



**scottish universities  
insight institute**

mobilising knowledge for a better Scotland

SUII Knowledge Exchange Programmes

*Inspiring a Food Revolution for People and Planet*

**Final Report**

**July 2022**



# scottish universities insight institute

mobilising knowledge for a better Scotland

## **Context and Objectives**

With food systems accounting for around 20% of greenhouse gas (GHG) emissions in the UK, and obesity levels rising in Scotland and globally, a food transformation is needed.

Together we, the University of Edinburgh Food Security and Sustainability Society and the University of Dundee Students for Global Health, collaborated to develop a **Planetary Health Meal Plan** for university students. This emerged from concerns over the impact of food choices on both climate change and population health. There was also significant enthusiasm from students for an affordable, healthy and sustainable diet.

Our aim – building on existing evidence from a range of sustainable eating initiatives in Scotland, the UK, and internationally – was to develop and disseminate affordable, simple, healthy and environmentally sustainable meal plans and recipes. Ultimately, our goal was to improve food consumption behaviours in Scotland. Our first objective was to create a meal plan based on the EAT-*Lancet* Planetary Health guidelines (1), which outline a diet that meets nutritional needs whilst also limiting the use of foodstuffs linked to adverse ecological impacts. Our second objective was to facilitate knowledge exchange by sharing novel ideas, practical resources and survey insights through multidisciplinary workshops and engagement with Scottish secondary schools.

Though our project was grounded in the EAT-*Lancet* report (1), we also drew on previous sustainable eating initiatives (e.g., Eatwell and Live Well Plates) for inspiration; to identify best practice; and to better understand barriers to the uptake of sustainable eating initiatives. Reviews of these initiatives revealed challenges relating to both accessibility and affordability, and informed our project planning.

Our project sought to tackle these challenges by creating a connected database of recipes, weekly ingredients lists and linked businesses, producers and food outlets all in line with our Planetary Health Meal Plan. The meal plan and associated website ([planetaryhealthrevolution.com](http://planetaryhealthrevolution.com)) were freely available and practical, providing details for weekly shops and creating recipes that were easy to follow. It also aimed to be educational by providing users with information regarding the carbon footprints of their meals, and regular blog posts on a range of different food sustainability challenges. We hosted a number of outreach events such as potlucks and online cook-alongs; and engagement activities such as providing food boxes for those who signed up for the meal plan.

## **Activities**

The project was conducted in two phases: an initial 2-week pilot that took place in June 2021, followed by a month-long launch of our meal plan in September 2021. Feedback surveys were administered at the end of both the pilot and the month-long meal plan to evaluate opportunities, barriers and challenges to following the meal plan. The first of these surveys fed into the development of the month-long meal plan, and the second survey has provided critical insights on challenges to engaging longer-term in the meal plan (and also ways to overcome these). In total, 109 respondents filled out these surveys. Across Dundee, Edinburgh and other regions of the UK, **250+ individuals signed up** in September to receive the recipe books for the Planetary Health Meal Plan.



# scottish universities insight institute

mobilising knowledge for a better Scotland

recipes

## Harissa Roasted Sweetcorn with Squash & Feta

Portions: 4

**Ingredients**

- 1 medium sized squash (peeled and chopped)
- 1 tin sweetcorn, drained
- 1 tin black beans, drained
- 1 tbsp harissa paste
- 1 tsp ground coriander
- 1 tsp ground cumin
- 1 tsp salt
- 2 tbsp olive oil
- ½ lime
- 100g feta cheese, crumbled
- 25 g fresh coriander, finely chopped
- Handful of kale
- Optional:  
Yoghurt and brown rice to serve

**Instructions**

**Step 1**  
Preheat the oven to 180°C (fan/200°C/ gas 6).

**Step 2**  
Mix together the squash, sweetcorn and black beans in a roasting tin along with the spices, harissa paste, salt and olive oil, then transfer to the oven and roast for 35 minutes, add the kale and cook for another 10 minutes.

**Step 3**  
Squeeze over the lime juice, then scatter over the feta and coriander

**Step 4**  
Optional: mix together 2 tbsp yoghurt with a few fresh coriander leaves, a squeeze of lime and a pinch of salt.

**Step 5**  
Serve with a portion of brown rice or grain of choice.

Nutritional Value for 1 Portion:  
Carbohydrates 66g  
Protein 16g  
Fat 16g  
Saturated Fat 5.55g

DAY 1,2,4



Several knowledge exchange workshops were carried out over Zoom and brought together stakeholders from Dundee and Edinburgh food sectors – including local businesses; third sector representatives; students; teachers; nutritionists; and academics. Workshops focussed on developing a meal plan and programme that would be mutually beneficial across the wider food system, and one that could be scaled out and sustained over time. Our project outputs fed into the [development of resources for Scottish high school students](#), including a downloadable comic strip of recommendations for climate conscious food consumption, and a cookbook collating recipes designed by the students and including information on carbon costings and nutritional benefits.

