

Lab5 – Sensitivity analysis

Context

The interpretation of the carbonated water can system has started during lab 4, after the impact assessment. During this lab we will deepen the interpretation with sensitivity analysis.

Tip: Use *parameters* in openLCA

Questions

1) Sensitivity analysis (by scenarios) with respect to the reference scenario– Show with a graph how the result would change according these changes in the system:

- a) Use different impact methods (*ReCiPe Endpoint (H)* and *Ecological scarcity*) and discuss to what extent the results and conclusions of the study are sensitive to the choice of impact assessment method.
- b) Identify which are the scenario analysis you've already performed throughout the different labs and discuss how sensitive such choices are on the results and conclusion of the study.

2) Sensitivity analysis ([tornado graph](#)) with respect to the reference system (LAB1) – Order in an ascending way the sensitivity of different input parameters on the impact scores of the climate change indicator from IW+ (You could do the same for the other four indicators of the IMPACT World+ method.):

Identify the input parameters that can be varied continuously:

- Aluminium mass of the can
- End of life transport distance
- Amount of electricity for the can production
- Amount of natural gas in can production
- Recycling rate
- Cooling time
- Etc.