

Angela Franz-Balsen,  
Lenelis Kruse (Eds.)



# Human Ecology Studies and Higher Education for Sustainable Development

European Experiences and Examples

Edition Humanökologie Volume 10

/III oekom



The logo for oekom consists of a stylized lowercase 'o' character followed by three vertical bars of decreasing height, and the word 'oekom' in a bold, lowercase sans-serif font.

oekom



**ClimatePartner°**  
**klimaneutral**

Verlag | ID: 128-50040-1010-1082

Dieses Buch wurde klimaneutral hergestellt. CO<sub>2</sub>-Emissionen vermeiden, reduzieren, kompensieren – nach diesem Grundsatz handelt der oekom verlag. Unvermeidbare Emissionen kompensiert der Verlag durch Investitionen in ein Gold-Standard-Projekt. Mehr Informationen finden Sie unter: [www.oekom.de](http://www.oekom.de)

#### Bibliografische Information der Deutschen Nationalbibliothek

Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet unter <http://dnb.d-nb.de> abrufbar.

© 2016 oekom, München  
oekom verlag, Gesellschaft für ökologische Kommunikation mbH  
Waltherstraße 29, 80337 München

Umschlagabbildung: © Robert Kneschke – Fotolia.com

Druck: Bosch-Druck GmbH, Ergolding

Dieses Buch wurde auf 100%igem Recyclingpapier gedruckt.

Alle Rechte vorbehalten  
ISBN 978-3-86581-299-5  
E-ISBN 978-3-96006-142-7



**Angela Franz-Balsen  
Lenelis Kruse  
(Eds.)**

**Human Ecology Studies  
and Higher Education for  
Sustainable Development**

**European Experiences and Examples**

Edition Humanökologie: Volume 10  
Deutsche Gesellschaft für Humanökologie  
German Society for Human Ecology  
Series editor: Bernhard Glaeser



# Contents

Preface - The German Society for Human Ecology (DGH) <i>Bernhard Glaeser</i> .....	7
Higher Education for Sustainable Development and Human Ecology in the European Higher Education Area – missed chances and current challenges <i>Angela Franz-Balsen, Lenelis Kruse</i> .....	9
<i>Times of change - new paradigms, new academic cultures</i> .....	23
Education for sustainable development: from reduction to integration <i>Rietje van Dam-Mieras</i> .....	25
At the bottom lines – student initiatives for sustainable development in higher education <i>Mandy Singer-Brodowski, Hannes Bever</i> .....	40
<i>Progress, barriers and innovative potential</i> <i>Examples of curriculum development from European universities</i>	55
Leuphana University Lüneburg and the sustainability challenge: a review and a preview <i>Maik Adomßent, Gerd Michelsen</i> .....	57
Human Ecology at the University of Gothenburg: experiences in undergraduate teaching <i>Karl Bruckmeier, Merritt Polk</i> .....	87
Let's shape the future! The success story of the Master's Degree in Sustainable Development at the University of Basel, Switzerland <i>Camelia Chebbi, Patricia Burkhardt-Holm</i> .....	113
Intertwining Sustainable Development in engineering courses: a manual for the “Individual Interactive Approach” <i>Dirk Jan Peet<sup>†</sup>, Arianne Bijma, Karel Mulder</i> .....	128

Human ecology in higher education in Poland <i>Anna Siniarska-Wolanska</i> .....	143
<b><i>Conclusions</i></b> .....	153
Human Ecology Studies and Higher Education for Sustainable Development – key issues and European perspectives <i>Angela Franz-Balsen, Lenelis Kruse</i> .....	154
Authors.....	163

# Preface

## The German Society for Human Ecology (DGH)

Bernhard Glaeser

Deutsche Gesellschaft für Humanökologie (DGH)

Human Ecology is a young discipline investigating the interrelations and interactions between society, humans, and the environment. Its core is a holistic approach that includes physical, socio-cultural, economic, and political aspects. The term “human ecology” was coined by the Chicago School of sociology in the 1920s. It has spread ever since as a research perspective in the natural, social, and planning sciences. In some countries, university chairs were established.

The German Society for Human Ecology (DGH) was founded in 1975. In its earlier years, it was largely influenced by social medicine. Later, it expanded thematically into other fields of science and policy. Today, DGH is a forum which hosts and assembles experts pertaining to all environment-oriented disciplines ([www.dg-humanoeukologie.de](http://www.dg-humanoeukologie.de)).

