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Learning from each other

The UNECE Strategy for Education for Sustainable Development

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NOTE

Symbols of United Nations documents are composed of capital letters combined with figures. Mention of such a symbol indicates a reference to a United Nations document.

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Foreword

Education is a key agent for change towards sustainable development. Education for sustainable development (ESD) builds the capacity of individuals, communities and society as a whole to make informed judgements and choices in favour of sustainable development.

Because ESD is not only about teaching the subjects relevant to sustainable development but also about participatory learning process, its introduction at the national and local levels is a complex and evolving process that often implies the challenge of transforming existing approaches to education.

Responding to the new challenge of ESD, in 2005 the environment and education ministers of United Nations Economic Commission for Europe (UNECE) member States adopted the UNECE Strategy for ESD. Work under the Strategy constitutes an important contribution of the UNECE region to the United Nations Decade on ESD. It is done in collaboration with UNESCO, the lead global agency for the Decade.

The UNECE Strategy for ESD is a policy tool that helps the countries of the region to introduce and promote ESD in national formal, non-formal and informal education in their respective countries. It aims at developing policy, regulatory and operational frameworks to support ESD, equipping educators with the necessary competences, ensuring that adequate tools and materials for ESD are accessible, promoting research on and development of ESD, and strengthening regional cooperation on ESD.

To facilitate and evaluate the Strategy's implementation and raise awareness at the national level, as well as share experience within the region, the member States agreed to periodically assess the implementation process based on a unified reporting format and a clear set of indicators. This periodic assessment provides information about countries' performance in implementing ESD and about the economic, environmental, and social impacts of ESD.

This publication brings together the relevant policy documents and a number of practical tools to guide Governments and other stakeholders through the process of assessing the success of ESD in a given national context. While developed in the context of the UNECE Strategy, the assessment tools also aim at strengthening synergies with other relevant processes, in particular those under the United Nations Decade on ESD. They therefore enable the region's input to any global evaluation and can be used by countries in other regions to assess their own progress with ESD.

United Nations Economic Commission for Europe

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Boxes, figures and tables

Abbreviations and acronyms

CSR	Corporate social responsibility
EE	Environmental education
EECCA	Eastern Europe, Caucasus and Central Asia
EFQM	European Foundation for Quality Management
EG	Expert group
ENSI	Environment and School Initiatives
ESD	Education for sustainable development
EU	European Union
FEE	Foundation for Environmental Education
HEI	Higher education institution
ICT	Information and communications technology
INFEA	National Programme for Environmental Education, Information and Training (Italy)
ISCED	International Standard Classification of Education
IUCN	International Union for Conservation of Nature
LSA	Large-scale assessments
MEDIES	Mediterranean Education Initiative for Environment and Sustainability (Greece)
MIO-ESCDE	Mediterranean Office for Environment, Culture and Sustainable Development
NAP	National action plan
NESDEC	National ESD expert council
NFP	National focal point
NGO	Non-governmental organization
NIP	National implementation plan
NIR	National implementation report
OSCE	Organization for Security and Co-operation in Europe
SCP	Sustainable consumption and production
SD	Sustainable development
SEE	South-Eastern Europe
(UN)DESD	United Nations Decade of Education for Sustainable Development
UNECE	United Nations Economic Commission for Europe
UNESCO	United Nations Educational, Scientific and Cultural Organization
USD	United States dollars

LEARNING WITHIN

CHAPTER I

INTRODUCTION

This chapter "lifts the lid" to reveal the workings inside the Expert Group as it developed indicators for the UNECE Strategy for Education for Sustainable Development (ESD); as far as possible, this chapter seeks to tell the story of the Expert Group in their own words.

Its purpose is to share some of the learning that this process engendered with those who may develop mandates for, or participate in, similar processes in future, in particular, the proposed UNECE Expert Group on ESD Competences. Beyond this primary audience, the analysis of the experts' remarks may have relevance for students of international policy while the set of suggestions may prove useful to a wider audience of participants and managers of similar processes.

Following these introductory remarks, the chapter is divided into four sections. Section one provides the background to the process, with particular reference to the mandate, the selection of experts and working arrangements. The second section focuses on the development of the outputs from the first draft of the indicators through the pilot testing process to the development of additional tools to facilitate the understanding and use of indicators. Section three looks at the Expert Group as a "learning arena" and shows how the positive group dynamics contributed to the success of the work and led to the development of ideas and actions beyond the indicator framework itself. These three sections lead logically to section four that suggests guidelines for similar processes.

The chapter refers to a number of key documents relating to the process but more significantly, it draws upon correspondence with 10 Expert Group (EG) members, (all group members were invited to respond). Follow-up interviews were conducted with three EG members*.

*The text below includes selected views and comments of the Expert Group members.

I. Setting the scene

A. The mandate

In March, 2005, the High-level Meeting in Vilnius, Lithuania adopted the UNECE Strategy for Education for Sustainable Development and at the same time mandated an ad hoc group of experts to, "develop indicators to measure the effectiveness of the implementation of the Strategy (UNECE 2005a: 7)".

At their first meeting, the Expert Group confirmed that the indicators should reflect both aspects of the mandate: the implementation as a process, and the effectiveness of the implementation, as a qualitative feature of the process (UNECE 2005c).

The link to the ESD Strategy itself was quite clear and this guided the work of the EG throughout:

To have a clear and often very well written strategy facilitated our work. It was possible to use the strategy as a guideline and to follow it. (EG 1)

The process went well because we tried to stick to the mandate… [however] sometimes the mandate was also too narrow for some of our thinking. (EG 2)

The mandate itself clearly created some tensions:

I think the work of the EG was restricted by the Strategy text/given mandate and the exhortation to stick to it, although there were good reasons to depart from it. (EG 3)

Sometimes the mandate was also a boundary. It limited our attempts to further research for output and outcome indicators. (EG 2)

While the mandate appears quite open, the experts were also guided by a background document (UNECE 2005b) that was prepared to provide the EG with "a basis for discussion". This set out the purposes of the indicators as (a) a short-term measure of performance, (b) providing information on longer term impacts, and (c) providing a possibility to compare performance between different countries.

The background document reflected the needs of UNECE Member States to manage the process of implementation in terms of targets and objectives and suggested that, where possible, quantitative indicators should be used.

While the background document acknowledged that ESD is complex and that qualitative measures would also be required, it also asked the EG to "encourage responses that are scalable rather than requesting open-ended descriptive statements" (ibid, p. 5). The notion that qualitative information should not be descriptive was subsequently challenged by EG members (see below).
A six-page annex to the background document provided a table of suggested indicators covering all components of the strategy. Although the specific indicators were not used, the format shaped the EG's final product to a considerable extent. Indeed, some flexibility was sought and even achieved (see section two), but with hindsight there was a general feeling that the EG should have pressed for a more open brief than that suggested by the background document and the initial Steering Group meeting.

B. The Expert Group

The mandate suggested that the composition of the Expert Group should ensure "equitable geographical representation" across the UNECE region while the experts themselves were to have extensive experience in national and international environmental and education policies, in environmental education and in ESD.

EG members were designated by their Governments and were joined by representatives of international organizations. One or two representatives of UNESCO attended each meeting plus one representative from the Central Asian Intergovernmental Working Group on Environmental Education and ESD and one from European ECO-Forum, a coalition of non-governmental organizations. According to the mandate, these representatives were invited as observers, although in reality there was no discernable difference in their freedom to participate throughout the process. At several meetings, other experts were invited to join and contribute to the work of the EG, e.g. the United Nation's Children's Fund (UNICEF) and ENSI (Environment and School Initiatives).

Specific EG members also connected the group to the ENSI network and the work of the Asia-Pacific ESD indicator project (UNESCO 2007). This combination of members was seen as a significant factor to the group's success:

There was quite some expertise present, which represented a number of different approaches, from highly scientific to very practical and down-to-earth…. (EG 4)

The value and challenges of such a heterogeneous group are highlighted in section three below.

C. Working arrangements

At the start of the process, each participant was invited to speak to the theme of indicators, stating their hopes for the process and the final outputs. During this meeting, notes were taken on individual EG members' reactions to ideas and to each other so that the Chair could better understand the people in the room and thus facilitate a positive process.

The meetings themselves comprised a mix of plenary sessions, in which the UNECE Secretary's drafting would be projected onto a large screen, and small

group work where each group was allocated a specific task. Both techniques were appreciated by EG members: Drafting "live" on a big screen with a scribe editing in real time was a very efficient process. (EG 7)

I loved the moments when the group was still working at 18.30 hours, and over dinner continued their debates, or the moments of small group work when everyone knows what to do and how to contribute. (EG 2)

Throughout the process, the EG received guidance from the UNECE Steering Committee, which would pass on suggestions springing from its own internal deliberations:

We always tried to focus on what the Steering Committee wanted (or what we thought they wanted). (EG 2)

This in turn led to rethinks and debates within the EG, although most members recognized the value of this process:

There was a willingness on the part of the participants and the Chairperson to go back to the fundamentals, question what the process was all about and redefine the problem. I am sure this led to a better outcome eventually, even though it was time-consuming. (EG 7)

It took somewhat longer than expected but I wonder if the success of the process was not partly due to that. (EG 8)

However intricate the debates, the Chair took time to summarize the achievements at the end of each session and to ensure that, as far as possible, consensus was reached among EG members. The successful resolution of debates owed much to the way in which the chemistry of the group developed in the spaces around the meetings (see 3.2).

In order to address time constraints, EG members elected to do "homework" between meetings in order to meet its own ambitious targets. Despite considerable workloads in their countries, experts communicated via e-mail and prepared their homework, occasionally with some delay. As the secretariat received the required input from the EG's teams, it was incorporated in the documents for the next meetings.

Over three years, the EG met two or three times a year; this meant that there were prolonged periods between some meetings, including a full six-month gap after the fourth meeting, while the EG awaited Steering Committee decisions before continuing. Although this was in accordance with the adopted terms of reference for the EG, such gaps were disruptive to the momentum of the process. As one EG member put it:

We disappear between meetings. (EG 9)

A few EG members suggested that an Internet-based platform might have provided a better means of communication during these intervals, rather than relying on individuals in UNECE who were themselves fully committed to also supporting other processes and events.

Another feature of the time lag between meetings was that some EG members would not be able to attend while some new members joined. This had both good and bad effects:

There was an occasional tendency to lose the "corporate memory" of the group. We would forget that we had been round some loop or other already a couple of meetings ago, and go round it again. (EG 7)

Changes in the EG composition brought some confusion, but at the same time it was an opportunity to rethink the main arguments and to see the process with "new eyes". (EG 6)

II. Making the indicators work

A. Some challenges

At almost every point in the process, the varied backgrounds of the EG members ensured that there was a debate to be had. Thus the mandate and inputs of the Steering Committee were important in containing and directing the discussions. However, there were areas that could not be resolved to the satisfaction of everyone and occasions where more flexibility was sought from the Steering Committee; these included the following tensions:

• Quantitative versus qualitative approaches

As noted above, the UNECE background document made several references to quantification and several EG members found this methodologically inappropriate:

I stick on the idea that to go to numbers and to quantity in many cases is not only not useful but meaningless. (EG 1)

This is largely qualitative, unlike the data ministries are used to. ESD is about added value (quality) to existing education, it cannot be expressed by numbers or known positive outcomes. (EG 9)

In the effort to express information quickly and simply, the EG discussed systems such as "traffic lights" and scales. Having statisticians within the group proved useful; they clarified the situation, stating their views without pushing for a decision. Eventually, tables were devised that could display relevant information for a given component of the Strategy in one place.

• Numerous specific indicators versus aggregated indicators

The EG's initial draft reporting format contained over 80 indicators, something the Steering Committee found unworkable. Even the final draft with seven headline issues for reporting and 18 indicators, expressed as 49

sub-indicators, proved too much for this EG member:

…The outcome… became far too complicated due to the fact that we were not able to limit ourselves to a few indicative indicators, in other words, to make choices! We wanted to do it all, to connect to all the objectives in the Strategy, one by one. (EG 4)

However, the Expert Group reported back to the Steering Committee that the aggregation of questions was not feasible due to the complexity of ESD and the debatable methodology. Furthermore:

"…No single indicator or sub-indicator should be seen as indicative of quality in its own right. Rather, it is the combination of answers that will indicate the state of progress in, and the effectiveness of, implementation of the UNECE Strategy for ESD" (UNECE 2006: 2).

- **National validity versus comparability**

The background document prepared ahead of the first EG meeting (UNECE 2005b) asked that one of the purposes of the indicators should be to compare performance between different countries. However, this would require generic formulations that would work in all situations across the UNECE region – perhaps one of the greatest challenges facing the EG.

Difficulty in connecting to the national level was a major frustration for EG members; this made it hard for the group to link their drafting exercise with the reality faced by National Focal Points in the UNECE member States. When asked what would have improved the process, one EG member suggested:

Tie the work in rather better with those holding the policy reins in-country. …for much of the time our group was operating, there was a vacuum in the Government policy team due to staff turnover and other priorities. (EG 7)

Elsewhere, an EG member reported:

Those who actually collect the data for country reports, e.g. ministry officials, have different drivers or priorities to the ESD experts. In some cases the data is not "real" because it has been gathered by maybe one person in order to provide an expedient (and possibly impressive) answer. (EG 9)

- **Adhering to the mandate**

This issue is related, but of a different order, to those above. To some EG members, the whole exercise was incompatible with ESD:

The framework is rigid: it kills the flexible and ever-evolving process ESD ought to be. (EG 10)

A symposium on ESD indicators held at a university in the United Kingdom during this process was very critical of the UNECE approach. This was uncomfortable for EG members, although many of the criticisms stemmed from the restrictions that the EG was working under. As one EG member observed: …The improvements that we proposed were rejected as impossible to realize, due to political constraints. (EG 10)

However, the Steering Group were not as inflexible as this suggests. The EG stressed that modifications to the mandate should be seen as learning. This enabled Steering Group members to recognize the value in shifting from their initial views on the process:

The idea that the Strategy should not be assessed in a rigid way but as a learning process gave space for negotiation. (EG 2)

And so it was noted, for example, that:

The emphasis on quantification reduced with each meeting. (EG 1)

Much of the tension around the mandate appears to stem from conflicting views of ESD. As the EG noted in their third report to the Steering Committee, this need not have been a tension if balance could be achieved between "ESD 1", i.e. providing information and developing skills with a view to achieving behaviour change (an instrumental – and largely governmental – view), and "ESD 2", i.e. building capacity to think critically about and beyond sustainability messages (an emancipatory view). The mandate appears to be firmly rooted in ESD 1, while many of the practitioners and academics in the EG favoured ESD 2. Consensus lay in achieving a balance between ESD 1 and 2; something that might have required a "mixed methods" approach to evaluation that was not fully envisaged at the time of preparing the mandate for this task.

B. Testing the reporting format

At the first meeting of the Steering Committee, several UNECE member States – including Norway, Finland and Slovenia – volunteered to carry out the first reporting for the Sixth Ministerial Conference "Environment for Europe" (Belgrade, October 2007) using indicators developed by the Expert Group (UNECE 2005c).

This offer to test the indicators was taken up more widely and by the time of the Belgrade Ministerial Conference, 36 member States had submitted National Implementation Reports to the UNECE secretariat. The level of detail varied widely with many Governments only completing the "yes/no" part, while others submitted more detailed responses, providing examples, clarifications and supportive quantitative data.

The reporting process proved invaluable in testing the format and indicators developed by the EG. Above all, it

highlighted difficulties in using the format by government staff that were unfamiliar with some of the data collection and evaluation methods required by the indicators:

"We did not pay sufficient attention to the process of data collection (therefore) the feedback and answers by the national governments were not fair and properly elaborated in some cases – there was only limited attention paid to this aspect [by the Expert Group]. (EG 9)

…In defining indicators an attention should be paid also to the assessment/evaluation methodology (the pilot reports showed some difficulties already). (EG 6)

A review of the reporting exercise, *Learning from Each Other* (UNECE 2007b), made a series of conclusions and recommendations, some of these were echoed by the EG in its own reports to the Steering Committee (e.g. multi-stakeholder participation, and developing a more integrative conceptualization of ESD) while others highlighted a number of "underexposed issues" that required attention such as:

- Educators' initial training
- Quality control mechanisms for ESD teaching tools and materials
- Research in ESD – and making this accessible to policymakers and practitioners
- Conservation, use and promotion of indigenous knowledge

Learning from Each Other included a review of good practices in ESD collected by UNESCO with UNECE in 2007. This was seen by some EG members as a helpful contribution to their work; it brought "colour" and "a reality to the work". Although the template for gathering good practices was developed jointly with UNESCO on the basis of the UNECE Strategy for ESD and the United Nations Decade of ESD and included the Sustainable Development themes identified in the UNECE Strategy, it also included themes from other regions of the world and did not (initially) make reference to the objectives of the Strategy although was rectified in a revised version. This led to some EG members having difficulty in recognizing the link between the collection of good practices and the UNECE Strategy.

They were used nicely in the publication Learning from Each Other, but they were not connected at all to the Strategy. (EG 2)

The approach of collecting practical examples was subsequently adopted by the EG (see below) in an effort to illustrate the indicators.

The please describe bit of the questions is most important – a qualitative reflection. In 2010 we should have interesting "pictures of progress".(EG 2)

C. Revisions and additions

The National Implementation Reports collected ahead of the Belgrade Ministerial Conference highlighted the needs of the National Focal Points who have the task of completing the UNECE reporting format. Many of these concerns had already been raised at a workshop on the Implementation of the UNECE Strategy for ESD for Eastern Europe, Caucasus and Central Asia held in Moscow in November 2006.

Given the complexity of the task in hand, the Steering Committee extended the mandate of the EG and requested it to revise the indicators, following the pilot reporting exercise and feedback from countries on the workability and feasibility of the indicators. The EG was also asked to explore the possibility of developing "criteria to assess success in the implementation of the UNECE Strategy for ESD" based on the indicators and on the examples submitted by countries to the UNECE secretariat. (UNECE 2007a: 4)

The Expert Group decided to develop a set of interrelated tools to facilitate the understanding and use of indicators and to help National Focal Points to visualize what "success" in implementing the Strategy might look like. The EG proposed to the Steering Committee that in support of the set of indicators it would develop:

(a) A set of criteria/thresholds to assess/monitor success in the implementation of the UNECE Strategy for ESD, i.e. a standard to meet - a more quantitative answer to the question success in the implementation;

(b) A guidance, to include an introductory part … and a set of descriptors comprising explanatory notes on relevant indicators/sub-indicators and providing good practices and examples for each of these indicators/sub-indicators - a more qualitative answer to the question success in the implementation". (UNECE 2008: 2)

The collection of examples of each sub-indicator will be an ongoing task that will change as the nature of ESD changes over time. The EG also described the descriptors as an "organic phenomenon" that would need to change in order to keep abreast with developments in SD and ESD (UNECE 2008). This need for updating was stressed by an EG member:

We need a second generation of questions; otherwise our learning focus may not be addressed. (EG 2)

This is a laudable aspiration; however, at the time of writing, there are no confirmed plans to undertake the drafting of this "second generation" of questions. For now, the indicators with integrated success criteria and descriptors would help to measure the process of implementation of the UNECE Strategy for ESD but:

…In the end, we also want to know what is the result and effect of the implementation. That is up to countries to measure and report. (EG 2)

This EG member went on to state:

I am proud of the work and also surprised that this had not been done before. We struggled but the result is acceptable and understandable in different parts of the region. (EG 2)

Another EG member was not so sure that the result was a good one:

…Looking back, we could had explored others possibilities, more theoretical, or more practical. (EG 1)

But upon being interviewed, they reflected further, stating that:

It was a good compromise; I would defend it anywhere. (EG 1)

There are still concerns that the indicator system is too complicated to handle in practice, but the very presence of the reporting format and indicators acknowledges the importance of ESD on a political level. The process has also put the issue of ESD indicators firmly 'on the map':

The generation of a discussion on ESD indicators/descriptors has been worthwhile (though only for a small selected group). It seems to lead to a re-visiting of the meaning of ESD which to some is frustrating, but to some (many?) is of key importance. (EG 10)

1. The link to United Nations Decade of Education for Sustainable Development

A number of opportunities arose to discuss the extent to which the UNECE indicator framework might also serve as a reporting mechanism for the United Nations Decade of ESD (DESD). The EG supported the decision by ministers that the submission of a single report on the implementation of the UNECE Strategy should also serve as a report on the implementation of the DESD. This was facilitated by the fact that the UNECE reporting timetable is about one year ahead of the DESD timetable.

