

***COPERNICUS-Guidelines
for Sustainable Development
in the European Higher
Education Area***



**How to incorporate the
principles of sustainable development into
the Bologna Process**



Education and Culture

Socrates

With the support of the European Commission

COPERNICUS Guidelines for Sustainable Development in the European Higher Education Area



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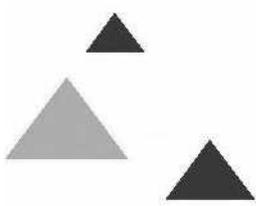
Prepared by the COPERNICUS-CAMPUS Sustainability Center at the Carl von Ossietzky University Oldenburg (Hans-Peter Winkelmann, Chairman) and the COPERNICUS-CAMPUS University Alliance for Sustainability.

“V. Preparing for 2010

Building on the achievements so far in the Bologna Process, we wish to establish a European Higher Education Area based on the principles of quality and transparency. We must cherish our rich heritage and cultural diversity in contributing to a knowledge-based society. We commit ourselves to upholding the principle of public responsibility for higher education in the context of complex modern societies. As higher education is situated at the crossroads of research, education and innovation, it is also the key to Europe’s competitiveness. As we move closer to 2010, we undertake to ensure that higher education institutions enjoy the necessary autonomy to implement the agreed reforms, and we recognise the need for sustainable funding of institutions.”

The European Higher Education Area - Achieving the Goals, Communiqué of the Conference of European Ministers Responsible for Higher Education, Bergen, 19-20 May 2005

The authors are responsible for the choice and presentation of the facts contained in this document and for the opinions expressed therein, which are not necessarily those of the European Commission and do not commit the Organization.



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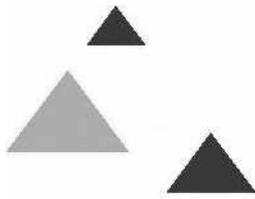
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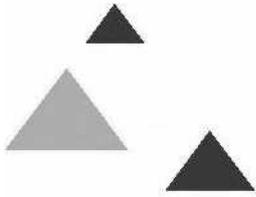
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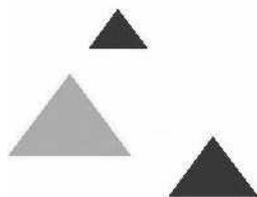


Background

At their last conference in Bergen in May 2005, the European Ministers responsible for Higher Education adopted the Bergen Communiqué, which makes for the first time since 1999 a strong reference that the Bologna Process for establishing a European Higher Education Area by 2010 and promoting the European system of higher education worldwide should be based on the principle of sustainable development. In the light of this decision, COPERNICUS-CAMPUS as the European university network for sustainable development, is taking up leadership in the European Higher Education Area to mobilize universities and academia around the theme of sustainability and to support higher education institutions in the implementation in relation to the Bologna Process. For that reason, COPERNICUS-CAMPUS has developed strategic guidelines for the incorporation of sustainable development into the European Higher Education Area to be presented in due time for the next conference of the European Ministers responsible for Higher Education in May 2007 in London. The elaboration of the COPERNICUS Guidelines has been supported by the European Commission under the Socrates Programme.

The COPERNICUS Guidelines address the challenges higher education institutions face through striving for sustainability and should give them orientation help in implementation in connection with the Bologna Process. Further, they should ensure that the establishment of the Higher Education Area by 2010 will be based on the principles of sustainable development in the Europe of knowledge.

COPERNICUS-CAMPUS has always been about what universities can do to help society meet the challenges of sustainable development. The signing of the COPERNICUS University Charter for Sustainable Development in 1993 as a response to the Earth Summit in Rio de Janeiro marked a breakthrough in raising consciousness within the European universities about the necessity to work together to preserve the future. Since that time, the COPERNICUS-CAMPUS university network of signatories to the COPERNICUS Charter is getting incessantly broader: By now, more than 320 universities and higher education institutions from 38 countries across Europe have signed the Charter, thereby declaring that they will give sustainable development an important place in their activities. This implies that in curricula, institutional management and services to the local/regional society, a responsible balance between economic, ecological and social/cultural aspects has to be worked out. Due to this broad acceptance in daily university life, the COPERNICUS Charter constitutes today principle guidance for the majority of higher education institutions in Europe in their efforts to contribute to sustainable development.



1. Scope of the COPERNICUS Guidelines

Seeing the Bologna Process against the background of the UN Decade of Education for Sustainable Development (UN DESD) in a global perspective, the Bologna Process is not just an education agenda about structures, such as the degree systems, recognition and quality assurance, but there is also a very strong social and cultural dimension as well as a wider political dimension to this process. The Bologna Process does not operate in a vacuum – it has a context and a set of broader European policy issues. The Bologna Declaration stated that a Europe of Knowledge is an important factor for social and human growth. Education and educational cooperation plays a role in the development of stable, peaceful and democratic societies. Universities have been important partners in the building of transnational understanding and cooperation, thus also contributing to the European dimension of higher education.

Consequently, the Bergen Communiqué of the Ministerial Conference held in Bergen in May 2005 to the Bologna Process for establishing a European Higher Education Area by 2010 and promoting the European system of higher education worldwide makes for the first time a strong reference to sustainable development. In para. 17, which describes the external dimension of the Bologna Process, it says:

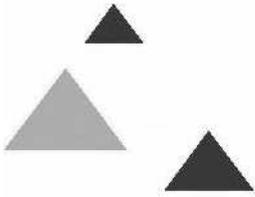
“The European Higher Education Area should be open and attractive to the rest of the world. Our contribution to achieving education for all should be based on the principle of sustainable development and be in accordance with the ongoing international work on developing guidelines for quality provision of cross-border higher education. We reiterate that in international academic cooperation, academic values should prevail.”

Higher education occupies a central position in shaping the way in which future generations learn to cope with the complexities of globalization. Here, universities are called upon to teach not only the skills students need to advance successfully in the labour market, but also to nourish in their students, faculty and staff a positive attitude towards cultural diversity and to help them to understand how people can contribute to a better life in a safer world. It is essential that the European universities mobilize all appropriate resources in a general context of sustainable development.

To that end, the Bologna Process is also to be seen in the wider context of the sustainable development requirement that present needs be met without compromising the ability of future generations to meet their own needs. What is urgently needed in order to implement the Bergen Communiqué is a pro-active approach on what universities could do to realize the Bologna reforms in order to face globalization, to serve the learners of the future and to contribute both to the UN Decade of Education for Sustainable Development and the UNECE Strategy for Education for Sustainable

To meet the challenges of a sustainable society, universities have to re-think their position: Which innovative approaches in teaching and learning are needed?

Development adopted jointly by Environment and Education Ministries in March 2005. Pro-active universities are of vital importance in the 'Europe of knowledge', particularly to contribute to sustainable development. To meet the challenges of a sustainable society, universities have to re-think their position: Which innovative approaches in teaching and learning are needed?



2. Objectives of the COPERNICUS Guidelines

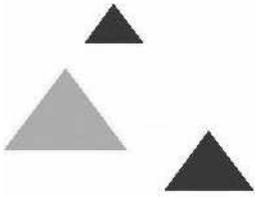
The COPERNICUS Guidelines address the challenges higher education institutions face through striving for sustainability and give them orientation help in implementation in connection with the Bologna Process. It is not the objective of these guidelines to provide solutions of universal validity, but they should primarily serve as a helping hand for higher education practice in higher education institutions, so that individual approaches can be developed based upon this. The goal of these guidelines should be to establish an institutionalized framework in response to the need for the incorporation of 'Sustainable Development' in the context of the development of Bachelor and Master Courses.

The COPERNICUS Guidelines provide strategic assistance on how to integrate sustainable development into the following areas:

- 1. Integration of sustainable development into the degree structure (modules)**
- 2. Integration of sustainable development into the qualifications framework and learning outcomes**
- 3. Integration of sustainable development into quality assurance**
- 4. Improvement of the social dimension and the attractiveness of the European Higher Education Area by integration sustainable development**

Overall aims of the COPERNICUS Guidelines are:

- supporting existing innovative approaches to elaborate modules on sustainable development for modularized study courses;
- improving the contribution of higher education institutions to sustainable development, in particular to creating equal standards of living;
- strengthening the role of higher education institutions in society based upon the principles of sustainable development and solidarity;
- improving the future compatibility and innovation potential of higher education institutions and
- making a long-term contribution to the UN Decade on Education for Sustainable Development.



