

S|U|C|C|e|s|s

Added Value through Sustainability

How to Assess the Sustainability of Products?



 **BASF**

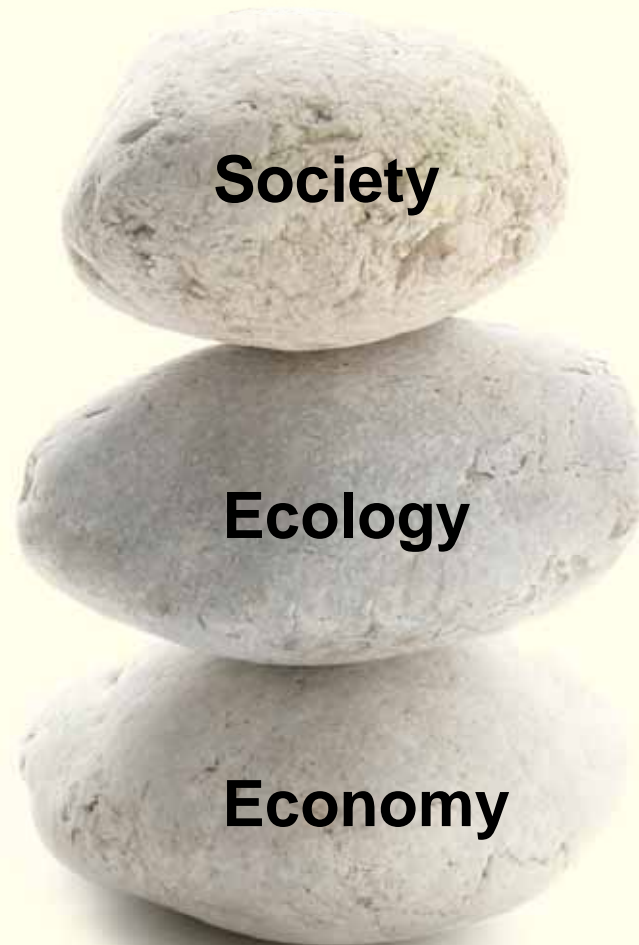
The Chemical Company

C. Mock-Knoblauch, BASF SE
28.9.2009

Sustainable Development is based on three Pillars

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How to measure the sustainability performance of a good or service?