There has also been interaction between the Chairs of both the DESD Monitoring and Evaluation Expert Group and UNECE's Expert Group and they were able to propose to their relevant secretariats a plan for closer integration of both monitoring processes.

III. Inside the Expert Group

A. The people

Most of the EG members who contributed their reflections to assist in the preparation of this chapter highlighted the role of the Chair, Roel van Raaij, in "setting the tone" for the process. While the first impression for some was that the group was strongly led in one direction, i.e. looking for something that can be measured, members appreciated the fact that the Chair became more flexible and accepted changes over time.

The process worked well in the sense that there was discipline in the discussions, but not rigidity. (EG 8)

The presence of expertise from different parts of the region was cited as important but this also brought its challenges as the group strove to find a common language:

It was not only a problem of different ways to look at ESD or of different fields of expertise… but of very different knowledge and feelings about ESD and its evolution in the last 10 years, and about evaluation and its evolution…. (EG 1)

Above all, it seemed to be the group's willingness to work hard and the positive group dynamic that enabled such a disparate collection of people to fulfil their common task:

Engaged doers were there to do a job, obtain results, not only to represent their countries. (EG 5)

It is perhaps difficult to find again such a good combination of expertise and openness of characters who started discussions with many ideas but not "fixed" ones. (EG 8)

In my opinion, the process worked well… I think this was because of both the goal-oriented moderation by our Chair and the ambitious group. (EG 3)

B. The process

The last quotation above points to the approach taken by the group's Chair, i.e. setting out a structured agenda for each meeting with clear goals to be achieved within the time available. Although this required a high degree of pre-planning, group members felt that:

There was always enough flexibility to achieve a common understanding and at the same time to keep a feeling of "ownership" of the decision made. (EG 6)

The first meeting was critical in setting the tone for the rest of the process and care was taken to build and maintain a positive group dynamic:

We invested in becoming a group – same hotel, meals together, informal moments. (EG 2)

Certainly, non-formal communication on the "evening sessions" contributed to the team-building and confident

relationships within the EG as well. (EG 6)

Given the heterogeneity of the group, it was perhaps surprising how members were able to resolve apparently irreconcilable differences between them. This is where the "investment in the group" paid dividends. By getting to know each others' backgrounds and personalities, a great deal of mutual respect was built up such that all members wanted to find a resolution regardless of their starting position.

There were enough "outspoken" members with different but not frontally opposite views who helped in the fertilization of the thinking. They were ready to reconcile and "line" with the views of the majority in a very naturally and evolving genuine consensus. (EG 8)

For many, the process (if not the product) exemplified ESD itself:

Flexibility and unpredictability are important. We can't clearly define what is to be done. How can we manage unpredictability and give guidelines? This is a contradiction, but it is meaningful. We know sustainable development is a learning process – the indicator group's process was therefore sustainable development in action. I am convinced that in sustainable development, the really important part is to clarify the problem and the constraints and ideas about it. We did this over the three years. (EG 1)

For me the key learning experience was the confirmation of the need to accept great variety of alternative routes and approaches, depending on the local culture and background, which, if properly conducted, could lead to an ESD with similar qualities, based on a balance of knowledge, behavioural changes and development of abilities, skills and willingness to act positively for the benefit of the society and the environment. (EG 8)

(I learned) that the ESD process could be very concrete, productive and based on real work, not only idealistic speeches. (EG 9)

Asked what they personally learned from the process, EG members highlighted the enjoyment and value of working in an international team and the skills they honed in working "diplomatically" and with different languages as well as specific experiences related to indicators that were new to members. This in turn has opened new avenues for members, for example:

My own work has been inspired by my participation in the Expert Group, especially with regard to further research on indicators. And, as a side-effect, I started to "dive" more into the research on "realistic evaluation" and its nexus to educational governance. (EG 3)

An indicator of a good team could be the fact that communication between EG members is continuing and common projects were initiated! (EG 6)

Finally of course it was a group of very interesting and sociable people, and you can't legislate for that! (EG 7)

C. Where next?

Just as individual members have developed from the process, so the work on indicators will continue. EG members are in agreement that there are two interrelated areas where further work is critical:

1. Capacity-building

This is critical to the success of the implementation and reporting process:

There is a role for experts to see the process through and then write it up. This is, after all, a big issue: how to indicate ESD (especially for my country). It's important for our NGOs, for fundraising, proving effectiveness and for connecting international work with the local (national) level. (EG 9)

We should be organizing trainings in which various stakeholders develop their national understanding of ESD, setting their own indicators and descriptors: thereby reporting about and at the same time engaging in ESD. (EG 10)

It is important to continue the link with the Expert Group as the process continues – possibly to provide support/ clarification to Member States. (EG 1)

2. Exchange of experiences

This can take the form of practical, often bilateral support between countries or research into the implementation process (and beyond), possibly in collaboration with partners from across the UNECE region. Sharing of experience in the use of the indicators themselves is seen as important:

Now we need a larger group of experts trying to apply the indicators and reflect on this. Peer evaluation is a useful instrument; this is a better way of doing it. The procedure for evaluation is important; it would be good to work with someone who has to use this product. To observe the process would help us to improve the product. (EG 1)

There should be some research into how this process works from now on, e.g. looking at the benefits and barriers of data collection. (EG 9)

Others hope to look beyond the strategy:

More effort is needed to investigate outputs and effects

of the indicators. What's happening? This means beyond the Strategy itself… (EG 2)

The learning from this collaborative effort will have implications beyond the UNECE programme:

I think it's necessary to share the results within the scientific community and to look for a critical debate, e.g. concerning the functionality of the indicator format and its academic quality criteria.

… The task remains to show that ESD is a topic within the mainstream of educational research (rather than a "niche" topic). (EG 3)

It would appear that the "spin-off" activity has already started to occur:

"(In my country) we have started a tri-national research project to develop a reduced set of indicators out of the UNECE indicators for the national monitoring and reporting on ESD issues. (EG 3)

These ideas indicate the extent to which EG members have become involved in (and changed by) the process. The UNECE Steering Committee on ESD would do well to find ways to tap into this well of experience, expertise and motivation.

IV. Recommendations

Given the accounts in the previous sections, three areas for recommendations emerge. Drawing once again on the views of EG members, the following points are made with a view to informing the proposed UNECE Expert Group on Competences in ESD.

A. Maintain a flexible mandate

Follow an iterative process that allows the mandate to co-evolve with inputs from the "expert group" and other (potential) users.

Current EG members are concerned that in the case of competences, the outcomes will be more difficult to define:

…Competences are hard to explain as a "must" in education, they are difficult to teach, learn and assess as a result of the (formal) learning process. …The issue is quite complex… different approaches or methods to deal with it are possible, a crucial point would be to split the task into several areas of interest and let experts distribute the work among themselves. (EG 9)

To write a new in depth document is a very different task compared to our work on indicators. (EG 1)

Therefore there is a need to:

…Spend more time in the "construction of the problem" and go on (to) the drafting, only when the issues to be dealt with and the experiences of the experts have been clarified. (EG 1)

With this in mind, a more dialogical process is envisaged:

We should start by brainstorming our strategy (rather than ESD). Send specific terms of reference back to the Steering Committee stating clearly, "what we can really do for you. (EG 1)

While flexibility is stressed, there is also recognition of the important role played by the Steering Committee in guiding the process:

In the mandate given, please do set some "boundaries" to keep focus. (EG 2)

B. Link to existing frameworks – and "real life"

The experience that EG members brought to the indicator drafting process meant that existing international conventions were drawn upon, although often by chance (e.g. the group used the UNESCO ISCED framework of educational levels, which made the reporting format more internationally comparable for a wider audience). So:

Link the work in to general, widely accepted frameworks for competences and skills. This will gain wider credence for the work, and with care can be done without forcing ESD into a straitjacket. (EG 7)

The use of existing frameworks is not only more efficient, it demonstrates confidence in the role and contribution of ESD:

I would suggest reinterpreting existing large-scale assessments (LSA) on competences such as PISA and have a precise look on links between competences measured there and those competences meant to be addressed through ESD. If possible, there shouldn't be another LSA especially on ESD competences – because ESD is something that is to be implemented into the educational systems…and become part of the "normal" business. (EG 3)

The indicator work was done on an "expert" level, and EG members recognized the need to involve those who would use the indicators in their countries. This link with was not planned into the indicator process, but in the work on competence there is an opportunity to work (possibly remotely) with technical staff in various UNECE member States.

The job is not for a promotion or PhD, but for a rather technical implication: to assist countries in their ideas and

efforts to enhance the ESD in their countries. (EG 2)

This two-way learning processes will help the group to develop a clearer understanding of the implications of their work as well as helping to orientate National Focal Points.

C. Build a group that works

The meeting process itself should be run by a skilled Chair, better still:

…A professional process manager (should be) appointed to guide and lead the process.... He or she should be fluent in English (but not a native speaker). (EG 4)

On reflection, the former EG members would have liked to have had the opportunity to find out more about each other at the start of the process and to clarify the state of knowledge in the group so that people could have started with a common understanding.

(Start with) a set of basic articles and documents as a common theoretical basis to discuss and on which to build something new and adapted to the (ESD) Strategy. We cannot start every time from nothing. (EG 1)

People should clarify their approach to the issue. We need to know people's contexts so we don't sound too prescriptive; e.g. former Soviet countries have very different approaches and we need to understand why they say things in the way they do. (EG 9)

It is important particularly taking into account different background and working positions of the EG members. (EG 6)

This suggests:

…A kind of short internal conference with the working group. (EG 1)

…A seminar-like exchange of information among the members of the group and in particular from those who may have something concrete to share, complemented eventually, by some references/publications to be circulated. (EG 8)

If the group is to complete tasks outside of the physical meetings, it is recommended that:

Some practical tool for cooperation via the internet is used between the meetings (not only e-mails, maybe some wiki to work together on one document). (EG 9)

There is a German enterprise called "Invent" Global Campus – maybe universities (i.e. group members) could use this for free? (EG 1)

The evident "good chemistry" in the EG was also based on a social programme enhanced by more or less enforced isolation. "Investment in the group" was a crucial component of the success of the EG:

Certainly the first competences group meeting should be held in a venue with no escape. It's important to build trust in a group so that disagreements can be handled well. (EG 2)

At the very least, those who will be facilitating the group on competences should ask questions of the Chair and members of the EG on indicators. When asked what a new expert group should do differently, one EG member simply stated:

Nothing…considering that people with different cultural, disciplinary, and professional (backgrounds) were working together we had fun and got things done. (EG 5)

Concluding remarks

This chapter aims to provide a flavour of the workings of the UNECE Expert Group on indicators. As the mandate was extended, those of us who served on the group found that it was a greater commitment than anyone had originally envisaged. Also, as this chapter indicates, there were serious questions and concerns along the way about whether this approach was even appropriate.

Whatever our misgivings, having heard back from so many Expert Group members, I can say with confidence that we all found it a pleasure and a privilege to serve on this group and to work towards the overlapping goals of sustainability and effective learning.

Paul Vare, United Kingdom
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UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

STRATEGY FOR EDUCATION FOR SUSTAINABLE DEVELOPMENT

CHAPTER II

UNECE STRATEGY FOR EDUCATION FOR SUSTAINABLE DEVELOPMENT

adopted at the High-level meeting of Environment and Education Ministries
(Vilnius, 17–18 March 2005)

Vision[1]

Our vision for the future is of a region that embraces common values of solidarity, equality and mutual respect between people, countries and generations. It is a region characterized by sustainable development, including economic vitality, justice, social cohesion, environmental protection and the sustainable management of natural resources, so as to meet the needs of the present generation without compromising the ability of future generations to meet their needs.[2]

Education, in addition to being a human right[3], is a prerequisite for achieving sustainable development and an essential tool for good governance, informed decision-making and the promotion of democracy. Therefore, education for sustainable development can help translate our vision into reality. Education for sustainable development develops and strengthens the capacity of individuals, groups, communities, organizations and countries to make judgements and choices in favour of sustainable development. It can promote a shift in people's mindsets and in so doing enables them to make our world safer, healthier and more prosperous, thereby improving the quality of life. Education for sustainable development can provide critical reflection and greater awareness and empowerment so that new visions and concepts can be explored and new methods and tools developed.

1 Agenda items 5 and 6 of the High-level meeting of Environment and Education Ministries (CEP/AC.13/2005/3/Rev.1).
2 See also World Commission on Environment and Development, "Our Common Future", 1987.
3 See also the Statement on Education for Sustainable Development; fifth Ministerial Conference "Environment for Europe", Kiev, 2003.

Introduction

1. The mandate to develop the Strategy derives from the statement made by the UNECE environment ministers at the Fifth "Environment for Europe" Conference (Kiev, May 2003). The Strategy benefited from experience gained both within the region and globally. It is a contribution to and in line with the framework for a draft implementation scheme for the United Nations Decade of Education for Sustainable Development developed by UNESCO, and should be used as a foundation for the regional implementation of the Decade and outcomes of the World Summit on Sustainable Development.

2. The Strategy was developed through a participatory process involving governments, educational institutions, NGOs and other stakeholders of the UNECE region as well as international organizations.

3. This Strategy should facilitate the introduction and promotion of ESD in the UNECE region and thereby contribute to the realization of our common vision.

4. The UNECE region encompasses countries with a rich cultural diversity and with different socio-economic and political conditions. The prospects of sustainable development depend 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.

5. The region has both preconditions and needs for implementing the Strategy. Most countries in the region have established education systems employing professional educators, ensured access to basic education and equal rights to education for all, achieved high levels of literacy, developed a scientific potential and provided for the participation of civil society. However, there are still challenges to be met in order to implement ESD effectively. Education systems should be improved to address the interdisciplinary nature of ESD, the involvement of civil society should be strengthened and adequate institutional and material provisions should be mobilized.

I. AIM AND OBJECTIVES

6. The aim of this Strategy is to encourage UNECE member States to develop and incorporate ESD into their formal education systems, in all relevant subjects, and in non-formal and informal education. This will equip people with knowledge of and skills in sustainable development, making them more competent and confident and increasing their opportunities for acting for a healthy and productive life in harmony with nature[4] and with concern for social values, gender equity and cultural diversity.

7. The objectives of this Strategy, which will contribute to the achievement of the aim, are to:

(a) Ensure that policy, regulatory and operational frameworks support ESD;

(b) Promote SD through formal, non-formal and informal learning;

(c) Equip educators with the competence to include SD in their teaching;

(d) Ensure that adequate tools and materials for ESD are accessible;

(e) Promote research on and development of ESD;

(f) Strengthen cooperation on ESD at all levels within the UNECE region.

8. The Strategy will be adopted by interested UNECE member States. States outside the region are also encouraged to follow it.

4 The Rio Declaration on Environment and Development states that human beings are at the centre of concerns for sustainable development, and that they are entitled to a healthy and productive life, in harmony with nature (See also Plan of Implementation, World Summit on Sustainable Development, United Nations, 2002).

II. SCOPE

9. The Strategy is addressed to governments, motivating and advising them on how to develop policies and practices that incorporate sustainable development into education and learning with the involvement of educators and other stakeholders. Since education for sustainable development must take account of local, subnational, national and regional circumstances, it may place varying degrees of emphasis on the different aspects of sustainable development, depending on the country and the field of education. This Strategy will serve as a flexible framework for the countries of the region, given that its implementation is driven by countries' priorities and initiatives addressing their specific needs and circumstances.

10. The Strategy encourages interdepartmental[5] , multi-stakeholder cooperation and partnerships, thereby stimulating investment of material and human resources in ESD.

11. The Strategy encompasses the basic provisions of Education for All: Meeting Our Collective Commitments.[6]

12. The Strategy supports the implementation of the communication, education, public-participation and awareness-raising provisions of multilateral environmental and other relevant agreements. It should also support the implementation of principle 10 of the Rio Declaration on Environment and Development, the Aarhus Convention[7], the United Nations Millennium Development Goals[8] and Quality Education[9] by promoting transparent, inclusive and accountable decision-making as well as people's empowerment.

III. PRINCIPLES

13. There is a need to consider the evolving meaning of SD. The development of a sustainable society should, therefore, be seen as a continuous learning process, exploring issues and dilemmas, where appropriate answers and solutions may change as our experience increases. Learning targets for ESD should include knowledge, skills, understanding, attitude and values.

14. ESD is still developing as a broad and comprehensive concept, encompassing interrelated environmental, economic and social issues. It broadens the concept of environmental education (EE), which has increasingly addressed a wide range of development subjects. ESD also encompasses various elements of development and other targeted forms of education. Therefore, EE should be elaborated and complemented with other fields of education in an integrative approach towards education for sustainable development.

15. Key themes of SD 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[10], rural and urban development, economy, production and consumption patterns, corporate responsibility, environmental protection, natural resource management and biological and landscape diversity. Addressing such diverse themes in ESD requires a holistic approach.[11]

16. While implementing ESD, the following areas should be addressed: improving basic education, reorienting education towards sustainable development, increasing public awareness and promoting training.[12]

17. ESD should foster respect for and understanding of different cultures and embrace contributions from them. The role of indigenous peoples should be recognized and they should be a partner in the process of developing educational programmes. Traditional knowledge should be valued and conserved as an integral part of ESD.

18. Learners at all levels should be encouraged to use systemic, critical and creative thinking and reflection in both local and global contexts; these are prerequisites for action for sustainable development.[13]

19. ESD is a lifelong process from early childhood to higher and adult education and goes beyond formal education. As values, lifestyles and attitudes are established from an early age, the role of education is of particular importance for children. Since learning takes place as we take on different roles in our lives, ESD has to be considered as a "life-wide" process. It should permeate learning

5 Between State bodies.
6 Dakar Framework for Action, UNESCO, 2000.
7 UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, Aarhus (Denmark), 1998.
8 United Nations Millennium Declaration, the General Assembly, 8th plenary meeting, 2000.
9 Ministers of Education Joint Communiqué, thirty-second General Conference of UNESCO, 2003
10 See also Framework for a draft implementation scheme for the Decade of Education for Sustainable Development, UNESCO, 2003.
11 See also Statement on Education for Sustainable Development.
12 See also Agenda 21.
13 See also Statement on Education for Sustainable Development.

programmes at all levels, including vocational education, training for educators, and continuing education for professionals and decision makers.

