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Education for sustainable development - emerging

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- Kritische Einwürfe

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Wendy Goldstein

Education for Sustainable Development - emerging

Zusammenfassung: Dieser Beitrag beschreibt wichtige Stationen der Bildung für eine nachhaltige Entwicklung in der internationalen Diskussion seit dem Weltgipfel von Rio und gibt einen Überblick über die konzeptionellen Fortschritte in verschiedenen Regionen der Welt. Die Autorin legt ein besonderes Augenmerk auf die Rolle der zivilgesellschaftlichen Partizipation und erläutert Bildung für nachhaltige Entwicklung als ein Bildungskonzept, das Veränderungsprozesse nicht nur auf der individuellen, sondern auch auf der institutionellen und gesellschaftlichen Ebene anstoßen soll.

Abstract: This article describes important milestones of an education for sustainable development in the international discussion since the world summit in Rio and gives an overview about the conceptional progress in different world regions. The author directs the reader's attention to the role of civil-societies participation and explains education for sustainable development as a concept for education that should encourage change processes not only on the individual level but also on the institutional and societal level.

How has the understanding of education for sustainable development changed since Rio?

The Rio mandate

The United Nations Conference on Environment and Development in Rio (1992) developed Agenda 21 and strongly emphasized the environmental basis of sustainable development, though striking a balance between improving people's economic and social standards of living on the one hand and conserving the natural resource base on the other. Agenda 21 specified the role of many groups in making sustainable development a reality and emphasized throughout measures to educate, train and engage society in participating in the journey to sustainable development. Chapter 36 is dedicated to promoting education, public awareness and training and called on actions to:

1. reduce adult illiteracy levels to half and improved access to basic education for boys and girls;

2. reorient education towards sustainable development to achieve environmental and development awareness in all sectors of society, accessibility of environmental and development education from primary school to adulthood, and integrate environment and development concepts in all educational programmes;

3. promote broad public awareness as an essential part of global education to strengthen attitudes, values and actions which are compatible with sustainable development;

4. strengthen training to develop human resources and facilitate a transition to a more sustainable world.

At Rio three Conventions were presented for adoption – the Convention on Biological Diversity, the Framework Convention on Climate Change, and the Convention on Desertification. All these Conventions call on the participation of people in their implementation and include articles specifying the obligation of signatory countries to undertake education, awareness, and training for their successful implementation.

Post Rio influences

Although Agenda 21 speaks of development and environment education contributing to education for sustainable development (ESD), inevitably, approaches are influenced by the sector from which it arises. The influence of the environment sector on the concept of sustainable development and indeed of environmental education on education for sustainable development still persists in the way ESD is interpreted today. Since Chapter 36 states more about the activities governments and a wide range of actors might take in education, than explaining what it is or how it should be undertaken, since Rio there has been a process of clarifying meaning and deepening understanding of ESD.

To communicate, stimulate and guide the work proposed by Agenda 21 the UN established the Commission on Sustainable Development CSD. UNESCO is the Task manager of Chapter 36 on education and public awareness and set up an ESD programme. The CSD adopted a Work Programme on education and public awareness in 1997. However acquiring adequate funding to support the work programme has been an issue. Five years after Rio, UNESCO reported to the UN that education was „the forgotten priority of Rio“¹.

Recognition for sustainable development gained ground

during the 1990s as a series of UN Conferences took place focusing on aspects of social and economic development². The values and educational recommendations agreed in these UN conferences added to the scope of education for sustainable development and were incorporated into thinking in UNESCO on what it called „education for sustainability“ or „education for a sustainable future“ (UNESCO / Government of Greece 1997).

The recommendations of the global UN Conferences were mostly debated and agreed outside the education sector. So there had to be a process of communication and building acceptance for these policy decisions by the education sector. UNESCO Conferences have involved education ministries and education unions in discussions to support ESD, though there is still much to be done to integrate ESD in the education sector.

