

# Solutions for farm-level environmental data

Delivering for farmers, supply chain, government and the planet





“To ensure an efficient, coherent and consolidated solution to environmental data that works for farmers, AHDB, along with key industry organisations, is working to find an industry-led solution – one that will help farmers take ownership of their data and derive benefits from its value”

Graham Wilkinson, CEO, AHDB

## The data challenge

More data than ever is being collected, recorded and shared by farmers – be it for themselves, the supply chain, regulatory or wider purposes. Increased demand for data raises questions about ownership and control, data security, and the value and benefits of sharing such information.

Data is often used to demonstrate environmental impact and evidence the effectiveness of action taken on farm, e.g. reducing greenhouse gas (GHG) emissions and increasing carbon sequestration/removal.

Farm-level environmental impact data, particularly carbon footprints, is the focus of this paper, with demand expected to grow significantly. Drivers include expanding requirements for processors and retailers to report indirect GHG emissions from their supply chains (Scope 3 reporting), as well as any future requirements such as from government and/or banks.

Environmental impact data presents some unique challenges that need addressing over time; these are:

1. Data requests are uncoordinated, fragmented and inconsistent – increasing pressure on farmers and others in the supply chain.
2. Inconsistent carbon calculation approaches lead to different results – this will inevitably move towards a more consistent approach but may take time.
3. Double counting of GHG emission reductions/sequestration – this needs to be avoided and will require coordination of data.

It is critical that data owners retain control of their data and choose who to supply it to, and trust whomever they share data with. As an independent and trusted levy body, AHDB is working with key industry organisations to explore options for an environmental data ecosystem (focusing initially on carbon footprint data) that will help all levy payers retain ownership and control. This is initially focused around solving point 1. For such a data ecosystem to work, a solution for farmers must:

**Be efficient and easy to use** – Collect data once and use many times.

**Have integrity** – High-quality data, where the value of what it shows about on-farm practice can be retained by farmers.

**Deliver trust** – Environmental data will be looked after, and data owners will keep full ownership and control of their data.

Any solution must be a joint initiative with collaboration across the industry. Here we explore some of the issues faced and how they might be overcome.

# Why collect environmental data?

The collection of environmental data is currently uncoordinated and fragmented, putting farmers at risk of duplication and contradiction or losing ownership of their data.

There are some positive signs, such as the increased coordination between carbon calculators following the publication in February of the ADAS report for Defra (Harmonisation of Carbon Accounting Tools for Agriculture) and funding from some devolved governments for farm-level carbon calculators. However, these do not fully address the issues of trust, data ownership and value. Furthermore, different customer demands result in different boundaries being drawn around carbon calculations (system, farm, life cycle analysis approach or national inventory). There is also concern that data from a government-managed system potentially could be used for enforcement or monitoring, undermining trust.

While farmers sharing their environmental data is likely to become a prerequisite for doing business, there is a risk they will give away their ability to use it to generate value from their own carbon credits or to access premium markets.

Supplying data easily is another concern as many farmers sell their products to multiple customers, whether that is different products (e.g. beef cattle, sheep, wheat, barley) or the same product to different supply chains. There is potential for each customer to ask for carbon footprint data in slightly different ways or from different carbon calculators. This becomes time-consuming and costly both to the farmer and the customer and will only increase as businesses start to report on their Scope 3 indirect GHG emissions.

Farmers are increasingly likely to be asked to provide environmental data to banks and other financial institutions as they come under pressure to show their lending is contributing towards net zero.

Individual farm data will potentially enable farmers to benefit from incentives to reward them for improved environmental performance.

Governments require similar data from farmers to inform the National Inventory, moving to reporting based on actual practice on farms and allowing the UK to report progress towards net zero based on changes in practice.

Agriculture has a central role in combining food production with environmental stewardship and there is a need for farming businesses to be rewarded and incentivised for the actions they are undertaking. However, this landscape is currently very complex, as illustrated in the diagram on pages 6–7.

On behalf of our levy payers, we will be working with the farming unions, levy bodies and the rest of the industry (including the Food Data Transparency Partnership) to develop possible solutions. Our primary focus is on a solution for England, but, because we have levy payers across the UK, we will work with our sister levy boards and all four nations of the UK on their solutions to this challenge and to find a coordinated solution for UK connectivity where necessary.

