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# Can LCA be used by non-specialists: Transfer to French local authorities of a simplified calculator for wastewater management

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## Introduction and objectives

If many LCA researches focus on methodological refinements, few focus on the operational implications. LCA can be analysed as a decision making tool: what about adoption process or effect to decision making. We addressed such topics in a transfer experiment with French local authorities responsible for wastewater management. In this field environment is a key-issue and yet LCA rarely used.

Neither technicians nor politicians from local authorities are LCA specialists. Iristea has developed for them a LCA simplified calculator (ACV4E) to assess wastewater systems (Risch and Roux 2012). The tool was dedicated to provide a more objective environmental criterion for investment choices. The objective of the project was to analyse the appropriation and real use of such a tool in public local authorities.



## Materials & methods

The transfer was carried out with 7 local authorities (intervention-research) (Hatchuel 2000). After a formation to the simplified calculator, local authorities used it freely.

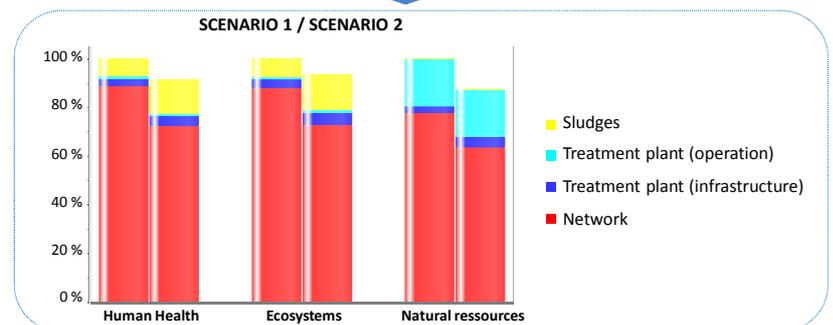
### Centralised scenario (1) vs decentralised scenario (2)



## Results & discussion

The experiment suggests that the co-construction of the calculator with potential users is crucial for appropriation. It partially opens the LCA black-box and allows to better meet field needs. The result visualization remains problematic. Classical mid/endpoint bar chart proved to be inefficient for non-specialist interpretation and for communication to politicians.

The introduction of LCA in decision criteria in wastewater management produced mixed results: the environment criterion was less subjective but remained dominated by others (finance, technical complexity) and the preferred way to take into account the environment remained the regulatory criteria (meet effluent standards).



## References

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- Risch, E. and P. Roux (2012). L'Analyse de cycles de vie (ACV) des systèmes d'assainissement : un outil complémentaire d'aide à la décision. *Sc. Eaux et Terr.* 9: 82-91.

## Take home message

The interest of a simplified calculator for non-specialists has to be confirmed, especially in the smallest cities in which LCA use would remain occasional and require too many competencies. It suggests that such a tool could be transferred to consulting offices, assisting local authorities.