20. Higher education should contribute significantly to ESD in the development of appropriate knowledge and competences.

21. ESD should take into account diverse local, national and regional circumstances as well as the global context, seeking a balance between global and local interests.

22. ESD could also contribute to developing rural and urban areas by increasing access to education and improving its quality. This would be particularly beneficial to people living in rural areas.

23. Addressing the ethical dimension, including issues of equity, solidarity and interdependence in the present generation and between generations, as well as relationships between humans and nature and between rich and poor, is central to sustainable development and, therefore, vital for ESD. Responsibility is inherent in ethics and becomes a practical matter for ESD.

24. Formal ESD should be permeated by experience of life and work beyond the classroom. Educators[14] involved in ESD play an important role in facilitating this process and in encouraging dialogue among pupils and students and the authorities and civil society.[15] In this way, ESD presents an opportunity for education to overcome its isolation vis-à-vis society.

25. 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.[16] 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[17] should also be considered, in particular as a contribution to resolving conflicts in society and achieving justice, including through Local Agenda 21.

26. 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 (NGOs), various communities, indigenous peoples and international organizations.

27. ESD should promote provisions of multilateral environmental agreements and relevant international agreements related to SD.

IV. IMPLICATIONS FOR EDUCATION

28. ESD demands a reorientation away from focusing entirely on providing knowledge towards dealing with problems and identifying possible solutions. Therefore, education should retain its traditional focus on individual subjects and at the same time open the door to multi- and inter-disciplinary examination of real-life situations. This could have an impact on the structure of learning programmes and on the teaching methods, demanding that educators change from being solely transmitters and learners change from being solely recipients. Instead both should form a team.

29. Formal education institutions play an important role in developing capacities from an early age, providing knowledge and influencing attitudes and behaviour.. It is important to ensure that all pupils and students acquire appropriate knowledge of SD and are aware of the impact of decisions that do not support sustainable development. An educational institution, as a whole, including pupils and students, teachers, managers and other staff as well as parents, should follow principles of SD.

30. It is important to support non-formal and informal ESD activities, since they are an essential complement to formal education, not least for adult learning. Non-formal ESD has a special role as it is often more learner-oriented, participatory and promotes lifelong learning. Informal learning in the workplace adds value for both employers and employees. Therefore, the cooperation among the different actors involved in all forms of ESD should be recognized and encouraged.

31. Appropriate initial training and re-training of educators and opportunities for them to share experiences are extremely important for the success of ESD. With heightened awareness and knowledge on sustainable development and, in particular, SD aspects in the areas where they work, educators can be more effective and lead by example. Training should also be closely linked to the relevant research findings on SD.

32. Teaching and learning in ESD are greatly enhanced by the content, quality and availability of

14 Educators are teachers, lecturers, trainers and all other professionals with educational tasks, as well as voluntary education leaders.

15 See also Statement on Education for Sustainable Development.

16 Thessaloniki Declaration; Thessaloniki, Greece, 1997. Some countries use the term “social learning” for participatory learning.

17 Agenda 21.

instruction materials. Such materials, however, are not available in all countries. This is a problem for entire sector of formal education as well as non-formal and informal learning. Therefore considerable efforts should be devoted to developing and reproducing them. Coherence between the instruction materials of formal and non-formal education should be encouraged and the challenge is to ensure that they are relevant to SD and locally affordable.

33. To be effective ESD should:

(a) Be addressed in two ways: (i) through the integration of ESD themes across all relevant subjects, programmes and courses; and (ii) through the provision of specific subject programmes and courses;

(b) Focus on enabling meaningful learning experiences that foster sustainable behaviour, including in educational institutions, the workplace, families and communities;

(c) Increase cooperation and partnerships among members of the educational community and other stakeholders. Further involvement of the private sector and industry in educational processes will help to address rapid technological development and changing working conditions. Learning activities in close relation with society will add to learners' practical experience;

(d) Provide an insight into global, regional, national and local environmental problems explaining them by means of a life-cycle approach and focusing not only on the environmental impact, but also on the economic and social implications, addressing both the natural environment and that modified by humans;

(e) Use a wide range of participatory, process- and solution-oriented educational methods tailored to the learner. Apart from the traditional ones, these should include among other things discussions, conceptual and perceptual mapping, philosophical inquiry, value clarification, simulations, scenarios, modeling, role playing, games, information and communications technology (ICT), surveys, case studies, excursions and outdoor learning, learner-driven projects, good practice analyses, workplace experience and problem solving;

(f) Be supported by relevant instruction materials, such as, methodological, pedagogic and didactic publications, textbooks, visual aids, brochures, cases studies and good practices, electronic, audio and video resources.

34. Governments should be supportive of non-formal and informal learning because informed citizens and knowledgeable consumers are essential in enacting sustainability measures through their choices and actions, including local Agenda 21.

35. Non-formal and informal learning, including public awareness programmes, should aim to provide a better understanding of the links between social, economic and environmental issues in local and global contexts, including a time perspective. Communities, families, the media and NGOs are important actors in raising public awareness on SD.

36. NGOs are important providers of informal and non-formal learning, able to implement processes of civil empowerment as well as integrating and transforming scientific knowledge and facts into easily understandable information. Their role as mediators between governments and the general public should be recognized, promoted and supported. Partnerships among NGOs, Governments and the private sector would add significant value to ESD.

37. Mass media is a powerful force in guiding consumer choice and lifestyles, especially for children and young people. The challenge is to mobilize their know-how and distribution channels to pass reliable information and key messages on SD-related issues.

38. All sectors of the workforce can contribute to national, regional and global sustainability. The development of specialized training programmes to provide professionals and decision makers with the knowledge and skills to contribute to SD has been identified as a critical component of education for sustainable development[18].

39. Thus, vocational and continuing education have a very important role to play and should therefore be offered to decision makers and all professionals, especially those with a role in planning and management. It should be aimed at building knowledge and awareness of SD. Continuing education has two main activity areas: (a) upgrading knowledge and skills; and (b) providing new competencies needed in different professions and in different situations. Continuing education is one of the areas that would benefit from cooperation among the education sector, stakeholders and the community at large.

40. Training programmes should address the key themes of SD, but at the same time take into consideration the needs of different professions and the relevance of these themes to their areas of work. Special attention should be given to subjects linked to the primary responsibility of a profession and its economic, social and environmental impacts.

18 See also the framework for a draft implementation scheme for the Decade of Education for Sustainable Development.

41. For ESD to become part of an agenda for change towards a more sustainable society, education itself must be subject to change. Research that might contribute to ESD should be encouraged. There is a need for increased cooperation and partnerships between stakeholders in research and development activities, ranging from identifying issues to working with new knowledge and making it known and used. The results of research and development efforts should be shared with actors locally, regionally and globally, and be incorporated into different parts of the education system, experience and practice.

V. FRAMEWORK FOR IMPLEMENTATION

1. National/State implementation

42. Each country is responsible for implementing this Strategy. To include SD perspectives throughout education, strong political support will be necessary at all levels of governance. To that end, it is recommended that countries should translate this Strategy into their official language(s), and, as appropriate, language(s) of minorities, and distribute it to the relevant authorities and designate a focal point.

43. Effective implementation of the Strategy requires its provisions to be integrated into the planning, investment and management strategies of the State and local government for all levels of education and for all educational institutions and organizations. At the same time, the implementation should be in accordance with and benefit from other relevant State, bilateral and multilateral initiatives. The legal, economic and communication instruments should be adapted to the State's circumstances. Thus, countries would implement the provisions, as appropriate, in relation to their legislation, policies and operational frameworks.

44. Countries should identify their existing obligations regarding communication, education and public participation and awareness raising in international environmental and other relevant agreements in order to address these in a coherent manner through ESD.

45. The education sector consists of a broad field of actors with different regulatory management systems in different countries. It is also geared to people of different ages and in different positions in life. The challenge will be to address and implement necessary reform of policy-making and the operational framework of the education sector on a basis of trust, inclusivity and subsidiarity, and to encourage self-evaluation. It is important that those responsible for formal, non-formal and informal education cooperate with other relevant State authorities in implementing this Strategy.

46. The cooperation, shared responsibility and leadership of all relevant State bodies should be recognized as an important mechanism for good governance and be strengthened. Education and Environment Ministries, in particular, should cooperate and take the lead in initiating and encouraging the further integration of SD concerns into formal education policies, programmes and curricula at all levels and assess the implementation of the Strategy. However, close and effective cooperation with other public authorities as well as with stakeholders is also required, in particular with authorities responsible for economy.

47. There is a need for a coordination mechanism for implementing the Strategy at the State level, as well as for sharing information and stimulating partnerships among different actors.[19] One option is to set up a "national ESD platform" possibly under the umbrella of the councils on sustainable development or other relevant bodies, bringing together professionals from different sectors.

48. National[20](State) implementation plans should serve as a core element of implementation. Countries should decide on a body that will be responsible for drafting their national implementation plan.

49. The national implementation plan should be developed with a participatory approach. Thus, all relevant stakeholders should be involved. It should take into consideration the actual situation in a country. Recognizing that countries may wish to set their own priorities and schedules for implementation in accordance with their needs, policies and programmes, the provisions of this chapter could serve as a guide for this work. National implementation plans should address objectives, activities, measures, tentative timetable, means of implementation and evaluation instruments.

19 Some countries have introduced the "knowledge management" approach.

20 For countries with a federal governmental structure, all references to national plans apply to State and sub-State plans, when appropriate.

2. Areas for action

Ensure that policy, regulatory and operational frameworks support the promotion of ESD

50. Policy, legislation, operational frameworks and curricula should include and support ESD. Key actions to achieve this could be to: adopt frameworks for ESD for all levels of education; stimulate the development of interdepartmental and multi-stakeholder cooperation, including the establishment of consultative mechanisms, as appropriate; to integrate SD principles into the study programmes and special courses at all levels of higher education, especially in initial teacher training; improve the provision and management of education facilities towards SD and strengthen the connection between natural, economic, political and social sciences in interdisciplinary, multidisciplinary and specialized studies. Interdisciplinary and specialized studies should be properly balanced.

Promote SD through formal, non-formal and informal learning

51. Raising public awareness of SD in and through institutions of formal education as well as communities, families, the media and NGOs should be encouraged.

52. Professional skills and knowledge of sustainable development should be improved continuously and, consequently, be part of the lifelong learning of individuals including those in sectors such as public administration, the private sector, industry, transport and agriculture. The development of new knowledge and the need to introduce new skills in order to give more specific substance to the concept of SD will remain a constant need, as many areas of expertise are constantly developing.

53. Key actions to achieve this could be to: offer SD-related learning opportunities in continuing education for professionals, including those in planning, management and the mass media; encourage and support community-based SD-awareness-raising activities; develop cooperation with NGOs and support their educational activities; promote cooperation among formal educational institutions and non-formal organizations as well as informal activities; encourage the media to inform and debate issues for SD to reach the general public.

Develop the competence within the education sector to engage in ESD

54. Educators, leaders and decision makers at all levels of education need to increase their knowledge about education for sustainable development in order to provide appropriate guidance and support. Therefore, competence-building efforts are necessary at all levels of both formal and non-formal education.

55. Key actions to achieve this could be to: stimulate competence development for staff in the education system, including actions for the leaders to increase their awareness of SD issues; develop criteria for validating professional competence in ESD; introduce and develop management systems for SD in formal educational institutions and non-formal education settings; include SD-related issues in training and re-training programmes for educators for all levels of education; and encourage educators, including those involved in non-formal and informal education, to share experiences.

Ensure that adequate tools and materials for ESD are accessible

56. Materials for ESD at all levels need to be developed, both for general courses and specialist education and for self-study and be adapted to the local conditions and needs.

57. Key actions to achieve this could be: (a) to stimulate the development and production of materials for educators, learners and researchers for all levels of education and training, especially in local languages; (b) to encourage the development and use of electronic, audio, video and multimedia resources and visual aids for both learning purposes and sharing information; (c) to facilitate access by electronic means and the Internet to resources and information relevant to ESD; (d) to ensure coherence between materials for formal, non-formal and informal learning; and (e) to develop relevant dissemination strategies.

Promote research on and development of ESD

58. There is a need for research and development activities in different areas of ESD, such as effective learning methods, evaluation tools, formation of attitudes and values, school/institutional development and implementation of ICT. Research and development on ESD should offer a continuing basis in developing ESD.

59. The results of research and development efforts should be shared with actors locally, regionally and globally, and incorporated into different parts of the education system.

60. Key actions to achieve this could be to initiate and promote research on and development of: the content of ESD and teaching and learning methods; the economic effects of and incentives for ESD; ways of including aspects of SD and their local context in different subjects, giving priority to research that brings together the different dimensions of SD; indicators and evaluation instruments for ESD; and share the results of research and examples of good practices.

3. International cooperation

61. Cooperation on education for sustainable development, apart from contributing to the strengthening and improvement of ESD in countries, could help to ensure mutual understanding, strengthen trust and develop respect for cultural values, thereby building friendly relations between peoples and nations and contributing to peace and wellbeing.

62. There is a need at the regional level to review and facilitate the implementation of the Strategy and support cooperation on ESD. The regional process should take into account other developments that take place in connection with the United Nations Decade on Education for Sustainable Development and be seen as a contribution to the global initiatives on ESD.

63. The region has a wealth of experience in international cooperation on education, especially in higher education. A number of national and subregional networks, education, working groups, networks and associations of universities, programmes and partnerships have started work on the development of multidisciplinary forms of education to devise solutions to the problems linked to sustainable development. The challenge is how best to use their experience and potential to promote ESD. Another challenge is research into ESD-related issues, which still does not have a prominent role internationally. There is also a need for international cooperation on ESD in pre-school and school education.

64. Regional and subregional forums that bring together members of the education community, such as civil servants, educators and researchers, and other relevant actors to share their experience and good practices on SD- and ESD-related issues should receive high priority.

65. The complex nature of ESD requires that, in addition to the education community, other relevant international actors should be invited to work in partnership to implement the Strategy. This is especially relevant for international cooperation aimed at improving SD-related knowledge and skills for different professionals and decision makers.

66. Experiences and needs vary in different parts of the UNECE region. Subregional cooperation needs to be strengthened. This would make it possible to work closely on those issues that are of high importance for a given subregion, thereby helping countries to attain the best practical results.

67. Further assessment of the needs in different subregions is required. Special emphasis should be given to the countries in Eastern Europe, Caucasus and Central Asia (EECCA)[21] and South-Eastern Europe (SEE) in solving their main problems in environmental education and in education for sustainable development. Some of their problems are lack of adequate instruction materials, the inefficient use of the capacity of higher education and research institutions, the shortage of skilled educators and insufficient awareness raising as well as a lack of interdepartmental and multi-stakeholder cooperation on ESD. Another challenge that should be addressed in EECCA and SEE is the poor quality of education for children living in rural areas and the lack of financial and human resources to develop ESD in those areas. Thus, providing capacity building, financial assistance and support to education, research and public awareness programmes on SD in countries with economies in transition should be recognized as an important issue and be considered by Governments, relevant organizations and donors accordingly.[22]

68. Key actions could be to: strengthen existing regional and subregional alliances and networks working on ESD and encourage twinning programmes, bilateral cooperation and partnerships; use, as appropriate, existing international legally binding instruments such as the Aarhus Convention and other relevant agreements to raise awareness of SD; facilitate the sharing of good practices and experiences, innovations and information of national experiences and projects in development cooperation on ESD-related issues, e.g. by using ICT tools and the website of UNECE; include ESD in relevant bilateral and multilateral programmes; encourage the participation of NGOs and other major groups in international cooperation on ESD; encourage and coordinate international events for SD awareness-raising; and encourage the share of experience.

69. To ensure efficient regional governance and communication, the establishment of ESD focal points in all UNECE member States and in relevant international organizations is required. A steering committee consisting of representatives of the education and environment (or other relevant) sectors might be established to follow up the implementation of the Strategy. The "Environment for Europe" process might be used as a partnership platform for regional cooperation on ESD and the UNECE Committee on Environmental Policy as a body to review progress in the Strategy's implementation in accordance with the Committee's work programme.

70. At the "Environment for Europe" Conferences, ministers may wish to discuss progress in the Strategy's implementation based on national and other relevant reports. Environmental performance reviews may also include an assessment of the reviewed country's efforts on ESD.

21 See also Environmental partnerships in the UNECE region: Environment Strategy for countries of Eastern Europe, the Caucasus and Central Asia. Strategic Framework; Fifth Ministerial Conference "Environment for Europe", Kiev, 2003.

22 See also Plan of Implementation; World Summit on Sustainable Development.

4. Roles and responsibilities

71. Governments should play a proactive role in promoting and facilitating the Strategy's implementation in their countries. They should assess and regularly follow up its implementation at all levels of governance.

72. Local educational authorities and institutions of formal education are encouraged to take on responsibility for implementing the relevant provisions of the Strategy and monitoring it.

73. Relevant stakeholders, including 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 should be invited to define their priorities and take responsibility for implementing and following up the Strategy.

5. Financial matters

74. Ensuring adequate financial means to implement the Strategy is an important precondition for its success. To assess accurately the costs of implementing measures that are necessary to achieve the objective of the Strategy and the return on this investment, it is essential to understand the value of education in introducing SD policies and practices in society. Education should be seen as an investment that will pay off in the long term.

75. The cost of implementing this Strategy should, in general, be borne by each country. Governments should therefore ensure that appropriate resources are available. Many of the proposed actions can be incorporated into ongoing development work in the education sector. Some actions could be more easily carried out as subregional or region-wide projects.

76. Governments should consider using budgets and economic incentives to finance ESD for all forms of education, including introducing scholarships on ESD and capacity building in educational institutions. Efforts should be made to include ESD components in relevant bilateral and multilateral programmes. Partnerships may be formed and should be encouraged to seek support, including contributions in kind, from international funding agencies and the private sector. At the first stage of implementation of the Strategy, financial assistance to some parts of the region, in particular to EECCA and SEE countries, is crucial to help those countries to start the process.

6. Evaluation and timetable

77. To assess the implementation of the Strategy, a time frame should be set and indicators be developed. Enabling people to act in favour of SD is a matter of quality of education and result of their studies. Introducing SD aspects into all forms and levels of education is a long process and the outcome can, therefore, be measured only over a long period of time.

78. Implementation of the Strategy should be seen as a continuous process. However, in order to facilitate assessment of its progress three phases for implementation are proposed:

Phase I (by 2007): good basis to start implementation, it is recommended that each country should identify what it is already doing that would fit within the remit of the Strategy. This would include a review of current policies, legal and operational frameworks, financial mechanisms, and educational activities, and would also include identification of any obstacles or gaps. Remedial action should be considered to overcome weaknesses and a relevant national implementation plan drafted. Evaluation methods and indicators for the implementation of ESD, in particular qualitative ones, should be developed. At their "Environment for Europe" Conference, Ministers can demonstrate their commitment to the Strategy, celebrate successes, share issues and concerns, and report on progress of their national/State strategies.

Phase II (by 2010): the implementation of the Strategy's provisions, as appropriate, should be well under way. In this respect, countries should review progress made in the implementation of their respective national/State strategies and revise them, if necessary.

Phase III (by 2015 and beyond): countries should have made considerable progress in implementing ESD.