Moreover since Rio, the actors in education have become broad and include government, university, NGO, business, teachers, media, indigenous, consumer and community groups. Many international and regional meetings were held to discuss the implications of education for sustainable development, such as Eco-Ed (Toronto 1993), Sustainable Development Education and Awareness (Prague 1995) Environment and Society (Thessaloniki 1997). Just as educators and NGOs discussed what was meant by education for sustainable development or education for sustainability, debates raged over the meaning of *sustainable development* itself and what a sustainable society would look like. The Wellbeing of Nations, a country by country index of quality of life and the environment, captured the dilemma of sustainable development: „Nobody knows how to meet these new demands. There is no proven recipe for success. In fact, no one has a clear sense of what success might be. Making progress towards ways of living that are desirable, equitable and sustainable is like going to a country we have never been to before with a sense of geography and the principles of navigation but without a map or compass. We do not know what the destination will be like, we cannot tell how to get there, we are not even sure which direction to take“ (Prescott-Allen 2001, pp. 1f.).

As well there was a range of terms to clarify. In New Zealand, „*sustainability*“ is the goal of sustainable development – „an unending quest to improve the quality of people’s lives and surroundings and to prosper without destroying and future generations of humans (and all other species on Earth) depend on. Like other important concepts such as equity and justice, sustainability can be thought of as both a destination (something worth aiming for) and a journey (that has no pre-ordained route“ (Parliamentary Commissioner 2004).

It is clear that sustainable development is a process of adaptive management and systems thinking. This requires creativity, flexibility and critical reflection (Tilbury/Goldstein 2002) to resolve the social, cultural and economic reasons behind unsustainable practices and inequalities that contribute

to the unsustainable exploitation of the environment. The implications of a more socially determined outcome of sustainable development have likewise impacted on education. Education is more than learning *about* sustainable development and conveying a body of theory and facts. It is education *for* sustainable development that leads to change in attitudes, changed ways of thinking and taking action. Education for sustainable development calls for *new learning* (rather than teaching) yet few are trained or experienced in these new approaches (Tilbury/Wortman 2004).

By the time of the *World Summit on Sustainable Development* (2002) the world’s governments had set new targets – the Millennium Development Goals, focused on alleviating poverty, reducing HIV/AIDS, providing access to basic education, clean water and protecting the environment, influencing the focus of the Summit. The lobby for sustainable development education was well organised so that the *Johannesburg Plan of Implementation*, recommends to „integrate sustainable development into education systems at all levels of education in order to promote education as a key agent for change“. Following an endorsement at the WSSD (World Summit on Sustainable Development), the United Nations agreed to declare the *Decade of Education for Sustainable Development 2005 - 2014*.

An added impulse to ESD from the Summit is that states „have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment[...].“ Developed countries have a responsibility to change unsustainable patterns of consumption and production, and critically examine the values and lifestyles that the well off now enjoys.

Understanding of ESD in different parts of the world

Despite the emphasis on educational processes in Agenda 21, the implementation of education for sustainable development over the last 12 years has been mixed and patchy. Few countries could claim that formal education has been reoriented to sustainable development, though environmental education and development education has gained ground in many (Tilbury/Goldstein/Ryan 2004). A number of issues and trends are emerging.

Clarity in communicating sustainable development education

Confusion still exists as to what and how to undertake education for sustainable development. There are still few texts which provide an in depth coverage of the approaches and tools for engaging and managing change for sustainable development (Tilbury/Wortman 2004). The *Japan Council on Sustainable Development* in 2003 found from its discussions in several meetings that education for sustainable development is a difficult concept for people to understand, despite conversations on it for 10 years. People understand better environmentally sustainable development³. In Asia 2005, a UNESCO meeting to prepare a regional strategy for the Decade decided one action is to clearly explain what ESD involves in terms of major content areas, skills, values and opportunities – considering these in the context of local languages and worldviews.

Definitions of ESD have emerged as countries develop action plans and strategies. ESD is defined (USA) as „a life-long learning process that leads to an informed and involved citizenry having the creative problem solving skills, scientific and social literacy and commitment to engage in responsible individual and cooperative actions. These actions will help ensue and environmentally sound and economically prosperous future.“⁴

The UK Sustainable Development Education Panel defined ESD as: „Education for sustainable development is about developing the knowledge, skills understanding and values to participate in decisions about the way we do things indi-

vidually and collectively, both locally and globally, that will improve the quality of life now without damaging the planet for the future“ (DETR/DfEE 1998).

In New Zealand: „Education for sustainability examines how people and groups in society can learn to live in sustainable ways. It is not simply education „about“ sustainability – education for sustainability has a strong purpose. It aims to empower people of all ages and different back grounds to contribute to a better future“ (Parliamentary Commissioner 2004).

