

Reasons for the Slow Uptake of Embodied Carbon Estimation in the Sri Lankan Building Sector

Authors : Amalka Nawarathna, Nirodha Fernando, Zaid Alwan

Abstract : Global carbon reduction is not merely a responsibility of environmentally advanced developed countries, but also a responsibility of developing countries regardless of their less impact on global carbon emissions. In recognition of that, Sri Lanka as a developing country has initiated promoting green building construction as one reduction strategy. However, notwithstanding the increasing attention on Embodied Carbon (EC) reduction in the global building sector, they still mostly focus on Operational Carbon (OC) reduction (through improving operational energy). An adequate attention has not yet been given on EC estimation and reduction. Therefore, this study aims to identify the reasons for the slow uptake of EC estimation in the Sri Lankan building sector. To achieve this aim, 16 numbers of global barriers to estimate EC were identified through existing literature. They were then subjected to a pilot survey to identify the significant reasons for the slow uptake of EC estimation in the Sri Lankan building sector. A questionnaire with a three-point Likert scale was used to this end. The collected data were analysed using descriptive statistics. The findings revealed that 11 out of 16 challenges/ barriers are highly relevant as reasons for the slow uptake in estimating EC in buildings in Sri Lanka while the other five challenges/ barriers remain as moderately relevant reasons. Further, the findings revealed that there are no low relevant reasons. Eventually, the paper concluded that all the known reasons are significant to the Sri Lankan building sector and it is necessary to address them in order to upturn the attention on EC reduction.

Keywords : embodied carbon emissions, embodied carbon estimation, global carbon reduction, Sri Lankan building sector

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