

Putting the metrics behind sustainability at ADEME.



Conversion of ACYVIA database from SimaPro to ILCD format

ADEME



Agence de l'Environnement
et de la Maîtrise de l'Énergie

The challenge

The French Environment and Energy Management Agency ADEME (L'Agence de l'environnement et de la maîtrise de l'énergie) has been working on initiatives to provide consumers and manufacturers with comprehensive information on the environmental impacts of goods and services. For consumers, this information promotes awareness of the environmental impact of their purchases. For producers, this information is an encouragement to mitigate these impacts and improve their production systems through eco-design.

After doing an environmental labelling project on consumer products from the Grenelle de l'environnement and working to obtain objective and scientifically robust environmental information, ADEME is now focusing on developing life cycle inventory (LCI) data. Their AGRIBALYSE® database was developed to provide data for the agribusiness sector. To complement AGRIBALYSE® with LCI data on agro-industrial transformation processes, ADEME recently developed the LCI database [ACYVIA](#), which stands for *Analyse de Cycle de Vie dans les Industries Agro-alimentaires* (life cycle analysis in agri-food industries). The database includes LCI datasets for agro-industrial transformation processes in France, with the main objective to be used for environmental labelling, life cycle assessment (LCA) and eco-design. In total, more than 60 French agro-industrial plants provided data. For the development of the ACYVIA database, ADEME teamed up with sector representatives and with experts in LCI.

1327 processes of the ACYVIA LCI database include:



Pork: dry ham, superior cooked ham, dry and fresh sausage



Beef: fresh and frozen ground beef



Dairy: soft and hard cheese, cream, soft and hard cheese whey



Canned goods: cooked dishes and frozen vegetables



Edible oils: crushing and refining of rapeseed, sunflower and grapeseed edible oils, refining of linseed and copra edible oils



Flour: cleaning, moistening and milling of wheat, eventually bagging of flour and by-products



Wine: red, rose and white wines production in cooperative and private winery



Distillery: brandy, calcium tartrate, ethyl alcohol, grape pulps, grape seeds, liquid potassium fertiliser and methane.



Making ACYVIA available in ILCD format allows adoption by and data exchange with different LCA software tools, reaching a much wider audience.

The database has three levels of aggregation with different intended audiences. The idea is to allow different stakeholders to model and use the impacts resulting from different food transformation processes:

1. **Factory:** fully disaggregated datasets to be used by manufacturers. The datasets can be configured to fit the current production process, adapt parameters, add real input data and thus implement eco-design scenarios.
2. **Industrial:** level-1 disaggregated datasets to be used as representative products of the agri-food production processes in France, with less granularity and the use of sector average data. This datasets are meant to be used in eco-design and LCA tools.
3. **Black box:** fully aggregated datasets to be used by final consumers and for labelling purposes.

PRé solution

The ACYVIA LCI database was initially created in SimaPro. To help the database get more reach, ADEME wanted it to be made available in the ILCD (International Reference Life Cycle Data System) format. PRé carried out this conversion.

For each original SimaPro dataset, we created an ILCD-compliant dataset with various levels of disaggregation. This includes the mapping of substances to ILCD-compliant flows, the inclusion of entry-level metadata information and the validation of the database to fulfil the format requirements. The deliverables were entry-level ILCD-compliant datasets of the ACYVIA LCI database.

Business value

Making ACYVIA available in ILCD format allows adoption by and data exchange with different LCA software tools, reaching a much wider audience. Availability in ILCD format also means the data is consistent, robust and in accordance with the quality requirements set by the European Commission. Now, LCA practitioners can combine the existing AGRIBALYSE database with food processing data from the ACYVIA database, which gives them access to all required secondary data to do their own assessments. Also, because the data is available in disaggregated format, they can adapt it to make it representative for their context.





Creating business value through sustainability metrics

Sustainability metrics consulting

Sustainability in business has become a core business concern and a driving factor in creating business value. PRé offers a range of consulting services, provided by a team of experts who will work with you to choose, create and deliver the right metrics for your sustainability goals.



INTEGRATION

Developing innovative new metrics for new challenges

Societal and stakeholder expectations for implementing sustainability in business are becoming more demanding. Sometimes, off-the-shelf metrics cannot help you answer their questions. PRé has extensive experience in life-cycle-based metrics pioneering: implementing cutting-edge new product metrics and developing completely new, scientifically sound and robust metrics. PRé has been the driving force behind many ground-breaking initiatives like ReCiPe or the Handbook for Product Social Impact Assessment.



PIONEERING

Integrating sustainability metrics in your business

To create business value from sustainability, your business needs to integrate sustainability metrics across its business functions. You can't improve what you can't measure. PRé has the expertise required to help you choose the right metrics and to integrate sustainability into your day-to-day operations. PRé also supports you in increasing the efficiency of your LCA work and in empowering your LCA practitioners.



DELIVERY

Expert LCA knowledge to measure sustainability performance

LCA has proven to be a robust and science-based way to measure and communicate your sustainability performance. PRé can review your LCA studies, deliver EPDs, footprints and other metrics, and provide you with completely new LCA studies to measure your impact. Our consultants are renowned for their expertise in specific topics, such as impact assessment, uncertainty, normalisation, toxicity, social sustainability and databases. PRé offers training courses and in-house training that build a solid knowledge base to help you conduct LCA studies yourself.

Market-leading businesses that create value from sustainability metrics

PRé has built a worldwide reputation as a leader on environmental and social impact assessment. We work with organisations and institutes such as the European Commission, European Space Agency, Heineken, Philips, L'Oréal and DSM.



Get in touch

We are happy to hear from you and discuss your sustainability challenges and opportunities.

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About PRé

PRé has been a leading voice in sustainability metrics and life cycle thinking, since 1990, pioneering the field of product and supply chain sustainability metrics. We've developed some of the world's most widely recognised and applied environmental impact assessment methods, as well as the world's leading LCA software, SimaPro. From the very first, we have not only focused on developing the science of LCA, but also its application – helping companies create value by using state-of-the-art measuring, monitoring and analysis methodologies to improve their sustainability performance.

