

Zurich-Basel Plant Science Center

Improving sustainability through canteen policies and interventions at three Swiss universities: ETH Zurich, University of Zurich and University of Basel

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1 Introduction

In order to reach the limit of 1.5 °C temperature increase set by the Paris Agreement, per capita carbon footprints need to be substantially reduced worldwide. The three most energy-intensive domains contributing to lifestyle carbon footprints constitute transport, housing and food.¹ Within food, meat and dairy have the highest impact, indicating a large potential for reduction of greenhouse gas (GHG) emissions.¹ As a consequence, there are recommendations like the Planetary Health Diet (PHD) calling for limiting the uptake of animal-sourced products in favour of a "flexitarian" diet consisting mainly of vegetables, nuts and whole grains.² Universities represent the link between society, science, and innovation, and thus can pioneer transition pathways to sustainable lifestyles. Swiss universities have committed themselves to improve their climate impact in the next few years, and thus must find strategies to reduce their direct and indirect GHG emissions. With thousands of students and faculty members eating from university canteens on a daily basis, universities can define canteen policies to lower their food-related GHG emissions and, through interventions, change the food choices and eating habits of staff and students.

In this report, we summarize the efforts to reduce GHG emissions in the community catering of three Swiss universities: University of Zurich, Eidgenössische Technische Hochschule Zurich and University of Basel. We present possible interventions and policies implemented in the canteens and discuss the impacts of these interventions in the institutional environments. Finally, we arrive at some recommendations for further action.

To obtain information about the current efforts at the universities we referred to published reports^{3, 4, 5} and conducted interviews with experts^{6, 7, 8} from the corresponding institutions. We conducted three interviews, each with a representative from the sustainability team of the respective studied university. Two interviews took place online, while the third participant received a questionnaire, responded with written answers, and returned the completed questionnaire. (Appendix 1)

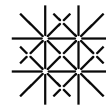
2 Implemented canteen policies

The possibilities of possible measures and interventions for sustainable food choices are many and they may be selected according to their ease of implementation or the targeted audience. Policies favouring sustainable consumption can be classified in the three main categories of information, training, and exposure.⁹

2.1 Information

Through interventions, information can spread to create awareness for the benefits of sustainable food choices. Different pieces of information could be combined for increased impact for example on sustainability and personal health.¹⁰ This targeted information could improve the acceptance of any introduced policy change.¹¹

The caterer at the **University of Zurich**, in collaboration with "Food2050," is communicating the environmental impact and global warming potential associated with their menu options to inform their customers. Starting in May 2024, **University of Basel** is communicating emissions per meal and other sustainability indicators



at their catering locations, aiming to raise awareness among guests. At **ETH Zurich** the shared information is dependent on the responsible caterer, GHG emissions are for example indicated on restaurant level (Compass in Zürich, Hönggerberg) and will soon be indicated per menu (ZFV in Basel and SV in Zurich Center and Hönggerberg). Additionally, different initiatives raise awareness by yearly events like the Vegiwoche 2022. These initiatives exemplify how canteens can utilize and communicate information strategically to nudge consumers into making more sustainable food choices.

2.2 Training

Sustainable options can be promoted by offering training, for example, through counselling or cooking courses to canteen staff. This provides the target audience with the necessary tools to introduce necessary changes, thus, facilitating the implementation of more sustainable choices.¹²

To develop the toolset for offering meals with lower environmental impact, all **three universities** collaborate with their contracted caterers. Interview partners from all institutions reported that their caterers conduct workshops aimed at educating chefs on preparing more sustainable meals.

2.3 Exposure

Finally, interventions can increase the exposure of consumers to sustainable meal offers. One approach is to improve the access to the sustainable options and restrict the availability of meals with large environmental footprints. Furthermore, visibility and attractiveness of sustainable options can be enhanced, e.g., by presenting sustainable options first.¹³ This might involve reordering the menu list or adjusting the placement of the order counter, ensuring that the vegan counter is more convenient and readily accessible than the meat counter.