3. *The Bologna Process in the context of Sustainable Development*

Adopting a way of life based on the principles of sustainable development is one of the biggest national and global challenges we face in the coming decades. The UN's World Summit on Sustainable Development in 2002 set goals whereby we commit ourselves to building a humane, equitable and caring global society, cognizant of the need for human dignity for all. Education is an essential way in which to nurture critical thinking, to empower people to handle both local and global questions related to development and to find solutions for sustainable development problems. Mutual respect between generations forms the basis of sustainable development. In order to honour our commitment to the Johannesburg Declaration, we have to include the whole population within our education policy; everyone must acknowledge their responsibility when it comes to creating an ecologically, economically, socially and culturally sustainable future. An education policy based on the principle of life-long learning strengthens society, gives citizenship a new meaning and increases welfare.

There is no universal model of education for sustainable development. It is important that the educational guidelines for sustainable development be drawn from the region's indigenous culture as well as from the local social, economic and environmental circumstances. Nevertheless, it is equally important that the global aspects of education for sustainable development be kept in mind.

Sustainable development as a principle and a practice brings added value to the content and process of higher education. Sustainable development can only be progressed – or indeed achieved – through a critical understanding of its complementary parts – such as how environmental, socio-political and economic factors influence our lives, the impact our choices and actions have on sustainable development – and a commitment to make a positive difference in our world.

Sustainable development as a principle and a practice brings added value to the content and process of higher education.

Universities play a significant role in the development of graduates as active citizens and the strategic space they create for the cultivation of knowledge about global and sustainable development. There is the need to produce graduates educated with values which are transferable between local, regional and national contexts into the international or global arena.

Higher education is more than being just the cherry on the cake of education systems, it is a vital part of any sustainable development strategy. Higher education not only empowers people for their role in society and therefore is of vital importance to promote the sustainable development of our global community. It provides also the highly skilled individuals necessary for every labour market such as teachers, doctors, civil servants, engineers, humanists, entrepreneurs, scientists, and many more. At last,

these trained individuals develop the capacity and analytical skills that drive local economies, support civil society, teach children, lead effective governments, and make important decisions which affect entire societies.

The “Graz Declaration on Committing Universities to Sustainable Development”¹, which was adopted at the International Conference on the occasion of the launch of the UN Decade of Education for Sustainable Development in higher education and which was organized by COPERNICUS-CAMPUS, UNESCO, oikos International, the University of Graz and the University of Technology of Graz, concluded that universities, as the location of academic education, bear a distinctive responsibility for the students and their professional and moral quality as future leaders in society and economy. As major contributors to research, they have to tackle questions which arise in connection with the transition of societies around the world towards more sustainable development paths. As significant societal actors, universities shape their local, regional and national environs and are therefore important partners of other stakeholders, and society at large, for a sustainable future. All these challenges and opportunities require universities to re-think their position in society in order to meet expectations as well as to take full advantage of emerging opportunities.

The Bologna Declaration stated that a ‘Europe of Knowledge’ is an important factor for social and human growth. Education and educational cooperation has a role in the development of stable, peaceful and democratic societies. Universities have been important partners in the building of transnational understanding and cooperation, thus also in contributing to the European dimension of higher education. This will be needed also in coming years.

“A Europe of Knowledge is now widely recognised as an irreplaceable factor for social and human growth and as an indispensable component to consolidate and enrich the European citizenship, capable of giving its citizens the necessary competencies to the challenges of the new millennium, together with an awareness of shared values and belonging to a common social and cultural space.”²

This extract from the Bologna Declaration of June 1999 encapsulates the importance of the Bologna Process to promote sustainable development as well. It is not the sole remit of academics or students, of governments or institutions. It is not just an educational agenda, nor an economic one. There is a very strong social and cultural dimension to this process. There is also a wider political dimension of the Bologna Process. It does not operate in a vacuum – it has a context and a set of broader European policy issues.

Consequently, the European Ministers responsible for Higher Education decided at their recent conference in Bergen in May 2005 that the Bologna Process for establishing a European Higher Education Area by 2010 and promoting the European system of higher education worldwide should be based on the principles of sustainable development. The

¹ See <http://www.uni-graz.at/sustainability/>

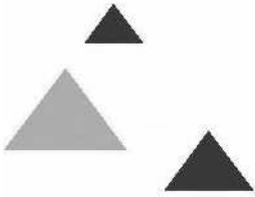
² See Bologna Declaration

Bergen Communiqué “The European Higher Education Area – Achieving the Goals” states in part III “Further challenges and priorities”:

“The attractiveness of the EHEA and cooperation with other parts of the world

The European Higher Education Area must be open and should be attractive to other parts of the world. Our contribution to achieving education for all should be based on the principle of sustainable development and be in accordance with the ongoing international work on developing guidelines for quality provision of cross-border higher education.”

Another high-level initiative that addresses sustainable development in higher education is the UNECE Strategy for Education for Sustainable Development adopted jointly by Environment and Education Ministries in March 2005. Since all European countries are members of the United Nations Economic Commission for Europe, this achievement might be formally reported by their respective governments at the first reporting cycle for the implementation of the UNECE Strategy for Education for Sustainable Development in 2010.



4. *M*aking higher education more attractive by incorporating the principles of sustainable development

Sustainable development addresses the areas which are absolutely central to the future of most higher education institutions in Europe:

- Cost-effectiveness of higher education systems and management
- Improving the quality of higher education and making it more attractive and future-oriented
- Internationalization of higher education in a global civil society

It is commonly agreed that pro-active universities are critical for the complex processes of innovation, economic prosperity and social cohesion. Consequently, universities must create a better sense of common purpose and leadership in the community to achieve sustainable development. Universities must develop their role much stronger as models for society in the pursuance of sustainability. They are critical social multipliers in achieving sustainable production and consumption patterns. Universities are important actors in the community, as employers, purchasers and service users. Universities are also enterprises where the prudent use of resources saves money and safeguards reputation.

Sustainable development as a guiding principle for the European universities can convey properly what challenges students of each discipline will face to solve global problems, in what ways their science can and must contribute to the necessary innovations, further, how they are expected to contribute to a sustainable and future-compatible development on the way to sustainable development later in their daily working life.

If sustainability is fully incorporated into the mission of universities, it will also respond to the three priority areas for reform of European universities which have been identified in the 2005 Communication from the Commission³: (1) enhancing the quality and attractiveness of Europe's universities, (2) improving their governance and systems, and (3) increasing and diversifying their funding.

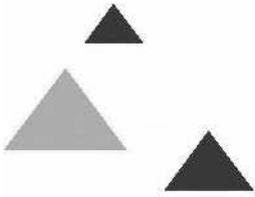
Sustainable development offers the opportunity to overcome the great disadvantage of not looking at these issues in relation to their environment and provides a logic in keeping together the priority areas, attractiveness, governance and funding of the modernization agenda in higher education that may appear not to be related.

Sustainable development addresses the areas which are absolutely central to the future of most higher education institutions in Europe.

³COMMUNICATION FROM THE COMMISSION "Mobilising the brainpower of Europe: enabling universities to make their full contribution to the Lisbon Strategy", Brussels, 20.4.2005 COM (2005) 152 final

The objective to achieve sustainable development and to bring Europe to the leading edge in the knowledge economy and society will present universities with a number of challenges and opportunities in the Bologna Process. Some principles of the Bologna Process are of particular importance while focussing on sustainable development:

- to prepare individuals for the labour market;
- to prepare for life as active citizens in a democratic society;
- to contribute to personal growth;
- to maintain and develop an advanced knowledge base.



5. Sustainable development to link the Bologna Process with the Lisbon Strategy

The Bologna Process must not only be seen in the framework of the UN Decade on Education for Sustainable Development and of the objectives of the UNECE Strategy for Education for Sustainable Development, but also in that of the educational political issues of the Lisbon Strategy. As far as the European Union is concerned, the Bologna Process fits into the broader framework of the Lisbon objectives, particularly in view of the educational programmes. The goals of the Bologna Process mirror in many ways the objectives of the Union's own programmes in the field of higher education.⁴

Sustainable development covering economic, societal-cultural and environmental aspects in a mutually reinforcing way provides an important link between the Bologna Process and the Lisbon Strategy. Based on the principles of sustainable development, the Bologna Process and the Lisbon Strategy share the same values. Both have endorsed sustainable development as a major priority and both have developed their own way to contribute to sustainability. They share the same regional context as well as a common responsibility towards present and future generations. Hence, sustainable development constitutes the intersection between the Lisbon and Bologna processes.

