Viewpoint: Without measurable metrics, ‘regenerative agriculture’ is often little more than a data-less claim and a form of greenwashing. Here’s how to make it more science based and sustainable.

In a previous column for [Science for Sustainable Agriculture], an independent nonprofit dedicated to bringing cutting edge technology to sustainable farming], just under a year ago, I highlighted concerns that the Sustainable Markets Initiative (SMI), a coalition of 12 of the world’s largest agri-food companies and organisations, was using the term regenerative agriculture as a form of ‘greenwashing’. With no specific commitments to action, and vague statements about moving towards a common set of area-based outcome metrics, it appeared the SMI coalition was simply embracing the concept of regenerative agriculture – presumably to ‘look green’ – without actually specifying what is meant by regen ag, without committing to meaningful outcomes or, critically, explaining how those outcomes would be measured in relation to food production.

Central to the concerns I identified was the involvement in the Sustainable Markets Initiative of organic campaigner Patrick Holden, chief executive of the Sustainable Food Trust, which has been touting its Global Farm Metric (GFM) as a harmonised system for measuring on-farm sustainability.

It absolutely isn’t, for a number of reasons.

First, the term ‘metric’ implies a consistent and reproducible system of measurement. It suggests that assessments would comply with the three ‘R’s most commonly associated with metrics – that measurements must be robust, reliable and repeatable. But even the most cursory glance at the GFM’s recently updated framework document (July 2023) makes clear that it includes broad, highly subjective criteria.

The ‘resources’ section, for example, covers parameters such as ‘state of farm infrastructure’, ‘state of farm buildings’, and ‘state of farm equipment’. Unless GFM is planning to send qualified civil engineers, surveyors and mechanics to each audit or inspection, such assessments will never be consistent or repeatable from one farm to the next, and will depend on highly subjective judgments. Akin to an assurance scheme at best, but certainly not a system of metrics.

Secondly, and much more importantly, the GFM adopts a whole-farm, or area-based approach to these assessments. So water use, for example, is measured for the farm as a whole, as are greenhouse gas emissions. This is clearly the wrong approach since it favours lower input/lower output farming; indeed, even more carbon and water could be saved if we stopped food production completely!
The reality is that if we were to implement this on any sort of scale, the UK’s food production would go down markedly and we would be exporting all of our issues with carbon, water and biodiversity to those countries producing the deficit in our food production, a rather more parochial farming metric than ‘global’ by my thinking. The Sustainable Food Trust’s favoured metric would therefore solve nothing other than excusing the awkward reality that organic and agroecological farming systems are much less productive than non-organic farming – between 29 and 44% less productive according to a recent meta-analysis published in 2021.

Area-based measurements will prove of little value to food manufacturers and retailers, whose interest will be in the climate and environmental impact of individual food products, whether a kg of potatoes or a litre of milk. So, as many before me have argued, the only meaningful system of sustainability measurement – certainly in relation to resource use and GHG emissions criteria – is per unit of production, not per area farmed.

Concerns over the greenwashing surrounding the issue of regenerative agriculture were recently amplified in a report from the FAIRR investor network, which found that in a study of 79 global agri-food firms, while 50 (63%) were publicly referring to the potential of regenerative agriculture as a solution to the climate and biodiversity crises, only 18 of these same 50 companies have in place any formal, quantitative company-wide targets to achieve those ambitions.

That is why it was so encouraging to read the latest global framework document from the SAI Platform, yet another coalition of global food and agribusiness companies working to promote sustainable agriculture, and which includes many of the same companies involved in the Sustainable Markets Initiative, eg Bayer, Yara, Mars, McDonalds, McCain, Pepsico. Thankfully, however, it is proposing a much more science- and evidence-based approach.

The SAI Platform framework sets out four priority impact areas for measuring the outcomes of regen ag – soil health, water, biodiversity and climate.

It also includes an initial list if 10 relevant outcome metrics in each case, ranging from soil organic carbon content and water use to the proportion of natural or restored habitat on the farm, and levels of carbon
Critically, the metrics specified by the SAI Platform in relation to water use and greenhouse gas emissions are expressed per unit of production. Hallelujah!

Of course, it isn’t perfect, and in its next iteration it could pursue the same logic to other measurements, such as carbon sequestration and soil organic carbon: expressing them per unit of production, rather than per area farmed, would provide a direct relationship to the sustainability of the food produced.

Likewise, using land for farming and food production inevitably has an impact on soil carbon sequestration and biodiversity compared to not farming the land, and therefore I would contend that land used per unit of production should also be factored into the core outcome metrics for regenerative agriculture.

But credit where credit is due. The SAI Platform framework is a welcome injection of clarity and science-based thinking into what has hitherto been a frustratingly confused and conflicting landscape of ideological standpoints.

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