DGH annual meetings have been devoted to the interdisciplinary discourse in focal topics relevant to varying environmental issues. This resulted in a series of book publications published by Westdeutscher Verlag:

Bernhard Glaeser (ed.) 1989. *Humanökologie*.

Bernhard Glaeser & Parto Teherani-Kröninger (eds.) 1992. *Humanökologie und Kulturökologie*.

Karl Aurand, Barbara P. Hazard & Felix Tretter (eds.) 1993. *Umweltbelastungen und Ängste*.

Josef Schmid (ed.) 1994. *Bevölkerung — Umwelt — Entwicklung*.

Barbara P. Hazard (ed.) 1997. *Humanökologische Perspektiven in der Gesundheitsforschung*.

Dieter Steiner (ed.) 1997. *Mensch und Lebensraum: Fragen zu Identität und Wissen*.

In 2000, DGH decided on a new start with Oekom Publishers and the new series Edition Humanökologie. The following books have been published:

- Wolfgang Serbser (ed.) 2004. *Humanökologie: Ursprünge – Trends – Zukünfte*. Edition Humanökologie Band 1.
- Wolfgang Serbser, Heide Inhetveen & Fritz Reusswig (eds.) 2004. *Land – Natur – Konsum. Bilder und Konzeptionen im humanökologischen Diskurs*. Edition Humanökologie Band 3.
- Bernhard Glaeser (ed.) 2005. *Küste, Ökologie und Mensch. Integriertes Küstenmanagement als Instrument nachhaltiger Entwicklung*. Edition Humanökologie Band 2.
- Bernhard Glaeser (ed.) 2006. *Fachübergreifende Nachhaltigkeitsforschung. Stand und Visionen am Beispiel nationaler und internationaler Forscherverbünde*. Edition Humanökologie Band 4.
- Susanne Stoll-Kleemann & Christian Pohl (eds.) 2007. *Evaluation inter- und transdisziplinärer Forschung. Humanökologie und Nachhaltigkeitsforschung auf dem Prüfstand*. Edition Humanökologie Band 5.
- Karl Bruckmeier & Wolfgang Serbser (eds.) 2008. *Ethik und Umweltpolitik. Humanökologische Positionen und Perspektiven*. Edition Humanökologie Band 6.
- Marion Glaser, Gesche Krause, Beate Ratter & Martin Welp (eds.) 2012. *Human—Nature Interactions in the Anthropocene: Potentials of Social-Ecological Systems Analysis*. Routledge, New York & London.
- Kurt Egger & Stephan Pucher (eds.) 2012. *Was uns nährt, was uns trägt. Humanökologische Orientierung zur Welternährung*. Edition Humanökologie Band 7.
- Parto Teherani-Krönner & Brigitte Hamburger (eds.) 2014. *Mahlzeitenpolitik. Zur Kulturökologie von Ernährung und Gender*. Edition Humanökologie Band 8.
- Karl-Heinz Simon & Felix Tretter (eds.) 2015. *Systemtheorien und Humanökologie. Positionsbestimmungen in Theorie und Praxis*. Edition Humanökologie Band 9.

Higher Education for Sustainable Development (HESD): Who are the pioneers of a new approach in teaching and learning in Europe? This volume comes timely, it contributes to the UN Decade of Education for Sustainable Development (2005-2014) by assembling case studies from different countries. It draws from experiments and experiences, presents challenges and success stories. The intention is to show how HESD and Human Ecology can profit from one another in curriculum development, teaching practice and a wealth of theoretical models. Crucial questions are raised for the future, how to accelerate innovation in European education and how to integrate the most important stakeholders—the students—in these change processes. What matters is the role of education and learning to enable society to understand and respond to societal needs, including sustainable development.

# **Higher Education for Sustainable Development and Human Ecology in the European Higher Education Area – missed chances and current challenges**

Angela Franz-Balsen<sup>1</sup>, Lenelis Kruse<sup>2</sup>

<sup>1</sup> Rue du Noyer 285, 1000 Brussels, E-Mail: franzbals@aol.com

<sup>2</sup> Universität Heidelberg, Psychologisches Institut, Hauptstraße 47-51, 69115 Heidelberg, E-Mail: lenelis.kruse@psychologie.uni-heidelberg.de

**Abstract.** This introductory chapter discusses the aims of the conference “Higher Education for Sustainable Development – Specific Contributions of Human Ecology” (Sommerhausen 2007) which provides the background of this book.