The Lisbon Strategy is a commitment to bring about economic, social and environmental renewal in the EU. In March 2000, the European Council in Lisbon set out a ten-year strategy to make the EU the world's most dynamic and competitive economy. With the Strategy, a stronger economy will drive job creation alongside social and environmental policies that ensure sustainable development and social inclusion. On the occasion of the relaunch of the Lisbon Strategy, the Spring European Council in March 2005 reaffirmed that the Lisbon Strategy itself is to be seen in the wider context of sustainable development. In this context, the European Commission adopted on 20 April 2005 a Communication which recognizes the pivotal role of education and training in the knowledge society and which calls upon universities to deliver their full potential to contribute to the Lisbon Strategy. Knowledge and innovation are the engines of sustainable growth in Europe today and universities are crucial for achieving the goals set by the Spring European Council.

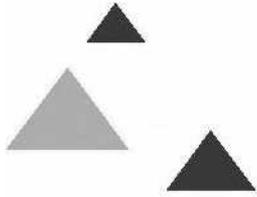
Sustainable growth and greater social cohesion can not be realized without paying attention to ecological, social and cultural aspects. Therefore, it is crucial that, in addition to the economic function of universities which is very important indeed, also the cultural function of universities remains important.

For European universities, this means that they must play an eminent role in enhancing the knowledge base for a sustainable society in Europe in line with the targets

⁴ See: The New Generation of Community Education and Training Programmes after 2006 – Com (2004) 156 March 2004

set by the European Council in Lisbon. However, sustainable growth and greater social cohesion can not be realized without paying attention to ecological, social and cultural aspects. Therefore, it is crucial that, in addition to the economic function of universities which is very important indeed, also the cultural function of universities remains important. Social and cultural diversity should also be seen as an important resource. As technological innovation is a complex process that cannot really be managed by top-down policy alone, academic diversity could also be seen as a potential stimulus for creativity. It is commonly agreed that universities must have 'old-fashioned' academic freedom, but in addition to a European policy targeted at large-scale standardization, bottom-up empowerment is also worth pursuing. For European universities living with and drawing from this European diversity, this is an important value in addition to sustainable development.

Also the European Ministers responsible for Higher Education, in their Berlin Communiqué of 2003, took into due consideration the conclusions of the European Council in Lisbon (2000) and called for further action and closer co-operation in the context of the Bologna Process. At the same time, the Ministers reaffirmed the importance of the social dimension of the Bologna Process. The need to increase competitiveness must be balanced with the objective of improving the social characteristics of the European Higher Education Area, aiming at strengthening social cohesion and reducing social and gender inequalities both at a national and at the European level.



6. Challenges stemming from sustainable development and the Bologna Process

How can sustainable development be incorporated into methodology, curricula, textbooks and studies?

Creative opportunities for incorporating the critical skills of enquiry will emerge when the process of sustainable development is conceived as part of the process of learning to foster personal and social capacity as active global citizens. The methodology, curricula, textbooks and studies must be future orientated, engaging learners in the kinds of thinking that lead to knowledge, skills and disposition that support sustainable development. Implementing sustainable development in existing studies via new study modules is clearly one way to incorporate it into the learning experience, but there are also examples of how this is done through the introduction of innovative content and study material as well as inter-disciplinary approaches.

How can quality standards for sustainable higher education be developed?

Working in partnership with a wide range of other educational partners and maintaining an international perspective is a good starting point. This approach of learning in, by and between institutions, organizations and communities recognizes the interdependence of HE and other institutions and processes, and how actions, choices and decisions taken in one establishment can impact on the sustainability of quality standards.

In which ways will the labour market ask for cross-disciplinary qualifications and competencies related to issues of sustainable development in a globalizing world?

What new skills, knowledge and attitudes do the ‘global engineers’ need to acquire to address the global challenges they encounter?

1. Intellectual ability – demonstrated by all
2. Language ability – demonstrated by the international student who survives and thrives using a non-native language
3. Awareness of the bigger picture – travelling across time zones to live and study is rarely accompanied by tunnel vision
4. Self-motivation – to take the decision to leave friends and comforts at home, to get on a plane and fly to an unknown country
5. Self-discipline – to stay there and see through their course of study

6. Determination – to study in a foreign language in a foreign culture and to succeed academically
7. Flexibility – to adapt to local ways, local study methods, local cultures
8. Personal development – top of the list of expectations and experience amongst international students
9. Communication skills – often little evidence in home country study; difficult to avoid in international study
10. International mobility – evidenced by their studies
11. Cultural sensitivity – not just a sensitivity to their host culture, but to the many other cultures most will encounter, studying with friends from other countries

How can a high level of employment be achieved under the aspects of social cohesion by means of political participation and the development of social competences?

Evidence from several European countries shows a trend towards employers recognizing the importance of critical thinking and active citizenship in the development of social competences and outcomes in the work environment.

How can lifestyle be influenced by learning processes in higher education to make students aware of our individual responsibilities to contribute to a sustainable society, to make responsible choices and to respect diversity?

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When learning incorporates the global dimension, learners develop the skills, knowledge and confidence to make responsible choices about lifestyles that contribute positively to a sustainable society. The global dimension can be understood through the following eight concepts: global citizenship, conflict resolution, social justice, values and perceptions, sustainable development, interdependence, human rights and diversity.

How can students get involved in political activities, participation and democracy?

There are several highly active, effective and respected student-led organisations and networks. They work within their higher education institutions, with peers locally and nationally, within local communities, internationally and in partnership with sustainable development non-government organisations, and provide some fine examples of how students can, and have, become actively involved in local and global issues.

Student involvement in local issues can help to enhance their awareness of their own political power and the role they can play to create a more just world, and improve the quality of life for the present and future generations. A link between critical information and critical engagement should be interconnected otherwise

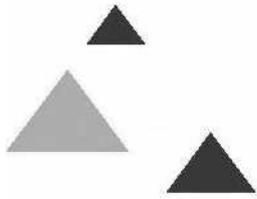
there is the danger for universities to generate “a world rich on information, yet poor on action”.

How can higher education deal with the challenges and aspects of globalization by applying the various educational approaches of global learning, e.g. e-learning?

The development of a global perspective and an adoption of an approach to develop global citizens who understand the need for sustainable development should be vital for all higher education curricula irrespective of subject area.

In adopting the notion and characteristics of a global university, higher education might be well advised to consider the following observations:

1. Adopt an institutional ethos approach where mission statements, policies etc. emphasise the creation of an international environment. This is often a holistic, university-wide approach embracing policies for recruitment, teaching and learning strategies, curriculum development, staff capability and so on. Such institutions have a global vision for themselves and their students.
2. Add an international dimension to course content; for example number of courses, units and modules with an international or global component – that is ‘internationalization’ of the curriculum introducing specialist curricula. This can include anything from specialist degrees to elective modules covering global/development issues (skill share); down to activities built into existing subject based curricula.
3. Use student mobility under exchange programmes as the way to internationalize the curriculum.
4. Introduce new teaching methods, to reflect and address both the cultural and educational context and indigenous learning styles of all students.
5. Encourage international research activity and international partnerships to further teaching, research and enterprise activities.
6. Emphasize and develop relevant generic graduate competencies in areas such as language proficiency and international business skills.



7. *R*ecommendations related to the integration of sustainable development into the Bologna Process

The implementation of the Bergen Communiqué requires the strategic incorporation of the principles of sustainable development into the Bologna Process in several areas. In a consultation held for the elaboration of these guidelines, the following issues have turned out as being crucial for the implementation of the Bergen Communiqué within the Bologna Process:

Recommendations for the integration of sustainable development into the degree structure (modules)

The Bologna reforms provide the opportunity to renew teaching and learning in accordance with sustainable curricula and training methods. Bachelor- and Master-degree studies shall in the future also correspond to international educational standards (e.g. DeSeCo of OECD) for sustainable development. Especially by the development of the degree structures (the so-called three-cycle degree system), it is necessary to generate binding requirements of competence of sustainable development. Therefore, the objective should be to establish a framework for the initiation of modules on sustainable development for modularized study courses in higher education and to use modularization in a pro-active way. Therefore, the modules should also polish interdisciplinary and intercultural working skills. It also appears advisable that higher education institutions elaborate the modules in cooperation. Regarding the integration of the sustainability paradigm into higher education, it can be observed that the implementation and institutionalization of the model discourse in the existing studies can basically be accomplished through new study modules. The introduction of the cycled degree system makes it easier to introduce curricula which include sustainability issues as central or peripheric contents. Above all comprehensive study offers such as a 'studium fundamentale' provide opportunities here to develop interdisciplinary approaches. Diverse real-life examples show that in the course of reform measures taken in order to introduce multi-cycle courses, concepts of higher education didactics are elaborated which can accomplish the fundamental aspects of education for sustainable development on a higher education level. The cases in point show that a modular structure is very well suited to the integration of sustainability issues into higher education studies also from a disciplinary point of view.

