

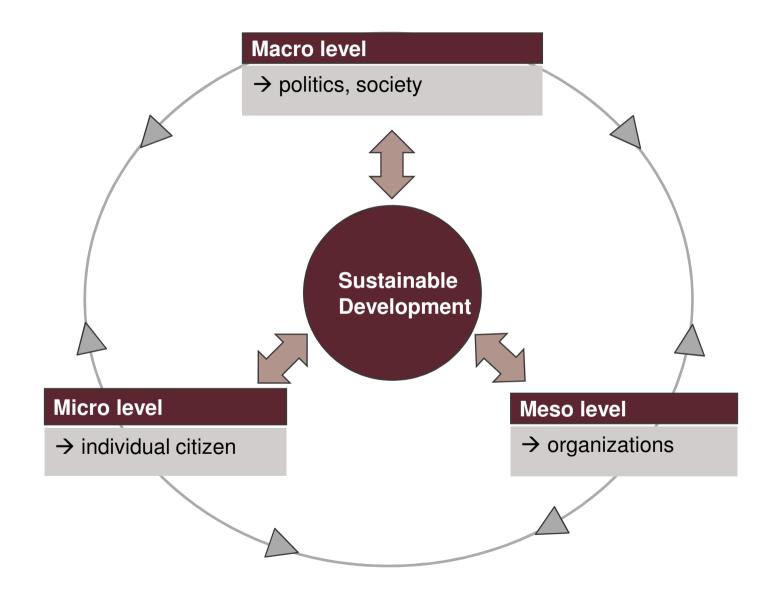


Leuphana University Lüneburg and the sustainability challenge: a review and a preview

Sustainability 2014: International Symposium "Future Urban Development at Different Scales" Karlsruhe, 8 May 2014

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Relationship between educational outcomes and social change

Type 1 approach

problems humanity faces are essentially environmental

 learning leads to change once facts have been established and communicated



Type 2 approach

fundamental problems are social and/or political

learning as a tool to facilitate choice between alternative futures

Type 3 approach

What is (and can be) known in the present is not adequate; desired ,end-states' cannot be specified

⇒ learning must be open-ended



Two Sides of Education for Sustainable Development

ESD 1 ESD 2

- Promoting / facilitating changes in what we do
- ✓ promoting (informed, skilled) behaviours and ways of thinking, where the need for this is clearly identified and agreed
- Learning *for* sustainable development

- ✓ Building capacity to think critically about (and beyond) what experts say and to test sustainable development ideas
- ✓ Exploring the contradictions inherent in sustainable living
- Learning as sustainable development



Implications of Sustainable Development for Universities

Sustainability

Interdisciplinary teaching on issues of sustainability

Inter- and transdisciplinary
Research (Sustainability Science)

