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GLOBAL LAND USE IMPACTS ON BIODIVERSITY AND ECOSYSTEM SERVICES IN LCA

Principles for life cycle inventories of land use on a global scale

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Abstract

Purpose To assess the diverse environmental impacts of land use, a standardization of quantifying land use elementary flows is needed in life cycle assessment (LCA). The purpose of this paper is to propose how to standardize the land use classification and how to regionalize land use elementary flows.

Materials and methods In life cycle inventories, land occupation and transformation are elementary flows providing

relevant information on the type and location of land use for land use impact assessment. To find a suitable land use classification system for LCA, existing global land cover classification systems and global approaches to define biogeographical regions are reviewed.

Results and discussion A new multi-level classification of land use is presented. It consists of four levels of detail ranging from very general global land cover classes to more refined categories and very specific categories

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