79. To help process-oriented evaluation and benchmarking of the Strategy a number of issues should be considered. This includes the following samples: identification of leaders and coordinators to drive the Strategy; policy, legal and operational frameworks to support the Strategy; framework for intergovernmental and multi-stakeholder cooperation and partnerships; relevance of formal curriculum and learning programmes; initial and continuing training on SD-related issues, in particular for educators; tools and materials for ESD; research and development on ESD; the development of non-formal and informal education; and the involvement of the media and the impact on learners.

Note

Two background documents are available for information: one on past and ongoing international processes on education for sustainable development (CEP/AC.13/2004/8/Add.1), and the other to clarify some terms used in the strategy (CEP/AC.13/2004/8/Add.2).

STATEMENT ON EDUCATION FOR SUSTAINABLE DEVELOPMENT

CHAPTER III

STATEMENT ON EDUCATION FOR SUSTAINABLE DEVELOPMENT
by the Ministers of Education and of the Environment of the UNECE Region

adopted at the joint session on education for sustainable development
at the Sixth Ministerial Conference "Environment for Europe" (Belgrade, 10-12 October 2007)[1]

We, Ministers of Education and of the Environment from the region of the United Nations Economic Commission for Europe,

Confirming our vision for the future, which is of a region that embraces common values of solidarity, equality and mutual respect between people, countries and generations[2],

Confirming the importance of the principle of sustainable development as the key to a globalization that secures environmental protection and sustainable management of natural resources, poverty eradication, and sustainable consumption and production, and enhances justice and civil rights, gender equality and the rights of children[3],

Reaffirming the importance of education for sustainable development as a tool for capacity-building that enables people to make this vision a reality,

Celebrating the successful adoption, and the start of the implementation of, the UNECE Strategy for Education for Sustainable Development, a practical instrument to promote sustainable development through education,

Emphasizing that close cooperation between the environment and education sectors as well as all other relevant sectors and stakeholders, especially educators and non-governmental organizations, has contributed significantly to the successful start of the implementation of the Strategy,

Welcoming progress to date in implementing education for sustainable development in our countries and the advances in regional and subregional cooperation in this area,

Welcoming the significant contribution of non-governmental organizations of the UNECE region to the development and implementation of informal and non-formal education,

Recognizing that the implementation process is benefiting from the experience gained both within the region and globally, and welcoming the fruitful cooperation between UNECE and the United Nations Educational, Scientific and Cultural Organization in the implementation process,

Acknowledging with satisfaction that our regional work on education for sustainable development furthers the implementation of the relevant outcomes of the World Summit on Sustainable Development[4] and brings a substantive contribution to the achievement of the Millennium Development Goals[5] and the United Nations Decade of Education for Sustainable Development[6], led by UNESCO at the global level,

Welcoming ESD-related developments taking place in the European Union and at subregional levels, including in Eastern Europe, Caucasus and particularly in Central Asia, in South-Eastern Europe and in the Mediterranean region,

Supporting the streamlining of relevant initiatives and the strengthening of synergies among processes aimed at achieving ESD and sustainable development as well as between ESD-related activities taking place within the frameworks of the United Nations Decade of ESD, the UNECE Strategy for ESD, the "Environment for Europe" process, the United Nations Commission on Sustainable Development, the Mediterranean Strategy for Sustainable Development, the Nordic Strategy for Sustainable Development and the European Union,

Acknowledging that education for sustainable development should consider diverse local, regional and national circumstances, and encouraging the involvement of all

1 Addendum 1 to the Report of the Sixth Ministerial Conference "Environment for Europe" (ECE/BELGRADE.CONF/2007/4/Add.1)
2 UNECE Strategy for Education for Sustainable Development (CEP/AC.13/2005/3/Rev.1), High-level Meeting of Environment and Education Ministries, Vilnius 2005.
3 As addressed by the Convention on the Rights of the Child, United Nations, 1989.
4 Johannesburg, South Africa, 2002.
5 United Nations General Assembly resolution A/RES/55/2 of 18 September 2000
6 United Nations General Assembly resolution 57/254 of 20 December 2002

stakeholders, including public authorities, the educational community, non-governmental organizations, business, youth and the media,

Recognizing that education for sustainable development is a complex and evolving concept and that its implementation can have both a short-term effect determined by favourable policies and a wider impact on society that can be seen only over a long period,

Taking into account the concerns and needs expressed by the member States during the first phase of the implementation process and acknowledging that some countries, particularly countries with economies in transition, may need donor support to carry out relevant activities,

1. Strongly support the continuation of this challenging endeavor and confirm that the implementation of education for sustainable development should be well under way by 2010, as stated in the Strategy;

2. Agree that the further process should seek to build a broad political platform for regional and subregional cooperation and partnerships. It should particularly address those areas with urgent needs, should aim to secure the participation of the countries of the region and beyond, and should be based on a set of common priorities and a long-term perspective;

3. Urge our Governments to take part in the further work on fostering national processes and to ensure that appropriate resources are made available in their respective countries for this purpose;

4. Urge our Governments to monitor the implementation process on the basis of indicators developed by the Expert Group and report on national progress to UNECE. This would also serve as a report to UNESCO on the implementation of the United Nations Decade of ESD;

5. Invite UNECE to further strengthen cooperation with UNESCO, the lead agency of the United Nations Decade of ESD, in order to make use of all available synergies;

6. Invite UNECE to continue providing secretariat support to further the process in cooperation with all relevant international actors, thereby contributing to the United Nations Decade of ESD;

7. Decide to extend the mandate of the Steering Committee until 2015 and request it to prepare, with the support of the UNECE secretariat, a Workplan of Implementation for phase II of the Strategy, including specific assistance taking into account the results of the first report on the Implementation of the UNECE Strategy for ESD as well as needs identified by the subregional workshops for South-Eastern Europe and Eastern Europe, Caucasus and Central Asia and expressed by the member States;

8. Invite stakeholders as well as bilateral and multilateral donors to contribute to and support the implementation process;

9. Decide that our future ministerial segments should be held on a regular basis, preferably at the “Environment for Europe” conferences, as appropriate, providing a broad framework bringing together a wide range of stakeholders.

REPORT ON PROGRESS IN IMPLEMENTATION OF THE UNECE STRATEGY FOR EDUCATION FOR SUSTAINABLE DEVELOPMENT

CHAPTER IV

Report on progress in implementation of the UNECE Strategy for Education for Sustainable Development[1]

I. INTRODUCTION

Responding to the new challenge of ESD, Environment and Education Ministers of the UNECE member States adopted the UNECE Strategy for ESD, an operational tool to implement ESD (Vilnius, 2005). Governments committed to incorporating SD themes into their formal educational systems, in all relevant subjects, and in non-formal and informal education. These themes include poverty alleviation, peace, ethics, democracy, justice, security, human rights, health, social equity, cultural diversity, the economy, environmental protection and natural resource management. The following six objectives set out a framework for implementation, aiming to:

(a) Ensure that policy, regulatory and operational frameworks support ESD;

(b) Promote Sustainable Development through formal, non-formal and informal learning;

(c) Develop the competence within the education sector to engage in ESD;

(d) Ensure that adequate tools and materials for ESD are accessible;

(e) Promote research on and development of ESD; and

(f) Strengthen cooperation on ESD at all levels within the UNECE region. Governments committed to achieving progress in implementing ESD as follows:

(i) Phase I (until 2007) – take stock of existing activities, implement initial measures, and define priorities for further activities;

(ii) Phase II (until 2010) – start integrating SD into learning programmes and curricula, review progress made in the implementation of the national[2] strategies and revise these strategies if necessary;

(iii) Phase III (until 2015) – make considerable progress in implementing ESD.[3]

On the first day of the Belgrade Conference[4], a special Joint Session of Environment and Education Ministers will consider the progress made and challenges encountered during Phase I and identify ways to improve the effectiveness of ESD implementation. This first evaluation report therefore focuses on the lessons emerging from phase I. It provides both an overview of the current situation with regard to the progress in the implementation of the Strategy and suggestions for the way forward. To do so, it describes the extent to which the objectives of the Strategy were attained and highlights some trends regarding the implementation process at various levels (national, subregional and regional). On the basis of activities that have been carried out so far, recommendations will be proposed for the further implementation.

Several sources of information were used for the development of this report. The main sources were the national implementation reports (NIRs)[5] submitted to the UNECE secretariat by 36 UNECE member States[6].

The details provided in these reports vary greatly; many Governments only completed the "yes/no" part, while others submitted more detailed responses, providing examples, clarifications and supportive quantitative data.

The information contained in NIRs was complemented with interventions of country delegates during the meetings of the UNECE Steering Committee on ESD, subregional workshops and other events, as well as the report on the assessment of implementation of ESD in Central Asia[7]. Furthermore, the "good practices in ESD"[9] were used to understand the precise nature and direction of activities related to ESD and to determine obstacles and conditions that should be taken into account in order to improve the implementation of the Strategy.

1 This report, titled "Learning from Each Other: Achievements, Challenges and the Way Forward", was presented at the Joint Session on Education for Sustainable Development, Sixth Ministerial Conference (Environment for Europe) (ECE/BELGRADE.CONF/2007/INF/3, ECE/CEP/AC.13/2007/2). The report was prepared by two experts, Mr. Arjen Wals and Ms. Natalia Eernstman. The Government of the Netherlands provided an in-kind contribution to support preparation of the document.

2 For countries with a federal government structure, all references to "national" apply to "state", as appropriate.

3 See the UNECE Strategy for ESD (UNECE, 2005; CEP/AC.13/2005/3/Rev.1) and Indicators for ESD. Reporting Format (UNECE, 2006; ECE/CEP/AC.13/2006/5/Add.1).

4 Sixth Ministerial Conference "Environment for Europe"(Belgrade, 10–12 October 2007).

5 The national implementation reports describe the progress in the implementation of the Strategy at a national level, on the basis of answers to a set of indicators developed by an international group of experts (see Indicators for ESD: Reporting Format (UNECE, 2006; ECE/CEP/AC.13/2006/5/Add.1)).

6 The national implementation reports can be found on the following website: http://www.unece.org/env/esd/Implement.Gov.htm.

7 The report is prepared by the Regional Environmental Centre for Central Asia (CAREC).

9 Collection of "Good practices in ESD", UNECE-UNESCO, 2007; website: http://www.unece.org/env/esd/GoodPractices/index.html.

The report attempts to provide a complete overview of the progress, by describing the ESD measures undertaken with both quantitative information and concrete examples of activities when available. Some countries are featured more often than others; this stems from the fact that these States gave more detailed descriptions of their activities, thereby providing a complete source of examples. This does not necessarily mean that countries that are not featured in this report have less to offer or have made less progress in terms of the implementation of ESD.

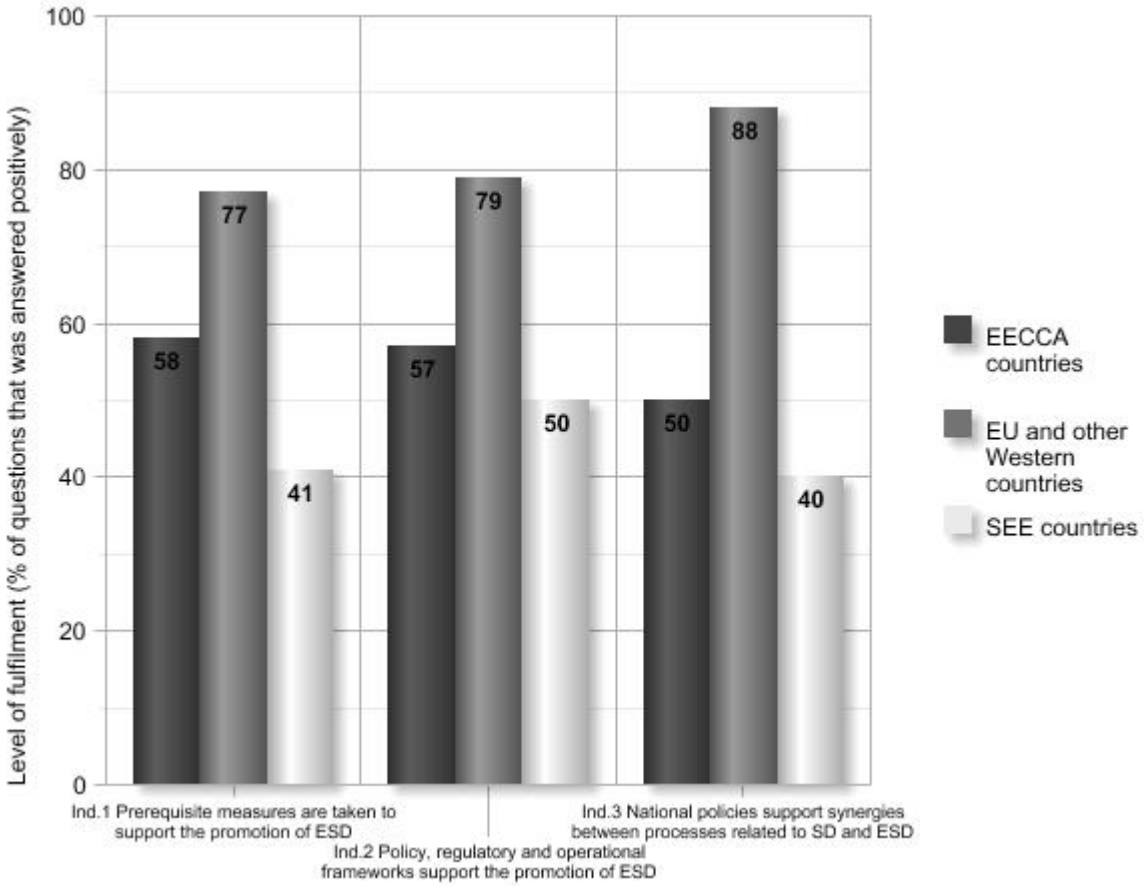
II. MEETING THE OBJECTIVES OF THE STRATEGY

This chapter is structured in accordance with the format of the NIRs.[9] This format was based on the six objectives of the Strategy and consists of indicators and sub-indicators to assess the extent to which the objectives were fulfilled.[10]

A. Policy, regulatory and operational frameworks

The figure below and the table in annex 1 give an overview of the degree to which the initial measures for the implementation of the Strategy have been fulfilled. Although the percentages look very encouraging, two important points should be taken into account. Firstly, the countries that did not submit data on the indicators were not included in the calculation[11], so consequently the percentages do not fully represent the actual situation. Secondly, the data do not provide any information about the extent to which newly created policies, cooperation and structures function in practice. This would require additional research.

Figure: Fulfilment of the initial measures for the implementation of the UNECE Strategy for ESD



9 See the Reporting format (UNECE, 2006; ECE/CEP/AC.13/2006/5/Add.1).

10 See the UNECE Strategy for ESD (UNECE, 2005; CEP/AC.13/2005/3/Rev.1) and Indicators for ESD Reporting Format (UNECE, 2006; ECE/CEP/AC.13/2006/5/Add.1).

11 For the calculation of the percentages different sources were used: data from NIRs was complemented with interventions by the governmental officials and with the answers to a questionnaire on the initial measures for the implementation of the UNECE Strategy for ESD (December 2005).

The figures show that the fulfilment of phase I is well on the way. In particular, the countries of Eastern Europe, Caucasus and Central Asia (EECCA) have made significant progress. The countries of South-Eastern Europe (SEE)[12] have a number of challenges ahead, in that many of them are still in the process of taking the prerequisite measures to support the promotion of ESD. In a majority of the countries, a formal relationship has been established between the ministries responsible for environmental and educational issues. Cooperation between these two ministries includes activities such as: the exchange of information used for drafting of materials on SD and ESD for educators and community leaders, promotion and dissemination of ESD concepts among public and officials, and development and implementation of training on ESD subjects.

Many countries have established a formal working group for the implementation of the Strategy that includes several governmental bodies and stakeholders such as non-governmental organizations (NGOs), business, subnational authorities and educational institutions.

Economic incentives to support ESD, however, appear to be lacking in many countries. Especially in EECCA and SEE countries most activities in the field of ESD are financially supported by international NGOs and donor organizations.

In one third of the responding countries, a national implementation plan is currently in place. Less than 50 per cent of the responding countries address ESD in relevant national legislation documents or include it in national curricula documents.

B. Sustainable development in formal, non-formal and informal learning

1. Key themes are addressed in formal education

Due to the lack of data, little can be concluded regarding the extent to which key themes of SD are addressed in the curricula or programmes of study at various levels of formal education. With regard to the type of themes, it is the environmental component of ESD that is largely addressed. SD is conceptualized in different ways, but most conceptualizations are of an ecological and environmental nature, especially in EECCA countries. School activities in these countries tend to focus on classic themes, such as water pollution, waste management and energy conservation. In some countries such as Finland, Greece, Hungary, Kyrgyzstan and the Netherlands, a more integrative conceptualization of SD is emerging, which also allows for socio-economic perspectives to enter the contents of ESD.

Several countries (some European Union and EECCA countries) state that they have a long tradition in environmental education (EE). This originates from the fact that they have, more than others, an embedded tradition to support and carry out extracurricular activities related to environmental protection.

Environmental subjects seem to be addressed at all ISCED levels[13], whereas issues such as poverty alleviation, production and consumption patterns, human rights, citizenship, corporate social responsibility, economics and rural/ urban development tend to be covered in higher education.

2. Strategies to implement ESD are clearly identified

In general, none of the strategies to implement ESD in formal education (i.e. through existing subjects only, a cross-curriculum approach, the provision of specific subject programmes or a stand-alone project) is more developed than the others. There are slight differences between subregions, however: EECCA countries tend to focus more on the integration of ESD issues with existing subjects such as ecology, social studies, economics, and the various sciences; whereas some Western and Northern European countries follow more of a cross-curriculum approach.[14]

A "whole institution approach"[15] is a relatively new concept and requires the questioning of existing routines and structures. Hence it is no surprise that the development of this approach is still in its infancy. Many countries, especially in the EECCA and SEE subregions, are currently evaluating this specific approach and the manner in which it can be adopted in their national institutions. At the present time, none of the EECCA countries, two of the SEE countries, and only 30 per cent of Western European countries have developed this approach, and only 20 percent of the countries provide incentives to

12 The EECCA countries are: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, the Russian Federation, Tajikistan, Turkmenistan, Ukraine and Uzbekistan. The SEE countries are: Albania, Bosnia and Herzegovina, Croatia, Montenegro, Serbia and the former Yugoslav Republic of Macedonia.

13 International Standard Classification of Education (ISCED), designed by UNESCO, serves as an instrument suitable for assembling, compiling and presenting statistics of education both within individual countries and internationally.

14 Examples of cross-curriculum approaches can be found in a European Union-supported project on Sustainability Education in European Primary Schools (SEEPS) (Shallcross, 2004; Shallcross et al., 2006).

15 A "whole institution approach" means that all aspects of an institution's internal operations and external relationships are reviewed and revised in light of SD/ESD principles. Within such an approach, each institution would decide on its own actions, addressing the three overlapping spheres of Campus (management operations), Curriculum, and Community (external relationships).

support it. Some countries (e.g. the Czech Republic and Hungary) indicate that there are some schools that have adopted a "whole-institution" approach, but that this includes only a minority of all educational institutions.

3. ESD is addressed by quality assessment/enhancement systems

Little is done in the field of education quality assessments/enhancement systems that include criteria on ESD. Current quality assessment and accreditation schemes still focus on traditional learning outcomes in terms of general skills or competencies that need to be developed in learners and on basic cognitive and disciplinary oriented learning outcomes. Incorporating ESD in education requires not only new competencies for both staff of the education sector and learners (i.e. systemic thinking, visioning, using multiple perspectives, problem-solving), but also new core areas for quality assessment and enhancement.

