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- General project in the works to assess and update all outdated data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
The world’s most consistent and transparent Life Cycle Inventory database

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