Starting from the observation that the scientific communities of Higher Education for Sustainable Development (HESD) and Human Ecology (HE) and their discourses in Europe constitute two separate worlds, the argument aims to convince that such a division should be overcome. The historical background of each of the two special academic cultures is introduced and parallels and potentials of mutual support are described. The focus is on teaching and on the state of art in Europe. Secondly, the contributions to the book are highlighted. The majority of these are examples of curriculum development and processes of change reported from universities in Germany, Sweden, Switzerland, the Netherlands and Poland.

**Keywords.** Higher Education for Sustainable Development, Human Ecology, curriculum, parallels, challenge.

## **Introduction**

Institutions of higher education have a long tradition in Europe and they are proud of it. To adapt their mission and their organisational structure to the challenges of a rapidly changing world has always been difficult. In the 20th century, however, “modern” universities had de-

veloped capacities to foster technological progress and industrial development, often submitting even the academic sphere to the logic of the mainstream economic system. Faced with the situation at the turn of the century (climate change, financial crisis, and other threats of global dimensions) this path was questioned again, especially by the concept of and the discourse on Sustainable Development (UNCED 1992, chapter 36), and of course this was not welcomed at all. When concerned and committed scientists called for comprehensive reforms (e.g. "Rethinking universities", Gruppe 2004), there was little resonance.

Since 1997, when the so-called Bologna Process began, universities all over Europe have in fact undergone considerable changes regarding teaching and learning cultures. A European Higher Education Area was the vision behind this process (European Ministers Responsible for Higher Education 2005). It was a great achievement that sustainable development is mentioned as part of this vision or rather as the path towards it: "Our contribution to achieving education for all should be based on the principle of sustainable development" (Bergen Communiqué 2005, p. 6). This could be interpreted as the integration of sustainable development into European higher education policies, an early highlight in the UN- Decade of Education for Sustainable Development (2005-2014). Theoretically, it was a window of opportunity in times of change, especially in countries like Germany where universities had to rewrite curricula in order to adapt to the Bachelor/Master model as requested by the Bologna process.

In practice, the majority of higher education institutions did not take the chance to shape the new curricula in ways adequate to equip young professionals with the expertise and skills they need in a globalised world and facing future global threats. Higher Education for Sustainability (HESD) is still far from being mainstream (UNESCO 2009; Schneidewind 2009; Schneidewind and Singer-Brodowski 2013). In 2007, not more than a handful of universities in each country of Europe had accepted the challenge and pioneered for innovative learning cultures that deserved to be called HESD, which implied also organisational change (Practice what you preach!). Most of them started from scratch, exploring the potential and the pitfalls of interdisciplinary academic work (Blewitt and Cullingford 2004; Jones, Selby and Sterling 2010; Leal Filho 2010; Leal Filho 2015: 113). They formed networks and learned from each other (cp. Adomßent and Michelsen, p. 81), since – apparently – there was no tradition to build on. Here Human Ecology (HE) comes in, with decades of experience in interdisciplinary research and teaching, but not known to a wide public.

It was the aim of the conference “Higher Education for Sustainable Development – Specific Contributions of Human Ecology” (Sommerhausen 2007) to bring these two separate worlds, the scientific communities of HESD and HE and their discourses in Europe, together and to explore potentials of mutual support.

As a first step, the historical background of each of the two special academic cultures needs to be introduced.

## **Human Ecology: Historical background and state of art**

Human Ecology is an interdisciplinary scientific approach to the interaction between human beings and the environment, bridging the gap between social sciences, natural sciences and humanities. It is usually traced back to the Chicago School of Sociology (Thomas 1909; Park and Burgess 1921), in the context of which it was established as a sub-discipline of sociology by Roderick D. McKenzie (McKenzie 1934, 1936). The term Human Ecology, however, had been coined in 1907 by the chemist Ellen Swallow Richards, her definition already focusing on the relationship between human beings and their environment (Richards 1907; Merchant, 2007)

The innovation which Human Ecology was to bring about was overcoming the strict disciplinary structure and segregation of the science system. And apparently all over the world, researchers and academic teachers felt the necessity of a theoretical framework that allowed them to develop multi- or pluridisciplinary approaches to the complex interactions between human beings and their environment. From there, however, it was still a long way to go until theoretical concepts for inter- and transdisciplinarity emerged, as defined at the beginning of the 21st century (Becker and Jahn 2006; Bergmann and Schramm 2008).