Some examples of developments in this field can be given, however. The Czech Republic has developed a national eco-labelling award scheme for schools and an award scheme related to the eco-footprint of schools. Greece uses the Eco-management and Audit Scheme (see box 1).

Box 1: The Eco-management and Audit Scheme in Greece

The Eco-Management and Audit Scheme (EMAS), is an Environmental tool for the voluntary establishment of environmental management in the organization. It is applied in the sector of education, and more specifically in schools and universities, intending to improve their environmental performance. The University of Makedonia, in Thessaloniki, is the first university in Greece that has implemented EMAS, with the active participation of all students who receive environmental education. The University will be soon registered in the Greek EMAS Register and it is expected that other universities as well as schools will follow its example.

Source: Collection of "Good practices in ESD", UNECE-UNESCO, 2007.

4. ESD methods and instruments for non-formal and informal learning

The development of methods and instruments for non-formal and informal learning to assess changes in knowledge, attitude and practice is quite advanced: a majority of the countries address SD issues in informal and public awareness-raising activities and support for in-service learning. The latter includes activities such as environmental training for local authorities, enterprisers and decision-makers (Estonia), and a national "CSR [16] network", which informs and helps companies with the implementation of a CSR strategy (the Netherlands). Instruments that assess the outcomes of ESD as a result of non-formal and informal learning are, however, largely lacking.

5. ESD implementation is a multi-stakeholder process

Too little information was provided by the Governments to draw sound conclusions on this issue. In most Western European countries, ESD is a multi-stakeholder process, but the extent to which this applies cannot be specified. The stakeholders that were most involved are NGOs and local governments.

16 Corporate social responsibility.

C. Competence within the education sector

Incorporating SD in education requires new competencies and competence building in ESD is necessary at all levels of formal education. The major challenge is that there is no agreed definition of ESD-related competencies, therefore it was left to each country to adapt them to some core requirements – e.g. systemic and interdisciplinary thinking, visioning and use of multiple perspectives – considering use of local and indigenous knowledge, but at the same time also having understanding of emerging global issues such as human rights, climate change, health security, loss of biodiversity, and the introduction of genetically modified organisms.[17]

In most countries, ESD is not part of the educators' initial training; it is rather part of their in-service training. Some countries (e.g. Uzbekistan) emphasized that this training mainly or exclusively focuses on topics related to environment. Hardly any of the countries reported having integrated ESD in the training of leaders and administrators of educational institutions. Some examples were given indicating that seminars and training are organized by, among others, the Ministries of Education and Environment (e.g. in Cyprus, France, Latvia, Lithuania and Turkmenistan). In short, the development of ESD competence as an integrative concept is a major challenge which has not yet been a part of the initial training and re-training of current educators, leaders and decision makers in education sector. Therefore, competence-building efforts are necessary at all levels of both formal and non-formal education in all countries across the region. Low salaries of teachers contribute to poor implementation of this task. This applies throughout the entire region, and is particularly the case in EECCA and SEE countries.

Box 2: The Eco-school programme in Hungary

The Eco-school program is a network of schools that have been approved to be sustainable after an application procedure. Consequently, they can join in meetings, exchange materials, establish contacts, participate in national and international in-service training programs. Hereby the network gives a professional framework for schools to develop their own sustainability projects.

Source: Collection of "Good practices in ESD", UNECE-UNESCO, 2007.

In most Western European countries, networks of educators involved in ESD exist, which are in many cases also governmentally supported. Canada has a website that serves as a discussion forum and clearing house for environmental educators, providing course outlines, curricula and other materials. Hungary has organized the Eco-School programme (box 2). In both Latvia and Malta, educators cooperate through the "Associations of Environmental Educators". The Netherlands has several networks of educators ranging from kindergarten to higher education (box 3).

Box 3: The Dutch national network for sustainable development in higher education curricula

The Dutch national network for sustainable development (DHO) in higher education curricula was initiated in 1998. Currently, more than 1000 educators and management staff within higher learning institutes, key persons within NGOs, companies and governments actively take part in the network. Apart from its members in the Netherlands, DHO collaborates with international partners in North and South. DHO aims to develop learning opportunities, innovative learning environments and methodologies within higher education that enable individuals to develop competences on sustainable development. More specifically, DHO aims to stimulate such opportunities for all students in institutes of higher learning in the Netherlands.

Source: http://www.dho.nl

17 Wals, 2006.

D. Tools and materials

Materials for ESD at all levels need to be developed, not only for educators and teacher trainers, but also for other ESD stakeholders (i.e. government officials, NGO representatives, administrators and business leaders). In most countries, a national strategy for the encouragement of the development of ESD tools and materials is still lacking. Only one third of EECCA and Western European countries report having such a mechanism in place. The number of countries that invest public money in this activity is considerably higher. In the EECCA subregion, however, none of the Governments provide such funds: the development of ESD tools and materials is entirely organized by foreign investors and organizations.

With regard to the quality control mechanisms for teaching tools and materials, very few public authorities either support or approve quality criteria. It is mainly the EECCA and SEE countries that have introduced measures to check quality; most Western countries do not have this arrangement in place, with a few exceptions, such as Greece.

The majority of countries have ESD teaching tools and materials available in their national language, but only in a few countries (i.e. the Netherlands, Norway and Spain) are they applicable to all levels of ISCED. The SEE subregion lags behind in this area: only Serbia reports having developed instruction materials for primary schools, specific tools for higher education, and teacher training manuals related to environmental education and ESD.

Box 4: The Environmental Education Network in Norway

The Environmental Education network functions as a meeting place for schools, research institutions and public management, and provides continual support to schools. The purpose is to give examples of methods, suggest how the education can be organized and give schools access to updated and quality-assured information. Another purpose is to assure the quality of the educational activities and to strengthen the capacities for this kind of education for all of the participants: pupils, teachers and other interested parties. The information provided by the network is quality assured by linking the network website to the webpage of the Ministry of Environment. The information gives the reader both an overview of and insight into the most important environment and development topics.

Source: Collection of "Good practices in ESD", UNECE-UNESCO, 2007.

In Western European countries and Canada, the accessibility of teaching tools and materials is fairly well organized, i.e. in the majority of the countries, the dissemination is organized through a national strategy. Of EECCA countries, only Ukraine reports having such strategy: ESD teaching materials are available through the Internet and a database exists of ESD tools and materials. In Estonia, the webpages of the Ministries of Environment and Education have cross-linked sites on which information is provided. Norway has launched an Environmental Education Network (box 4).

E. Research and development

Despite the need for research on ESD-related issues, little is done in this respect. Although research that addresses content and methods for ESD is governmentally supported in 20 of the responding countries, there is almost no research carried out at a national level that evaluates the outcome of the implementation of the Strategy. The number of post-graduate programmes addressing ESD is low and only several countries indicate that they have government-supported scholarships for post-graduate research in ESD. For example, in Belgium a Centre of Expertise for SD has been set up to supply data, instruments, methods and evaluations that can be used for further policy development. In Canada, a SD Research Initiative has been established (see box 5). Nineteen countries report having support for innovation and capacity-building of ESD practice, but what kind of support this involves is not clear.

Box 5: SD Research Initiative in Canada

The SD Research Initiative (SRDI) is a research group at the University of British Columbia that encourages interdisciplinary collaboration among faculty, departments and other centres at the university, as well as with other institutes and programmes undertaking sustainability research in Canada and around the world.

Source: Canada's response to the UNESCO questionnaire, 2006.

F. Cooperation on ESD

The cooperation between countries appears to be intensive: the vast majority of the countries report that their national public authorities are part of and support international networks. In the EECCA subregion, for example, there is a strong cooperation through the Central Asia Working Group on ESD (box 7), and cross-regional cooperation takes place through the Baltic 21 network (box 6), which includes several European Union (EU) countries and the Russian Federation. Only a few countries are actively promoting ESD in international forums outside the UNECE region. Greece is very active in this respect, as it is disseminating the Strategy to other non-UNECE countries in the Mediterranean region. Canada is actively promoting ESD in India (through assisting in the organization of the conference "Education for a Sustainable Future") and in Burkina Faso, bringing together the major francophone bodies working on EE to exchange information and collaborate on different educational initiatives.

Box 6: The Baltic 21 Network

Baltic 21 is a regional multi-stakeholder process for sustainable development initiated in 1996. Its mission is to pursue sustainable development in the Baltic Sea Region by regional multi-stakeholder cooperation. Accordingly, Baltic 21 provides a regional network to implement the globally agreed Agenda 21 and World Summit on Sustainable Development activities, while focusing on the regional context of sustainable development.

Source: www.baltic21.org

Box 7: Central Asian Working group on ESD

The Central Asian Working Group is jointly working and carrying out the EE and ESD projects in the subregion. Including Ministries of Education, Environment, science, and NGOs, it coordinates the mechanism and programs on EE and ESD. This is done through annual subregional conferences where a year's work is summarized and new tasks are determined. These meetings help the individual countries to stay well informed of international, regional and subregional policy on ESD and to learn about challenges, needs and solutions of countries of Central Asia. It also provides the opportunity to exchange experience, to present examples of best practice, and to efficiently coordinate efforts and actions, in order to design new analytical, educational and methodological materials jointly and develop a subregional position for the representation at the international level.

Source: Progress Review on ESD in Central Asia, CAREC, 2006.

G. Conservation, use and promotion of knowledge of indigenous peoples in ESD

Indigenous knowledge should be valued and conserved as an integral part of ESD, alongside other types of knowledge, such as scientific, local and experiential.

Not much progress has been made in the fulfilment of this task, although many countries in the region contain rich sources of indigenous and other local knowledge. Only a few countries highlighted activities related to this issue. In Kyrgyzstan, traditional knowledge in the sphere of biodiversity conservation was collected and used. In Norway, the curriculum for the 10 years' compulsory education considers the specific needs of the Sami people. Croatia refers to activities such as the collection and preservation of folk and traditional costumes, music and dance, and the integration of knowledge on traditional fruits and herbs in school curricula. Canada has developed initiatives directed towards the Inuit population (box 8).

Box 8: Curriculum from an Inuit Perspective in Canada

In 2004, the Canadian Government described the education system as needing to be built within the context of *Inuit Quajimajatunqagit* (which translates as "that which is long known by Inuit") and that the raising and teaching of children and the care of those in need are a collective community process. *Inuuqatigiit: the Curriculum from the Inuit Perspective* lays the foundation for education to this indigenous group. Sustainable development in its broadest definition is a core value of Inuit life and is thus becoming the foundation of education.

Source: Intervention by Canada, UNECE Steering Committee on ESD, 2005.

H. Self-assessment by countries

Only 10 countries that submitted a NIR responded to the self-assessment questionnaire. Consequently, very little can be said in this regard.

In general, the level of implementation of the ESD Strategy is "in progress"; for example, 14 indicators have been identified by Slovakia as "in progress" At the same time, vast differences exist between countries. Sweden and the Netherlands, for example, have "completed" three objectives and are in progress/developing with regard to the other indicators. The latter has not yet started the development of a quality-control mechanism for teaching tools and materials for ESD. This indicator was most rated by countries as "not started". Kyrgyzstan is in a very initial stage of the implementation process, as it ticked "not started" for most of the indicators.

III. SOME SUBREGIONAL TRENDS

To describe subregional trends in the implementation of the Strategy, the following three features were taken into account:

(a) Application domain: The level at which the ESD implementation takes place (e.g. at the local, school, State levels; pupils/students education/teacher education or non-formal education);

(b) Implementation strategy: The approach which is followed: i.e. emancipatory vs. instrumental[19];

(c) Core themes: the SD themes that are mainly addressed.

19 An emancipatory approach focuses on: (a) enabling citizens to determine for themselves, in interaction with each other and all relevant stakeholders, what for them seems the most sustainable way of living; and (b) equipping them with the competencies needed to participate in this process and to implement the ideas and solutions they have identified. An instrumental approach focuses on using education and communication strategies to change people's sustainability-related behaviours and lifestyles in a pre-determined direction (Wals 2006).

A. Eastern Europe, the Caucasus and Central Asia

In general, the EECCA subregion has made considerable progress in the implementation of the Strategy. Governments have shown themselves to be committed to the objectives, which has resulted in the establishment of the political, regulatory and operational frameworks necessary to further embed the Strategy.

The ESD-related activities, however, currently take place mainly at a national level. The causes for this were identified as follows:

(a) There is little awareness of SD among the general public; consequently initiatives mostly emerge at national level.

(b) Traditionally, the political structure of the EECCA countries has been centralized, therefore most significant actions are initiated at the national level.

(c) There is a lack of cooperation between the authorities and key stakeholders, e.g. schools, NGOs, training institutes, the media and business.

The ESD activities are thus of a rather instrumental and prescriptive nature. Subjects, approaches and methods are directed by high-level bodies, leaving little room for local institutions (e.g. schools, community centres, training institutes and teacher organizations) to create and follow a path leading to a more emancipatory, multi-stakeholder process.

Possible reasons for the instrumental nature of ESD processes could be the following:

(a) The implementation (e.g. subjects, methods, materials) is to a large extent copied from Western European countries and realized by foreign NGOs. This shows up in the fact that preference is given to translating existing foreign materials instead of developing own tools and books. Consequently, a true sense of ownership of the implementation process may be lacking.

(b) The educational system in the EECCA subregion is still very much centralized and managed by national governments, which leaves little room for schools and teachers to develop ESD programmes more autonomously.

(c) Teachers receive low salaries while having many responsibilities and working under pressure. In consequence, there is little opportunity to develop and organize new activities, to extend and innovate the curriculum, or to participate in training.

In the field of EE, locally generated, more emancipatory activities do exist, as EECCA countries tend to have a long tradition of environment-related extracurricular activities. But as a consequence, the focus in the implementation is on environmental subjects within ESD, and the difference between EE and ESD is often not clear (only in Belarus are EE and ESD declared to be conceptually different).

A last aspect that complicates the implementation of the Strategy in the EECCA subregion is that ESD is based more strongly on the formation of values, rather than the acquisition of certain knowledge, whereas education in EECCA countries is very much focused on the latter.

B. South-Eastern Europe

There are many similarities between the SEE and EECCA subregions in the application domain (ESD actions mainly take part at the national level), implementation strategy (there is little multi-stakeholder participation), and the key themes (the focus is on environmental subjects and there is no conceptual separation between EE and ESD). These parallels are also caused by similar preconditions: a centralized political and educational system; a high dependency on ideas and resources from Western countries; and educators working under high pressure, while receiving low salaries.

The main difference between the two subregions is that the educational system in most SEE countries is undergoing large scale transformations resulting from the need to comply with EU standards on education. This transformation process has several implications:

(a) Through educational reform, the education system has become a combination of elements from the previous models and new educational ideas, which are influenced by emerging notions of democracy and autonomous development.

(b) The general educational reforms taking place create a new dynamic in the system, which provides an opportunity for the introduction of ESD.

(c) SEE countries are looking for a European identity which fits within the framework of their national heritage. This informs their emerging education systems thereby potentially opening up spaces for participatory

and explorative ESD processes at the school level.

A second difference is the lack of a formal umbrella organization, such as the Central Asian Working Group on ESD, which provides a platform for cooperation thereby strengthening ESD activities in the subregion.

C. North America: the example of Canada

Unlike EECCA and SEE countries, the political and educational system in Canada is decentralized in nature. Partly due to this feature, there is:

(a) Strong cooperation between State bodies and local authorities

(b) An intensive involvement of stakeholders in the implementation of the Strategy.

This facilitates the development of ESD at all levels of society.

45. Due to a lack of data on the precise nature of the individual ESD related projects, little can be said about the general strategy employed. Since the Government provides grants to educators that collaboratively plan, develop and implement SD curriculum units, the national strategy seems to stress and stimulate the growth of emancipatory and explorative SD processes at school and in communities.

Most projects described are related to environmental themes within ESD. Thus, Canada also emphasizes the environmental/ecological conceptualization of SD. This does not necessarily mean that no activities are carried out targeting social and economical issues. There are indications that many NGOs are working on ESD, covering themes such as ethics, equity and social justice.

D. The European Union and other Western European countries

Vast differences exist between the countries within this subregion, making it hard to pinpoint general trends. Countries that entered the EU during the final two accession rounds (e.g. Bulgaria, Poland, Romania and Slovenia) tend to have more in common with the EECCA and SEE countries than with some Western European countries (e.g. the Netherlands, Norway and Sweden). The latter countries show a pattern of decentralized educational and political systems, allowing institutions at the local level (e.g. schools and community centres) to develop their own interpretations of ESD. This has resulted in a relatively high number of activities within all sectors of society. Some countries have national networks and platforms looking for synergies between these independent initiatives.

There is a continuing debate on the meaning of ESD; it is proving difficult to distill the concept in a clear-cut definition, as its interpretation largely depends on the context and the user, and is dynamic in space and time. The only steady characteristic of an ESD process seems to be that it has no universal definition and/or operationalization. This feature influences the way the Strategy is implemented, especially in countries where many initiatives are already taking place. The broad understanding of the ESD concept allows authorities and other administrative bodies to employ it as a “container-term”, classifying a broad range of activities as ESD which might not entirely address ESD. Although the number of initiatives currently taking place looks promising, this in itself says little about the extent to which institutions and organizations have really reoriented themselves to allow sustainability issues to pervade the vision, ethos, thinking and work of institutions.

IV. LESSONS LEARNED

This section is based on the "good practices in ESD [21] provided by Governments and stakeholders. The "good practices" were classified according to their main purposes and as a result, seven key tasks emerged. These tasks can be seen as the core elements of the implementation process as it has been conducted in phase I. These tasks are listed in figure 2 (annex II), accompanied by the measures employed to realize the respective tasks.

The text below briefly elaborates the key tasks and the corresponding measures. To a fuller understanding of the measures, the reader is referred to the "good practices", which provide concrete examples of the realization of these measures in practice.[21]

A. Upgrading existing activities

In all countries, there is a need to make optimal use of results and experiences of existing national ESD programmes in order to further develop them. Some of the most important measures countries have employed to fulfil this task are:

(a) Granting awards to institutions that are showing good practice;

(b) Starting a benchmarking process among institutions;

(c) Effectively communicating and disseminating experiences and outcomes to all sectors in society through inter-institutional cooperation, platforms and information centres.

B. Developing a strategic framework

Several good practices referred to the establishment of a methodological or strategic framework for ESD implementation. Main measures employed by Governments in this respect are:

(a) The establishment of inter-institutional cooperation (e.g. between ministries and governmental bodies and NGOs, or schools and educational organizations);

(b) (International) platforms/networks, through which collaboration between different sectors of society is stimulated.

C. Institutionalizing ESD

Countries that have a longer tradition in ESD identified the coordination and connection of independent initiatives as a weak point. There is a need to bundle existing activities in order to reinforce their impact. To do so, similar measures are being employed as mentioned under heading A above.

20 Not all submitted "good practices" have been included in the figure. This because several were submitted in Cyrillic, and were therefore unintelligible to the author; others were too broad to classify and some projects were mentioned by various countries, but have been listed once in the grid.