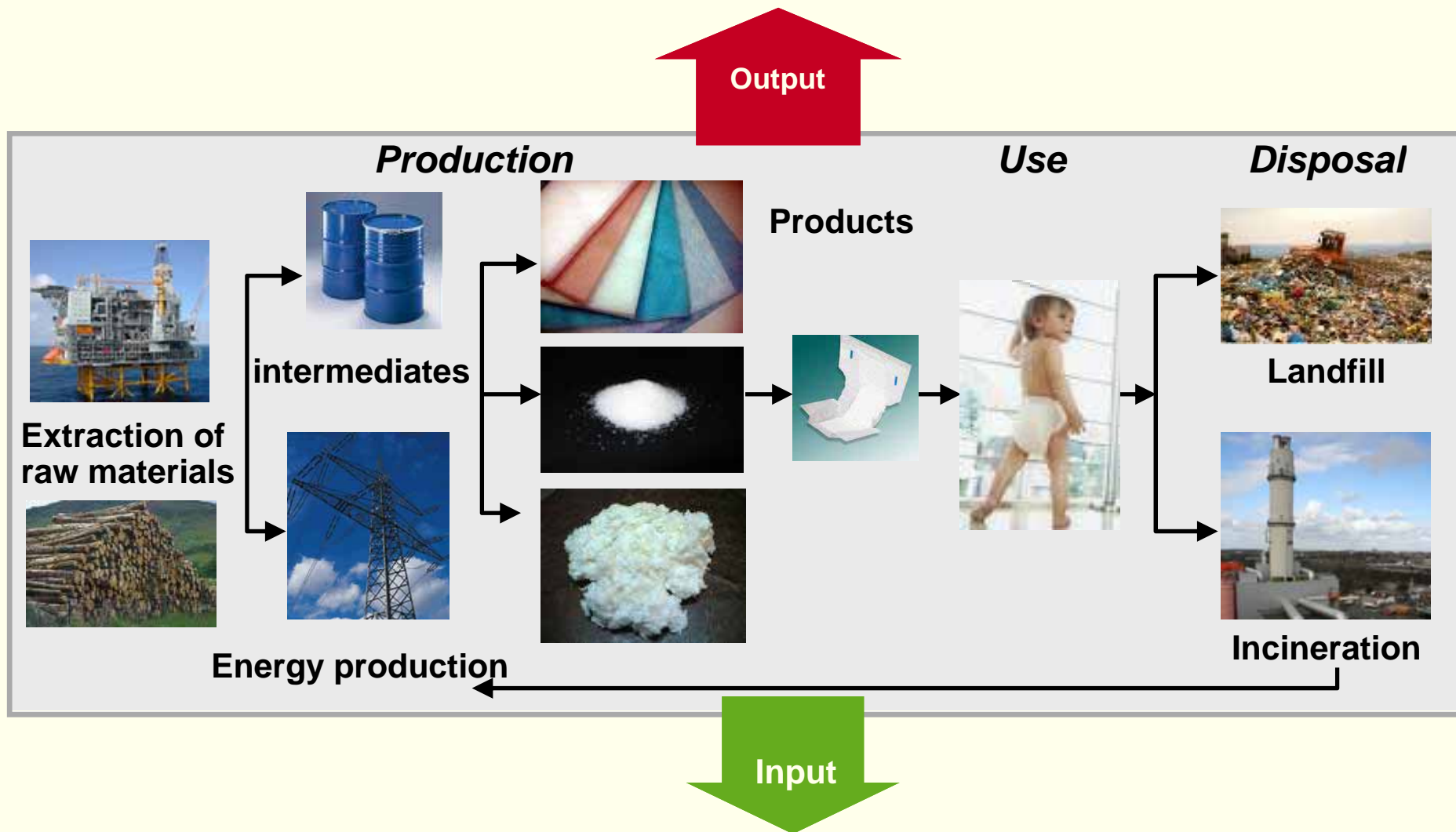
- ☑ ***holistic***
- ☑ ***scientific, objective***
- ☑ ***cost effective***
- ☑ ***decision oriented***

=> BASF's eco-efficiency analysis

Life Cycle Assessment (LCA): From cradle to grave

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Sustainability assessment of Biodiesel



State of the art:

- Although biodiesel is made from **renewable raw materials**, the environmental advantages are small
- The production of biodiesel is **more expensive** than that of conventional fossil diesel (excl. taxes and subsidies)
- However, biodiesel production **creates jobs** in the agriculture sector.

customer benefit

Use of a conventional diesel car
(driving distance 200.000 km)

alternatives

- RME (biodiesel)
- conventional diesel

Weighting and aggregation of environmental categories

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Energy use

20%



Resource cons.

