Ongoing and future development

ecoinvent after version 3.4

- Strategic direction
- New and updated data
- Technical developments
- Collaborations
- ecoinvent as a product

Direction: Main focus of the next year

- Update older data
- Update and improve documentation, clarity and guidance
- Expand geographical coverage

- Improve the quality of results
- Improve ways to understand and interpret results

Data updates

- Metals (non-ferrous)
  - Also expansion of coverage
  - New mining regions and recycling
- Global supply chains
- Refinery operation and fuel supply chain
- Cracking and steam reforming

Data updates

- General project in the works to assess and update all outdated data
  - Rolling updates over years
  - Focus on the sectors, datasets and values most in need
  - Documentation review as well
- Analysis tools guide the process
  - Identification of key datasets and even key values in the database

Documentation and clarity

- Focus on increasing the clarity of the database for the users
  - Improved user guidelines
  - Expanded documentation
  - Updates to datasets to increase clarity
  - Ease-of-use improvements on the website, for user and data provider tools

Geographical coverage

- Many datasets from the SRI project, supported by EMPA and the Swiss SECO
- **Latin America**: electricity, agriculture, animal husbandry, aquaculture, metals, cement and concrete
- **South Africa**: electricity, agriculture, animal husbandry, coal, metals, cement and concrete
- **India**: electricity, coal, iron and steel, cement and concrete, agriculture, textiles, plastics recycling
- **Global scale**: Freight transport, tourism

New supporting models and tools

- Data entry tools
  - Import of data from different sources, using different formats
- Data generation support
  - Petroleum refining
  - Agricultural production
  - Solid waste treatment
  - Wastewater treatment

Large-scale modifications with OCELOT

- Merging and combining data sources often requires large-scale modifications before allocation and matrix calculations
  - Commercial software tools generally do not facilitate such projects
- ecoinvent is a partner of the OCELOT project with PSI (supported by Switzerland's CTI fund)
- OCELOT is a free, open-source implementation of ecoinvent's linking and allocation algorithms
  - Python
  - https://ocelot.space/

Large-scale modifications with OCELOT

- Adding large amounts of datasets based on third-party data is easily possible
  - Disaggregating ecoinvent datasets to match other data sources (e.g. adaptation for social databases,…)
  - Creating localized versions of datasets by providing values for key parameters
  - Substituting large amounts of datasets throughout the supply chain
    - Forecasting studies
  - Changing allocation rules or allocation factors

- Some experiments increase database size more than tenfold

Collaborations

- GLAD (Global LCA data access) technical partner
- PEF data provider
- Social LCA database connectivity

Conclusions

- The main focus for the next years will be updated and more easily accessible core data sectors
  - Data updates, tools, improved documentation, ease of use
  - New data will significantly expand the geographical coverage
- Expanding our network of data providers and increasing the value of the data through partnerships

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Thank you for your attention, next a few words on the database product