21 The *Compilation of Good Practices* can be found on: http://www.unece.org/env/esd/GoodPractices/index.html

D. Integrating ESD in the curriculum

Most of the submitted "good practices" focused on the integration of ESD in curricula. All measures mentioned in the figure 2 in fact contribute to this factor, but several should be highlighted:

(a) ICT-based methods are seen a promising in the deliverance of ESD;

(b) Several projects focus on the development of innovative teaching methods;

(c) In many "good practices", the active participation of pupils and teachers in the development of ESD materials and education is seen as crucial as is the use of an interdisciplinary approach towards SD.

Box 9: Green Pack developed by the Regional Environmental Centre for Central and Eastern Europe

The Green Pack is a multi-media environmental education curriculum kit mainly intended for European primary school teachers and their students. It focuses on particular aspects of environmental protection and SD, and includes a variety of educational materials such as a teacher's handbook with lesson plans and fact sheets for students, a film collection with animated clips and educational films, and an interactive CD-ROM with extensive information on various environmental topics. The country-specific Green Packs are developed by governmental and professional partners following the results of a national feasibility study. The packs are distributed to teachers after a training session.

Source: Collection of "Good practices in ESD", UNECE-UNESCO, 2007.

E. Developing ESD competence

A large number of countries, especially in the EECCA and SEE subregions, indicated that the implementation process is hindered by a lack of ESD competencies among staff. Many projects are therefore directed towards this objective through the:

(a) The deliverance of training to educators;

(b) The production of materials (toolkits) and development of innovative teaching methods;

(c) The exchange of experiences at an international level;

(d) The development of knowledge through action research;

(e) The establishment of platforms to make teaching guidelines easy accessible (e.g. through virtual channels and networks).

F. Raising public awareness

There is need to create a support base among the general public with regard to ESD in general and the principles and objectives of the Strategy in particular. These goals and objectives have not yet sufficiently been transferred from the national to the local level. In good practices directed towards raising public awareness, often a "community based approach" is employed, in which the local community (e.g. teachers, pupils and parents) is actively involved in creation and realization of an ESD project. In other projects, "new" media (e.g. movies, musical festivals) are used to attract people's attention.

G. Disseminating ESD-related information

A final task that emerged from the "good practices" is the improvement of the accessibility of ESD-related information. This does not only refer to the distribution of information on ESD and the principles and objectives of the Strategy through measures as mentioned in section F above, but also to the creation of centres and channels through which practitioners in the field of ESD, such as educators and government officials, can easily get hold of ESD materials and advice. This mainly occurs through international platforms, use of "new" media and the establishment of educational centres.

V. CONCLUSIONS AND RECOMMENDATIONS

This chapter summarizes the most important conclusions regarding current progress in the implementation process of the UNECE Strategy for ESD, featuring key shortcomings, challenges and corresponding recommendations for the next phase of the implementation process.

A. Conclusions and recommendations relevant to the entire UNECE region

From policy to practice

The fulfilment of Phase I is well on its way; most countries are showing commitment to establishing the necessary policies, cooperation and structures to implement the Strategy. There is however a lack of concrete actions following the establishment of measures at the political level. The implementation process should move from a mere Strategy to country and region specific action plans for ESD.

Interdepartmental cooperation and multi-stakeholder participation are followed

The core of the Strategy, namely the fact that partnership mechanisms should be established between different ministries and agencies and that multi-stakeholder participation should be stimulated, seems to be supported by most countries. One should bear in mind, however, that established partnerships should not remain protocols on paper, but that actual communication need to take place between the partners (e.g. ministries of education and environment).

More commitment through economic incentives

Economic incentives to support ESD appear to be lacking in many countries, in particular in EECCA and SEE countries. This to some extent implies that Governments are still lacking the commitment to fully engage in the implementation of the Strategy.

From a mere environmental to a more integrative conceptualization of ESD

In many countries it is mainly the environmental component of ESD that is addressed. More emphasis should be put on the other SD issues (i.e. social and economic), while taking into account that some themes are more appropriate or urgent to certain countries at this point in time, and are on country-specific conditions and needs. Determining these priorities is an important part of a country's development of an appropriate national ESD strategy. Therefore countries should be given sufficient room to select and adopt suitable issues and methods.

Address the underexposed issues

Several issues have not sufficiently been addressed up to now and therefore require attention:

(a) In most countries, ESD is not part of the educators' initial training. In fact, many countries indicate that this lack is a principal hindrance to the implementation of the Strategy. Teacher trainers should be considered as key stakeholders in the ESD implementation process. Thus, more support for (sub)regional ESD workshops for teacher trainers focusing on potential meanings of ESD, ESD learning and instruction processes and methods, and ESD curriculum integration strategies, is needed.

(b) Quality control mechanisms for ESD teaching tools and materials are lacking. The use of a dynamic set of ESD quality indicators, and the introduction of continuous monitoring and evaluation schemes, could increase the quality of ESD.

(c) Research in the field of ESD is lacking, and the outcomes of current and past research are scattered and remain underutilized. There is a need for intermediate platforms that can promote ESD research, on the one hand by articulating questions from policy and practice with regards to ESD implementation, and on the other, by synthesizing and sharing ESD research in a way that is accessible and useful for policymakers and practitioners.

(d) The conservation, use and promotion of indigenous knowledge remains a weak point in the ESD implementation process in a majority of the countries. In part, this may be the result of a lack of awareness of the existence of this knowledge and of its potential contribution in moving towards a more sustainable world. Raising such awareness at all levels should be an essential component of a national ESD strategy.

Focusing on the content and teaching methods

Currently, most countries tend to focus on integrating the content of ESD in curricula and training. ESD, however, involves entirely new approaches to teaching and learning, inter alia:

(a) A shift from top-down curriculum planning to the active participation of pupils in negotiating the content and nature of their own learning within the environment in which the learning occurs[23];

(b) A shift from the transmission of mere knowledge to the formation of values among pupils.

B. Conclusions and recommendations specific to the EECCA subregion

Although much can be learned from the experiences in countries that have a longer history with ESD, EECCA countries should also focus on the development of their own ESD measures, thereby becoming less dependent of foreign incentives and creating a sense of ownership of the Strategy at national and local levels. This also may pave the way for a better use of local and indigenous knowledge.

There should be more room for schools and teachers to develop ESD programmes directly based upon the needs arising from their immediate environment and community, thereby making the implementation process more participatory, locally relevant and, ultimately, more meaningful.

C. Conclusions and recommendations specific to the SEE subregion

The current dynamics in the educational system provide an opportunity for innovation that should be seized upon to integrate ESD into curricula and into existing and/or emerging quality assurance mechanisms.

An SEE forum to coordinate and strengthen ESD activities has yet to be formally established. Even though common activities and exchanges in the context of ESD are taking place, more synergies could be created by establishing a more formal forum, such as the Central Asian Working Group on ESD.

D. Conclusions and recommendations specific to the Western European countries and Canada

The significant differences that exist between the countries should be exploited, as they would provide the opportunity to effectively share the broad range of experiences that exists within this group. To do this fruitfully, exchange mechanisms should be reinforced and developed.

Many independent initiatives are taking place, many of which exemplify good practices in ESD. To strengthen the implementation process as a whole, these initiatives and resulting lessons need to be made available and employed for the further development of ESD.

A risk exists that the ESD may lose ground in the continuing debate on the its meaning among scholars and policymakers, as the focus tends to be on the interpretation rather than the implementation of the concept. Due to the "vagueness" of the ESD concept, it can easily be misused by authorities, organizations and the private sector, as a tool to "green" their images. Both the implementation and specific meaning of ESD is enhanced by actual execution of concrete activities. A system of continuous monitoring and evaluation will help improve the quality of ESD policies, actions and tools, thereby also preventing institutions and companies from misusing the concept to "green-wash" their activities

23 *Source*: Shallcross, Robinson, Pace and Wals, 2006.

Annex I

Fulfilment of the initial measures for the implementation of the Strategy

Indicator	Sub-indicator	Number of the responded countries	Fulfilled (percentage)
Prerequisite measures are taken to support the promotion of ESD	Strategy has been translated in the national language of the country	44	79.5
	A national focal point has been appointed	34	73.5
	A coordinating body is established	38	72.6
	A national implementation plan has been developed	40	35.0
	There are synergies between the UNECE process and other processes relevant to ESD	37	69.9
Policy, regultory and operational frame-works support the promotion of ESD	The ESD is addressed in national policy documents	36	86.1
	Public budgets to support ESD are available	36	56
	There is a formal structure for interdepartmental cooperation	39	79.5
	A mechanism for multi-stakeholder cooperation on ESD exists	37	70.3
National policies support synergies between processes related to SD and ESD		29	75

Annex II

Key tasks and corresponding measures fulfilled in phase I[22]

1. Using the figure below, one easily derive the prerequisite conditions, factors and measures for successful ESD implementation and at the same time find practical examples of projects that were directed towards the specific task. This exercise – the exchange of existing experiences, knowledge and solutions – stimulates the "learning from each other". The numbers correspond to the "good practices" in which the measure was used to reach the corresponding task.

	Upgrading existing activities	Developing a strategic framework	Institutionalizing ESD	Integrating ESD in curriculum	Developing ESD competence	Raising public awareness	Disseminating ESD related information
Developing ESD materials and toolkits		36	36	4, 17, 26, 35, 39, 40, 41	4, 52, 41		
Delivering trainings to educators				4, 7, 17, 21, 26, 27, 29, 33, 35, 40, 41	20, 21, 26, 38, 35, 50, 18, 27, 33, 29, 40, 41	30	
Granting awards	1		1	1 , 18, 33			
Benchmarking	1	36	1, 36	1			
Inter-institutional cooperation	2, 31, 3, 14	16, 19, 24, 28, 31, 36, 37	36	12, 21, 24, 32	21	3, 14, 19, 21, 32, 34	
Using foreign experiences and expertise	38	11, 37		4, 10	4, 11, 38	11	
Employing a community based approach				5, 7, 13, 15, 17, 22, 39		5, 13, 22, 30	
Employing a multidisciplinary or 'holistic' apporach		28		12, 27		8, 27	
Developing and using ICT methods		6		9, 22, 35, 40	26, 40	11, 22	26
Establishing (international) platforms and networks	2, 3, 5, 14, 25, 31, 38	11, 31, 36, 37	39, 36	9, 25, 39, 17	11, 17, 30, 20, 25, 38	3, 11, 14	38
Using (action) research	38	16		15, 21	21, 20, 38		38
Using different forms of media				22		8, 22	
Setting up or supporting ESD information centers	38	24		23, 25, 24	25, 38	22, 23, 30	23, 26, 38
Developing and using innovative teaching methods		28		1, 5, 10, 12, 18, 22, 27, 32, 40, 41	26, 40, 41	27	
Active participation/ high involvement of pupils and teachers in the development of ESD materials and education				13, 15, 18, 33, 32, 35, 39		13, 32	

22 *Source*: *Collection of Good Practices in ESD*, UNECE-UNESCO, 2007.

REPORTING FORMAT

CHAPTER V

REPORTING FORMAT [1]

I. INTRODUCTION

The reporting format provided in this document was developed following the adoption by the UNECE Steering Committee on ESD of the Workplan for the Implementation of the UNECE Strategy for Education for Sustainable Development, 2005–2007 (CEP/AC.13/2005/8), which contains the procedure for the review of implementation of the UNECE Strategy for ESD. The reporting format also takes into account the pilot reporting exercise and feedback from countries on the workability and feasibility of the indicators and the requested information for reporting.

In addition, the adopted Workplan of Implementation for phase II of the UNECE Strategy for ESD (2008-2010) sets out the timeline for the reporting exercise in 2010 (ECE/CEP/AC.13/2008/5, part C. paras. 29-34, and annex II).

The set of indicators was developed by the UNECE Expert Group on Indicators for ESD that was set up by the High-Level Meeting of Environment and Education Ministries (Vilnius, 17–18 March 2005). Three complementary progress reports provide the information on the developed set of indicators (see documents CEP/AC.13/2005/9, ECE/CEP/AC.13/2006/5 and ECE/CEP/AC.13/2008/4).

Following the request of the High-level Meeting and the decision by the Joint Session on ESD at the Sixth Ministerial Conference "Environment for Europe" (Belgrade, 10–12 October 2007), the reporting requirements were streamlined by UNESCO and UNECE. Thus, UNECE member States will be able to submit a single report on the implementation of the UNECE Strategy that can also serve as a report on the implementation of the United Nations Decade of ESD. A standard reporting format would provide a useful structure for processing the information received and would facilitate comparison of reports. Therefore, UNECE, in cooperation with UNESCO, developed the reporting template that appears in this document.

Following are the main elements of the reporting procedure:

(a) UNECE member States should prepare reports[3] through a transparent consultative process involving all relevant stakeholders at the national/State level;

(b) Thirty-six member States reported on voluntary basis by preparing reports for the Belgrade Ministerial Conference in 2007. The first formal call for reporting will take place in 2010. Thereafter, an updated version of the report will be prepared by the respective member States for 2015;

(c) Reports should be submitted to the secretariat electronically in Word format. The text should be in English. Member States are also encouraged to provide the text in the two other official languages of the UNECE, French and Russian. Reports will be made available in the languages in which they are received. No editing will be provided;

(d) Deadlines for submission to the secretariat will take into account United Nations document management procedures and will be communicated by the secretariat in due course;

(e) UNECE will post the reports on its website. It will also ensure the distribution of hard copies to the UNECE member States and key stakeholders. UNESCO will ensure access to the reports through its website and will use them for its work;

1 Prepared by the Chairperson of the Expert Group on Indicators for Education for Sustainable Development, with assistance from the secretariat, for the the fourth meeting of the UNECE Steering Committee on Education for Sustainable Development (Geneva, 19–20 February 2009; ECE/CEP/AC.13/2009/10). The revised reporting format was endorsed by the Steering Committee at its third meeting. To facilitate reporting, the reporting format will be accompanied by informal guidance on reporting, including quality criteria: (a) a set of criteria/thresholds to assess/monitor success in the implementation of the Strategy and (b) a set of descriptors comprising explanatory notes on relevant indicators/sub-indicators and providing good practices and examples for each of these indicators/sub-indicators.

(f) The first progress report on the basis of the voluntary reporting by countries was prepared for the Belgrade Ministerial Conference (ECE/BELGRADE.CONF/2007/INF/3-ECE/CEP/AC.13/2007/2). The UNECE secretariat will prepare a synthesis report for 2010 and for 2015, highlighting progress made, identifying challenges and drawing up recommendations;

(g) Key stakeholders are encouraged to provide the secretariat with their reports on programmes or activities that support the implementation of the Strategy;

(h) Meetings of the Steering Committee will be a forum for considering reports. The "Environment for Europe" Ministerial Conferences will be informed of progress as appropriate, and will be encouraged to hold joint environment/education sessions as needed.

2 Countries with a federal structure will submit one consolidated report based on subnational/State inputs.

Annex

FORMAT FOR REPORTING ON IMPLEMENTATION OF THE UNECE STRATEGY FOR EDUCATION FOR SUSTAINABLE DEVELOPMENT

Withinn the framework of the United Nations Decade of Education for Sustainable Development (2005–2014)

The following report is submitted on behalf of the Government of ……. in accordance with the decision of the UNECE Steering Committee on Education for Sustainable Development.

Name of officer (national focal point) responsible
for submitting the report:
Signature:
Date:
Full name of the institution:
Postal address:
Telephone:
Fax:
E-mail:
Website:
Contact officer for national report (if different from above):

A. Provide brief information (not more than half a page) on the process by which this report has been prepared, including information on which types of public authorities were consulted or contributed to its preparation; on how the stakeholders were consulted and how the outcome of this consultation was taken into account; and on the material used as a basis for the report.

☐ Governmental institutions (please specify) _____
Stakeholders:

☐ NGOs (please specify) _____

☐ Academia (please specify) _____

☐ Business (please specify) _____

☐ Other (please specify) _____

B. Report any particular circumstances that help clarify the context of the report – for example, whether the decision-making structure is federal and/or decentralized, and whether financial constraints are a significant obstacle to implementation. (This information should not exceed half a page.)

TEMPLATE FOR REPORTING

Issue[1] 1. ENSURE THAT POLICY, REGULATORY AND OPERATIONAL FRAMEWORKS SUPPORT THE PROMOTION OF ESD	
If necessary, provide relevant information on your country situation regarding this specific objective (up to 1,500 characters with spaces).	
Indicator 1.1	**Prerequisite measures are taken to support the promotion of ESD**
Sub-indicator 1.1.1	Is the UNECE Strategy for ESD available in your national[2] language(s)?
Yes ☐ No ☐	***Please specify languages.***
Sub-indicator 1.1.2	Have you appointed a national focal point to deal with the UNECE Strategy for ESD?
Yes ☐ No ☐	
Sub-indicator 1.1.3	Do you have a coordinating body for implementation of ESD?
Yes ☐ No ☐	***Please specify its mandate and coordinating mechanism. Please also specify whether its mandate covers implementation of the UNECE Strategy for ESD.***
Sub-indicator 1.1.4	Do you have a national implementation plan for ESD?
Yes ☐ No ☐	***Please specify whether this plan includes implementation of the UNECE Strategy for ESD.***
Sub-indicator 1.1.5	Are there any synergies at the national level between UNECE ESD process, the UNESCO global process on the United Nations Decade of ESD,[3] and other policy processes relevant to ESD?
Yes ☐ No ☐	***Please specify.***
Indicator 1.2	**Policy, regulatory and operational frameworks support the promotion of ESD**
Sub-indicator 1.2.1	Is ESD reflected in any national policy[4] document(s)?
Yes ☐ No ☐	***Please specify and list major document(s).***

1 Issues 2 to 6 can be overlapping with the objectives of the UNECE Strategy for ESD (ECE/CEP/AC.13/2005/3/Rev.1).

2 For countries where federal government structure, all references to "national" apply to "State", as appropriate. In this context, "data at national level" means aggregated data received from sub-State entities.

3 The United Nations General Assembly in its resolution 57/254 of 20 December 2002 proclaimed the 10-year period beginning on 1 January 2005 the United Nations Decade of Education for Sustainable Development.

4 Policy documents may include national strategies, plans, programmes, guidelines and the like.

Sub-indicator 1.2.2	Is ESD: (a) addressed in relevant national education legislation/regulatory document(s); and (b) included in your national curricula and/or national standards/ordinances/requirements; at all levels of formal education, as understood by your education system in accordance with ISCED?[5]
(a) Yes ☐ No ☐ (b) Yes ☐ No ☐	***If yes, please specify for (a) and (b). Fill in the table by ticking (V) as appropriate.***

ISCED levels[6]	(a)	(b)[7]
	Yes	**Yes**
0		
1		
2		
3		
4		
5[8]		
6		
Teacher education		

Sub-indicator 1.2.3	Are non-formal and informal ESD addressed in your relevant national policy and/or regulatory document(s) and operational frameworks?
Yes ☐ No ☐	***Please specify.***
Sub-indicator 1.2.4	Is public awareness in relation to ESD addressed in relevant national document(s)?
Yes ☐ No ☐	***Please specify.***
Sub-indicator 1.2.5	Does a formal structure for interdepartmental[9] cooperation relevant to ESD exist in your Government?
Yes ☐ No ☐	***Please specify.***
Sub-indicator 1.2.6	Does a mechanism for multi-stakeholder cooperation on ESD exist with the involvement of your Government?[10]
Yes ☐ No ☐	***Please specify.***
Sub-indicator 1.2.7	Are public budgets and/or economic incentives available specifically to support ESD?
Yes ☐ No ☐	***Please specify.***
Indicator 1.3	**National policies support synergies between processes related to SD and ESD**
Sub-indicator 1.3.1	Is ESD part of SD policy(s) if such exist in your country?
Yes ☐ No ☐	***Please specify.***
Issue 2. PROMOTE SD THROUGH FORMAL, NON-FORMAL AND INFORMAL LEARNING	
If necessary, provide relevant information on your country situation regarding this specific objective (up to 1,500 characters with spaces).	
Indicator 2.1	**SD key themes are addressed in formal education**
Sub-indicator 2.1.1	Are key themes of SD[11] addressed explicitly in the curriculum[12]/programme of study at various levels of formal education?