UNESCO suggests there are certain guiding principles for ESD (see UNESCO ESD Position paper 8th draft, 2003)

- Using quality education to encourage decision-making based on holistic and interdisciplinary critical thinking.
- Alleviating poverty and lessening the income gap between nations and between communities and individuals.
- Promoting democracy, human rights, participation and a culture of acceptance, non-violence and peace in the workplace and civil society.
- Promoting gender sensitivity and equity.
- Sustaining diversities.
- Making communities viable and sustainable.
- Using natural resources and materials in a sustainable manner, accounting for all hidden costs.
- Planning across generations.

Differences between ESD and environmental education

There has been some confusion and dissent about replacing environmental education with education for sustainable development. The IUCN (The World Conservation Union) Commission on Education and Communication held an international internet debate in 2000 to explore in what ways practitioners saw the relationship between the two.

Many view ESD as the new generation of EE (Environmental Education) which includes ethics, equity and new ways of thinking and learning. Others say ESD should be part of good EE and there is no need to do away with EE as the umbrella. Others say EE is part of ESD and that ESD is more comprehensive dealing with development, north-south relationships, cultural diversity, social and environmental equity. Figure 1 shows the varying perceptions of the relationships. The trends or changes in environmental education to education for sustainable development were discussed. Participants who say ESD as a successor to EE characterised it as:

- more future oriented (careful examination of possible and probable futures);
- critical of predominant market and consumption driven society-emphasis on lifestyle choices;
- more sensitive to the different realities that challenge people around the world;
- more systemic when dealing with complexity and developing skills and knowledge for socially critical citizens to deal with complex issues;
- more community and solidarity oriented as opposed to individualistic and self promoting.
- less concerned with product (behavioural outcomes);
- more concerned with process – creating the right

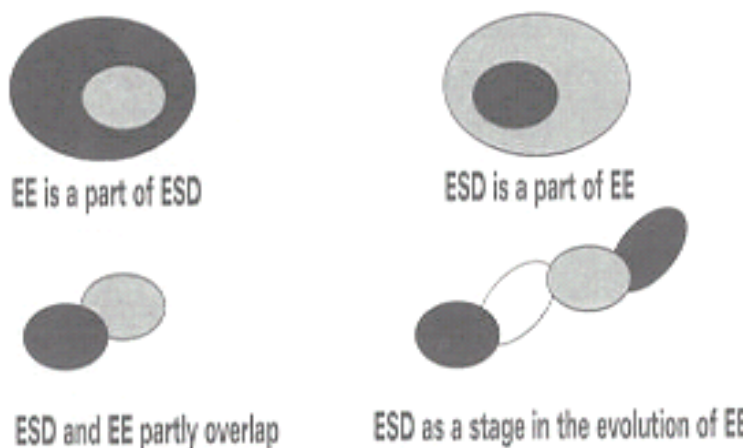


Fig. 1: Different views of the relation between EE and ESD from IUCN ESDebate

condition for social learning and participatory processes;

- more open to new ways of thinking and doing – changing mental models;
- preoccupied with linking social and economic and environmental equity at local, regional and global level;
- developing capacity for change and improved quality of life;
- less emphasis on awareness-raising and behaviour changes;
- more focus on social, structural and institutional change (more than personal change) (Hesselink et al. 2000).

Institutional support

Agenda 21 called for all countries to develop and implement a strategy to integrate environment and development education into education at all levels by 1995. A strategy is the way to engage a wide sector of stakeholders in planning and follow up action, and should result in mechanisms to support it. To date, however, only a handful of nations have drafted strategic frameworks for advancing this process at the national level including Australia, Canada, USA, England, Germany, Spain, Hungary, The Netherlands, Scotland, Norway, Sweden, Poland, Jamaica, El Salvador, Ecuador, and South Africa. As in most countries the strategy development process in Spain was developed through a participatory process of dialogue with all its state governments and stakeholders. In the SADC (South African Development Community) countries of southern Africa and south-east Asia a regional process was put in place to stimulate environmental education policy and strategy. A Europe wide strategy for ESD has been developed (2004) under the United Nations Economic Commission for Europe (www.unece.org).

Focus on formal education

Even though most unsustainable development happens outside the formal education sphere, there is still an emphasis of activities in the formal education sector, an important factor to be addressed.