University

Sustainable organization of the university

The university as part of the community / social responsibility

Transformation, Communication, Discourse about values

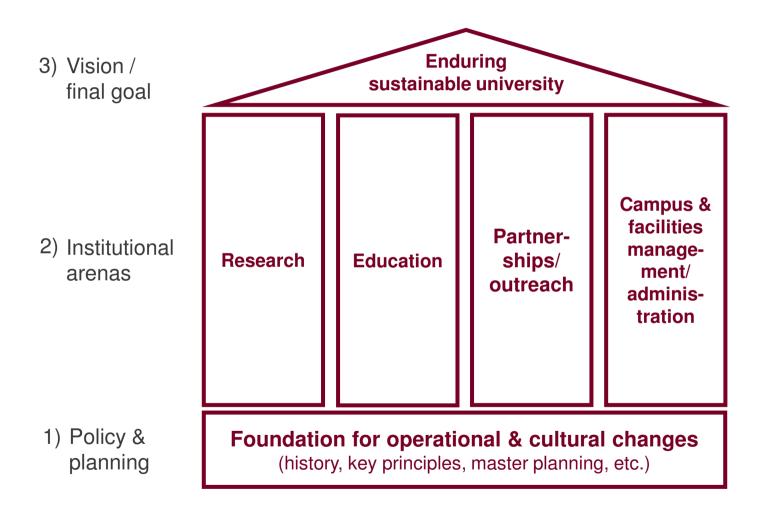


Staged social and educational responses to sustainability

Sustainability transition	Response	State of sustainability	State of education
1 Very weak	Denial, rejection or minimum	No change (or token)	No change (or token)
2 Weak	,Bolt-on'	Cosmetic reform	Education <i>about</i> sustainability
3 Strong	,Build-in'	Serious greening	Education <i>for</i> sustainability
4 very strong	Rebuild or redesign	Wholly integrative	Sustainable education



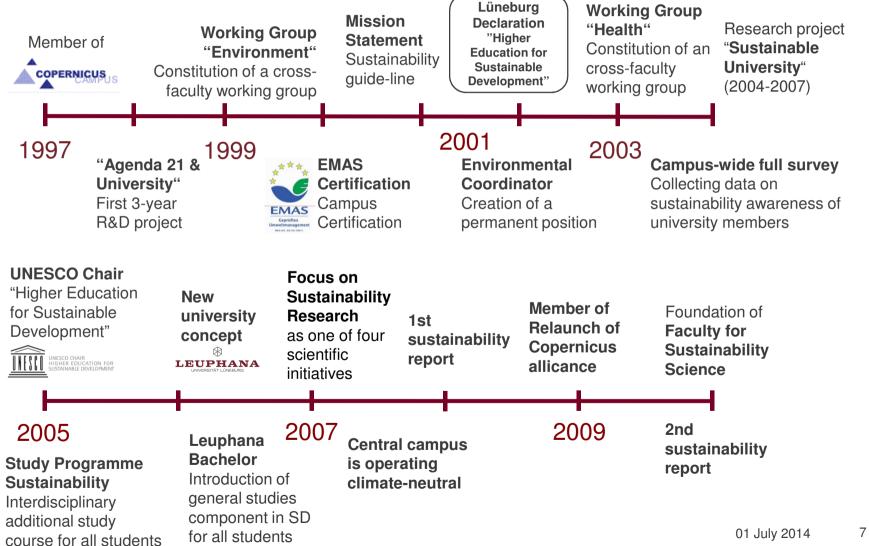
Leuphana University's leadership has worked out a clear strategic framework.







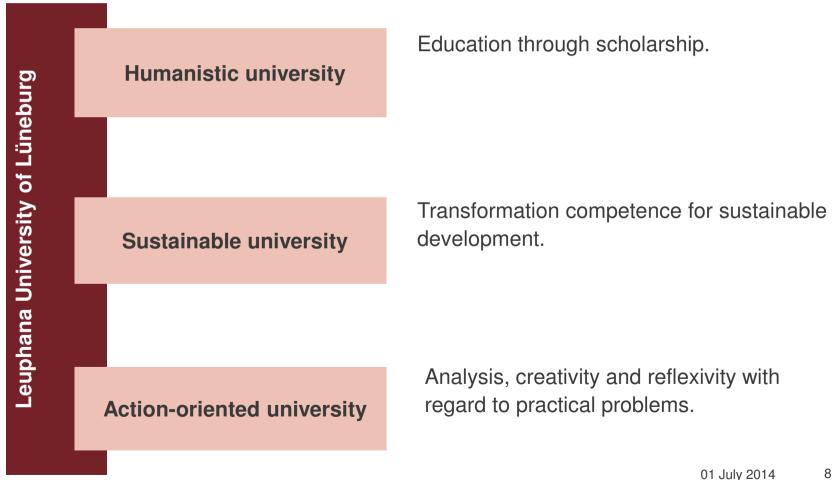
Foundation: Leuphana's sustainability orientation is rooted in a long-term tradition. → Decisive steps:







Foundation: Basis and objective: Sustainability is one of the key principles for Leuphana University's development. Its core activities – research, teaching and transfer – are seen as basic academic action areas for the development of a sustainable society.