20%



Land use

10%



Risk potential

10%



Toxicity potential

20%



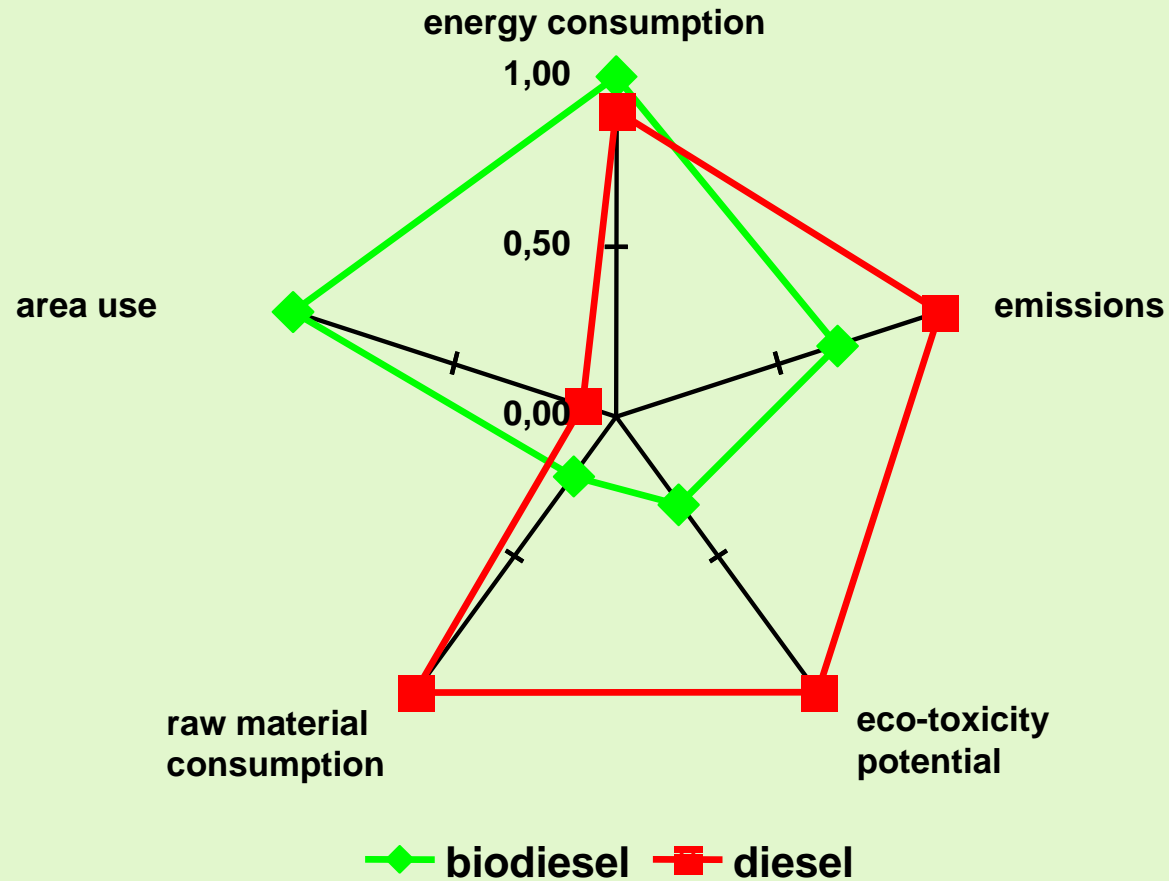
Emissions

20%



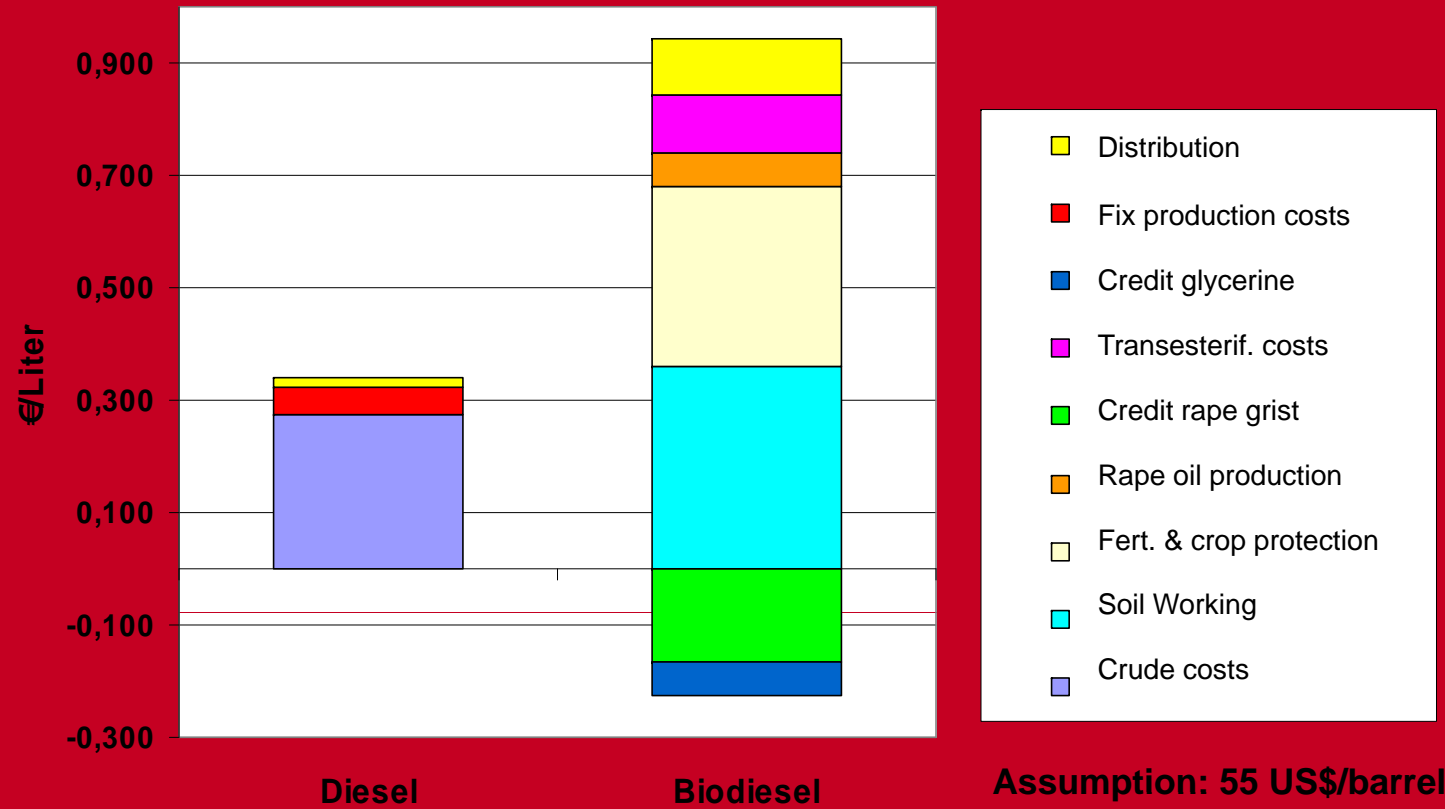
Ecological Fingerprint

Use of a conventional diesel car (driving distance 200.000 km)



1 $\hat{=}$ worst alternative

Fuel Production Costs (Excluding Taxes)



