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Dear Brian,

Thank you again for forwarding me the letter from Mr Daniel Zeichner MP, Minister of State for Defra, dated 6th January 2025, in response to food and farming questions that I had raised with you on behalf of Climate Friendly Bradford on Avon (CFBoA). Apologies for my delay in replying, I wished to find time to carefully consider Mr Zeichner's response, and discuss with others. I appreciate the attention that Mr Zeichner has given to the points that I originally raised and am encouraged by many aspects of the government's vision for the future of food and farming; however, many concerns remain.

Question 1: concerning the need for better tools for a standardised assessment in the food and farming sector.

I am delighted to hear that "Defra is committed to developing a harmonised approach to measuring carbon on farms to ensure farm carbon calculator outputs are consistent and comparable and their ability to serve different customer needs is maintained." It is good to hear that work on standardisation is progressing, and that "Defra regularly engages with the Soil Association Exchange, Consortium of Labelling for the Environment, Animal Welfare and Regenerative Farming [CLEAR], Global Farm Metric amongst others on initiatives to develop the evidence base in these areas in parallel to our work on data and metrics." However, I strongly support the response sent to me by Fidelity Weston, Chair of CLEAR:

1. *That if the FDTP [Food Data Transparency Partnership] is there to support "green growth" then surely, they should have proper representation from those farmers and producers who are producing in an agroecological way. CLEAR is there to represent that voice – it brings together a consortium of over 40 organisations. The FDTP is dominated by big business and food manufacturers and does not reflect all stakeholders involved in the food supply chain. This is a significant omission.*

2. *It is good that they are looking at the carbon calculators but the problem with the focus just on carbon is that it does not address the other drivers and pushes production to intensification. A holistic approach must be taken and there is work going on to help develop this so they should be including representatives of this in their main decision making and supporting the work being carried out to improve the current lack of suitable data.*

Mr Zeichner says that the Long-term improvements to Environmental impact Data for Food (LED 4 Food) project will build on and align with existing standards, such as PAS2050 and the 2006 IPCC Guidelines. Although I can't easily access all this documentation on my laptop, I am pleased to read in the introduction to PAS2050 this

acknowledgement of the multiplicity of factors which affect environmental impacts: *This PAS addresses the single impact category of global warming. It does not assess other potential social, economic and environmental impacts or issues arising from the provision of products or issues associated with the life cycle of products, such as non-GHG emissions, acidification, eutrophication, toxicity, biodiversity or labour standards. The life cycle GHG emissions of products, as calculated using this PAS, do not provide an indicator of the overall environmental impact of these products, such as may result from other types of life cycle assessment.*

Discussing, in the past, my concerns about the validity of carbon calculators for dietary guidance with a member of CFBoA Coordinating Group, whose business supports organisations to analyse and reduce their carbon footprint, he wrote: *Yes food production is where the ecological crisis merges with the climate crisis. Carbon footprinting is a very useful tool for looking at industrial and business processes, and it's a good way of quantifying direct climate impacts of activities across the board. But it doesn't really give any indication of ecological impacts, so it's a very limited tool to use in looking at ecological impact.*

There's a real danger when a technique or approach becomes fashionable: this is usually where theory turns into dogma. Footprinting is trendy, which always makes me nervous. Very dangerous in terms of making an intelligent response! For the ecological crisis, the scientists we need to be listening to are the ecologists. But here we run into a deep philosophical problem in that most other disciplines struggle with ecology because it doesn't fit the analytical, Newtonian model - you can't break down an ecosystem into its component parts for individual analysis! Everything is connected to everything else, so your maths get very strange, it's described as "descriptive science" and tends to get ignored.

Over and above that, LCA very quickly becomes unworkably complex. If your approach is to break down a process into ALL of its components and footprint every one, then the whole thing spirals rapidly beyond what's feasible! This shows up in the current debate about "scope 3 carbon". You can't analyse your way through your entire supply chain without making some well-judged approximations - which is why most people end up with what Mike Berners Lee describes as a "carbon toeprint", a scope 2 footprint - they just ignore the difficult bits!

