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Product Carbon Footprinting Schemes and Standards

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Summary

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Product carbon footprints (PCFs) summarise the greenhouse gas (GHG) emissions from goods and services for entire supply chains or parts thereof. They are increasingly used by businesses, governments and other stakeholders to quantify and reduce GHG emissions, and some businesses communicate the climate change impact of their products to their consumers via carbon labels. However, despite the growing application of PCF schemes, the measurement and scientific study of actual GHG emissions from the varied production systems around the globe is still incomplete, especially for agricultural production and processing in developing countries (Brenton et al. 2009, Edwards-Jones et al. 2009). PCF methodologies are currently mainly being designed in industrialised countries which – coupled with the lack of scientific knowledge on GHG emissions in developing countries – raises fears that current methodologies might not adequately represent production systems in developing countries. This might have implications for their export opportunities through mechanisms such as carbon labeling and carbon taxes.

Countries in which standards are being developed include the UK, Germany, France, Switzerland, Sweden, USA, Japan, Korea and Thailand. Some of the schemes communicate GHG emissions numerically, while others try to guide consumers to more ´climate-friendly´ products without providing exact figures. The various PCF schemes adopt different analytical methodologies, and results can also be affected by limited data availability and uncertainty surrounding the value of key variables. These issues may reduce the validity of comparing PCFs between products and countries of origin, even when standardised methodologies are followed. Policy makers and other stakeholders need to understand the differences in approaches adopted by different PCF methodologies and how they can influence the final results, and they need to be aware of the uncertainties surrounding these calculations in order to avoid misleading conclusions.

A case study is used to highlight issues such as the importance of the requirement to include land use change emissions in PCFs, uncertainty in results due to the variation in published emission factors used during the calculations, and the impact of a lack of secondary data specific to developing countries (Plassmann et al. 2010). Characteristics of less developed countries which might make their economies particularly susceptible to the introduction of carbon accounting and/or labelling of food products are briefly discussed, e.g. the need for long distance transport to their markets, the expansion of agricultural activity and resulting emissions from land use change, and the deficiency in data and information relevant to these countries. Finally, some recommendations for the design of more development-friendly PCF methods and further scientific study are given.

References

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