**Carbon metrics and carbon budget: improving building design & operation**

One of the main tasks of the New European Bauhaus is the design and construction of sustainable buildings that can contribute to a sustainable society. In close interaction with other design tasks, this requires careful use of natural resources and understanding their impacts on both the local and global environment. To mitigate climate change, new metrics, target values and management tools are need to limit greenhouse gas emissions from new and existing buildings over their whole life. Several recent scientific activities are helping to move this forward for both policy and practice. The publication of a peer-reviewed special issue on “Carbon Metrics”, presented new international research with ideas, methods and insights for measuring, assessing and controlling GHG emissions. Carbon metrics have practical application in supporting decisions in design and product development as well as evaluating progress in reaching targets for net-zero.



This Buildings & Cities special issue creates an important virtual space for research and discussion. It brings together researchers, educators, practitioners and policy makers to examine and create sound, appropriate carbon metrics for the built environment. In addition, consideration is given to what format(s) those could take for embodied and operational emissions. These can be used effectively to identify and assess GHG emissions at different scales of the built environment. They can promote clarity, common understanding, a shared goal amongst diverse stakeholders and provide a basis for public policy and practices.

**Advancement of previous approaches**

Since the foundation of the Bauhaus in Weimar, 100 years ago, there were goals to limit the use of coal for heating buildings and the production of building materials. Muche’s “Haus am Horn” already had thermal insulation, whose effects on construction and operational costs, as well as the consumption of coal, were examined. This topic is still relevant today but must now be expanded to include aspects of climate protection.

**Results of an international cooperation with a focus on Europe**

In Europe there is a close exchange between scientists, where also colleagues from all over the world are involved. Projects such as the International Energy Agency’s EBC Annex 72, the standardization activities of CEN TC 350 and current legislative initiatives in countries such as Finland contribute to the further development of design goals and tools to ensure their application. These activities flow into the contributions to the special issue.

**Platform for discussion and exchange**

*Buildings & Cities* offers a virtual platform for the presentation of scientific results, which are further discussed at workshops and events to broaden understanding and engagement with key stakeholders in policy and practice. An event at COP26 is planned to broaden and deepen the discussion and prepare the way for policymakers and practitioners to act.

[Carbon Metrics: Assessing & Controlling GHG Emissions Across Scales - Special Issues (buildingsandcities.org)](https://www.buildingsandcities.org/journal-content/special-issues/carbon-metrics.html)