Research: Leuphana University has developed a clear research focus on the sustainability sciences, and, as part of this process, has been establishing the Faculty of Sustainability Science with 25 professorships by 2014.

1996

Establishment of the interdisciplinary Faculty of Environmental Sciences.

2007

Focus on
Sustainability
Research as
one of four
scientific
initiatives.

2009 - 2011

Appointment of 9 new research oriented professorships as part of the sustainability initiative.

2010

Establishment of the Faculty of Sustainability Science as one of four faculties at Leuphana University.

2013

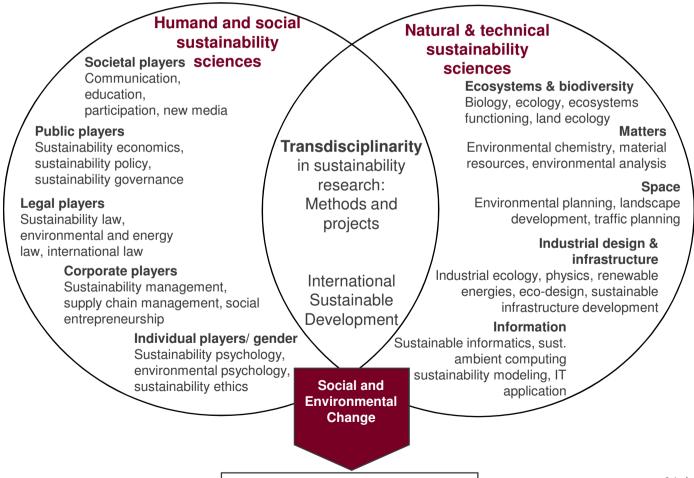
Kick-off transformative long-term study "2042" (50 years of sustainability transition)

The sustainability sciences are at the forefront in the acquisition of external funding and the number of publications at Leuphana University, which shows the research staff's support for the sustainability research focus.





Research approach: In Leuphana's transdisciplinary research profile "Human and social sustainability sciences" and "Natural & technical sustainability sciences" are given equal weight. Both aim at action-oriented research.

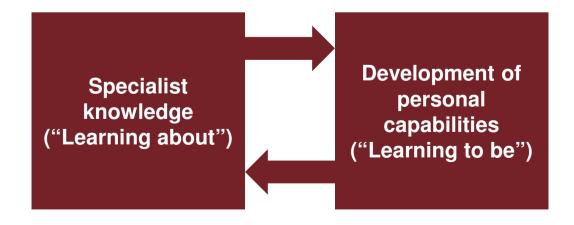






Education: Education for Sustainable Development is one of Leuphana's key principles.

- Between 2006 and 2010 the educational reorientation towards sustainability has been the **president's special concern** in order to assign top priority to educational matters.
- Three of the five members of the presidental board are vice-presidents of Leuphana's three academic schools (College, Graduate School and Professional School).
- Leuphana's idea is that, apart from specialist knowledge, academic education needs to support competency acquisition and the development of personal capabilities. Thus, the objective is to educate reflective, critical and active societal members (agents of change).





Education: Higher Education for Sustainable Development has been integrated in the form of a general studies mandatory component for all Bachelor students and different degree programmes.

General studies for all Bachelor students:

(1) Leuphana Semester covers the first semester of all Bachelor study programmes and is mandatory for all first semester Bachelor students, independently from their major studies.

Module "Science bears Responsibility" accounts for 1/3 of the Leuphana Semester and covers sustainability issues and illustrates ethical behaviour.

(2) Complementary studies accompany all Bachelor study programmes and cover several sustainability seminars.

