

COLLABORATING WITH BUSINESS

by academics in Arts, Humanities and Social Sciences

Business School researchers' sustainable menu tool gives caterers food for thought

A review of UK school meals' carbon footprint wrote the recipe for a new solution to count the environmental cost of what is on our plates.

After becoming the first in the world to declare a climate emergency, in 2019 the UK Government committed to cut greenhouse gas emissions to net-zero by 2050 – a sharp increase on the 80 per cent reduction target set by the 2008 Climate Change Act.

Making energy and transport greener will be vital to reducing our environmental impact during the next 30 years. However, Professor Angela Tregear says another critical factor is often forgotten “At least 30 per cent of the UK’s greenhouse gas emissions come from the food we eat”, she argues. “The Food Climate Research Network and World Wildlife Fund UK have already suggested the carbon footprint of food must decrease by 70 per cent to meet the Climate Change Act target. To achieve net-zero



emissions, we need to reduce this even further.”

Angela believes the public sector has a crucial role to play. “British government bodies spend billions of pounds each year on food - the vast majority of which becomes meals for hospital patients or the UK’s 10 million school pupils”, she explains. “With such enormous buying power, they set the tone for what people eat and where it comes from.”

Angela and Business School colleagues, Professor Mary Brennan and Dr Maysara Sayed, are members of a 30-partner consortium from 15 countries researching the environmental, economic and social impacts of food supply across Europe. The Edinburgh group’s latest research as part of the five-year EU-funded Strength2Food project suggests improving the sustainability of school meals cannot be achieved by buying local and reducing waste alone. “The environmental impact of food comes down to what is on our plates. Looking at meals in more than 200 state-funded schools in Durham and Inverclyde in the UK, we

found on average 96 per cent of greenhouse gas emissions came from the production and processing of food”, explains Mary.

“Meat – and red meat in particular, which is very carbon-intensive to produce – contributed 31 per cent of each meal’s CO2 equivalent. That’s a higher proportion of overall emissions generated by either local transport or waste processing. So, even a small decrease in the use of animal products in school meals would significantly reduce their environmental impact. However, any switch to red meat substitutes and low-carbon alternatives has to make financial and nutritional sense. It also must be accompanied by the right kind of food education to ensure pupils understand the reasons for the change and eat the new options.”

The research caught the imagination of Strength2Food government and commercial partners. Harissa - the restaurant and food catering arm of North East of England food and nutrition social enterprise, Food Nation - immediately saw the potential to apply the methods to assess the carbon footprint of its meals. “When the Harissa team responded so enthusiastically and offered to give us their menus, recipes and supply chain data to analyse, we realised there could be an external application for our work”, Maysara recalls.

“Angela, Mary and I began to discuss the potential to create a software application any caterer could use to check how environmentally friendly their menu is, and how they could improve it. We also saw an opportunity to help government procurement departments evaluate the sustainability of tenders for public sector food services. I volunteered my experience in computer programming to develop a prototype.”

The team worked with the **Knowledge Exchange and Impact** team to secure external funding to develop a proof of concept for the tool, but they still needed more data to use in their testing. Their breakthrough came when their school’s business development colleagues and **Interface** introduced them to Sodexo, one of the world’s largest catering and facilities management companies. The addition of valuable data from three of the group’s UK sites allowed Maysara to develop a proof of concept, that has already helped Harissa secure accreditation from the **Sustainable Restaurant Association** and received a positive response from Sodexo’s catering leaders.

As the three researchers consider how to bring the application to the market, Angela is optimistic about its potential. “The majority of the food industry and consumers will only switch to more environmentally conscious diets if they don’t feel the difference in their pocket or on their palate”, she reflects. “The crucial aspect of our concept is that it takes into account cost and consumer preferences to develop optimal, value for money menus which lower environmental impact. It’s only by taking this realistic approach to behaviour change that we have a chance to meet our responsibility to reduce the carbon footprint of food.”



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