

Détails de la contribution

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Track / type de contribution: **A-VIII Generating data: LCA databases and datasets quality, assurance and verification**

Developing a Quality Management System for LCA data sets – the case of the LCA-CIRAD platform for tropical products

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Résumé

Since 2009, CIRAD (French Agricultural Research Centre for International Development) has been developing an ambitious LCA platform for analysing the life cycle of tropical agricultural products, involving a team of around 15 LCA practitioners, calculation tools and pooled databases. Implementing LCA in Mediterranean and tropical contexts raises specific challenges. In particular, data scarcity on foreground agricultural systems and the lack of LCI data sets for background processes in those contexts require significant resources to collect large amounts of LCI data on-site. Where primary data are not available, proxies must be found and adapted. Hence large data sets need to be compiled, changes tracked and experiences shared.

Creating high-quality shareable data sets based on high-quality data was the main ambition for the new LCA platform right from the start. To this end, data sets must be created with the greatest care and transparency, especially when they are implemented in a pooled database, where providers of data sets and potential users may be distinct. The best way to ensure that data sets can be properly reused is to develop an integrated quality management system (QMS) at practitioner level, based on common procedures for data collection, data and metadata implementation in LCA software and nomenclature for data set review processes.

The LCA-CIRAD team started to develop its QMS in 2012. The QMS is managed by a database engineer in charge of standardising and pooling the resources of the platform. The QMS is based on four activities:

- 1) LCA data quality management: corpus of procedures on data set quality (compulsory acceptance) and training for practitioners.
- 2) Data & tool management: mirroring of calculation tools, remote access to the platform, versioning control.
- 3) Intellectual Property management: licence development, specific training in database property rights, intellectual property policy and licensing.
- 4) Practitioner skill management: technical support, in-service training in advanced features of tools.

Since it has been deployed, the LCA-CIRAD QMS has followed an on-going improvement cycle, with regular feedback from practitioners, leading to regular updates of procedures. The implementation of QMS guidelines by permanent LCA scientists, interns and PhD students at CIRAD has markedly improved the quality of LCI metadata, data set transparency and reuse of LCA projects.