Specialisation options:

(3) Bachelor studies: Major Environmental Sciences

Minor Sustainability a) in Humanities and b) in Natural Sciences

(4) Master studies: Sustainability Sciences

(5) MBA: Sustainability Management

(6) PhD: Sustainability Sciences

(7) Extra-occupational: Certificate in "Sustainability and Journalism"







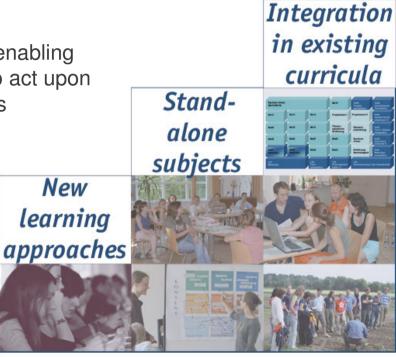
Higher Education for Sustainable Development – how we meet the challenge

HESD aims at a new learning culture which examines the potential of HE for a sustainable future

Goal is to promote personal development, enabling students to cope with complex situations, to act upon reflection and to make meaningful decisions

 Basically four steps of integration may be distinguished according to their degree of innovation and implementation

Lecture series







Partnerships / **Outreach:** Leuphana University supports and encourages strategic partnerships.

Research cooperations

- UNESCO Chair for "Higher Education for Sustainable Development"
- Cooperations with universities worldwide (e.g. Asia, Latin America, Europe, USA)

City and regional cooperations

- Sustainability Council of Lüneburg
- Partner of the Regional Centre for Expertise (RCE) of the city of Hamburg and region
- Education projects together with local and regional actors (business, governmental organisations, NGOs)
- Incubator for innovation (93 mio € EU project for regional development)

An example of an **incentive** to establish partnerships are the "Best Teaching Award", "Service Learning" and "Transfer Award", in which cooperation with regional actors is a critical assessment criterion.



Business cooperations

- Environmental Management Accounting Network (EMAN)
- EMA-SEA Environmental Management Accounting

Educational cooperations

- COPERNICUS-Alliance member
- Awardee of 13 official German projects of the UN World Decade "Education for Sustainable Development"
- Partner universities in Asia, Latin America, Africa, Europe, USA





The What: Campus & facilities management activities.

Leuphana's mission is to serve as 'living laboratory' for staff and students to foster organisational and individual sustainability learning processes.

Action areas	Campus development	Enviromental coordination	Energy	Infrastructure	Awareness raising
Activities	Campus design, renewables, sustainable facility design	Coordination of environmental activities by special team	Reduction of energy consumption, efficiency	Transport & waste management	Consumption of resources, health aspects
Concrete examples	 Sustainable campus design (central building by D. Libeskind, Campus concentration) Solar project (20% of electricity, 300 tons CO₂ savings/year) Cafeterias for organic food 	1) EMAS certification 2) Sustainability report creation 3) Coordination of energy, infrastructure & recycling activities	1) Organization al measures (e.g. flexible cleaning time) 2) Technical measures (e.g. efficient equipment) 3) Behavioural measures (e.g. awards, campaigns, CO ₂ sig. light)	1) Direct busservice to railway station 2) Car sharing and free bike station for staff & students 3) Waste separation system	 CO₂ signal lights in seminar rooms Posters about resource consumption & health aspects (e.g. in lifts) Guideline "studying sustainably"





The How: Implementation processes.

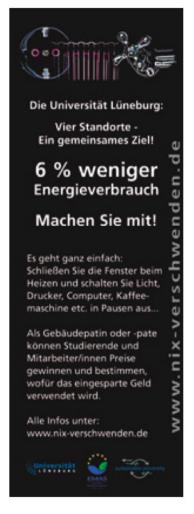
A systematic combination of top-down and bottom-up approaches enables a widely accepted and supported implementation process.

