EATS: the Environmental Assessment Tool for School meals

Valeria De Laurentiis, Dexter Hunt and Chris Rogers

EATS is a decision support tool for local authorities and their contractors responsible for providing catering services to schools. The purpose of this tool is to quantify the environmental impact of the meals served in order to identify hotspot meals and ingredients, and suggest simple, yet transformative, reduction measures.

Through an easy-to-use user interface, it enables calculation of the Carbon Footprint (CF) and Water Footprint (WF) of a meal, based on its recipe, the origin and transport mode of its ingredients and the cooking procedure.

Being based on life cycle thinking, it calculates the environmental impacts of a meal generated throughout the entire supply chain, from cradle to plate. As such it provides caterers with a tool that can readily facilitate more sustainable, environmentally-friendly choices when considering school menus.
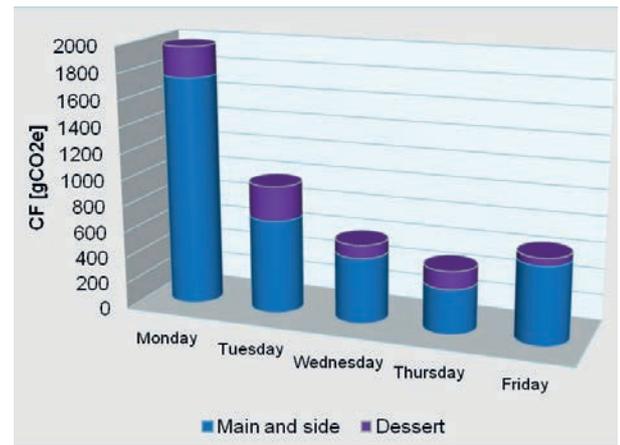
Tool Contents

EATS contains two databases, which collect the values of CF and WF associated with the production of a list of 108 commonly consumed ingredients used in the preparation of the school meals in the UK. By using this data in combination with information provided by the user through its interface, it enables the calculation of the CF and WF of a recipe. Additionally it provides three plots, which show the contribution of the different ingredients to the environmental impact and the weight of the different stages of the food supply chain. A typical output is shown in the figure.

How has it been delivered?

EATS was presented at two scientific conferences, at an online webinar session, and through a tutorial-style You-Tube video circulated through social media. Attached to the video is a link that enables viewers to download a beta-version of the tool, in order to test it and provide feedback though an online survey.

Carbon Footprint of an existing school menu calculated with EATS

Where has it been published?

Environmental assessment of the impact of school meals in the United Kingdom (Proceedings of the 10th International conference of Life Cycle Assessment of Food)
EATS: a life-cycle based decision support tool for local authorities and school caterers (under review).

Who participated?

During the development process five anonymous catering professionals within the UK tested the tool and provided invaluable, and uniformly positive, feedback which has helped to refine the tool.

Levels of Usability/Testability

The tool can be used by anyone with basic computer skills. The results of the online survey proved that users found the interface easy to learn and user friendly.