### ***An account of the insights resulting from the programme (including lessons around the theme of the Sustainable Development Goals)***

Nutrition Revolution was a student-led and staff-supported collaboration that actively sought to address challenges outlined in several of the Sustainable Development Goals (SDGs). These include SDG 3 - Good Health and Well-being, SGD 11 - Sustainable Cities and Communities, and SDG 13 - Climate actions. This project aimed to tackle issues of malnutrition and overnutrition (SDG 3), the adverse impacts of certain forms of food production on the environment (SDG 13), and to foster a community of food consumers in local spaces across Scotland (SDG 11).

In order to maximise our potential to contribute to these SDGs, we sought to make the Planetary Health Meal Plan engaging and accessible to students at our target universities. To enable this, we held several meetings with stakeholders (including chefs, academics, local NGOs and local businesses) already working to promote accessible, nutritious and sustainable eating across Scotland. These conversations helped to ensure that the project was locally rooted in each space, and that recipes were easy to follow, easy to source ingredients for, and aligned to Planetary Health guidelines. The engagement with these stakeholders throughout the project has helped support the longevity of this project in Edinburgh and Dundee.

A key insight raised by our stakeholders early on was the importance of seasonality in the design of our meal plan, important in addressing both SDG 13 on climate action and SDG 11 on sustainably stimulating local



# scottish universities insight institute

mobilising knowledge for a better Scotland

communities. These conversations shaped the development of a recipe book that showcased a range of Scottish seasonal products, highlighting both their versatility and low carbon footprint.

Results from our initial survey indicated that affordability and accessibility of produce were significant barriers to users of the Planetary Health Meal Plan. Our target beneficiaries were students, who often have limited income and restricted access to cooking resources. A core component of SDG 3 is the essentiality of healthy living, and access to healthy foods is core to this goal. While we did arrange discounts for students across commonly accessed stores and issued free starter packs for those starting the meal plan, the issue of affordability still remained with around 18% of users citing cost as a barrier to fully engaging with the meal plan. This highlighted the need for further work ensuring that a healthy, planet-conscious diet is affordable and accessible to students and the wider community. We propose that building stronger communication links between consumers and producers is important in breaking down these barriers to healthy eating and in ensuring the value of food is protected whilst remaining affordable to consumers.

Our pilot results also highlighted the importance of convenience. Through iterations of the meal plan, we tried to simplify the recipes by using ingredients that would be easily accessible at small local outlets, highlighting alternatives for less common ingredients and incorporating leftover meal ideas. Despite these changes, 55% of participants found that convenience was a major barrier to participating in the meal plan at the end of our month-long programme. We recognise that the meal plan was a structured approach to cooking and consuming in a planetary health aligned way, aiming to give people the basic skills to cook with different resources. We hope that following on from the meal plan, participants will be able to adapt their learning to suit their lifestyle and hence, create a more convenient low-carbon consumption pattern.

## ***Main outcomes and (expected) impact***

The core objectives of this project were to develop a Planetary Health Meal Plan for students in Dundee and Edinburgh, and to promote meaningful behaviour change relating to purchasing, preparation and consumption of food. For the September rollout of the month-long meal plan, 250+ participants signed up to receive the meal plan. We received significant engagement with related posts on Twitter and Instagram dedicated to the Planetary Health Meal Plan. Our survey conducted post-meal plan provided evidence of behaviour change, with participants reporting **increased commitments to shop locally (42%), to waste less food (44%), to eat less meat (20%) and more vegetables (31%) and to cook more (25%)**. There is also ongoing interaction with the Nutrition Revolution website following our September campaign, including sustained visits to the website (see figure 1).