The UK Government set up a Sustainable Development Education Panel (1998 - 2003) to advise on strategies to promote ESD. It suggests the concepts for school education include interdependence, citizenship and stewardship, needs and rights of future generations, diversity, quality of life, equity and justice, sustainable change, uncertainty and precaution in action ⁵.

Much educational innovation is driven by Non Governmental Organisations, pushing for the reorientation of education programs to encompass environmental education and more lately for sustainable development. At first NGOs produced resources for formal education, from magazines like *Action* in Southern Africa, and *Walia* by IUCN in Mali (Oepen/Hamacher 2000). NGOs stimulate wildlife clubs as an extra curricula activity e.g. Uganda and use traditional theatre and marionettes as means to bring messages to the broader community. NGOs prepare teaching resource materials like WWF (World Wildlife Fund) and the World Resources Institute, USA, to make use of its state of the environment reports and stimulate interdisciplinary and interactive approaches.

Over time the work of NGOs has gone from being an add-

on or issue based to be part of the mainstream, being involved with the government in the policy development for education (IUCN Pakistan). The Canadian NGO *Learning for a Sustainable Future* worked with provincial education ministries to encourage education for sustainable development. The approach encouraged a multi-stakeholder engagement in developing the policy, knowledge, skills, and values of education. The NGO prepared a list of knowledge, values and skills drawing up a composite list from development, global and environmental education as a guide to deliberations (www.schoolnet.ca/vp/learning).

NGOs have been involved in curriculum reform (IUCN Nepal). In China WWF launched its successful Environmental Educator's Initiative (EEI) in 1997 in partnership with the Ministry for Basic Education and British Petroleum China. EEI has built capacity in the formal education system by challenging existing curriculum structures, encouraging cross-curricular planning and promoting participatory and interactive approaches to teaching and learning. It has supported these changes with teacher education, resource development and establishment of a number of regional Environmental Education Centres. In addition, EEI supports a number of pilot schools that act as leaders and developers of Environmental Education innovation and change. The successes of this project have placed the EEI team in a good position to take advantage of China's current period of educational reform to collaboratively develop National Environmental Education Guidelines with the Ministry of Education, integrating ESD into the curriculum and adopting enquiry-based student-centred learning (Tilbury 1999).

Partnerships

As the China example shows, partnerships provide effective ways to develop change in education and sustainable development. Many partnerships are flourishing around the world helping create synergy, combining resources and talents, breaking down hierarchies, building shared visions and motivating actions. Partnerships were encouraged in Agenda 21 and are a key to UNESCO's Decade ESD Implementation Strategy (2003). The University Leaders for a Sustainable Future in collaboration with the International Association of Universities, Copernicus Campus and UNESCO have formed the Global Higher Education Network for Sustainability Partnership (GHESP). This group is preparing regionally relevant resources, tools and change strategies for sustainability in curriculum and organisational practice in universities.

The US held a „National Forum on Partnerships Supporting Education about the Environment“ (1994) as a demonstration project of the (Clinton) President's Council on Sustainable Development. In an effort to explore strategies for building effective partnerships to support education for sustainability, a multi-stakeholder group met to outline *Education for sustainability - an agenda for action*, including policy recommendations for formal and non formal education, partnerships for cross cutting themes and stories to illustrate practice. The publication provided a pool of opportunities for partnerships to advance education for sustainability from formal education to corporate and community education.

Participation in decision making

Drawing from many failed development projects NGOs have been active in developing approaches to aid participation and empowerment of the communities that were to be „developed“. Rather than imposing solutions on communities, the approach evolved to work with and through communities to solve sustainable development issues. These approaches such as Participatory Rural Appraisal and Participatory Learning and Action meant that stakeholders were more involved in research, visioning, planning and evaluation of development and conservation projects. By acting as the catalyst, the „outsider“ plays a facilitating role to assist local people to decide what to do with the information and analysis that they generate (Borrini-Feyerabend et al 2004). Knowledge was no longer seen as just in the heads of „experts“, communities also have knowledge passed down over the generations. These experiences led to rethinking education to being one of facilitating a learning process in which all participate and share their knowledge and aspirations.

