A new indicator for assessing and communicating sink constraints

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Joint Research

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[Images of professors]
Motivation

Sources

Primary materials

Use cycle

Material

Secondary materials

Sinks

Man-made

Solid & liquid waste

Emissions

Natural
Key question

How to assess & communicate sink constraints?
A new indicator

\[ \lambda = \frac{\text{Acceptable flows}}{\text{Actual flows}} \times 100 \]

Case studies

Switzerland (PFOS)

Austria (GHG)

Vienna (Pb)
Greenhouse gases in Austria

Greenhouse gases [Mg CO₂-äqu./a]

Actual flow

Acceptable flow

\( \lambda = 82\% \)


Total GHG emissions without LULUCF

Kyoto Target
Lead in Vienna: Inventory
Lead in Vienna: Impact assessment

![Graph showing Pb flows for different sinks and the percentage λ=92%]

- **Man-made sinks**
  - Landfill I
  - Landfill II
  - Landfill III
  - Underground storage facility

- **Natural sinks**
  - Air
  - Surface water
  - Soil

The acceptable flow is indicated by green bars, and the unacceptable flow is indicated by red bars. The percentage λ=92% indicates the proportion of acceptable flows across all sinks.
PFOS in Switzerland: Inventory
PFOS in Switzerland: Impact assessment

MAN-MADE sinks
- Incineration
- Landfill

NATURAL sinks
- Surface Water I
- Surface Water II
- Soil
- Air

Acceptable flow: λ=96%
No target available

PFOS flows [t/yr]
Conclusions

Sinks are provided
...by environment and waste management sector.

The indicator quantifies
...environmentally acceptable share of material flows to sinks.

The indicator can be used
...for policy performance evaluation.
...for regional benchmarks.
...to communicate results to relevant stakeholders.
THANKS