So you're dead right - when it comes to looking at food, carbon footprinting is a very limited tool. It takes far too narrow a view, even if you're wise enough not to try and carry out a full LCA.

The question arises: is there an element of 'groupthink' in the narrative from many academics and statisticians, which is based on inadequate metrics being used because they are 'easy to use' and scientifically replicable, and which has also become embedded in the public narrative?

Some of the key concerns to come out of the exploration of the literature with regard to food, farming and the environment that I, with others in our Climate Friendly Bradford on Avon group, have carried out since 2012, are that the many shortcomings of the carbon footprint and Life Cycle Analysis metrics perversely drive the intensification of farming (these measures were derived from use in industry and clearly serve corporate interests of scale), and lead to confused and inappropriate guidance as to best environmental policies and decision-making, and also dietary choices (as discussed in our document the ***Environmental Impacts of Our Food and Drink: The Misleading Metrics*** - here).

It is not only the ecological aspects of food and farming where statistical analysis is failing to give a comprehensive insight into impacts. Our document highlights many other areas where the current measures used are incomplete and inadequate, as does the Parliamentary POST referenced in the Additional Information with my original question here. Partitioning products from their integral co-products and by-products and approximations is particularly an area where attempts at carbon footprinting take leave of common sense, distorting perceptions, policies and dietary recommendations, and damaging the ability of the farming sector to produce food sustainably. Post farm-gate, transport and waste metrics, for example, omit many of the related emissions and impacts.

The **7th Carbon Budget** has just been published and these issues with the metrics are again apparent and I hope that in considering the CCC's recommendations that government will bear this in very much in mind. I do think that it is welcome that rather than advising that everyone should decrease meat and dairy consumption, as in the 6th Carbon Budget, now figures for an environmentally acceptable weekly consumption are given. For example: cooked meat consumption/person/week reduces to 928g by 2030, and to 678g by 2050. Interestingly, this latter figure is very close to what the **IDDRI Report** modelling indicated could be provided for the projected 2050 European population if Europe converted to agro-ecological production (ie. 650g/person/week).

However, the 7th Carbon Budget suggests an increase in the amount of poultry consumption (intensively-produced, granivores); but this has already quadrupled in the last 60 years in the UK, and per unit of nutrient density, pig and poultry systems occupy 3.6-5.1 times more arable land respectively than sheep or cattle. They also recommend an increase in dairy produce, and a marked decrease in ruminant meat consumption. **By contrast**, the IDDRI In depth modelling for a nutrient balanced diet, produced in climate and nature-friendly, agroecological farming systems recommends that poultry and pork consumption should markedly decrease, whereas beef and lamb, should only decrease very slightly. A moderate decrease in dairy consumption would be needed, as the amount of dairy beef would increase in high welfare systems, where the dairy cattle have better longevity and more calves are produced that are therefore not needed as replacements in the dairy herds.

The IDDRI recommendations better support the principles of regenerative farming, which include returning specialist arable farming to mixed farming models to help restore depleted soil organic carbon, nutrient uptake, soil health, structure and hydrology, and biodiversity. The IDDRI dietary recommendations are consistent with the 500g/week of red meat that the NHS advise can be part of a healthy diet (and which can help correct the widespread nutritional deficits, which are now leading to increased hospitalisations in the UK). The IDDRI analysis is also supported by the Sustainable Food Trust report: *Feeding Britain from the Ground Up.* This modelling indicated that with dietary adjustment, the UK could be 60% self-sufficient in food, as now, but with better nutrients and environmental, animal welfare and nature restoration outcomes.

Encouraging people to base their core diet on what can best be produced in the UK/locally, in a low fossil fuel system, makes sense in terms of food security.