NGOs, the indigenous people's movement, farmers' and community based organisations (CBOs) have pushed for sharing of power in the management of natural resources, so that communities could take responsibility and receive benefit from sustainable management of resources. In so doing they have challenged the systems that sustain power, stimulated attention to gender issues and equity. NGOs and CBOs have involved schools, women and the landless in these community processes assisting in reconceptualising environmental education towards sustainability, going beyond schooling and into the domain of lifelong learning and stimulating social debate.

The effects of this work can be seen in more interactive policy making by governments and development agencies, and co-management of natural resources between government and community groups, and in local agenda 21 processes through local government and NGOs around the world. Government and civil society are both actors in promoting this debate. Networks or associations also provide a stimulus and forum in which debates or learning take place, from chambers of commerce to consumer groups, from agricultural networks to fishermen's cooperatives to businesses and government organisations.

Communication

Communication is often seen as the means to create awareness, and to put issues on the social agenda. Often it is part of a government campaign to implement policy. In Canada, the Ministry of Environment developed manuals encompassing knowledge on environmental citizenship for use by radio and educational institutions to increase awareness, develop values and practices to save water, energy, reduce impact on climate change and conserve nature. Communication campaigns are also effectively waged by NGOs to draw attention to particular issues and to raise the importance of an issue on the agenda of a business or government. Sometimes stunts are required to attract media attention, a method well developed by Greenpeace. Increasingly Internet is being used to mobilise opinion and action, as happened in the international lobby against land mines.

Communication is an essential part of awareness raising and advocacy for the Decade to ensure involvement of a wide range of stakeholders, sharing of results and political attention.

While governments and NGOs make use of the mass media, it is increasingly playing a role in stimulating social debate for sustainable development itself, driven by networks of environmental journalists and responsible editors. The Sydney Morning Herald, the main morning newspaper for the city of over four million, has waged a multi week *Campaign for Sydney*, preparing the population for measures to address water, air transport and land planning issues. It has challenged the government to improve the infrastructure and provide more effective governance of the city's development. The paper shares examples of what works from cities around the world and feedback from readers. It is a most remarkable investment by a newspaper that goes beyond the usual „issue“ to look at a holistic approach.

Communication is a policy instrument, a process of two way engagement wherein community interests are heard, social groups are engaged in policy forming and decision making. Communication is an essential tool for managing the relations with stakeholders, keeping networks alive, people informed and giving feedback in policy, project and programme (Oepen/Hamacher 2000).

Designing the Future

The Global Scenario Group prepared a report outlining a number of scenarios for the future in „*Great Transition*“ (Raskin 2002). Work such as this is recognized as having an important role in education for sustainable development. The NGO *Foundation For Our Future* developed a methodology, drawing from business scenario and planning processes, to use in education (www.fff.org). While referring to students, Wheeler (Introduction in Wheeler et al. 2000) states that „our challenge is to kindle a strong desire to look into the full range of possible futures, understand the systems that affect the future, provide them with the techniques to plan for the future, and empower them to affect the future positively both for themselves and for their communities“.

The Global Scenario Group suggests that to achieve the desired future we would act on the root causes that shape society and the human experience, the ultimate drivers such as values, understanding, power and culture. This is in contrast to mainstream development policy which focuses on the proximate drivers which are more responsive to short term intervention and include influence on economic patterns, technology, demographics and institutions (Raskin et al. 2002).

Recognizing the need for transformation

The New Zealand Parliamentary Commissioner for the Environment released „*See change - learning and change for sustainability*“ as an inspiring think piece. In a play on words on the title – *See Change* – the Report states that „a shift in perception and understanding is needed among many people and organizations in society, in the ways that they look at issues and search for solutions, to enable a sea change for the better“ (when a „sea change“ – „refers to a profound or notable transformation“) (Parliamentary Commissioner 2004, p. 3 f).

The call for a transformation occurs frequently, creating demand for new learning in society and challenging deeply held beliefs about our social and economic systems and the sustainability of our lifestyles. New learning needs both skills of critical and systemic thinking.

Systemic thinking

Systemic thinking helps us to think differently about the world in contrast to the usual way of analyzing things by taking them apart. This approach has led to seeing things in boxes and failing to see how one thing connects or relates to another, leading to side effects and externalities from our actions. ESD needs to develop relational thinking, with its emphasis on integrative approaches and long term solutions.

