
INTEREST AND IMPLEMENTATION OF LCA-GIS COUPLING

March 16th 2017



Confidentiel

Restreint

Libre

Interne

LCA and GIS practices at Engie Lab : Before

LCA software: SIMAPRO

→ Not an open-source LCA software

LCA Database: Ecoinvent, internal databases

→ No GIS data (coordinates)

GIS Softwares: ESRI ArcMap, QGIS

→ No coupling with LCA



Case study: Impacts and Risks associated to Engie sites

Interest coupling GIS	Low High		
Target application	Performance indicator, ecolabel criteria, environmental declaration	Ecodesign, comparison, supply chain greening, policy information, model development	Policy development, optimization
Decision context	C	A	B
Target audience	Others		External, non technical
Target sector	Others	Agriculture, transports, infrastructures, énergie	ACV territoriale
FU definition	Without geographic specification		With geographic specification
Quality data criteria	Others	Specific data, sensitive to geographic variability	Data with spatial resolution
Environmental impact	Climate change, ozone depletion, mineral and fossil resources	Eutrophication, acidification, particulates, ionizing radiation, photoch. ozone, water use, land use	Toxicity, noise

LCA and GIS practices at Engie Lab : Now

- Increased interest in using georeferenced data in LCI
 - Atmospheric emissions, Emissions to soil and water
- Capacity to use regional and local Characterization Factors
 - Mainly for water footprint
- Soft coupling

And for further studies:

- Georeferenced restitution of LCA results