[5] International Standard Classification of Education (ISCED), UNESCO, 1997 (http://www.unesco.org/education/information/nfsunesco/doc/isced_1997.htm).
[6] Education level in accordance with ISCED.
[7] National curricula and/or national standards/ordinances/requirements.
[8] For higher education institutions when answering: (1) regarding national legislation: this objective is focusing equally at the first stage of tertiary education (Bachelor), the second stage (MSc) and the third stage (PhD) while covering various aspects such as: service agreements/contracts, national strategies of Research and Development, university organizations and student acts, or general laws of higher education; (2) regarding national and/or subnational standards/ordinances/requirements: special attention shall be devoted to indications of linking systems of quality assurance and accreditation (with regard to the Bologna process; see http://www.coe.int/t/dg4/highereducation/EHEA2010/BolognaPublications_en.asp for information) for higher education institutions with ESD, as well as to regulations of study programmes and study fields which reflect the principles of ESD.
[9] Between State bodies.
[10] For explanation see paragraph 46 of the UNECE Strategy for ESD.
[11] For explanation see paragraph 15 of the UNECE Strategy for ESD.
[12] At the State level, where relevant.

Yes ☐ No ☐	***Phase II: Please specify in the table in appendix I (a) and use the scale. Indicate the results in the box below.*** A ☐ B ☐ C ☐ D ☐ E ☐ F ☐
Sub-indicator 2.1.2	Are learning outcomes (skills, attitudes and values) that support ESD addressed explicitly in the curriculum[13]/programme of study at various levels of formal education?
Yes ☐ No ☐	***Phase II: Please specify in the table in appendix I (b) and use the scale. Indicate the results in the box below.*** A ☐ B ☐ C ☐ D ☐ E ☐ F ☐
Sub-indicator 2.1.3	Are teaching/learning methods that support ESD addressed explicitly in the curriculum[14]/programme of study at various levels of formal education?
Yes ☐ No ☐	***Phase II: Please specify in the table in appendix I (c) what methods are of particular significance in your country and use the scale. Indicate the results in the box below.*** A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ ***Please also specify for non-formal and informal education, as appropriate. If relevant data are available please also specify (provide examples on how it is done).***

[13] See footnote 12.
[14] See footnote 12.

Indicator 2.2	Strategies to implement ESD are clearly identified
Sub-indicator 2.2.1	Is ESD addressed through:[15] (a) existing subjects[16] only? (b) a cross-curriculum approach? (c) the provision of specific subject programmes and courses? (d) a stand-alone project?[17] (e) other approaches?

(a) Yes ☐ No ☐
(b) Yes ☐ No ☐
(c) Yes ☐ No ☐
(d) Yes ☐ No ☐
(e) Yes ☐ No ☐

Please II: If yes, please specify for different levels of education system in accordance with ISCED by ticking (V) in the table as appropriate.

ISCED levels	(a) *Yes*	(b) *Yes*	(c) *Yes*	(d) *Yes*	(e) *Yes*
0					
1					
2					
3					
4					
5					
6					
Teacher education					

If you ticked (e), please specify the approaches.

[15] For higher education institutions: These distinctions would be equal to: (a) courses and disciplines; (b) interdisciplinary courses; (c) separate, specified ESD courses or seminars; and
(d) stand-alone projects implemented by the department, faculty or inter-faculty structures.
[16] E.g. geography or biology. For higher education, "subject" means "course".
[17] A project is interpreted as a discrete activity with its own time allocation rather than a teaching/learning method.

Indicator 2.3	A whole-institution approach* to SD/ESD is promoted
Sub-indicator 2.3.1	Do educational institutions* adopt a "whole-institution approach" to SD/ESD?
Yes ☐ No ☐	***Phase II: If yes, please specify for all levels of your education system in accordance with ISCED by ticking (V) in the table as appropriate.***

ISCED levels	*Yes*
0	
1	
2	
3	
4	
5	
6	
Teacher education	

Please also specify for non-formal and informal education, as appropriate. If relevant data are available, please also specify (provide examples on how it is done).

Sub-indicator 2.3.2	Are there any incentives (guidelines, award scheme, funding, technical support) that support "a whole institution approach to SD/ESD"?
Yes ☐ No ☐	***Phase II: If yes, please specify what schemes are available for all levels of your education system in accordance with ISCED by ticking (V) in the table as appropriate.***

ISCED levels	*Yes*
0	
1	
2	
3	
4	
5	
6	
Teacher education	

Please also specify for non-formal and informal education, as appropriate. If relevant data are available please also specify (provide examples on how it is done).

[*] A "whole institution approach" means that all aspects of an institution's internal operations and external relationships are reviewed and revised in light of SD/ESD principles. Within such an approach each institution
would decide on its own actions, addressing the three overlapping spheres of Campus (management operations); Curriculum; and Community (external relationships).
[*] For higher education institutions: whole university, whole college or whole faculty approach (including inter-faculty approaches).

Sub-indicator 2.3.3	Do institutions/learners develop their own SD/ESD indicators for their institution/organization?
Yes ☐ No ☐	***Phase II: If yes, please specify for all levels of your education system in accordance with ISCED, by ticking (√) in the table as appropriate:***

(a) For formal institutions.

ISCED levels	*Yes*
0	
1	
2	
3	
4	
5	
6	
Teacher education	

(b) For non-formal institutions for non-formal and informal education.

ISCED levels	*Yes*
0	
1	
2	
3	
4	
5	
6	
Teacher education	

If relevant data are available, please also specify (i.e. provide examples on how it is done).

Indicator 2.4 ESD is addressed by quality assessment/enhancement systems	
Sub-indicator 2.4.1	(a) Are there any education quality assessment/enhancement systems? (b) Do they address ESD[9]? (c) Are there any education quality assessment/enhancement systems that address ESD in national systems?
(a) Yes ☐ No ☐ (b) Yes ☐ No ☐ (c) Yes ☐ No ☐	***Please II: If yes, please specify for various levels of your education system in accordance with ISCED, by ticking (V) in the table as appropriate.***

ISCED levels	(a) *Yes*	(b) *Yes*	(c) *Yes*
0			
1			
2			
3			
4			
5			
6			
Teacher education			

Please also specify for non-formal and informal education, as appropriate. If relevant data are available, please also specify this data (i.e. provide examples on how the data was compiled).

Indicator 2.5	ESD methods and instruments for non-formal and informal learning are in place to assess changes in knowledge, attitude and practice
Sub-indicator 2.5.1	Are SD issues addressed in informal and public awareness-raising activities?
Yes ☐ No ☐	***Please II: Please specify.***[10]
Sub-indicator 2.5.2	Is there any support for work-based learning (e.g. for small companies, farmers, trade unions, associations) which addresses SD issues?
Yes ☐ No ☐	***Please II: Please specify and provide examples.***
Sub-indicator 2.5.3	Are there any instruments (e.g. research, surveys, etc.) in place to assess the outcomes of ESD as a result of non-formal and informal learning?
Yes ☐ No ☐	***Please II: Please specify, including the results available for (a) attitude, skills and values, and (b) knowledge.***

[9] For higher education institutions: either national centres for quality assessment in higher education or cooperation with general quality assessment agencies such as the European Foundation for Quality Management (EFQM).

[10] Please describe how this is done, e.g. in press articles, TV and radio programmes or public lectures promoting environmentally friendly goods and services, sustainable lifestyles.

Indicator 2.6 ESD implementation is a multi-stakeholder process[32]	
Sub-indicator 2.6.1	Is ESD implementation a multi-stakeholder process?
Yes ☐ No ☐	***Please II: Please specify in the table in appendix II (a) and (b) and use the scale. Indicate the results in the boxes below.*** **(a) According to the UNECE Strategy on ESD** A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ **(b) According to the UN DESD** A ☐ B ☐ C ☐ D ☐ E ☐ F ☐
Issue 3. EQUIP EDUCATORS WITH THE COMPETENCE TO INCLUDE SD IN THEIR TEACHING	
If necessary, provide relevant information on your country situation regarding this specific objective (up to 1,500 characters with spaces).	
Indicator 3.1 ESD is included in the training[33] of educators	
Sub-indicator 3.1.1	Is ESD a part of educators' initial training?[34]
Yes ☐ No ☐	***Please II: Please specify by filling in the table in appendix III.***
Sub-indicator 3.1.2	Is ESD a part of the educators' in-service training?[35]
Yes ☐ No ☐	***Please II: Please specify by filling in the table in appendix III.***
Sub-indicator 3.1.3	Is ESD a part of training of leaders and administrators of educational institutions?
Yes ☐ No ☐	***Please II: Please specify by filling in the table in appendix III.***
Indicator 3.2 Opportunities exist for educators to cooperate on ESD	
Sub-indicator 3.2.1	Are there any networks/platforms of educators and/or leaders/administrators who are involved in ESD in your country?
Yes ☐ No ☐	***Please II: Please specify (provide examples on how this is done).***
Sub-indicator 3.2.2	Are ESD networks/platforms supported by the government in any way?[36]
Yes ☐ No ☐	***Please specify how, listing the major ones, and describing them as appropriate.***
Issue 4. ENSURE THAT ADEQUATE TOOLS AND MATERIALS FOR ESD ARE ACCESSIBLE	
If necessary, provide relevant information on your country situation regarding this specific objective (up to 1,500 characters with spaces).	

[32] For higher education institutions: this covers the issue of university "networks" (covering a wide spectrum from regional integration, business cooperation and transdisciplinarity to eco-procurement and network-education-cooperation).
[33] ESD is addressed by content rather by methodology.
[34] For higher education institutions: The focus is here on existing teacher training at universities/colleges regarding SD and ESD for university/college teachers.
[35] For higher education institutions: The focus is here on existing in-service training programmes regarding SD and ESD for university/college teachers in their own universities/colleges.
[36] Including assistance through direct funding, in-kind help, political and institutional support.

Indicator 4.1 Teaching tools and materials for ESD are produced	
Sub-indicator 4.1.1	Does a national strategy/mechanism for encouragement of development and production of ESD tools and materials exist?
Yes ☐ No ☐	***Please describe.***
Sub-indicator 4.1.2	Is public (national, subnational, local) authority money invested in this activity?
Yes ☐ No ☐	***Phase II: Please specify to what extent public money is invested in this activity, by providing an indication of the amount (in USD) for annual expenditures on ESD-related research and development.***
Indicator 4.2 Quality control mechanisms for teaching tools and materials for ESD exist	
Sub-indicator 4.2.1	Do you have quality criteria and/or quality guidelines for ESD-related teaching tools and materials that are: (a) supported by public authorities? (b) approved by public authorities? (c) tested and recommended for selection by educational institutions?
(a) Yes ☐ No ☐ (b) Yes ☐ No ☐	***Phase I: For (a) and (b), please describe.***
(c) Yes ☐ No ☐	***Phase II: Please specify for (a), (b) and (c) for formal, informal and non-formal education. For (c), please also describe. Please also provide your own examples, as appropriate.***
Sub-indicator 4.2.2	Are ESD teaching tools/materials available: (a) in national languages? (b) for all levels of education according to ISCED?
(a) Yes ☐ No ☐ (b) Yes ☐ No ☐	***Phase I: For (a) please specify.***
	Phase II: If yes for (b), please specify by ticking (V) in the table as appropriate.

ISCED levels	(b) *Yes*
0	
1	
2	
3	
4	
5	
6	
Teacher education	

Indicator 4.3 Teaching tools and materials for ESD are accessible	
Sub-indicator 4.3.1	Does a national strategy/mechanism for dissemination of ESD tools and materials exist?
Yes ☐ No ☐	***Phase II: Please describe.***
Sub-indicator 4.3.2	Is public authority money invested in this activity?
Yes ☐ No ☐	***Please specify to what extent by providing an indication of the amount in USD, giving the annual expenditures for ESD-related research and development.***
Sub-indicator 4.3.3	Are approved ESD teaching materials available through the Internet?
Yes ☐ No ☐	***Please describe.***
Sub-indicator 4.3.4	Is a register or database of ESD teaching tools and materials in the national language(s): (a) accessible through the Internet? (b) provided through other channels?
(a) Yes ☐ No ☐ (b) Yes ☐ No ☐	***For (a) and (b) please specify.***
Issue 5. PROMOTE RESEARCH ON AND DEVELOPMENT OF ESD	
If necessary, provide relevant information on your country situation regarding this specific objective (up to 1,500 characters with spaces).	

Indicator 5.1 Research[37] on ESD is promoted	
Sub-indicator 5.1.1	Is research that addresses content and methods for ESD[38] supported?
Yes ☐ No ☐	***Phase II: Please specify what kind of research (content and methods). Please provide the total amount annually over the reporting period, and if feasible, as a percentage of the total research budget.***
Sub-indicator 5.1.2	Does any research evaluate the outcome of the implementation of the UNECE Strategy for ESD?
Yes ☐ No ☐	***Please specify what kind of research (content and methods).***
Sub-indicator 5.1.3	Are post-graduate programmes available: (1) on ESD:[39] (a) for the master's level? (b) for the doctorate level? (2) addressing ESD: (a) for the master's level? (b) for the doctorate level?
(1) (a) Yes ☐ No ☐ (b) Yes ☐ No ☐ (2) (a) Yes ☐ No ☐ (b) Yes ☐ No ☐	***Phase II: Please specify what kind of programmes are available for (1) (a) and (b); (2) (a) and (b).***
Sub-indicator 5.1.4	Are there any scholarships supported by public authorities for post-graduate research in ESD: (a) for the master's level; (b) for the doctorate level?
(a) Yes ☐ No ☐ (b) Yes ☐ No ☐	***Phase II: Please specify for (a) and (b).***
Indicator 5.2 Development of ESD is promoted	
Sub-indicator 5.2.1	Is there any support for innovation and capacity-building in ESD practice?[40]
Yes ☐ No ☐	***Phase II: Please specify and provide the total amount annually over the reporting period.***
Indicator 5.3 Dissemination of research results on ESD is promoted	
Sub-indicator 5.3.1	Is there any public authority support for mechanisms[41] to share the results of research and examples of good practices in ESD[42] among authorities and stakeholders?
Yes ☐ No ☐	***Phase II: Please specify and provide the total amount annually over the reporting period.***
Sub-indicator 5.3.2	Are there any scientific publications: (a) specifically on ESD? (b) addressing ESD?
(a) Yes ☐ No ☐ (b) Yes ☐ No ☐	***Phase I: For (a), if feasible, please provide the number on annual basis over the reporting period. Please list the major ones.***
	Phase II: For (b), if feasible, please provide the number on annual basis over the reporting period. Please list the major ones.
Issue 6. STRENGTHEN COOPERATION ON ESD AT ALL LEVELS WITHIN THE UNECE REGION	
If necessary, provide relevant information on your country situation regarding this specific objective (up to 1,500 characters with spaces).	
Indicator 6.1 International cooperation on ESD is strengthened within the UNECE region and beyond	
Sub-indicator 6.1.1	Do your public authorities cooperate in/support international[43] networks on ESD?
Yes ☐ No ☐	***Phase II: Please specify for national, subnational and local levels and list major networks.***

[37] These include support from various sources, such as State, local authorities, business and non-governmental sources.
[38] E.g. concepts; formation of attitudes and values; development of competencies; teaching and learning; school development; implementation of information communication technology; sources of motivation including socio-economic impacts.
[39] ESD is addressed by substance and/or by approach.
[40] Activities may include pilot projects, action research, social learning and multi-stakeholder issues.
[41] E.g. conferences, summer schools, journals, periodicals, networks.
[42] E.g. the "participatory approach", links to local, regional and global problems, an integrative approach to environmental, economic and social issues, an orientation to understanding, preventing and solving problems.
[43] In this context, international associations, working groups, programmes, partnerships, etc. across these at the global, regional and subregional levels.

Sub-indicator 6.1.2	Do educational institutions/organisations (formal and non-formal) in your country participate in international networks related to ESD?
Yes ☐ No ☐	***Please specify. List major networks.***
Sub-indicator 6.1.3	Are there any state, bilateral and/or multilateral cooperation mechanisms/agreements that include an explicit ESD component?
Yes ☐ No ☐	***Phase II: Please specify and list the major ones.***
Sub-indicator 6.1.4	Does your Government take any steps to promote ESD in international forums outside the UNECE region?
Yes ☐ No ☐	***Please list and describe.***
Issue 7. FOSTER CONSERVATION, USE AND PROMOTION OF KNOWLEDGE OF INDIGENOUS PEOPLES, AS WELL AS LOCAL AND TRADITIONAL KNOWLEDGE, IN ESD	
Provide relevant information on your country situation regarding this specific issue (up to 2,000 characters with spaces). Please be as specific as possible.	
Phase II: Please provide the updated information to indicate changes over time.	
Phase III: Please provide the updated information to indicate changes over time.	

Issue 8. DESCRIBE ANY CHALLENGES AND OBSTACLES ENCOUNTERED IN THE IMPLEMENTATION OF THE STRATEGY
Provide relevant information on your country situation regarding this specific issue (up to 1,500 characters with spaces). Please be as specific as possible.
Phase II: Please provide the updated information to indicate changes over time.
Phase III: Please provide the updated information to indicate changes over time.
Issue 9. DESCRIBE ANY ASSISTANCE NEEDED TO IMPROVE IMPLEMENTATION
Provide relevant information on your country situation regarding this specific issue (up to 1,500 characters with spaces). Please be as specific as possible.
Phase II: Please provide the updated information to indicate changes over time.
Phase III: Please provide the updated information to indicate changes over time.

Appendix I (a)

Indicator 2.1, sub-indicator 2.1.1

Please specify which key themes of SD are addressed explicitly in the curriculum/programme of study at various levels of formal education by filling in the table below.

(Please tick (√) relevant themes for each level. Use the blank rows to insert additional themes that are considered to be key themes in addressing learning for SD.)

Some key themes covered by sustainable development	ISCED Levels					
	0	*1*	*2*	*3*	*4*	*5*
Peace studies (e.g. international relations, security and conflict resolution, partnerships)						
Ethics and philosophy						
Citizenship, democracy and governance						
Human rights (e.g. gender and racial and inter-generational equity)						
Poverty alleviation						
Cultural diversity						
Biological and landscape diversity						
Environmental protection (waste management, etc.)						
Ecological principles/ecosystem approach						
Natural resource management (e.g. water, soil, mineral, fossil fuels)						
Climate change						
Personal and family health (e.g. HIV/AIDS, drug abuse)						
Environmental health (e.g. food and drinking; water quality; pollution)						
Corporate social responsibility						
Production and/or consumption patterns						
Economics						
Rural/urban development						
Total						
Other (*countries to add as many as needed*)						

NB: Your response will reflect the variety of ESD themes distributed across the ISCED levels. The distribution is more important than the raw number of ticks.
The number of ticks may be used for your own monitoring purposes.

