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United Nations Decade of Education for Sustainable Development **(DESD, 2005-2014)**

Review of Contexts and Structures for

Education for Sustainable Development

2009

Learning for a sustainable world

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Learning for a Sustainable World

Prepared by: Arjen Wals (Wageningen University, the Netherlands)

The author is 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 UNESCO and do not commit the Organization.

This review is a result of the successful completion of the first phase of the DESD Monitoring and Evaluation process: 2007-2009. The DESD M&E process is guided by the Global Monitoring and Evaluation Framework.

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Foreword

The UN Decade of Education for Sustainable Development (DESD, 2005-2014), offers an opportunity to rethink the manner in which we approach global challenges. Since its international launch in New York on 1st March 2005, the DESD has made considerable progress in terms of concrete activities and actions on the ground. Apart from the regional and national launches, progress has been achieved in both institutional and programmatic areas at international, regional and national levels. However, given the scale and severity of the global challenges we face, much still remains to be done.

The mid-point of the Decade is a good moment for the international community to reflect on its understanding of and commitment to the Decade. It is also a moment to take stock of what has been achieved so far, to consider the key lessons learned and to decide on priority measures towards achieving the goals of the Decade.

This 2009 DESD Global Report Learning for a Sustainable World: Review of Contexts and Structures for Education for Sustainable Development presents a succinct yet insightful overview of the contexts in which regions and countries around the world are trying to develop Education for Sustainable Development (ESD) and related forms of education and learning. Regional and national realities have shaped how the development and promotion of ESD have occurred, thereby engendering a variety of interpretations of ESD. In the next half of the Decade, we need to focus on finding the unifying dimensions in our thinking about ESD and work towards identifying ways to translate general themes into particular applications responsive to local needs.

The report also sheds light on the structures that countries have put in place to promote and facilitate ESD. Policies, coordination mechanisms and budget allocations, to name a few, constitute the basic building-blocks necessary if progress in ESD is to be achieved. Though progress is satisfactory, we need to do more by mobilizing further political support in countries where ESD is not yet a priority.

This mid-Decade review comes at a time when the economic, social, environmental and cultural realms of global society are faced with daunting challenges. Today, more than ever before, the need for a holistic approach to learning and teaching becomes both vital and urgent. If its potential to contribute to the paradigm shift in thinking, learning and teaching for a sustainable world is to be realised, ESD has to move to the political centre-stage.

The perspectives in this review should serve as a backdrop for not only making the DESD a success but also for ensuring that ESD occupies a salient position on international, regional, national and local agendas.

I hope that this review, through its analysis of contexts and structures for ESD around the world, will contribute to developing a better understanding of the scope and nature of ESD and also to addressing more effectively the challenges that still lie ahead so that the DESD may truly fulfil its potential.

Mark Richmond
Director
Division for the Coordination of
United Nations Priorities in Education

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This mid-Decade review, which is an important milestone in the life of the United Nations Decade of Education for Sustainable Development (DESD, 2005-2014) is a result of the successful completion of the first phase of the DESD Monitoring and Evaluation (M&E) process. Many stakeholders, partners and actors have contributed to the M&E process as well as to the development of the structure and content of this review.

We are extremely grateful to the members of the DESD M&E Expert Group (MEEG): Saïd Belkachla, Abelardo Brenes, Rangachar Govinda, Alex Michalos, Roel van Raaij, Overson Shumba, Daniella Tilbury (Chair), Elaine Unterhalter and Pierre Varcher. They devoted a significant amount of time and energy, as a group and individually, to not only designing the M&E process in close collaboration with the Section for DESD Coordination at UNESCO, but also to providing valuable inputs to the structure and content of this review.

We extend our appreciation and thanks to Arjen Wals for preparing this insightful and analytical review. We would particularly like to commend his unstinting commitment to the challenging task of presenting this complex review in a lucid and simple manner to facilitate a wide readership.

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Introduction

The United Nations Decade of Education for Sustainable Development (DESD, 2005-2014) has reached its mid-point. A mid-Decade review was conducted to take stock of what has been accomplished during the first five years of the DESD. At the same time, this review was designed to identify the obstacles encountered in creating structures, provisions and conditions that facilitate the development and implementation of ESD. Finally, the review aims to generate possible actions, based on the lessons learned during the first five years, for the remainder of the Decade. This introductory chapter briefly sets the stage for the DESD and this mid-Decade review.

The continued quest for sustainable development

The world continues to face various critical challenges such as: human-induced climate change, the rapid depletion of natural resources, the frequency of natural disasters, the spread of (old and new) infectious diseases, the loss of biodiversity, the violation of human rights, increased poverty, the dependency of our economic systems on continuous growth in consumerism and so forth.[1] Sustainable development (SD) has become a vehicle around the globe for expressing the need to depart from present dominant models of development which appear unable to balance the needs of people and the planet in the pursuit of peace and prosperity.

Sustainable development needs to be described for each of these dimensions in their interrelation in time (past-present-future) and in space (near-far). Sustainable *social* development *(people)* is aimed at the development of people and their social organization, in which the realization of social cohesion, equity, justice and well-being plays an important role. A sustainable *environmental* development *(planet)* refers to the development of natural ecosystems in ways that maintain the carrying capacity of the Earth and respect the non-human world. Sustainable *economic* development *(prosperity)* focuses on the development of the economic infrastructure, in which the efficient management of our natural and human resources is important. It is the finding of balanced ways to integrate these dimensions in everyday living and working that poses, perhaps, the greatest challenge of our time as this requires alternative ways of thinking, valuing and acting.

[1]Many international 'state of the planet'-type reports have appeared about these challenges including a number of world development reports (www.theworldbank.org), the Intergovernmental Panel on Climate Change Report (www.ipcc.ch), The United Nations Millennium Forum Declaration reports (www.un.org/millennium/declaration), Millennium Ecosystem Assessment Reports (www.milleniumassessment.org). and UNEP's Fourth Global Environment Outlook: environment for development report www.unep.org/geo/geo4/

Across the globe there is a surge of interest in sustainability issues in governments, communities and organizations and in business and industry. More importantly, perhaps, more and more people are beginning to understand that the creation of a sustainable world that includes humanity depends on fundamental changes in our socio-economic systems as a whole, supported by a critical re-orientation of our principles, values, behaviours and lifestyles. The worldwide financial crisis of 2008-2009 is seen by some as a phenomenon that will accelerate the transition towards alternative economic systems, mechanisms and principles that are more in tune with the 'planet' and 'people' dimensions of sustainability. In response, new policies, legislation, forms of governance at the local, regional, national and international level and, indeed, new forms of education and learning are emerging that can help facilitate such changes.

The emergence of ESD

While the roots of ESD can be traced back to the early 1970s its first flowering occurred at the United Nations Conference on Environment and Development (UNCED), also known as the Earth Summit, held in Rio de Janeiro in 1992. UNCED resulted in a landmark publication: Agenda 21[2]. Agenda 21 provides a comprehensive plan of action to be taken globally, nationally and locally by UN agencies, governments and major organizations (NGOs, CSOs and networks) to reduce the human impact on the environment. Agenda 21, the Rio Declaration on Environment and Development and the Statement of Principles for the Sustainable Management of Forests were all adopted at the Earth Summit by 178 Governments. The Commission on Sustainable Development (CSD) was created in December 1992 to ensure effective follow-up of UNCED and to monitor and report on implementation of the agreements at international, regional, national and local levels.

Chapter 36 of Agenda 21 on education, training and public awareness, for which UNESCO was designated as Task Manager, identifies four overarching goals:

- **Promote and improve the quality of education:** The aim is to refocus lifelong education on the acquisition of knowledge, skills and values needed by citizens to improve their quality of life.
- **Reorient the curricula:** From pre-school to university, education must be rethought and reformed to be a vehicle of knowledge, thought patterns and values needed to build a sustainable world.
- **Raise public awareness of the concept of sustainable development:** This will make it possible to develop enlightened, active and responsible citizenship locally, nationally and internationally.
- **Train the workforce:** Continuing technical and vocational education of directors and workers, particularly those in trade and industry, will be enriched to enable them to adopt sustainable modes of production and consumption.

Although there appears widespread consensus about these goals, there is less agreement about the meaning of ESD. Just as is the case with sustainable development, there is not one single correct interpretation and use of ESD. The fact that there is no 'one size fits all' when it comes to SD and the road that will take us there, does not necessarily make SD and ESD weak concepts. On the contrary, it can be argued that this characteristic allows for the key challenge of our time to be addressed in multiple ways from different vantage points in locally grounded but globally connected ways. Perhaps ESD can be seen as the total sum of diverse ways to arrive at a 'learning society' in which people learn *from* and *with* one another and collectively become more capable of withstanding setbacks and dealing with sustainability-induced insecurity, complexity and risks. From this vantage point, ESD is about - through education and learning - engaging people in SD issues, developing *their capacities* to give meaning to SD and to contribute to its development and *utilizing* the *diversity* represented by all people - including those who have been or feel marginalized - in generating innovative solutions to SD problems and crises; however, as will become clear in this review, this is not the only vantage point.

[2]Agenda 21 was published by the United Nations in 1992. For further information, please visit: http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21toc.htm

The United Nations Decade of Education for Sustainable Development (DESD)

The creation of the DESD was seen as a means to re-emphasize these overarching goals in a context of SD by emphasizing the role of education and learning. Resolution 57/254 on the United Nations Decade of Education for Sustainable Development (2005–2014) was adopted by the United Nations General Assembly in December 2002, shortly after the World Summit on Sustainable Development (Rio plus 10) which was held in Johannesburg in August/September of the same year. This resolution requested UNESCO, as the designated lead agency for overseeing the Decade, to develop an International Implementation Scheme (IIS)[3] which would also clarify the relationship of the DESD with existing UN-supported educational processes (e.g., the Dakar Framework for Action[4] and the United Nations Literacy Decade).[5] The IIS was prepared through consultations with other UN agencies, international organizations, governments, NGOs, universities, individuals and the private sector, building upon more than 2,000 contributions gathered through the recommendations of national, regional and global workshops/conferences and through the UNESCO-DESD website.[6] The finalized version of the IIS was presented and approved by the United Nations General Assembly in September 2005.

The basic vision of the Decade is of a world in which everyone has the opportunity to benefit from education and learn the values, behaviours and lifestyles required for a sustainable future and for positive societal transformation. DESD seeks to promote the meaningful development and implementation of ESD on all geographical scales (locally, nationally, regionally and internationally) with the involvement of a wide range of stakeholders. At the start of the Decade, this vision was translated into four objectives: 1) facilitate networking, linkages, exchange and interaction among stakeholders in ESD; 2) foster an increased quality of teaching and learning in ESD; 3) help countries progress towards and attain the Millennium Development Goals[7] ; and 4) provide countries with new opportunities to incorporate ESD into education reform efforts.

The implementation plan called for a number of actions to realize this vision, including:

- **catalyzing new partnerships with the private sector, youth and media groups;**
- **sharing good ESD practices;**
- **linking Member States that have developed or have the desire to develop ESD curricula, policies and research;**
- **establishing an agenda for ESD research and a framework for monitoring and evaluating the Decade.**

To date, UNESCO has provided leadership in shaping and coordinating these processes. However, continuous support to ESD is necessary to further strengthen the momentum. The 34th UNESCO General Conference in 2007 adopted a resolution on ESD that *recognized that further substantial initiatives have to be taken by Member States and by UNESCO in order to reorient teaching and learning towards sustainable development worldwide.*[8] To address this call, UNESCO and its Member States would have to further help conceptualize ESD as well as implement it. To build on the progress achieved in the first half of the Decade and to strategically prioritize actions to obtain visible results during the remaining half were identified as the key areas of action of UNESCO and its partners.

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Relationships with other major international education initiatives[9]

A number of related international initiatives were already taking place when the DESD got underway in 2005, including the Millennium Development Goal (MDG)

[3]For more information on the IIS, please visit:

http://portal.unesco.org/education/en/ev.php-URL_ID=23280&URL_DO=DO_TOPIC&URL_SECTION=201.html

[4]In April 2000, more than 1,000 participants from 164 countries ranging from prime ministers to teachers, academics to policy-makers, non-governmental bodies to the heads of major international organizations gathered in Dakar, Senegal, for the World Education Forum. They adopted the 2000-word Dakar Framework for Action, Education for All: Meeting Our Collective Commitments For more information, please visit: www.unesco.org/education/efa/ed_for_all/framework.shtml.

[5]For more information on the United Nations Literacy Decade, please visit: http://portal.unesco.org/education/en/ev.php-URL_ID=53811&URL_DO=DO_TOPIC&URL_SECTION=201.html.

[6]For more information on the UN DESD, please visit: www.unesco.org/education/desd/.

[7]For more information on the United Nations Millennium Development Goals, please visit: http://www.un.org/millenniumgoals/.

[8]All relevant documents generated at this 34th General Conference can be found at: http://portal.unesco.org/en/ev.php-URL_ID=39369&URL_DO=DO_TOPIC&URL_SECTION=201.html.

[9]In 2005 UNESCO published a report titled: "UN Decade of Education for Sustainable Development: Links between the Global Initiatives in Education". For more information on this report, please visit: http://unesdoc.unesco.org/images/0014/001408/140848m.pdf.

process, the Education for All (EFA) movement and the United Nations Literacy Decade (UNLD). All three initiatives emphasize the importance of the quality of and easy accessibility to basic education. By focussing on sustainability, the DESD goes beyond education per se, as it aspires to be a vehicle for "articulating the overall social project and aim of development, alongside other overarching concepts such as peace, human rights and economic viability"[10] . The DESD therefore not only seeks to enable the exploration and critique of underlying principles and values conveyed through education but is also concerned with the content and purpose of education. At the same time, the DESD seeks to advance new forms of learning that can help citizens, young and old to address sustainable development issues in a wide range of contexts.

The specific roles of each initiative may be summarized as follows:

- **MDGs provide a set of tangible and measurable development goals within which education is a significant input and indicator.**
- **EFA[11] focuses on ways of providing quality educational opportunities to everyone.**
- **UNLD[12] concentrates on promoting literacy as the key tool for all forms of structured learning.**
- **DESD promotes a set of underlying values, relational processes and behavioural outcomes, which should characterize learning in all circumstances. Whereas the UN Development Programme (UNDP) coordinates the MDG initiative, UNESCO coordinates the other three.**

Recently, the relationship between EFA and ESD was further explored through a study on EFA-ESD dialogue. Table 1 shows how the two are distinct but also overlap.

EFA	EFA/ESD overlap	ESD
▪ Basic education and literacy available to all learners, Particularly addresses those who are excluded from quality basic education	▪ Commitment to quality education ▪ Education as a human right ▪ Promotion of human rights, especially gender equality and rights for marginalized people ▪ Concern to improve the quality of life, reduce poverty, improve health ▪ Importance of primary education ▪ Participation of all in education and development: governments, civil society organizations (CSOs), the private sector, communities and individuals ▪ Includes non-formal learning	▪ Broader purposes beyond education per se, ▪ Relevance and importance of ESD for all planned learning activities (formal, non-formal and informal). ▪ Includes those in privileged positions in societies where consumerism dominates ▪ Emphasis on basic values, processes and behaviours as part of all learning

Table 1 Some distinctions and common ground between EFA and ESD[13]

ESD not only relates to these major UN-supported education initiatives but also to a whole range of other 'adjectival' educations that touch upon SD or SD components. Such other SD-oriented types of education, which vary in scale, geographical scope and age, include: environmental education, peace education, human rights education, consumer education, development education, health education, HIV & AIDS education, biodiversity education, gender education, inclusive education, multi-cultural education, holistic education, global education and citizenship education.

Based on the importance and popularity of the Internet as a tool for advocacy and communication, the following example provides an interesting anecdotal snapshot.

If one considers the number of 'hits' or websites generated using the search engine, Google, as an indicator of the presence of a phenomenon in society and if the growth in these hits over time is an indicator of an increase of this presence in society, then consider the following:

On March 29th 2005, the year of the start of the DESD, a Google search for "Education for Sustainable Development" yielded 89,000 websites. On January 29th 2009, almost four years into the DESD, the same search yields 215,000 of such websites. This represents a 'Google-growth' of 142 per cent. Of course much of this growth is a result of the on-going digitalization of communication that affects all fields. Other educational fields related to ESD show a similar growth pattern, perhaps with the exception of AIDS education (Figure 1). Although the

[10]http://portal.unesco.org/education/en/ev.php-URL_ID=23298&URL_DO=DO_TOPIC&URL_SECTION=-473.html

[11]For Education for All (EFA) background information refer to: www.unesco.org/education/efa/

[12]For information on the United Nations Literacy Decade (UNLD) refer to: www.unesco.org/education/litdecade/

[13]Source: Wade, R and Parker, J (2008) 'Background Paper EFA-ESD Dialogue' UNESCO, Paris. http://unesdoc.unesco.org/images/0017/001780/178044e.pdf.

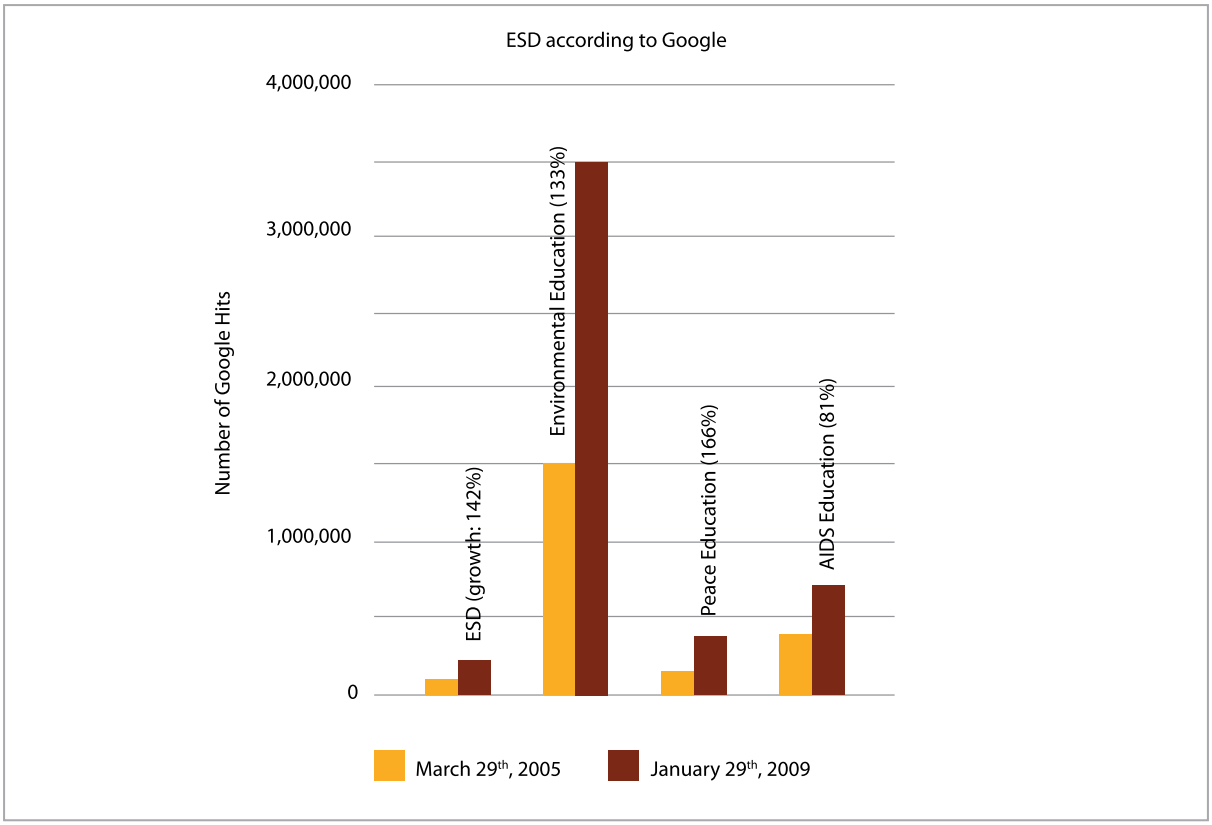

Figure 1: ESD growth during the first half of the Decade according to a search conducted on Google using the key word 'Education for Sustainable Development'.

number of Google hits only provides a snapshot and is by no means an authoritative indicator of ESD growth, let alone for the quality of the learning that takes place under the umbrella of ESD, it does indicate that it is finding a place in the world of emerging types of education seeking to address some of the key challenges of our time. Another observation from the figure is that the much older and more widely established field of environmental education has a similar growth pattern but in January of 2009 received more than 16 times as many hits as ESD (3.5 million websites).

A Mid-Decade Review

Given its ambitious goals, the DESD has raised high expectations among the countries and stakeholders who seek to promote and develop ESD. UNESCO and its Member States are called upon to deliver quick, visible and tangible results. The year 2009 marks the midpoint of the DESD. A mid-Decade review, shaped by the objectives stated in the IIS, has been conducted to take stock of progress achieved and to determine strategies and directions for the second half of the DESD (2009-2014). The IIS identifies monitoring and evaluation as part of the implementation strategy. As the lead agency, UNESCO was given the responsibility of establishing mechanisms for monitoring and evaluation as well as for reporting on progress to the UN General Assembly in 2010 and to the UNESCO Executive Board at the end of each Biennium.

The Monitoring and Evaluation Expert Group (MEEG)

In 2007, UNESCO established a DESD Monitoring and Evaluation Expert Group (MEEG) to advise on appropriate monitoring mechanisms for assessing:

1) **global progress in the implementation of the DESD; and**
2) **UNESCO's own contribution to the implementation of the DESD.**

Following the advice of the MEEG, a Global Monitoring and Evaluation Framework (GMEF)[14] was developed which elaborated a rationale, identified methods and provided structures for the data collection, analysis and reporting processes for the DESD at the global level.

The purpose of this mid-Decade review is not to rank, label or judge countries or regions against a universal ESD standard but rather to highlight the provisions and structures that have been put in place around the world for the development of ESD.

[14]The GMEF can be found at: http://portal.unesco.org/education/en/files/56743/12254714175GMEFoperationalfinal.pdf/GMEFoperationalfinal.pdf

The review also identifies the obstacles that countries encountered in the creation of such provisions and structures and suggests ways to overcome them. In doing so, it seeks to strike a balance between what might be called the universal (attempts to generate general guidelines that can be used in contexts other than the ones in which they were generated) and the contextual (attempts to do justice to local realities, histories and political structures). The latter also recognizes that the various countries and sub-regions around the world each have their own unique challenges, perspectives and histories that all affect the way ESD is perceived and implemented.

The recommendations put forward in the final 'Ways Forward' chapter are, much in the spirit of ESD as described above. The recommendations are intended to be stepping stones that may inform or guide local development of ESD in the years to come and not as prescriptions. Altogether, 97 countries from all regions of the world contributed to this mid-Decade review. However, this review also includes examples from countries that did not contribute directly to the M&E process as outlined in the GMEF (Chapter 1), thereby showing that ESD is also an educational field in progress in many of those countries as well.

Chapter 1 **Reviewing a Decade in progress**

‘Not everything that counts can be measured. Not everything that can be measured counts.’

(Albert Einstein)

Reviewing a UN Decade in progress is highly complex when considering the geographical scope (the globe), the time-frame (10 years), its ambition to affect multiple levels of governance and to bring in multiple stakeholders and marginalized groups and voices in society and, finally, the different meanings attributed to its focus: Education for Sustainable Development (ESD).

There is no doubt that across the globe people are engaged in forms of ESD, sometimes in the name of ESD, sometimes in the name of Environmental Education (EE) or EE for SD (EESD) or in the name of another related existential concern. It is quite complicated and perhaps impossible to prove that this engagement is *in spite of* or *because of* the DESD. The point of this review, however, is not to provide such evidence but rather to get a better sense of 1) the contexts in which regions and countries around the world are trying to develop ESD and ESD-related forms of education and learning, 2) whether the conditions (structures, policies, coordination, budgets, etc.) are favourable for such development and 3) to identify strategies and actions that could lead to an improvement of these conditions during the remainder of the Decade, particularly in those countries where they are considered unfavourable.

The existence of favourable conditions for the development of ESD in some countries could be the result of the DESD. In others, they might have emerged regardless of the DESD. From the UN perspective, it would obviously be useful to have more information on this aspect. This review will touch upon a range of mechanisms that have been put in place around the world that reflect strategies outlined in the DESD International Implementation Scheme (IIS). The DESD is not in and of itself an end but rather a means to promote, develop and implement ESD.

Finally, it should be recognized that in many instances practice is ahead of policy. This is to say that in many

parts of the world there is a lot of ESD activity in formal, informal and non-formal learning settings that are not or hardly supported by policies and structures put in place by governments. Since the 2009 DESD review focuses on contexts and structures of ESD these practices will not be featured here. Processes and learning for ESD will be the focus of the 2011 DESD review.

DESD Monitoring and Evaluation Process

The focus on contexts, provisions and structures in this review does imply that this report does *not* focus on the actual learning that takes place in schools, universities, communities and workplaces. This will be the focus of a second review of ESD in action.

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Mechanisms

In order to review the ways countries and regions around the world have responded to the challenge of ESD during the first four years of the DESD, four forms of inquiry were used:

1. **Questionnaire –** A questionnaire focussing on the contexts, structures and mechanisms currently in place to support ESD was administered at the country level. Questionnaire respondents were asked to engage a range of stakeholders actively in collecting data and responses. The information generated through the questionnaires was collated at the regional and sub-regional levels by the UNESCO Regional Bureaux for Education.

   Ninety-seven countries completed the questionnaires.[15]

2. **Complementary research –** Complementary research was conducted by reviewing existing reports, research articles on ESD and ESD implementation and by organizing regional ESD expert and stakeholder meetings to fill in information gaps in the questionnaire responses. This complementary research was also helpful in (a) identifying global issues; (b) capturing innovative practices; (c) assessing changes within and across the regions; and (d) capturing global trends.

3. **The Multi-stakeholder consultation process (MSCP) –** Stakeholders were involved in the monitoring and reporting process at a number of levels. At the national level, UNESCO National Commissions were asked to involve stakeholders in the completion of the questionnaire. At the regional level, UNESCO Regional Bureaux for Education and Cluster Offices were asked to involve relevant stakeholder groups in providing insights and validating the data collected. At the international level, eleven global stakeholder networks specializing in major ESD themes were consulted, of which seven provided input regarding achievements, challenges and lessons learned in implementing the DESD.

4. **UNESCO's Self-Assessment and Portfolio of Evidence –** As lead agency for the DESD, UNESCO has two related roles to play. The first is that of leader, to catalyze, coordinate and lend support to the global process. The second role is that of one of the implementers of the Decade, particularly to help create an enabling environment within the countries for the DESD. The data collected from this component consisted primarily of a self-evaluation aimed at assessing UNESCO's own contribution to the DESD.

Indicator areas

The Global Monitoring and Evaluation Framework (GMEF) is underpinned by a set of global indicators concerning contexts and structures, processes and learning and impacts and outcomes to provide the basis for assessing progress in ESD. Seven key areas regarding contexts and structures of ESD have been identified (Table 2) along with specific indicators for each area.

Area 1:	policy, regulatory and operational measures that support ESD
Area 2:	measures taken to promote SD through formal education
Area 3:	measures taken to equip educators with the competencies to include ESD in their teaching
Area 4:	measures taken to develop public awareness and understanding of SD through non-formal and informal learning
Area 6:	measures taken to promote research and development of ESD
Area 7:	measures taken to strengthen regional and international cooperation on ESD

Table 2 Seven key ESD indicator areas identified by the MEEG

[15]Please refer to the Annex for the map of countries that responded to the DESD M&E questionnaire.

The choice of indicators was informed by the objectives and global milestones identified in the DESD IIS and by regional DESD Monitoring and Evaluation (M&E) processes, such as the work on indicators by the UNECE Expert Group on Indicators for ESD[16] and the UNESCO IUCN Asia Pacific Indicators Project.[17]

The indicators are not definitive or static but are likely to evolve as the monitoring and evaluation process is implemented. The MEEG will review the list at the end of each reporting cycle and develop indicators in close consultation with UNESCO.

Data collation process

The UNESCO Regional Bureaux for Education played a key role in motivating and encouraging UNESCO National Commissions (the cooperating bodies set up by the Member States for the purpose of associating their governmental and non-governmental bodies with the work of the Organization) as well as various UN agencies to involve stakeholders from across sectors and from different levels of engagement when collating responses to the questionnaire.

The UNESCO Regional Bureaux for Education were provided with an electronic template to help organize and analyze the data collected. Each of the UNESCO regions wrote a Regional Synthesis Report based on this analysis.[18]

Complementary research was carried out by the Global Progress Report Coordinator, the UNESCO-DESD Secretariat and the Regional Complementary Research Teams (RCRTs) when it became clear that the results from the questionnaires did not provide all the necessary information.

