Moving from the ENVIFOOD Protocol to harmonized Product Category Rules and reference data: current and future challenges of the European Food Sustainable Consumption and Production Round Table

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ABSTRACT

The ENVIFOOD Protocol is a food and drink-specific guidance document created by the European Food Sustainable Consumption and Production Roundtable, a multi stakeholder initiative co-chaired by the European Commission and business associations from the food and beverage supply chains. The Protocol has been published in November 2013 and shall be used as a complementary guidance to the Product Environmental Footprint (PEF) and Organizational Environmental Footprint (OEF) guides in the PEF/OEF pilot testing launched by the European Commission. This paper describes the process of creating the ENVIFOOD Protocol as a consensus guidance document from the European food supply chain partners, and describes the key outcomes of the two public testing periods organized in 2013. Finally, we explain how the ENVIFOOD protocol is expected to be used as part of the PEF/OEF pilot testing, and the role it may play outside the application of the PEF/OEF guides.

Keywords: sectorial guidance, PCR/PEFCR, simplified ecodesign, harmonized environmental communication, Europe

1. Introduction

Lack of consistency in the methodologies for assessing and communicating the environmental performance of food and drink products has the potential to confuse consumers and other stakeholders involved in relevant supply chains. It also poses an unnecessary burden on organizations requested to evaluate their product's environmental footprint on the basis of different guidance leading often to different results. In order to address this issue, business associations, other food supply chain partners and the European Commission (EC) have established the European Food Sustainable Consumption and Production Round Table (RT).

This article provides an overview of the process to arrive at the Protocol, describes the process and outcomes of the public consultation and pilot testing and illustrates the next steps for the RT on the development and adoption of Product Category Rules (PCRs) in line with the Protocol and the EC's Product and Organization Environmental Footprint (PEF-OEF) guides. It also provides recommendations on the development of streamlined tools and an adequate database to best support such assessment tools. Finally, it provides insights on the future applications of the Protocol, especially in relation with the EC's PEF. The Protocol and PCRs will allow the development of user-friendly and affordable tools for assessment and communication of the environmental performance of food and drink products in Europe and beyond.

2. Methods: the process to create the ENVIFOOD Protocol

2.1. Setup of the Food Roundtable

The RT is co-chaired by the EC and food supply chain partners on equal footing and supported by the UN Environment Programme (UNEP) and European Environment Agency. When applying a life cycle approach, the RT's unique structure based on transparency and dialogue facilitates an open, results-driven and evidence-based dialogue among all players along the food chain which leads to further harmonization. The RT has delivered on its objectives according to schedule: the publication of the ten "Guiding Principles on the voluntary provision of environmental information along the food chain" (European Food SCP Roundtable, 2010), the Reports on "Communicating environmental performance along the food chain" (European Food SCP Roundtable, 2011) and "Continuous Environmental Improvement" (European Food SCP Roundtable, 2012) and the ENVIFOOD Protocol (European Food SCP Roundtable, 2013).

2.2. Creation of the ENVIFOOD Protocol

Since 2009, RT members have been working together on a commonly-agreed and science-based framework for assessment and communication of the environmental performance of food and drink products in Europe. Based on the above mentioned "Guiding Principles", the RT reached agreement on key methodological aspects at scientific workshops in 2010 and 2011 (Peacok et al., 2011; De Camillis et al., 2012). An analysis of relevant data, methodologies and guidelines for assessing the environmental performance of food and drink was also conducted. The analysis led to a harmonized methodology for environmental assessment, the ENVIFOOD Protocol. The Protocol provides guidance to support environmental assessments of food and drink products conducted in the context of business-to-business and business-to-consumer communication and the identification of improvement options. A public consultation period has been organized between November 21st 2012 and March 31st 2013. The consultation was specifically targeted at stakeholders in the food production chain, but open to anyone interested. The feedback from the public consultation was managed through the Roundtable Secretariat and addressed by subject matter experts from the Working Group 1.

