# SBE19 Graz

SUSTAINABLE BUILT ENVIRONMENT D-A-CH CONFERENCE 2019
Graz, 11–14 September 2019


*Special Session*

## Role of Buildings in the Consumption Based GHG Accounting

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## SUSTAINABLE BUILT ENVIRONMENT D-A-CH CONFERENCE 2019

The SUSTAINABLE BUILT ENVIRONMENT D-A-CH CONFERENCE 2019 is part of a major international series of conferences that focus on sustainable buildings and construction. This series, now on a three-year cycle, has become recognized as the world's preeminent conference series in this important field. Graz University of Technology will host the SBE19 in co-operation with University of Natural Resources and Life Sciences, Vienna, Karlsruhe Institute of Technology and ETH Zürich. Within this conference several Special Sessions are organized.

## Objective of this Special Session

In national GHG inventories and reporting only the GHG emission that physically are emitted in a country are calculated. All GHG emission related to import or export of products and services are not included. In our global connected economy these national inventories only reflect GHG emissions occurring in a country but give no indication on the real consumption based GHG emission per capita. So it is necessary to set up a consumption based GHG balance that starts with all the products and services consumed in a country and directly attributes the GHG emission to all these products and services which occur in or outside the country in their supply chain. The national GHG emissions of Austria are about 50 – 60% higher, which was concluded based on research undertaken by the 10 members of the CCCA working group on "Consumption Based GHG Accounting". The building sector as part of the infrastructure plays a crucial role in the consumption based GHG accounting. On one hand the construction of new buildings (e.g. steel, concrete) contributes significantly to the annually national GHG emissions, on the other hand these GHG emissions are allocated to different consumption areas e.g. living, financial services, education, over several years. Currently two methodological approaches are developed and applied in consumption based GHG accounting, which could also be combined:

1. Top-down Approach: The macro-economic approach of Environment-Input-Output Analysis based on Multi-Regional Input-Output (MRIO) Models of sector land product levels
2. Bottom-up Approach: The techno-natural science based approach, which is based on Life Cycle Assessment (LCA) of each consumed product and service.

The scope of the session covers the role of buildings in the consumption based GHG accounting, the methodological approaches, its necessary data base and its application to case studies, regions and countries.

## Submitting Abstracts

Authors willing to present a paper at this Special Session are kindly invited to submit a 150 - 250 word abstract in accordance with the topic until **30 November 2018** through the online submission system available on **sbe19.tugraz.at**. Please indicate in the submission system that you would like to submit an abstract to this particular Special Session.

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In Cooerpation with:

ETH zürich

BOKU Universität für Bodenkultur Wien

KIT Karlsruher Institut für Technologie