Limitations of the Global Monitoring and Evaluation Framework[19]

The Global Monitoring and Evaluation Framework (GMEF) guides the DESD monitoring and evaluation process. It is important, however, to acknowledge the limitations of the GMEF.

a) The GMEF has been developed to assess implementation of the DESD. In reality, it is more likely to capture the changes occurring during the ten-year period marked by the DESD and not just initiatives developed under the label of the DESD. It will be difficult to determine which plans, policies and activities were developed specifically for the DESD and which have gained or gathered momentum because of the existence of the DESD.

b) Resource and time constraints meant that it was difficult to reach everyone involved in DESD or ESD activities.

c) The lack of resources inevitably meant that only information that was available was compiled and analyzed. This limited the depth and reach of the review. The GMEF recognizes that at this early stage in the implementation process of the Decade, most of the information available relates to inputs, structures and investments rather than outcomes, impacts or performance.

d) Prior academic and practical knowledge of ESD indicators is limited. The GMEF was developed on the basis of the experience related to the development of indicators in the UNECE and Asia-Pacific regions. However, these experiences are recent and in their early stages of implementation. More research, experiences and dialogue are needed.

e) Using a universal template and questionnaire has advantages not only in creating uniformity in reporting, but also in making sure that all countries report on the same ESD components and issues. From the data provided, however, it is clear that not all concepts included in the template are understood in the same way. Even within the same country, organizations or officials have different understandings of concepts such as ESD and EE or concepts such as the 'whole school' approach to sustainability.

Finally, during the process of developing this mid-Decade review it became clear that an impressive pool of (international, regional) policy documents, case studies, networks and studies is available. Some of them have been supported by UN agencies that are involved in DESD while others emerged without such support. This mid-Decade review looks for trends at a higher level of abstraction but does attempt to capture a fraction of this richness by weaving in vignettes of countries, cases, networks and institutions.

Even though much effort went into encouraging the designated country representatives to complete the questionnaires based on a consultative process involving multiple ESD stakeholders, there are regional differences with regard to the response rate and the amount of interaction that took place preceding the actual completion of the questionnaires. Ideally, the questionnaires should have been completed through a multi-stakeholder

[16]Please refer to: http://www.unece.org/env/esd/welcome.htm.

[17]The Asia-Pacific Guidelines for the Development of National ESD Indicators covers data collection, reporting mechanisms and examples of ESD indicators. The report can be downloaded at: http://www2.unescobkk.org/elib/publications/121/Guidelines.pdf.

[18]Since there is no Regional Bureau for Education in the regions of Europe and North America, the responsibility of developing a regional synthesis report was entrusted to an external consultant who worked closely with the DESD Secretariat and the Global Report Coordinator. Apart from the data generated from the questionnaires sent out by UNESCO, the consultant also used data that were available through the monitoring and evaluation of the implementation of the UNECE Strategy for ESD (see: http://www.unece.org/env/esd/).

[19]Most of these limitations have been identified by the MEEG. The GMEF is available at : http://portal.unesco.org/education/en/files/56743/12254714175GMEFoperationalfinal.pdf/GMEFoperationalfinal.pdf

consultation process involving those who are most familiar with the different indicator areas in a particular country.

A key point of the questionnaire designed by the MEEG was to start a series of national consultations involving a wide range of stakeholders. Although there are good examples of this from several countries and regions (Box 1), in most cases such an elaborate consultation did not take place due to time pressures, a lack of experience in multi-stakeholder consultation processes, unfamiliarity and/or poor communication with some of the stakeholders. Box 1 provides an example of a country that was able to conduct a multi-stakeholder process along the lines intended by the MEEG.

In the framework of the DESD Global Monitoring and Evaluation process, the Swiss National Commission for UNESCO launched a consultation process at the national level. This initiative was aimed at engaging all stakeholders in the M&E exercise in order to get a balanced view of what is happening in the domain of ESD in the country. The national consultation process was carried out in three steps:

1. A list of stakeholders was drawn up. The UNESCO DESD M&E questionnaire was sent out to them with the request that it should be distributed to as many people through their respective networks.
2. The UNESCO DESD M&E questionnaire and accompanying documents like the glossary of terms were translated into three official languages of Switzerland. In addition, explanations were provided so that the M&E process could be understood in terms of the arrangements that the federal system obliges (the main responsibility for education lies with the cantons. There is no national ministry of education).
3. An analytical synthesis was drawn up on the basis of the completed questionnaires. This document was used as a basis for discussions during a day-long meeting. The meeting provided the DESD M&E questionnaire respondents with the platform to discuss issues in a participatory way and highlight areas of ESD, in the Swiss context, that need attention.

The multi-stakeholder participatory approach that the UNESCO National Commission for Switzerland adopted to complete the questionnaire has resulted in the generation of a balanced picture of ESD in the country.

Box 1. UNESCO National Commission of Switzerland: engaging with all for the DESD M&E process (Source: Europe & North America Synthesis Report)

Conclusion

Despite the complexity of monitoring and evaluating the functioning of the DESD in terms of structures and provisions it seeks to put in place around the world, a monitoring and evaluation process has been designed that is not so much evidence-based as learning-based. This process results in a review that uses a mixture of narratives and other data from questionnaires and interviews, as well as key inputs from the many UN reports that have been written on ESD and ESD-related fields since the start of the DESD in 2005.

This process also includes several rounds of feedback to earlier draft versions of the mid-term report from some key DESD actors like the UNESCO-appointed MEEG, the DESD Reference Group, the four UNESCO Regional Bureaux and the DESD Secretariat at UNESCO Headquarters, Paris. The next chapters will share the highlights of the results of this iterative process.

Chapter 2 Regional contexts for implementing the DESD

Regional contexts and strategies

Although both the challenge of sustainable development and the call for ESD is worldwide, there is a general understanding that the local realities and manifestations of 'unsustainability' are often quite different and deeply rooted in local histories and political and cultural traditions. Therefore, regional strategies for the development and implementation of ESD have been developed in each of the UN-defined regions: sub-Saharan Africa, the Arab States, Europe and North America, Asia and the Pacific and, Latin America and the Caribbean.

Using these regional strategies as well as the input from the regional synthesis reports that were written for this mid-Decade review, brief sketches are provided of the regional contexts in which ESD development and implementation take place. Even though these sketches only begin to communicate the huge diversity that exists within each of these regions, they are important in illustrating that the challenges of SD and the type of ESD responses they demand vary across the globe. This chapter aims only to highlight some ESD issues or challenges that stand out in the region. The chapters hereafter provide much more detail about ESD meanings, provisions, obstacles and ways forward in a more generic or trans-regional way.

Challenges to Sustainable Development in Sub-Saharan Africa[20]

The DESD in Africa cannot be understood in isolation from its contribution to the achievement of the Millennium Development Goals and to the alleviation of poverty.

[20]The draft Strategy of Education for Sustainable Development in Sub-Saharan Africa can be found at: www.dakar.unesco.org/news/pdf07/observatory_strat.pdf.

Other key challenges that need to be considered when interpreting ESD progress in Africa include the following:

- the need to recognize that human development is closely linked to longevity (health and well-being), knowledge (education) and living standards (income). Overall Africa has not been progressing well on any of these three critical dimensions of achieving a better quality of life.
- the negative impact of the HIV & AIDS pandemic, the changing social structures where many families are now being headed by grandparents and children, the vulnerability to climate change and the lack of food security continue to pose a threat to populations in African countries. Moreover, the institutional capacity to face these challenges is quite limited.
- the majority of Africans live in rural areas and are heavily dependent on the use of natural resources for sustaining their livelihoods. Loss and degradation of these resources reduces livelihood options and options for sustainable development.
- major capacity gaps exist for the achievement of sustainable development. This capacity deficit presents a significant obstacle to achieving sustainable development in Africa.

In Africa, the re-orientation of education towards sustainable development requires the strengthening and boosting of the *quality* and *efficiency* of human capacity development initiatives (education, training, community development and public awareness programmes) to address governance efficacy and the relevance of education to development and poverty alleviation objectives. Hence, EFA initiatives need to focus not only on *quantity* (getting as many children to school as possible) but also on *quality,* as going to school without access to quality education means very little. ESD has the potential to contribute significantly to the *quality* of educational programmes and this contribution needs to be proactively explored in the DESD in Africa.

Region-specific ESD-related issues

The potential contributions to enhancing the quality of education and, ultimately the quality of life in Africa are enormous as ESD can help address a number of key needs in the region, including by:

- developing greater synergies between school and community (e.g. education in schools and literacy initiatives amongst adults; education in schools and employment opportunities for youth, etc.) to address sustainable development goals.
- re-aligning education in Africa with African culture, knowledge and contexts. African countries are still in the process of defining education systems that are both locally and globally appropriate and relevant.
- stimulating creative thinking in society that can produce new economic models to benefit more people and new social responses to changes in culture, social structures and lifestyles that help people to protect their natural resources for current and future generations. This poses many new challenges for education systems, as, in Africa, many are still guided by either colonial histories or globalization trajectories.
- critically appraising and addressing the 'real underlying causes' of unsustainable development in Africa (e.g. colonial legacies, cultural beliefs and practices, inappropriate development models, social inequality, wealth accumulation for the benefit of the elite at the expense of the majority, corruption and lack of delivery associated with the 'trickle down' approach to wealth-sharing, inequalities embedded in trade structures and so on).
- listening to diverse 'voices' in establishing the agenda for the ESD in Africa including those of policy-makers, educators, community members, learners, etc. These provide a fuller picture of how ESD can be conceptualized and implemented. ESD should not be only policy-driven.
- expanding and building leadership for implementing ESD in Africa.
- building on what is already going on in the other UN initiatives like EFA , the UNLD and the MDGs and to use the EFA process to bring out the ESD focus, values and practice. Education in Africa has been heavily influenced by international programmes which have often been difficult to implement due to local resource constraints. ESD needs to be understood as 'another' international initiative that has to find its place amongst other competing priorities such as HIV & AIDS education, EFA, literacy, peace-building and human rights. The integrative possibilities of ESD therefore need to be nurtured and strengthened.

The importance of (sub) regional networking, both formally and informally, is stressed in the two African sub-regional synthesis reports.[21] One example of such cooperation is the Southern African Development Community (SADC) which is a regional economic cooperation initiative. The networking and collaboration taking place within SADC has revealed the following critical insights for the region affecting the potential of ESD in African contexts:

- The inter-linkages between poverty, environmental degradation, increased health risk and food security need to be understood in the context of educational

[21]Two African sub-regional synthesis reports – one from east & southern Africa and the other west & central Africa, were developed in the framework of the DESD 2009 M&E process. These reports have informed the development of the DESD Global Report for 2009. The two African sub-regional reports are available at:

http://portal.unesco.org/education/en/ev.php-URL_ID=27234&URL_DO=DO_TOPIC&URL_SECTION=201.html.

reform efforts and curriculum change processes to ensure appropriate educational responses.

- ESD provides an integrating and coherent focus for education.
- The need to strengthen existing debates and discussions around sustainable development issues in Southern Africa. ESD can help mobilize people's participation in sustainable development and problem-solving.
- Insufficient policy synergy to strengthen the implementation of ESD in Southern Africa.
- The presence of a wide array of partnerships, partnership networks and partnership approaches to facilitate ESD in Southern Africa.
- Significant presence in Southern Africa of a rich variety of ESD-related themes and practices like indigenous and local knowledge, values and ethics, critical and creative thinking, situated and active learning.
- Inadequate ESD-related research and capacities.
- ESD could bring focus and relevance to mainstream education, training and public awareness initiatives.

Another strongly emerging network in Africa is MESA. MESA is a DESD-and UNEP-supported initiative that stands for Mainstreaming Environment and Sustainability in African Universities Partnership. The overall aim of MESA is to enhance the quality and policy relevance of university education in Africa in the context of sustainable development and the achievement of the Millennium Development Goals.

According to the sub-regional report from Southern and East Africa, ESD has untapped potential to offer solutions to the challenges cited above.

Challenges to Sustainable Development in the Asia-Pacific region[22]

Although all regions are impressive in terms of size, population and diversity, the Asia-Pacific region leads all others on all three dimensions. The region includes five sub-regions, all impressive in size and diversity which combined holds more than half of the world's population. The following issues need to be considered when interpreting ESD progress in the region[23]-

- Ethnic, religious and linguistic barriers resulting in migration, lack of citizenship, human rights issues and conflict;
- Traditional concepts and beliefs, particularly with regard to girls' education and life skills education;
- Loss of indigenous and traditional knowledge;
- The geographic size of larger countries in the region. Large populations and diverse languages create difficulties in networking , transportation and communication and limited delivery of services;
- Rural and remote areas, in particular small island nations, are often faced with marginalized populations and more expensive delivery of services.
- Lack of inter-ministerial coordination and cooperation which can result in limited or uncoordinated political leadership on key issues. Many countries require political support to implement new programmes, concepts and ideas;
- Decentralized management and decision-making between the national and provincial levels in larger countries which can result in variability in the levels of development;
- Lack of financing for key projects, corruption, security and armed conflict.
- Shortage of donor support for formal and non-formal education to overcome issues associated with underpaid or under-qualified teachers and trainers;
- Gender disparity in education, including disparities among teachers and the management levels in primary, secondary and higher education;
- Universal primary education and universal completion hindered by lack of efficiency, quality and inclusiveness in the education system;
- Exclusion of most young children from Early Childhood Care and Education (ECCE)[24] unless efforts are undertaken to provide adequate financial resources to enable all children to participate;
- Obstacles to quality education and training for disadvantaged groups such as:

  – street children and working children;

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[22]The working paper on the Asia-Pacific Regional Strategy for ESD can be found at: http://portal.unesco.org/ci/wsis/tunis/stand/content/a/UNESCOs%20ICT%20in%20Education%20Programme%20in%20the%20Asia-Pacific%20region/edu%20sustainable%20development.pdf

[23]Data from global DESD questionnaire responses was supplemented with information from Asia-Pacific sub regional EFA Mid-Decade Assessment reports, Asia-Pacific ESD Monitoring Country Updates and 2008 Asia-Pacific Sub-regional ESD Consultations.

[24]UNESCO considers Early Childhood Care and Education (ECCE) an integral part of basic education and the first and essential step in achieving the goals of Education for All. ECCE generally covers the age group of 0 to 8 years old, in other words, from birth to the first few years of primary education. In recognizing the multidimensionality of child development, quality ECCE provisions use a holistic approach, integrating health, nutrition and education in programmes for young children from the very beginning and at all stages

(Source: www.unescobkk.org/education/appeal/programme-themes/ecce/)

  - religious, linguistic and ethnic minorities as well as indigenous peoples;
  - persons/children with disabilities or with special needs;
  - children of very poor families;
  - population in remote areas; and
  - children in more difficult circumstances (i.e., places affected by armed conflict, disasters and calamities)
- Low adult (15 and over) literacy rates, especially among women;
- Limited training and professional development in a variety of contexts including industry, formal education and the community;
- Insufficient cooperation and coordination between different government departments and ministries and the private sector to synergize skills training programmes that better match the needs of trainees and the demands of the labour market;
- Lack of effective initiatives for adolescents and youth to develop their life and livelihood skills, including adolescent and reproductive health.
- An increasing number of recurring natural disasters (tsunamis, earthquakes, cyclones, floods, droughts, volcanic eruptions) in the Asia-Pacific region which create temporary and prolonged disruptions to infrastructure, the surrounding environment, socio-economic structures and ways of life.

Many of these challenges were re-emphasized as thematic sustainable development priorities by UNESCO Member States during the 2008 Asia-Pacific Sub-regional ESD Consultations, sponsored by the Japanese Funds in Trust (Table 3).

SD Pillar	Thematic SD priorities
Social	Good Governance, Gender Equity, Health and HIV & AIDS, Reproductive Health, Peace/Conflict, Human Rights, Access to Education, Human Trafficking, Drug Addiction
Cultural	Cultural Heritage, Cultural Preservation, Indigenous Knowledge
Economic	Urbanization, Poverty, Food Security, Rural Development
Environmental	Climate change, Fresh Water, Energy/ Natural resources, Air Pollution, Desertification, Environmental Conservation, Biodiversity, Natural Disasters

Table 3 Thematic SD priorities in the Asia-Pacific Region (Source: UNESCO Bangkok Regional Office)

Region-specific ESD-related issues

Based on regional consultation workshops, ESD in the Asia-Pacific region is now at a point where countries are beginning to engage in clear strategies for ESD – moving from ESD in theory to practice – by identifying clear thematic national SD priorities, linking priorities to existing aims and objectives for education and learning in current policies, building inter-ministerial support, discussing financing and engaging with the right people at the national level. These recent developments are heading towards the incorporation or linking of ESD to national development plans, national sustainable development strategies and/or poverty reduction strategies to increase the importance of the role of ESD.

ESD is developed most in the region in formal education settings. There is little government engagement in the non-formal and informal education settings. As a result, there is insufficient government funding for non-formal and informal ESD-awareness raising programmes and initiatives. Furthermore, there is little attention given to the development of ESD materials and tools for groups that fall under the category of non-formal and informal education.

There is an emphasis on the promotion of regional cooperation. For example, UNESCO Bangkok and several UN agencies discuss the DESD in the UN DESD Interagency Steering Committee of the Asia-Pacific. The Committee updates members on the implementation of each other's past events and promotes joint planning and alignment of activities. ESD requires the full support of the government to move forward. As ESD is a cross-sectoral initiative, many government ministries and departments, in addition to NGOs and IGOs, are involved in ESD-related activities. It is not only difficult to coordinate ESD activities among the various ministries, departments and sectors, but it is also challenging to identify ESD in existing initiatives and philosophies.

Challenges to Sustainable Development in the Arab States[25]

Since the Rio Summit, major accomplishments have been made in the Arab Region towards the achievement of sustainable development, particularly in the areas of education, health and improved standards of living. However, a number of SD challenges-which fall into three interrelated categories - economic, social and environmental - continue to face Arab countries. Examples include: the absence of peace and security, the continuation of foreign occupation in some Arab lands, poverty, illiteracy, population growth, debt burdens for some countries, aridity and related water scarcity and

[25]The Regional Guiding Framework of ESD in the Arab Region can be found at: www.unesco.org/beirut/fileadmin/FIELD/BEIRUT/PDF/ESD_Regional_Framework_EN_May08__2_.pdf.

agricultural problems and the limited capabilities of academic and research centres.[26] Broader issues include:

- Poverty, unemployment and the loss of intellectual capacity;
- Limited possibilities for women to participate in non-domestic economic activity;
- Loss of land-productivity as a result of desertification, agriculture and water scarcity (in addition to challenges at the environmental level);
- Scarcity of resources in general and the need to develop and rationalize their use.
- Political insecurity and demographic instability;
- Lack of possibilities for women and youth to participate in social life;
- Lack of health awareness especially as regards infectious and communicable diseases such as HIV and AIDS.
- Lack of environmental awareness and lack of environmental conservation;
- Increase of environmental pollution rates and environmental deterioration in all its forms;
- Biodiversity conservation;
- Unsustainable consumption patterns enhancing environmental degradation.

The above challenges and their interrelatedness determine the most appropriate course for ESD although not all challenges affect each country in the same way or with the same urgency.

At the same time, the region has a number of *governance challenges* that need to be addressed as well. Such challenges include:

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- Lack of sustainable forms of governance (new management and organizational patterns and methods in private and public sectors);
- Many Arab countries have recently completed the development of policies, programmes and practices in the education sector which is a major challenge for ESD/DESD as it is difficult for citizens to accept the idea of amending policies after they have been implemented.
- Regional and sub-regional cooperation constitutes another major challenge for ESD as it has no history in the region.

The region is also confronted with a number of *education challenges* including:

- The difficulties in reaching full participation of all children and youth in the present education systems, which negatively impacts literacy levels;
- The difficulties in providing the necessary resources, human in particular, for the development and implementation of high quality education;
- The lack of relevant, culturally appropriate educational materials (brochures, documents, activities, scientific research and studies).

Region-specific ESD-related issues

The fact that almost all countries in the region responded to the mid-Decade review shows that ESD features on today's political agenda in the Arab Region. However, the high response level does not necessarily mean that ESD is currently in implementation in all the countries that participated. The ESD regional strategy for the Arab states identifies a number of challenges for ESD implementation:

- understanding the broad and inclusive concept of education for sustainable development and its inter-linkages with a number of other cross-cutting themes and initiatives so that it can be integrated into school curricula, educational materials and activities;
- integrating the values and traditions of the Arab States in the planning and implementation of ESD. Presently these values and traditions are not adequately used to inform the development of ESD curricula and teaching materials;
- the provision of the necessary funding and training and the promotion of the principle of equal partnership;
- the participation of international organizations and bodies in ESD development and implementation will accelerate cooperation;
- wars and conflicts are a burden on some countries of the Region and constitute a challenge not only for ESD but also for development itself and for the sustainability of large segments of the population.

[26]Source: www.un.org/esa/sustdev/partnerships/activities_initiate/101202_sd_initiative_arab_region.pdf.

The Regional Synthesis Report for the Arab States[27] emphasizes the environmental component of ESD. In addition, ESD has a stronger presence in formal education than in non-formal and informal education. The role of NGOs within ESD/DESD is still not well defined in the region or understood by the general public. Most activities during the first few years of the DESD have focussed on government officials and institutions that are associated with formal education institutions (schools, ministries of education and higher education, universities). An important observation in the Regional Synthesis Report for the Arab States is that policy-makers, administrators and teachers need to be given more space to make changes, to experiment and to take risks to accomplish new educational and sustainability goals.

Challenges to Sustainable Development in Europe and North America[28]

The Europe and North America region encompasses countries with a rich cultural diversity and with different socio-economic and political conditions. The success of sustainable development (SD) depends to a great extent on changing lifestyles and patterns of consumption and production, respecting at the same time the needs of countries where poverty alleviation is still a major concern. The region has both preconditions and needs for the development and implementation of ESD, in part because both SD and ESD are often seen as 'Western concepts'.

Key themes of SD in the region include among other things poverty alleviation, citizenship, peace, ethics, responsibility in local and global contexts, democracy and governance, justice, security, human rights, health, gender equity, cultural diversity, rural and urban development, economy, production and consumption patterns, corporate social responsibility, environmental protection, climate change, prevention and adaptation, natural resource management, biological and landscape diversity. ESD themes will no doubt vary from country to country in the future. Traditionally, the region has focussed on nature, ecology and the environment rather than the social and economic dimensions of SD and this will need to be addressed through ESD as well.

Most countries in the region have established education systems employing professional educators, ensured access to basic education and granted equal rights to education for all, achieved high levels of literacy, developed a scientific potential and provided for the participation of civil society. Nevertheless, there are still important inequities in this respect within the region. For instance, in South-Eastern Europe (SEE) and Eastern Europe, the Caucasus and Central Asia (EECCA) the poor quality of education for children living in rural areas due to a lack of financial and human resources remains an issue. Thus, providing capacity-building, financial assistance and support to education, research and public awareness programmes on SD in countries with economies in transition is recognized as an important issue by many governments, NGOs, CSOs and donors. The following key actions have been identified: strengthening existing regional and sub-regional alliances and networks working on ESD and encouraging twinning programmes, bilateral cooperation and partnerships, using existing international legally binding instruments such as the Aarhus Convention[29] and other relevant agreements.

Region-specific ESD-related issues

The United Nations Economic Commission for Europe (UNECE) Strategy for ESD[30] that was adopted in March 2005 in Vilnius, Lithuania, by the High-level Meeting of Environment and Education Ministries not only places ESD high on the political agenda but is also the driving force for creating structures and provisions for ESD in the region. The Vilnius Strategy serves as a flexible framework for the countries of the European and North American regions as it recognizes that implementation of ESD is driven by countries' own priorities and initiatives addressing their specific needs and circumstances. The Strategy outlines a range of objectives underlying the regional implementation of ESD (e.g. ensuring that policies support ESD, promoting SD through all forms of learning, equipping the education sector with the competences to engage in ESD, developing ESD tools and materials, promoting research and development of ESD, fostering the use of indigenous knowledge and strengthening cooperation on ESD in the UNECE region). Many of these objectives are shared with those outlined in other regional strategies (Box 2).

[27]The Regional Synthesis Report for the Arab States is available at: http://portal.unesco.org/education/en/ev.php-URL_ID=27234&URL_DO=DO_TOPIC&URL_SECTION=201.html.

[28]The countries of Europe and North America, as well as of Caucasus and Central Asia (the UNECE region) adopted the UNECE Strategy for ESD at the High-level Meeting of Environment and Education Ministries (Vilnius, March 2005). The Strategy can be found at: http://www.unece.org/env/esd/Strategy&Framework.htm.

[29]The Aarhus Convention is a new kind of environmental agreement which links environmental rights and human rights and acknowledges that we owe an obligation to future generations. The convention can be found via: www.unece.org/env/pp/.

[30]For more details on the Vilnius Strategy for ESD, please visit, http://www.unece.org/env/esd/Strategy&Framework.htm.

ESD requires multi-stakeholder cooperation and partnership. The main actors include governments and local authorities, the education and scientific sectors, the health sector, the private sector, industry, transport and agriculture, trade and labour unions, the mass media, non-governmental organizations, various communities, indigenous peoples and international organizations.

ESD involves initiatives for developing a culture of mutual respect in communication and decision-making, shifting the focus away from solely transmitting information towards facilitating participatory learning. ESD should therefore be recognized for its contribution to interactive and integrated policy and decision-making. The role of ESD in developing and enhancing participatory democracy should also be considered, in particular as a contribution to resolving conflicts in society and achieving justice, including through Local Agenda 21.

Box 2 Examples of UNECE ESD strategy principles[31]

The strategy outlines a wide range of implications for education when translating these principles into practice. One of those highlights recognizes mass media as a powerful force in guiding consumer choices and lifestyles, especially for children and young people. According to the strategy, the challenge here is to mobilize this know-how and these distribution channels to pass reliable information and key messages on SD-related issues. In implementing the strategy as a whole, much emphasis is placed on national governments taking a leading role, with the active involvement of all ESD and SD stakeholders.

The importance of (sub) regional networking in advancing ESD in the region is emphasized as well. The region has a wealth of experience in international cooperation in education, especially in higher education. The strategy notes that a number of national and sub-regional education networks, working groups, associations of universities, programmes and partnerships have started working on the development of multidisciplinary forms of education to devise solutions to the problems linked to SD. The strategy notes that special emphasis should be given to countries in South-Eastern Europe (SEE) and Eastern Europe, the Caucasus and Central Asia (EECCA) in solving their main problems in EE and in ESD. Their problems include a lack of adequate instruction materials, the inefficient use of the capacity of higher education and research institutions, a shortage of skilled educators and insufficient awareness-raising, as well as a lack of interdepartmental and multi-stakeholder cooperation on ESD.

However, there are still other challenges to be met in order to implement ESD effectively, partly because SD and ESD seem to require a rethinking of the principles upon which these firmly rooted education systems are based. For instance, the current education systems are ill-prepared to address the interdisciplinary and holistic nature of ESD. A key challenge in the region is lack of competences in ESD, in particular in the education sector, which was recognized as a persistent bottleneck in advancing ESD by Ministers of Education and of the Environment in Belgrade in 2007.[32] Other challenges are the absence of an agreed definition for ESD, confusion about understanding the difference between environmental education and ESD, institutional, legislative and policy frameworks requiring adaptation to the needs of ESD and the lack of ESD teaching tools and research. There is also a need to strengthen the involvement of civil society in governance at multiple levels (e.g., school, community, region, country).

Challenges to Sustainable Development in Latin America and the Caribbean[33]

The Latin America and the Caribbean region encompasses over 40 very diverse countries, ranging from mid-income countries such as Mexico and Chile, to least developed countries such as Haiti, from Small Island States to countries with vast territories such as Brazil and Argentina. The key SD challenges vary accordingly, but a few general observations can be made.

Despite a favourable economic development, progress in reducing poverty is too slow. In 2001, 24.5 per cent of the region's population was living in poverty[34] according to World Bank data and it is estimated that in 2006 more than 20 per cent of the population was living in poverty. Income disparities in Latin America are greater than anywhere else in the world, leading to inequity with regard to access and quality provision of services such as health, education, electricity and drinking water. Many groups within society and particularly indigenous people and women are affected by this. Violence and crime continue to grow, especially in the cities, primarily due to social inequity.

