



Concrete moves...



OSLO
June 7 - June 8 2018



Concrete contribution to
a changing world

ERMCO
EUROPEAN READY MIXED CONCRETE ORGANIZATION

DEVELOPMENT OF CONCRETE WITH LOW CLIMATE IMPACT IN SWEDEN

M. Löfsjögård ⁽¹⁾,

(1) Swedish Concrete Federation (Svensk Betong), Box 55 684, 102 15 Stockholm, Sweden.

Abstract

We face a climate challenge as well as a great need for housing and infrastructures. Taking a leading role to reduce impacts of greenhouse gases, the Swedish parliament has decided goals for the year 2045 and the concrete industry is working intensively to meet them. Over the last 20 years, an extensive work has been done to reduce carbon dioxide emissions linked to the production of cement, achieving a 20% reduction of climate impact for concrete houses. Active choices and optimization of concrete composition make it possible today to go further to a 30% reduction, and the Swedish concrete industry is working to further reduce the concrete's climate impact in the short and long term. Short-term improvements are based on the concrete industry's development on design and material optimization and the use of alternative binders, but also on improvements in transportation and manufacturing. In the long term, technology and process development as well as new binders will be required. With technology development in the cement manufacturing process it is possible to achieve climate neutral concrete from a life-cycle perspective. The Swedish concrete industry's goals for concrete for building construction are therefore to reduce the climate impact to 50% within five years and to be climate neutral in the 20-30 years for buildings. A similar development is taking place for concrete to infrastructure concrete constructions, as new cement with 20% lower climate impact are going to be introduced in Sweden.

Keywords: concrete, climate impact, carbon dioxide, environment, sustainability, climate neutral