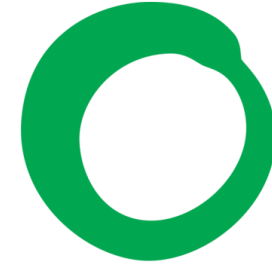


The shortcomings of Life Cycle Assessments for food and beverage packaging



Meadhbh Bolger, Friends of the Earth Europe
UNWRAPPED Conference, California, June 2019



**Friends of
the Earth**

RETHINK
PLASTIC



#break
free
from
plastic

UNWRAPPED

HOW THROWAWAY PLASTIC IS FAILING TO SOLVE EUROPE'S FOOD WASTE PROBLEM (AND WHAT WE NEED TO DO INSTEAD)

OVER-PACKAGING

PACKAGE FREE RETAIL

SHORT FOOD SUPPLY CHAINS

JUSTIFYING PLASTIC POLLUTION
THE SHORTCOMINGS OF LIFE CYCLE ASSESSMENTS IN FOOD PACKAGING POLICY

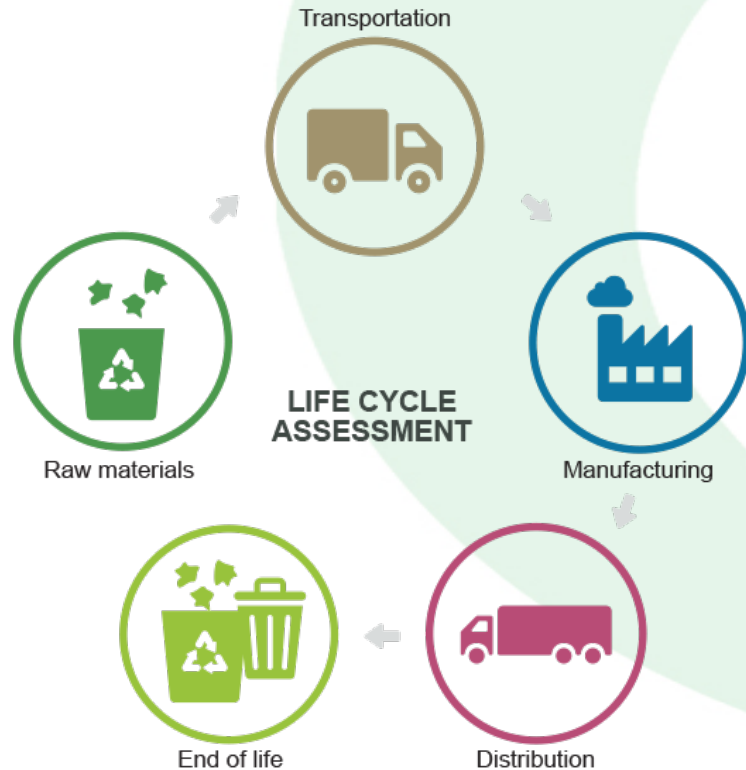
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THE HEALTH RISKS OF PLASTICS + FOOD PACKAGING CHEMICALS



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LCAs for food and beverage packaging

- Used extensively in evaluating the environmental performance of packaging
- Review of 21 LCA studies on food and beverage packaging



**JUSTIFYING
PLASTIC
POLLUTION**

**THE SHORTCOMINGS
OF LIFE CYCLE ASSESSMENTS
IN FOOD PACKAGING POLICY**



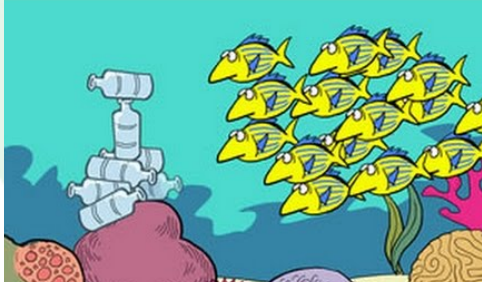
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LCAs for food and beverage packaging – main findings

- Focus on greenhouse gas emissions



- Largely ignore real end-of-life impacts of packaging



- Limited range of packaging applications and types of distribution considered



- Ignore health impacts of possible chemical migration from packaging



European Commission LCA study

Table 27: The most relevant impact categories of the packaging film scenarios contributing at least 80%

| S1 Fossil PP | | S2 Fossil LDPE | | S3 Bio-based LDPE | |
|-------------------------|--------------|--------------------------------|--------------|------------------------------|--------------|
| Impact category | Contrib. (%) | Impact category | Contrib. (%) | Impact category | Contrib. (%) |
| Resource Use - fossils | 38% | Resource Use - fossils | 37% | Particulate Matter | 68% |
| Climate Change | 36% | Climate Change | 35% | Climate Change | 10% |
| Human Toxicity - cancer | 10% | Human Toxicity - cancer | 9% | Eutrophication Marine | 5% |
| Total | 84% | Total | 82% | Total | 83% |
| S4 PLA | | S5 Starch co-polyester polymer | | S6 CO ₂ -based PP | |
| Impact category | Contrib. (%) | Impact category | Contrib. (%) | Impact category | Contrib. (%) |
| Climate Change | 37% | Climate Change | 57% | Climate Change | 47% |
| Resource Use - fossils | 23% | Resource Use - fossils | 25% | Resource Use - fossils | 26% |
| Acidification | 8% | | | Human Toxicity - cancer | 9% |
| Particulate Matter | 7% | | | | |
| Land Use | 7% | | | | |
| Total | 81% | Total | 82% | Total | 82% |

No analysis of use phase impacts!



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Solutions and recommendations

○ Are LCAs the right tool???



○ Zero and reusable packaging

○ Shorten food supply chains

○ Policy change



WHO WILL LEAD THE GAME



TO CURB PLASTIC POLLUTION?



@braynMalters

#breakfreefromplastic

RETHINK PLASTIC

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