The region's eco-systems are of global importance. The region includes five of the world's ten most bio-diverse countries – Brazil, Colombia, Ecuador, Mexico and Peru – as well as the single most biologically diverse area in the world – the eastern slope of the Andes. Large varieties of flora and fauna thrive in these regions and have an important role to play in the regulation of the global climate. Today, Latin American biodiversity is under severe

[31]Source: www.unece.org/env/esd/Strategy&Framework.htm

[32]A high-level segment on ESD was organized during the Sixth Ministerial Conference "Environment for Europe", Belgrade, October 2007 (http://www.unece.org/env/esd/belgrade.htm).

[33]The LAC Regional ESD Strategy can be found (in Spanish) at: http://www.oei.es/decada/portadas/estrategiaregional.htm

[34]The World Bank data on poverty can be accessed via PovertyNet. PovertyNet provides an introduction to key issues as well as in-depth information on poverty measurement, monitoring, analysis and on poverty reduction strategies for researchers and practitioners. PovertyNet can be found via: www.worldbank.org/html/extdr/thematic.htm

threat, as these five countries are also among the fifteen countries in the world whose fauna is most threatened by potential extinction.

The problems of global climate change and the threat to biodiversity are considerably exacerbated by the lack of protection of tropical forests. This makes the region even more vulnerable to extreme climate phenomena such as cyclones, floods and droughts. Small Islands in the Caribbean are furthermore threatened by rising sea-levels.

The production of bio-fuels in the Latin America and the Caribbean region is both an opportunity and a threat. On the one hand, bio-fuels can help protect the climate and create new income opportunities in the agricultural sector but, on the other hand, it may lead to further clearing of the remaining forest areas and contribute to rising prices of staple foods.

Region-specific ESD-related issues

At the strategy-building conference "Building an Education for Sustainable Development in Latin America and the Caribbean," held in San José, Costa Rica in 2006,[35] UNESCO and the Earth Charter[36] together stressed the need for the development of a regional strategy for the DESD for the Latin America and the Caribbean (LAC) region. The priority actions identified are as follows:

- Involve actors responsible for political, technical and administrative decisions in diverse spheres of government, legislation, business and other organizations, in conjunction with NGOs, networks and social movements.
- Call upon specialists from the educational, scientific, technological and professional communities to actively participate. These also include representatives of traditional knowledge and technologies.
- Involve those people who, because of the position they occupy, can act as barriers or drivers of processes related to the promotion of ESD, such as leaders of syndicates, communities, civil society organizations, religious organizations, communicators and journalists, coordinators of networks, coalitions and social movements.
- Although all members of society are to benefit from the actions undertaken during the DESD, particular importance is given to vulnerable sectors including children, youth, the elderly, indigenous populations and other excluded groups.

The LAC Regional Strategy acknowledges that the concept of sustainability has a potential to integrate and create synergies between diverse educational themes and other United Nations educational action frameworks that have been important in the region, namely, environmental, inter-cultural, peace, human rights, poverty alleviation, health, HIV & AIDS, literacy and gender equity education. Also, the agenda of the Dakar Education for All Action Framework and the Millennium Development Goals were considered as fundamental referents that need to be articulated through this strategy.

The strategy is based on a shared vision that by the end of the Decade, through public educational policies and active participation of educators and communicators, the LAC region would be in a position to contribute towards counteracting acute processes of environmental contamination and destruction and would have made substantial progress in the construction of just and sustainable societies.

With regards to the need to provide an adequate financial and resource base for the development of ESD in the region, the strategy considers that it is necessary to assure that all actors, including governments, international organizations, the private sector and civil society organizations, make a joint commitment. Therefore the strategy considers it is imperative to incorporate ESD as a priority issue in the agenda of the forums of ministers of education and environment in the LAC region. It also calls upon international organizations to promote the DESD in the region and specifically calls upon UNESCO and UNEP to jointly forge synergies with other multilateral agencies, such as WHO, FAO, UNICEF, UNDP and UNFPA as well as with bilateral agencies. The strategy also acknowledges the need to coordinate DESD activities with on-going regional programmes[37] such as the Regional Project of Education for Latin America and the Caribbean (PRELAC) and the Latin American and Caribbean Program for Environmental Education (PLACEA).

The strategy is seen as an excellent regional instrument to promote ESD in the LAC region. It is the first regional instrument designed especially for ESD (and not exclusively for environmental education). It was developed in a

[35] At this meeting a draft strategy document was created, which went through an electronic consultative process from November 2006 to February 2007. The final version was the product of this consultation. An executive summary of the results of the meeting can be found at: http://www.earthcharterinaction.org/ECI_LADESDMeeting_ExecSum.pdf

[36] "The Earth Charter Initiative" represents a diverse, global network of people, organizations and institutions that participate in promoting and implementing the values and principles of the Earth Charter. The Initiative is a broad-based, voluntary, civil society effort. Participants include leading international institutions, national governments and their agencies, university associations, non-government organizations and community-based groups, city governments, faith groups, schools and businesses – as well as thousands of individuals. For more information, please visit: http://www.earthcharterinaction.org/

[37] See for instance the Santo Domingo Declaration signed in 2009 at the Sixteenth Forum of Ministers of the Environment of Latin America and the Caribbean. This Forum of Ministers constitutes the main body for regional inter-governmental political consensus building on environmental issues and offers a space to agree on actions and reflect on the main challenges of the global and regional environmental agenda, in the context of sustainable development. The Declaration can be found at: http://www.global.net/iepala/gloobal/tematicas/crearpdf.

participatory and consultative process which made it possible to involve various stakeholders and several countries from the region and led to a certain degree of consensus-building on the topic of ESD.

Unfortunately, no information exists about follow up actions to the strategy and the progress of its implementation. It is therefore recommended that in the capacity of initiators of the strategy, the Earth Charter and UNESCO should reinforce their efforts to promote and implement the LAC regional strategy on ESD.

Conclusion

The regional sketches of sustainable development challenges show that each region has its own pressing issues to address and hurdles to overcome. At the same time we see common themes and systemic patterns that appear to transcend regions. It is no surprise that contextual differences exist from region to region but and this must be recognized as well, within these hugely diverse regions ESD will have different meanings, priorities and strategies. These differences are rooted in traditions in governance but also in the key existential challenges facing each region. Traditions in governance are likely to dictate whether a country adopts a more pedagogical orientation towards ESD emphasizing (social) learning, democracy and participation or a more instrumental one emphasizing changing people's behaviour in a predetermined or expert-led direction. As far as the focus of ESD is concerned from a thematic point of view, countries facing extreme poverty, HIV & AIDS and rapid loss of biodiversity, are likely to focus on the content of ESD differently from those who are facing high oil-dependency and advanced consumerism.

As far as the strategies for implementing and developing ESD are concerned, they rely on the extent to which countries can call upon regional and sub-regional networks of international organizations, NGOs and CSOs but also upon inter-governmental support mechanisms. Although contextual differences are likely to remain and, from a diversity point of view, should remain, there is still a need for inter-regional learning (South-South, North-South, North-North) as there are globalizing forces and systems that affect all regions that can be understood better when discussed inter-regionally. At the same time, such international dialogue allows for the sharing of lessons learned and creative solutions found in each region, sub-region and country as they attempt to develop and implement ESD.

All regions report that having a regional ESD strategy is useful, although it is not clear whether they are 'living strategies' in that they are actively used to stimulate action at the various policy-levels and are frequently re-visited, updated, re-confirmed, re-endorsed and shared by all relevant stakeholders.

Presently, it appears that the only strategies which are consistently monitored and fully endorsed by countries in the regions are the UNECE ESD Strategy and, to some extent, the regional ESD strategy for the Asia-Pacific.

Chapter 3 **Meanings of ESD**

Despite the many reports on ESD prompted by the Decade, its precise meaning continues to be the subject of worldwide debate.

The regional synthesis reports that served as input for this mid-Decade review provide a variety of ESD definitions which share common elements but are subtly different when addressing larger regional issues (see Chapter 2). At the beginning of the Decade, there was a greater perceived need to arrive at an agreed definition whereas now there appears more room for localization and contextualization. To this end, national and local debates are seen as crucial to develop the meaning of ESD.

These differences are important in ensuring that ESD develops in ways that are locally relevant and culturally appropriate. This means it is not necessary to seek consensus over the meaning of ESD but, rather, seek consensus around a range of key principles covering the scope, purpose and practice of ESD.

Commonalities and tensions

A number of such principles may be identified in the general descriptions of ESD (see also Introduction).

An example of such a description was provided in the DESD Monitoring & Evaluation (M&E) guidelines document

that accompanied the questionnaire which was used for this review (Box 3).

"Education for Sustainable Development (ESD) is a learning process (or approach to teaching) based on the ideals and principles that underlie sustainability and is concerned with all levels and types of education. ESD supports five fundamental types of learning to provide quality education and foster sustainable human development – learning to know, learning to be, learning to live together, learning to do and learning to transform oneself and society.

Education for Sustainable Development must be seen as a comprehensive package for quality education and learning within which key issues such as poverty reduction, sustainable livelihoods, climate change, gender equality, corporate social responsibility and protection of indigenous cultures, to name a few, are found. The holistic nature of ESD allows it to be a possible tool for the achievement of the Millennium Development Goals (MDGs) and the Education for All goals. Both of these initiatives have a set of objectives to be achieved by a certain time limit. ESD could be perceived as the vehicle for achieving those objectives"

Box 3 ESD description/definition as provided in the original DESD M&E guidelines document

The international stakeholder networks that contributed to the review (Asia/Pacific Cultural Centre for UNESCO,[38] Earth Charter International,[39] IUCN's Commission on Education & Communication,[40] DESD Inter-Agency Committee for the DESD, United Nations University-Institute of Advanced Studies (UNU-IAS),[41] Youth Action for Change,[42] and the CSD Education Caucus) each have a slightly different view of ESD but share common ground that it can be defined as:

- a transformative and reflective process that seeks to integrate values and perceptions of sustainability into not only education systems but one's everyday personal and professional life;
- a means of empowering people with new knowledge and skills to help resolve common issues that challenge global society's collective life now and in the future;
- a holistic approach to achieve economic and social justice and respect for all life;
- a means to improve the quality of basic education, to reorient existing educational programmes and to raise awareness.

When analyzing the various meanings of ESD provided in the Regional Synthesis reports, there is some convergence towards the definition provided in the guidelines document that accompanied the DESD M&E questionnaire (Box 3, p.37) albeit with a subtle but important difference in emphasis. Some emphasize the *SD* in ESD - stressing ecological, socio-cultural, economic sustainability both in time (present and future) and space (here and elsewhere) - and others emphasize the *E* in ESD - stressing new forms of learning, competence and skills development to create a new kind of citizen and a new kind of educational system. Those stressing sustainable development also appear to put more emphasis on changing people's behaviours and lifestyles in a scientifically agreed upon direction (see the example from China in Table 4) while those stressing education put more emphasis on developing the capacities, qualities or competencies people need in order to be able to actively, critically and meaningfully contribute to sustainable development (see the examples from Chile and Botswana in Table 4).

Country	Meaning of ESD
Chile	A fundamental part of citizenship education, an opportunity to satisfy human needs through a pedagogy that fosters the cultural transformation towards a sustainable society and which permits education to re-think itself and to work in favour of the democratization of knowledge, the collective construction of an ethic of human action which promotes the development of participatory and supportive educational communities.
Botswana	ESD is education that places emphasis on equipping learners and the public with skills that will sustain them in future. It involves the acquisition of knowledge, skills, right attitudes and values in such a way that learners will be able to use their environment productively and in a sustainable manner so as to improve the quality of their life and to become productive members of their society.
Arab Region	ESD contributes to "the acquisition and practice of knowledge, values and skills that ensure balance between the economic, social and environmental aspects of development and the observance of both individuals and society development and progress in life". (UNESCO-Beirut, Regional Guiding Framework of ESD for the Arab Region, 2008).
China	In accordance with common scientific understandings, ESD is viewed as a kind of education that develops values that support sustainable development, with the intention to help people learn relevant knowledge and values and to develop the right and healthy habits and lifestyle which will lead to sustainable development for the whole society (adapted from Asia-Pacific regional report).

Table 4 Meanings of ESD[43]

[38] www.accu.or.jp/en
[39] www.earthcharterinaction.org
[40] www.cec.wcln.org
[41] www.ias.unu.edu
[42] www.youthactionforchange.org
[43] The meanings of ESD have been elaborated in Regional Synthesis reports. The Regional synthesis reports are available at: http://portal.unesco.org/education/en/ev.phpURL_ID=27234&URL_DO=DO_TOPIC&URL_SECTION=201.html

Two pedagogical interpretations of ESD can be distinguished:

1) ESD as a means to transfer the 'appropriate' sets of knowledge, attitudes, values and behaviour; and
2) ESD as a means to develop people's capacities and opportunities to engage with sustainability issues so that they themselves can determine alternative ways of living. Where the emphasis is placed is likely to depend on the traditions and specificities regarding issues like governance and participation in a particular region or country. Although there is no hard evidence to support this claim, there is anecdotal evidence to suggest that there is more emphasis today on the E in ESD than there was at the beginning of the Decade.

In part, this shift could be due to increased realization of the complex nature of SD and the recognition that there is no 'one size fits all' for all regions and local contexts regarding it.

The emphasis on lifelong learning and capacity-building that we find in recent ESD documents such as UNEP's Mainstreaming Environment and Sustainability in African Universities Partnership report[44] and ENSI's workshop report Progress and Possibilities for the UN Decade of Education for Sustainable Development (DESD) in EU Member States,[45] seem to support this observation.

Many of the responding countries emphasize that ESD is values-driven and seeks to empower and enable people to participate in society and help them understand the complexity of finding a balanced approach that integrates socio-economic, ecological, cultural and ethical factors that jointly determine the sustainability of development. Key SD issues such as poverty alleviation, climate change or gender equality, are generally not mentioned in the definitions but instead the focus tends to be on the *types of learning* that can engage, enable and empower people. This is not to suggest that these SD issues are not important or are not identified but rather that the E in ESD is considered crucial. Table 5 below lists some key words frequently used in ESD definitions.

- Creation of awareness
- Local and global vision
- Responsibility (learn to be responsible)
- Learning to change
- Participation
- Lifelong learning
- Critical thinking
- Systemic approach and understanding complexity
- Decision-making
- Interdisciplinarity
- Problem-solving
- Satisfying the needs of the present without compromising future generations

Table 5 Frequently mentioned key words and sentences in ESD definitions (Source: Regional Synthesis Reports)

Anthropocentric/eco-centric

There are some differences in emphasis between countries and regions, although these need not apply to a region or country as a whole. In Latin America and the Caribbean, as well as in some parts of southern Africa, social transformation and the democratization of knowledge tend to be emphasized. There are also differences in what might be called the ethical vantage point with most taking on a more anthropocentric (or human-centred) perspective while some try to promote a more eco-centric interpretation of SD by frequent references to living in harmony with nature and to the rights of other species and the non-human world. Table 6 provides several descriptions from the Latin America and the Caribbean region.

Colombia	In line with the systemic character of the environment, environmental education should be considered as a process that allows the individual to understand the interdependence between himself/herself and the environment, based on the critical and reflective knowledge of his/her bio-physical, social, political, economic and cultural reality, so that the appropriation of this concrete reality generates in the student and his/her community attitudes that value and respect the environment.
	Refers to the learning processes that promote awareness on the inter-relations between human beings and between human beings and their environment, in search of improving the quality of life and to achieve the satisfaction of everybody's needs without compromising the satisfaction of the needs of future generations.
	Necessary global strategy that proposes indispensable changes in the ways we think, feel and act as human beings so that the economic, social, cultural and spiritual development is to the benefit of the entire human family while at the same time saving and preserving the Planet Earth as a home for all beings that inhabit it.

Table 6 Some ESD descriptions from the Latin America and Caribbean region (source: LAC Regional Synthesis Report)

[44]Environments and School Initiatives (ENSI) (2009) Progress and Possibilities for the UN Decade of Education for Sustainable Development (DESD) in EU Member States. ENSI workshop report on: International Conference on ESD in Bordeaux, France (27-29 October, 2008).

[45]The term 'adjectival educations' is applied to a host of principles and practices that emerged around the 1970s. It embraces environmental education, human rights education, development education, peace education, global education, futures education.

Relationship between ESD and other adjectival educations[46]

The framework of the DESD International Implementation Scheme[47] suggests that full-fledged ESD requires the integration of the three dimensions referred to earlier in this review:

- the *socio-cultural dimension* which refers to issues related to human rights, peace and human security, gender equality, cultural diversity and intercultural understanding, health, HIV & AIDS and new forms of governance;
- the *environmental dimension* which refers to issues related to natural resources (water, energy, agriculture, biodiversity),climate change, rural development, sustainable urbanization, disaster prevention and mitigation;

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- the *economic dimension* which refers to issues related to poverty reduction, corporate responsibility and accountability and re-orienting the market economy.

Since the start of the DESD, but also in the years leading up to it, many of these issues have been included in education taking place under the umbrella of ESD but also under the umbrella of other emerging 'adjectival' educations (e.g., peace education, global education, development education, AIDS education, citizenship education, intercultural education and holistic education and long-existing educations such as environmental education and health education). Generally speaking, the broader the interpretation of these 'single issue' educations, the more they resemble ESD as expressed in the IIS.

Although ESD can be seen as connected to the many emerging 'adjectival' educations mentioned earlier, the inter-relationship with environmental education (EE) is emphasized in nearly all regional reports. This is no surprise as in many countries around the world EE is firmly established, particularly in formal education systems. The simultaneous existence and development of EE and ESD has given rise in some countries to questions about the relationships between the two and the call for distinctions by some or for convergence by others. The resulting confusion or stalemate in some cases can hinder policy implementation. Also, it appears that in countries with a strong EE tradition, ESD tends to build upon EE structures and policies already in place, particularly in countries that have interpreted EE broadly to include social, economic and political dimensions. The quotation below illustrates this:

> … issues of development, survival, livelihoods, improved quality of education and improved quality of life and more sustainable living practices. It is perhaps for this reason that environmental educators in southern Africa have long been concerned with environmental education processes that are processes of social change (Lotz-Sisitka, 2004: 10).[48]

In countries where such a tradition is absent or weak at best, ESD and the DESD appear to have provided an opportunity to create new structures from scratch and a possibility to catch up with those countries that already had a strong EE tradition. When analyzing the regional synthesis reports and the regional strategies, one can find three different ways of viewing the relationship between EE and ESD which resemble some of the ones identified in the ESDebate held in 1999.[49] The way the relationship is perceived tends to be related to the historic role EE has played in a country (prominent or marginal) and the way EE itself is interpreted (broad or narrow).

[46]The term 'adjectival educations' is applied to a host of principles and practices that emerged around the 1970s. It embraces environmental education, human rights education, development education, peace education, global education, futures education.

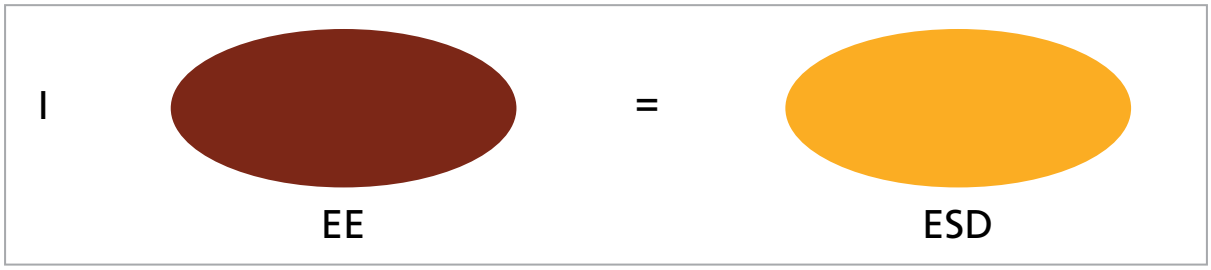
[47]The 2006 'Framework for the UN DESD International Implementation Scheme' can be found at: http://unesdoc.unesco.org/images/0014/001486/148650E.pdf

[48]Lotz-Sisitka, H.B. (2004). Positioning Southern African environmental education in a changing context. Howick: Share-Net/ SADC REEP.

[49]Hesselink, F., van Kempen, P.P. & A.E.J. Wals (2000). ESDebate: International On-line Debate on Education for Sustainable Development. Gland, Switzerland: IUCN, 98 p. The report based on the on-line ESD debate can be downloaded from: http:// www.hect.nl/publications/ESDebate2.pdf.

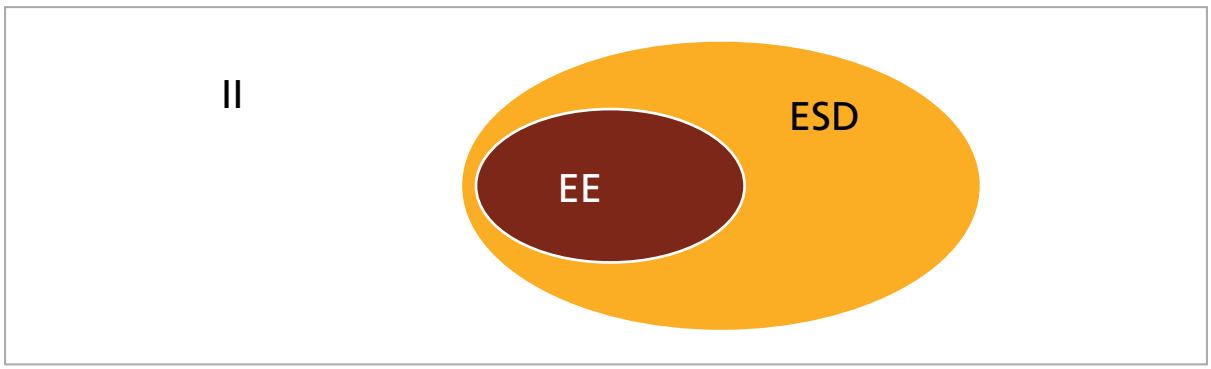
In other countries with a strong EE tradition, it may be interpreted more broadly, in tune with the Tbilisi Declaration,[50] to include socio-economic and political aspects.

When interpreted as such, EE and ESD become almost synonymous. These three relationships are described below:

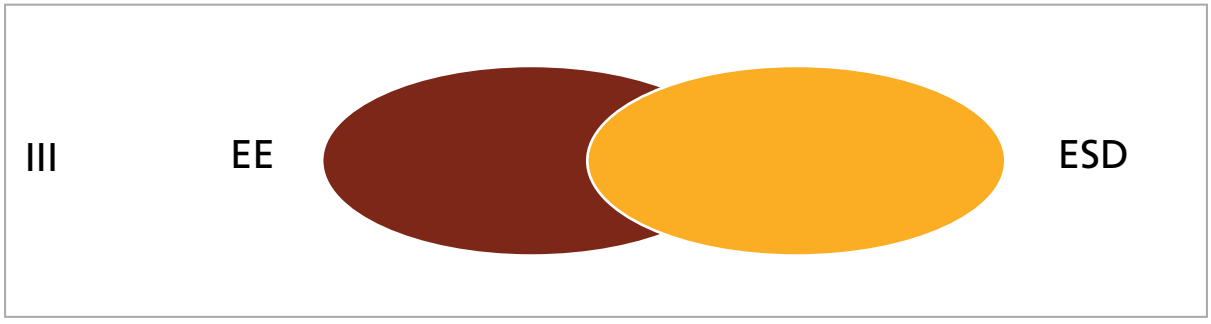


Environmental education has been firmly established over time and in the spirit of the forward-looking Tbilisi Declaration. It is viewed broadly to include issues of poverty, inequity, values and ethics. The emergence of ESD is not necessarily seen as an opportunity for renewal or reform but rather as a distraction of the good work that is already being done in the name of EE. In the worst cases, ESD might actually have a negative effect on the good work done under EE as this field is no longer seen as up-to-date or relevant by policy-makers and donors since it does not reflect ESD supported by, for instance, the DESD and the international community.

Two responses within this view of the relationship between EE and ESD can be seen. In some countries, EE continues to evolve and remains popular because people can identify better with it than with ESD (e.g., USA). In other countries, where the government has joined the international group of nations that committed themselves to ESD, groups are strategically or pragmatically adopting ESD, without necessarily changing their EE practice in order to remain eligible for funding and government support. In the latter case, one can sometimes see the emergence of EE for sustainable development (e.g., Taiwan) or EE for sustainable societies as is the case in Brazil.



Whereas, in some of its forms, EE narrowly focusses on environmental protection, natural resource management and the conservation of nature, ESD constantly goes further by bringing in socio-economic, political and cultural dimensions. In a sense, EE had become outdated and needed to be upgraded and replaced by ESD to better focus not only on the Planet but also on the People and Prosperity aspects of environmental and sustainability issues. In some parts of the world, the emergence of ESD has provided a stimulus for EE reform in this way and in countries where there was no tradition in EE or where it was marginally present, the DESD movement provided



[50]The UNESCO-UNEP 1977 Tbilisi Declaration on Environmental Education can be downloaded from: http://unesdoc.unesco.org/images/0003/000327/032763eo.pdf.
The 4th International Conference on Environmental Education (also known as the Tbilisi plus 30 conference) was held in November of 2007 and resulted in the Ahmedabad Declaration: A call for action. This declaration states, among other things, that 'EE processes support and champion ESD' and 'that governments worldwide need to support EE and develop sound ESD policy frameworks and commit to their implementation.' Fifteen hundred participants from 97 countries attended the conference.
The declaration can be found at: www.tbilisiplus30.org/Ahmedabad%20Declaration.pdf

an opportunity for a jumpstart (e.g. Vietnam, many Arab countries). ESD and EE are distinct, although they do overlap and both are legitimate and necessary. The old EE infrastructure and existing programmes therefore, will need to be still supported and government support for ESD should not be at the expense of EE. At the same time, the development of ESD needs to be supported as well as it adds important new dimensions that EE does not address or only addresses lightly (e.g. the socio-economic and cultural dimensions.) As a result, parallel policy streams and support mechanisms exist: one focussing on EE and another on ESD (e.g. The Netherlands, Canada, Greece). Sometimes coordination mechanisms are in place to assure that the EE stream is also informed by the ESD stream and vice versa.

Conclusion

It is evident that there is a wide range of interpretations of ESD; however there is no consensus yet about some core components. The tradition in governance could dictate whether a country favours a more pedagogical orientation towards ESD consequently implying (social) learning, participation and capacity-building or a more instrumental orientation that emphasizes a change in people's behaviour.

A strong history in EE but also the way EE is interpreted itself is likely to affect the meaning of ESD. Where such a history is lacking or where EE has been interpreted narrowly to focus on nature conservation and environmental protection, ESD can be developed and given meaning on its own terms. At the same time, all across the world one sees an emergence of a range of other 'adjectival' educations that tend to privilege a single issue (e.g. peace, human rights, gender, HIV & AIDS). This tendency may require some fine-tuning so that the adjectival educations mutually support rather than compete with each other.

Finally, recent ESD documents and discourse tend to show a shift from education to learning to emphasize the need for continuous engagement in sustainability in formal, non-formal and informal settings on the one hand and the need for capacity-building, participation and self-determination for sustainable development on the other.

Chapter 4 **UN Contributions**[51]

This mid-term DESD review focuses primarily on provisions and structures that have been put in place around the world to advance the development and implementation of ESD. Within this context, UNESCO has fulfilled a dual responsibility of offering global leadership and coordination, on the one hand and acting as an implementer, on the other.
At the onset of the DESD, an organizational structure was envisioned that took advantage of existing UNESCO infrastructure but also created new links between different sectors within the UN System and UNESCO itself under the common challenge of sustainable development.

Mechanisms to facilitate UNESCO's global leadership and coordination role

A number of advisory and coordination mechanisms have been established to facilitate UNESCO's global leadership role in facilitating the DESD.

DESD Secretariat

The DESD Secretariat, located in the DESD Coordination Section of the Division for the Coordination of United Nations Priorities in Education, provides oversight, advice, backstopping and coordination support to different programme and thematic areas while working to ensure the coherence of in-house activities. To this end, short texts on the DESD have been disseminated to all UNESCO staff so that they can include appropriate reference to and discussion of, the DESD in papers and presentations that they make in international forums. The Secretariat also acts as the interface between the Inter-Agency Committee (IAC), the DESD Reference Group, the Monitoring and Evaluation Expert Group (MEEG), the UNESCO National Commissions and the UNESCO Regional Offices, Bureaux for Education, Field Offices and institutes.

High-Level Panel on the DESD

A High-Level Panel (HLP) on the Decade of Education for Sustainable Development was created early in at the onset of the DESD to provide guidance to UNESCO on implementation and direction. Convened by UNESCO's

[51]Input for this chapter primarily came from the DESD secretariat and two documents: The UN Decade of Education for Sustainable Development: The first two years (http://unesdoc.unesco.org/images/0015/001540/154093e.pdf) and The Journal of Education for Sustainable Development, Vol. 1, No. 1, 117-126.