A report in the farming press in February, indicates that, although there are many benefits to growing pulses, the acreage in the UK fell significantly in 2024 and is likely to be lower again this year: reasons given include disruption caused by the weather and the low returns for risky, inconsistent crops. Hodmedod's (still, I think, the only wholesaler focussing on promoting British-grown legumes) say in a recent newsletter *Growing beans other than fava is difficult in the UK. Over the years we've worked with small growers to offer occasional small quantities of different Phaseolus bean varieties. But they sell out fast and we've left many bean lovers disappointed.* So, they are now starting to import from France. Most pulses are imported, often from far afield, and increased reliance on these could lead to impacts on land use abroad and more carbon leakage.

Our grasslands are important to ensure food security in key nutrients and enable diverse diets. I am pleased to read '*A new perspective on healthy eating'* where Joanna Blythman (4th March 2025) here, reviews The Nourishment Table, a new dietary framework from Brussels which has been designed to help us make healthier food choices based on two key considerations: nutrient density and degrees of processing.

It is greatly to be welcomed that UK farmers are now increasingly using regenerative, nature-friendly approaches to farming and finding significant benefits. I am therefore concerned about the other focus of the Agriculture Act, which this government is now rolling out, incentivising an intensive, high-tech approach to future food and farming in the UK.

Please consider that: *The International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) provided a powerful evidence-based call to shift from dominant, resource-extractive and*

input-intensive approaches to agriculture (referred to as "business as usual") and significantly transform our agriculture and food systems. The IAASTD was authored by over 400 scientists and development experts from more than 80 countries, sponsored by five United Nations agencies and the World Bank, approved by governments in 2008 and published in 2009. It provided an extensive array of policy options to shift course away from business as usual, towards biodiversified agroecological practices that place small farmers – who produce the majority of the world's food – and their knowledge systems at the center. The IAASTD also identified actions to address power imbalances embedded in global and national political, economic, research and trade systems and institutions that were found to entrench the inequities responsible for persistent poverty and hunger in the world.

In the 2016 interview (pp.48-49 here), Prof Hans Rudolf Herren, Co-chair of the IAASTD, emphasised that:

Climate-Smart Agriculture could also be called Green Revolution 2.0. It is just more of the same old model some want to maintain given the huge vested interests the agribusiness has in selling inputs to farmers, be it seeds, fertilizers or precision agriculture gadgets. With all we know about the need for holistic and systemic approaches to agriculture, this is clearly wrong-headed and diverts too much attention from what needs to be done, i.e. embracing agroecological/regenerative practices. The latter two are going hand in hand, as the basic premise is to work with nature, not against it, using natural processes to regenerate soils and seeds and work in highly diversified systems, with diverse crops and animal breeds of very distinct genetic makeup.

The Climate Change Committee's 7th Carbon Budget (p.200) recognises that:

Agroecology incorporates a number of ecological and sustainable principles into farming systems. Measures in the Balanced Pathway such as agroforestry, cover crops, and incorporation of legumes score highly on these principles. Further work is required to quantify the impact a transition to agroecological systems at scale would have on greenhouse gas emissions, carbon stocks, and productivity. However, evidence suggests such approaches can enhance biodiversity, improve air and water quality, build soil health, and promote resilience at the farm-scale.

The "treadmill" of industrial agriculture is described in '*Agriculture at the Crossroads IAASTD findings and recommendations for future farming*': the constant drive for technological advances to produce more (p.23). This incurs large capital costs to the farmer; however large outputs (often associated with specialization, mono-cropping and intensive livestock production) which drive down costs to the consumer, mainly through corporative outlets, leave less intensive or "cutting edge" systems of production unable to compete. The latest technological or scientific "innovation" will always be round the corner and it becomes necessary to stay one step ahead to stay in business.

The truth of this seems so apparent to me.