Internationalisation and cooperation in higher education for development of curricula, producing common course materials and exchange of experiences between universities and countries are extremely valuable and the most efficient way to develop new course modules. The introduction of the sustainable

development agenda in existing (undergraduate) education, courses etc. is the most difficult part of the present challenge. Case studies, meetings between university teachers from different countries and disciplines, and other forms of exchange of experiences provide the most efficient way to promote these changes. The Bologna Process offers an excellent opportunity for introducing new Masters or joint Masters on sustainable development. The need for Master programmes with a specialization in sustainable development should thus be considered in all countries.

Recommendations for the integration of sustainable development into quality assurance

As sustainable development is today understood in very different ways, it is essential that the content of sustainability does not deteriorate. Use of natural resources and environmental science is basic in a sustainable development curriculum. The societal context is equally important, but should not be studied in isolation. The fundamental dilemma of how to maintain economic prosperity in this situation should not be dismissed by terms such as “sustainable growth” which at best are careless and at worst contradictory. Inter-disciplinarity is essential.

Innovative learning and teaching methods, the promotion of project initiatives of students as well as external learning processes (like environmental and social responsibility, cooperation in local and regional Agenda 21 processes, etc.) shall be accredited. Therefore standards (in terms of ecological and social qualifications) of education for sustainable development as part of an integrated and sustainable system of quality and accreditation for higher education institutions and for degrees (Bachelor and Master) should be included into the system of evaluation and accreditation of study courses and institutions. Binding criteria for the sustainability for organs of accreditation and accreditation agencies should be elaborated, so that these criteria can be taken into account during external reviews for the quality assurance for higher education institutions.

Courses in sustainable development may be accredited according to a system of generic standards (European standards for education!), inspired by the ISO system for management, now also developed for social responsibility (the ISO 26,000 standard working group). For such an initiative a working group to prepare a draft of this standard is needed. Such a standard may then be used for support and as a means of accreditation.

The teachers’ understanding of sustainable development is a key issue, which in many countries will decide how students perceive it. Teachers’ training is thus important. In the variety of such courses also short (one-day) courses for teachers (and students) are needed to serve as primers.

Recommendations for the integration of sustainable development into the qualifications framework and learning outcomes

Before we can embark on a qualifications framework and learning outcomes for sustainable development in higher education, the following goals based on the Baltic 21E programme must be achieved first:

A person with a university degree will have the basic know-how and skills needed in the professional world and to work as an expert. They will be capable of acting as active citizens and they will be capable of influencing decision making. They will also be able to keep themselves up-to-date with the innovations and research conducted in their own field – and this according to the principle of sustainable development.

The concept of learning outcomes will probably be central in the development of national qualification frameworks. Learning outcomes have been defined as statements of what a learner is expected to know, understand and/or be able to do at the end of a period of learning. It is important for institutions to be aware that in addition to a professional education in the respective disciplines, the labour market will ask for cross-disciplinary qualifications and competencies. Interacting in socially heterogeneous groups, acting autonomously and using tools interactively are indispensable prerequisites for an individually successful life and for the sustainable socio-economic and democratic development of society. And that is where education for sustainable development comes in: to learn to know, to do, to understand, to be, also to be aware of our individual responsibilities to contribute, to make responsible choices, to respect diversity. These reference points support in particular the articulation of outcomes-focussed approaches to national higher education frameworks of qualifications. Learning outcomes, including competences, represent one of the essential building blocks for transparency within higher education systems and qualifications. The Berlin Communiqué (2003) called for the creation of an overarching qualifications framework in terms of workload, level, learning outcomes, competences and profile for the European Higher Education Area.

It is necessary to make sure that the labour market will consider knowledge on sustainable development as a valuable professional competence. The sustainability agenda thus will have to be introduced in professional cultures. Universities have a special responsibility for extending learning opportunities on sustainable development to many already professionally active groups in society. Continuing education and professional competence development are essential for introducing the sustainability agenda with all new skills required to move Europe towards sustainability. This could take different forms, such as distance courses, short seminars, and specialization courses. Key target groups are i.a. engineers in industry, and planners, architects, managers and decision-makers in local and regional authorities. If sustainability is incorporated and recognized as being an asset, then the labour market (the “consumers” of the graduates) will ask for those graduates.

Recommendations for the improvement of the social dimension and the attractiveness of the European Higher Education Area

Higher education institutions are also an element in the societal structure where they are located. Their research and teaching activities reach out to local industry and administration and to the general public. In some places, students have reached out to underprivileged youth and helped them to a start in higher education. Taking part in university governance prepares students for active participation in a democratic society based on the principles of sustainable development. Studying in an international environment may hopefully develop tolerance for the multicultural society we all will be members of in coming years, i.e., the European Higher Education Area.

It is important that higher education in the future will be based on sustainability, but we also see a need for introducing the topic of sustainable development already earlier, in the school curriculum. Finally it is essential that universities make considerable efforts to improve their own “sustainability profile”. Universities should thus carefully review and improve their environmental management routines; they should review and, if needed, strengthen internal democracy; and they should develop the students’ “learning environment” – including internationalization and options for using ICT for international communication - to support the social and human growth of their institutions, teachers and students.

Starting from the “External Dimension” of the Bologna Process it is helpful within the debates around sustainable development to explore the links between people living in the more economically developed countries of the North with those of the less economically developed countries in the South, enabling students to understand the links between their own lives and those of people throughout the world. In this context it would be important to increase the understanding of the economic, social, political and environmental forces which shape our lives. Furthermore, the skills, attitudes and values should be developed, which enable people to work together to bring about change and take control of their own lives. And finally, working towards achieving a more just and sustainable world in which power and resources are more equitably shared is another crucial criteria to enhance the attractiveness of the European Higher Education Area in the context of sustainable development.

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Recommendations on integrating sustainable development into research and development at university level

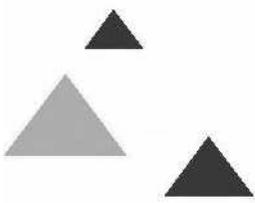
The most important aims of research on sustainable development are to produce information on the environment, society and cultures so that the precursors of as well as possible hindrances to sustainable development can be identified and

analyzed; to produce information and to develop action plans and technology that advance sustainable development, including education and training content and method; to create know-how whereby people can assimilate and apply research results that have been produced elsewhere; to help as a nation those in a weaker position and to make an effort in solving global problems.

Research on sustainable development is needed both in terms of basic research and applied research. The principles of sustainable development should, however, permeate research throughout. Permeability in research can be achieved by evaluating and weighing all research results in light of the principles of sustainable development. Basic natural science research on the sustainability of the environment needs to be continued and it must be increased in areas that are currently not well represented in research (the atmosphere, outer space within close proximity to Earth and the oceans and seas). Basic research on sustainable development is also needed in the social, economic, cultural and health sciences. Applied research on sustainable development should be linked to basic research through multidisciplinary research projects or larger clusters.

Passing research results to citizens and decision-makers so that they actually have an impact on how citizens behave and how political and economic decisions are made is a particularly daunting challenge. Setting sustainable development as a goal means giving up on economic and technological laissez-faire and restricting the abuse of nature and other humans. Such decisions necessitate solid basic knowledge and a commit to the principles of sustainable development based on scientific knowledge. So as to make research more influential, the end-users of research results need to be part of the research process already during the planning phase.

