh: Some farm trials in Sussex are looking at sandy subsoil compaction and how to mitigate this.

Tesco: Partnership with WWF Germany is looking at global risk mapping, looking at soil health on a macro level, will need to be refined and made more accurate in years to come. Tesco is working with LEAF and Red Tractor on nutrient management plans for farms to tackle river pollution.

Nestle: Through the collaborative Landscape Enterprise Networks (LENs) model in East Anglia, which Nestle is part of with 3 Keel and Anglian Water, different industries and businesses are able to gain an understanding of ways to reverse nature degradation and support farmers in doing so.

Nomad Foods: Trails with direct supplying farmers are looking into soil compaction on pea cultivations in partnership with the Yorkshire Wildlife Trust. Mitigating actions include taking headlands out of production to place wildlife strips. Data is being collected to explore productivity implications of such actions.

c) Communications

Waitrose: Sponsor training courses for technical managers and agronomists with the University of Lancaster which include modules on soil health.

Arla: Newly launched CARE label will inform consumers of sustainable practices being used in dairy farms in the future years, which will likely include soil health practices.

d) Knowledge Sharing

Waitrose: Part of the Sustainable Market Initiative (SMI) Agribusiness Taskforce, with

other large corporations, looking at how to scale up regenerative agriculture. Trials at Waitrose's Farm, Leckford Estate, including soil health metrics and best practices are being communicated across the business's supply chain. Waitrose is also involved in Innovative Farmers, including field trials looking at soil health in partnerships with LEAF, Soil Association and Innovation for Agriculture.

Kellogg's: Origin Programme UK includes 20 farm pilots looking at nutrient management and biodiversity, impacting soil health both directly and indirectly.

PepsiCo: Also part of the Sustainable Market Initiative (SMI) Agribusiness Taskforce.

Nestle: The Landscape Enterprise Networks (LENs) involve partnerships between different industries and businesses, sharing best practices and allowing farmers and businesses to improve their mutual natural setting (including soils). Nestle's Wheat Plan, also part of LENs, will allow farmers to receive training and support to reduce pesticide use and carbon emissions while improving soil organic matter and biodiversity.

Yeo Valley: The Regenerative Organic Farming Project aims to establish robust data to identify which management practices sequester carbon and encourage knowledge exchange between farmers.

d) Financial support

Tesco: Subsidising cover crops for potato farmers for the last three years, as well as herbal ley seed for dairy farmers starting in 2022.

Nestle: The LENs programme allows businesses to help incentivise best soil health practices on farms. Nestle's Sustainability Bonus pays for soil sampling.

Nomad: Subsidising cover crops with supplying farmers and Nomad Foods has increased pea farmer contracts by 22% this year in order to maintain best practices.

Arla: The Sustainable Incentive Model attributes points for soil sampling which ultimately results in an increased price paid for the dairy farm's milk.

Morrisons: As part of their Beef and Lamb scheme, farmers will be able to undertake free carbon audits to encourage increased carbon sequestration through soils.

e) Carbon/Net Zero

Kellogg's: Exploring potential pilots in France and Netherlands to measure soil carbon.

Nestle: Soil carbon data collection is at an advanced level in Nestle's dairy suppliers - this primary data will feed into Nestle's Net Zero calculations.

Sainsbury's: Working to be in line with FLAG guidance and SBTi updates (including soil carbon insetting).

Arla: Working with C-Sequ to have international dairy alignment, currently piloting carbon sequestration calculation. Data on Soil Organic Carbon is being collected as part of Arla's Sustainable Incentive Model.

Morrisons: Free carbon audits will be available for farmers as part of their Beef and Lamb scheme.

Yeo Valley: The Regenerative Organic Farming Project in partnership with the Farm Carbon Toolkit is working with 25 dairy farms and monitoring changes in soil carbon.

Annex 1: Menu of Actions

By signing up to the SHIP commitment, businesses agree to undertake some of the following actions (unilaterally or collectively). Businesses are not expected to undertake all of the actions listed but rather select those most suited to their businesses.

Category 1: Consistent soil health metrics

A universal set of farm soil metrics is established and rolled out across the industry, providing clarity and consistency to all farmers.

1. Align with businesses and other stakeholders behind a universal set of soil health metrics, consistent with national policy and able to demonstrate progress against target outcomes.
2. Promote and incentivise regular and routine soil health monitoring by farmers throughout your supply chain (including farm carbon cutting toolkits).
3. Establish an industry-led open access repository of soils data to facilitate soil health benchmarking and comparison, and feed into national measurement.

Category 2: Soil risk reduction and mitigation

Critical soil risks specific to individual crops, geographies and climates are identified and mitigation efforts introduced.

1. Research and identify crop, climate and region-specific soil risks (carbon/nutrient loss, erosion, compaction etc).
2. Embed regulatory compliance (e.g. Farming Rules for Water) into supplier communications and contracts.
3. Evaluate third party farm assurance/certification schemes to assess their viability to mitigate soil risk.
4. Educate and inform relevant internal audiences (commercial), procurement about soil risk.

Category 3: Communications

Soil becomes a pillar of customer, investor, and stakeholder communications - alongside air, water and biodiversity.

1. Include soil in consumer education programmes - what customers can do in their own gardens etc.
2. Ensure soil is reflected in existing and proposed sustainable food labelling schemes.
3. Include soil in CSR, ESG and net zero reporting.
4. Develop materials to explain how/why soil is important - e.g. for internal newsletters, senior management, supply chain.
5. Create toolkit for intermediary suppliers to help them understand soil and align their ambitions with yours.

Category 4: Knowledge exchange

Best soil management practices and techniques are identified and disseminated throughout the industry.

1. Collaborate with research and farming bodies to identify, measure, and promote best practice soil management interventions.
2. Disseminate the results/outcomes of any research, including case studies, best practice via an open-access, farmer-focused industry portal/forum and peer-to-peer knowledge exchange.
3. Ensure internal agronomists are familiar with the latest soils knowledge/third party training.

4. Collaborate on knowledge-exchange in region/rotation-specific.
5. Collaborate with established mechanisms for knowledge and guidance dissemination (SFI, AHDB, LEAF etc.) to signpost to farmers research and best practice to farmers.

Category 5: Financial support

Farmers are rewarded and compensated for management changes that improve or protect the soil.

1. Investigate and understand market barriers to the transition to regenerative farming (economic risk, training etc).
2. Establish a reward/incentive/risk-sharing mechanism for regeneratively produced goods that reflects the costs and timeframe of transitioning.
3. Understand consumer market for price premium on regeneratively farmed produce.
4. Provide direct financial support (subsidy, loans) for regenerative-farming specific capital or training costs (cover crop seed etc).
5. Ensure payment for ecosystem projects are high-integrity and aligned with relevant landscape/outcome-specific standards.

Category 6: Carbon/Net Zero

Farming's ability to capture and store carbon in the soil is understood, measured, promoted and rewarded.

1. Discuss with suppliers/intermediates your respective plans and expectations for incorporating farm soil carbon into GHG (incl. scope 3) reporting; establish clear transparent frameworks for carbon ownership and reporting.
2. Incentivise/promote/subsidise soil carbon measurement and modelling.
3. Provide suppliers with guidance about the emerging market for ecosystems services and specifically soil carbon and its role in meeting Net Zero.
4. Understand and communicate internally how farm soil carbon is included in Net Zero reporting.