



IMPACT World+™

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Centre interuniversitaire de recherche sur le
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Comparing IMPACT World+ with other LCIA methodologies at end-point level using the Stepwise weighting factors

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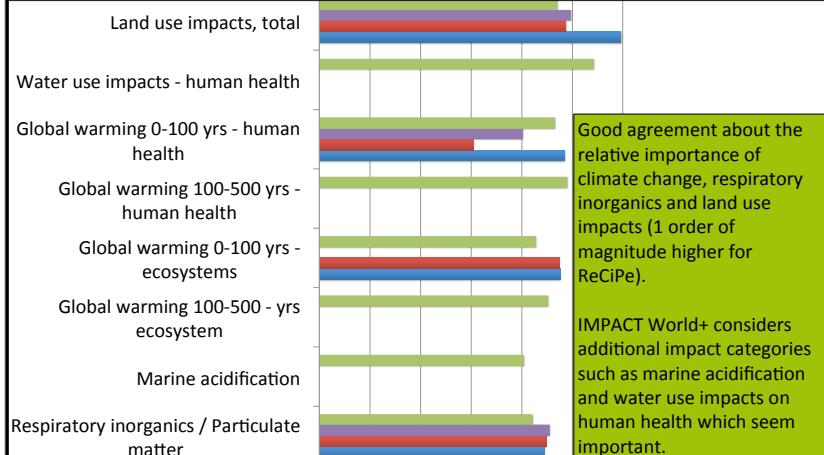
Materials and methods

IMPACT World+, Ecoindicator99 (H), Stepwise2006 and ReCiPe2008 (H) are put in perspective with respect to the relative and absolute importance that they assign to the different midpoint impact categories.

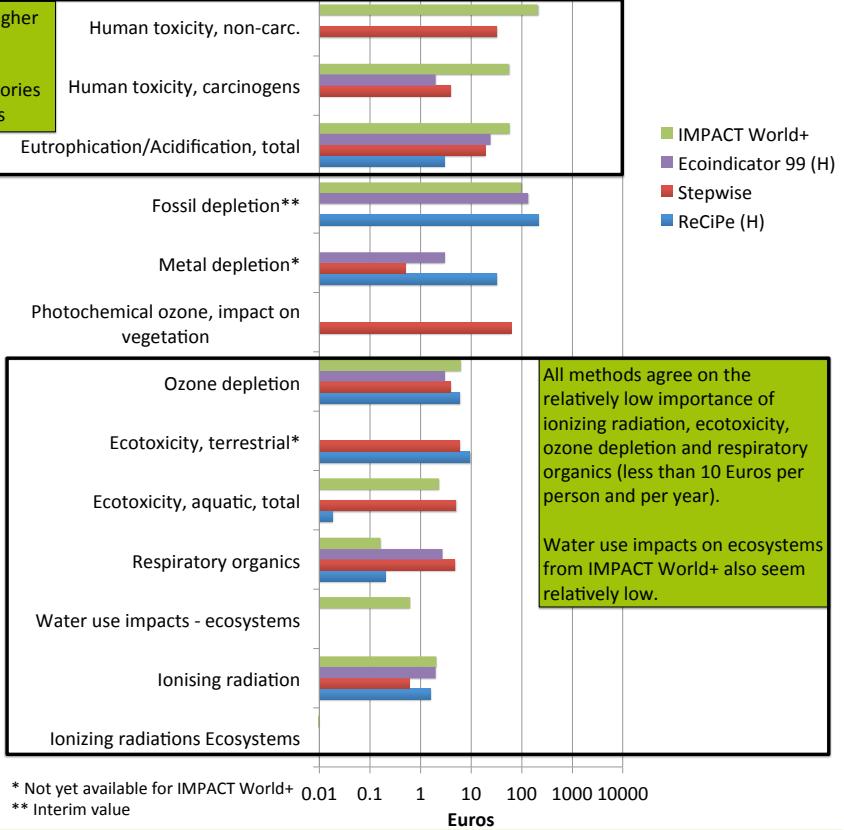
The Stepwise weighting factors are used in order to put endpoint results on a comparable scale (in euros) : 74,000 Euro/DALY for human health, 0.14 Euro per PDF-m2-yr for ecosystem quality.

Those values were applied on the normalization values (correspond to the global emissions per person per year) of all the impact category indicators characterized at the endpoint level with the four LCIA methodologies.

The result corresponds to the total monetarised impact in the world per person and per year predicted by each of the methodologies, which may allow putting in perspective LCA results with individual revenues which is a good interpretation tool.



IMPACT World+ gives a higher importance to toxicity, eutrophication and acidification impact categories than other methodologies



Results

The total value are :

- 1650 Euro/pers.yr for Ecoindicator99 (H),
- 1773 Euro/pers.yr for Stepwise2006,
- 11088 Euro/pers.yr for ReCiPe2008(H)
- 4374 Euro/pers.yr for IMPACT World+ short term impacts, +1220 Euro/pers.yr for long term impacts.

Main learnings :

- The overall tendency is respected between impact assessment methodologies;
- Different behaviors of the methodologies for some impact categories need to be better understood to evaluate whether this is due to an improved assessment or to a modelling bias;
- In particular, Water impact on humans dominate in IMPACT World+, highlighting a need for further investigation;
- Improved respiratory inorganics modelling in IMPACT World+ is now better in line with other methods.

Acknowledgement

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