8. Guidelines for the incorporation of sustainable development into the Bologna Process



Implementing the COPERNICUS Guidelines requires a comprehensive approach that embraces all levels. The strategy for the incorporation of the principles of sustainable development into the Bologna Process must be based on setting up strategic goals, both on university and policy-making level. Like in the Finnish National Strategy of Education for Sustainable Development, the following goals along with appropriate guidelines are suggested:

8.1 Setting up strategic goals

- By the end of 2008 all universities across Europe will have endorsed the University Charter for Sustainable Development (COPERNICUS Charter) as a voluntary self-commitment that they will give sustainable development an important place in their curricula, institutional management and services to the local/regional society in the establishment of the European Higher Education Area by 2010 and promoting the European system of higher education worldwide.
- By 2009 all university departments will have looked in a process of self-assessment into the possibility of incorporating sustainable development into all teaching and research as well as into degree requirements and research projects on the basis of the COPERNICUS Charter.
- By 2009, universities will have also in a process of self-assessment gone through their environmental programme concerning their working environment and they will have incorporated goals related to sustainable development in it on the basis of the COPERNICUS Charter.
- By 2010, every university as signatory to the COPERNICUS Charter will have formed a partnership based on development co-operation with at least one other university. Universities are to help these partnership universities in their scientific endeavours and in developing their teaching programmes as learning by comparing, looking at what universities need and how others are doing it. Such partnerships can be

initiated by the network of the signatories to the COPERNICUS Charter, COPERNICUS-CAMPUS.

- By 2012, the pre-conditions necessary for sustainable development will have been integrated into every university's strategy in a university-wide process. For such an initiative a working group to prepare a draft of a standard is needed, which may be managed by COPERNICUS-CAMPUS.

8.2 Self-assessment checklist of crucial topics to be addressed by each university

In order to respond to the challenges European universities are facing through the need to incorporate the principles of sustainable development into the Bologna Process, they must look in a process of self-assessment how – not why – to achieve the strategic goals set up above in the best way. This university-wide process must embrace all three naturally constitutive levels of universities:

- Institutional/administrative,
- Academic, and
- Research and Technology.

For that reason, a comprehensive checklist should help decision-makers in the higher education community to get a better overview of innovative practices of integrating sustainability into higher education. As an important principle of the COPERNICUS Charter, this checklist is non-prescriptive because how a university does this is a matter of its own internal process. Concerning their innovative practices related to the topics given below, universities should assess themselves

- how their institution's process for sustainability is developed;
- how the university's strategic direction is developed;
- how the university translates its overall mission and strategic direction into specific targets and plans, which take into account the available resources;
- how the university ensures that the sustainability policies, programs and activities run efficiently, effectively and economically;
- the mechanisms for monitoring and evaluating sustainability activities;
- the principle means of communication (to internal and external audiences) and ensuring collaboration between the people of the university and society;
- how the university plans to strengthen its future endeavours to embed sustainability strategically into teaching, research, management and outreach and what kind of concrete activities are envisaged.

**Policy, planning and administration:**

This topic addresses the mission, policies, and planning of universities to communicate and promote sustainability. The descriptions of learning objectives and the public relations materials of the various faculties, departments, or institutes must express prominent and explicit concern for sustainability. This commitment shall be further evidenced through administrative positions and committees (e.g. Director of Environmental Programs, Sustainability Task Force, etc.) and practices (e.g., orientation programs, socially responsible policies, annual environmental audits, and faculty and staff rewards).

**Research:**

Research at a higher education institution committed to sustainability must focus significantly on sustainability topics in the humanities and social sciences, and on sustainability technology in the sciences. Such research could include renewable energy, sustainable building design, ecological economics, population and development, environmental justice, women and poverty, etc.

**Curriculum/teaching:**

Disciplinary, professional, and general education requirements at sustainable universities must focus on sustainable development, with an emphasis on interdisciplinary thinking and problem solving. The institution would impart a basic understanding of (a) the complex environmental, social, and economic issues that must be addressed to create a sustainable future, and (b) the nature of the political, organizational and individual responses needed, demonstrating the particular contributions of the various disciplines and professions to interconnected, multisectoral solutions.

**Service to society:**

Service and outreach at a sustainable university must support local, regional and global efforts to enhance sustainability. These efforts should involve collaborating with other higher education institutions, with local primary and secondary schools, and with business and government to foster sustainable practices. They should also include seeking international cooperation in solving global justice and sustainability challenges.

**Human resources and staff development:**

This topic explores how the university is performing in managing people: finding, supporting, developing and deploying them. It must examine how they are helped to develop their full potential to serve and support the university's objectives. It is intended that all staff (whether teaching/research/non-teaching, full-time/part-time, or permanent/fixed term) are to be covered by this topic.

**Physical operations/infrastructure:**

This topic analyzes the physical operations at university campuses committed to sustainability work to reduce the institution's ecological footprint and demonstrate practical examples of sustainable living. Examples include water and energy conservation, carbon dioxide reduction practices, sustainable building construction and renovation, and environmentally conscious student housing and purchasing of food, paper and other products. Furthermore, these operational practices must be integrated into the educational and teaching activities of the university.

**Networking and partnerships:**

Many universities in Europe have attained a high level of excellence. But they must use their potential to the full to sustain and develop it further. Universities must cooperate much more to overcome the barriers to the mobility of students, teachers, researchers and the transmission of new knowledge. Universities must learn from each other and need not to re-invent the wheel again and again. Networking and strategic partnerships allow a higher grade of institutional commitment to channel the transfer of knowledge. Excellence can exist in a few entire universities, but much more widely in individual faculties or teams within institutions or networks.

**Assessment and reporting:**

Sustainability assessments, if performed and publicized effectively, will help higher education institutions monitor their behaviour, make improvements, and stimulate awareness of sustainability in the campus community. Increasing numbers of universities around the world are assessing the environmental sustainability of their physical operations. Few institutions to date are assessing their economic or social sustainability, and very few are analyzing sustainability in teaching, research, or service and outreach. Individuals and organizations are starting to develop sustainability assessment tools for the higher education sector, which appears to reflect a growing demand.

8.3 Five simple steps to get the implementation process started

In order to get the implementation of the strategic goals started, the following approach is being suggested for all universities that has endorsed the COPERNICUS Charter as the principle of their endeavours to integrate sustainable development in their overall daily university life.

Step 1: For institutions to do a gap analysis on the elements of sustainability already in the curriculum for each course

Step 2: Tell people what they are already learning in terms of sustainability

Step 3: Hold workshops with students (post- and undergraduates) and professional bodies to establish what their understanding of sustainability is

Step 4: Develop a set of recommendations that can then be implemented by lecturers

Step 5: Review and amend the process in 12 months time

This approach ensures that everyone's needs are met, that everyone learns about the practicalities of sustainability at the same rate and that the process is continually improving. It is also very straightforward and requires no significant extra work by lecturers, there are no time tabling issues, you are praising the good work already done and quality assessment is easier.

This approach will also enable a set of 'key performance indicators' to be developed that are relevant to institutions across Europe.

8.4 Recommendations on ministerial and national involvement

Because many curricula are mandated at the provincial/state or national level, ministries of education are the main addressees when the necessary European policy framework for the incorporation of the principles of sustainable development into the European Higher Education Area should be created. At the same time, European Ministers responsible for higher education have committed themselves strongly through the adoption of the Bergen Communiqué. If incorporating sustainability into curriculum is mandated, it is far easier to reorient curriculum to address it than if incorporating sustainable development into the curriculum is optional. Therefore, European Ministers responsible for higher education have to take up this particular responsibility in the future Bologna Process. The following recommendations to ministerial and national level can be formulated as part of the COPERNICUS Guidelines:

The European Ministers responsible for Higher Education

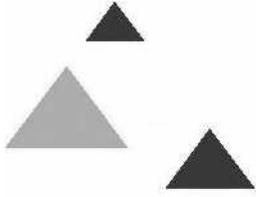
- acknowledge the UNECE Strategy for Education for Sustainable Development adopted jointly by Environment and Education Ministries in Vilnius in March 2005 that must become the basis for incorporating the principles of sustainable development ideas into the educational process at universities.
- honour the UN Decade on "Education for Sustainable Development 2005-2014".

The European Ministers responsible for Higher Education

- acknowledge sustainability standards of education as part of an integrated and sustainable system of quality and accreditation for higher education institutions and for degrees (Bachelor and Master)
- support the implementation of the COPERNICUS Guidelines, taking into account the sustainable development when establishing modular study courses.

The European Ministers responsible for Higher Education

- support higher education institutions in their effort to integrate ecological, social and economic sustainability in the institutional management and to sign the University Charter for Sustainable Development (COPERNICUS Charta) and
- acknowledge the COPERNICUS Charta as part of a European mission statement for higher education institutions.



