

ONE TWO WE: A programme for environmentally friendly canteen meals



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Introduction

Nutrition is the most important anthropogenic activity from an environmental point of view and accounts for 30% of total environmental impacts (see Figure 1).

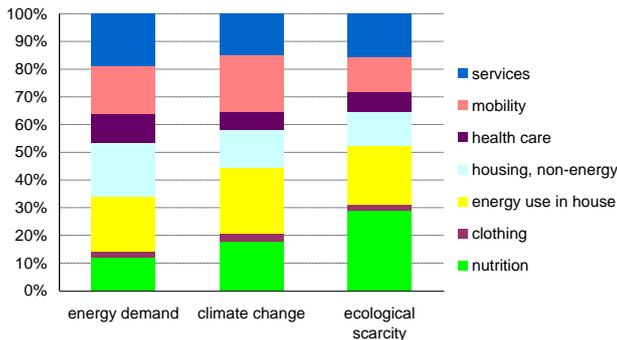


Figure 1: Environmental impacts of different anthropogenic activities [1]

Objective of the programme



Environmental awareness is increasing in the gastronomy sector. The Swiss canteen operator SV Group commissioned ESU-services Ltd. to make an LCA of its full food and non-food purchases in order to identify improvement potentials. The LCA results are the basis of the programme "ONE TWO WE", which aims to assist the customers of SV Group with the reduction of their GHG emissions by 20%. The customers are companies that commission the SV Group with the operation of their canteen in their premises. The programme is elaborated in close collaboration with WWF Switzerland and ewz Zürich.



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Life cycle assessment

The SV Group provided the full list of their food purchases and origin. This has been linked with the LCI database of ESU-services [2]. With this it was possible to make an LCA of all purchases. An average meal served in the canteens operated by the SV Group has a global warming potential (GWP) of 4.1 kg CO₂-eq (see Figure 2). The main life cycle step is the production of the raw ingredients. The production of meat and poultry has the higher GWP.

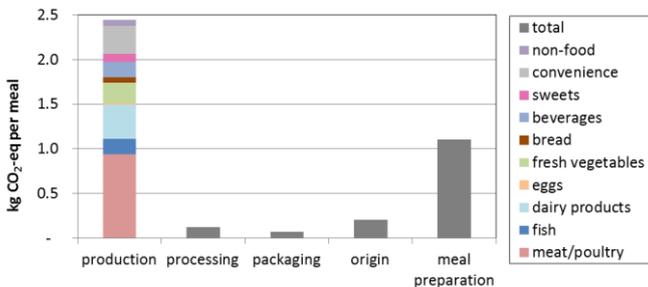


Figure 2: GWP of food purchases and meal preparation per meal

Seasonal food calendar

The environmental impacts of vegetable and fruit purchases depend on the production period, the origin and the means of transport. For a given fruit or vegetable, all monthly supply routes were assessed and the monthly GWP was estimated in order to provide better guidance for purchases along the year. The monthly GWP results were compiled in a seasonal food calendar. Figure 3 shows some examples taken from the seasonal food calendar. Broccoli is cultivated in heated greenhouses in January, February and December in Spain and Italy. Therefore, its GWP is higher. During these months, SV Group will avoid the purchase of broccoli from heated greenhouses and favour deep-frozen broccoli from Switzerland as a better alternative. Green asparagus transported by air freight from Peru in January, February and from July to December have a higher GWP. SV Group will only provide green asparagus from Switzerland and Spain during the growing season.

kg CO ₂ -eq per kg good		Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Broccoli	CH-Lorry	n.a.	n.a.	n.a.	n.a.	0.6	0.6	0.6	0.6	0.6	0.6	0.6	n.a.
	ES-Lorry	7.2	7.2	0.9	0.9	0.9	n.a.	n.a.	n.a.	n.a.	n.a.	0.9	7.2
	IT-Lorry	7.1	7.1	0.7	0.7	0.7	n.a.	n.a.	n.a.	n.a.	n.a.	0.7	7.1
Broccoli deep frozen	CH-Lorry	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Green asparagus	CH-Lorry	n.a.	n.a.	n.a.	1.5	1.5	1.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	ES-Lorry	n.a.	n.a.	n.a.	1.7	1.7	1.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	PE-Air	12.8	12.8	n.a.	n.a.	n.a.	n.a.	12.8	12.8	12.8	12.8	12.8	12.8

Figure 3: Monthly GWP of some vegetables taken from the seasonal food calendar

Conclusions

The programme "ONE TWO WE" was elaborated based on the results of the LCA and further collaborations. It consists of a set of improvement options in four fields (see Figure 4). The range refers to the food assortment or variety. Less meat per meal and more vegetarian meals are targeted. The customer can choose with which improvement options they want to start the programme.



Figure 4: The programme "ONE TWO WE" is structured in different steps

The programme "ONE TWO WE" was launched in October 2012 in Zürich and is being implemented in 70 restaurants until the end of 2013. In 2013 the initiative was awarded the Zurich Climate Prize 2013. The future will show whether also the guests in the canteens support the changes.

References

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