“ The agri-food industry and Government are working together in Northern Ireland to draw together expertise, industry schemes and data sets under one coherent strategy to promote and advocate the sustainability credentials of the NI food and farming industries in an evidenced and robust way by developing linkages to existing data sets and agreements around ownership, analysis and handling of collated data. There is a need for this to be joined up with other country initiatives at a UK level ”

**Wesley Aston, Chief Executive,  
Ulster Farmers' Union**

“ I supply my beef and sheep to two different processors, each of which require a carbon footprint but use different calculators. A lot of the information is the same, but I have to submit it separately, doubling the time I spend on it. This needs joining up so I can put the data in one place once and provide what my customers require based on one version of the truth ”

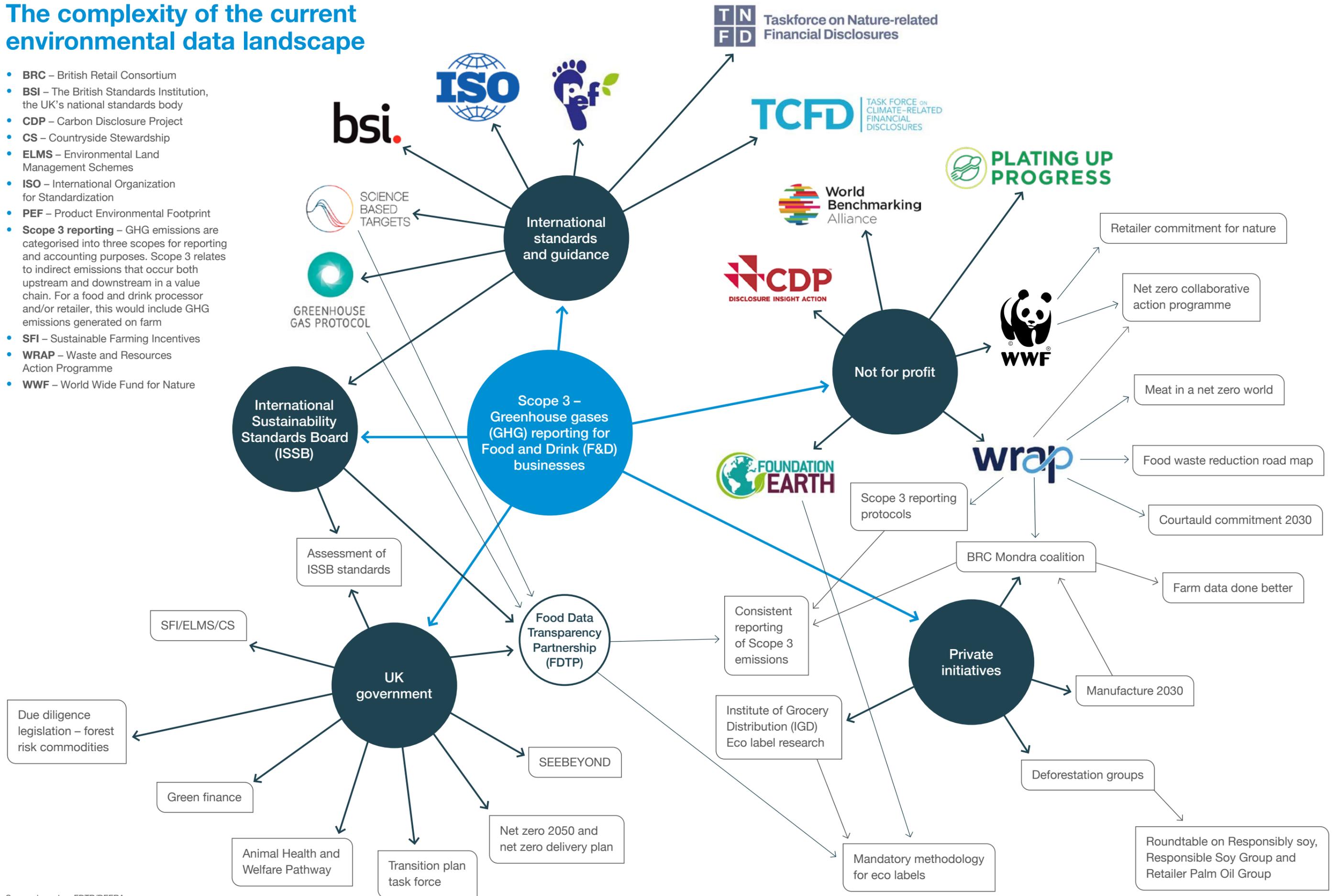
**George Fell, beef and sheep farmer**

“ Capturing and consolidating farm-level environmental data at a national level is essential in order to demonstrate the Beef & Lamb sector's progress toward net zero and other environmental goals. It will also provide an essential defence of the vital home market against imports which already claim to have such data, and will be important when promoting British products into some new markets. The time for action on this is now ”

**Andrew Loftus, Chair, NFU North Livestock Board**

# The complexity of the current environmental data landscape

- **BRC** – British Retail Consortium
- **BSI** – The British Standards Institution, the UK’s national standards body
- **CDP** – Carbon Disclosure Project
- **CS** – Countryside Stewardship
- **ELMS** – Environmental Land Management Schemes
- **ISO** – International Organization for Standardization
- **PEF** – Product Environmental Footprint
- **Scope 3 reporting** – GHG emissions are categorised into three scopes for reporting and accounting purposes. Scope 3 relates to indirect emissions that occur both upstream and downstream in a value chain. For a food and drink processor and/or retailer, this would include GHG emissions generated on farm
- **SFI** – Sustainable Farming Incentives
- **WRAP** – Waste and Resources Action Programme
- **WWF** – World Wide Fund for Nature



Source: based on FDTP/DEFRA

# Where do we start?

The current environmental data landscape is incredibly complex.

