L I G N O V I S I O N E N

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Holz:
Rohstoff – Werkstoff – Energiequelle der Zukunft

Wood:
Raw material – Material – Source of energie for the future

Holz ist der wichtigste nachhaltig verfügbare Massenrohstoff und das eröffnet ihm damit eine führende Rolle im Wettstreit der Werkstoffe. Durch die traditionelle Prägung des Holzes als Alltagswerkstoff werden die Zukunftsperspektiven des Holzes aber oft nicht erkannt. Der vorliegende Band 2 von LIGNOVISIONEN gibt das Fachsymposium „Holz – Rohstoff, Werkstoff, Energieträger der Zukunft" im Rahmen des Internationalen BOKU Kongresses 2001 „ Leben und Überleben – Strategien für die Zukunft" wieder.
Exemplarisch wird darin aufgezeigt, wie Holz zu einem der wichtigsten Werkstoffe für das Leben und Überleben der Menschheit wird.

Wood is the most important sustainable mass raw material available. As wood has always been a traditional material used in everyday life, we do not immediately realize its importance for the future. It was the target of the symposium „Wood – Raw Material and Source of Energy for the Future", which was organized within the International BOKU Congress „Life and Survival –Strategies for the Future", to point out the future importance of wood. The present issue 2 of LIGNOVISIONEN summarizes this symposium, where the potential of wood was demonstrated and selected innovative developments were discussed.

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Ökobilanzierung –
Bewertungssystem für Werkstoffe und Produkte der Zukunft

Bernhard Zimmer

Wer heute von Globalisierung spricht, denkt im allgemeinen an das Zusammenwachsen der Wirtschaftssysteme und der Märkte. Es findet aber seit mehreren Jahrzehnten auch eine Globalisierung der Umweltproblematik statt. Wurden in der Vergangenheit die lokalen und regionalen Umweltprobleme mit "End-of-pipe"-Technologien angegangen und "gelöst", erfordern die heute erkennbar gewordenen globalen Umweltprobleme, wie der Anstieg der CO_2-Konzentration in der Atmosphäre und die immer deutlicher werdenden Folgen des anthropogen verursachten Treibhauseffektes, eine neue Qualität der Umweltpolitik und der Umweltvorsorge.

Life Cycle Assessment -
A Method to Quantify Environmental Impacts of Materials and Products

In this day and age, when we talk about globalisation, we generally think of the amalgamation of economic systems and markets. For several decades, however, a globalisation of environmental issues is also taking place. While attempts were made, in the past, to address and "solve" local and regional environmental problems with "end-of-pipe" technologies, the global environmental issues that have been recognised to date, such as the rise in atmospheric CO_2 and the increasingly obvious consequences of the anthropogenic green-house effect require a novel kind of environmental policy and care for the environment.
Since the World Climate Conference in Rio de Janeiro in 1992 at the very latest, the realisation has dawned on mankind that the global environmental problems make it imperative that we generally reconsider our way of thinking and strive for fundamental changes in the way we manage our economies. The objective is to achieve sustain-ability; the means we chose to satisfy the needs of the present generation must not compromise the ability of future generations to meet their own needs. In the achievement of this objective forests and wood play a decisive role, but the dimensions of this role are still being underestimated by politicians and economists.
One part aspect of any global environment policy is the reduction of all emissions affecting the climate and there is general agreement that in this context the industrial nations play a special part and have special responsibilities. The first objectives for a reduction in greenhouse gas emissions are laid down in the Kyoto protocol. How these objectives are to be achieved and which measures need to be introduced remains obscure, as do questions regarding the crediting system and the control of projects and measures, as well as methods for the evaluation of CO_2 effects.
This is the point where the present paper offers a novel approach. Life-Cycle-Assessment (LCA) introduces a method which makes it possible to calculate the carbon sink potentials of materials, working materials and products. This is illustrated by several examples of wood and wood products.
In accordance with the principles of sustainable development all products need to be studied for their impacts on the environment. The search is on for "the environmentally friendly product", the product that is suited to the future.
In the recent past a series of methods was developed to find answers to the questions of the environmental compatibility of materials, production processes and products. The major one is the product-related Life-Cycle-Assessment. The method consider and assess products and services over the entire life-cycle of a product, as it were "from the cradle to the grave". The entire life-cycle of a product is scrutinised, from raw material extraction to the product manufacturing process and the use of the product up to its disposal or recycling.
After the product has served its purpose, and this goes especially for wood products, there are several possibilities how to put it to further use. While the disposal of wood products that are of no further use has no future relevance on account of current regulations, there are, in principle, many other viable ways and means. Decisions about the best way in each case depends, inter alia, on the results of the LCAs to be performed.