In the 1970's, when the environmental impacts of industrialized societies became more and more evident, a second wave of Human Ecology began. The ecological debates of the 1970/80's and theoretical models of the founders were integrated into a variety of concepts, developed by academics from all continents. Sub-disciplines of human ecology or competing disciplines appeared: cultural ecology, urban ecology, environmental sociology, and anthropological ecology.

Today it is nearly impossible to give a concise historical record and description of the varied theoretical concepts of Human Ecology that emerged worldwide. As German pioneers Atteslander and Hamm have to be mentioned, they introduced the term *Sozialökologie* into the German urban sociology discourse (Atteslander and Hamm 1974; At-

teslander 1976). Thirty years later *Soziale Ökologie* (Becker and Jahn 1999; Becker and Jahn 2006) stands for a broader approach which helped to pave the way for sustainability research in Germany. The contribution of the scientific community of human ecologists has become visible in the academic world through its journals (*Journal of HE*; *Human Ecology Review*; *Human Ecology*) and international conferences organized by the Society of Human Ecology (SHE)<sup>1</sup>, a network, founded in the United States in 1983, that became the leading international network of over 100 human ecology institutions and organisations worldwide (Borden 2008: 106).

This might read like a story of success, but academic recognition of human ecology in disciplinary structures has always been difficult, though. Could an interdisciplinary discipline fit into the old structures? "It is little wonder that interdisciplinary pursuits have struggled to secure a place in modern universities. These are the obstacles the founders of the Society for Human Ecology confronted. They still remain. It is unlikely they will ever disappear." (Borden 2008: 106).

Teaching human ecology has always been a mission of human ecologists, and schools or departments of human ecology exist at many US-Universities and on all continents.<sup>2</sup> Human ecology curricula are characterized by the inherent principle of interdisciplinarity (Hens et al. 2003).

Of lighthouse character for teaching human ecology is the "College of the Atlantic" (COA). This college was founded in 1969 as the first college worldwide to offer a single interdisciplinary degree in human ecology. With its focus on interdisciplinary learning, College of the Atlantic does not have distinct departments, and all faculty members consider themselves human ecologists in addition to their formal specialization. Its curriculum includes student-directed projects and community involvement.

"College of the Atlantic enriches the liberal arts tradition through a distinctive educational philosophy — human ecology. A human ecological perspective integrates knowledge from all academic disciplines and from personal experience to investigate — and ultimately improve — the relationships between human beings and our social and natural communities. The human ecological perspective guides all aspects of education,

---

<sup>1</sup> SHE website: <http://societyforhumanecology.org/>

<sup>2</sup> Overviews available at <http://societyforhumanecology.org/> and [www.checinternational.org/about-chec/checs-network/](http://www.checinternational.org/about-chec/checs-network/)

research, activism, and interactions among the college's students, faculty, staff, and trustees. The College of the Atlantic community encourages, prepares, and expects students to gain expertise, breadth, values, and practical experience necessary to achieve individual fulfillment and to help solve problems that challenge communities everywhere.”

(COA Mission Statement)

### **Human Ecology in Europe**

In Europe networks of Human Ecology formed more or less at the same time, in the 1970's, in Geneva, London, Vienna, Gothenburg and in Poland (Poznán, Katowice, Wroclaw).

The long tradition and very special approach to Human Ecology in Poland is described in chapter x of this book. Polish HE was linked to epidemiology and public health in its early years. Later environmental protection became a leading subject in HE curricula in Poland. To date human ecology is well represented at Polish universities.

In Western Europe the first association of human ecologists took place around the foundation of the International Centre for Human Ecology (Centre International d' Ecologie Humaine, CIEH) at the Faculty of Sciences of the University of Geneva (Hens et al. 2003) which in 1972 created a certificate. This certificate was characterized by the interdisciplinarity of its study programme. In 1973 it was implemented at the universities of Geneva and Paris V, University of Toulouse, University of Bourdeaux I, and the University of Aix-Marseille II. In 1975 the Université libre de Bruxelles (Belgium) and the Vrije Universiteit Brussel (Belgium) stepped in, in 1976 University of Padua joined the network. With universities from Portugal and France the network had 12 members, all offering slightly different but comparable 2-year courses for professionals. Their convention says: “The certificate is intended to train qualified people having to deal with the problems raised by the interactions between man and his environment. It brings interdisciplinarity and international university co-operation to continuing education”

(CIEH 1978, quote from Hens et al. 2003). This mainly French-speaking network is still functioning; its active members today are the universities of Pau and Marseille III, the University of Padua, and the Universidade de Lisboa.