9. *I*nitiatives taken to incorporate sustainable development into higher education

OVERVIEW OF THE GUIDELINES ADOPTED AT THE WORLD CONFERENCE ON HIGHER EDUCATION (WCHE)

The World Conference on Higher Education (WCHE) adopted a clear stance in favour of sustainable development and the improvement of society. Both the Declaration and the Framework for Action speak of “sustainable development” while the title of one of the thematic debates included the phrase “sustainable human development”. The conference documents, nevertheless, reflect a number of social concerns, and invite Member States, the world of higher education and their partners to adopt clear guidelines in support of sustainable development, democracy and the strengthening of a humanist perspective. These concerns can be grouped under four headings:

Service to the community

In addition to their traditional functions in education, training and research, higher education institutions are urged to strengthen their services to the community. Here are some of the guidelines proposed:

1. articulate programmes with the requirements of the work world and encourage students to develop a spirit of initiative that will lead them to create new jobs;
2. support cultural, social and economic development by sharing expertise with the community;
3. identify and deal with complex problems affecting communities, nations and global society, through an interdisciplinary and transdisciplinary approach;
4. undertake activities that will help to eliminate poverty and hunger, intolerance, violence, illiteracy, environmental degradation and disease.

Education to responsible citizenship

Higher education should offer programmes that associate the transmission of knowledge with the development of high-level professional skills. It should also help to train citizens, scientists and professionals – men and women – who will be required to make decisions concerning humanity. In all disciplines, higher education should prepare students to make decisions informed by a culture of peace. Here are some of the guidelines proposed:

1. train young people in the values that form the basis of democratic citizenship and help reinforce humanistic perspectives;

2. educate students to think critically, to analyze the problems of society, to look for and apply solutions to these problems, and to accept social responsibilities.

The critical and ethical function

Higher education institutions, and the people who study, teach and do research in them, are urged to place their intellectual capacities at the service of society, in order to defend ethical values such as peace, justice, freedom, equality and solidarity. Academic freedom and institutional autonomy are essential for exercising this critical and ethical function. Here are some of the recommendations to those active in higher education:

1. subject all their activities to the rules of ethics and intellectual rigour;
2. speak out with an independent and responsible voice on social issues;
3. develop their capacity to give forewarning of social, economic and political trends.

Interaction with other actors in the education system

Given the importance of education in human development, higher education must play an active role in preparing teachers to support learning of individuals of all ages. Higher education must become an active partner in the education system, particularly with respect to secondary education. Here are some of the guidelines proposed:

1. contribute to the development of the entire education system;
2. improve initial and continuing education for teachers;
3. encourage research in education.

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THE FINNISH NATIONAL STRATEGY OF EDUCATION FOR SUSTAINABLE DEVELOPMENT

Finland's decade of education for sustainable development is based on both national strategies and guidelines as well as on regional plans related to the promotion of sustainable development in education. It is based on the the ESD Strategy of the United Nations Economic Commission for Europe (UNECE) and the Baltic 21E programme. In addition, the following guidelines intended for the whole education sector take into consideration the University Charter for Sustainable Development (COPERNICUS Charter).

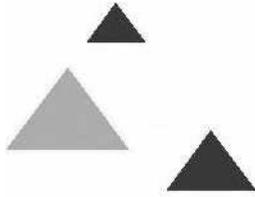
Here are the guidelines for Finland's decade of education for sustainable development:

1. Promote sustainable development in education and training: education and training for sustainable development will be one of the focal areas of the

education system, and this includes sustainable consumption and production. This will apply to both compulsory education and vocational education, to polytechnics, universities and adult education.

2. Commit to sustainable development on an institutional level (political, administrative and practical level): Show a real commitment to the principles and practices of sustainable development in developing and implementing education policy.
3. Endorse an ethical and integrated line of approach: in all matters take into consideration the ecological, economic and socio-cultural aspects whilst keeping in mind that all three are complementary.
4. Transparency: Sustainability has to be integrated into all aspects of education. We must formulate programmes, means and methods that further education for sustainable development, and we must have all teachers, researchers and students participating at all educational levels. Everyone should be aware of the challenges related to society, the environment and development regardless of which topic one is studying, teaching or researching. Our society needs citizens that know the basics of sustainable development just as much as it needs sustainable development experts.
5. In-house training: Offer staff in schools, educational institutions and universities courses and training in matters related to sustainable development. Just encouraging them is important too. Give them the means to do their job in an ecologically, economically, socially and culturally responsible way.
6. Interdisciplinarity: Encourage schools and other educational institutions to engage in interdisciplinary education as well as in teaching and research projects related to sustainable development so that these form a core function of all education in schools and educational institutions. Children and teenagers should be brought up as responsible citizens by approaching different subjects in a holistic manner using different means and teaching methods. Tradition and skills should be transmitted and made good use of.
7. Disseminate information: devise easily accessible teaching material and teaching programmes, organise lectures open for the general public, and collaborate with the media. Develop internet services so that the goals of sustainable development and the means for achieving these goals can be widely spread through virtual teaching and web course platforms. Widely accessible internet services should also be used to disseminate information to private persons, businesses, corporations and the public sector on how to participate in building a sustainable future and who to contact.

8. Networking and increased co-operation: Reinforce the local, national, regional and international network of interdisciplinary education experts for sustainable development in order to collaborate within the framework of teaching and research programmes. This means that pupil, student and researcher exchange programmes should receive sufficient support as well. Develop co-operation between other relevant actors in society, plan and implement co-ordinated strategies and action plans. Improve implementation and make it more transparent through wide collaboration between different professional groups.
9. Participation: Create genuine opportunities for citizen's to participate and influence decision-making through non-governmental organisations. Enlarge the learning environment to encompass the surrounding society and working life.
10. Research, graduate and further education: Promote research as to advance sustainable development. Devise specific programmes for different target groups, such as teachers, the business world, public administration, NGOs and the mass media.
11. Putting innovations to good use: Encourage the use and incorporation of innovative, sustainable development friendly technologies in teaching.



10. *The University Charter for Sustainable Development (COPERNICUS Charter)*

Since its inception by the former European Rector's Conference (CRE) in 1993, 328 universities and higher education institutions from 38 countries across Europe (as of 31 December 2006) have signed the University Charter for Sustainable Development, thereby declaring that they will give sustainable development an important place in their activities. This implies that in curricula, institutional management and services to the local/regional society, a responsible balance between economical, ecological and social/cultural aspects has to be worked out. Due to this broad acceptance in daily university life, the COPERNICUS Charter constitutes today principle guidance for the majority of higher education institutions in Europe in their efforts to contribute to sustainable development. This strong voice by universities can not be ignored while the incorporation of the principle of sustainable development into the European Higher Education Area is being discussed. The wording of this fundamental reference declaration is therefore given below. A list of all signatory universities follows below as well.

Preamble

Man's exploitation of the biosphere is now threatening its very existence and delicate balance. Over the last few decades, the pressures on the global environment have become self-evident, leading to a common outcry for sustainable development. In the words of the Brundtland report, we must learn to care for the needs of the present without compromising the ability of future generations everywhere to meet their own needs. The awareness is there. What is required is a comprehensive strategy for building a sustainable future which is equitable for all human beings, as highlighted by the Rio Conference (UNCED) in 1992. This requires a new frame of mind and new sets of values. Education is critical for promoting such values and improving people's capacity to address environment and development issues. Education at all levels, especially university education for the training of decision-makers and teachers, should be oriented towards sustainable development and foster environmentally aware attitudes, skills and behaviour patterns, as well as a sense of ethical responsibility. Education must become environmental education in the fullest sense of the term.

The role of universities

Universities and equivalent institutions of higher education train the coming generations of citizens and have expertise in all fields of research, both in technology as well as in the natural, human and social sciences. It is consequently their duty to propagate environmental literacy and to promote the practice of environmental ethics in society, in accordance with the principles set out in the Magna Charta of European Universities and subsequent university declarations, and along the lines of the UNCED recommendations for environment and

development education. Indeed, universities are increasingly called upon to play a leading role in developing a multidisciplinary and ethically-oriented form of education in order to devise solutions for the problems linked to sustainable development. They must therefore commit themselves to an on-going process of informing, educating and mobilizing all the relevant parts of society concerning the consequences of ecological degradation, including its impact on global development and the conditions needed to ensure a sustainable and just world. To achieve these aims and fulfil their basic mission, universities are urged to make every effort to subscribe to and implement the ten principles of actions set out below.

