

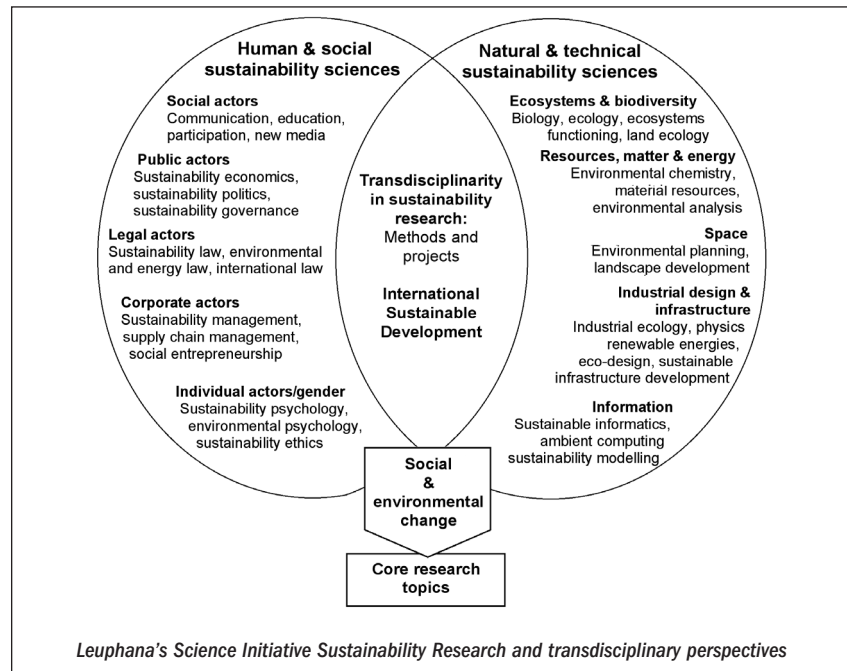
# Competence-building in sustainability

...for the challenges of the 21st Century...

**S**ustainable development is without doubt one of the meta themes of the 21st Century. It includes a multitude of environmental, social and economic issues such as climate and biodiversity protection, fighting poverty or improving working conditions. All decision-makers in political, economic and social institutions are challenged. To find solutions, new ways of thinking and acting are necessary. This requires specific interdisciplinary know-how and the capabilities to deal with the complexity inherent in sustainability issues.

Hence, scientific research and higher education play a central role in creating scientific knowledge and in providing academic training to foster sustainable development. Higher education in sustainability requires capabilities for implementing entrepreneurial approaches in public institutions as well as in companies. Apart from the factual sustainability knowledge, soft skills are a crucial part of the qualification of agents of change who are ambitious to shape the future of the civil society of the 21st Century.

Furthermore, sustainability research can only contribute to solving the real world problems if it overcomes narrow disciplinary focuses. Different disciplinary perspectives have to be adopted and combined in order to understand the actions and view-points of different societal players in their respective environments and the ecological systems developments. Whereas most universities add some lectures or chairs to their existing faculty, sustainability research and education rather needs a scientific concept from which the transdisciplinary research and educational programmes can be derived. One integrative aspect of all scientific endeavours in sustainability research



is the alignment towards the goal of sustainable development. Furthermore, successful sustainability research approaches include inter- and transdisciplinary methodologies, involve experts from practice and scientists in joint projects, are application-oriented and predominantly yield pragmatic results. However, sustainability research and education are rarely represented by a broad range of perspectives.

## Science Initiative Sustainability Research at Leuphana Universität Lüneburg

This is why Leuphana Universität Lüneburg has decided to establish its Science Initiative Sustainability Research. The initiative shapes and integrates sustainability sciences in terms of research, teaching and knowledge transfer. Understanding sustainable development as a co-evolutionary process of the anthropogenic society and the natural environment calls for an integrative approach with close links between human sustainability sciences and natural sustainability sciences.

Leuphana's sustainability faculty transcends disciplinary boundaries through a unique structural combination of different professorships and chairs, as shown in the diagram above.

