ecoSpold version 2
improved data format meeting the challenges of future LCI databases

2nd LCM conference
Beijing, China / November 16, 2009

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**ecoSpold version 1**

**Historical facts**

- ... is «Open source»
- ... is available as an import (and partly as an export) interface implemented by all major LCA software providers.

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**ecoSpold v1 ...**

- ... is Compliant with ISO/TS 14048;
- ... enables extensive documentation, individual determination of allocation factors, confidential data management (if required);
- ... facilitates the communication between LCA practitioners;
- ... is working, is widely applied (e.g. US, AUS, ecoinvent, ...) and accepted;
Motivation
Drivers for the revision of the ecoSpold format

- Databases grow, and maintaining consistency between datasets over geographies and time become an increasing concern
- Increasing flexibility of application for different models (attributional, consequential, substance flow analysis, life cycle costing, IO-LCA, equilibrium models)
- Removing annoying issues discovered during use of version 1
- Support for more language versions
- Support for formulas, images, numerical data quality indicators, multiple classifications, tags
- Taking advantage of new IT developments (e.g. UUIDs)
- Data exchange to ILCD

Timetable
Revision process for version 2

- Ecoinvent ad hoc Working Group on Database Structure with 12 selected experts
- Open hearing (October-December 2008)
- First public beta May 2009
- Separate meeting with ILCD developers to ensure easy conversion
- Second public beta August 2009 with conversion tool from v1
- Editing tool (ecoEditor 2) under development (internal testing)
- Extensive testing during the next half year
- Final release early 2010
- Implementation in ecoinvent database for 2011 release
What is new?

1) Facilitating database maintenance & extension

- Option for parent-child relationships between activity datasets
- Option for expressing geographical information using GIS coordinates
- Option to use formulas and variables in numerical fields
- Use of UUIDs for internal references in datasets
- New field to declare macro-economic scenario for forecasted activities

What is new?

1) Facilitating database maintenance & extension (i) parent-child relationship

geography-related information
What is new?
1) Facilitating database maintenance & extension
(ii) geographical information

- More than just „countryCode“ ...
  - point sources,
  - linear sources,
  - specific surface area
- KML format
- Default values for all countries / regions (similar to ecoSpold v1) in separate KML file
What is new?

2) support for alternative modelling options

- Option to use tags & multiple classification schemes for activities and products, of which the “category/subcategory” classification for activities is only one
- Option to declare market model (attributional, consequential) used for an activity
- Separate names for activities (processes) and products, allows flexible linking between activities via markets
- New field to declare an activity as a market activity
- New field to declare technology level (new, modern, current, old, outdated) for activities, for use in identification of marginal suppliers to a market
- Reduction of the number of required fields
- Addition of joker elements to enable simpler extension of format
What is new?
3) Support for mass, energy & monetary balances

- Option to add multiple properties of exchanges, e.g. price, dry mass, water content, energy content, elementary or substance composition
- New numerical field to declare annual production volume
- New output type: “addition to capital goods”
- New field to declare product transfer coefficients (outputs relative to inputs)

What is new?
4) Support for languages / better documentation

- Support for language versions
  - Option to add language versions for all text fields
- Support for better documentation
  - Option to add images
  - Option to add more than one validator
  - Fields for uncertainty information made more general and new numerical fields for the 5 data quality indicators
Compatibility & Implementation

- Compatibility with ecoSpold version 1:
  - Forwards compatible (converter from v1 to v2)
  - NOT backwards compatible (too many new fields and functionalities), however
  - Does NOT require database changes in LCA software, except the ability to read ecoSpold 2 files

- Compatibility with ILCD format:
  - Complete, with use of additional namespaces
  - Converter to ILCD under development (expected November)
  - ecoEditor v2 can then also be used to produce ILCD datasets

ecoEditor 2 - under internal testing ...
Conclusion

ecoSpold v2 data exchange format:

- Remains open source and flexible for different applications
- Meets the challenges raised by recent and expected developments in LCA modelling, the growth in data availability, and the expansion of the application area for LCI data
- Is expected to be implemented in all major LCA software by 2011

Thank you


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