Principles of action

1. **Institutional commitment:** Universities shall demonstrate real commitment to the principle and practice of environmental protection and sustainable development within the academic milieu.
2. **Environmental ethics:** Universities shall promote among teaching staff, students and the public at large sustainable consumption patterns and an ecological lifestyle, while fostering programmes to develop the capacities of the academic staff to teach environmental literacy.
3. **Education of university employees:** Universities shall provide education, training and encouragement to their employees on environmental issues, so that they can pursue their work in an environmentally responsible manner.
4. **Programmes in environmental education:** Universities shall incorporate an environmental perspective in all their work and set up environmental education programmes involving both teachers and researchers as well as students - all of whom should be exposed to the global challenges of environment and development, irrespective of their field of study.
5. **Interdisciplinarity:** Universities shall encourage interdisciplinary and collaborative education and research programmes related to sustainable development as part of the institution's central mission. Universities shall also seek to overcome competitive instincts between disciplines and departments.
6. **Dissemination of knowledge:** Universities shall support efforts to fill in the gaps in the present literature available for students, professionals, decision-makers and the general public by preparing information didactic material, organizing public lectures, and establishing training programmes. They should also be prepared to participate in environmental audits.
7. **Networking:** Universities shall promote interdisciplinary networks of environmental experts at the local, national, regional and international levels, with the aim of collaborating on common environmental projects in both research and education. For this, the mobility of students and scholars should be encouraged.
8. **Partnerships:** Universities shall take the initiative in forging partnerships with other concerned sectors of society, in order to design and implement coordinated approaches, strategies and action plans.

9. **Continuing education programmes:** Universities shall devise environmental educational programmes on these issues for different target groups: e.g. business, governmental agencies, non-governmental organizations, the media.
10. **Technology transfer:** Universities shall contribute to educational programmes designed to transfer educationally sound and innovative technologies and advanced management methods.

Endorsing the Charter

COPERNICUS-CAMPUS invites university rectors to endorse the Charter on behalf of their institutions. Their signature will constitute a commitment to secure the support of their university, teachers and students alike, in adopting and implementing environmental guidelines which are consistent with the Charter. The principles of action listed above are general and open-ended. It is left to each individual institution and its students and staff to give them substance compatible with local circumstances. Expressed in terms of specific guidelines, they should form a key element in the mission statement of the university concerned.

The 328 signatories to the University Charter for Sustainable Development (COPERNICUS Charter)

Albania:

University of Tirana, Tirana

Armenia:

Yerevan State Medical University
after M. Heratsi (YMSU), Yerevan

Austria:

Karl-Franzens-Universität Graz, Graz
Technische Universität Graz, Graz
Leopold-Franzens-Universität, Innsbruck
Universität Klagenfurt, Klagenfurt
Johannes Kepler Universität Linz, Linz
Universität Wien, Wien
Universität für Bodenkultur Wien, Wien
Universität für Musik und Darstellende Kunst, Wien
Veterinärmedizinische Universität Wien, Wien

Belgium:

Universitaire Centrum Antwerpen, Antwerpen
Universitaire Faculteiten Sint-Ignatius, Antwerpen
Universitaire Instelling Antwerpen, Antwerpen
University of Antwerpen, Antwerpen
Vrije Universiteit Brussel, Brussel
Université Libre de Bruxelles, Bruxelles
Universiteit Gent, Gent
Katholieke Universiteit Leuven, Leuven
Université de Liège, Liège
Université Catholique de Louvain, Louvain-la-Neuve
Faculté Polytechnique de Mons, Mons
Université de Mons-Hainaut, Mons
Facultés Universitaires Notre Dame de la Paix, Namur

Bosnia and Herzegovina:

University of Sarajevo, Sarajevo
The University of Tuzla, Tuzla

Bulgaria:

Academy of Medicine, Sofia

University of Architecture Civil Engineering & Geodesy, Sofia

Technical University of Sofia, Sofia
University of National and World Economy, Sofia
Université Saint Kliment Ohridski, Sofia

Croatia:

Josip Juraj Strossmayer University, Osijek
University of Zagreb, Zagreb

Czech Republic:

University of Veterinary and Pharmaceutical Sciences, Brno
The University of Technology, Brno
Czech Technical University, Prague
Charles University, Prague

Denmark:

Aalborg Universitetscenter, Aalborg
Technical University of Denmark, Lyngby
Roskilde Universitetscenter, Roskilde

Estonia:

University of Tartu, Tartu

Finland:

Åbo Akademi University, Åbo
College of Veterinary Medicine, Helsinki
Helsinki School of Economics and Business Administration, Helsinki
University of Helsinki, Helsinki
University of Industrial Arts, Helsinki
Swedish School of Economics and Business Administration, Helsinki
University of Joensuu, Joensuu
University of Jyväskylä, Jyväskylä
Kymenlaasko Polytechnic, Kotka
University of Kuopio, Kuopio
University of Oulu, Oulu
University of Lapland, Rovaniemi
University of Tampere, Tampere
Turku School of Economics and Business

Administration, Turku
University of Vaasa, Vaasa

France:

Université d'Angers, Angers
Université Bordeaux 1, Talence
Université de Savoie, Chambéry
Université de Technologie de Compiègne, Compiègne
Université Catholique de Lille, Lille
Université Claude Bernard - Lyon 1, Lyon/Villeurbanne
Université de Metz, Metz
Université Paris VII, Paris
Université de Vincennes à St-Denis - Paris 8, Paris
Université de Paris IV - Sorbonne, Paris
Université de Paris XII - Val de Marne, Paris
Université de Perpignan, Perpignan
Université de Rennes 2 - Haute Bretagne, Rennes
Université Robert Schuman de Strasbourg
Université Paul Sabatier - Toulouse III, Toulouse

Germany:

Fachhochschule Aachen
Universität Augsburg, Augsburg
Otto-Friedrich-Universität, Bamberg
Philosophisch-Theologische Hochschule der Salesianer Don Boscos Benediktbeuern
Freie Universität Berlin, Berlin
Humboldt-Universität, Berlin
Technische Universität Berlin, Berlin
Universität Bielefeld, Bielefeld
Universität Bremen, Bremen
Brandenburgische Technische Universität Cottbus,
Technische Universität Darmstadt, Darmstadt
Universität Dortmund, Dortmund
Universität-Gesamthochschule-Duisburg, Duisburg
Fachhochschule Eberswalde, Eberswalde
Katholische Universität Eichstätt, Eichstätt
Universität Essen, Essen
Justus-Liebig-Universität, Giessen
Technische Universität Hamburg-Harburg
Universität Hamburg, Hamburg
Universität Hannover, Hannover
Universität Hildesheim, Hildesheim
Universität Hohenheim, Stuttgart
Technische Universität Ilmenau, Ilmenau
Universität Kaiserslautern, Kaiserslautern
Universität Karlsruhe, Karlsruhe
Universität-Gesamthochschule Kassel, Kassel
Christian-Albrechts-Universität zu Kiel, Kiel
Deutsche Sporthochschule Köln, Köln
Universität Leipzig, Leipzig
Fachhochschule Lübeck, Lübeck
Universität Lüneburg, Lüneburg
Fachhochschule Münster, Münster
Carl V. Ossietzky Universität Oldenburg,
Universität Osnabrück, Osnabrück
Universität Regensburg, Regensburg
Universität Rostock, Rostock
Fachhochschule Rottenburg, Rottenburg
Universität des Saarlandes, Saarbrücken
Universität-Gesamthochschule, Siegen
Fachhochschule Trier
Universität Trier, Trier
Universität Ulm, Ulm/Donau
Bergische Universität-Gesamthochschule Wuppertal
Bayerische Julius-Maximilians-Universität, Würzburg
Hochschule Zittau/Görlitz, Zittau
Internationales Hochschulinstitut IHI Zittau

Greece:

National Technical University of Athens, Athina

Athens University of Economics and Business,
University of Ioannina, Ioannina
Democritus University of Thrace, Komotini
University of Patras, Patras
University of Macedonia Economic and Social Sciences, Thessaloniki
Aristotle University of Thessaloniki, Thessaloniki

Hungary:

Budapest University of Economic Sciences
Central European University, Budapest
Technical University of Budapest, Budapest
University of Veterinary Science, Budapest
Agricultural University of Debrecen, Debrecen
Kossuth Lajos University, Debrecen
Eszterházy Károly College, Eger
Gödöllő University of Agriculture, Gödöllő
College of Nyiregyháza, Nyiregyháza
Janus Pannonius University, Pécs
Jozsef Atilla University, Szeged
University of Veszprém, Veszprém