System thinking is also helpful in understanding how to overcome barriers and the functioning of an organisation in relation to the larger context, which in turn leads to organisational change. When the way we think about the world is changed, we can act on „the tipping point“ that can cause a cascade of impact. This is a positive view that with the right kind of impetus people will change their behaviour (Gladwell 2000).

Values and ethics

Systemic and critical thinking are required for ESD to address the drivers of unsustainability such as cultural values and ethics. It is recognized that while scientific and technological progress are important, science cannot answer questions on what type of people we want to be and what quality of life we want or what is right and wrong. This is part of the will which needs the principles for an inspiring ethical vision and the courage to undertake transformation in values and institutions. One approach to developing ethics is using the Earth Charter (www.earthcharter.org) as a basis for discussion in education. Recent research in Canada shows that environmental courses with a strong values element can have a significant impact on student's values (Applied Environmental 2003).

More than individual change

The desired result of the above approaches - partnerships, communication, critical and system thinking - is social debate to „heat up society“ (AED 2002) towards a transformation to sustainable development. In the Netherlands and IUCN sustainable development education can be thought of as developing the learning citizen at three levels:

1. the *individual level* – a learning person who has skills and plays a role in society leading to sustainable behaviour (new knowledge, new skills);
2. *institutional level* – within a learning organisation which tries to improve the quality of its own structure and performances in sustainability (new priorities, new procedures, and new practices);
3. *social level* – within the learning society in which there is an addition of learning processes of different organisations and individuals with their own perspectives in which there is a cumulative effect (creating new agendas, new partnerships, new ways of interaction and participation).

ESD aims for results in the individual, organization and social systems. In the educational sector besides changes in curricula and pedagogy, universities and schools need to change their culture, how they operate, and what they procure towards sustainability. With increasing social pressure to practice corporate social responsibility, businesses have to not only create learning opportunities to comply with sustainability standards but also learning to adopt new ways of working and operating towards sustainability going beyond making the products more sustainable to even considering the type of products themselves.

Since ESD emphasises changes in organisations and society and not just individual learning, people are placed in a situation where they learn, often better than individually, by relating their personal experiences to those of others. This is called *social learning* and there are four elements that form the basis of this learning process:

- *action*: people have to be able and prepared to consider themselves to be people who can actively take their own situation in hand;
- *cooperation*: people have to be able and prepared to cooperate with others;
- *reflection*: people have to be able to reflect on what they have done and translate this into changed behaviour;
- *communication*: is conditional for social learning that one can communicate about it, explain and transfer experience.

IUCN plans for the Decade

The World Conservation Union (IUCN) and its Commission on Education and Communication (CEC) has been an advocate of education for sustainable development since Rio. The Commission is a volunteer network of experts constituting a formal knowledge network under IUCN statutes to bring advice to the organisation. At first CEC pushed for the development of national strategies for education and communication for sustainable development and held regional meetings with governments and NGOs to discuss strategic planning in Europe, Latin America and Asia. The Commission has a publishing programme to share case studies and practice on education for sustainable development and managing participation and communication.

The Commission's work now is mainly focused on establishing the „World Conservation Learning Network“ (www.wcln.org). This global partnership is focused on developing capacity and empowering leadership amongst professionals to undertake sustainable development. In the future CEC will offer learning opportunities in ESD and managing communication and participation for sustainable development and the environmental Conventions through the World Conservation Learning Network.

IUCN's over 1000 conservation organisations have endorsed the Decade of ESD and the organisation is developing its policy on ESD which will influence its work programme globally. IUCN members have called for ESD to be incorporated in the IUCN programme. With UNESCO in the Asia Pacific, IUCN will work on the indicators to review, monitor and evaluate work and progress in ESD.

Through the CEC web site www.iucn.org/cec knowledge is shared about education for sustainable development and communication as a service to the Conventions, governments, practitioners, and the Commission on Sustainable Development.

