Evaluation of Long-Term Impacts in Life Cycle Assessment

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Goal and Overview:
Time aspects covered
in the morning presentations

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Goal of this LCA Forum

- Full picture of time aspects in both LCI and LCIA
- Discussion on pros and cons of a temporally differentiated weighting
- Input to LCIA method development

Time within the product system

• Industrial processes were required in the past and will be required in the future:

No presentation





 -10^2 to -10^0 a

toḋay

 10^{0} to 10^{2} a

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Time within processes

• Industrial processes may emit a long time after they were required:



Gabor Doka:
Modelling of long-term
emissions in LCIs of
landfills

today 10° to 10° a 100 a

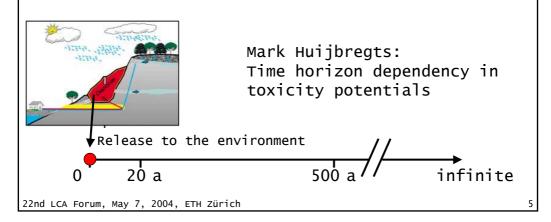
100'000 a

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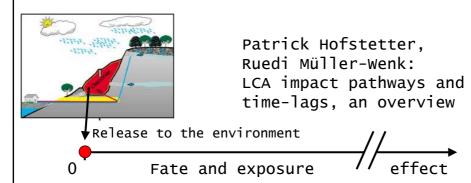
Time aspects in impact potential assessment

• Impact potential of an emitted substance may vary with the time horizon considered:

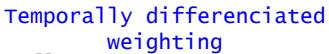


Time aspects in impact pathways

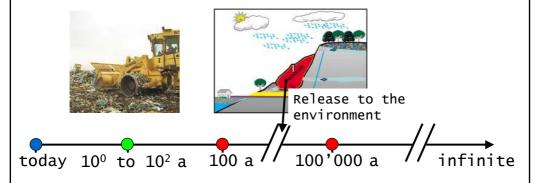
Time-lags in fate and exposure,
 effect and damage of an emitted
 substance:



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Stefanie Hellweg: Discounting in LCA Anton Leist:
Assessment of long-term
damages to the environment:
ethical questions



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