



Swiss Centre for Life Cycle Inventories

A joint initiative of the
ETH domain and Swiss
Federal Offices





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Quality control measures in the ecoinvent 2000 project

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Quality control measures



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- Three quality control measures in the ecoinvent 2000 project:
 - Quality guidelines
 - Internal data (and report) review for each dataset
 - Data format requirements and centralised lists for names (products / services and elementary flows), units, country codes, *et cetera*



Quality guidelines



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- System boundaries: expert knowledge, no fixed rules (such as percentages of mass contribution)
- Estimates: applied on expected pollutants where no information is available
- Electricity mixes: national supply mixes or company/association specific mixes
- Standard transport distances / waste treatment options
- Multi-output (incl. recycling) processes:
no system expansion, no credits
- Quantitative uncertainty assessment: lognormal distribution and standard deviation per individual input/output of unit processes

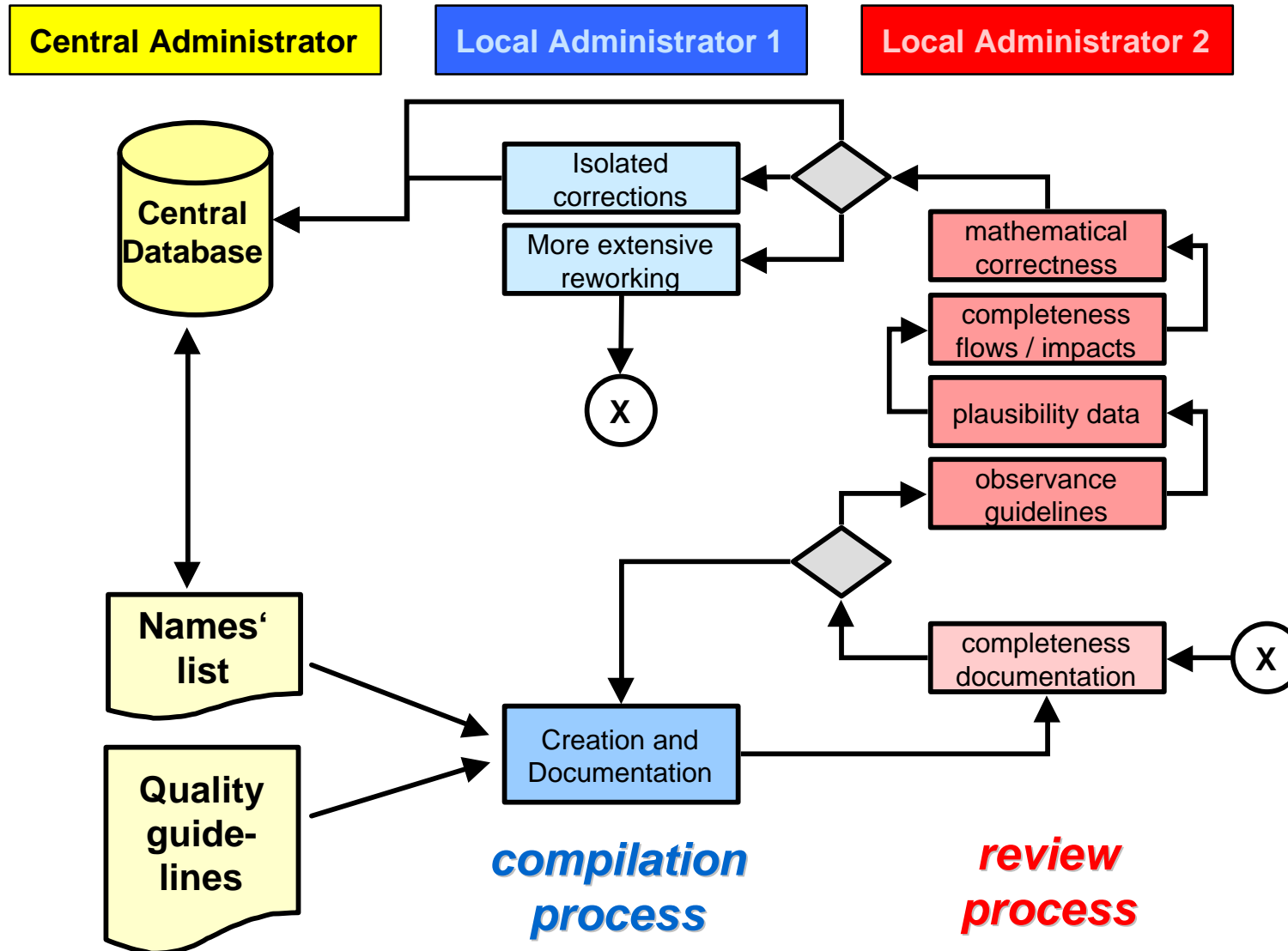


Data compilation and review



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EcoSpold: ecoinvent data format



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- Initially derived from SPOLD 97/99
- Adapted to ISO/TS 14048
- Allows for
 - extensive documentation
 - individual setting of allocation factors
 - confidential implementation of LCI raw data
- Covers
 - LCI raw data,
 - LCI results,
 - impact assessment methods,
 - impact assessment results

