

WasteFootprint

a flexible tool for analysing
supply-chain waste flows in LCA

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Why?

To promote ‘circularity’ we must understand waste, but
supply-chain waste in LCA is not well understood as
most focus is on downstream waste

What?

We’ve written an extension to the brightway2 LCA
framework that calculates the waste footprint of a prod-
uct or service. It finds upstream waste flows in a supply
chain, categorises waste flows into 14 types and finds
hotspots in waste generation.

How?

It explodes the database, identifies upstream waste
exchanges, edits them and writes custom WasteFoot-
print methods. The waste flows then become pseudo-
biosphere flows and the waste footprint can be calcu-
lated as an LCIA method.

Challenges?

- Data completeness:** ca. 95% of waste has no EoL
- Waste is not all the same:** Sometimes ‘inert-waste’ is
just moving some rocks around
- LCA system models:** both attributional and consequen-
tial models make a mess of this

What next?

- The method will be refined and also extended with case
studies and ex-ante exploration.
- The WasteFootprint tool can be easily applied to calcu-
late the ‘footprints’ of other supply-chain flows such as
water, gas, and critical raw materials.

o waste! o waste,
wherefore art thou?

*With code our guide,
we seek to find,
hidden hotspots,
where waste entwined.*

We created the WasteFootprint tool
to track supply-chain waste in LCA

View the WasteFootprint code
in our GitHub repository



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Brightway

Step by step through the code