2.3. Use of the ENVIFOOD Protocol in the PEF/OEF testing

The European Commission launched in January 2014 a second call for volunteers to test the development process of PEF/OEF guides. This second call was dedicated to food, feed and drink products. This call also included a testing of the ENVIFOOD Protocol in the development of the PEFCRs. The call closed on March 28th, the selected pilots presented in May, and the testing period started in June 2014. In this testing, the ENVIFOOD Protocol shall be used as a complementary guidance to the PEF/OEF guides (European Commission 2013). The RT will support the PEF/OEF testing as decided in the mandate for Working Group 1 for 2014, mainly on two axes: recommendations on the use of databases, as well as coordination of PCR/PEFCR development.

A first workshop on database development has been organized on June 11th 2014 in Brussels, and key database providers for the food sector have been invited to present their initiatives to the selected pilot testers as well as to interested stakeholders from the RT.

The working group will coordinate the development of product-specific rules (PEFCR/PCR) through the PEF pilot by:

- facilitating coordination and consistency between the pilots, including through participation in PEF pilot consultations and organization of technical workshops
- providing technical support for the interpretation of the ENVIFOOD Protocol, in relation with the EF Technical Helpdesk

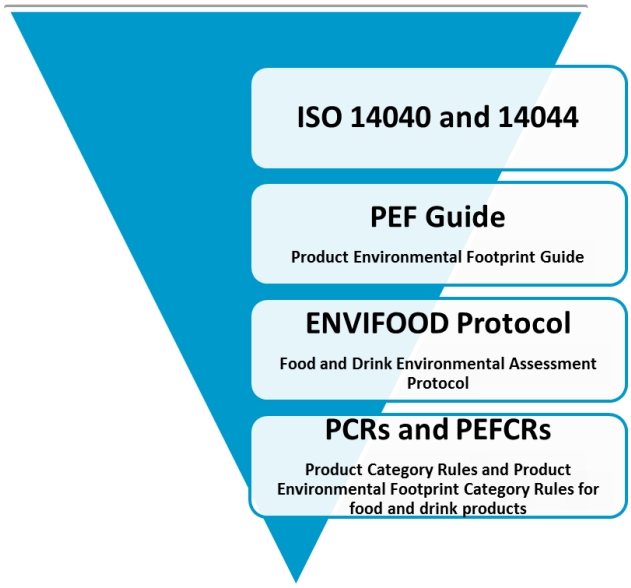

Figure 1. The intermediate position of the ENVIFOOD Protocol as a sectoral guidance in the context of the PEF/OEF pilot phase

As illustrated in Figure 1 above, the ENVIFOOD Protocol lies between the PEF Guide and the PCRs and PEFCRs. For example, assuming we are to assess on environmental performance of different coffee beverage products we would rely on the general guidance on LCA provided by the ISO norms 14040 and 14044 (e.g. the different phases of LCA). The methodology to follow would further be specified in the PEF Guide (e.g. which impact assessment model should be used). The ENVIFOOD Protocol then provides additional guidance specific to the food sector – in the example on coffee, this might be related to functional unit and the calculation of land use change associated to the development of coffee plantations. Finally, PCRs and PEFCRs would specify further details of how the assessment should be conducted at product level, including for instance on the consumer use phase (e.g. heating of water to drink the beverage). Based on all documents, calculation tools to assess environmental impacts of coffee beverages could be developed. Such tools would be sufficiently simple to use without the need of a deep understanding of all available guidance.

3. Results

3.1. Outcomes of the Public Consultation

A total of 11 stakeholders of different affiliations (industry, consulting, government agencies, and research institutes) have submitted feedback during the public consultation period. The feedback highlighted contradictions within the Protocol, misalignments with guidance provided by other institutions, further need for clarifications, as well as highlighting guidance with which certain stakeholders could not agree. Altogether, 144 comments have been received and have been analyzed by members of Working Group 1 of the RT to be included in the updated version of the ENVIFOOD Protocol. Many of the comments received could be used to improve the clarity of the guidance provided. However, a certain number of requests could not be followed because, among other reasons, a consensus on certain questions could not be achieved in the RT or because the points raised were considered more relevant for PCR than for the ENVIFOOD Protocol itself.

