

7th Meeting of the Task Force on GHG Methodologies

The Hague, 16 March 2010

Background document for discussion on next steps

Background

To respond to the need for transparent life cycle analysis (LCA) reporting for the bioenergy sector, the Global Bioenergy Partnership (GBEP), at its 3rd Steering Committee meeting on 8 May 2007 in New York, established the Task Force on Greenhouse Gas (GHG) Methodologies.

In June 2009, the Task Force published “The GBEP Common Methodological Framework for GHG Lifecycle Analysis of Bioenergy,” providing a reference for comparison across LCA methodologies as well as a set of pertinent questions for countries/institutions to ask when seeking to develop a methodology. The methodological framework is flexibly designed to account for different circumstances, conditions and systems of production (including feedstocks used). Furthermore, the framework is intended to enable a multi-tiered approach to the analysis of GHG emissions depending on the level of sophistication employed in the production of the biofuel and the data available.

Biofuels producers, scientists, policy makers and other stakeholders have been encouraged to respond to the checklist’s questions and provide comments and feedback to the GBEP Secretariat in order to identify any needs for further improvements. In addition, a dedicated Partners-only web page has been set up on the GBEP website in order to allow Partners and Observers to fill in an interactive version of the Version Zero framework, to provide comments, and to upload relevant documents and available studies in order to provide GBEP members with examples of how the framework can be used. On the basis of the collected results, the GBEP Secretariat and Task Force leaders have drafted the present paper to support the discussion in the next GHG Task Force meeting on the 16th of March 2010.

Completed tests and feedback from users

As of February 2010, five countries have provided the Secretariat with completed questionnaires and made them available to other Partners (namely: France, Germany, Italy, China, as well as El Salvador and the Dominican Republic through UNF). In addition, four private companies and an association (Mossi & Ghisolfi, Novozymes, Eni, Itabia, Biofuel Italia) have provided comments and completed questionnaires.

Comments received so far on the Methodological Framework are in general positive, as it is viewed as an opportunity for scientists and researchers to acquire a deeper comprehension of the needs of an LCA. The Framework is seen as a useful tool for documenting congruence and the completeness of LCA work. Nevertheless, some users have noted that certain elements of the LCA are not completely clear and difficult to analyze with precision. For example, it was suggested particular attention should be devoted to the development of appropriate boundary conditions. Users also noted that incorporation of sensitivity analyses would be valuable, in order to more fully explore sources of discrepancy between LCA for biofuels and fossil fuels. Finally, it was suggested that the Framework should include

reference input data that are generally agreed-upon for standard feedstock, processes and biofuels, so as to guarantee an optimum starting point for LCA comparisons; this would be an expansion of the scope of the Methodological Framework, and will require consideration by the Taskforce.

Proposals on the way forward

LCA is an internationally recognized technique for evaluating the natural resource requirements and environmental impacts from the materials and processes involved in the manufacture of a product or service¹. It has been used extensively in the bioenergy sector to investigate the energy and carbon balances of production chains, and in a smaller number of cases has been used to look at wider environmental impacts. In addition, The Copenhagen Accord calls for accounting for targets that is “rigorous, robust and transparent” and the World Resources Institute recently called upon Parties to agree to rigorous and consistent estimation and accounting methodologies².

The “GBEP Common Methodological Framework for GHG Lifecycle Analysis of Bioenergy” can represent an internationally recognized and effective tool to increase transparency. In order to further the Methodological Framework, several possible refinements building on the comments and feedback received from users are outlined below:

- Develop a comprehensive preface on the LCA method to provide a context for comparative assessment of biofuels with respect to GHG emissions, with the aim to guide users on how to carry out LCA for biofuels based on reasonable guidelines and assumptions on methodological issues and on how to deal with the associated uncertainty of key parameters. Such an introduction could include reference to the different LCA types (e.g. consequential LCA – CLCA - and attributional LCA - ALCA), in order to clearly define every step of the framework. This preface would allow non-experts and different kinds of stakeholders to understand methodologies and choices.
- Insert agreed graphical representations (flow-chart/flow diagrams) to be used as a quick visual “checklist” for each review to simplify comparisons of comprehensiveness and consistency in the system definition (see: IEA Bioenergy Task 38 or Schlamadinger et al. 1997).
- Provide an agreed set of definitions or, where discrepancies may arise from different national definitions in use, provide a brief list of the main internationally accepted definitions (EISA, RTFO, RED, ISO 140 44, IPCC).
- Replace, wherever possible, open-ended requests for descriptions of assumptions with closed Yes/No questions in order to make comparisons among questionnaires more accurate.

¹ ISO (2006) ISO 14040: 2006 – Environmental management: life cycle assessment – principles and framework. International Standards Organisation.

² Levin, Kelly and Rob Bradley. “Comparability of Annex I Emission Reduction Pledges,” WRI Working Paper. World Resources Institute, Washington DC. Available online at <http://www.wri.org> February 2010

- Develop guidance to assist users in completing the questionnaire especially where descriptions and assumptions descriptions are necessary and not replaceable by closed questions. This will allow users to clearly understand steps and aid in choosing among a set of available existing options.
- Finally, a special effort could be devoted to developing the most effective communication strategy, focusing on developing countries needs and limitations in order to provide a reference for those countries when designing national policy frameworks. This activity could be expanded to a suitable and effective capacity building tool for developing countries.