At the **University of Zurich** the exposure to sustainable meal choices has been significantly increased by expanding their meatless offerings to encompass more than half of their menus. They have also renamed menus and reordered them to feature vegan options first on the menu list, with the intention of enhancing the attractiveness and visibility of their vegan and

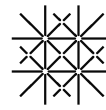
vegetarian selections. **University of Basel** has extended its range of meatless meals to constitute half of all menu offerings. Through carrying out various strategies, such as exclusively offering environmentally friendly meals on Climate Day twice a year, only serving meatless meals on Wednesdays in the Bernoulli mensa, and incorporating more plant-based alternatives, they aim to improve the visibility and importance of vegan and vegetarian meals. **ETH Zurich** has set targets to reduce GHG emissions considering the whole goods basket of the caterer. These targets are achieved e.g., by limiting the amount of meat, fish, and dairy per portion as well as replacement of for example beef with poultry and more vegetarian and vegan meals as well as substituting with a higher fraction of seasonal and regional vegetables.

In a further effort to improve attractiveness of sustainable offers, many institutions are implementing price differentiation in their canteens, encouraging more price-sensitive guests to opt for the meatless options with lower costs. **University of Zurich** and **University of Basel** have already successfully implemented this approach. Similarly, at **ETH Zurich** the cheapest available meals are always meatless.

3 Efficacy of interventions

There are numerous possible interventions to stimulate sustainable food choices in the food environments of universities.¹⁴ Especially, counter position and partially menu position of the most sustainable vegetarian or vegan menu option combined with the use of sustainability labels will significantly increase awareness and alter food choices towards meatless menu options across different settings.¹⁵

The universities measure the number of vegetarian and vegan menus versus meat menus sold and the total catering related GHG emissions to verify successful interventions. However, they cannot attribute this success to any specific action, especially if several interventions were implemented simultaneously. Lack of standardized data from caterers, lack of comparability to data from years affected by the global Covid-19 pandemic and change of data collection methods were also identified as challenges to measuring the impact of implemented interventions. Consequently, none of the interview participants were



able to confidently point out to the interventions and measures which had the greatest positive impact in reducing overall emissions and meat consumption in the canteens.

4 Conclusion and Recommendations

In this article, we report interventions in canteens of three Swiss educational institutions, University of Zurich, ETH Zurich and University of Basel to reduce the consumption of animal-based products while increasing the amount of consumed plant-based food. All universities and their contracted caterers mainly improved the visibility and attractiveness of the meatless meals, for example they change the menu order or communicate the environmental impact of the offerings. Additionally, they train the chefs to prepare attractive sustainable meals. Thanks to the various utilized measures, all institutions report improved sustainability of their gastronomy.

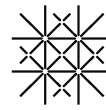
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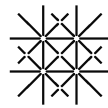
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In summary, our main recommendations to further reduce the environmental impact of the universities' canteens:

- 1. Improved exposure:** We recommend to additionally improve the visibility of the meatless menu options by changing the counter order on top of the menu order and names, since this had a significant effect in literature reports.
- 2. Quantitative data collection:** We recommend implementation of a standardized and quantitative method to track the progress and allow the evaluation of different strategies and comparison of impact across institutions.
- 3. Increased information:** We recommend the raising of awareness through frequent campaigns and information material in all canteens. This measure may improve frequency of ecological choice and acceptance of other measures and enable customers to make more sustainable choices outside of the canteen context.



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5 Appendix 1: List of questions used during the interviews

other canteen? What are your recommendations?

5.1 Targets/ Goals

- Are there short-term and long-term targets/goals in place to improve the sustainability of the ____ canteen? Are there targets/goals with a specific focus on meal offerings?

5.2 Measures and/or Interventions

- What specific measures and/or intervention are in place to reduce meat/animal product consumption in ____ mensa? How does ____ canteen promote the adoption of the Planetary Health Diet*?
- What specific measures and/or intervention are in place to reduce food waste in ____ mensa?
- How have these measures been chosen? Did you follow specific (policy) guidelines or literature reports?

5.3 Evaluation/Impact

- Have these measures and/or interventions been impactful in reducing GHG emissions? Which of these measures and/or interventions have been the most impactful and why?
- What data or metrics are used to assess the environmental impact of these measures and/or interventions? What quantifiable results are available?

5.4 Challenges

- What has been the overall reception of students and faculty to these measures and/or interventions?
- Have there been any setbacks or pushback in implementing these measures and/or interventions and how could you overcome them?

5.5 Universality

- Are the same measures and/or interventions in place at all your canteen's locations? If not, what inspired the unique solutions?
- Do you consider your measures and/or interventions could also be successful at any

5.6 Outlook

- Are there plans to expand or enhance current measures and/or interventions in the future?
- How can universities enhance their efforts to reduce GHG emissions through canteen policies?