Future development of the ecoinvent database
ecoinvent after version 3.1

- Version 3 brought many technological and methodological changes and improvements
- Version 3.1 brings a new system model, but also a lot of new and updated data
- The new framework offers much room for development without much technological development
  - Focus on data and update of the core data
  - Development of selected new system models
  - Targeted additions of functionality
  - Increase global coverage of the database
Update of the core data

- Version 3.1 brings an update of the wood sector
  - Significant update, replaces older data

- Further sectors would benefit from updates
  - Individual updates and specific improvements of existing data over various versions

- Focus on updates in addition to new data

- Reviews of core sectors
  - Check for reliability and consistency
  - Expand geographical coverage when relevant
  - Identify datasets where newer data are available
  - Carry out individual updates or whole sector updates
Update of the core data

- Metals
- Mining
- Energy and energy resources
- Freight transport
- Waste treatment and Recycling
- Electronics
- ...
Update of the core data

- Complete sector updates bring several benefits
  - Consistency in modelling and structure
  - Consistent use of available data sources
  - More transparency of the sector

- Data for new sectors and areas of impact are also planned
  - Consumer goods (incl. textiles and food products)
  - Household and office activities
  - Buildings and infrastructure
  - Indoor emissions
  - Noise
Developments of new system models

- 3 system models offer choice to the users
- Too many system models lead to potential confusion
- Further models for end-of-life scenarios
  - Consistent scenarios for faster sensitivity analysis
  - Implementation of PEF end-of-life modelling (changed once already, currently undergoing review)
- Other models possible for specialty or non-LCA applications
Development of new functionalities

- Careful evolution of the version 3 system
- Assessment of new methodologies and functionalities
  - Review of benefits, problems and acceptance
- Development of additional functionalities
  - Maintain compatibility
  - Optional and non-intrusive
  - New features for data providers that users will not notice
ecoinvent as a global database

- Make use of new functionalities to grow the database
- ecoinvent started as a Swiss database
- International supply chains demanded international data collection
- Now the most used global database of known quality
- Growth can be challenging:
  - Expertise at ecoinvent is Switzerland/Europe-centered
  - Data for different regions benefit from local expertise
  - International data collection ideally organized in a collaboration of regional data collection networks
ecoinvent as a global database

- Collaboration with CIRAIG in Canada to build an LCI database for Québec
- Data are integrated into the existing global supply chains
- Local data collection efforts can rely on global background data and grow organically into local process systems
- Other collaborations are in planning or are already submitting first datasets
Cooperation of LCI initiatives

- Cooperation with several emerging economies to support LCI networks in developing countries, supported by the Swiss government (SECO)
- Use the existing expertise of ecoinvent starting out as the Swiss LCI network
- The goal is to:
  - Build expertise on life cycle thinking and LCA
  - Create capacity for LCI data collection
  - Create background data for local (and global) studies
  - Grow into self-sustaining regional LCI competence centres
Conclusions

- Ensure that the **core sectors** of the database remain valid
- Provide **new system models** if beneficial to the user base
- **Assess** and **fine-tune** new features of the database
- Targeted development of useful improvements
- Expand the **global coverage** of the database and form network of collaborators
Thank you for your attention!

New system models?

Where should the database go?

Questions and Discussion

Useful features?

Data updates?

Less useful?

New sectors?

www.ecoinvent.org