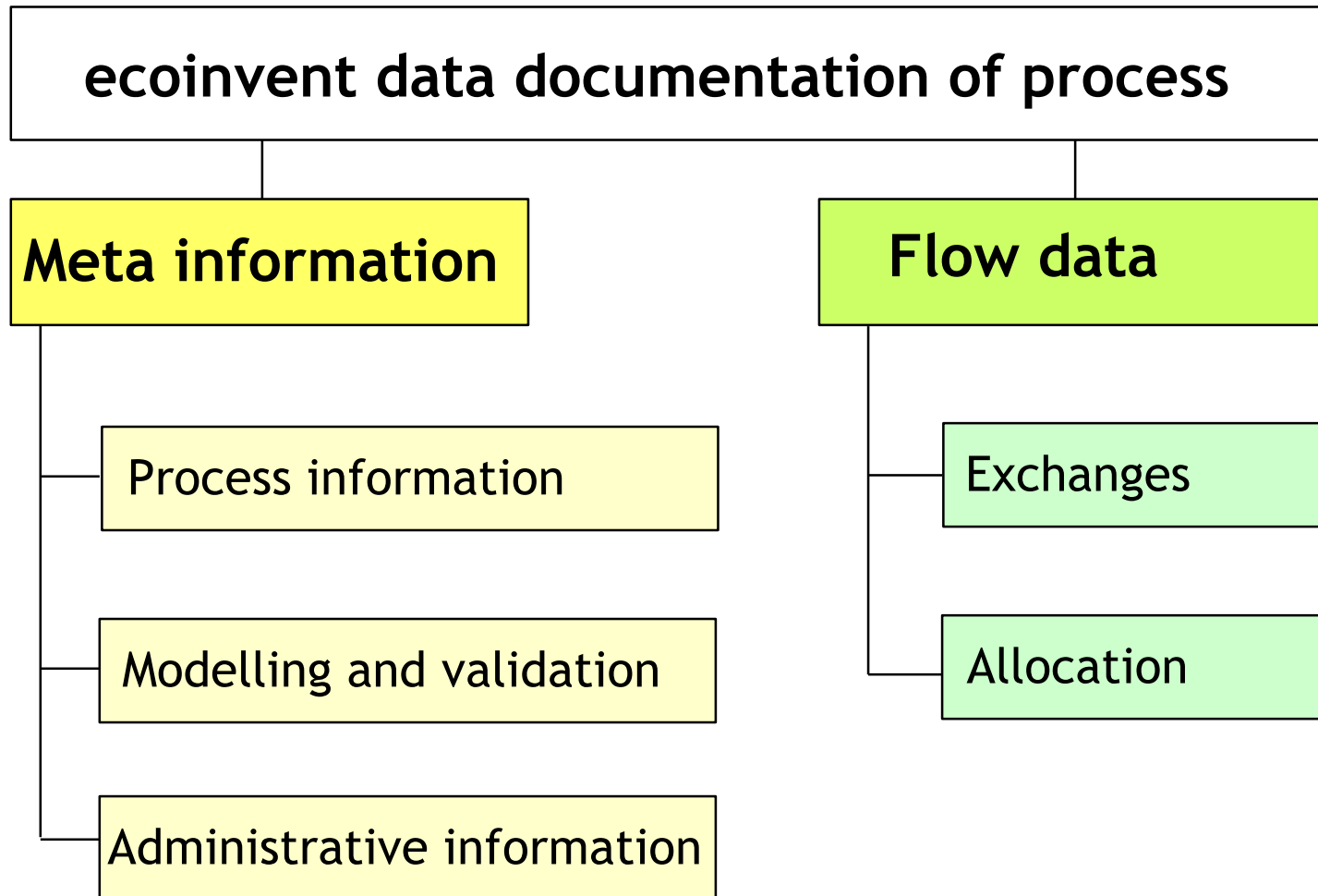


EcoSpold: structure



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EcoSpold areas: data requirements



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Area	Unit proc.	Results	Elem. flows	Impact ass.
ReferenceFunction	Always	Always	Always	Always
Geography	Always	Always	Never	Never
Technology	Possible	Possible	Never	Never
TimePeriod	Always	Always	Never	Possible
DataSetInformation	Always	Always	Always	Always
Representativeness	Possible	Possible	Never	Never
Sources	Always	Always	Never	Always
Validations	Possible	Possible	Possible	Possible
DataEntryBy	Always	Always	Possible	Always
DataGeneratorAndPublication	Always	Always	Never	Always
Persons	Always	Always	Possible	Always
Exchanges	Always	Always	Never	Always
Allocations	Possible	Never	Never	Never

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Conclusions



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Data quality measures used in ecoinvent 2000 project

- serve as guidelines for involved LCI practitioner and data collectors
- serve partly as quality filters (i.e. data format requirements)
- improve database consistency and comparability of datasets

BUT

- substantially increase work effort required per dataset
- data format increases probability for errors and technical problems

The logo for ETH (Eidgenössische Technische Hochschule), consisting of the letters "ETH" in a bold, italicized, sans-serif font.

The logo for EPFL (École Polytechnique Fédérale de Lausanne), featuring the letters "EPFL" in a white, sans-serif font inside a red square.

The logo for FSI (Forschungsinstitut für Saubere Industrie), featuring the letters "FSI" in a white, sans-serif font inside a grey square.

The logo for EMPA (Empirech), featuring a red square with a white cross and the letters "EMPA" in a bold, sans-serif font.

The logo for EAWAG (Eidgenössisches Anstalt für Wasserbau und Gewässerforschung), featuring a blue square with a white circle and the letters "EAWAG" in a bold, sans-serif font.

The logo for FAL (Forschungsinstitut für Abfallmanagement), featuring a grey square with a white circle and the letters "FAL" in a bold, sans-serif font.