Director-General, it is composed of prominent personalities and experts in politics, economics, culture and society. The role of the HLP is to advise UNESCO with a view to intensifying support to DESD at the highest levels and to guide UNESCO in its strategy to assist its partners in mobilizing resources for ESD.

Inter-Agency Committee for the DESD (IAC/DESD)

One of the greatest challenges identified by the DESD Secretariat was to embed the ESD agenda into the work of the family of UN agencies in a coherent and timely manner. The Inter-Agency Committee (IAC) on the DESD was created to bring together international agencies for open-ended collaboration for the effective implementation of the Decade. The IAC seeks to reinforce and emphasize the role of education within the DESD and its implications for all forms of education – including its link to other international initiatives such as Education for All (EFA), the UN Literacy Decade (UNLD) and the Global Initiative on Education and HIV & AIDS (EDUCAIDS) as well as the MDGs. The IAC consists of representatives from: ILO, UNAIDS, UNEP, UN Habitat, UNICEF, UNU, World Bank, WFP, FAO, UNDP, UNHCR, UNFPA, UNHCHR, WHO and WTO.

Reference Group for the DESD

The Reference Group for the DESD was created to assist the DESD Secretariat in meeting the various challenges of the Decade, to think strategically on what UNESCO can and should do and to facilitate the coordination and mobilization of a diverse set of partners and stakeholders. The Reference Group is composed of experts in different spheres of Education for Sustainable Development (ESD). This group helps facilitate the work of UNESCO in setting strategic directions and enhancing the mobilization of partners.

Monitoring and Evaluation Expert Group (MEEG)

To ensure effectiveness in tracking progress of the implementation of the DESD, a group of experts was established to provide guidance on the development of a set of indicators as well as to advance the work of building an effective M & E framework (see Introduction). Given the diverse nature of the DESD and its engagement with the three pillars of sustainable development, with culture as a cross-cutting theme, the members of the M & E Expert Group (MEEG) are specialists who have expertise and experience at the international and national level in the following fields: educational policies and management, educational statistics, environmental education, social development and economics of development.

UNESCO National Commissions

National Commissions are key partners in the promotion and implementation of the DESD at national and regional levels. At national level, National Commissions play a role in the establishment of national Decade committees. Dialogue and exchanges initiated between some National Commissions are encouraged to help strengthen regional and international cooperation towards the mobilization of resources and the development of innovative ESD policies and programmes.

UNITWIN/UNESCO ESD Chairs Programme

The promotion of ESD in higher education is considered crucial to building a sustainable future and to placing young people at the centre of development. At UNESCO, one of the flagship programmes seeking to promote ESD in higher education is the UNITWIN/UNESCO Chairs Programme. The programme was conceived as a way to advance research, training and programme development in higher education by building university networks and encouraging inter-university cooperation through the transfer of knowledge across borders. Since its creation in 1992, the programme has established 626 UNESCO Chairs and 60 UNITWIN Networks, involving over 740 institutions in 125 countries. There are currently eight UNESCO Chairs and one UNITWIN Network focussing specifically on Education for Sustainable Development (Table 7). There are also other Chairs and Networks that focus on educational, cultural or scientific issues relevant to sustainable development (e.g., environmental education, water resources, desertification, habitats and cities).[52]

[52] An overview of UNESCO Chairs and UNITWIN networks is available at: http://www.unesco.org/education/unitwin/

UNESCO Chair in Reorienting Teacher Education towards Sustainability
Established 1999, York University (Canada)
Objectives:
- to take leadership in developing an international pilot network among existing teacher training institutions around the world and facilitating and coordinating its work.
- to reorient teacher education towards sustainability, using an agreed upon common framework allowing for comparison of results; and
- to gain practical experience and insights that can be articulated in the form of guidelines to reorient teacher education towards sustainability.

UNESCO Chair in Higher Education for Sustainable Development
Established 2005, University of Lüneburg (Germany)
Objectives:
- to promote an integrated system of research, training, information and documentation in the fields of sustainability for university education and its implementation in research and education;
- to help facilitate collaboration between high-level, internationally recognized researchers and teaching staff of the University and other institutions in Germany and elsewhere in Europe and in other regions of the world;
- to help bring forward the concepts of inter/transdisciplinary education and research, to counterbalance disciplinary approaches which are equally needed to achieve sustainability; and
- to stimulate international debate about the meaning of sustainability as a paradigm for higher education institutions.

UNESCO Chair in Early Childhood Education and Sustainable Development
Established 2008, Göteborg University (Sweden)
Objectives:
- to promote the principles enshrined in the UN Convention on the Rights of the Child as a fundamental text and a point of departure for collaboration with universities in the North and South;
- to teach children democratic values through sharing and respect for others at an early age and to promote teacher training skills and awareness of the concept of knowledge;
- to reinforce cooperation with parents; and
- to collaborate closely with universities in the North and South as an effective means of better targeting research that draws attention to early experiences and their impact on life-long learning and human development.

UNESCO Chair in Research and Education for Sustainable Development
Established 2007, Okayama University (Japan)
Objectives:
- to develop the human resources needed for the creation of a sustainable society, through research and education for sustainable development.
- to foster the training and development of experts who will work to realize a sustainable society at the local level, as well as experts who will work in the international arena and contribute to the creation of a sustainable society at the global level.
- to reorient the curriculum of Okayama University so as to contribute the creation of a sustainable society locally, nationally, regionally and globally; and,
- to transfer technology and knowledge on environmental conservation to developing countries through inter-university cooperation.

Table 7 Examples of UNESCO ESD Chairs

Mechanisms to facilitate UNESCO's role as an implementer of the DESD

Inter-Sectoral Working Group (IWG)

UNESCO seeks to establish an inter-sectoral "one UNESCO" approach to the DESD. An Inter-Sectoral Working Group (IWG) on ESD has been created to: (1) contribute to the elaboration of an in-house Action Plan; and (2) make recommendations to all UNESCO sectors, divisions and field offices to integrate the goals and objectives of DESD in their activities. The IWG also aims to realize inter-sectoral

co-ordination among Headquarters, regional bureaux, field offices and institutes and strives to ensure that the DESD contributes to reinforcing the three core EFA initiatives – the Literacy Initiative for Empowerment (LIFE), the Teacher Training Initiative for Sub-Saharan Africa (TTISSA) and the Global Initiative on HIV & AIDS and Education (EDUCAIDS). The IWG is composed of representatives from all programme sectors as well as the Bureaux of Strategic Planning (BSP) and Field Coordination (BFC) and representatives from External Relations and Cooperation (ERC) and the Office of the Director-General (ODG). The directors of UNESCO institutes and the directors of the regional offices also participate.

UNESCO Action Plan for the DESD[53]

To ensure responsiveness to the Decade's goals and diverse audiences, a UNESCO Action Plan for DESD was put in place by the DESD Secretariat in close collaboration with the Inter-Sectoral Working Group in June 2006. The Action Plan is shaped by the four major thrusts of education for sustainable development that were first articulated in Chapter 36 of Agenda 21 and is a result of inputs from all programme Sectors and an extensive consultative process with UNESCO regional, cluster and national offices as well as UNESCO Institutes and Centres around the world. The UNESCO Action Plan spells out the following:

- key audiences of education for sustainable development;
- type of assistance that UNESCO will extend to its Member States in this area;
- examples of thematic programmes through which UNESCO will help create the enabling environment and capacity for Member States and other stakeholders to achieve the objectives of the DESD;
- targets and milestones specified at a biennial level to guide programme planning;
- organizational structures to catalyze inter-sectoral co-ordination and collaboration;
- partners who will participate in and support DESD Thematic Programmes; research activities; and
- monitoring and evaluation.

The Inter-Sectoral Working Group approved the final draft of the Action Plan in March 2007 and a summary was presented to the 177th session of the Executive Board in September 2007. While the inter-sectoral activities are already underway, this Action Plan will be integrated into the next UNESCO Medium-Term Strategy (2008-2013, 34 C/4) and into the Work Plans for the 2008-2009 biennium (34 C/5). The UNESCO Action Plan, in conjunction with the International Implementation Scheme (IIS)[54] (172 EX/11), guides UNESCO's efforts in developing programmes that support Member States and other stakeholders in their efforts to integrate sustainable development issues and practices into education systems at all levels as a basis for a more sustainable human society. The UNESCO Action Plan is conceived to be a "working document" which may evolve as new details of the 2008 – 2013 Medium-Term Strategy emerge and subsequent Programmes and Budgets are developed.

Inter-Sectoral Basis of the Action Plan

The Action Plan focusses on the relationships among UNESCO Sectors and Field Offices in support of Member States, as well as with international partners. Key elements in this implementation model for a "one-UNESCO" approach to the DESD include:

- The Inter-Sectoral Working Group on DESD (IWG-DG/Note/05/34) responsible for the overall coordination and review of all UNESCO DESD programmes and activities. The IWG is supported by DESD Focal Points in different Sectors, Field Offices and Institutes.
- The UN Inter-Agency Committee (IAC) for the DESD established to ensure harmonious international coordination of the DESD and mobilization of resources for strategic interventions at all levels.
- UNESCO National Commissions, UNESCO Field Offices, Institutes, Centres and networks, all of which are responsible for catalyzing the commitment of Member States and assisting them with processes of policy reorientation, capacity-building and the development of the ESD support resources necessary for them to implement the Decade.

Elements of the UNESCO Action Plan for the DESD

The strategic objectives of the Action Plan focus on the creation of an enabling environment and capacity-building opportunities for all Member States to:

- develop policies and plans for achieving a high quality of education provision and outcomes by integrating ESD principles and priorities in all sectors and levels of education;

[53]Please refer to the DESD website for the Action Plan and all other DESD-related documents- http:// www.unesco.org/education/desd/

[54]The 2006 'Framework for the UN DESD International Implementation Scheme' is available at- http://www. unesdoc.unesco.org/images/0014/001486/148650E.pdf.

- integrate educational processes as key tools in strategies for sustainable development;
- support educational institutions, the media,[55] the private sector and civil society groups in the use of education to promote widespread awareness and understanding of sustainability; and
- integrate sustainable development issues and priorities into policies and programmes for workforce development across schools, TVET, higher education and lifelong learning.

The principles underpinning implementation of the Action Plan include:

- The focus of the DESD should be education and related communication, training and capacity-building strategies for promoting sustainable development.
- All DESD programmes and activities should reflect a balanced focus on education for the economic, social and environmental pillars of sustainable development, with culture as an underlying theme and be directed at creating the enabling environment and capacity for countries to implement the DESD.
- In addition to working with governments, DESD programmes and activities should focus on catalyzing the participation of international agencies, the private sector, the media, civil society groups and professional educational associations in national, regional and international projects.
- To ensure success, inter-sectoral programmes and activities should be based on strong and coordinated management processes, as well as organizational structures and budget processes that reinforce inter-sectoral collaboration.

Inter-sectoral Platforms/ the Education for Sustainable Development Platform

Inter-sectoral platforms are an innovation in the way UNESCO conceives, manages and implements its programme in an interdisciplinary manner. The Organization's principal strength remains the in-depth expertise of its five Programme Sectors. However, many of today's challenges call for an inter-sectoral response, which can be one of UNESCO's comparative advantages in the multilateral arena.

The ESD Inter-sectoral Platform aims to contribute to Member States' efforts to improve the quality of education through integrating sustainable development issues and practices into all types, levels and settings of education. It focusses on such areas as policy, capacity development, knowledge enhancement and awareness-raising.

The ESD Intersectoral Platform provides the opportunity to strengthen the pre-existing internal coordination mechanisms on ESD, including the Inter-sectoral Working Group on ESD and UNESCO Action Plan for the Decade of ESD.

Network of UNESCO focal points

Since DESD is a cross-cutting theme, it is embedded in programmes and activities housed under other sectors. To help establish a 'one-UNESCO approach,' focal points have been identified within different sectors to maximise participation in the implementation of the DESD. The focal points attend meetings organized by the DESD Secretariat and participate actively in taking the DESD agenda forward.

UNESCO Thematic programmes

The UNESCO Action Plan for the DESD, defines the Thematic Programmes as "long-term inter-sectoral programmes that comprise a suite of interconnected projects and activities that seek to promote all relevant aspects of an enabling environment and capacity-building for Member States in relation to a specific objective, thrust and/or theme of the DESD".

To this end, eight thematic programmes (Table 8) were identified, each corresponding to a different aspect of ESD.

1. International Leadership and Advocacy of the DESD
2. Integrating ESD into Basic Education
3. Integrating ESD into TVET
4. Teacher Education for ESD
5. Mainstreaming Cultural Diversity and Intercultural Dialogue in ESD
6. Education for Sustainable Water management
7. Education for Sustainable Ecosystems and Livelihoods.
8. Communication and ICT for Development serving Education for Sustainable Development

Table 8 Current UNESCO Thematic Programs (Source: UNESCO DESD self-evaluation report)

The Thematic Programme Leaders have leadership and management responsibility for a Thematic Programme across the DESD. They work within UNESCO in concert with international agencies to develop a coordinated approach to meet the objectives of the DESD in the particular

[55] 'Media as partners in education for sustainable development: a training and resource kit' was developed by Bird, Lutz and Warwick as a part of the UNESCO Series on Journalism Education in 2008. This document is available at: www.unesdoc.unesco.org/images/0015/001587/158787e.pdf.

thematic area. According to the UNESCO DESD Action Plan, all sectors, Regional/Cluster offices and Institutes/ Centres should develop their plans for participation in the DESD through appropriate Thematic Programmes.

Research, as a foundation for providing the knowledge needed to plan and implement programmes effectively, is an integral component of all Thematic Programmes.

The GMEF called for a UNESCO self-assessment and the creation of a portfolio of evidence. The data collected from this component consisted primarily of a self-evaluation aimed at assessing UNESCO's own contribution to the DESD. This self-assessment does not cover all mechanisms described above. For instance, there is no (self) assessment of the functioning of the DESD Reference Group, the MEEG, the role of the UNESCO National Commissions or the Regional Bureaux. Although there is, mostly anecdotal, evidence that all these mechanisms seem to contribute, no systematic evaluation of their effectiveness and efficiency has been conducted. Therefore this chapter only presents the results of UNESCO's internal self-assessment which is mostly based on an in-house questionnaire, follow-up interviews with key representatives within the UNESCO-system who play a role in supporting the DESD and feedback on earlier drafts of this review by members of the MEEG, the DESD Reference Group and the UNESCO DESD Secretariat.

At the mid-point of the DESD, the Thematic Programme Leaders identified five areas in need of improvement: lack of human and financial resources, difficulties in making linkages with ESD, weak inter-sectoral collaboration, lack of appropriate tools for ESD and difficulties in assessing ESD (Table 9).

Insufficient human and financial resources	▪ Due to insufficient funds, staff are obliged to prioritize activities and channel funds to activities that relate directly to the programme. ▪ Due to insufficient human resources, it is difficult to give time for activities other than the ones that are directly linked to one's own programme.
Difficulties in making linkages with ESD	▪ There is an implicit understanding of the concept of ESD. However, it is difficult to make linkages with other programmes/activities. ▪ A real in-house debate on the issue of ESD is lacking, therefore making linkages becomes difficult. ▪ There is not enough in-house communication on ESD/DESD
Challenges to inter-sectoral collaboration	▪ In keeping with the evolving concept of ESD, materials related to ESD need constant updating.
Challenges in assessing ESD	▪ Assessing ESD remains challenging.

Table 9 Some barriers in advancing ESD identified by UNESCO Thematic Programme Leaders (source: UNESCO-DESD self-evaluation report)

Despite these barriers, the Thematic Programme Leaders do see progress:

a) there is now an increased awareness of the DESD principles and vision in their everyday activities;

b) more DESD-related educational materials have been developed and made available; and

c) DESD has helped make linkages with activities that are carried out by other sectors under the umbrella theme of ESD. The latter has been slow but at least there appears to be a growing awareness within UNESCO.

The contribution of other UN bodies to the DESD

As reported earlier, the United Nations Inter-Agency Committee on the United Nations Decade on Education for Sustainable Development (IAC/DESD) was created to coordinate the Decade within the UN Agencies. Below can be found some ESD strategies and activities of several of the 15 UN Agencies that make up the IAC/DESD:

UN-HABITAT[56] (see also Box 4), for instance, adopted a Medium-Term Strategic and Institutional Plan in 2007, covering the period 2008 – 2013, whereby for the first time there is a formal reference to education for

[56]UN-HABITAT analyzes and studies human settlement patterns and develops methods for controlled settlement with the preservation of the environment in mind. For more information go to: www.unhabitat.org/

sustainable development as part of the overall key result on advocacy and partnerships. Activities related to ESD have also been incorporated in the work programme for the biennia 2008-09 and 2010-11.

The World Food Programme's[57] Policy Framework (Strategic Plan 2008-2011), for instance, identifies the main objective of school feeding programmes as: "Preventing acute hunger and investing in disaster preparedness and mitigation measures."

Such programmes are supportive of ESD-related activities.

UNICEF[58] established or included five ESD-related programmes: Child-Friendly Schools Initiative, WASH, Education for emergencies, Voices of Youth and Rural youth participation and non-formal education and the Environmental Education Resource Pack (EERP) that was developed in partnership with other agencies.

UNEP[59] created a Strategy for Environmental Education and Training for the Decade and a special brochure on UNEP and the DESD, outlining strategic elements and the associated actions and flagship programmes necessary for UNEP to play its role in meeting the goals of the DESD (UNEP, 2005).

These examples show that these UN agencies do address the question of ESD through their various programmes/ activities at the formal, non-formal and informal levels of education.

The collaboration between UN-HABITAT and partners on education and sustainability is implemented across the whole agency. It covers a wide spectrum of activities, including improving access to quality basic education (e.g., the Human Values-based Water, Sanitation and Hygiene Education programmes in African and Asian cities), reorienting existing education programmes (e.g., Habitat Partner Universities, see further), developing public understanding and awareness (e.g., the World Urban Forum) and providing capacity-building and training (e.g., the development of a new Training Centre in Korea on sustainable urban development for the Asia Pacific region). Overarching these initiatives, the new Sustainable Urban Development Network aims to serve as a cross-divisional vehicle for engaging partners, including tertiary institutions, in the debate on and the furthering of the sustainable urbanization agenda.

Box 4 An example of UN-HABITAT's contribution to DESD[60]

Some of the UN agencies contributing to the DESD do report obstacles to playing this role. UNICEF, for instance, identifies constraints relating to funding, co-ordination with and within governments and social and cultural issues including:

- Insufficient coordination between national structures in the execution of the activities.
- Need for teacher capacity to be strengthened with more knowledge and skills in teaching environmental studies, as well as additional provision of resources.
- Lack of national coordination dedicated to the subject of adolescent citizenship.
- Lack of understanding of this developmental phase of life as fundamental for human development (rather than a problematic phase to be overcome).
- Lack of financial resources to increase partnerships for programme implementation.

Provisions at the regional and national level

The UNESCO country offices, cluster offices and regional bureaux were assigned proactive roles at the outset of the DESD in promoting ESD and the DESD by initiating dialogue with the Member States, United Nations' partners, non-governmental organizations (NGOs) and other stakeholders at the country level. The regional bureaux were encouraged to facilitate the development of regional strategies for ESD and explore possibilities of organizing regional exchanges and sharing experiences on ESD. Furthermore, they were expected to provide technical and professional support to the cluster and national offices in their attempts to assist the Member States.

The present mid-Decade review lacks data on the functioning of these support mechanisms. Regional ESD strategies have been developed with the support of the regional bureaux. With the exception of Europe and North America and the Asia Pacific region, no information exists about follow-up actions to these strategies and the progress of their implementation. In North America and Europe, a very active regional role was played by UNECE.[61] An important observation made by reviewers of earlier drafts of this review is that not all UNESCO Regional Bureaux have sufficient human and financial resources assigned to them.

[57]The World Food Programme (WFP) is the United Nations frontline agency in the fight against global hunger. It is the world's largest humanitarian organization. For more information go to: http://www.wfp.org

[58]UNICEF upholds the Convention on the Rights of the Child. The agency works towards achieving the Millennium Development Goals by focussing their interventions on: young child survival and development, basic education and gender equality, combat HIV & AIDS among children, child protection. For more information go to: www.unicef.org

[59]UNEP provides leadership and encourages partnership in caring for the environment by inspiring, informing and enabling nations and peoples to improve their quality of life without compromising that of future generations. For more information, go to: http://www.unep.org

[60]Source: UNESCO DESD self-evaluation report. Please visit: http://portal.unesco.org/education/en/ev.phpURL_ID=27234&URL_DO=DO_TOPIC&URL_SECTION=201.html

[61]The United Nations Economic Commission for Europe (UNECE) promotes pan-European economic integration. To do so, UNECE brings together 56 countries located in the European Union, non-EU Western and Eastern Europe, South-East Europe and Commonwealth of Independent States (CIS) and North America. For more information go to: http://www.unece.org/

It is important to note that UNESCO does not have a regional bureau for Europe and North America; this, consequently, makes the role of the UNECE in the region crucial.

The observation that there are diverse degrees of effectiveness also applies to the UNESCO National Commissions. The UNESCO National Commissions are considered key partners in the implementation of the DESD at the national level as they can take on a number of roles, as actors, initiators and catalysts. Countries are encouraged, with the help of the UNESCO National Commissions, to establish national committees for the Decade. National Commissions can also play a vital role in promoting DESD goals and in ensuring the integration of ESD into national educational policies, strategies and plans. National Commissions can create the link between UNESCO programmes, national institutions, NGOs and civil society at large on various issues related to ESD, but also between national government bodies, including ministers of education, science, culture, environment, trade and finance. Finally, National Commissions can assist in strengthening international cooperation towards the development of innovative policies and programmes and the practice of ESD.

Again, no systematic evaluation was carried out on the functioning of the UNESCO National Commissions with regard to the promotion and development of DESD. However, it is commonly known that they are not all equally staffed and resourced. Furthermore, ESD may not always be a priority for all National Commissions as it competes with other burning issues the National Commissions seek to address.[62] Boxes 5 and 6 provide examples of the involvement of UNESCO National Commissions.

The Vietnam National DESD Committee was established in 2005. The daily operations of the Vietnamese National DESD Committee are taken care of by the UNESCO National Commission of Vietnam. The UNESCO National Commission of Vietnam is the lead agency for implementing the DESD in collaboration with UNESCO Hanoi and the Ministries of Education & Training; Science & Technology; Natural Resources & Environment; and Culture & Information. On 15th of February 2006, the Vietnamese Natcom hosted the national launch of the DESD in Hanoi. The main outcome of the meeting was the establishment of ESD priorities for Vietnam and the creation of a national action plan framework to orient education towards sustainable development.

Within the framework of cooperation between the UNESCO National Commission of Vietnam, the UNESCO offices in Bangkok and Hanoi and a number of local specialists, a new pilot project is underway between the Associated Schools Project Network (ASPnet) and Community Learning Centers (CLCs). To elaborate, lower-secondary students will establish links with CLCs as an extra-curricular activity in the provinces of Ha Tay and Hoa Binh on key ESD topics in Vietnam like biosphere conservation, poverty reduction and HIV & AIDS/drug prevention. The preparations for practical exchanges between the ASPnet schools and CLCs suggest exciting future developments for the integration of sustainability into formal and non-formal education systems.

Box 5 UNESCO National Commission of Vietnam: ESD in action (Source: DESD Secretariat)

The Sri Lanka National Commission for UNESCO has taken action to establish the ESD National Committee, which includes all related Ministries, Departments, Private Sector organizations and Donor Agencies. The ESD Committee has discussed the ESD issues and all stakeholders have agreed to give their fullest support to implement the ESD concepts and activities. The funding agencies like World Bank, GTZ have also agreed to provide financial support to implement the ESD activities.

The Sri Lanka National Commission for UNESCO (SLNCU) in collaboration with the Ministry of Education has organized principal's awareness programmes and teacher awareness programmes. Also the SLNCU has organized a media personnel awareness programme regarding the ESD. Presently, 42 selected schools in Sri Lanka have commenced ESD activities as a pilot project.

SLNCU targets all educational sectors, formal, informal and non formal, to implement the ESD activities. In formal education the focus is on implementing ESD concepts through the existing curriculum. A barrier in formal education the SLNCU encounters is that the teaching and learning taking place in schools is highly exam-oriented making it very difficult to impact the teachers and the student's interests towards the ESD issues. Nonetheless most of the ESD concepts are in the existing curriculum.

In the non-formal and informal sector, ESD is implemented through ESD projects carried out by the UNESCO clubs and ASP networks, through appropriate projects.

Box 6: UNESCO National Commission of Sri Lanka: concerted efforts to promote the DESD (Source: DESD Secretariat)

[62]Although no systematic research was done, the UNESCO DESD secretariat conducted an email survey in February 2009 among the National Commissions asking about their involvement in ESD and the kind of obstacles they encounter in becoming (more) involved. An early analysis of the results seems to confirm these observations.

Role of UN country teams and integrating ESD into UNDAFs

Finally, advancing ESD will be difficult in many countries unless the UN Country Team is involved and ESD is incorporated into the United Nations Development Assistance Frameworks (UNDAFs)[63] to provide a solid basis for national assistance. UNDAF is a common programme and resource framework for UN development agencies and programmes including, first and foremost, the United Nations Development Group (UNDG).[64] Its purpose is to maximize the development impact of United Nations assistance by introducing goal-oriented collaboration in response to national development priorities and to enhance coordination among individual programmes. In terms of financial support, donor involvement is also crucial in the process of developing national strategies and frameworks to support ESD.

Conclusion

The UN contribution to the DESD is characterized by an impressive number of involved UN agencies, Thematic Programmes, UNESCO Chairs and UNITWIN networks, Regional Bureaux, National Commissions, ad-hoc support groups comprising internationally recognized experts, an active DESD Secretariat and a number of coordinating and supporting mechanisms. Many launches, meetings and workshops have taken place around the globe and an impressive number of UN-supported documents and ESD resource materials (see References in the Annex) have appeared both digitally and in print. In addition, all UNESCO Regions have developed their own regional strategies for ESD.

At the mid-point of the Decade, however, it is too early, to speak of a 'one concerted UN response' to ESD and there remains much work to be done. Strengthening inter-sectoral collaboration, providing human and financial resources within UNESCO at headquarters and at the regional levels would further improve the implementation of the DESD.

Furthermore, the mid-Decade review does reveal the need for a more systematic review of the functioning of all elements of the UNESCO global structure created for the implementation of the DESD to determine whether fine-tuning is needed for current mechanisms or the creation of new ones for the remaining half of the Decade.

[63]United Nations Development Assistance Framework (UNDAF) is the strategic programme framework for the United Nations Country Teams (UNCT). It describes the collective response of the UNCT to the priorities in the national development framework - priorities that may have been influenced by the UNCT's analytical contribution. Its high level expected results are called UNDAF outcomes. For more information go to: www.undg.org

[64]The UN Development Group (UNDG) unites the 33 UN funds, programmes, agencies, departments and offices that play a role in development. Our common objective is to deliver more coherent, effective and efficient support to countries seeking to attain internationally agreed development goals, including the Millennium Development Goals. For more information go to: www.undg.org

Chapter 5 National Policies and Frameworks for ESD

Creating national policies and frameworks that support the development of ESD in all educational sectors as well as in society at large has been identified in the UNESCO Action Plan for the DESD and the IIS as a key priority.

Progress in six key provisional areas is highlighted in this chapter:

1. **the creation of national coordinating bodies for ESD;**
2. **the development of ESD policies and/or the inclusion of ESD in existing policies;**
3. **the creation of interdepartmental cooperation with regards to ESD development and implementation;**
4. **measures taken to conserve, use and promote knowledge of indigenous people with respect to ESD;**
5. **the availability of ESD tools and materials;**
6. **the allocation of specific budgets for supporting ESD.**

Many of these provisional measures were already identified when the DESD was conceptualized and were called for at the many DESD launches that took place around the world in 2005 or soon thereafter. Now that the DESD is reaching its halfway point, it is worthwhile observing whether frameworks for supporting ESD are indeed in place. The information provided here has largely been derived from the Regional Synthesis reports that were developed on the basis of completed MEEG questionnaires sent to all Member States.

1) ESD national coordination bodies

In 2006, 44 countries in the world had a national ESD coordinating body. By the end of 2008, at least 78 countries had such a body; a remarkable achievement in a relatively short period. There are some regional variances. The Europe and North America region has made considerable progress as compared to other regions.