Conclusions

The Decade of Education for Sustainable Development offers an important opportunity for advocacy for the education for sustainable development. Governments will want to report on their activities at the UN and take responsibility for ESD in the context of their sustainable development plans. Support to foster ESD is needed and the following institutional means need to be in place and supported:

- A shared vision and framework to support ESD nationally developed with key stakeholders and communicated nationally.
- To sustain the issue of ESD on the agenda, act as a watchdog and progress thinking on ESD, establish an esteemed group of thinkers and educators such as an ESD Council or Commission.
- Foster the means to share knowledge nationally, regionally and globally between NGOs, corporate sector, networks and local and national government on ways to stimulate social engagement in sustainability.
- Support communities of practice and internet based working groups.
- Stimulate innovation in ESD through prizes, grants and communication and support community groups in actions for sustainable development.
- Support research and communication of knowledge in ESD to practitioners through forums, networks, websites and publications.
- Stimulate media coverage of discussion on sustainable development issues.
- Set targets for ESD, monitor, evaluate, learn and adapt.
- Develop capacity of educators and facilitators in leading new learning, managing partnerships, systemic and critical thinking, and activities such as scenario building.
- Develop leadership and the capacity of professionals to think systemically about sustainable development.
- Take courage that there are thousands and thousands of people working to bring about education for sustainable development.

Annotations:

- 1 Report of Director General UNESCO 1997 on Chapter 36 to the 19th Special Session of the General Assembly of the UN.
- 2 1993 Human Rights – Vienna; 1994 Population and Development – Cairo; 1995 World Summit for Social Development – Copenhagen; 1995 Women – Beijing; 1996 Food Security – Rome; 1996 Human Settlements – Istanbul.
- 3 Prof. Hirono, Seiki University, Japan, 2003 report during GEA Symposium in Tokyo Japan.
- 4 Education for sustainability – an agenda for action, US Government Printing Office
- 5 To see more visit www.defra.gov.uk and on the revised education curriculum that now gives more space to ESD: www.dfes.gov.uk.

References:

- AED - Academy of Educational Development:** Heating up Society to Take Environmental Action – a Guide to Effective Environmental Education and Communication., Washington 2002.
- Applied Environmental Education and Communication:** 2 (2003) 2.
- Borini-Feyerabend, G./Pimbert, M./Farvar, T./Kothari, A./Renard, Y:** Sharing Power: Learning by Doing in Co-management of Natural Resources Throughout the World. Tehran 2004.
- DETR - Department of Environment, Transport and the Regions/ DfEE – Department for Education and Employment:** Sustainable Development Education Panel. First Annual Report. London 1998.
- Fien, J. (Hg.):** Education & Conservation: Case Studies of Good Practice. Gland/Washington 1999.
- Gladwell, M.:** The Tipping Point. How Little Things Can Make a Big Difference. New York 2000.
- Hesselink, F./van Kempen, P./Wals, A. (Hg.):** ESDebate International Debate on Education for Sustainable Development. IUCN Commission on Sustainable Development, Gland 2000.
- Oepen, M. (Hg.):** Communicating the Environment. Environmental Communication for Sustainable Development. Frankfurt/Main 2000.
- Parliamentary Commissioner for the Environment:** See Change – Learning and education for sustainability. Wellington 2004.
- Prescott-Allen, R.:** The Wellbeing of Nations: a Country-by-Country Index of Quality of Life and the Environment. Washington 2001.
- Raskin, P./Banuri, T./Gallop, G./Gutman, P./Hammond A.:** Great Transitions: The Promise and Lure of the Times Ahead (A Report of the Global Scenario Group) Stockholm 2002.
- Tilbury, D./Goldstein, W./Ryan, L.:** Towards Environmental Education for Sustainable Development: The Contributions of NGOs in the Asia-Pacific Region. In: International Review for Environmental Strategies 4 (2003) 1, S. 59 – 73.
- Tilbury, D./Goldstein, W.:** Supporting the UN Decade of Education for Sustainable Development.. Gland 2002 (leaflet).
- Tillbury, D./Wortman, D.:** Engaging People in Sustainability.. Gland 2004.
- UNESCO/Government of Greece:** Educating for a Sustainable Future: A Transdisciplinary Vision for Concerted Action. Paper Prepared for the International Conference Thessaloniki 8-12 December 1997.
- UNESCO:** United Nations Decade of Education for Sustainable Development 2005-2014. Framework for the International Implementation Scheme. Paris 2003.
- Wheeler, K.A./Bijur, A.P. (Hg.):** Education for a Sustainable Future. A Paradigm of Hope for the 21st Century. New York/London 2000.

Key Websites:

- www.unece.org
www.schoolnet.ca/vp/learning
www.ffof.org
www.earthcharter.org
www.iucn.org/cec
www.defra.gov.uk
www.dfes.gov.uk

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