3.2. Outcomes of the Pilot Testing

A call for volunteers to evaluate the draft version of the ENVIFOOD Protocol has been made by the RT at the end of 2012. The pilot testing period lasted from March 27th 2013 to October 15th 2013 and actors of the food supply chain have been invited to test the ENVIFOOD Protocol in their organizations on case studies of new product developments or comparisons of existing products with product alternatives or competing products. The participants were free to choose the product to test. Also, the participants could choose whether or not to also

communicate environmental performance based on the outcomes of the testing (the RT did not, at that time, recommend specific communication tools).

Overall, 18 organizations participated to the pilot testing. The participants included a wide range of manufacturers from the food and drink sector, research institutes, as well as trade associations. Written feedbacks were gathered from the 18 pilot projects and a workshop with pilot testers and RT members took place in February 2014 in order to reach consensus among the pilot testers on the modifications to include in the ENVIFOOD Protocol. The comments have been assessed by the Working Group 1 of the RT and classified into three categories:

1. Comments for immediate change, mainly concerning editorial comments or clarification needs. These comments have been incorporated into version 1.0 of the ENVIFOOD Protocol (published on Nov 20th 2013)
2. Medium term changes: some comments were requesting further guidance which could not be incorporated into the ENVIFOOD Protocol in the small amount of time available between the pilot testing and the publication of the Protocol. Therefore, these comments have been addressed in a separate guidance document which will be available in spring or early summer 2014 on the RT's website. In this document there will be a clear focus on Land Use Change (LUC) as the need for clarification on this topic was often mentioned (although the technical recommendations from the ENVIFOOD Protocol were not challenged)
3. Long term comments: some comments on fundamental questions could not be addressed, either because they would have required significant changes to the document, or because no consensus could be reached on them in the Working Group 1. They will be kept in a separate list and addressed during the next major revision of the ENVIFOOD Protocol.

3.3. Example: specific Results from the Testing of the Feed Sector

This paragraph describes the main outcomes of the pilot test of the ENVIFOOD Protocol undertaken by the EU feed industry, represented through the European Feed Manufacturers Federation (FEFAC), as an illustrative example of feedback from the pilot testing.

As an active member of the EU Food SCP, FEFAC contributed to the development of the ENVIFOOD Protocol. It was then a logical step to participate in the pilot test of ENVIFOOD Protocol in order to practically evaluate its relevance and applicability for the compound feed industry. This pilot test was undertaken by a consortium of feed associations and feed companies from the EU but also from outside EU.. Testing the recommendations of the ENVIFOOD by undertaking a concrete cradle to gate assessment for 21 feed compositions for feed for land animals as well as fish enabled to draw the following conclusions:

- It is currently necessary to be an experienced LCA practitioner in order to be able to deal with the requirements of the ENVIFOOD Protocol. Further work remains necessary so that these recommendations can be implemented by feed companies on a regular basis.
- The development of a comprehensive database, aligned with the requirements of the ENVIFOOD Protocol would be useful to facilitate the implementations of the requirements of the ENVIFOOD Protocol.
- For impact assessment, going through all the impact categories mentioned in the ENVIFOOD Protocol was not considered as something feasible. The selection criteria recommended in the ENVIFOOD Protocol were really useful to reduce the list to a manageable level.
- The recommendations regarding assessment of data quality were difficult to implement and considered as a way to try to quantify a subjective interpretation of data quality, which can often be just as well (or even better) discussed in a qualitative way. Moreover, there is no easy way to combine these types of quality indicators for a large range of data points (like in compound feed production) and end up in a meaningful cumulative assessment.
- The ENVIFOOD Protocol however provides added value when it comes to the environmental assessment of feed and constitutes a very relevant starting point for a feed PCR.

