

**E-Forum on Full-Cost Accounting of Food Wasteage  
Summary of Discussions of Week 2: Climate Change  
(28 October to 3 November 2013)**

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The second week of the e-forum was an opportunity for the participants to reflect on food wastage impacts on climate change and the related societal costs within the Full Cost Accounting (FCA) framework. The objective of this second week was to discuss the evaluation and monetization of climate change impacts arising from food wastage. The key points of the second week discussions are presented below.

- **Attributional vs consequential LCAs.** While attributional LCAs are less complex, they are unable to show the real impacts a change in consumption would have. A consequential perspective would possibly lead to different results than the ones presented, as food waste reduction would have two different impacts: a) less resource use; b) less intensive resource use. Nevertheless, there is need to avoid adding up the cost of less food being available to the environmental cost of food wastage, because this would result in double counting. If food was not wasted, either it would be available for consumption (then the environmental impacts would have occurred), or there would be no need to produce more food (thus avoiding further environmental impacts and costs).
- **Social Cost of Carbon.** The Social Cost of Carbon approach was deemed appropriate for FCA. Nevertheless, such estimates often integrate impacts of climate change as part of other environmental impacts. We need to pay particular attention to potential double counting.
- **Discount rates.** The degree of certitude in the evaluation of GHG (potential emissions/sequestration) needs to be factored in when selecting an appropriate discount rate. There are also arguments in favour of valuing emissions/savings today more highly than emissions/savings in the future. Finally, emissions should be weighted differently if they contribute to (or undermine) the meeting of certain policy target (e.g. 80% emission reduction by 2050). Weighting may therefore change over time, depending on atmospheric concentrations or progress in other sectors/interventions.
- **Land conversion vs intensification.** The environmental impact of land clearing should be studied in comparison with agricultural intensification, to understand what is less desirable according to different situations.
- **Complexity of the global supply chain.** Within the globalised commodity market, food wastage can have an environmental impact on many geographical locations: from its production site (and even upstream where inputs are produced) to where it is wasted and disposed of. GHG emission have a global effect, unlike other environmental impacts, and this is important to keep in mind.
- **Mitigation measures.** Food wastage reduction measures should be assessed in relation to the impact of food wastage itself, given that some reduction measures may be quite energy intensive, such as cold storage.
- **Origins of waste.** From an economic perspective, food waste occurs because food prices are too low for the industrial world. Studies have shown that if food prices increase (in organic supply chain for example), incentives for food waste mitigation increase too.

The e-forum participants mentioned several information sources, including:

- The ENVIFOOD Protocol as a concrete step towards harmonised environmental assessment across for food and drink products in Europe and beyond. The <http://www.food-scp.eu/>
- Lenzen, M, Moran, D., Kanemoto, K., Foran, B., Loberfaro, L. and Geschke, A. 2012 International trade drives biodiversity threats in developing nations. *Nature*. <http://www.nature.com/nature/journal/v486/n7401/full/nature11145.html>
- Kreft et al. 2013. On the effect of higher food prices on food wastage incentives looking at the example of organic carrots. [http://oega.boku.ac.at/fileadmin/user\\_upload/Tagung/2013/Short\\_Papers\\_2013/13-29\\_Kreft\\_et\\_al\\_SGA-OEGA\\_2013.pdf](http://oega.boku.ac.at/fileadmin/user_upload/Tagung/2013/Short_Papers_2013/13-29_Kreft_et_al_SGA-OEGA_2013.pdf)