Beginning in 2011 with the USEPA project

Final Technical Report to USEPA

Contract EP-11-C-000197:

Emergy research support for supply chains

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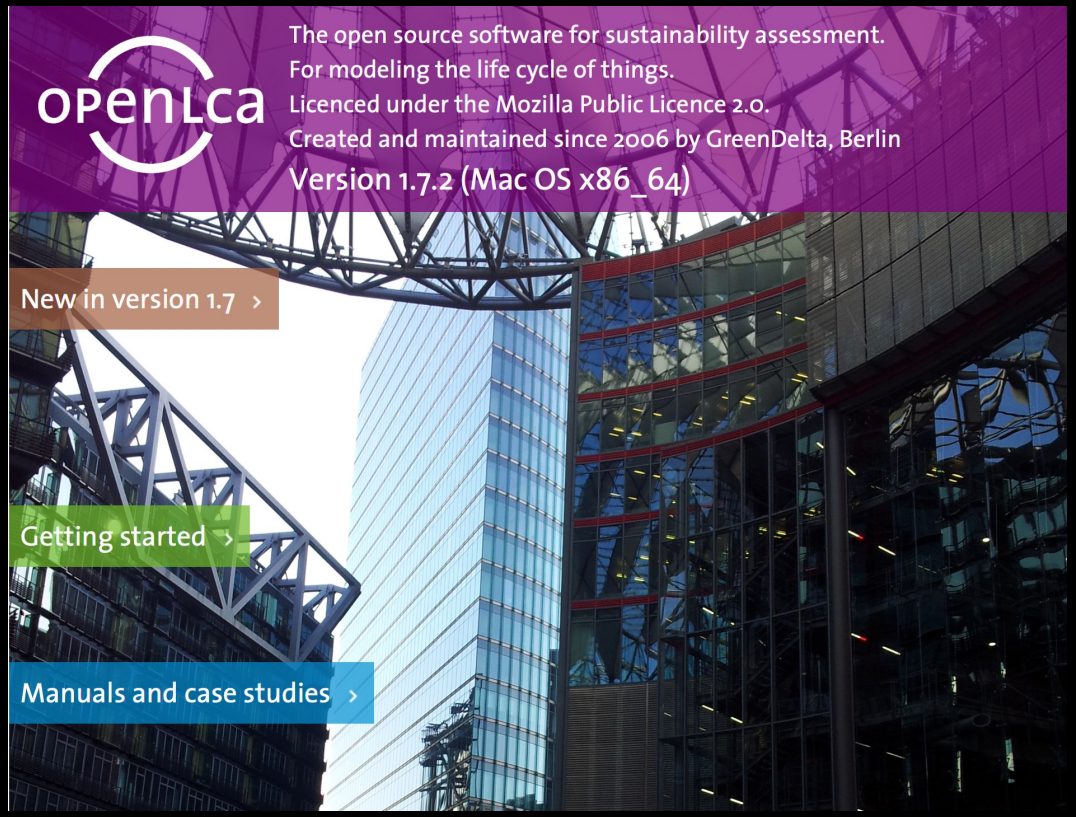
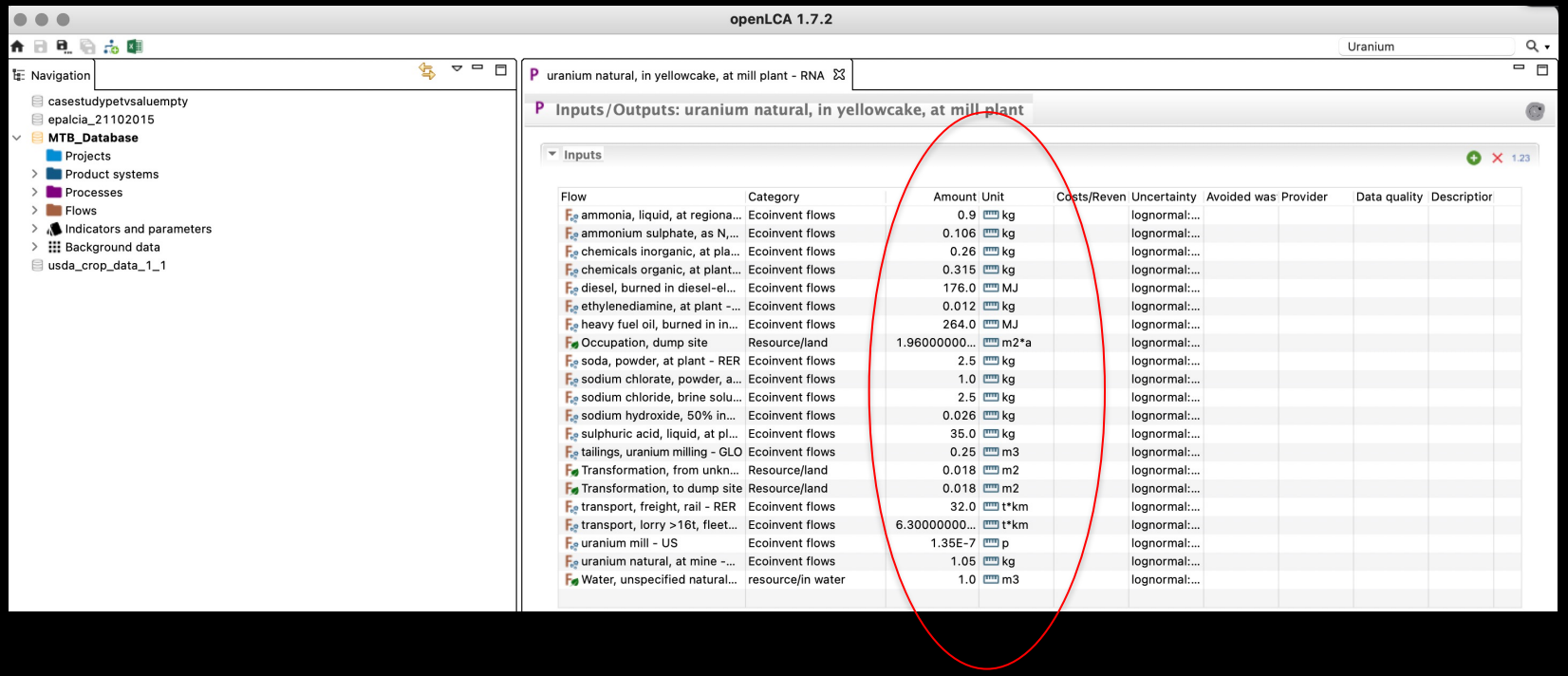
We started compiling emergy evaluations using data from EcoInvent…