Members of national coordination bodies often include government representatives and representatives from formal education (e.g., educational policy-makers, administrators and, occasionally, teachers) and NGOs. In some countries, the private sector is also represented. The *levels* of government involved in coordinating ESD differ from country to country. In some, the responsibility lies with government ministries while in others responsibilities have been decentralized to the regional level. There are

also differences in the scope of ESD covered by a national coordinating body, varying from a narrower interpretation of ESD (e.g., coordinating ESD in formal primary and secondary education, streamlining it with existing EE programmes) to a much broader interpretation. A broader interpretation usually also covers non-formal learning and professional development of teaching staff and spans the whole of formal education from early childhood education to higher education. In general, there is little mention of the representation of labour unions, religious groups and the mass media in national coordinating bodies.

Although the rapid rise of the coordinating bodies is remarkable, more insight is needed into the processes leading up to the creation of the national coordinating bodies and the roles they actually play. The following questions appear relevant: how are people appointed and nominated? To what extent are all ESD areas represented in these bodies? What are the actual responsibilities and activities of these bodies? From the narrative responses provided, it can be concluded that the presence of such a body in and by itself does not mean that this is an entity that creates synergy and energy and plays a stimulating role in engaging stakeholders in contributing to the development of ESD. At the same time, the absence of such a body does not necessarily mean that ESD is non-existent or weak. There are examples of countries that do not have a formal national coordinating body but show a lot of ESD activity (e.g., Brazil). Nonetheless, it appears that countries that do have a national coordinating body in place are more likely to also have the other ESD provisions such as those described in the remainder of this chapter.

2) ESD in national policy documents

Worldwide there is a notable presence of ESD in national policy documents (Box 7). The majority of them address broadening participation in ESD and re-orienting educational curricula. ESD is mainly integrated in national educational policies and curriculum statements, especially in primary and secondary education. In some cases SD and ESD are both part of a country's environmental strategies. At the same time, it can be concluded that most countries do not yet have a specific national ESD policy or strategy. The Ministries of Education and Environment are mainly involved in the establishment of such policies and National Action Plans. In some cases, other stakeholders are also involved (NGOs and representatives from business and industry).

Practically all countries contributing to the mid-Decade review report that *sustainable development* and/or *sustainability* are in their national constitutions (Box 8).

But, while public development policies always seem to include references to sustainability, they do not always refer to the role of ESD. This explains the emergence of two general trends: on the one hand, we find countries that have developed SD strategies and/or national commitments to the DESD that explicitly include ESD in their formulations, while on the other hand we find countries that instead have incorporated ESD-related concepts in national processes, policies and strategies within existing EE frameworks.

The Australian policy "Statements of Learning for Civics and Citizenship" seeks to provide students with opportunities to learn about Civics and Citizenship through three essential learning areas, (1) Government and Law (2) Citizenship and Democracy and (3) Historical Perspectives.

ESD is underpinned through each of the three essential learning areas of the Civics and Citizenship Statements of Learning. The two specific aspects through which students are provided learning opportunities are that all students have the capacity to:

- clarify and critically examine values and principles that underpin Australia's democracy and the ways in which these contribute to a fair and just society and a sustainable future and
- develop an understanding of the ways in which citizens and governments contribute to environmental sustainability in local to global contexts and a commitment to adopting values, behaviour and lifestyles required for a sustainable future.

Box 7 Integrating ESD into national policy documents in Australia: linking ESD, Civics and Citizenship[65]

Already in 2003 before the start of the DESD the Supreme Court of India directed that "We accept on principle that through the medium of education awareness of the environment and its problems related to pollution should be taught as a compulsory subject". The judgment further required that all universities prescribe a course on the environment and that the levels leading to tertiary education include compulsory education on the environment.

Even before the high court's ruling, different ministries had cooperated to strengthen education related to environmental conservation in schools. Through StrEESS (Strengthening Environmental Education in Schools), the ruling helped state governments to further integrate this dimension of ESD into the formal school system.

Box 8 Supreme Court Decision in India directs awareness of the environment through education

[65]Source: Asia-Pacific Regional Synthesis Report: http://portal.unesco.org/education/en/ev.phpURL_ID=27234&URL_DO=DO_TOPIC&URL_SECTION=201.html

Although the *social* and *economic* dimensions of ESD are always mentioned, they are not stated very clearly in policy documents in most of the countries contributing to the mid-Decade review. In those cases where policies on ESD are in place, these are often based on existing dispositions that include EE elements, environmental issues, or curricular designs that define SD-related topics. Where national SD strategies are not available, countries are beginning to link ESD to national development plans and poverty reduction strategies, or are considering the development of a national SD strategy in the near future.

ESD in educational policy areas

Worldwide, there is an effort to integrate ESD into policies and legislation targeting primary and secondary education. In formal primary and secondary education, the ministry that is responsible for education is also responsible for the location of ESD in the school curriculum. Educational policies that focus on ESD can be divided into: 1) those that integrate ESD by connecting it to existing curriculum topics and also require an integrated or interdisciplinary approach; 2) those that create space for schools to have ESD projects and extra-curricular ESD-related activities; and 3) those that leave it up to the schools themselves to prioritize and position ESD. The case of Japan is interesting in this regard.

Before the resolution on DESD was adopted a period of Integrated Studies was created within the school curriculum, which allowed for the implementation of instruction related to topics like environmental education, energy education, culture education, education for international understanding and other related educations. This topic of Integrated Studies serves as a foundation for ESD. However, in order to advance ESD effectively the programmes under Integrated Studies must be linked comprehensively and promoted continuously from the perspective of building a sustainable society. To assure this the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) supports:

1) the formulation of the Basic Plan for the Promotion of Education which identifies ESD as a critical component,
2) the revision of Courses of Study to allow for ESD topics to enter various subject areas and
3) the expansion of the UNESCO Associated School Network.

Box 9 Supporting ESD in the curriculum in Japan (Source: Japanese National UNESCO Commission, 2008).

Policies that promote the integration of ESD in the other formal education spheres (early childhood, technical and vocational education and higher education) appear to be lagging behind compared with primary and secondary education. Nonetheless there are good examples of policy provisions even in those areas of formal education. Box 10 provides an example from early childhood education.

The Swedish National Curriculum for the Pre-school (Ministry of Education and Science, 1998) states the fundamental values for preschool education. Some examples:

- Each and everyone working in the pre-school should promote respect for the intrinsic value of each person as well as respect for our shared environment. (p. 3)
- The pre-school should put great emphasis on issues concerning the environment and nature conservation.
- An ecological approach and a positive belief should typify the pre-schools' activities. The pre-school should contribute to ensure that children acquire a caring attitude to nature and the environment and understand that they are a part of nature's recycling process. (p.7)

The pre-school should strive to ensure that each child develops:

- their ability to discover, reflect on and work out their position on different ethical dilemmas and fundamental questions of life in daily reality (p.8)…
- respect for all forms of life as well as care for the surrounding environment (p.8)…
- an understanding of their own involvement in the process of nature and in simple scientific phenomena, such as knowledge of plants and animals (p.10)

Box 10 Excerpts from the Swedish National Curriculum for Pre-school Education (0-6)

At the university level, several international pre-DESD meetings led to declarations signed by university leaders which include commitments to the integration of sustainability in campus, curriculum and community activities. Table 10 lists the main pre-DESD declarations but also shows the different components such declarations tend to cover. It should be noted that colleges and universities tend to have more autonomy than pre-school, primary and secondary schools. Therefore, much policy-making tends to take place within the higher education institutions themselves. Nonetheless, in some cases national research programmes focussing on ESD supported by the Ministry responsible for Science and Education do exist.

Declaration	Moral obligation	Public outreach	Sustainable physical operations	Ecological literacy	Develop interdisciplinary curriculum	Encourage sustainable research	Partnership with government, NGOs and industry	Interuniversity cooperation
1990 Talloires	■	■	■	■	■	■	■	■
1991 Halifax	■	■		■			■	■
1993 Kyoto	■	■	■	■		■	■	■
1994 Swansea	■	■	■	■		■		■
1997 COPERNICUS	■	■		■		■	■	
2000 Lüneburg	■	■			(■)	■	■	■

Table 10 Common principles of Sustainability in Higher Education Declarations[66]

Whereas the pre-DESD higher education declarations tended to be oriented towards 'Northern' or 'Western' universities, it appears that during recent years, often with UN support, universities in other parts of the world are now also actively engaged in ESD (Table 11), although it is hard to judge to what extent declarations are translated into concrete actions.

2004 *MESA* (Mainstreaming Environment and Sustainability in African Universities) network and partnership (led by UNEP, UNESCO and AAU) was initiated to strengthen the contribution of higher education and to sustainable development in African universities

2007 *Ahmedabad Conference* (emphasizes role of Higher Education in Environmental Education for sustainable development and in responding to climate change and new development challenges of the 21st century, including poverty alleviation and sustainable livelihoods for all)

2008 *First MESA Conference in Africa* (hosted by UNEP to strengthen South-South and North-South dialogue on HESD …prepares contributions from Africa for the World Conference on Higher Education Conference (2009) and the World Conference on Education for Sustainable Development (2009), as well as the 2009 Association of African Universities conference focussing on HESD.

Table 11 Recent activities and initiatives created in 'the South' to advance the contribution of higher education to SD[67]

Specific policies that support informal and non-formal learning in the context of SD were not reported even though in many regions the rise of community-based learning and multi-stakeholder (social) learning is noted.

3) Inter-governmental cooperation on ESD

In most parts of the world, a structure for interdepartmental governmental cooperation on ESD is lacking. There are some exceptions as some countries have established a structure that consists of a combination or subset of interdepartmental commissions, cooperation between the different ministries (especially between the Ministries of Education and Environment),[68] ESD working groups or Sustainability Centres. The groups operating within these structures are mostly responsible for the implementation of an ESD or SD national strategy. Cross-sectoral collaboration to establish ESD linkages with other ministries appears on the rise across the globe (see Box 11 for an example). In several regions, countries are now beginning to engage different actors within and across the various relevant ESD sectors to share new knowledge and lessons learned, maximize resources and devise coordinated methods for national ESD implementation.

The Dutch Programme Learning for Sustainable Development has an intergovernmental steering committee that makes the decisions. Members of the steering committee are representatives from the six ministries that are involved in this programme (Ministry of Agriculture, Nature Management and Food Quality; Ministry of Housing, Spatial Planning and the Environment; Ministry of Education, Culture and Science; Ministry of Foreign Affairs; Ministry of Transport, Public Works and Water Management; and Ministry of Economic Affairs).

[66]Wright, T. (2004). The evolution of sustainability declarations in higher education. In: Corcoran, P.B. & Wals, A.E.J (Eds.) Higher Education and the Challenge of Sustainability: Problematics, Promise and Practice. Dordrecht, Kluwer Academic Press.

[67]Source: The 2008 UNEP report on Mainstreaming Environment and Sustainability in African Universities Partnership report on supporting universities to respond to environmental, sustainable development and climate change challenges is available at: http://www.did.uu.se/iresd/documents/UNEP%20MESA%20A4%20horizontal-LoRes.pdf

[68]Thanks to the efforts of UNECE, collaboration between Ministries of Environment and Ministries of Education is well established in the context of ESD in many UNECE countries.

A representative for the Dutch provinces and the Dutch water boards, as well as a representative from the UNESCO National Commission and from the NCDO (National committee for sustainable development, with a focus on Development Education and the Dutch focal point for the Earth Charter) are also involved in the steering committee'.

Box 11 Interdepartmental ESD cooperation in The Netherlands[69]

Nonetheless, even though ESD is seen as an inter-sectoral field that concerns multiple ministries, interdepartmental cooperation remains difficult as each department has its own sectoral agenda. Furthermore, there is a risk that all may assume someone else is taking responsibility and leadership which can lead to a vacuum and hinder the development of ESD altogether. In countries where the SD component of ESD is emphasized more than the E component, the responsibility for ESD tends to lie with ministries that focus on environment, development and economic affairs (with little involvement of the ministry of education). In other countries, the reverse seems to occur: where the E in ESD is emphasized, the Ministry of Education plays a leading role and the challenge is to bring in those ministries that focus on environment, development and economic affairs.

There are also examples of small countries that take a coordinated regional approach to create synergy (Box 12).

A key feature of the Pacific region is the coordinated approach that the Pacific Islands often take to implement international priorities. Since the launch of the UNDESD, the New Zealand National Commission for UNESCO has worked with the UNESCO Office in Apia, Samoa, UNESCO Bangkok and the Pacific Centre for Environment and Sustainable Development (PACE-SD) at the University of the South Pacific (USP) to raise the profile of the UNDESD in the Pacific Islands. At the 2006 Meeting of Pacific Island Forum Education Ministers (FEdMM) held in Nadi, Fiji, the Ministers formally discussed Education for Sustainable Development in the Pacific, agreed to take a coordinated approach to ESD and endorsed the Pacific ESD Framework. A year later, at the 2007 FEdMM, held in Auckland, New Zealand, the Ministers endorsed the ESD Pacific Regional Action Plan. Immediately following the FEdMM, the New Zealand National Commission for UNESCO and PACE-SD convened the Pacific Regional UNDESD Implementation Workshop that developed project proposals to guide the future implementation of the UNDESD in the Pacific throughout the rest of the Decade.

Box 12 Intergovernmental cooperation at a regional level (Source: UNESCO Regional Office- Bangkok)

4) Measures taken to conserve, use and promote knowledge of indigenous people with respect to ESD

The conservation, use and promotion of indigenous knowledge are considered an integral part of SD strategies for preserving diversity - both cultural and natural. Indigenous knowledge may hold some crucial clues for all of humanity in developing a world that is more sustainable. A part of the questionnaire used for this mid-Decade review chapter focussed on the measures countries have taken so far to conserve, use and promote indigenous knowledge. Although the number of countries reporting that measures are in place is limited in all regions, the ones that do have them in place seem to have a clear vision and a range of corresponding (policy and legislative) measures.

In the Europe and North America region, few countries have addressed this issue. Most of the countries do state that they put in place measures to conserve, use and promote knowledge of indigenous people by supporting activities in schools that revolve around local knowledge. In some cases, such as in Slovenia (Box 13), where several minority ethnic groups co-exist in the same territory, the government has designed an Education Strategy which lays out several objectives to include indigenous knowledge in the education system and to provide support for these minorities. There are also examples from a number of countries of informal learning that utilizes and generates local knowledge in communities.

Since 2004 the Government of Slovenia has invested considerable efforts to improve the situation of the Roma community and to achieve a higher level of inclusion of the Roma community in society [...].

[…]The legal basis for regulating the status of the Roma ethnic community in the Republic of Slovenia is Article 65 of the Constitution, which determines "The status and special rights of the Roma community living in Slovenia shall be regulated by law"[…].

[...]The Government is also aware that the area of education is particularly important. A strategy for a more successful inclusion of Roma in the system of care and education was therefore adopted in 2004. A more favourable method of financing pedagogic work applies for schools where Roma pupils have been enrolled. This means more teachers, smaller class numbers, additional funds for Roma pupils for costs in connection with school activities and excursions and for refunding school meals [...].

Box 13 Measures to improve the situation of the Roma community in Slovenia[70]

[69]Source: The Dutch Programme Learning for Sustainable Development. This is the focal point of the DESD in the Netherlands. The programme is available at: http://www.senternovem.nl/mmfiles/LvDo_programmabrochure_engelstalig_tcm24-290166.pdf

[70]Source: Europe and North America Regional Synthesis Report: http://portal.unesco.org/education/en/ev.phpURL_ID=27234&URL_DO=DO_TOPIC&URL_SECTION=201.html

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Although measures to promote knowledge of indigenous people with respect to ESD vary to a great extent from country to country in the Asia/Pacific region, there appears to be a common thread. Two notable aspects of these measures are shared by groups of countries: 1) the appreciation of indigenous knowledge as an asset for societal transformation towards sustainable development; and 2) underlining the ideal of indigenous "values" especially with regard to harmonious co-existence with nature. Approaches taken to harness these elements of indigenous knowledge range from integrating knowledge about national indigenous cultures into learning materials to safeguarding indigenous knowledge and "assets" though legal frameworks.

In the Pacific, one sub-regional initiative is reported among the Pacific Islands to strengthen indigenous knowledge content in educational curricula by using an interactive multimedia tool and materials developed to engage youth in content related to both sustainable development and cultural heritage (Box 14).

Indigenous Navigation in the Pacific is an ancient science that has come close to being lost forever in some parts of the Pacific. The "Indigenous Knowledge of Navigation in the Pacific" Curriculum, an interactive CD-ROM and Learner Resource Pack which supports it, have been developed by the UNESCO Local and Indigenous Knowledge Systems (LINKS)[71] programme. The aim of this voluntary addition to the timetables of schools, colleges and other learning institutions in the Pacific is to raise the profile of indigenous knowledge in the education system and thus strengthen the identity and pride of youth in their Pacific heritage. The curriculum includes interactive learning activities and materials and is designed to be taught alongside the UNESCO LINKS programme CD ROM 'The Canoe is the People' which provides a vast amount of information about the use of endemic woods and fibres for building canoes, sails and ropes, the reading of waves, stars and winds to navigate ocean pathways and the ongoing Pacific-wide revival of traditional non-instrument wayfaring.

The Secretary of Education, via the National Programme on Education for Autochthonous and Afro-West Indian ethnic groups of Honduras (PRONEEAH), has adopted an integral strategy with emphasis on the knowledge on and strengthening of the identity of each people and consequently of the national identity.

This has been possible through the processes and relations established between the State and the Indigenous and Afro-Honduran Federations. The opening of spaces for negotiation and consensus between these instances has contributed to the development of public and educational policies which aim to respond to the needs of education and the strengthening of the peoples' languages.

The institutionalization of an educational model that allows the autochthonous people to use their own linguistic and cultural resources still has to be concretized.

Another important measure that has been adopted is the training of 812 primary school teachers with a focus on intercultural bilingual education of the communities which uses the daily knowledge of its members. Furthermore, the Secretary of Education is covering needs with regard to access to and capacity building for these communities by granting new placements, opening new educational centres – formal and non-formal (through the Honduran Programme of Community Education) and continually training teachers in the use of didactic materials in indigenous languages and Spanish.

At the departmental level, the Departments for Education are coordinating the indigenous and Afro-Honduran federations, contracting the teachers, as well as supporting the educational centres. Each Department has a coordinator for intercultural and bilingual education.

Finally, another measure implemented is the standardization of the writing of the indigenous languages as well as the execution of ethnographic studies on eight of the ethnic peoples (Tawahka, Miskito, Garifunas, Pech, Lenca and Isleño).

Box 15 Some Honduras' efforts to protect and enhance indigenous linguistic and cultural resources (Source: LAC Regional Synthesis Report)

The LAC Regional Synthesis Report concludes that the issue of identity, the acknowledgement of cultural and ethnic diversity and the teaching of national languages have the potential to stimulate the reappraisal of cultural values and traditional knowledge.

[71]The LINKS project builds dialogue amongst traditional knowledge holders, natural and social scientists, resource managers and decision-makers to enhance biodiversity conservation and secure an active and equitable role for local communities in resource governance. For additional information go to: www.unesco.org/links

Some African countries participating in the mid-Decade review report a range of diverse measures in this area (see Table 11).

Country	Measures taken
Kenya	Sharing and developing narratives, cultural centres, writing, filming and recording events
Malawi	Capacity-building targeting the various indigenous groups, coming up with interventions that are locally suitable, promoting research and preservation of intangible and tangible cultural heritage, integrating of intangible and tangible heritage issues in curricula based on informed research.
Ethiopia	Government policy to conduct first cycle of education and literacy for adults in mother languages, to incorporate value education into the curriculum

Table 11 Measures taken to conserve, use and promote knowledge of indigenous people with respect to ESD (Source: African Regional Synthesis Reports)

5) Availability of ESD tools and materials

In all parts of the world, the production and dissemination of ESD materials is, in most cases, handled at a national/federal level, particularly when these materials are aimed at early childhood education and primary and secondary education. Depending on the national context, some materials are further adapted to meet local needs at the state and municipal level.

In many countries, where a national strategy is not yet in place and/or political support for ESD is weak, there appears to be limited government engagement for the development and dissemination of specific materials for ESD. Municipal authorities appear to be less involved in the development of ESD tools and material and when they are, they tend to focus on the lower education levels. In some countries, state and provincial (or cantonal in the case of Switzerland) governments are co-responsible for the creation of ESD tools and materials.

Most available ESD tools and materials are targeted towards formal education through primary, secondary and teacher education (for some examples from the LAC Region see Box 16). In general, the emergence of two kinds of material is evident: learning materials, both for formal and informal learning; and teacher/facilitator training materials for formal, informal and non-formal settings of education. In some countries, NGOs, the private sector and universities generate the majority of ESD-related materials. Many responding countries express the need to have ESD tools and materials available in local languages.

In some regions, there is a large number of actors that produce ESD-related materials. However, there is a need for better coordination of the development and branding of ESD materials. Some regions reported the concern that the pre-occupation with the development of tools, materials and guidelines might take away from the equally, if not more important, need to learn about processes of integrating materials into curricula and into non-formal and informal learning.

Colombia	states that the Ministry of Education through its EE Programme elaborates guiding documents to be used nation-wide and each province adapts the topics to the various educational levels and contexts.
Costa Rica	describes a partnership between the central government and private and non-governmental organizations devoted to the production of ESD-related educational materials and stresses those involving the environment, human rights, values, gender, violence prevention, substance abuse, etc.
Honduras	explains that textbooks, manuals, methodological guides, printed materials, brochures and magazines with sustainable development content are considered as tools, as they contribute to the strengthening of institutional capacities at the central and decentralized level.
Mexico	states that in primary education fostering knowledge, skills and attitudes related to EE is a priority, with the aim to promote SD. To this end, integrated first and second grade textbooks and third to sixth grade natural science textbooks – distributed free of charge, now include lessons on the environment. Environmental and natural science books designed for teachers also contain basic guidelines on these topics. Educational material that incorporates productive contents and projects in support of the DESD, have been elaborated for secondary education, particularly for the modalities Tele-secondary education and distance secondary education Programme for Adults.

Box 16 Availability of ESD materials and tools in formal education in some Latin American countries

In the Africa region, the situation is similar. Most countries have developed some ESD tools and materials that are available for primary and secondary levels of education. Tools are generally developed by government agencies and by universities.

In the Europe and North America region, all responding countries provide ESD tools and materials for one or another level or setting of education. A trend, which appears more prominent in this region, is the use of DVDs, CD-ROMS, simulation games and web-supported learning. In the other regions, the majority of countries provide ESD tools and materials for primary and secondary education. It is observed that few tools and materials are available for early childhood and further education.

6) The allocation of specific budgets for supporting ESD

In most countries across the world, the availability of public budgets and/or economic incentives is either non-existent or minimal at best. The process of internalizing ESD within national budget structures is still in the initial stages in most parts of the world. This observation stands out in sharp contrast to the apparent consensus that raising funds for ESD activities and projects is key to ensure the development and implementation of ESD.

Integrating ESD into national policies, development plans and frameworks is seen as crucial for engaging the private sector and the donor community. Countries are now beginning to take into account financing and budgeting for ESD across ministries by determining how ESD aligns with key documents across sectors in order to coordinate funding and programming at the national level.

It is unclear how the current world financial crisis will yet affect the allocation of specific budgets for ESD.

Conclusion

With regard to the availability of national policies and frameworks for ESD, it can be concluded that at the midpoint of the Decade, an impressive number of national coordinating bodies for ESD have been created around the globe. There is a tendency to integrate or link ESD to existing SD policies or SD-related policies; however, most SD policies do not explicitly refer to ESD.

Inter-ministerial cooperation with regard to ESD is reported by many countries but remains problematic as there is little experience in cross-boundary thinking among policy-makers who tend to be responsible for a very specific thematic area or topic.

In formal education, there are now good examples of ministries of education creating frameworks for the integration of ESD into formal education. This is mostly the case in primary and secondary education. The same trend is not apparent in early childhood education, technical and vocational education and higher education.

Specific policies that support informal and non-formal learning in the context of SD were not reported. This does not mean that they do not exist in some countries and regions that stress the importance of community participation and multi-stakeholder social learning.

In general, ESD funding remains inadequate at present.

Responding countries from all regions report that mechanisms are either in place or are in the process of being developed to support the conservation, use and promotion of indigenous knowledge with respect to ESD.

Despite an increase in the development of ESD tools and materials, there is still a lack of those specifically designed to implement ESD. The availability of ESD-specific methods and innovations in teaching and learning are also still scarce.

It is unclear whether the allocation of specific budgets for supporting ESD will increase in the near future given the current world financial crisis.

Chapter 6 **ESD in Formal Education**

Formal education reaches hundreds of children and young people across the globe. It is no surprise that when societies face grave challenges, schools are seen as key places to develop capacities in a structured environment to help address those challenges. Many schools around the world now also seek to address a wide range of issues, including health, poverty alleviation, environmental protection, traffic safety, climate change, biodiversity, peace and conflict.

Sustainable development needs to be added to an already overcrowded curriculum that must teach the basics of reading, writing and arithmetic. At the same time it can be seen as an integrative, cross-curricular theme that can bring together many of the single issues that schools are already expected to address. The mid-Decade review included a range of questions that tried to reveal the ways in which countries support the integration of ESD in the formal education system (early childhood education, primary education, secondary education, vocational education, teacher education, higher education and professional development).

ESD learning outcomes

Where ESD is already a part of the formal education system, in some cases because of a history of EE in the curriculum, a wide range of learning goals can be distinguished. The level of education dictates the differences in emphasis of the learning goals. Frequently mentioned learning goals include: acting with respect for others, acting with responsibility locally and globally, critical thinking, understanding complexity, the capacity to imagine the future, understanding inter-disciplinary relations, responsible behaviour and the ability to identify and clarify values. Several of them can be seen as generic, in the sense that they are as relevant to SD as they are to other realms of life and need to be developed by all citizens.

Again (see also Chapter 3) there are differences between countries in the extent to which the focus lies on more instrumental learning goals (e.g., developing responsible behaviour) or on more emancipatory learning goals (e.g., critical thinking and participating in democratic decision-making). These differences may reflect the historical and political context of a particular country.

The MEEG questionnaire used in the mid-Decade review provides 14 learning outcomes for all levels of education:

- **Critical reflective thinking**
- **Understanding complexity/systemic thinking**
- **Futures thinking**
- **Planning and managing change**
- **Understanding inter-relationships across disciplines**
- **Applying learning in a variety of life-wide contexts**
- **Decision-making, including in uncertain situations**
- **Dealing with crises and risks**
- **Acting with responsibility locally and globally**
- **Ability to identify and clarify values**
- **Acting with respect for others**
- **Identifying stakeholders and their interests**
- **Participating in democratic decision-making**
- **Negotiating and consensus building**

Responding countries indicated that most of the 14 outcomes were covered at the level of primary and secondary education but less so at the level of professional education, teacher education and higher education and hardly at all at the level of early childhood education. The latter finding seems to confirm that in many parts of the world the role of early childhood education in developing and implementing ESD is not always clear and therefore hardly emphasized.

Presence of specific sustainable development (SD) themes in curricula

Key content themes which are emphasized within ESD-related frameworks all over the world are the more traditional environmental ones such as: health, water, natural resource management (water, soil, mineral and fossil fuel) and loss of biodiversity. Key themes which are emphasized less at present in curricula include: the Millennium Development Goals, disaster prevention and corporate social responsibility. Roughly speaking, countries reporting in the wealthier regions or wealthier parts of a region appear less preoccupied with addressing the socio-cultural dimension of SD in their curricula whereas countries in poorer regions or poorer parts of regions appear to stress this dimension more, including topics like peace, citizenship, ethics, equality, poverty reduction and cultural diversity.

Two SD focal areas in curricula emerge from the review of the regional reports:

- a focus on an understanding of the causes and impacts of key issues, including their inter-linkages – economic, environmental, social and cultural;
- a focus on capacity development for addressing key issues at both the community and individual level.

With regard to the latter, some countries that appear to stress the emancipatory aspect of ESD identified additional learning outcomes by referring to so-called 'soft skills' such as empathy, collaboration and utilising diversity.

Approaches to ESD

Depending on each country's historical background and educational perspectives, various approaches or strategies exist around the world to integrate ESD into formal education. Approaches vary from more conventional (i.e. conforming to existing systems and structures) to more innovative ones (in the sense of breaking with existing systems and structures).

At the more conventional end of the continuum, we find 'integrating ESD and SD issues in existing school subjects' and at the innovative end we find 'adopting a 'whole school' approach to ESD and SD issues'. Box 17 provides an example of a 'whole school' approach as outlined by the Eco-Schools programme of the Foundation of Environmental Education.[72]

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[72]Foundation for Environmental Education (FEE) is a non-governmental and non-profit organization aiming to promote sustainable development through environmental education (formal school education, training of staff and general awareness-raising). For more information, please visit: www.fee-international.org

FEE Eco-schools incorporate seven elements for schools to adopt as a methodology. These elements have been designed to be the core of the Eco-schools process, yet the structure is flexible enough to be adopted in any country and at any level of schools' previous environmental achievement. Student involvement throughout the process is an integral factor.

