



Climate impact estimation – from feasibility study to handover

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Abstract

Responsible for 1/5 of the total CO₂-equivalents emissions and 50% of the materials resources used globally, the construction industry plays a vital role for a sustainable future. All parties in the construction industry address the challenge from their perspective and national transport administrations are often considered as the driver toward a fossil free industry. In this study, three Swedish infrastructure projects are studied by means of interviews, focusing on the usage and acceptance of the recently implemented climate estimation process. From the interviews, it is found that currently there is a lack of knowledge regarding climate estimations among bridge and environmental specialists as well as project managers. To address this challenge, it is important to educate the industry and increase the knowledge about climate estimations and declarations as well as inform which actions have the largest impact to reduce the CO₂-equivalents emissions.

Keywords: Climate estimation; Climate declaration; Infrastructure design; Early design Stages.

1 Introduction

It is well-established that the construction industry is highly responsible for a great share of the world's climate impact. All parties in the construction industry address the challenge differently based on their perspective and national transport administrations are often considered as the driver toward a fossil free industry.

Sweden has a long-term target to reach zero net emission from CO₂-equivalents at the latest by 2045 [1, 2]. Up to 2045 the Swedish Transport Administration (STA) has defined three milestones to reach the target [3], see Table 1, and implemented climate estimations for new infrastructure construction projects with an estimated cost \geq SEK 50 million.