4. Discussion

The ENVIFOOD Protocol is also intended to be used outside the context of PEF/OEF. The main reason for this is that many actors in the food sector are interested in applying one single LCA methodology throughout their organization, which may be located in more than a country and even beyond the EU. Therefore, if the ENVIFOOD guidance is implemented as part of the PEF/OEF approach in these organizations, they would like to also use the same guidance outside the context of PEF/OEF. The RT therefore is in contact with organizations inside and outside Europe that work on sustainability in the food sector, and is interested in promoting the guidance developed in the RT also in other organizations.

5. Conclusion

The RT as a large European stakeholder initiative has successfully established scientifically solid and harmonized guidance on life cycle assessment for the food and drink sector. A number of guidance documents have been published (ENVIFOOD Protocol, but also related documents on communication, databases, PEFCR/PCR development, etc.) over the past years. While the ENVIFOOD Protocol and associated documents do not solve all challenges in assessing the environmental impacts in the food sector, the RT has created a platform for exchange of views between stakeholders, and has managed to establish a methodology that can further evolve as consensus forms and scientific methods improve.

6. References

European Commission (2013) Guidance for the implementation of the EU Product Environmental Footprint (PEF) during the Environmental Footprint (EF) pilot phase (http://ec.europa.eu/environment/eussd/smgp/pdf/Guidance_products.pdf, accessed March 2014)

European Food SCP Roundtable (2010) Voluntary environmental assessment and communication of environmental information along the food chain, including to consumers, Guiding Principles (http://www.food-scp.eu/sites/default/files/Guiding_Principles.pdf, accessed March 2014)

European Food SCP Roundtable (2011) Communicating environmental performance along the food chain (http://www.food-scp.eu/files/ReportEnvComm_8Dec2011.pdf, accessed March 2014)

European Food SCP Roundtable (2012) Continuous Environmental Improvement (http://www.food-scp.eu/files/Continuous_Environmental_Improvement_FINAL_21_November_2012.pdf, accessed March 2014)

European Food SCP Roundtable (2013) ENVIFOOD Protocol, Environmental Assessment of Food and Drink Protocol, European Food Sustainable Consumption and Production Round Table (SCP RT), Working Group 1, Brussels, Belgium (http://www.food-scp.eu/files/ENVIFOOD_Protocol_Vers_1.0.pdf, accessed March 2014)

Peacock, N., De Camillis, C., Pennington, D., Aichinger, H., Parenti, A., Rennaud, J.-P., Raggi, A., Brentrup, F.,
Sára, B., Schenker, U., Unger, N., and Ziegler F. (2011): Towards a harmonised framework methodology for the environmental assessment of food and drink products. The International Journal of Life Cycle Assessment 16(3): 189-197

De Camillis, C., Bligny, J.-C., Pennington, D., and Palyi, B. (2012). Outcomes of the second workshop of the Food Sustainable Consumption and Production Round Table Working Group 1: deriving scientifically sound rules for a sector-specific environmental assessment methodology. The International Journal of Life Cycle Assessment 17(4): 511-515.

This paper is from:

Proceedings of the 9th International Conference on Life Cycle Assessment in the Agri-Food Sector

8-10 October 2014 - San Francisco

Rita Schenck and Douglas Huizenga, Editors
American Center for Life Cycle Assessment

The full proceedings document can be found here:
http://lcacenter.org/lcafood2014/proceedings/LCA_Food_2014_Proceedings.pdf

It should be cited as:

Schenck, R., Huizenga, D. (Eds.), 2014. Proceedings of the 9th International Conference on Life Cycle Assessment in the Agri-Food Sector (LCA Food 2014), 8-10 October 2014, San Francisco, USA. ACLCA, Vashon, WA, USA.

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ISBN: 978-0-9882145-7-6