Establishment of the Eco-School Committee: The core of the *Eco-schools* process, the Committee organizes and directs *Eco-schools* activities and consists of the stakeholders from the school environment, namely pupils, teachers, cleaners, caretakers, parents and governors. The sense of democracy involved and the motivation in resolving initiatives brought forth by the students themselves are products of this process.

Environmental review: Work commences with a review or assessment of the environmental impact of the school. Pupils are involved in this work, ranging from assessing the level of litter on school grounds to checking infrastructure for inefficiencies.

Action Plan: The information from the review is used to identify priority areas and create an action plan, setting achievable and realistic targets and deadlines to improve environmental performance on specific issues.

Monitoring and evaluation: Ensures that progress towards targets is followed, that any necessary changes are made to the action plan and that achievement is celebrated. It further ensures that environmental education and care is an on-going process in the school.

Curriculum work: Classroom study of themes such as energy, water and waste are undertaken by most students. The whole school should be involved in practical initiatives, for example, saving water, recycling materials and preventing litter. Where environment and sustainable education is not part of the national/regional curriculum, recommendations are made as to how this can be incorporated.

Informing and involving: This directly brings Local Agenda 21 into schools, as local authorities, businesses and the wider communities are involved in the *Eco-schools* process. *Eco-schools* are encouraged to make ties with external organizations in order to benefit from their experience and expertise.

Eco-code: Each school produces its own 'Eco-code' or statements of intent, outlining what the students are striving to achieve.

Box 17 Foundation for Environmental Education's Eco-schools programme (Adapted from: FEE International Secretariat (2004)

In between we can find approaches such as 'the creation of stand-alone ESD projects' and adopting 'a cross-curricular approach to ESD implementation'. Addressing ESD through existing subjects is the most common approach that different countries use while the execution of stand-alone projects is the least common.

The so-called 'whole-school approach' appears on the rise.[73] Many countries in all the regions at least report the existence of this approach that seeks to address sustainability not only in teaching and learning but also in school's operations and linkages with the wider community. Whole-school approaches in various parts of the world can be seen as an attempt by schools to implement an integrative approach towards ESD.

Teacher training and educators' professional development in ESD

In those countries that include ESD in teacher education and educators' professional development, ESD is mainly addressed through existing subjects but occasionally also in a cross-curriculum approach, again mostly in the context of primary and secondary education. However, analysis of the country questionnaires used for this review shows that ESD professional development practices are also increasingly common in other levels of education, primarily in higher and vocational education. The measures adopted range from national seminars on ESD to training workshops, regional seminars, production of guides, to the launching of pilot projects and refresher courses. These activities often depend on the existence of teacher training institutes and universities that offer training courses, as well as the participation of teachers/instructors in post-graduate courses that cover some aspects related to ESD.

The extent to which ESD has been integrated into teacher education programmes is unclear as: 1) limited knowledge of ESD at all levels is still a fundamental challenge and, in many cases, ESD has yet to move beyond a focus on the environment in many training programmes; 2) ESD is still often carried out by a limited number of teacher training institutions at the national level and needs to be further

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[73]See for instance Henderson and Tilbury's 2004 report: Whole-school approaches to sustainability: An international review of whole-school sustainability programmes.
This report can be found at: http://www.aries.mq.edu.au/pdf/international_review.pdf

mainstreamed; and 3) more policy support is needed to guide ESD in teacher education and professional development.

In many countries, capacity-building for teacher education is in high demand, including training on pedagogy and processes for reorienting curricula and integrating ESD content (Box 18). Especially in poorer countries where the most significant challenge in moving ESD forward is a lack of human resources, capacity-building for ESD is much needed. In regions with a strong EE infrastructure, it is suggested that this structure can be utilized to advance professional development in ESD.

From 2005 and onwards SPARE (a school project for application of energy resources) conducted several trainings for 133 teachers in 100 schools from different regions of Georgia. SPARE attracts youth energy efficiency activities and promotes sustainable energy. The basic idea of SPARE is to transform a global concern into practical school activities.

The International Committee of the Red Cross organizes seminars for authors, working on school textbooks, to highlight international humanitarian law.

Box 18 Two examples of ESD professional development in Georgia (Source: Europe-North America Synthesis Report)

Although the review did not yield much information about this, there are signs that the rise of ESD in education is leading to innovation in teaching and learning. In some cases, these new forms of learning were already commonplace in EE (e.g. systems thinking, discovery learning, community problem-solving) but in some cases they were not (e.g. social learning, transformative learning, context-rich learning using authentic community issues). Even though, as reported earlier, the 'whole school' approach is on the rise in primary and secondary education, it is hardly mentioned in the context of teacher education and professional development. The emergence of these new forms of learning is likely to have implications for teacher education and educator's professional development in the years to come.

Another phenomenon that may affect future teacher training and the professional development of educators and, indeed, school administrators is the rise of certification, accreditation and reward systems for encouraging good ESD practices in education although these mostly appear to focus on environmental management and rewarding environmentally sound behaviour and less on re-orienting curricula, teaching and learning towards sustainability.

Training for educational leaders and administrators

The Regional Synthesis Reports[74] suggest that training for leaders and administrators is most common in the context of primary and secondary education. Training approaches may vary from workshops, international forums, training programmes and distance learning courses to annual in-service seminars. The training of leaders and administrators is usually organized by higher education institutes, but there are also examples of trainings initiated and supported by ministries and NGOs. ESD-related curricular themes covered include: risk and disaster management, creating a culture of peace and diversity, environmental education, human rights, inter-culturalism, citizenship, gender equality and capacity-building for SD. In some regions, principals and administrators appear not to be included among the target groups of ESD professional development training. This is seen by some as an indication that ESD is probably not being prioritized, or that it is yet to fully permeate the education systems.

Some examples of programmes and strategies for addressing ESD professional development of leaders and administrators are provided in Box 19.

Cyprus: The Cyprus Pedagogical Institute, which is the responsible body for the in-service teacher training and also for leaders and administrators introduced to its training courses for administrators and leaders specific subjects for Leadership and Sustainable Development. Particularly, leaders and administrators from all the educational levels attend an 8-hour seminar Creating the Sustainable School: guidelines for promoting educational sustainable agenda in school.

France: Those responsible in the educational system on a national, academic and institution level, must be trained to establish the ESD dynamics and the display of the different steps to make in E3D or Agenda 21. . *Institut des hautes études du Développement Durable* (IHEDD) is being established to create awareness to leaders of all sectors of the country.

Germany: Some programmes in professional education sponsored by the Federal Ministry of Education and Research and coordinated by the Federal Institute for Vocational Education and Training provide courses in which ESD is seen as a management strategy for enterprises and institutions and there are also courses for managers working in the field of renewable energies, renewable raw materials, sustainable building (constructing and renovating) among others.

Box 19 European examples of programmes and strategies for addressing ESD professional development of leaders and administrators (Source: European – North America Regional Synthesis Report)

[74]The Regional Synthesis Reports can be found at: http://portal.unesco.org/education/en/ev.phpURL_ID=27234&URL_DO=DO_TOPIC&URL_SECTION=201.html

Vocational education and workplace-based ESD

Technical and Vocational Education and Training (TVET), or education for the world of work, is one of the providers of learning and life-skills programmes for young people and adults. TVET is essential to support inclusive growth and the expansion of skills and competencies necessary in rapidly changing labour markets. TVET is seen as one of the solutions to poverty reduction and a support to socio-economic development. Apart from technical knowledge and the capacity to work productively in teams, people must now have a preparation which goes beyond basic literacy and numeracy to include both vocational and social skills, together with values which help to build harmonious societies. Seen through the lens of TVET, ESD is seen as a necessary and facilitating factor to ensure sustainable livelihoods and occupations. Integrating ESD into TVET is essential to develop knowledge and skills for employability which supports economic development and enables people to improve the quality of their daily lives.

Vocational education and workplace-based SD is provided by a number of stakeholders, including UN agencies, international cooperation agencies, financial institutions and NGOs. The survey used as a part of this mid-Decade review did not specifically ask about progress and challenges in the context of ESD in vocational education. Therefore, the Regional Synthesis Reports contained no information about this emerging area, although some references were made to the rise of corporate social responsibility and the need for higher and vocational education to respond. The UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training (UNESCO-UNEVOC) assists UNESCO's 193 member states to not only strengthen and upgrade their TVET systems but also to align them with the principles of sustainable development.[75] To this end, the UNESCO-UNEVOC International Centre emphasizes TVET for sustainable development through its programme activities and publications and as part of the Decade of Education for Sustainable Development.

For example, the International Labour Organization (ILO),[76] Gesellschaft für Technische Zusammenarbeit (GTZ),[77] the German agency for international cooperation in the field of sustainable development, the Asian Development Bank,[78] the African Development Bank,[79] InWEnt Capacity Building International,[80] Germany, the World Business Council for Sustainable Development[81] and the European Commission[82] are all active players in the development and promotion of TVET.

The stakeholders mentioned above collaborate with UNESCO-UNEVOC for capacity-building, research and training, joint project development and implementation and networking related to developing and promoting skills development and competencies.[83] However, there is a need to reinforce the partnerships with these stakeholders to strengthen UNESCO's response to TVET in Member States.

UNEVOC has a three-pronged approach to promoting ESD:

1. **ESD is integrated into TVET activities and programmes which in turn contribute to Education for All (EFA) and lifelong learning. TVET contributes particularly to EFA goals 3 and 6:**

- Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills programmes (EFA goal 3);
- Improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills (EFA goal 6).

2. **ESD themes run through all activities and programmes that UNEVOC conducts through its networks in 165 countries.**
3. **ESD as a stand alone theme whereby there is an emphasis on TVET through programme activities and publications as part of the United Nations Decade of Education for Sustainable Development (DESD).**

[75] For more information about UNEVOC refer to: www.unevoc.unesco.org

[76] http://www.ilo/org

[77] http://www.gtz.de

[78] http://www.adb.org/

[79] http://www.afdb.org

[80] http://www.inwent.org

[81] http://www.wbcsd.org

[82] http://ec.europa.eu/

[83] UNEVOC and Springer, with support of Japanese Funds-in-Trust, recently published a comprehensive overview of the way countries, education systems and institutions have responded to the call for an integration of learning for work, citizenship and sustainability: Fien, J, Maclean, R. & Park, M. (Eds.) (2009) Work, Learning and Sustainable Development: Opportunities and Challenges Series: Technical and Vocational Education and Training: Issues, Concerns and Prospects , Vol. 8 Frankfurt: Springer Verlag.

Box 20 shows an example of UNEVOC's efforts to reach marginalized groups in the least developed countries.

UNESCO-UNEVOC has developed a "Skills Development Package for Learning and Working". The aim of the Package is to help facilitate the organization and implementation of awareness and motivation campaigns for marginalized groups in least developed countries. The idea behind the Package is to offer a platform and produce an environment to motivate people living in adverse economic conditions to enrol in TVET courses and take up self-employment activities in order to improve their economic situation.

The target group for the Skills Development Package for Learning and Working are marginalized groups in least developed countries. These are groups that have had no access to regular formal schooling and who are also excluded from participating in economic and social life.

The backbone of the Skills Development Package for Learning and Working is a set of DVDs complemented by a series of supporting documents. Examples include: Out-of-school and out-of-work youth, rural and remote region populations, women and girls, ethnic and racial minorities, demobilized soldiers.

Box 20 UNESCO-UNEVOC's Skills Development Package for Learning and Working[84]

Conclusion

Many governments from the responding countries have committed themselves to supporting the inclusion of ESD in formal education, most notably in primary and secondary education. This inclusion tends to lead to a re-design of curricula, teaching and learning and indeed, the way an entire educational institution operates (e.g., in the case of a 'whole school' approach).

A more common response is to make minor adjustments to the existing system, sometimes using existing facilities that have been created in the past for accommodating EE, to create more space for sustainability issues. Occasionally, the inclusion of ESD also leads to the adoption of new approaches to learning such as cross-curricular and interdisciplinary teaching and learning. Few countries report the support of ESD in early childhood education. The situation is more positive for teacher education, higher education and technical and vocational education and training. With regard to the latter, we are witnessing a significant increase in interest in integrating forms of ESD into vocational education and workplace-learning as a number of stakeholders including UN agencies, international cooperation agencies, financial institutions and NGOs are currently promoting such integration.

[84]http://www.unesco.unevoc.org

Chapter 7 Structures in Informal and Non-Formal Education

Perhaps the most ESD activity around the world is generated not by formal government organizations but by NGOs that sometimes work with formal education systems but more often in non-formal and informal learning settings. Informal and non-formal education refers to the collective learning that takes place outside of formal educational systems in everyday life, for instance, in the context of families, work-places, clubs, web-based communities, etc. Non-formal learning can be more or less structured and range from the learning occurring in study groups, non-governmental organizations, social movements, youth clubs, churches, folk high schools etc. Informal and non-formal education in all forms is characterized by being voluntary, by active participation and by the reciprocal exchange of ideas. They are an important part of the concept of lifelong learning and occur everywhere, even at times within formal education and school systems.[85]

The mid-Decade review does not focus on the type of activities that actually take place or on their quality but rather on the structures that countries and international organizations have created to advance ESD in informal and non-formal learning. The review does so by analyzing the self-reported contributions of a mix of international stakeholder and civil society networks that are active in supporting ESD in non-formal and informal settings: Asia/Pacific Cultural Centre for UNESCO, Earth Charter International, IUCN's Commission on Education & Communication, UN Inter-Agency Committee for the DESD, United Nations University-Institute of Advanced Studies (UNU-IAS), Youth Action for Change and the CSD Education Caucus (see also Chapter 3).

These networks were consulted as a part of the Multi-stakeholder Consultation Process (MSCP) designed for this review (see Chapter 1). Additional information comes from the Regional Synthesis Reports based on the MEEG questionnaire. This questionnaire included specific questions about ESD in formal and non-formal education, although the responses were generally rather limited primarily because the respondents themselves were unable to consult with NGOs active in their own countries.

[85]This definition can be found in the non-formal and informal learning section of the "The Gothenburg Recommendations on Education for Sustainable Development" which were adopted in Gothenburg, Sweden in November 2008. The declaration can be downloaded from: http://www.unesco-sweden.org/Bazment/Alias/Files/?Goteborgsrekommendationerna

Role of international multi-stakeholder and civil society networks

All consulted networks have participated in and continue to participate in consultations related to ESD and SD at different levels. Some have participated in consultations to develop specific ESD/SD-related strategies at global and regional levels and mechanisms like designing indicator processes for ESD. Some have been involved in consultations at national and local levels and in consultations electronically over a specific issue like climate change.

The seven international multi-stakeholder and civil society networks that contributed to the mid-Decade review have all adopted measures and/or policies to promote and advocate SD and some have specific structures in place to promote and advocate SD. The IUCN, for instance, developed a strategic plan that determines its contribution to SD over a period of four years while the Earth Charter International has an organizational policy that favours decentralized empowerment. UN-Habitat which is a part of the IAC/DESD has included ESD as a part of its work programme for the biennia 2008-2009 and 2010-2011.

The audiences that the stakeholder networks seek to work with or affect are varied. However, most stakeholder networks are engaged in formal education and work closely with primary and secondary school teachers and students; they also work with members of the higher education community.

In non-formal and informal settings, the beneficiaries of stakeholder network activities include out-of-school children, underprivileged populations and people with disabilities.

Other actors like civil society organizations, including local communities and NGOs, UN agencies and government ministries also benefit from ESD-related stakeholder network activities.

All the consulted networks indicated that some form of funding for measures for the promotion and advocacy of SD is available. UNDP, the European Commission, Japanese-Funds-in-Trust, funds from the Japanese Ministry of Environment, donor governments, foundations and private donors have been cited as sources of funding. Apart from these, the respondents have also indicated use of their own funds for the promotion and advocacy of SD-related measures.

ESD content and process support

The consulted networks engage in a wide range of activities that support ESD development in formal but also in informal and non-formal setting including:

- Running conferences and organizing workshops
- Producing educational materials
- Training staff for public awareness, advocacy and lobbying
- Working on research and capacity-building to integrate ESD into curricula at all levels of education, including non-formal education
- Organizing events to promote ESD and DESD goals.

In non-formal settings, the networks primarily contribute to: workshops and courses for students which build upon knowledge/skills acquired through the formal education channel; out-of-school environment, health and hygiene, peace education programmes; and community empowerment programmes. In informal settings, they are engaged in capacity-building through meetings, dialogue, developing peer learning mechanisms, leadership programmes for government officials, teacher trainers, NGOs and the private sector, partnering with local media to promote key messages to other stakeholders in the community. Tools and mechanisms being currently used for capacity-building and training include: teacher training workshops, printed resources on ESD, non-formal education trainers courses, training manuals, use of ICTs, on-line toolkits, seminars and conferences, public campaigns, flexible programmes in the field of formal and non-formal learning, accredited trainings, teacher training processes based on the systemic framework for sustainability and peer learning.

Most consulted networks have created a number of ESD support tools that are available for everybody through their websites. IAC-DESD member UNICEF, for instance, has developed on-line games, a three-month e-learning course and educational software that can be downloaded free of charge. The Earth Charter has online courses for youth leadership.[86] All respondents communicate news and updates on their activities through their websites.

Networks and partnerships

Most consulted stakeholder networks work with regional and local partners and stakeholders on ESD-related issues. Developing common goals, missions and plans is seen as one of the ways of achieving a sense of ownership of ESD development and implementation.

[86]The Earth Charter Youth Initiative (ECYI) calls itself 'a bold, diverse network convinced that urgent action is required to bring about a just, sustainable and peaceful world.' The ECYI holds that sustainability must be understood and implemented in a holistic and integrated manner, inclusive of ecological integrity, social and economic justice and democracy, nonviolence and peace. Information about the ECYI and its on-line youth leadership courses can be found via: http://www.earthcharterinaction.org/youth/

All consulted stakeholder networks belong to or partner with other networks. Some are members of university networks, regional commissions (UNECE, ASEAN), specialised DESD networks and consortia of organizations and steering committees. Members of the stakeholder networks are also members of different forums and steering committees in individual capacities.

The networked Regional Centres of Expertise, supported by UNU-IAS, may serve as an example of how different local groups in society, who do not ordinarily work together but are bound by mutual sustainability issues, find themselves working creatively towards their improvement (Box 21)

The Regional Centre of Expertise (RCE) concept was developed by United Nations University to deliver education for sustainable development (ESD) to local and regional communities. A network of RCEs worldwide constitutes the global Learning Space for Sustainable Development. RCEs aspire to achieve the goals of UN Decade of Education for Sustainable Development by translating its global objectives into the context of the local communities in which they operate. Key elements of RCEs include governance, that is, addressing issues of management and leadership; collaboration with various partners and other RCEs; and research and development. RCEs also aim at transforming current education to be in line with DESD goals.

Box 21 RCEs as an example of regionally networked ESD[87]

Financial and technical support

All consulted stakeholder networks provide either financial or technical support to research and innovation-related projects and programmes in ESD. For example, IUCN has an innovation fund to which projects and programmes can apply.[88] UNU-IAS provides funding to programmes, modules testing, funding of experts and resource persons as well as trainees. Others mentioned financial support to projects but did not specify in what areas and how. UNICEF and the UNU-IAS cite examples of development of materials, concepts and strategies for delivery.

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Technical support is also provided internally to staff members working for the networks. All networks participating in the review use ICTs for employee awareness and training. The intranets of these networks have regular news and updates on SD. Online resources are available for employee training as well as online discussions and forums (e.g., Earth Charter, IUCN) that enable employees as well as non-employees to participate in discussions. CDs and video materials are also made available to employees for training.

Monitoring and evaluation

All consulted stakeholder networks report that they have mechanisms in place to monitor and evaluate their ESD-related activities. The Earth Charter, for instance, monitors and evaluates its ESD-related activities through studies using qualitative methods. The Youth Action for Change sends out questionnaires to collect feedback and carries out analysis of its project outcomes. UNICEF and UN-Habitat carry out self-evaluation and,impact evaluations of programmes as well as internal evaluations. The IUCN has adopted a monitoring and evaluation process while the ACCU has developed a framework for evaluation with methodologies and indicators to evaluate community-based ESD projects (Box 22). The UNU-IAS publishes an annual report on its ESD activities which is based on a well-developed M&E process.

ACCU held a workshop titled *"Evaluation Approaches from ESD perspectives in Asia and the Pacific"* in Tokyo and Miyagi, Japan from 23-28 June 2008 in co-operation with the Miyagi University of Education with the support of Japanese National Commission for UNESCO, UNESCO Bangkok, UNU-IAS and the RCE Greater Sendai Area. A group of experts and representatives of the Centres of Excellence (COEs) in ESD developed a framework of indicators and methodologies for evaluating community-based ESD projects, notably the *ACCU-UNESCO Asia-Pacific Innovation Programme for ESD.* The overall concept of of the evaluation venture was summarised as "HOPE": holistic, participatory and empowering for all stakeholders involved in the ESD projects.

Box 22: Monitoring and evaluation: an example from ACCU-UNESCO[89]

In addition, most consulted stakeholder networks publish annual reports of their activities. These reports are in most cases available online. The reports go through an expert review before being published.

[87]At the beginning of 2009 UNU acknowledged sixty-one Regional Centres of Expertise (RCE). More information about the Regional Centres of Expertise and their location can be found at: www.ias.unu.edu/sub_page.aspx?catID=108&ddlID=183

[88]Use of this Innovation Fund is based on an integrated approach across IUCN's programmes (including regional, global thematic and commission programmes) and clear outputs that are scientifically credible, can be readily communicated to key audiences and have strong potential to attract further investment by donors and partners. For more information go to: www.iucn.org/about/work/global_programme/innovation/

[89]The overall objective of the Innovation Programme of ACCU-UNESCO is to initiate and support projects that will serve as good examples for the implementation and promotion of Education for Sustainable Development (ESD) in the Asia-Pacific region. More information can be found at: www.accu.or.jp/esd/projects/ip/index.html

Obstacles

The seven stakeholder and civil society networks that responded to the MSCP questionnaire listed a number of common obstacles and challenges in implementing and promoting ESD, some of which apply to formal education, others to non-formal and informal education and others to all three. These obstacles include:

- Lack of clarity on the difference between ESD and EE.
- Lack of methodological information to develop ESD-related processes.
- Lack of networks of educators for sustainability to facilitate exchange of knowledge and ESD-related experiences.
- Funding for ESD.
- Perception of ESD as being too formal education-centric.
- Difficulties in co-ordinating with governments on ESD-related issues, especially those related to the social and cultural domains.
- Lack of public awareness regarding sustainable development.
- Difficulties in translating public awareness into behavioural change.
- Lack of teachers who are trained for ESD.

National support structures for ESD in non-formal and informal education

The country questionnaires used for the mid-Decade review did yield some insight into support structures created at national levels. The following indicator-areas are considered: 1) the availability of public funds for supporting such learning, 2) the presence of guidelines or other forms of non-financial support provided by public agencies to non-formal and informal ESD, 3) target groups of ESD initiatives in informal and non-formal learning contexts and 4) additional measures taken to support non-formal and informal education in ESD. Each of them will be highlighted.

Availability of public funds

National governments, followed by NGOs and news media, appear to be the main channels for distributing public funds for ESD in non-formal and informal learning contexts but there are some regional differences. In most regions, the role of municipal government, faith-based groups and organized labour is very limited as distributing agents of public funds for the purposes of developing public awareness and understanding of SD. This may also be a problem of inadequate data, as there are many ESD programmes going on at local district levels in various countries that may not have been captured. An additional explanation might be that funds allocated for local initiatives in the Africa, Latin America and the Caribbean and Asia-Pacific regions are often donor-sourced, as some countries indicated that they have other distributing agents besides the ones indicated in the questionnaire.

In the Europe and North America region, on the other hand, most responding countries indicate that they invest public funds in non-formal and informal ESD activities not only through the national government but also through NGOs, the private sector and educational institutions that also play a role in non-formal and informal learning. Some examples from the region can be found in Box 23.

Cyprus: The government established the governmental network of Environmental Education Centres, attempting to connect formal and non-formal education in providing ESD effectively in the educational system. Educational institutions such as the Cyprus Pedagogical Institute are funding experiential training courses attempting to introduce educators to methods and approaches that will help them to use outdoor settings as an important educational-learning tool in sustainable issues. Finally, the private sector and NGOs are funding activities that have developed in cooperation with the government and educational institutions, such as events in local communities, seminars and outdoor projects that are based on non-formal education.

Scotland: Within the UK, the Scottish Government funds a range of activities on ESD primarily through Government, Local Government, NGOs and educational institutions (although not exclusively). For example, the Scottish Government funds the 'Scottish Sustainable Development Forum' which advocates sustainable development and is a focus for thinking and action in Scotland in pursuit of a sustainable future.

Box 23 Examples of public ESD funding in two European countries[90]

Non-financial support provided by public agencies to non-formal and informal ESD

The provision of guidelines and forms of non-financial support follows a similar pattern as above: the national government and NGOs play a key role in creating such provisions but now the role of educational institutions

[90]Source: European – North America Regional Synthesis Report: http://portal.unesco.org/education/en/ev.phpURL_ID=27234&URL_DO=DO_TOPIC&URL_SECTION=201.html

is emphasized as well. Again, regional differences emerge, with countries in Africa reporting that very little effort is made by the government in developing public awareness and understanding of SD through non-formal and informal learning. Most of this support comes from donor organizations and from stakeholder and civil society networks such as those described earlier in this chapter. In the Latin America and the Caribbean region, most of the responding countries stress the key role of NGOs and the media. State and provincial governments as well as municipal authorities are also frequently mentioned as playing an important role. Here, like elsewhere, the private sector, labour unions, regional committees and faith-based groups lag behind in providing guidelines and other non-financial forms of ESD support in informal and non-formal learning settings. The situation in the Europe and North America region is remarkably similar.

Target groups of ESD initiatives in informal and non-formal learning contexts

In most countries, ESD initiatives in informal and non-formal learning contexts target out-of-school youth and adults. In some countries the economically under-privileged or the poor are considered specific target groups. Visitors of recreational centres (parks, museums botanical gardens), young people and other groups are also mentioned. Box 24 lists some of the target groups identified by some of the responding countries in the Latin America and the Caribbean region.

Colombia	Teachers, trainers and community leaders for the development of environmental school projects (PRAE); delegates of institutions which are part of the technical inter-institutional committees on environmental education (CIDEA); technicians.
Costa Rica	National population, in topics related to the environment, gender, health, transparency, values, sexual education, human rights, etc.
Cuba	Children, students and youth, rural women, populations of rural and mountainous areas and coastal ecosystems.
Honduras	Children, youth and adults
Peru	Children, youth and young adults, families and the community in general

Box 24 Examples of target groups of ESD initiatives in informal and non-formal learning contexts in Latin America[91]

Additional measures to support non-formal and informal education in ESD

Additional measures taken to support non-formal and informal education vary in type and audience. Among some countries, these focus on promoting cooperation between governmental organizations and NGOs, such as youth organizations, farmers' organizations/associations or women's groups. Other measures include the production of information material on ESD for public distribution.

At regional and sub-regional levels in Asia-Pacific, for instance, youth initiatives are beginning to emerge rapidly in an effort to engage young people in discussions, activities and projects for sustainable development through retreats, conferences, contests and online forums. Such initiatives are conducted by NGOs, the private sector, government, universities and intergovernmental organizations. Table 13 provides a number of additional support mechanisms in place in some African countries.

Country	Additional support
Botswana	Public meetings, radio programmes, TV advertising and national commemorating days.
Ethiopia	Programmes focussing on literacy, intensive training towards development, further education.
Malawi	Exchange visits to places with ESD projects/activities. Stakeholder consultations through organizations such as Technical Education and Vocational Training Authority (TEVETA) and the Malawi Entrepreneurs Development Institute (MEDI) among others.
Kenya	Revised and increased funding for non-formal institutions for ESD-related issues.
Central African Republic	Sensitization campaigns by NGOs in the framework of deforestation-related issues.
South Africa	ESD programmes such as those provided by the Department of Water Affairs and Tourism, the Expanded Public Works Programme and the Department of Health (amongst others).