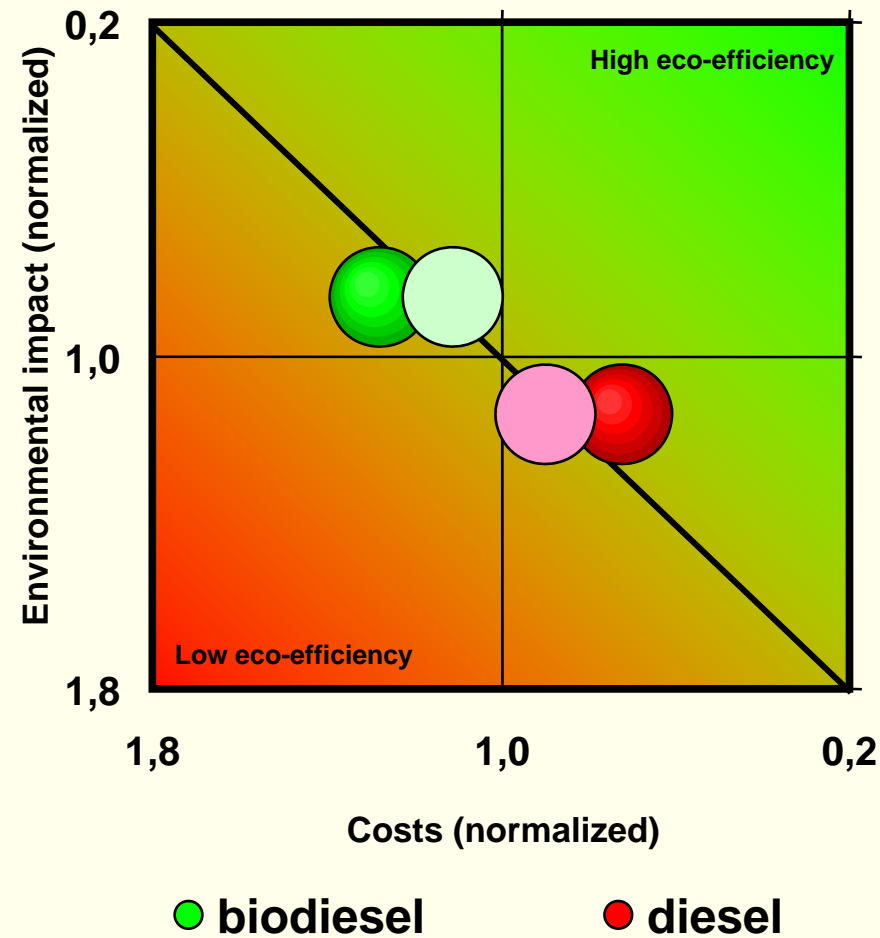
Eco-Efficiency Portfolio

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Assumption: 55 US\$/barrel / 92 US\$/barrel

Use of a
conventional
diesel car
(driving
distance
200.000 km)



• *Eco-efficiency of biodiesel compared to diesel is strongly dependent on oil price*

• *The Break Even for biodiesel to have the same eco-efficiency as diesel is at an oil price of approximately 85 US\$/barrel*

Eco-Efficiency Analysis

Standard Diaper versus Fluff Reduced Diaper

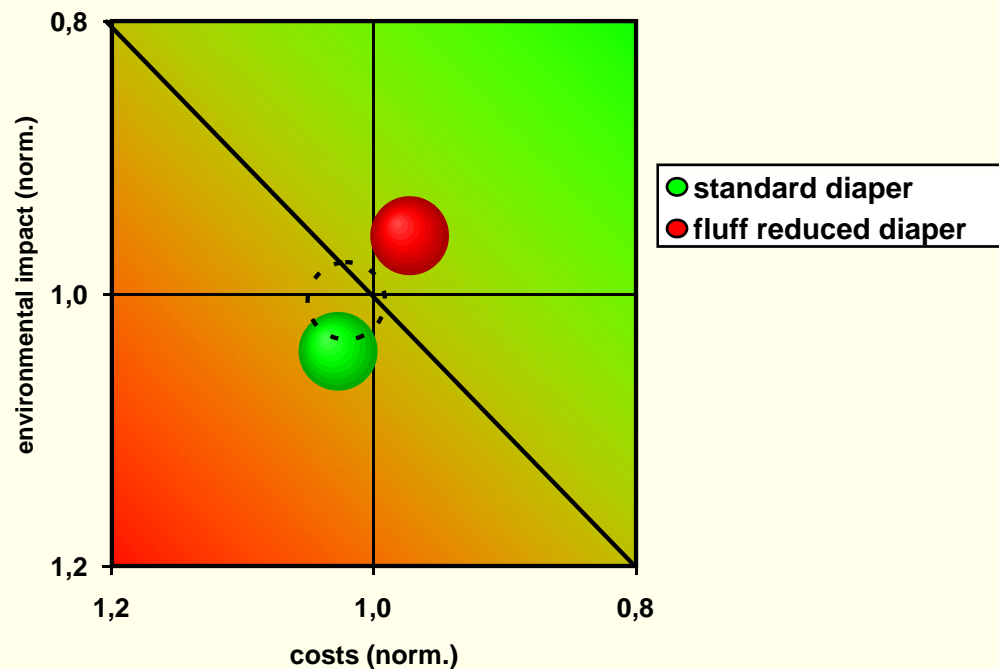
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The market driven trend within the diaper industry is towards thinner, fluff reduced diapers

... what impact does this have on the overall sustainability?

Full eco-efficiency analysis



Only Carbon Dioxide (Model)