Ireland:

Dublin City University, Dublin
Trinity College, Dublin
University College Galway, Galway
University of Limerick, Limerick

Island:

University of Iceland, Reykjavik

Italy:

Università degli Studi di Ancona, Ancona
Università degli Studi di Bologna, Bologna
University of Catania, Catania
Università degli Studi "G. d'Annunzio", Chieti
Università degli Studi di Firenze, Firenze
Istituto Universitario Europeo, S.Domenico di Fiesole
Politecnico di Milano, Milano
Università degli Studi di Modena, Modena
Università degli Studi di Padova, Padova
Università degli Studi di Siena, Siena
Politecnico di Torino, Torino
Università degli Studi di Trieste
Università degli Studi di Udine, Udine
Università degli Studi di Venezia, Venezia

Latvia:

University of Latvia, Riga

Lithuania:

Kaunas University of Technology, Kaunas

Former Yugoslav Republic of
Macedonia/F.Y.R.O.M:
"St.Kiril and Metodij" University, Skopje

Malta:

University of Malta, Msida

Moldova

State Agrarian University of Moldova, Chisinau

The Netherlands:

Universiteit van Amsterdam, Amsterdam
Vrije Universiteit, Amsterdam
Delft University of Technology, Delft
Eindhoven University of Technology, Eindhoven
Universiteit Twente, Enschede
Rijksuniversiteit Groningen, Groningen
Open Universiteit, Heerlen
Rijksuniversiteit te Leiden, Leiden
Universiteit Maastricht, Maastricht
Katholieke Universiteit Nijmegen, Nijmegen
Erasmus Universiteit Rotterdam, Rotterdam

Katholieke Universiteit Brabant, Tilburg
Rijksuniversiteit te Utrecht, Utrecht
Wageningen Agricultural University, Wageningen

Norway:

University of Bergen, Bergen
University of Oslo, Oslo
Norwegian University of Science and Technology
(NTNU) Trondheim

Poland:

University of Gdansk, Gdansk
Technical University of Gdansk, Gdansk
Technical University of Silesia, Gliwice
Karkonoshe College, Jelenia Gora
University of Silesia, Katowice
Stanislav Staszic University of Mining & Metallurgy,
Kraków
The Jagiellonian University, Kraków
Technical University of Łódź, Łódź
University of Łódź, Łódź
Marie Curie-Skłodowska University, Lublin
Olsztyn University of Agriculture and Technology
Adam Mickiewicz University, Poznan
Uniwersytet Mikołaja Kopernika, Torun
Warsaw University of Technology, Warszawa
University of Warsaw, Warszawa
Warsaw School of Economics, Warszawa
University of Wrocław, Wrocław
Technical University of Wrocław, Wrocław

Portugal:

Universidade do Minho, Braga
Instituto Politecnico de Braganca, Braganca
Istituto Politecnico de Coimbra, Coimbra
Universidade Catolica Portuguesa, Lisboa
Universidade Nova de Lisboa, Lisboa
Universidade Técnica de Lisboa, Lisboa
Universidade de Lisboa, Lisboa
Universidade do Porto, Porto

Romania:

Universităţe "Trasilvania" Brasov, Brasov
Polytechnic Institute of Bucharest, Bucuresti
University of Bucharest, Bucuresti
Romanian University of Science and Arts
"Georghe Cristea", Bucuresti
Babes-Bolyai University, Cluj-Napoca
University of Medicine and Pharmacy, Cluj-Napoca
University of Craiova, Craiova
"Politehnica" University of Timisoara, Timisoare

Russia:

Kaliningrad State University, Kaliningrad
Novosibirsk State Technical University,
Novosibirsk
St. Petersburg University, St. Petersburg

Serbia:

University of Belgrade
Univerzitet "Svetozar Marković", Kragujevac
Univerzitet u Nisu, Nis

Slovak Republic:

Comenius University, Bratislava
Slovak University of Technology, Bratislava
Constantine the Philosopher University in Nitra

Slovenia:

University of Ljubljana, Ljubljana
University of Maribor, Maribor

Spain:

University of Alicante, Alicante
Universidad de Extremadura, Badajoz
Universitat Autònoma de Barcelona, Barcelona

Universitat de Barcelona, Barcelona
Universitat Politècnica de Catalunya, Barcelona
Universidad de Cádiz, Cádiz
Universidad de Castilla-La Mancha, Ciudad Real
Universidade da Coruna, A Coruna
University of Girona, Girona
Universidad de Granada, Granada
Universidad Autonoma de Madrid, Madrid
Universidad Complutense de Madrid, Madrid
Universidad Politécnica de Madrid, Madrid
Universidad Pontificia Comillas de Madrid, Madrid
Universidad Nacional de Educación a Distancia
(UNED), Madrid
Universidad de Málaga, Málaga
Universidad de Murcia, Murcia
Universidad de Las Palmas de Gran Canaria
Universidad de Navarra, Pamplona
Universidad Pontificia de Salamanca, Salamanca
Universidad de Salamanca, Salamanca
Universidad de Cantabria, Santander
Universidad de Santiago de Compostela,
Santiago de Compostela
Universitat Rovira i Vergili, Tarragona
Universitat de Valencia, Valencia
Universidad de Valladolid, Valladolid
Universidad de Zaragoza, Zaragoza

Sweden:

University College of Borås, Borås
University of Gävle, Gävle
Chalmers University of Technology, Göteborg
University of Göteborg, Göteborg
Blekinge Institute of Technology, Karlskrona
Karlstad University, Karlstad
Kristianstad University
Linköping University & Institute of Technology
Lunds University, Lund
Malmö University, Malmö
Stockholm School of Economics, Stockholm
The Royal Institute of Technology, Stockholm
University of Stockholm, Stockholm
Umea University, Umea
Swedish University of Agricultural Sciences,
Uppsala
University of Uppsala, Uppsala
Mälardalen University, Västeras
Växjö University, Växjö

Switzerland:

Université de Fribourg, Fribourg
University of Geneva, Geneva
Ecole Polytechnique Fédérale de Lausanne
Université de Lausanne, Lausanne
Pädagogische Hochschule Rorschach
ETH Zürich (Hochschule), Zürich
Pädagogische Hochschule Zürich (PHZH)
Universität Zürich, Zürich

Turkey:

Ankara Üniversitesi, Ankara
Hacettepe University, Ankara
Middle East Technical University, Ankara
Uludag Üniversitesi, Bursa
Trakya Üniversitesi, Edirne
T.C. Anadolu Üniversitesi, Eskisehir
Bogaziçi Üniversitesi, Istanbul
Marmara Üniversitesi, Istanbul
Yildiz Technical University, Istanbul
Ege Üniversitesi, Izmir
Ondokuz Mayıs Üniversitesi, Samsun

Ukraine:

Kiev T.G. Shevchenko State University, Kiev
Odessa State Academy of Refrigeration, Odessa
Odessa State Polytechnic University, Odessa
Odessa State University, Odessa

Odessa State Environmental University, Odessa
Odessa State Maritime University

United Kingdom:

The Queen's University of Belfast, Belfast
University of Sussex, Brighton
University of Bristol, Bristol
University of Cambridge, Cambridge
University of Kent at Canterbury, Canterbury
University of Ulster, Coleraine
University of Abertay Dundee, Dundee
University of Durham, Durham
Heriot-Watt University, Edinburgh
University of Strathclyde, Glasgow
University of Glasgow, Glasgow
University of Surrey, Guildford
University of Hertfordshire, Hatfield
University of Huddersfield, Huddersfield
Kingston University, Kingston upon Thames
University of Wales, Lampeter
University of Leeds, Leeds
De Montfort University, Leicester
Liverpool John Moores University, Liverpool
University of East London, London

Middlesex University, London
University of Westminster, London
University of Northumbria at Newcastle, Newcastle upon, Tyne
The Nottingham Trent University, Nottingham
University of Portsmouth, Portsmouth
University of Central Lancashire, Preston
South Bank University London, London
Staffordshire University, Stafford
University of Stirling, Stirling
University of Sunderland, Sunderland
University of Wolverhampton, Wolverhampton

Vatican:

Università Pontificia Salesiana, Roma

Others:

Conselho de Reitores das Universidades
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DAAD, Bonn
Department of Linguistics applied to Science &
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Stuurgroep Handvest Duurzaamheid HBO, Utrecht