The Scandinavian centre of HE was located in Gothenburg where in 1972 a number of university professors and lecturers founded the “Center of Interdisciplinary Studies of the Human Condition”. The ups

and downs of the centre are described in the chapter by Polk and Bruckmeier. Since 2006, human ecology has been integrated into the School of Global Studies at the Social Science Faculty of Gothenburg. This case is of special relevance for the aims of this book, as it successfully bridges the gap between HE and HESD.

German-speaking human ecologists were gathered by Helmut Knöting, professor at the technical University of Vienna, who in 1975 founded the German Society of Human Ecology (Deutsche Gesellschaft für Humanökologie, DGH). Its individual members were very active in academic teaching, research and publishing. But only for a short period they succeeded in installing a centre of Human Ecology (1999 – 2007 Technical University of Cottbus).

In UK it was an international NGO, the Commonwealth Human Ecology Council (CHEC), which lead the human ecology movement on the isles. CHEC is an active network, its headquarters located in London. It cooperates with development projects across the Commonwealth countries and with the numerous academic institutions in UK that have HE curricula (Oxford University, University College London, Manchester, Glasgow, Edinburgh).

In conclusion: The multi- and interdisciplinary approaches of human ecology seem to have fascinated scientists all over Europe in the 1970s, they were taken up by quite a number of universities, differing from country to country and from institution to institution in the way HE was associated to certain disciplines or established as an independent, innovative curriculum. In the last decade of the 20<sup>th</sup> century, HE was also interpreted as Higher Education for Sustainable Development, for instance in Australia (Dyball and Carpenter 2006). In many other places, however, it stayed independent, at the margins of the academic mainstream, and no approximation was made to the newly emerging Higher Education for Sustainable Development.

### **Higher Education for Sustainable Development**

The universities that have been taking up the challenge of Education for Sustainable Development (ESD) can today be seen as pioneers of a new approach to teaching and learning. Their number is growing and they have organised in networks of regional, national, international and global scopes. The mandate goes back to chapter 36 of Agenda 21 as a result of the UN conference on Environment and Development in 1992. Highlighting the inter-relationship between ecological, economic and sociol-cultural dimensions of human living and activities means that

the goal of future endeavors is to reorient these interdependencies from their unsustainable development to more sustainable ones.

The task for universities was to make room for broad, interdisciplinary approaches in teaching and learning, providing ample opportunities for the students to make their own observations and draw conclusions, to let them experience dilemmata and be faced with uncertainty. As Stephen Sterling says: “Sustainability is not just another issue to be added to the curriculum, but a different view of curriculum, of pedagogy, of organizational change, of policy and particularly of ethos.” (Sterling 2004: 50).

The implementation of ESD into higher education started slowly, it needed the examples of a few pioneering universities, the political push of the UN-Decade of Education for Sustainable Development (2005-2014) as well as the Bologna Process to make HESD visible as a guideline for innovation in higher education institutions. Milestones on the way to progress as well as obstacles encountered can be taken from several contributions in this book (van Dam Mieras; Adomßent and Michelsen; Chebbi and Burkhardt-Holm; Peet, Bijma and Mulder).

In more and more places HESD was implemented in such a way that a whole college or university would be gradually transformed. This was identified as distinct from the popular “Greening the Campus”-approaches and called “Third-wave Sustainability in Higher Education” (Wals and Blewitt 2010). It means that all subsystems of an institution of higher education (research, teaching /learning, campus management and organisational culture) are being re-oriented towards sustainability (e.g. Adomßent and Michelsen, p. 57 ff.). This reminds of the holistic approach of the College of the Atlantic and leads us to compare the characteristics of human ecology study programmes and HESD.

### **Human Ecology and HESD – parallels and intersections**

At this point a number of parallels between HE and HESD should have emerged: The theoretical framework of both was based on real world problems, caused by the interaction of humans (or people) and the biosphere. Interdisciplinarity and transdisciplinarity are key principles that both share the understanding of problems and of problem-solving. Both HE and HESD want to equip future professionals with self-confidence and a broad bundle of competences. And both were not easily accepted by mainstream academia or the scientific system, to say the truth, they have remained at the margins so far.