Human and social sustainability science research follows an actor-orientated approach. This involves the examination and consolidation of the perspectives of various societal players, the identification and analysis of activities of the so-called change agents. Accordingly, the scientific investigation looks at the environmental and sustainability themes and issues that are facing social, political, legal, official, corporate and individual players. From the natural and technical sustainability science perspective, research focuses on environmental and sustainability themes and issues that relate to ecosystems and biodiversity, space, resources, matter and energy, and information. This perspectives approach ensures a clear focus and interdisciplinary view on the main

social, economic and environmental topics of sustainability, as well as the inclusion of various disciplinary views and results. In addition, the specific highlighting of transdisciplinary sustainability research in the core of Leuphana's sustainability focus serves the development of new research methods and educational approaches and as a driver of interdisciplinary integration. Together with the chair for international sustainable development, the chair for transdisciplinarity in sustainability research fosters integration between the human, social sciences and the natural and technical sciences while maintaining the focus on the overarching topic of sustainable development.

This perspectives structure of sustainability sciences offers a range of approaches to analyse and develop solutions to a large variety of sustainability themes like climate change, the reduction of biodiversity, water problems, etc. Within the framework of transdisciplinary events and research projects, the aim is to examine real world problems by bringing scientist together with experts from practice like managers, politicians, public servants, agents from NGOs, etc. This transdisciplinary approach supports the development of new analyses and solutions. Knowledge transfer and cooperation are integral components of transdisciplinary research. The uniqueness of the Leuphana approach to sustainability research within the European university landscape results from the:

- **Interplay between human and natural sustainability science research:** In contrast to the commonly separate, narrow disciplinary natural, engineering and social science institutes and faculties of many universities, the Leuphana approach strives not only for undertaking disciplinary research but moreover to promote cooperation between natural and human science researchers;
- **Consistent sustainability orientation:** Whilst the majority of institutes and universities, which concern themselves with

sustainability themes, demonstrate either an environmental or a social orientation and can not guarantee a consistent integration of the various aspects of sustainability, the Leuphana Sustainability Research Initiative aims at achieving a clear orientation towards the concept of sustainable development. The emphasis is not on an additive consolidation of analyses of environmental, social and economic issues, but rather on an integrative approach;

- **Transdisciplinarity as methodological approach:** Leuphana's sustainability research is exceptional in methodological terms, due to its considerable interdisciplinary and transdisciplinary approach. Leuphana's research approach not only integrates researchers and teachers from different disciplines but also interacts with experts from the field to keep a clear view on real world problem solving;
- **Project-orientated cooperation between natural and human sciences and research collaborations:** The research focus towards concrete sustainability problems is substantiated, on the one hand, by disciplinary research and, on the other, by interdisciplinary and transdisciplinary projects, which are methodologically supported, in particular by an academic chair for 'Transdisciplinary Sustainability Research'. Cooperation with highly qualified international research institutes, with companies as well as political and societal organisations are used to integrate expert practical knowledge;
- **The identification of core actors for sustainable development:** Leuphana's Sustainability Research Initiative is based on fundamental perspectives for sustainable development: in the field of human and social sciences, an actor's perspective is taken, which is orientated towards the question of which main 'change agents' influence social change and

sustainable development. These are social, public, legal, corporate and individual players. Gender and diversity aspects are taken into consideration;

- **Internationality:** Sustainability themes are often international themes, the qualified processing of which profits from an exchange of knowledge with excellent national and international research institutions. The Leuphana Science Initiative Sustainability Research considers international research and educational standards and contributes to the development of sustainability science as an emerging discipline, not only through its methodology but also through its research cooperation and the communication of its research results at scientific conferences and in professional journals.

With the presented configuration of its research focus, Leuphana Universität Lüneburg doesn't only aim at promoting the individual scientific disciplines engaged in sustainability research. In particular, it aims at deepening the understanding for the long-term interrelationships between the ecosphere and the anthroposphere, between nature and society. At the same time, new ground in methodological approaches shall be broken. Leuphana Universität expresses its social embeddedness and contributes to the establishment of an innovative civil society worth living in, in the 21st Century.



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