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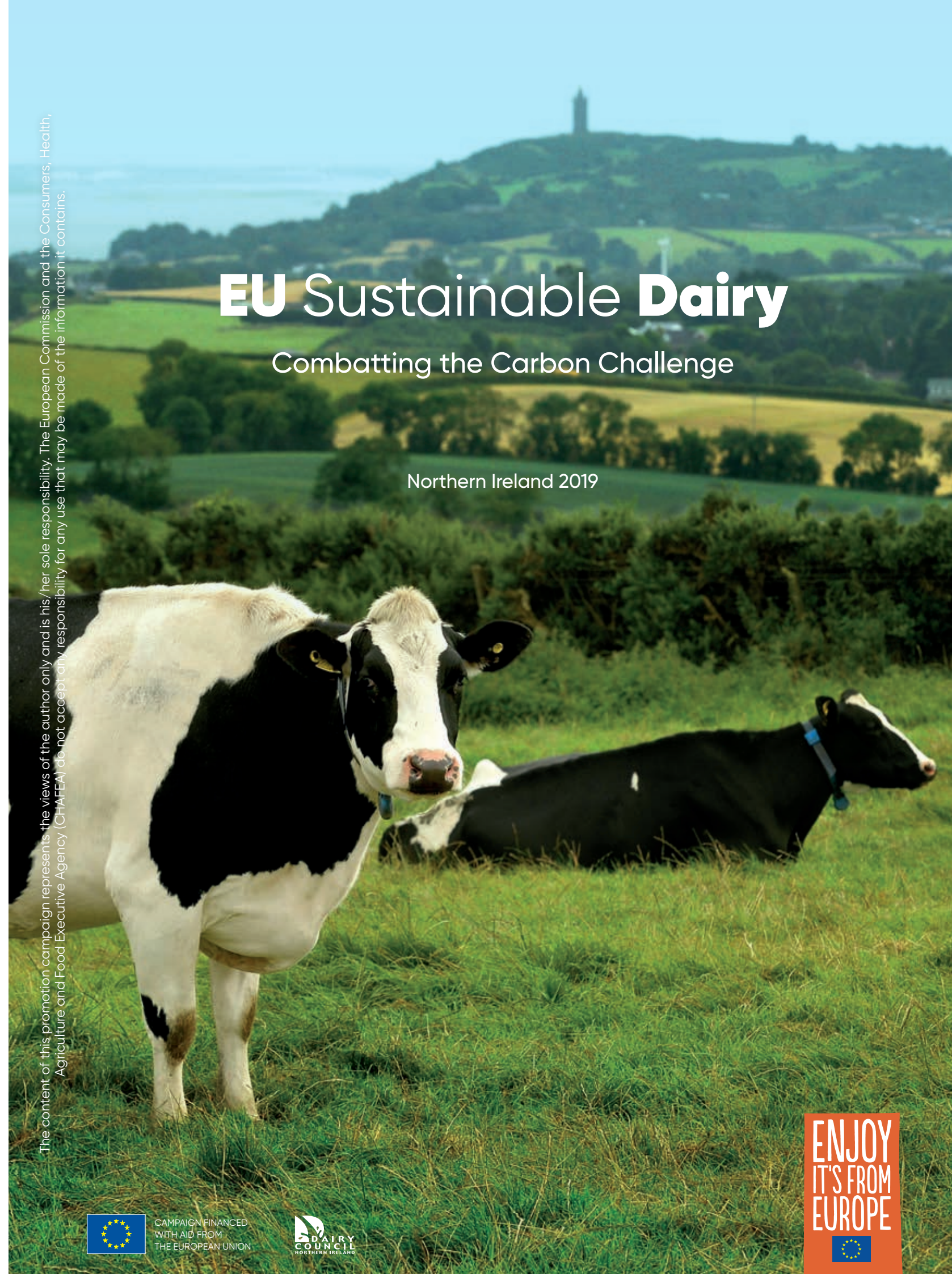


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EU Sustainable Dairy

Combatting the Carbon Challenge

Northern Ireland 2019





Nutrition

Healthy diets from sustainable food systems

In 2010, the United Nations Food and Agriculture Organization (FAO) defined the four pillars of a sustainable diet as: Health, Economics, Society, and the Environment.

Each pillar plays an equally important role in ensuring that the diet in question provides the appropriate level of nutrition, in an affordable, accessible way, with minimal negative impact on the environment.

