

TOWARDS AN INTEGRATED TOOL TO ESTIMATE CARBON EMISSIONS FROM LIFE CYCLE ASSESSMENT OF BUILDING MATERIALS IN EGYPT

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ABSTRACT

Life cycle assessment (LCA) program developments were intended for the construction of life cycle inventory (LCI) database for refrigerators, computers, and general consumer products. But buildings are different from general consumer products for their long life span, and possess different characteristics from consumer goods. Examples of the various programs developed or commercialized for the performance of LCA are Be Cost, BOUSTED, ECOLOGIC, IDEA, PEMS, TEMIS, SIMAPRO, ECOPACK2000, TEAM, OfE, LIFEWAY, LCAiT, GaBi, KCL-ECO, and LCAiT each of them special country-specific, the paper introduce a brief on each program. From aforementioned, Egypt do not have tool to estimate carbon emissions from building LCA, thus the paper sheds light on Be Cost tool to take advantage from it, furthermore to be a guide in creating ECE-LCA Tool. Thus, the main aim of this paper is to develop a tool to estimate the life cycle carbon emissions (Global Warming Potential (GWP)) of the residential building materials in Egypt.

KEYWORDS: ECE-LCA Tool, Building Materials, Residential Building, Egypt