Table 13. Additional ESD support for non-formal and informal education in some African countries

[91]Source: LAC Regional Synthesis Report: http://portal.unesco.org/education/en/ev.phpURL_ID=27234&URL_DO=DO_TOPIC&URL_SECTION=201.html

Again, participating countries in the Latin America and the Caribbean region emphasize the role of the media. Cuba, for instance, reports the creation of two educational television channels and provincial tele-centres but also the organization of university courses for all. Honduras refers to the development of educational radio and television programmes. Peru also mentions the role of its National Environmental Commissions (CAR) and local cultural centres.

In the Europe and North America region, a wide range of additional measures are in place to address ESD in non-formal and informal education: seminars and eco-conferences; dialogues with NGOs and the media sector; lessons for school children; awareness-raising campaigns; TV and radio programmes; documentary films, promotion videos and TV advertisements; video, animation and cartoon films; excursions; interpretation books, road posters, map-collages for tourists; magazines, leaflets, flyers, booklets, advertising banners and posters; photo and drawing exhibitions; story-telling for children; and special websites.

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Conclusion

Based on the review of the contribution of the seven international networks and civil society organizations and the analysis of the country questionnaires, it can be concluded that ESD in non-formal and informal learning is not just on the agenda in many parts of the world but is also actively supported by a wide range of financial and non-financial provisions. It is impossible to say at this point, however, whether both the volume and the quality of support are adequate enough to meaningfully tap into the seemingly infinite possibilities for ESD-related learning in non-formal and informal settings.

Little information is available about the amount of money that is allocated to ESD in informal and non-formal education. Similarly, there is not enough known about the way in which the many freely provided resources both in printed and in digital form are used. Information is also needed about which groups use these resources and in what numbers.

Furthermore, the promotion of ESD in informal and non-formal settings seems to demand new ways of distributing funding to NGOs, faith-based groups, civil society organizations, stakeholder networks and so on who wish to develop ESD in semi-structured or non-structured learning environments that in principle cannot be controlled or managed. This may have consequences not just for the way such money is distributed but also for the way of determining whether such money is spent effectively and efficiently as the impact of spending on ESD in informal and non-formal settings is not easily measured.

Chapter 8 **ESD Research and Development**

Research and innovation comprise one of the seven strategies recommended in the IIS to move the DESD forward. UNESCO has recognized research as an essential component of success for the DESD.

ESD research could focus on a range of areas including:[92]

- Clarifying the concepts (e.g. defining and re-defining ESD and ESD research as they evolve)
- Raising awareness (e.g. what are good practices?)
- Analysis of policy (e.g. which educational policies promote or thwart ESD?)
- Analysis of curriculum (e.g. identify current threads of sustainability in the curriculum)
- Methods for building capacity to undertake research related to ESD (e.g. needs assessments of practitioners and researchers)
- Evaluation of practices (e.g. identify good practices for the eventual development of case studies)
- Learning (citizens of the future must learn their way to a more sustainable future. Therefore, research on learning is crucial for ESD.)

To what extent are there mechanisms and structures in place that support ESD research and development? In response, the following indicator areas, identified in the GMEF and used in the country questionnaires, will be presented: availability of national funding for ESD R&D, availability of post-graduate training and research programmes, availability of scholarships, availability of financial support for innovation and capacity-building in ESD practice, availability of ESD quality assessment opportunities, availability of existing research and evaluation initiatives and finally, the dissemination of ESD research.

The information about these indicator areas is limited. This is partly because ESD research and development is still in its infancy and simply does not take place in many of the countries responding to the mid-Decade review.

Availability of national funding for ESD research and development

From the responses to the M&E questionnaire, it is clear that there are big differences between regions, with more than half of the countries in the Arab region and Europe identifying specific funds for ESD R&D, while the Latin America and the Caribbean, Africa and Asia-Pacific regions reporting that such funding is marginal at best. At the same time, it must be said that some countries find it hard to specify the amount of funding in part because it is not clear what kind of R&D funds can be labelled as ESD R&D financial support.

[92] See also: McKeown, R. (2007). Setting the Stage for a Strategic Research Agenda for the UNDESD: A Joint UNU-UNESCO Workshop. Journal of Education for Sustainable Development 1(1) 91-96

As the questionnaires were sent to individual country government representatives, a potentially large sum of ESD R&D funding made available through inter-governmental organizations (e.g., the European Union, the World Bank) and Foundations (e.g., Windrock Foundation, Gates Foundation, Rockefeller Foundation) and multi-stakeholder networks (e.g., IUCN) was not captured through the survey.

ESD scholarships and post-graduate training and research programmes

The number of graduate courses at the MSc and PhD level that focus on ESD is rather limited, although in all regions there are countries that provide both. Whether a country indicates that there are PhD or MSc programmes available depends, to a large extent, on how an ESD degree is defined. Some countries consider degrees in environmental studies or biodiversity conservation or integrated water management to be ESD or ESD-related degrees, others do not. Some only count those degrees that have ESD in the title or degrees that centre on learning and education in the context of sustainable development. Some count a Masters or PhD degree in environmental education as an ESD degree, whereas others do not. A better inventory is needed to provide a clearer picture about the state of ESD in higher education.

Similarly, the responses regarding the availability of scholarships are rather limited and to a degree dependent on what is considered an ESD scholarship and what is not. Presently, information about scholarship appears rather scattered and is not easily accessible. Nonetheless, it can be concluded that ESD scholarships do exist in all regions.

Financial support for innovation and capacity-building

Eligibility for and availability of financial support for innovation and capacity-building in ESD practices varies from country to country. Where available, it is mainly inter-governmental organizations and ministries that provide funding but there are instances in some regions (e.g., Africa, Europe and North America) where the private sector contributes as well. The regional reports identify a whole range of stakeholders eligible for financial support for innovation and capacity-building in ESD: students, teachers/lecturers, government officials, individual researchers and schools and universities as organizations, NGOs, NGO-coalitions, young entrepreneurs and umbrella organizations or networks.

ESD quality assessment opportunities

The responses indicate that quality assessment opportunities vary. While some countries do not report any activity here, others have already developed such opportunities, often taking advantage of trends in the certification of teachers and the emergence of working groups to assess the quality of ESD. In terms of quality assessment processes in formal education, various methodologies have emerged to date, on a limited scale, including the use of rubrics, portfolios, story-telling and interviews. A shift in schooling and assessment culture is often required to roll out, support and sustain such quality assessment practices even at the school level. Most responding countries indicate that there are no adequate research and evaluation initiatives in place to assess the effectiveness and outcomes of ESD. Internationally, there has been a response to this need as is illustrated by the rapid increase in documents, articles and projects focussing on ESD quality assessment (Box 25).

Finland: One characteristic of the Finnish system is that the duty to evaluate permeates all educational legislation, that is, legislation obligates providers at all levels to evaluate their performance. Research is also evaluated. Thus it is possible to assess the quality of ESD initiatives. However, because of limited human and financial resources, evaluation is not as prevalent as it could be. In the 1990s the National Board of Education undertook a wide-scale evaluation of SD in its sector. In 2000 and 2001 ESD was evaluated as part of the drafting of the Baltic 21E programme. An SD committee appointed by the Ministry of Education undertook some evaluation in looking into the development of SD from 2002 to 2006. The development of SD/ESD is currently being looked into, for instance within the SD forum of universities and polytechnics (led by the Resource Centre of the Åbo Akademi university) and by the National Board of Education.

United Kingdom: Ofsted, England's school curriculum and inspection authority developed the s3 Sustainable Schools Self-Evaluation, which provides a framework for primary and secondary schools to assess their progress towards achieving sustainability. At present, the s3 is a voluntary evaluation but represents an important effort in terms of identifying the outcomes that the government seeks to achieve in the field of ESD. In 2008 Ofsted also published an evaluation of school visits to 41 schools to measure the presence of sustainability teaching practices in the classroom, which reported a low level of knowledge and awareness of sustainability in most schools.[93]

Box 25 Availability of ESD quality assessment opportunities in two European countries[94]

[93]The evaluation can be downloaded via: http://www.ofsted.gov.uk/Ofsted-home/Publications-and-research/Browse-all-by/Education/Leadership/Management/Schools-and-sustainability/(language)/eng-GB

[94]Source: Europe and North America Regional Synthesis Report: http://portal.unesco.org/education/en/ev.phpURL_ID=27234&URL_DO=DO_TOPIC&URL_SECTION=201.html

ESD research, development and dissemination

ESD research and development is not well developed around the globe. Although there is limited funding available for ESD research and some post-graduate training courses are currently in place around the world, there are not enough measures to guarantee its development: the majority of countries do not provide scholarships, provide little support to innovation and capacity-building in ESD practice and the evaluation of the different initiatives are rarely conducted. Most ESD research that does exist is again focussed on formal education.

Academic publishers play an important role in disseminating ESD research findings through their books and journals which are increasingly web-based and electronically available. The costs of accessing these journals and books might be a barrier in many parts of the world. Each region has academic journals, for instance, focussing on EE which increasingly report on ESD research (Box 26).

- The Chinese Journal of Environmental Education
- The Southern African Journal of Environmental Education
- The Canadian Journal of Environmental Education
- The Australian Journal of Environmental Education
- Tópicos en Educación Ambiental
- Environmental Education Research
- The Journal of Applied Environmental Education and Communication
- The International Journal of Geographical and Environmental Education Journal of Environmental Education Research.

Box 26 Examples of EE journals reporting on ESD research

Since the start of the DESD, a new academic journal on ESD has been created that specifically focuses on ESD: the International Journal of Education for Sustainable Development. Furthermore, general educational research journals occasionally report ESD-related matters as well (e.g., Journal of Curriculum Studies, International Journal of Science Education). In addition, there are also academic journals that focus on SD aspects that will occasionally report on research, the role of education, communication and learning in the context of SD (e.g., Local Environment, Journal of Peace Education, Journal of Sustainable Agriculture, Journal of Peace Education). Finally, much research funded by international donor organizations and inter-governmental organizations is reported on both in print and through websites.

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A drawback of using academic platforms such as journals for dissemination of research is that this tends to attract a relatively small circle of EE and ESD researchers and may not reach practitioners. Not only is the language used (academic and usually in English) problematic for many teachers, administrators and policy-makers, the high costs of accessing these journals electronically or subscribing to them provides a barrier as well. At present there are very few open-access and open-source on-line ESD platforms or wikis that are both comprehensible and accessible.

Little evidence was provided in the mid-term review that there are policies in place in formal education, professional development and teacher training that encourage educators to become reflective practitioners themselves and to conduct their own research. There are, however, some networks of practitioners and academics that seek to bridge the theory-practice divide using forms of action research to improve practices (Box 27).

- ENSI is an international government-based network that places emphasis on school development in the field of Education for Sustainable Development.
- ENSI's strength lies in the combined work of policy-makers, researchers, teacher educators and their student and pilot schools with teachers and students.
- Working in this context, ENSI prepares case studies on teacher education, carries out research by conducting cross analysis studies and develops trends and guidelines for future-orientated teacher education.
- ENSI also organizes case studies on school development in the field of ESD and develops guidelines and a set of quality criteria by cross analyzing these studies.
- ENSI influences policy decisions at the international level by combining international processes of quality development and quality improvement at international conferences and formulating guidelines and criteria such as the UNECE process on ESD.
- ENSI supports schools by helping them in their own development and promotes international exchange by influencing networks across Europe and other regions of the world.
- ENSI organizes and affects the exchange of expertise in the field of research education on sustainable development by offering a platform for senior experts, as well as for young innovative researchers.

Box 27 The Environment and School Initiatives (ENSI)[95]

[95]The Environment and School Initiatives (ENSI).

ENSI was set up in 1986 by the Centre of Educational Research and Innovation of the OECD. More information about ENSI can be found at: www.ensi.org

Conclusion

The mid-Decade review shows that the seeds for ESD research and development have been sown but that support for such research, especially in higher education, appears rather limited. As ESD practice is on the rise, there is an increased need for ESD quality assessment. Much of the existing ESD quality assessment schemes (e.g., the development of ESD indicators) is supported by international bodies and not so much by national governments. The UNESCO-initiated expert meetings on establishing a DESD ESD research agenda (e.g. Paris 2006,[96] Ahmedabad 2007[97] and the Tokyo Forum 2008[98]) created a better understanding of the meaning and potential of ESD research and of how such research can be supported by establishing guidelines and 'a roadmap for ESD research' in interaction with researchers, policy-makers and practitioners.

The interface between ESD research and other related areas of research on, for instance, education, teaching, learning and communication in the context of peace, development, health and so on, may need to be explored in order to create synergy and to tap into other potential sources of research funding.

[96]The main results of this meeting can be found in: McKeown, R. (2007). Setting the Stage for a Strategic Research Agenda for the UNDESD: A Joint UNU-UNESCO Workshop. Journal of Education for Sustainable Development 1(1) 91-96

[97]This meeting was held during the 4th International Conference on Environmental Education which was held from 24 to 28 November, 2007 at Centre for Environment Education (CEE), Ahmedabad, India. The Indian Centre for Environmental Education (CEE) was the nodal and host agency of the conference which was organized by Government of India with UNESCO and UNEP as co- sponsors. For more information go to: www.tbilisiplus30.org/

[98]The International Forum on ESD Dialogue 2008 (Tokyo, Japan, 2 – 5 December 2008) was held to: use our collective learning as a basis for enhanced future action; identify results-oriented strategic projects for the second half of the Decade; explore the possibility of a global consortium on ESD involving the private sector and NGOs; and to consider the contribution of research and innovation to the Decade. The results of the www.esd-world-conference-2009.org/fileadmin/download/TokyoRecommendations_FINAL.pdf

Chapter 9 **Ways Forward**

The development and implementation of ESD are a global challenge and face many obstacles around the world. This comes as no surprise as ESD has many faces, spans many sectors and disciplines, emphasizes new forms of learning and ways of thinking and needs to be grounded in local contexts while at the same time being receptive and sensitive to what happens elsewhere. As a result, there is no one right way of implementing ESD. Even though each country is unique in the way it seeks to meet the challenge of SD and the role it attributes to education and learning in its realization, there are some common issues and obstacles that emerge. Some of these commonalities are intra-regional (common within a region) but many are inter-regional (common between regions).

This mid-Decade review has identified 10 major action areas for the second half of the DESD.

1. Awareness, meaning and scope of ESD

Limited awareness and understanding of ESD at all levels is still a fundamental challenge resulting in a narrow societal and governmental support-base for ESD. This factor may prevent people from recognizing the presence and value of ESD in activities that may not be labelled as such but which, in essence, constitute education and learning in an SD context. Efforts need to be made to communicate ESD creatively in a way that allows for multiple interpretations of ESD and SD to co-exist. The involvement of the media (both print-based and non-print/web-based) in communicating ESD and SD and in creating open-source dialogues across the world about ESD and SD among and between different audiences and particularly youth, needs to be considered in this regard.

Although there should be space for multiple interpretations and meanings of ESD, there is a common understanding that education and learning in the context of sustainable development must recognize the interconnections between the environmental, social, cultural and economic aspects of SD. Whereas many countries have a tradition in addressing the environmental dimension of sustainability and are quite comfortable in doing so, this is less the case when it comes to the social and economic dimensions.

As a result, ESD implementation is complex and sometimes contradictory (e.g., setting thematic priorities but also advocating a holistic approach) and therefore requires careful communication with multiple stakeholders and at multiple levels.

2. Reorienting curricula, teaching and learning

The nature of ESD demands new perspectives on matters like curriculum, teaching and learning. ESD and SD tend

to focus on connections, feedback loops, relationships and interaction. Yet the dominant educational structures are based on fragmentation rather than connections and synergy. Another observation is that the search for a more sustainable world requires the full and democratic involvement of all members of society which should also have implications for teaching and learning.

ESD calls for new kinds of learning that are not so much of a transmissive nature (i.e. learning as reproduction) but rather of a transformative nature (i.e. learning as change). The latter requires permeability between disciplines, schools and the wider community and between cultures, along with the capacity to integrate, connect, confront and reconcile multiple ways of looking at the world. These multiple ways of looking at the world also include indigenous knowledge and ways of knowing, marginalized voices and recognition of the intrinsic value of the non-human world. Initiatives that support and enable teachers to become ESD researchers themselves in their own schools and classrooms should be supported.

ESD-triggered innovations in teaching and learning are still in their infancy and there is a worldwide call for alternative methodologies that can strengthen people's SD capacities such as: understanding complexity; seeing connections and interdependencies; participating in democratic decision-making processes; questioning dominant and taken-for-granted systems and routines that appear fundamentally unsustainable.

ESD requires an emphasis on new learning processes and educational methodologies as opposed to merely addressing SD topics and focussing on the transfer of knowledge about these topics. Schools, curriculum development institutes and educational research organizations should be at the forefront of the search for and development of these new forms of learning and the kinds of curricula, learning environments and school-community relationships that are needed to enable such learning to flourish.

3. Capacity-building

In the next few years, ESD professional development should also focus on how to build the capacities of teachers, managers and facilitators to initiate and enhance such new ESD-inspired forms of learning in schools, universities, workplaces and neighbourhoods. Space needs to be created to develop and experiment with these new forms of teaching and learning. Several measures have been put forward in the regional synthesis reports that underlie much of the review. These include teacher training courses on ESD for formal (including early childhood education and vocational education) and non-formal education; distance learning courses on regional ESD development, implementation and dissemination; training courses for principals and administrators on ESD and ESD educational policy; the design of an ESD course for policy-makers at the national, regional and local level.

In countries with a strong EE tradition, such courses should make the connections with ESD. There is also a call for strengthening ESD in further and professional education so that they may become more actively and explicitly involved in the implementation of ESD.

ESD should, in connection with the rise of Corporate Social Responsibility, become an integral part in the training of leaders in business and industry. The latter has been little emphasized in the DESD so far, although ESD appears to have made remarkable inroads in some areas of technical and vocational education and training.

Capacity-building in multi-stakeholder social learning and the facilitating and strengthening of networking between schools, educational institutions/ organizations and other potential partners in ESD at a local, national and international level, appears crucial. Such capacity-building is also needed in non-formal and informal learning settings (e.g. in the world of business and industry and the NGO-sector).

4. Research, monitoring and evaluation

Support for ESD research is needed to enhance both the quality and the evidence base of ESD. Such research could focus on: 1) theoretical underpinnings and critical discourses of ESD; 2) identifying and analyzing elements and efforts that support and hinder ESD; 3) identifying and analyzing ESD's evolving contribution to the educational community (e.g. practice, curriculum and education outcomes); 4) identifying and analyzing ESD's evolving contribution to the sustainability of society; 5) using research-derived data on ESD to inform decisions; 6) tracking the progress of the DESD (i.e. monitoring and evaluation). With regard to point 6, many actors involved in ESD call for the development of contextually relevant ESD indicators. Most countries have yet to develop a national ESD indicator framework and may require assistance in developing their own ESD indicators.

More support for ESD research needs to be registered. To facilitate this process, resources must be put in place for interdisciplinary research projects, for ESD-specific projects and for ESD projects focussing on social-economic aspects. The creation of ESD research funds with the help of international donors and national research foundations may help advance the quality and quantity of ESD research by both academics and practitioners.

An inventory and evaluation of all diplomas, specializations, Masters and PhD programmes directly or indirectly related to ESD might help identify present gaps in tertiary education in this emerging field.

Additionally, existing electronic ESD knowledge-sharing platforms should be utilized to share such an inventory as well as the results of ESD research.

The interface between EE research and ESD research but also between ESD research and research done in the context of issues of, for instance, development, human rights, health, peace and environmental justice, is presently unclear and needs to be articulated in order to create synergy between them. Platforms for cross-fertilisation of insights and networks associated with these emerging SD-related research areas need to be supported.

Finally, research on ESD in non-formal and informal learning has been minimal at best and will need to be strengthened during the coming years.

5. ESD synergy with other adjectival educations

In several regions there is a call for the explicit articulation of the relationship between ESD and EE in order to create more synergy between the two. The expected resulting process of reciprocal enrichment will resolve existing tensions and is likely to contribute to an improved conceptualization and institutionalization of both. In addition, similar synergies need to be created between ESD and other 'adjectival' educations such as peace education, gender education, inclusive education, multi-cultural education, human rights education, HIV and AIDS education, global education, consumer education, holistic education, citizenship education, health education and development education. During the remainder of the DESD, the creation of platforms and networks and the support of meetings that bring together key representatives from these SD-related types of education should be stimulated. The integrative possibilities of ESD need to be nurtured and strengthened.

6. ESD resources and materials

The lack of materials specifically designed to promote ESD is acutely felt. While some reference materials are available, many countries have to resort to documents that address general SD issues or resort to more traditional EE content and methods. The availability of ESD-specific methods and innovations in teaching and learning are still scarce. The earlier mentioned lack of ESD research and development is a concern in this respect. At the same time, more resources must be put in place to support educators who are working to integrate ESD in their teaching. Countries and educational systems need assistance in the reforming and reorienting of educational contents, methodology and curricula to address the development of ESD-based skills, knowledge and values.

The creation of accessible ESD knowledge-sharing platforms for multiple audiences using multiple media, including ICT-based ones, can help in making ESD resources available. Ideally these resources should be available in several languages. At the same time, such resources need to be reviewed and constantly updated and improved. The creation of open-source, open-access resources for ESD (i.e. ESD wikis) might be an attractive option for ESD resource sharing and development.

7. International cooperation

The way forward in regions hinges on the development and utilization of networking. Currently some powerful regionally networked ESD initiatives are already taking place around the world which helps to promote and strengthen ESD at the national level. These networked initiatives need to be supported or initiated by active ESD focal points, ESD national coordinating bodies, UNESCO Regional Bureaux for Education, UNESCO National Commissions and UNESCO Chairs, preferably in collaboration with existing regional networks and SD-oriented NGOs.

In the coming years, North-South cooperation will remain crucial as well as South-South and North-North cooperation. The associated sub-regional networking that takes place in the context of SD in general and ESD in particular should be supported as well.

Even though the regions are positive about their Regional Strategies for ESD, it is evident that a periodic revitalization is necessary to maximize their impact. This will require an active involvement of all concerned stakeholders to fine-tune, monitor and evaluate the strategy. It is equally necessary to involve those stakeholders who have not contributed or endorsed the regional strategy for ESD.

8. National networking

Establishing well-grounded, coordinated and supported regional, sub-regional, national and even local ESD strategies remains a priority. In countries where National (D)ESD Commitments are still lacking, they need to be developed during the second half of the decade taking advantage of national SD Commissions or national SD agreements that often already exist. In countries where such strategies do already exist, they should be considered as living and open to frequent redesigning in participatory ways as conditions change and more stakeholders become involved. Appropriate mechanisms need to be utilized to share such strategies with those who did not contribute to their creation.

Specific ESD national strategies are not yet commonplace. Again, countries with a strong EE tradition rely on

strategies designed for the implementation of EE actions or other SD-related initiatives, which is not necessarily negative as these are often well-grounded in the local reality and are nationally recognized.

As ESD development and support are a multi-stakeholder process, ESD strategies should be implemented in collaboration with different governmental departments (not only the Ministries of Education and Environment) as well as other key interest groups (e.g. NGOs, the private sector, individuals, experts, faith-based groups and the media).

Nationally networked ESD should also allow for the inclusion of local and more indigenous perspectives on SD. They can actively do this by organizing meetings on the topic of ESD and indigenous communities, for the purpose of establishing regional approaches, methods and mechanisms to support sustainable processes in these communities. Regional networked ESD should also result in products, tools and materials that are locally accessible and in the local languages.

9. Coordination

ESD requires the full support of the governments to move forward. As ESD is a cross-sectoral initiative, many government ministries and departments, in addition to NGOs and CSOs are involved in ESD-related activities. Although there are examples of inter-governmental coordination of ESD, many countries are still searching for mechanisms and forms of governance that transcend vested sectoral interest. Capacity-building for ESD policy development within all relevant Ministries for instance, including the Ministry of Economic Affairs, but also at other levels of government, appears a priority for realizing inter-sectoral synergy and improved coordination.

Coordination is also needed among national, regional and/or local stakeholders to establish priorities, whether thematic or programmatic, in order to focus ESD on pressing sustainable development needs and form a basis for addressing sustainable development through education and learning more widely. In many developing countries, active involvement of the UN Country Team and the inclusion of ESD into United Nations Development Assistance Frameworks (UNDAFs) is needed to provide a basis for national assistance. In those countries, collaboration with donor organizations is also crucial in the process of developing national strategies and frameworks to support ESD.

Finally, even though there is an impressive range of UN bodies, agencies and networks active in ESD and coordinating mechanisms have been put in place, it is too early to speak of one concerted UN response to ESD. Within the UN system itself, ESD requires 'out-of-the-box' thinking and a genuine rather than a mere strategic commitment to ESD. Such thinking and commitment needs to be strengthened within the UN system if one concerted UN effort is to become a reality in the years to come. Such thinking and commitment may also lead to a re-thinking of existing structures and budgets. Only then will the whole of all UN efforts in developing and supporting ESD around the globe be more than the sum of the contribution of individual agencies, networks, national commissions and so on. Critical reflection on the functioning of key offices, commissions and bureaux which have been assigned a responsibility in supporting ESD will need to take place as well, as the current mid-term Review did not call for such reflection and it may reveal additional areas of improvement that will strengthen the UN contribution to the DESD.

10. Financing

At the mid-point of the DESD, it is unclear how the current world economic crisis will affect ESD and SD funding but different scenarios can be envisioned. A DESD-friendly scenario would be one where the current world economic crisis leads to a more commonly shared realization that our present systems, including our economic ones, are unsustainable and that now, more than ever, is the time for transition towards more sustainable systems. In this scenario, more funding might become available for ESD and/or SD. A less DESD-friendly scenario would be one where the current economic crisis sets back the ESD and the SD movement as P for Profit takes precedence over P for Planet or People.

If the first brighter scenario occurs, it is crucial that ESD is positioned as a key component of the kind of capacity-building that is needed in business and industry, in communities and educational institutions to create new economies and financial systems that are based on the principle of sustainability.

Raising funds for ESD activities and projects is key to ensuring the successful achievement of the DESD. Financial resources and the drive for ESD should not be left just to governments as multilateral/bilateral donors and the private sector also have the potential to be important contributors. To gain the full support of donors and stakeholders, ESD not only needs to be included on the national agenda, but also needs to be incorporated into budgeting frameworks, national development plans and national sustainable development strategies (if available). In a similar way to EFA, ESD needs to have budget support and budget ownership also needs to be advocated for ESD within all relevant ministries.

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Key Findings and Ways Forward

Context

The United Nations Decade of Education for Sustainable Development (DESD, 2005-2014) has reached its mid-point. This review reports on progress made and obstacles encountered during the first five years in establishing provisions, strategies, mechanisms and contexts that support the development and implementation of Education for Sustainable Development (ESD). It also outlines ways forward for the remaining five years.

Key findings

This review has identified 10 key findings.

1) Meanings of ESD

Regional, national and local differences mean that ESD may be interpreted in many different ways. These differences in interpretation are often rooted in a country's particular tradition in governance but may also derive from the concrete challenges a country or region might be facing. As a result, there is a wide range of interpretations of ESD. The tradition in governance, for instance, affects whether a country adopts a more pedagogical orientation towards ESD emphasizing (social) learning, participation and capacity-building or a more instrumental one emphasizing changing people's behaviour. Countries facing extreme poverty, problems of HIV & AIDS and rapid loss of biodiversity are likely to focus the content of ESD differently from those that are facing high oil-dependency and excessive consumerism.

Thus, national and local debates are seen as crucial to arrive at a consensus over the meaning of ESD.

2) UN Contribution to the DESD

The UN contribution to the DESD is characterized by the engagement of a number of UN agencies in implementing ESD.

UNESCO has put in place Thematic Programmes to facilitate collaboration across its sectors, appointed ad-hoc advisory expert groups and mobilized its Regional Bureaux and the UNESCO National Commissions to ensure efficient implementation of the DESD. In addition, UNESCO has also mobilized the UNITWIN/UNESCO Chairs Programme to support ESD and the DESD.

In 2005, there were a number of DESD launches at regional and sub-regional levels as well as at national and sub-national levels. ESD-related meetings and workshops have taken place around the globe and a number of UN-supported ESD documents and ESD resource materials have appeared both digitally and in print. At the mid-point of the Decade, however, it is too early to speak of a 'one concerted UN response' to ESD and there remains much work to be done. Strengthening inter-sectoral collaboration and providing human and financial resources within UNESCO at headquarters and at the regional level would further improve the implementation of the DESD.

3) ESD national coordination bodies

Of the 97 countries that responded to the 2008 survey, 79 report that a national ESD coordinating body has been created. This is quite an achievement in a period of roughly five years. However, there are some regional variances.

Although the rapid rise of the coordinating bodies is remarkable, more insight is needed into the processes leading up to their creation and the roles they actually play.