Professor Adam Drewnowski, Director of the Centre of Public Health Nutrition at the University of Washington has observed that many approaches to sustainable diet modelling often overlook the nutritional dimension,

instead focussing on the environmental credentials with little or no regard for nutrition. For example, calculating the carbon footprint of our diet per kg of food weight rather than in relation to the nutrients a food provides.

// *...In other words, a diet cannot be considered a sustainable diet, if it doesn't meet the nutritional need of the community it is designed to serve...* //



Health



Economics



Society



Environment



Where models do give due attention to health and nutrition, it is often the case that they measure the nutritional value of the diet based on energy (calorie) density rather than ensuring that the food systems are rich in nutrients.

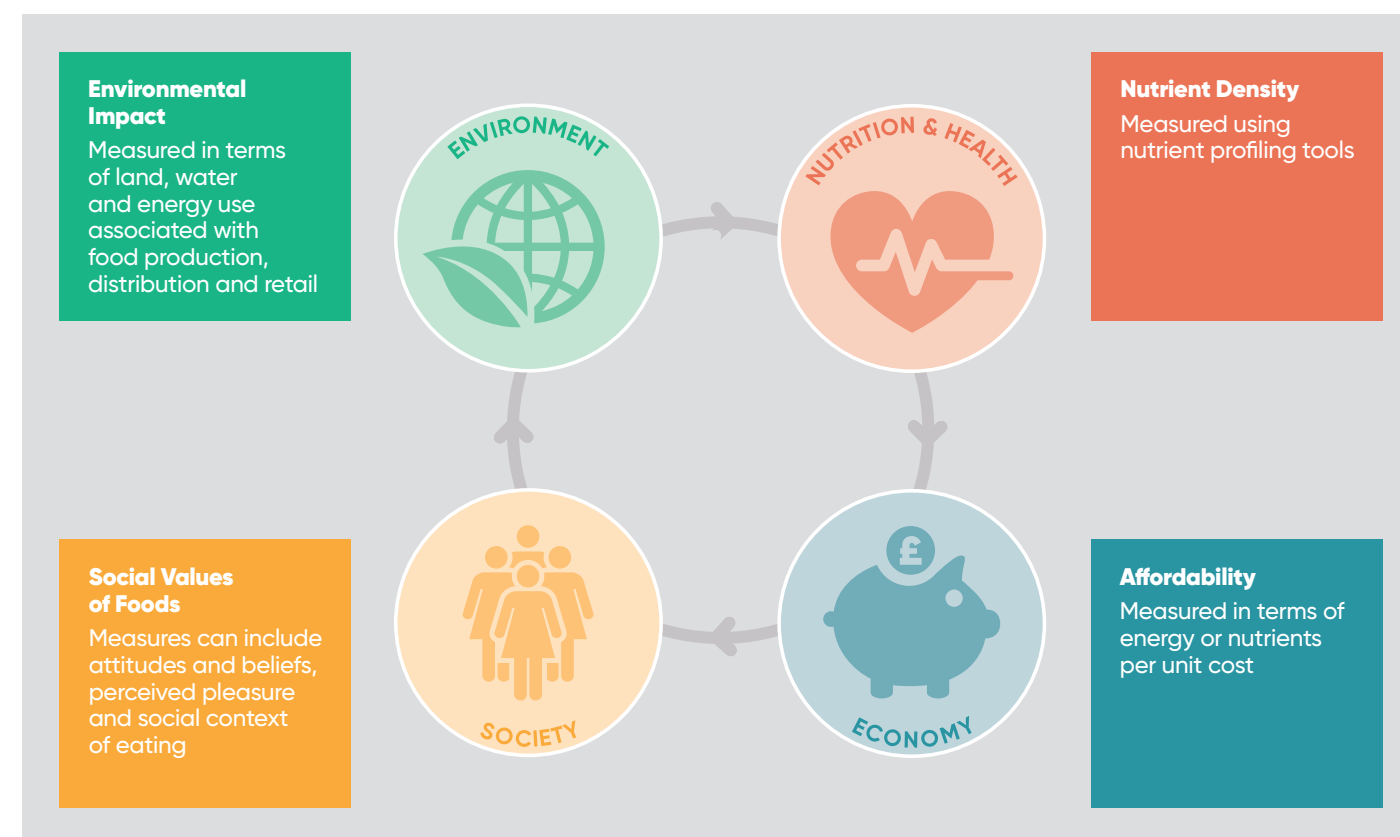
A better way of profiling a 'sustainable diet' would be to move away from energy density modelling and refer to the nutrient content of the foods. Properly addressing the nutritional need will allow the discussion to move from simply sustainable diets to 'healthy diets with low impact on the environment'.

