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Edjabou, Maklawe Essonanawe; Petersen, C.; Scheutz, Charlotte; Astrup, Thomas Fruergaard

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## **OCCURRENCE AND TEMPORAL VARIATION OF DANISH HOUSEHOLD FOOD WASTE**

M.E. EDJABOU\*, C. PETERSEN\*\*, C. SCHEUTZ\*, T.F. ASTRUP\*

\* *Department of Environmental Engineering, Technical University of Denmark (DTU), Miljoevej, Building 113, 2800 Kgs. Lyngby, Denmark*

\*\* *Econet AS, Copenhagen, Denmark*

It is estimated that one third of the food produced for human consumption within the European Union (EU-27) is wasted. The largest share of this amount is attributed to the consumption stage of the food supply chain, where up to 40% of the losses occur. The production of food, which is later on being wasted, accounts for use of 24% of the total freshwater resources, 23% of the global cropland area, and 23% of the global fertiliser consumption. Consequently, the production and distribution of food which eventually becomes wasted contribute to growing environmental, societal and economic problem, which could threaten the global food security. Lately, in order to tackle the issue, legislators have proposed measures on global, European and regional levels. As an example, the Danish Government aims to significantly reduce by 50% the total amount of discarded edible food waste.

Quantification of food waste is necessary to estimate the current situation and to evaluate the performance of measures against the reduction targets. Additionally, particular sources of food waste, like households, also require a better understanding of the behaviours associated with the food waste generation. This information enables a good planning and implementation of successful communication and awareness programs to help households to reduce their edible food waste. Currently, only direct reporting methods (e.g. kitchen diary, questionnaires, etc.) have been applied to study the household behaviour related to food waste generation. However, such methods may be considerably affected by errors such as under-reporting. Additionally, these research methods fail to provide the vital information such as, which food waste fraction is more frequently discarded by a household? Is all households generating food waste? Etc.

The general objective of this work was to provide qualitative analysis of food waste data from households in Denmark. Thus, we sampled residual waste from 200 households generated during one week in April 2011, October 2011 and in March 2012. The residual waste from each household was sorted into seven waste fractions of which six were food waste fractions (e.g. vegetable food waste, animal derived food waste, avoidable food waste, etc.). Statistical analyses were carried out to determine the frequency of food waste fractions occurrence, determine the patterns of food waste generation and the potential factors influencing it.

Preliminary results showed that vegetable unavoidable food waste was more frequently discarded by households compared with other food waste fractions and the household size significantly affect the household's behaviour relating to food waste generation.