4) ESD in national policy documents

The participating countries report a notable presence of ESD in national policy documents. The majority of them address broadening participation in ESD and its integration in curricula. ESD is mainly integrated in national educational policies and curricula, especially in primary and secondary education but also in sustainable development and environmental strategies. At the same time, it can be concluded that most countries do not yet have a specific national ESD policy or strategy. Specific policies that support informal and non-formal learning in the context of sustainable development (SD) were not reported, which is not to say that they do not exist in countries and regions that stress the importance of community participation and multi-stakeholder social learning. Responding countries from all regions report that mechanisms are either in place or are being developed to support the conservation, use and promotion of indigenous knowledge and ways of living, also in the context of ESD.

5) Interdepartmental governmental cooperation on ESD

In most parts of the world, a structure for interdepartmental governmental cooperation on ESD is still lacking as there is little experience in cross-boundary thinking among policy-makers and governmental departmental structures. Nonetheless, many responding countries do report increased efforts to establish ESD linkages between Ministries and other stakeholders.

6) ESD in formal education

Many governments from the responding countries have committed themselves to supporting the inclusion of ESD in formal education, most notably in primary and secondary education. This inclusion, incidentally, can lead to a re-design of curricula, teaching and learning and, indeed, the way an entire educational institution operates (e.g. in the case of a whole school approach). A more common response is to make minor adjustments to the existing system to create more space for sustainability issues, sometimes using existing facilities that have been created in the past for accommodating Environmental Education (EE).

Occasionally, the inclusion of ESD also leads to the adoption of new approaches to learning such as cross-curricular, interdisciplinary teaching and learning. Few countries report the support of ESD in early childhood education. The situation is more positive for teacher education, higher education and vocational education and training.

7) ESD in non-formal education and informal learning

ESD in non-formal education and informal learning is on the agenda of most responding countries and of all the responding international stakeholder networks and civil society organizations. However, it is impossible to say whether both the volume and the quality of support are adequate enough to meaningfully tap into the seemingly infinite possibilities for ESD-related learning in non-formal and informal settings. Little information is available about the amount of money that is allocated to ESD in informal and non-formal education. Similarly, there is not enough known about the way in which the many freely provided resources, both in printed and in digital form, are used. Information is also needed on which groups use these resources and in what numbers.

Furthermore, the promotion of ESD in informal and non-formal settings seems to demand new ways of distributing funds to NGOs, faith-based groups and civil society organizations who wish to develop ESD in semi-structured learning environments.

8) ESD research, development and dissemination

ESD research and development is not very well developed around the globe. The vast majority of the reporting countries does not provide ESD scholarships and does not report financial support for ESD innovation and capacity-building. ESD-related research that takes place is mostly focussed on formal education and on the policy and regulatory measures related to ESD implementation. As ESD practice is on the rise, there is an increased need for ESD quality assessment. Much of the existing ESD quality assessment schemes (e.g. the development of ESD indicators) is supported by international bodies and not so much by national governments.

9) ESD networking at the international level

From all the UNESCO regions, a wide range of rich examples of regional cooperation is provided suggesting a remarkable increase in international ESD networking. However, some of the regional synthesis reports do note that not all examples used necessarily facilitate ESD networking. Rather, these examples constitute ways to promote ESD. Common groups or organizations that are involved in ESD-related networks include: universities, national governments (Ministries), municipal governments, local governments, the private sector and NGOs.

10) Availability of public budgets and/or economic incentives for ESD

In most responding countries, the availability of public budgets and/or economic incentives for ESD is either non-existent or minimal at best. There appears consensus among them that raising funds for ESD activities and projects is key to ensure the successful achievement of the DESD. It is also important to internalize ESD within national budget structures. Countries are now beginning to take into consideration financing and budgeting for ESD across Ministries by determining how ESD aligns with key documents in different sectors in order to coordinate funding and programming for ESD across sectors at the national level.

Ways forward

This review has identified 10 major action areas for the second half of the DESD.

1) Awareness, meaning and scope of ESD

Limited awareness and understanding of ESD at all levels are still a fundamental challenge resulting in a limited societal and governmental support-base for ESD. This limited awareness and understanding may keep people from recognizing the presence and value of existing ESD, with activities taking place that may not carry an ESD label but which, in essence, constitute education and learning in the context of sustainable development. Efforts need to be made to better communicate ESD more creatively so that the full diversity of ESD and SD is fully understood. The involvement of the media needs to be strengthened (print-based and non-print/web-based) in communicating ESD and SD and in creating (open-source) dialogues about ESD and SD among and between different audiences, particularly young people across the world.

Although there should be space for multiple interpretations and meanings of ESD, there is a common understanding that education and learning in the context of sustainable development cannot ignore the interconnections between the environmental, social, economic and cultural aspects of SD. Whereas many countries have a tradition in addressing the environmental dimension of sustainability and are quite comfortable in doing so, this is less the case when it comes to the social, economic and cultural dimensions. During the remaining half of the DESD, multi-stakeholder dialogue among individuals and organizations that represent the economic, social and environmental aspects of SD should be encouraged.

2) Reorienting curricula, teaching and learning

As ESD-triggered innovations in teaching and learning are still in their early stages, there is a world-wide call for alternative methodologies that can strengthen people's SD-related capacities such as: understanding complexity; seeing connections and interdependencies; participating in democratic decision-making processes; and questioning dominant and long-accepted systems and routines that appear fundamentally unsustainable. Schools of education, curriculum development institutes and educational research organizations should be at the forefront of the search and development of these new forms of teaching and learning and the kinds of curricula, learning environments and school-community relationships that are needed to allow for such learning to flourish. At the same time, educational policies and support mechanisms that allow for more integrated forms of teaching and learning should be strengthened.

3) Capacity-building

In the next few years, ESD-related professional development should also focus on how to build the capacities of teachers, managers and facilitators to initiate and enhance new ESD-inspired forms of learning in schools, universities, workplaces and neighbourhoods. Space needs to be created to develop and experiment with these new forms of teaching and learning. ESD should, possibly in connection with the rise of Corporate Social Responsibility (CSR), become an integral part in the training of leaders in business and industry. The latter has been little emphasized in the DESD so far, although ESD appears to have made remarkable inroads in some areas of vocational education and training. Finally, capacity-building in multi-stakeholder social learning and the facilitating and strengthening of networking between schools, educational institutions/organizations and other potential partners in ESD at a local, national and international level appears crucial. Such capacity-building is also needed in non-formal education and informal learning settings.

4) ESD-related research, monitoring and evaluation

Support for ESD-related research is needed to enhance both the quality and the evidence base of ESD. Such research could focus on: 1) theoretical underpinnings and critical discourse of ESD; 2) identifying and analyzing elements and efforts that support and thwart ESD; 3) identifying and analyzing ESD's evolving contribution to the educational community (e.g. practice, curriculum and education

outcomes); 4) identifying and analyzing ESD's evolving contribution to the sustainability of society; 5) using research-derived data on ESD to inform decisions; and 6) tracking the progress of the DESD (i.e. monitoring and evaluation).

Research on ESD in non-formal education and informal learning has been minimal at best and will need to be strengthened during the coming years. Furthermore, many actors involved in ESD and its development call for the creation of contextually relevant ESD indicators to assist them in its monitoring, evaluation and further development. Countries need to be supported in developing their own ESD indicators.

The creation of ESD-related research funds with the help of international donors and national research foundations may help advance the quality and quantity of ESD research by both academics and practitioners. With regards to the latter, initiatives that support and enable teachers to become ESD researchers themselves in their own schools and classrooms should be supported.

5) ESD synergy with other 'adjectival' educations

In several regions, there is a call for the explicit articulation of the relationship between ESD and Environmental Education (EE) in order to create greater synergy between the two. The expected resulting process of reciprocal enrichment is to resolve existing tensions and is likely to contribute to an improved conceptualization and institutionalization of both. Similar synergies need to be created between ESD and other 'adjectival' educations such as: peace education, gender education, inclusive education, multicultural education, human rights education, HIV & AIDS education, global education, consumer education, holistic education, citizenship education, health education and development education. During the remainder of the DESD, the creation networks that bring together key representatives from these SD-related educations should be stimulated.

6) ESD resources and materials

There is an acute lack of materials specifically designed to promote ESD. While some reference materials are available, many countries have to resort to documents that address general SD issues or resort to more traditional EE content and methods. The availability of ESD-specific methods and innovations in teaching and learning needs to be improved. The creation of accessible ESD knowledge-sharing platforms for multiple audiences using ICTs can help in making ESD resources available.

Ideally, these resources should be available in multiple languages. At the same time, such resources need to be constantly reviewed, updated and improved. The creation of open-source, open-access resources for ESD (e.g. ESD wikis) might be an attractive option for ESD resource-sharing and development.

7) International and regional cooperation

North-South and South-South cooperation

The way forward in all regions depends in part on the development and utilization of inter- and intra- regional networking. North-South collaboration will remain crucial but in the coming years, South-South collaboration and the associated sub-regional networking that takes place in the context of SD in general and ESD in particular would also need to be well supported. Currently, there are some powerful regionally networked ESD initiatives already taking place around the world which help promote and strengthen ESD at the national level. These networked initiatives need to be supported or initiated by active ESD focal points, ESD national coordinating bodies, UNESCO Regional Bureaux for Education, UNESCO National Commissions and UNESCO Chairs, in collaboration with SD-oriented NGOs, the private sector and civil society organizations.

Regional Strategies for ESD

Even though the regions are positive about their Regional Strategies for ESD, it is evident that a periodic revitalization is necessary to maximize their impact. This will require an active involvement of all concerned stakeholders to fine-tune, monitor and evaluate the strategy. It is equally necessary to involve those stakeholders who have not contributed or endorsed the regional strategy for ESD.

8) National networking

Establishing well-grounded, coordinated and well-supported national, provincial/state and local ESD networks and partnerships remains a priority. In countries where national ESD commitments are still lacking, they should be developed during the second half of the Decade, taking advantage of the national SD Commissions or national SD agreements that are often are already in place. In countries where such strategies do already exist, they should be considered as 'living' and in need of frequent redesigning in participatory ways as conditions change and more stakeholders become involved. Nationally networked ESD should also allow for the inclusion of local and more indigenous perspectives on SD. This can be realized by establishing regional approaches, methods and mechanisms with active and equal participation

of representatives from indigenous communities and other marginalized groups in society. Regionally networked ESD should also result in products, tools and materials that are easily accessible and in the local languages.

9) Coordination

Although there are examples of inter-governmental and inter-institutional coordination of ESD, many countries are still searching for mechanisms and forms of governance that transcend vested sectoral interests. Capacity-building for ESD policy development within all relevant Ministries, including the Ministry of Economic Affairs but also at other levels of government, appears a priority for realizing inter-sectoral synergy and improved coordination.

Coordination is also needed among national, regional and/or local stakeholders to establish priorities, whether thematic or programmatic, in order to form a solid basis for addressing sustainable development through education and learning. In many developing countries, active involvement of the UN Country Team and the inclusion of ESD into United Nations Development Assistance Frameworks (UNDAFs) is needed to provide a basis for national assistance. In those countries, collaboration with donor organizations is also crucial in the process of developing national strategies and frameworks to support ESD.

Within the UN system itself, ESD requires cross-boundary 'out-of-the-box thinking' and a genuine, rather than a merely strategic, commitment to ESD. Such thinking and commitment need to be strengthened within the UN system if a 'one concerted UN' effort is to become a reality in the years to come. In this way, the whole of all UN efforts in developing and supporting ESD around the world will amount to more than just a sum of the contribution of individual agencies, networks and national commissions. Critical reflection on the functioning of key offices, UNESCO National Commissions and Regional Bureaux which have been assigned a responsibility in supporting ESD will need to take place as well. The current Mid-Term Review did not include such reflection. Critical self-reflection may reveal additional areas of improvement that will strengthen the UN contribution to the DESD.

10) Financing

Raising funds for ESD activities and projects is key to ensuring the successful achievement of the DESD. The provision of financial resources for ESD should not be left to governments alone. Multilateral/bilateral donors and the private sector have the potential to be important contributors. To gain the full support of donors and stakeholders, ESD needs to be not only included on the national agenda, but also to be incorporated into budgeting frameworks, national development plans and national sustainable development strategies (if available). Similar to EFA, ESD needs to have budget support. Budget ownership also needs to be advocated for ESD within all relevant ministries.

At the mid-point of the DESD, it is unclear how the current world economic crisis will affect ESD and SD funding but different possible scenarios can be envisioned. A DESD-friendly scenario would be one where the current world economic crisis leads to a more commonly shared realization that our present systems, including our economic ones, are unsustainable and that now, more than ever, is the time for transition towards more sustainable systems. In this scenario, more funding might become available for ESD and/or SD. A less DESD-friendly scenario would be one where the current economic crisis sets back the ESD and the SD movement as the P for Profit takes precedence over P for Planet or P for People.

If the first brighter scenario occurs, it is crucial that ESD is positioned as a key component of the kind of capacity-building that is needed in business and industry, in communities and educational institutions to create new economies and financial systems that are based on the principle of sustainability.

References

UNESCO and Sustainable Development brochure

A brochure on "UNESCO and Sustainable Development", prepared with the Bureau of Strategic Planning, outlines UNESCO's actions for sustainable development in its different fields of competence.

http://unesdoc.unesco.org/images/0013/001393/139369e.pdf

Framework for the UN DESD International Implementation Scheme

This reference document was prepared through consultation with other United Nations Agencies, international organizations, governments, NGOs, universities, individuals and the private sector. It was presented at the 59th Session of the United Nations General Assembly (New York, September-October 2004). It served as basis for the writing of the DESD International Implementation Scheme.

http://unesdoc.unesco.org/images/0014/001486/148650E.pdf

DESD International Implementation Scheme

The DESD International Implementation Scheme was approved at the 172nd session of the UNESCO Executive Board.

http://unesdoc.unesco.org/images/0014/001486/148654E.pdf

United Nations Decade of Education for Sustainable Development (DESD 2005-2014): the first two years

http://unesdoc.unesco.org/images/0015/001540/154093e.pdf

UNESCO World Conference on Education for Sustainable Development: Bonn Declaration

http://www.esd-world-conference-2009.org/fileadmin/download/ESD2009_BonnDeclaration080409.pdf

EFA-ESD Dialogue: educating for a sustainable world

http://unesdoc.unesco.org/images/0017/001780/178044e.pdf

Links between global education initiatives

A brochure entitled "Links between the Global Initiatives in Education", gives an overview of the similarities and differences among the four initiatives (MDGs, UNLD, EFA and DESD) and includes suggestions for mutual support and collaboration. It is available only online.

http://unesdoc.unesco.org/images/0014/001408/140848m.pdf

Guidelines for integrating sustainability issues in Teacher Education

Guidelines and Recommendations for Reorienting Teacher Education to Address Sustainability have been prepared by the UNITWIN/UNESCO Chair on Reorienting Teacher Education to Address Sustainability (York University, Toronto) and the International Network of Teacher Education Institutions.

http://unesdoc.unesco.org/images/0014/001433/143370e.pdf

Drivers and barriers for implementing sustainable development in higher education

A collection of papers emanating from a workshop held in Göteborg (7-9 December 2005) and organized by the Chalmers University of Technology and the Göteborg University.

http://unesdoc.unesco.org/images/0014/001484/148466E.pdf

Drivers and barriers for implementing learning for sustainable development in pre-school through upper secondary and teacher education

A collection of papers emanating from a workshop held in Göteborg (27-29 March 2006) and organized by Göteborg University and the City of Göteborg (Sweden).

http://unesdoc.unesco.org/images/0015/001509/150966e.pdf

Contribution of Early Childhood Education to a Sustainable Society

This publication explains how to educate young children to prevent further degradation of our planet and contribute to a sustainable society where values of human rights, peace and justice are upheld. It originates from the international workshop 'The Role of Early Childhood Education for a Sustainable Society', held in Göteborg, Sweden, in May 2007.

http://unesdoc.unesco.org/images/0015/001593/159355E.pdf

Good practices in education for sustainable development: teacher education institutions

Examples of good practices coming from teacher education institutions in different parts of the world.

http://unesdoc.unesco.org/images/0015/001524/152452eo.pdf

Good practices in the UNECE region

Examples of good practices coming from Member countries of the UN Economic Commission for Europe (UNECE)

http://unesdoc.unesco.org/images/0015/001533/153319e.pdf

ESD Good Practices using the Earth Charter

A compilation of 27 educational experiences from non-formal, primary and secondary education and higher education, co-published by UNESCO and Earth Charter International. These experiences, from 17 countries, show how it is possible to put ESD into practice, using the Earth Charter as a tool.

http://www.earthcharterinaction.org/resources/files/Good%20Practices%202%20Earth%20Charter%20Stories%20in%20Education%20Full%20Document.pdf

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The DESD in brief

A leaflet on the UN DESD, what it is and UNESCO's role in leading the DESD

http://unesdoc.unesco.org/images/0014/001416/141629e.pdf

International Implementation Scheme in brief

A user friendly booklet on the essential elements of the DESD International Implementation Scheme has been prepared and is available in English and French.

English-http://unesdoc.unesco.org/images/0014/001473/147361E.pdf

ESD information sheet

As part of UNESCO's 60th anniversary celebrations, the week of 5-10 June 2006 was dedicated to Education for Sustainable Development. An information sheet on ESD was produced by the UNESCO Bureau of Public Information in English, French, Arabic, Chinese, Russian and Spanish.

http://www.unesco.org/bpi/pdf/memobpi39_sustainabledvpt_en.pdf

"Educating for Tomorrow's World"

Issue 16 of the Education Today, UNESCO's Education Sector Newsletter focuses on Education for Sustainable Development and the DESD.

http://unesdoc.unesco.org/images/0014/001444/144403E.pdf

Framework for a DESD communication strategy in support of the UN Decade of Education for Sustainable Development

http://unesdoc.unesco.org/images/0015/001512/151243e.pdf

Education for Sustainable Development and Life Skills

A booklet *Contributing to a More Sustainable Future: Quality Education, Life Skills and Education for Sustainable Development* looks at quality education that fosters the knowledge, skills, perspectives and values that lead to a more sustainable future.

http://unesdoc.unesco.org/images/0014/001410/141019e.pdf

Education for Sustainable Development: Linking Learning and Happiness

This pamphlet provides a brief overview of the development concept of Gross National Happiness and its linkages with Education for Sustainable Development as a means for promoting 'Happiness' through quality learning

http://www2.unescobkk.org/elib/publications/146_147/ESD_Hapiness%202007_web.pdf

Two concepts, one goal: education for international understanding and education for sustainable development highlights key complementary areas and synergies between education for international understanding and ESD

http://unesdoc.unesco.org/images/0015/001507/150703e.pdf

Globalization and education for sustainable development: sustaining the future

Report of the International Conference on Globalization and Education for Sustainable Development: Sustaining the Future; Nagoya, Japan; 2005

http://unesdoc.unesco.org/images/0014/001492/149295e.pdf

Natural Disaster Preparedness and Education for Sustainable Development

Provides details of the development of culturally appropriate and locally relevant educational material for natural disaster preparedness that targets key stakeholder groups and integrates ESD principles and strategies

http://unesdoc.unesco.org/images/0015/001504/150454e.pdf

Education for Sustainable Development Toolkit

http://unesdoc.unesco.org/images/0015/001524/152453eo.pdf

CD-ROM 'Teaching and Learning for a Sustainable Future'

A multimedia teacher education program. The program contains 100 hours (25 modules) of professional development for use in pre-service teacher courses as well as for the in-service education of teachers, curriculum developers, education policy makers and authors of educational materials. Also available online at www.unesco.org/education/tlsf.

Media as partners in education for sustainable development

This kit, produced by UNESCO with the Thomson Foundation, seeks to assist media professionals in their efforts to report on sustainable development issues, help provide relevant information resources and establish a model for media training on this important topic.

This Education for Sustainable Development media training and resource kit addresses the issues that are being discussed on the social, economic and environmental fronts. It does not pretend to know all the answers, but draws on existing experience and recommends resources for further inquiry and research.

http://unesdoc.unesco.org/images/0015/001587/158787E.pdf

YouthXchange - towards sustainable lifestyles; training kit on responsible consumption

A guide for young people on sustainability issues

http://unesdoc.unesco.org/images/0015/001587/158700e.pdf

Seven Complex Lessons in Education for the Future (Edgar Morin)

http://unesdoc.unesco.org/images/0011/001177/117740eo.pdf

Regional strategies

Regional Strategy of Education for Sustainable Development for Sub-Saharan Africa (SSAESD)

http://www.dakar.unesco.org/news/pdf07/observatory_strat.pdf

Regional Guiding Framework of Education for Sustainable Development in the Arab Region

http://www.unesco.org/beirut/fileadmin/FIELD/BEIRUT/PDF/ESD_Regional_Framework_EN_May08__2_.pdf

Building Education for Sustainable Development in Latin America and the Caribbean

Estrategia Latinoamericana para la Década de Educación para el Desarrollo Sostenible http://www.earthcharter.org/foro2006/index.htm

Asia-Pacific Regional Strategy for Education for Sustainable Development

http://www.unescobkk.org/fileadmin/user_upload/esd/documents/esd_publications/working-paper.pdf

Pacific Education for Sustainable Development Framework

http://unesdoc.unesco.org/images/0014/001476/147621E.pdf

UN Economic Commission for Europe (UNECE) Regional Strategy for Education for Sustainable Development

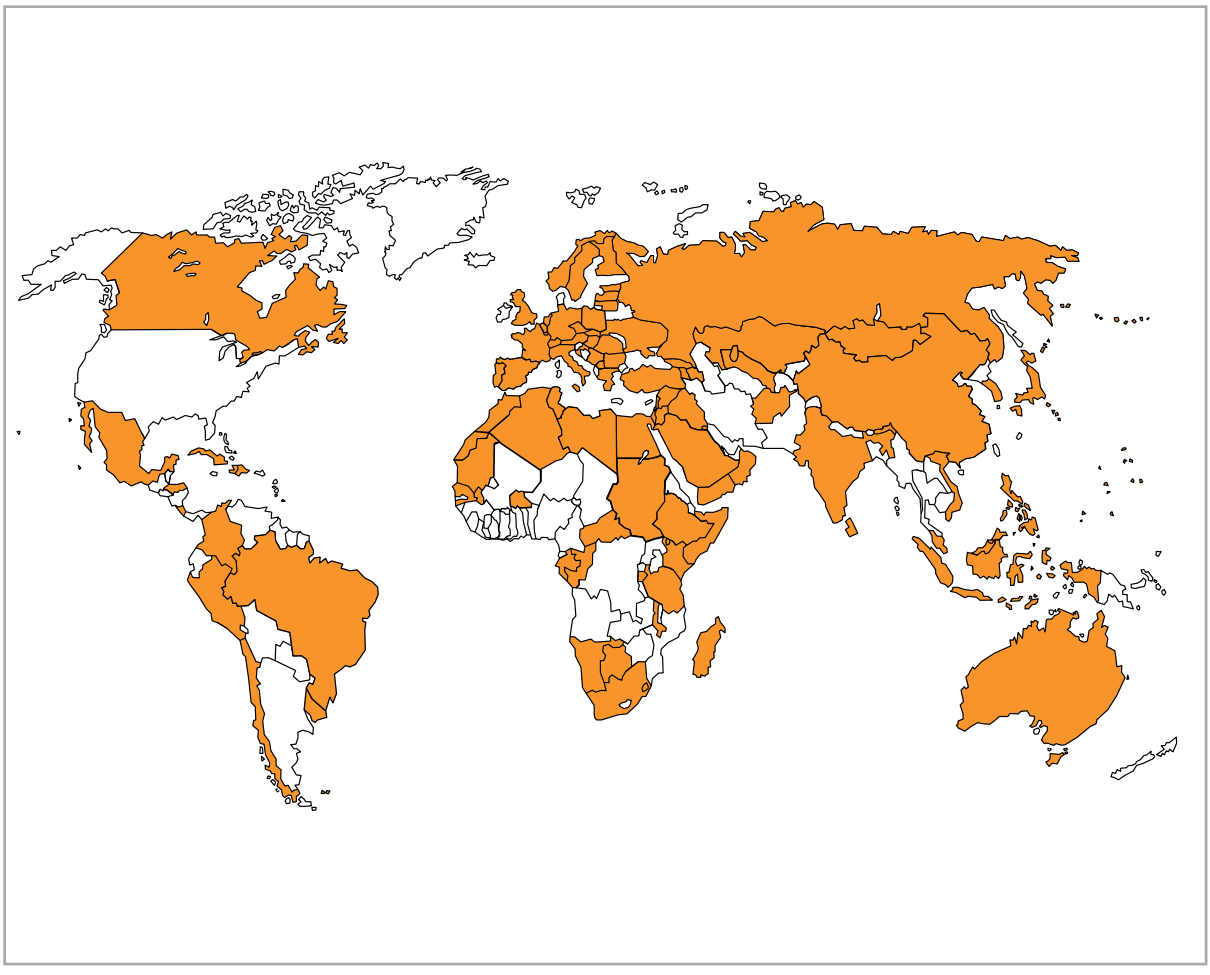
http://www.unece.org/env/documents/2005/cep/ac.13/cep.ac.13.2005.3.rev.1.e.pdf

List of acronyms

ASPnet	Associated Schools Project Network
BFC	Bureau of Field Coordination
BSP	Bureau of Strategic Planning
CSD	Commission on Sustainable Development
CSO	Civil Society Organisation
DESD	Decade of Education for Sustainable Development
ECCE	Early Childhood Care and Education
EE	Environmental Education
EECCA	Eastern Europe, the Caucasus and Central Asia
ENSI	Environment and Schools Initiative
ERC	External Relations and Cooperation
ESD	Education for Sustainable Development
ESD-J	Japanese Council on the UN Decade of ESD
EFA	Education for All
EDUCAIDS	Global Initiative on HIV/AIDS and Education
FRESH	Focussing Resources on Effective School Health project
GMEF	Global Monitoring and Evaluation Framework
GTZ	Gesellschaft für Technische Zusammenarbeit
HIV & AIDS	Human Immunodeficiency Virus Acquired Immune Deficiency Syndrome
HLP	High Level Panel
IAC/DESD	Inter Agency Committee for the DESD
ICTs	Information and Communications Technologies
IGO	Inter-governmental organisation
IIS	International Implementation Scheme
ILO	International Labour Organisation
IUCN	International Union for Conservation of Nature
IWG/ESD	Inter-sectoral Working Group on ESD
JFIT/ESD	Japanese Funds in Trust on Education for Sustainable Development

LAC	Latin America and the Caribbean
LIFE	Literacy Initiative for Empowerment
LINKS	Local and Indigenous Knowledge Systems project
MESA	Mainstreaming Environment and Sustainability in Africa
MDGs	Millennium Development Goals
M&E	Monitoring and Evaluation
MEEG	Monitoring and Evaluation Expert Group
MSCP	Multistakeholder consultation process
NFE	Non formal education
NGO	Non-governmental organisation
ODG	Office of the Director-General
RCE	Regional Centre of Expertise
SADC	The Southern African Development Community
SD	Sustainable Development
SEE	South-Eastern Europe
TTISSA	Teacher Training Initiative for Sub-Saharan Africa
TVET	Technical and Vocational Education and Training
UIS	UNESCO Institute for Statistics
UNCED	United Nations Conference on Environment and Development
UNCSD	United Nations Commission on Sustainable Development
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNDG	United Nations Development Group
UNEP	United Nations Environment Programme
UNLD	United Nations Literacy Decade
UNESCO	United Nations Education, Scientific and Cultural Organization
UNU	United Nations University
UNU-IAS	United Nations University-Institute of Advanced Studies
WBCSD	World Business Council for Sustainable Development
WSSD	World Summit on Sustainable Development

Map of Countries that responded to the DESD M&E call



The United Nations Decade of Education for Sustainable Development (DESD, 2005-2014) has raised high expectations among countries and stakeholders who are committed to promoting and developing Education for Sustainable Development (ESD).

The year 2009 marks the mid-point of the Decade. It is a key moment for countries, stakeholders, UN agencies and UNESCO, in its role as the lead agency of the Decade, to take stock and reflect on the achievements and challenges of the last five years as well as plan for the remaining half of the Decade.

The “Learning for a Sustainable World” DESD Monitoring and Evaluation (M&E) report series aims to capture the progress made in ESD during the life of the Decade. The 2009 review of contexts and structures for ESD is the first in the series.

The review presents a succinct yet clear picture of what is being done in countries across the world in terms of structures and mechanisms, such as policies, regulations and coordination bodies, that facilitate ESD as well as provides an insight into the various geographical contexts in which ESD is currently evolving.

The review attempts to give the reader a balanced view of the state-of-play of ESD globally and the challenges it faces.

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