The agri-food supply chain needs a data ecosystem that connects the flow of environmental data. It should:

- Use existing data sets to pre-populate to reduce cost – collect once – use many times
- Have two-way exchange of data with carbon calculator providers to avoid duplication
- Provide farmers with a mechanism to control the flow of their data and capture its value
- Enable aggregation of data and feed it into government and supply chain reporting mechanisms when farmer permission has been given

## What should it look like?

A successful environmental data ecosystem will:

- Be easy to use and trusted by farmers
- Have clear control of the use and privacy of data
- Allow farmers to capture value from it
- Be backed by farmers and growers, governments, the supply chain and retailers

To build such a system will require industry collaboration and government support.

## Setting key principles

As the farming unions and levy boards explore solutions, it is important to have a shared set of principles that will apply to any approach to management and collation of farm-level environmental data. It is possible that some country-specific systems may be developed. Where this happens, it is important that collaboration is facilitated through the individual systems sharing appropriate data where required.



## The nine principles

- 1** Farmers own/control their data, including carbon footprint (raw and derived by calculation) and can permit or restrict its onward use.
- 2** Individual data will not be passed to any other party without farmer agreement, including commercial entities (processors, retailers, etc.), governments and agencies.
- 3** The data system should support the ability of farmers to capture value from their data from current and future arrangements, including:
  - Natural capital markets
  - Commercial arrangements within the supply chain
  - Government support arrangements
- 4** Farmer representatives must be integral to the governance and control of the system to stimulate trust.
- 5** Where possible, data must be based on individual farm data (not inappropriate averages) to incentivise and reward improved performance on farm. In accordance with Principle 1 this requires agreement of the data owner.
- 6** Farmers should be able to access and share with the environmental data system any existing government and industry data about their farm to avoid duplication and ensure there is one version of the truth with the highest-quality data.
- 7** Data collection and reporting must be as consistent as possible across the different devolved governments to allow UK/GB-level reporting.
- 8** If different systems are used by devolved nations, then, where appropriate, they must be able to share consistent data with those to whom farmers wish to supply the data.
- 9** Aggregated (anonymised) national data of sufficient sample size will be available for use to inform government, support the reputation of our industry and market our products domestically and overseas.

These principles will underpin further discussions on the development of a data ecosystem. Regardless of the outcome, these principles will help ensure any future environmental data system is easy to use and trusted by farmers, with clear data ownership and value captured and shared fairly in the supply chain.

Shared  
Data  
Ecosystem

# What are the options?

The first priority is to establish a joined-up approach to address carbon calculator data to meet the needs of farmers and their customers.

This could then be extended to other environmental data once established. We are exploring a number of options, and it is likely that each country of the UK will have a slightly different solution. For example, Northern Ireland's government-funded Carbon Footprinting Project will be adopting one farm carbon calculator. It is important that these country-specific solutions have the ability to share data to provide aggregated data on a UK basis where agreed to by the data owner.

Several approaches to farm-level environmental data are possible. The radical approach is to build a single database or data ecosystem containing all the farm-level data to meet farmer, supply chain and government needs, beyond just the environment. While appealing, this lofty ambition is probably less practical than focusing on a single objective and connecting existing data systems.

## What steps are we taking?

On behalf of our levy payers, we will be working with the farming unions, levy bodies and other industry organisations across the UK to develop options for a solution to collating environmental data for farmers and the supply chain.

This process includes engaging with stakeholders across the agri-food supply chain from farmers, processors, millers, feed companies, etc., to retailers and governments.

Our focus is on a solution for England, but we will work with organisations across all four nations of the UK to find a coordinated solution for UK connectivity.

It is vital that a solution is not imposed on farmers or the rest of the supply chain without consultation, and we would welcome contact from any organisation with an interest in this area.

If you would like to contribute to our thinking or feel we have missed something, we would welcome your input. Contact us at [environmental.data@ahdb.org.uk](mailto:environmental.data@ahdb.org.uk)

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AHDB is a statutory levy board funded by farmers and others in the supply chain. Our purpose is to be a critical enabler, to positively influence outcomes, allowing farmers and others in the supply chain to be competitive, successful and share good practice. We equip levy payers with easy-to-use products, tools and services to help them make informed decisions and improve business performance. Established in 2008 and classified as a Non-Departmental Public Body, AHDB supports the following industries: meat and livestock (Beef, Lamb and Pork) in England; Dairy in Great Britain; and Cereals and Oilseeds in the UK. For further information visit [ahdb.org.uk](http://ahdb.org.uk)

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