Imple- mentation approach	Integration of education activities	Integration of research projects	Participation / social integration	Incentive system	Evaluation processes
Imple- mentation activities	Continuous seminar topics / seminar series in "sustainable university"	Interdisciplinary research project "climate neutral university"	Stakeholder dialogue in different projects	Recognition of innovative and sustainable organisational commitment	Comparison of sustainability targets with achievements
Concrete examples	1) Achitecture 2) Mobility management 3) CO ₂ compensation measures 4) Energy saving measures 5) Adoption of renewable energies	1) Technologies for energy issues in buildings 2) Energy efficiency 3) Eco-social examination of user interactions	1) Sustainability report preparation 2) Student initiative for solar project 3) General meeting & discussion for everyone	1) Transfer reward 2) Various competitions 3) Best Fundraiser Award	1) EMAS certification 2) Sustainability report

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Energy Saving Campaign "Save It!"





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Reflection of and communication about sustainability



Culture and Sustainable Development

- Integration of theories of culture in the sustainability discourse
- Art projects that address university reform and criticism of unsustainable (university) development
- Exhibitions on issues of sustainability

Comunication and knowlegde transfer

- Newspaper "Campus Courier"
- Radio program on sustainability issues
- Making events
- Production of video clips





Sustainability initiatives and activities on campus

- Days of Action
- Events
- Green Students' Club
- Students' photovoltaic initiative
- Other student groups dedicated to sustainability issues (Greenpeace, Amnesty International, SNEEP ...) International, SNEEP,...)
 Sustainability conferences organized by students
- **.**..







Sustainable University: A strategic reorientation of the university's activities towards sustainability can only be ensured by a continuous process of institutionalisation.

Leuphana's critical landmarks for the institutionalisation of an academic sustainability culture can be seen in:

- Strong internal promoters;
- Integration of sustainability into the university's principles;
- A "strategic development unit" for the consideration of sustainability principles;
- A substantial number of scientific staff that supports the idea of becoming a sustainable university;
- Academic dialogue and active participation of the academic community;
- Support by university's management board;
- Sustainability centres and initiatives for research;
- Creation of national and international networks that stabilise the external visibility of the university profile and support in its turn the internal commitment to sustainability;
- Internal competitions as incentives.



A hierarchy of learning as a starting point?

- Awareness of sustainable development, as well as the range of views of interpretations of sustainable development and the implications for these differences
- Process encourages to begin to question (and analyse) how the principles of sustainable development can be made to work;
- Integration beginning to use the principles of sustainable development exensively in assignments and other class-work linking to real world issues in the community
- *Transformative* without direction, students operate as critically reflective practitioners of sustainable development.
- At this level, the curriculum becomes an expression of the cultural change that is sought."

Sterling/Thomas (2007)





Sustainable University: Leuphana University has been given several awards for its various sustainability activities.

Selection of International & National Awards

- International Awards for Innovative Practices in Higher Education for Leuphana's sustainability strategy and its whole-campus approach in 2011
- International Sustainable Campus Award (Category Leadership) in 2010
- The energy efficient and sustainable concept for the new central building, planned by Daniel Libeskind has been selected as one of the German exhibits for the Shanghai World Exhibition 2010.
- UNESCO Chair "Higher Education for Sustainable Development" in 2005 to Prof. Michelsen, Institute for Environmental and Sustainability Communication.
- Award of 13 projects for the UN Decade of Education for Sustainable Development. (Leuphana University is the most successful German university)
- Leuphana University was winner of the German's former federal president's (Horst Köhler) initiative "365 Landmarks in the Land of Ideas" six times in a row from 2008-2013.
- Award of the Institute for Environmental and Sustainability Communication by the Altner Combecher Foundation for Ecology and Peace.
- Award-winner in the category *KNOWLEDGE* of The science magazine *ZEIT WISSEN* and the initiative "Mut zur Nachhaltigkeit" (Encouraging Sustainability) as "best-practice" project that contribute in a significant way to sustainable development (2013)



F t re.

Without u there's no sustainability.

Ohne Dich keine Nachhaltigkeit.

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