Similarly, measures of the affordability of a diet frequently look at calorie density (kcal per £) but Professor Drewnowski maintains that a more accurate picture can be gained by building an overall nutrient profile.

This process can involve dividing nutrients into two categories, those we want to encourage (for example; calcium, fibre, magnesium, vitamins A, C, E, K and D), and those we may want to discourage (saturated fat, added sugars and sodium).

Newly developed methods also now focus on protein quality, separating animal and plant proteins, distinguishing the usually higher quality animal proteins such as milk.

Once this information on nutrient density or other measures of diet quality is available, the data can then be used for a wide range of purposes including innovation, product development, and reformation or for comparing against other food models. It may be in the future that ways can also be found to take into account the health effects of a food, which may go beyond the nutrients it contains.



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Important contribution of dairy foods to the European and Northern Ireland diet

Milk and dairy foods make an important contribution to the nutritional quality of the European diet. In many countries, including Northern Ireland, they are the main providers of calcium. Dairy also makes significant contributions to the intake of many other nutrients including high-quality protein, riboflavin, vitamin B12, phosphorus, vitamin A, iodine, zinc and potassium.

In Northern Ireland, the dairy food group is the largest contributor to intakes of calcium, iodine, vitamin B2 and vitamin B12, supplying around a third of adults' intakes and even more in children and teenagers.

Nutrients	4-10 years	11-18 years	19-64 years
Protein	21	15	13
Calcium	45	37	37
Potassium	22	15	12
Iodine	55	44	35
Zinc	23	16	15
Vitamin A	24	18	17
Vitamin B2	43	32	29
Vitamin B12	54	40	35

Contribution (%) of dairy foods to nutrient intakes in Northern Ireland⁵¹

⁵¹ Reference: National Diet and Nutrition Survey, Results from Years 5-9 (combined) of the Rolling Programme (2012/13-2016/17); Northern Ireland
* Vitamin B12 results for years 1-4 of the Rolling Programme

A **healthier** diet is also more **sustainable**

A discussion with Professor Ian Givens



Professor Ian Givens, Director of the Institute for Food, Nutrition and Health at the University of Reading believes that we should focus on improving public health in Western populations, as this will also have sustainability benefits. He also stresses that the current public debate on a sustainable diet is too simplistic, as the division between animal and plant-based foods doesn't take the nutritional aspect into account.

High-dairy diets are often healthier than low-dairy diets

The debate is focussed on the dichotomy between animal and plant-based foods with animal foods often categorised as 'bad' for the environment and for health, and plant foods as 'good'. But he argues it is much more complex than that.

Even animal foods cannot be categorised so simply, "It is not correct to talk about animal-based foods like that, every food is different". He stresses that there are differences between dairy products and red processed meat and that the current rush to replace animal proteins with plant proteins can result in nutrition deficiencies, "Some foods, like dairy, provide high quality protein and are nutrient dense. That is unique compared to plant products". Professor Givens elaborates that, "proteins aren't just proteins", they are made up of different kinds of amino acids, and the amino acids that dairy products provide is uniquely well fitted to human needs.

The UN Food and Agriculture Organization states that sustainable diets are:

- protective and respectful of biodiversity and ecosystems
- culturally acceptable and accessible
- economically fair and affordable
- nutritionally adequate, safe and healthy.

Professor Givens agrees that all four dimensions: nutrition, climate/environment, economy and culture should be taken into account but, unfortunately, often they are not particularly the nutritional aspects.

Moreover, he points to a recent study in the UK, showing that diets with a high intake of dairy products often are healthier than low dairy diets, "Low dairy diets are correlated with a higher intake of fizzy drinks, sugar and a lower intake of greens and vegetables than dairy-rich diets".

Improving public health is sustainable

When talking about sustainability, Professor Givens believes that it would be beneficial to invest in improving public health, as this would result in more sustainable diets as well. Diets like the New Nordic Diet are both healthier and more environmentally sustainable than the way we eat currently in many western countries, however, he also acknowledges that improving public health is extremely difficult.



About Professor Ian Givens:

Ian Givens is a Professor of Food Chain Nutrition and Director of the Institute for Food, Nutrition and Health at the University of Reading. He has background training in biochemistry and nutrition, and his research interests focus on the relationship between consumption of animal-derived foods across the key life stages, nutrient supply and chronic disease risk with particular emphasis on dairy foods.