Some technological advances are, of course, to be welcomed. Nevertheless, it has taken over a century for the serious adverse effects caused by agri-chemicals to become more fully recognised, similarly with ultra-processed food. Although striking medical successes have been achieved in treating individuals with gene therapy, there are many within our group who consider that increasingly altering the genetic sequencing of everyone's food and drink and the wider environment, and lab food, are deeply concerning and the necessity is open to question, which was indeed the view of the IAASTD.

Owen Paterson, as Minister of State for Defra, was responsible for pushing the EU to reduce its precautionary position on genetically-engineered (GE) food and drink. Some of Boris Johnson's first words on announcing the UK departure from the EU were that the UK would now be able to forge ahead with development of GE crops and farm animals in the UK, and subsequent legislation laid the way for this – under cover of darkness, according to Baroness Young, and despite the British public not being onside. The public consultation on GE was not fit for purpose. In the Agriculture Act and other literature various terminology/synonyms are used and I understand (from a PhD student working on scaffolding solutions for lab meat) that this is intentional and encouraged, in order to

deflect public understanding and concern. **There needs to be a requirement for the terminology used for GE research, processes, products to be standardised and transparent to the public.** This government is understandably deeply concerned about the economy. I question the focus on stimulating economic growth above all else. I would like to see more in-depth deliberation on whether the techno-fix approach, such as genetically engineering our food and the natural world, is necessary, or indeed wise.

According to the UN, the world population is expected to increase to 9.7 billion in 2050 and could peak at nearly 10.4 billion in the mid-2080s.

I consider Prof Herren to have the sagest voice and the widest, most deeply informed overview of how to feed the world sustainably. Herren (in 2016) indicates that: *The truth is that it is irresponsible not to spend money to transform the system now to agroecological and regenerative practices and science. In its Green Economy Report in 2011, UNEP clearly demonstrated that IAASTD's recommendations can be implemented by 2050 with spending only about a third of the total agricultural subsidies paid today. We would still produce enough food in the quantity and quality needed to nourish well nine to ten billion people, while using less land and water.*

Question 2 - public sector food procurement:

Mr Zeichner indicates that "Officials are developing a range of proposals to develop public sector food and catering procurement policy to set the tone for our ambition, as well as driving net zero, public health and animal welfare outcomes." Whilst very much welcoming that progress is now being made, I hope that the officials working on this will take into account the current unsatisfactory status of the carbon calculator metrics, discussed above, when considering the need to drive net zero. I also hope that the procurement will be properly funded, so that there are fair returns to farmers and growers and other food chain workers, and, without the rest of the procurement being squeezed and standards lowered further. Issues of migration are increased by exploitative food production practices, which impoverish soils and over-extract fresh water resources. As Sir Keir Starmer stated, prior to the general election, procurement of food from British producers or certified to higher environmental standards should rise rapidly from the initial target of 50%. For the sake of health, the environment, food security and global well-being we need to know that all of our food has been produced in sustainable farming systems, both here and abroad.

Please note: '*The IAASTD (key findings - at a glance)':*

Point 17: Negative Impact of International Trade: Opening national agriculture markets to international competition can lead to long term negative effects on poverty alleviation, food security and the environment.

Point 18: Export Agriculture Unsustainable: Intensive export agriculture has adverse consequences such as exportation of soil nutrients and water, unsustainable soil or water management, or exploitative labour, in some cases.

To conclude, key asks are: to urge the government to ensure that CLEAR has proper representation on the FDTP to support green growth: and that metrics truly support sustainable farming - rather than both processes being dominated by big business and food manufacturers.

As this response is longer than originally intended, I would like to respond to Mr Zeichner's reply to my third question in a separate letter, in due course, particularly in view of the ongoing consultations and measures relating to food, farming and the environment that have been announced in the last couple of months.

Yours sincerely,
Ros Edwards

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Striving for the Bradford on Avon community area to be carbon neutral by 2030
https://climatefriendlybradfordonavon.co.uk/