…and the open-source life cycle assessment software OpenLCA



Data are downloaded from Open LCA….

Directly into Excel spreadsheet.



UEVs previously computed are added to the table

Uranium yellow cake production				
Item	**Units**	**Quantity**	**UEV**	**Emergy (E12 sej)**
ammonia, liquid, at regional stor	kg	0.9	4.90E+12	4.41
ammonium sulphate, as N, at re	kg	0.106	6.80E+12	0.72
chemicals inorganic, at plant	kg	0.26	1.00E+12	0.26
chemicals organic, at plant	kg	0.315	1.00E+12	0.32
diesel, burned in diesel-electric g	MJ	176	1.70E+11	29.92
heavy fuel oil, burned in industr	MJ	264	1.73E+11	45.67
sodium bicarbonate	kg	2.5	1.00E+12	2.50
sodium chlorate, powder, at plar	kg	1	1.00E+12	1.00
sodium chloride, brine solution,	kg	2.5	1.00E+12	2.50
sodium hydroxide, 50% in H2C	kg	0.026	1.00E+12	0.03
sulphuric acid, liquid, at plant	kg	35	1.45E+12	50.75
transport, freight, rail	t*km	32	1.00E+11	3.20
transport, lorry >16t, fleet avera	t*km	6.3	2.50E+11	1.58
uranium natural, at mine	kg	1.05	**1.81E+13**	19.00
Water, unspecified natural origi	m3	1	2.23E+11	0.22
1kg yellow cake			**1.62E+14**	162.07

The sum of emergy equals the emergy of the product