

An R package for the computation of the Commodity Life Cycle Costing Indicator. An Economic Measure of Natural Resource Use in the Life Cycle

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One of the products of the 2022 research activities is an R package to compute the *Commodity Life-Cycle Costing* (CLCC), an economic indicator measuring natural resource consumption by product/processes during their life-cycle. R is a programming language and software environment for, among other things, statistical analysis, data visualization and text-editing supported by several operating systems and that is fully open-source. R is becoming increasingly popular among scientists and professionals for its versatility and because it allows the fully reproducibility of results. An R package is an organized collection of functions to perform a very specific task that usually expands the standard capabilities of the software. Packages are a great way to organize code and to share it with others. The development of an R package to calculate the CLCC indicator is aimed at increasing the visibility of a product of RSE's research activities and to make it easy, for external LCA and LCC practitioners, to use the indicator in their analyses. The functions contained in the package allow to use, as input, spreadsheets generated by the popular LCA software SimaPro, to calculate a version of the indicator considering critical materials only and to run uncertainty analyses with Monte Carlo techniques.