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Assessing the Sustainability of Buildings - From Energy Certificate to Sustainability Report

In its current work on the development, testing and implementation of a national system to describe, evaluate and certify sustainable buildings (DGNB – Deutsches Gütesiegel Nachhaltiges Bauen), Germany is focussed on the current state of international and European standardisation in ISO TC 59 SC 14, ISO SC TC 59 SC 17 as well as CEN TC 350. The aim is to assess the sustainability of buildings by including ecological, economic and social aspects in all their dimensions and – in addition – functional, technical and process-quality aspects. This assessment should be based on quantitative methods of life cycle assessment and life-cycle costing and thus on scientifically recognized methods. The scheme was the object of intensive discussions with all interested stakeholders and the German Sustainable Building Council which took place amongst others at the Round Table on Sustainable Building.

The assessment system envisages including amongst others economic aspects in addition to the environmental and social performance of the building and thus expands the “green building approach” towards a “sustainable building approach”. The method gives equal importance to ecological, economic, social and technical aspects and takes account of this fact in the weighting of the different groups of criteria. In addition to the evaluation of the building’s sustainability, the quality of the building’s location is described. The entire list of assessment criteria currently contains around 60 criteria.

In establishing criteria and developing measuring procedures and assessment standards, Germany is oriented towards its national objectives which however at the same time based on the commitments made at European and international level. These are, inter alia:

- limiting the land take per day for traffic and settlement areas to 30 hectares per day in Germany, for example by giving priority to the inner development of settlements rather than to their expansion – to be taken into account in the evaluation of land use due to the type and size of the land plot.
- improving energy efficiency by tightening the requirements on the permissible primary energy consumption of new buildings of 30 percent from 2007 to 2009 and additional 30 percent by 2012
- to be taken into account in the evaluation of non-renewable resources consumption.
- increasing the share of renewable energy for heating in buildings from around six percent in 2006 to 14 percent in 2020 - to be taken into account in the evaluation of renewable resources use.
- giving more weight to life cycle costs when making investment and procurement decisions with the objective of reducing these costs – to be taken into account in the evaluation of economic performance.
- improving indoor air quality - to be taken into account in the evaluation of the environmental compatibility in terms of social performance.

The presentation will also demonstrate how a certification scheme can be integrated into a package of complementary and supporting planning and assessment tools.