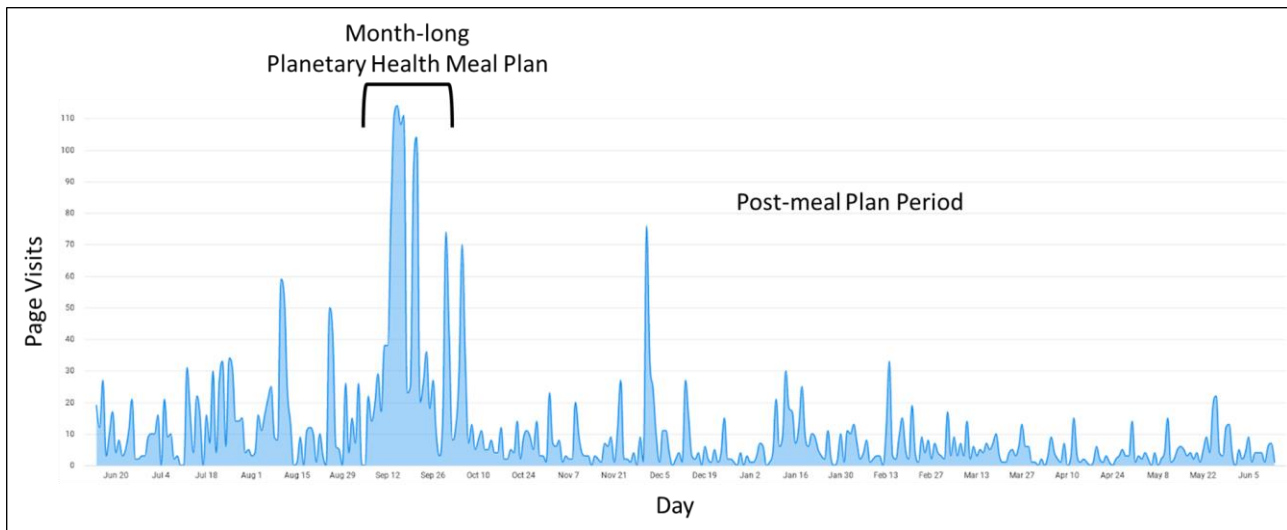


Figure 1: Page visits per over time to the Nutrition Revolution website (source: Authors own from Nutrition Revolution website analytics)

We also aimed to initiate longer-term improvements in our higher education institutions (HEI) relating to food procurement and consumption policies. We worked with the University of Edinburgh catering team to introduce [17 carbon-costed recipes](#), which were deemed to fit into the university's long-term Good Food Policy (2). Dundee's and Edinburgh's student associations also actively helped in the promotion of the meal plan, mobilising students to choose healthy and sustainable foods. Promotion and incentivisation through various discounts at small food outlets helped to further stimulate the micro-economy. Many of these organisations supported in publicly promoting the Planetary Health Meal Plan to their networks.

Beyond HEI, we also worked with Blairgowrie High School to develop comic book strips designed to promote Planetary Health aligned consumption for high school students. Teachers and pupils created a recipe book using locally produced ingredients in order to promote healthy, easy cooking amongst school pupils. Similar to the Planetary Health Meal Plan, these recipes were carbon-costed and nutritionally evaluated to align with the EAT-Lancet guidelines. Dissemination of the recipe book and comic strip is ongoing, and we hope this will be a resource that can be shared across other high schools in Scotland.

### Key recommendations for end users / policy communities

Successful adaptation of the planetary health framework needs active involvement beyond the student body including staff, university management and key external partners within the targeted local communities. Herein, we list a number of additional recommendations:

1. Localised meal plans, which integrate information on locally available foodstuffs, local stores and promotional discounts.
2. Ensuring meal plans include a wide range of alternatives for vegan, vegetarian and gluten-free diets to ensure accessibility and inclusivity of meal plans.
3. Ensuring recipes are under 30 minutes (where possible), and that the meal plan fully incorporates use of leftovers into recipe design.



# scottish universities insight institute

mobilising knowledge for a better Scotland

4. Increased adoption of Planetary Health guidelines in university catering with targeted marketing towards students on the positive health and ecological impacts of following a Planetary Health aligned meal plan.
5. Recruitment of a social media manager to promote the Planetary Health Meal Plan across all forums used by students and staff, and to develop engagement events (e.g., a photo competition).

## ***Planned follow up activities***

Building on the progress made as part of this project, we plan to undertake the following activities:

1. We are in the process of developing a seasonal meal plan, which can be utilised year-round with ingredients that are easy to source.
2. Rollout of the meal plan across additional Scottish HEIs. We had several participants in the meal plan join from universities outside of Edinburgh and Dundee, and there is scope to promote the meal plan more broadly to these institutions.
3. Increase uptake of the meal plan in local communities beyond universities. This could be through breakfast clubs and community dinner projects. The University of Edinburgh Food Security and Sustainability Society currently cooks a Planetary Health Meal Plan recipe monthly for Soul Kitchen in Edinburgh. There is scope to extend this work.
4. Dissemination of the Blairgowrie High School recipe book and comic strip for school pupils across Scotland.

## ***References***

1. Willett et al. Food in the Anthropocene: the EAT-*Lancet* Commission on healthy diets from sustainable food systems. *The Lancet*. 2019;393(10170):447-492.
2. The University of Edinburgh, Social Responsibility & Sustainability. Good Food Policy Update 2020-21. Edinburgh: University of Edinburgh; 2022.