The scoring key for this table (max. 102 ticks; "other" not counted) is:

No. of ticks	0–5	6–10	11–25	26–50	51–75	76–100
Scale	A	B	C	D	E	F

Could you specify which specific themes are of critical important in your countries and why? Please specify for different ISCED levels, as appropriate.

Appendix I (b)

Indicator 2.1, sub-indicator 2.1.2

Please specify the extent to which the following broad areas of competence that support ESD are addressed explicitly in the curriculum*/programme of study at various levels of formal education, by filling in the table below.

(Please tick (√) relevant expected learning outcomes for each level. Use the blank rows to insert additional learning outcomes (skills, attitudes and values) that are considered to be key outcomes in your country in learning for SD.)

Table of learning outcomes

Competence		ISCED Levels					
	Expected outcomes	**0**	**1**	**2**	**3**	**4**	**5**
Learning to learn Does education at each level enhance learners' capacity for:	- posing analytical questions/critical thinking?						
	- understanding complexity/systemic thinking?						
	- overcoming obstacles/problem-solving?						
	- managing change/problem-setting?						
	- creative thinking/future-oriented thinking?						
	- understanding interrelationships across disciplines/holistic approach?						
	Total						
	- other (*countries to add as many as needed*)?						
	-						
	Expected outcomes	**0**	**1**	**2**	**3**	**4**	**5**
Learning to do Does education at each level enhance learners' capacity for:	- applying learning in a variety of life-wide contexts?						
	- decision-making, including in situations of uncertainty?						
	- dealing with crises and risks?						
	- acting responsibly?						
	- acting with self-respect ?						
	- acting with determination?						
	Total						
	- other (*countries to add as many as needed*)?						
	-						
	Expected outcomes	**0**	**1**	**2**	**3**	**4**	**5**
Learning to be Does education at each level enhance learners' capacity for:	- self-confidence?						
	- self-expression and communication?						
	- coping under stress?						
	- ability to identify and clarify values *(for phase III)?*						
	Total						
	- other (*countries to add as many as needed*)?						
	-						
	Expected outcomes	**0**	**1**	**2**	**3**	**4**	**5**
Learning to live and work together Does education at each level enhance learners' capacity for:	- acting with responsibility (locally and globally)?						
	- acting with respect for others?						
	- identifying stakeholders and their interests?						
	- collaboration/team working?						
	- participation in democratic decision-making?						
	- negotiation and consensus-building?						
	- distributing responsibilities (subsidiarity)?						
	Total						
	- other (*countries to add as many as needed*)?						
	-						

NB: Your response will reflect the variety of ESD learning outcomes distributed across the ISCED levels. The distribution is more important than the raw number of ticks. The number of ticks may be used for your own monitoring purposes.

The scoring key for this table (max. 138 ticks; "other" not counted) is:

No. of ticks	0–7	8–14	15–35	36–70	71–104	105–138
Scale	A	B	C	D	E	F

* At the State level, where relevant.

Appendix I (c)

Indicator 2.1, sub-indicator 2.1.3

Please indicate the teaching/learning methods used for ESD at the different ISCED levels.

(Please tick (√) relevant teaching/learning methods for each level. Use the blank rows to insert additional teaching/learning methods that are considered to be key methods in your country in teaching-learning for sustainable development.)

Table of teaching-learning methods

Some key ESD teaching/learning methods proposed by the Strategy[*]	ISCED Levels					
	0	1	2	3	4	5
Discussions						
Conceptual and perceptual mapping						
Philosophical inquiry						
Value clarification						
Simulations; role playing; games						
Scenarios; modeling						
Information and communication technology (ICT)						
Surveys						
Case studies						
Excursions and outdoor learning						
Learner-driven projects						
Good practice analyses						
Workplace experience						
Problem-solving						
Total						
Other (*countries to add as many as needed*)						

NB: Your response will reflect the variety of ESD teaching/learning methods distributed across the ISCED levels. The distribution is more important than the raw number of ticks. The number of ticks may be used for your own monitoring purposes.

The scoring key for this table (max. 84 ticks; "other" not counted) is:

No. of ticks	0–5	6–28	29–35	36–50	51–65	66–84
Scale	A	B	C	D	E	F

[*] Please refer to paragraph 33 (e) of the UNECE Strategy for ESD.

Appendix II

Indicator 2.6, sub-indicator 2.6.1

Please specify to what extent is ESD implementation a multi-stakeholder process by filling in the table below. Please provide examples of good practice.

(Please tick (√) in both (a) and (b) template-tables to indicate what types of education stakeholders are involved.)

Table (a) According to the UNECE Strategy for ESD

Stakeholders	Classification by UNECE Strategy for ESD		
	Formal	Non-formal	Informal
NGOs			
Local government			
Organized labour			
Private sector			
Community-based			
Faith-based			
Media			
Total			
Other (*countries to add as many as needed*)			

The scoring key for this table (max. 21 ticks; "other" not counted) is:

No. of ticks	0–1	2	3–5	6–10	11–15	16–21
Scale	A	B	C	D	E	F

Table (b) According to United Nations Decade of ESD

Stakeholders	Classification by United Nations Decade of ESD				
	Public awareness	Quality education	Reorienting education	Training	Social learning
NGOs					
Local government					
Organized labour					
Private sector					
Community-based					
Faith-based					
Media					
Total					
Other (*countries to add as many as needed*)					

The scoring key for this table (max. 35 ticks; "other" not counted) is:

No. of ticks	0–5	6–11	12–17	18–23	24–29	30–35
Scale	A	B	C	D	E	F

Appendix III

Indicator 3.1, sub-indicator 3.1.3

Please specify to what extent is ESD a part of the initial and/or in-service educator's training, by filling in the table below by ticking (V) as appropriate.

ISCED levels	Percentage of education professionals who have received training[36] to integrate ESD into their practice: *(see key below)*																	
	Educators												Leaders/administrators[37]					
	*Initial**						*In service***						*In service****					
	A	B	C	D	E	F	A	B	C	D	E	F	A	B	C	D	E	F
0																		
1																		
2																		
3																		
4																		
5																		
6																		
Non-formal																		
Informal																		

The scoring key for this table (max. 100%) is:

Percentage of educated trainers	0–5	6–10	11–25	26–50	51–75	76–100
Scale	A	B	C	D	E	F

***** **Please indicate the number of educators who have received initial training on ESD as a percentage of the total number of educators by the reporting date.**

****** **Please indicate the number of educators who have received training on ESD as a percentage of the total number of educators who received in-service teacher training by the reporting date.**

******* **Please indicate the number of leaders/administrators who have received training on ESD as a percentage of total number of leaders/administrators who received in-service teacher training by the reporting date.**

[36] Training is understood to include at least one day (a minimum of five contact hours).

[37] See paragraphs 54 and 55 of the UNECE Strategy for ESD.

Appendix IV

Summary and self-assessment[9] by countries:

1	Indicator 1.1	Prerequisite measures are taken to support the promotion of ESD	☐ Not started ☐ Developing	☐ In progress ☐ Completed
2	Indicator 1.2	Policy, regulatory and operational frameworks support the promotion of ESD	☐ Not started ☐ Developing	☐ In progress ☐ Completed
3	Indicator 1.3	National policies support synergies between processes related to SD and ESD	☐ Not started ☐ Developing	☐ In progress ☐ Completed
4	Indicator 2.1	SD key themes are addressed in formal education	☐ Not started ☐ Developing	☐ In progress ☐ Completed
5	Indicator 2.2	Strategies to implement ESD are clearly identified	☐ Not started ☐ Developing	☐ In progress ☐ Completed
6	Indicator 2.3	A whole-institution approach to ESD/SD is promoted	☐ Not started ☐ Developing	☐ In progress ☐ Completed
7	Indicator 2.4	ESD is addressed by quality assessment / enhancement systems	☐ Not started ☐ Developing	☐ In progress ☐ Completed
8	Indicator 2.5	ESD methods and instruments for non-formal and informal learning are in place to assess changes in knowledge, attitude and practice	☐ Not started ☐ Developing	☐ In progress ☐ Completed
9	Indicator 2.6	ESD implementation is a multi-stakeholder process	☐ Not started ☐ Developing	☐ In progress ☐ Completed
10	Indicator 3.1	ESD is included in the training of educators	☐ Not started ☐ Developing	☐ In progress ☐ Completed
11	Indicator 3.2	Opportunities exist for educators to cooperate on ESD	☐ Not started ☐ Developing	☐ In progress ☐ Completed
12	Indicator 4.1	Teaching tools and materials for ESD are produced	☐ Not started ☐ Developing	☐ In progress ☐ Completed
13	Indicator 4.2	Quality control mechanisms for teaching tools and materials for ESD exist	☐ Not started ☐ Developing	☐ In progress ☐ Completed
14	Indicator 4.3	Teaching tools and materials for ESD are accessible	☐ Not started ☐ Developing	☐ In progress ☐ Completed
15	Indicator 5.1	Research on ESD is promoted	☐ Not started ☐ Developing	☐ In progress ☐ Completed
16	Indicator 5.2	Development of ESD is promoted	☐ Not started ☐ Developing	☐ In progress ☐ Completed
17	Indicator 5.3	Dissemination of research results on ESD is promoted	☐ Not started ☐ Developing	☐ In progress ☐ Completed
18	Indicator 6.1	International cooperation on ESD is strengthened within the UNECE region and beyond	☐ Not started ☐ Developing	☐ In progress ☐ Completed

[9] On the basis of the answers to the sub-indicators, please self-assess the status of the implementation of the respective indicator in your country. If feasible, please specify the methodology used for the self-assessment.

GUIDANCE FOR REPORTING ON THE IMPLEMENTATION OF THE UNECE STRATEGY FOR EDUCATION FOR SUSTAINABLE DEVELOPMENT

CHAPTER VI

REPORT ON PROGRESS MADE BY THE EXPERT GROUP FOR INDICATORS FOR EDUCATION FORSUSTAINABLE DEVELOPMENT:

GUIDANCE FOR REPORTING ON THE IMPLEMENTATION OF THE UNECE STRATEGY FOR EDUCATION FOR SUSTAINABLE DEVELOPMENT[1]

Note by the Expert Group on Indicators for Education for Sustainable Development

Fourth meeting UNECE Steering Committee on Education for Sustainable Development
(Geneva, 19–20 February 2009)[1]

Summary

This guidance for reporting was developed by the UNECE Expert Group on Indicators for Education for Sustainable Development (ESD) as a follow-up activity to a decision of the UNECE Steering Committee on ESD made at its last meeting (ECE/CEP/AC.13/2008/2, para. 22).

The Expert Group worked on finalizing the elements of the guidance at its seventh and eighth meetings (ECE/CEP/AC.13/2009/4). The guidance for reporting is complementary to the reporting format (ECE/CEP/AC.13/2009/10).

This guidance for reporting was submitted to the Steering Committee with a view to facilitating reporting exercises in 2010 and 2015, and beyond. Some parts of this guidance, such as the fields containing "examples", might require updating with additional information to reflect current progress with respect to ESD.

1 Note by the Expert Group on Indicators for Education for Sustainable Development presented at the fourth meeting of the UNECE Steering Committee on ESD (ECE/CEP/AC.13/2009/5).

I. INTRODUCTION

The UNECE Strategy on ESD was adopted by the High-level Meeting of Education and Environment Ministries (Vilnius, March 2005) following negotiations between environment and education ministries based on a decision in Kiev.[2] This comprehensive Strategy has three phases of implementation to be completed by 2015. It is being implemented in cooperation with UNESCO and is the UNECE region's contribution to the United Nations Decade of ESD (2005–2014).

At the Belgrade Ministerial Conference[3], for the first time in the history of the "Environment for Europe" process, ministers of education and environment from the region came to a joint decision. The ministers considered achievements, lessons learned and challenges since the Kiev Ministerial Conference and agreed on the way ahead. They adopted by acclamation a Joint Statement on ESD, proving their commitment to further implementation of the Strategy. The joint decision and statement constituted an encouraging signal for other sectors to cooperate and make sustainable development a reality.

Among the other major achievements of Belgrade Ministerial Conference was the evaluation made of progress in the Strategy's implementation of through a comprehensive reporting mechanism and a set of indicators. While information in the reports varied, the overall feedback of 36 national implementation reports – was a success. The close and effective joint work between UNECE and UNESCO, especially in the area of monitoring progress, was highly appreciated by member States. A second major achievement of the Belgrade Conference was the collection of good practices in ESD in the UNECE region. This joint UNECE and UNESCO endeavour resulted in the first publication of a wide range of good practices to promote ESD in formal, non-formal and informal education.

This guidance was developed as a contribution to the monitoring and reporting mechanism under the UNECE Strategy for ESD. It contains a compilation of information, recommendations and remarks that are mostly available in various documents with a view to helping national focal points (NFPs) for ESD to develop their respective reports on the progress in the implementation of the Strategy and complete the reporting format provided in the document ECE/CEP/AC.13/2009/10. The guidance includes, for example, information on the

methodology, suggestions for sources and data collecting and on procedures relevant to the reporting, the background information behind the set of indicators. It also includes a set of criteria to monitor the implementation and a set of descriptors to aid the understanding of indicators, a glossary, and other useful information and materials.

The indicators for ESD were developed by a group of experts established following the decision by the Vilnius High-level Meeting with the mandate to develop indicators to measure the effectiveness of the implementation of the Strategy. At the national level, the set of indicators contributes to enhancing learning by: (a) increasing awareness; (b) triggering debate about ESD; and (c) involving multiple stakeholders in the reporting exercise. The indicators may also be adapted to address specific needs by developing more localized benchmarks and sets of indicators into a national set of indicators for ESD.

The following documents provide information relevant to the reporting:

(a) UNECE Strategy for ESD (CEPAC.13/2005/3/Rev.1);

(b) Vilnius framework for the implementation of the UNECE Strategy for ESD (CEP/AC.13/2005/4/Rev.1);

(c) Explanatory notes to the draft UNECE Strategy on ESD (CEP/AC.13/2004/8/Add.2);

2 Fifth Ministerial Conference "Environment for Europe", Kiev, 21–23 May 2003.
3 Sixth Ministerial Conference "Environment for Europe", Belgrade, 10–12 October 2007.

(d) Joint Statement on ESD by Ministers of Education and of Environment (ECE/BELGRADE.CONF/2007/4/Add.1);

(e) Ministerial Declaration of the Sixth Ministerial Conference "Environment for Europe" (ECE/BELGRADE.CONF/2007/8, paras.11 and 12); the Chair's Summary of the Conference (ECE/BELGRADE.CONF/2007/9, paras. 17–26); and the Chair's Summary of the Joint Session on ESD at the Conference (ECE/BELGRADE.CONF/2007/4/Add.3);

(f) Two workplans (for phase I and for phase II) for the implementation of the UNECE Strategy on ESD (CEP/AC.13/2005/8 and ECE/CEP/AC.13/2008/5);

(g) First progress report on the implementation of the UNECE Strategy for ESD, "Learning from each other: achievements, challenges and the way forward" (ECE/BELGRADE.CONF/2007/INF/3-ECE/CEP/AC.13/2007/2), and its addendum "Conclusions on the reporting process and on the use of indicators" (ECE/BELGRADE.CONF/2007/INF/3/Add.1-ECE/CEP/AC.13/2007/2/Add.1);

(h) Pilot reports submitted by the UNECE member States (available on http://www.unece.org/env/esd/Implement.Gov.htm);

(i) Compilation of Good Practices in ESD in the UNECE region (ECE/BELGRADE.CONF/2007/INF/3);

(j) Reports of the first, second and third meetings of the UNECE Steering Committee on ESD (CEP/AC.13/2005/7; ECE/CEP/AC.13/2006/3 and ECE/CEP/AC.13/2008/2);

(k) Progress reports of the Expert Group on Indicators for ESD (CEP/AC.13/2005/9; ECE/CEP/AC.13/2006/5, ECE/CEP/AC.13/2008/4 and ECE/CEP/AC.13/2009/4);

(l) Reporting format (ECE/CEP/AC.13/2009/10);

(m) International Standard Classification of Education, ISCED 1997 (UNESCO, November 1997).

7. These documents can be found on the UNECE website at the following addresses:

http://www.unece.org/env/esd/Strategy&Framework.htm; http://www.unece.org/env/esd/SC.Meet.htm; http://www.unece.org/env/esd/belgrade.htm; http://www.unece.org/env/esd/Implementation.htm; http://www.unece.org/env/esd/GoodPractices/index.html; http://www.unece.org/env/esd/SC.EGI.htm.

II. PROCEDURE

The reporting format is for use by the NFPs on ESD for preparing the national implementation reports (NIRs) on ESD. The reporting requirements are streamlined by UNESCO and UNECE. Thus, UNECE member States would be able to submit a single report on the implementation of the UNECE Strategy that can also serve as a report on the implementation of the United Nations Decade of ESD.

The target groups for the NIRs are: (a) Governments (e.g. for reporting to international bodies, for use for national purposes and for self-evaluation); (b) international organizations (e.g. for providing a comprehensive basis to Governments and other stakeholders to assess progress in implementation and for development of other relevant indicators); and (c) non-governmental organizations and other stakeholders (e.g. for learning about performance in implementation of their respective countries and of the UNECE region as a whole). It is expected that other relevant forums might use the results of their work to evaluate implementation of ESD.

To ensure good quality in the NIRs, it is crucial that Governments prepare reports in a participatory manner, involving relevant stakeholders at all stages of preparation, as appropriate, and particularly giving them a feasible and workable opportunity to comment on the draft report before its final submission to the UNECE.

For countries with a federal government structure, all references to "national" apply to "State", as appropriate. In this context, "data at the national level" means aggregated data received from sub-State entities.

A. Time frame for reporting

Progress over time in implementing ESD could be seen by assessing the progress following the reporting for each of the three implementation phases of the Strategy (2007, 2010 and 2015).

The NFPs prepared NIRs for the pilot voluntary reporting in phase I (2007), and are expected to prepare NIRs for reporting in phase II (2010) and phase III (2015). The first formal call for reporting would take place in 2010. Thereafter, an updated version of the report would be prepared by the respective member States for 2015. However, member States were invited to start reporting voluntarily in 2007 to prepare reports for the Belgrade Ministerial Conference. A proposed time frame for the reporting exercises is provided in the table below (see also para. 33):

Table: Proposed time frame for reporting

Process in your country	Time required
First draft of the report	One month
Multi-stakeholder consultation on the draft	One to three months
Final report preparation (including translation, where required)	One month
Deadline for submission of NIRs to UNECE	Six months in advance of a meeting to consider the review of implementation of the respective phase (II and III)

The main elements for the reporting procedure are as follows:

(a) UNECE member States should prepare reports[4] through a transparent consultative process involving all relevant stakeholders at the national/State level.

(b) Reports should be submitted to the secretariat electronically in Word format. The text should be in English. Member States are also encouraged to provide the text in their own national language, and if feasible in the two other official UNECE languages, French and Russian. Reports will be made available in the languages in which they are received. No editing will be provided.

(c) UNECE will post the reports on its website. It will also ensure the distribution of hard copies to the UNECE member States and key stakeholders. UNESCO will ensure access to the reports through its website and will use them for its work (see also para.33).

(d) The UNECE secretariat prepared a first report on progress for the Belgrade Conference in 2007 and will prepare synthesis reports for 2010 (deadline for submitting the NIRs is 1 October 2010) and for 2015 (deadline for submitting the NIRs is 1 October 2015), highlighting the progress made, identifying challenges and drawing up recommendations. (see also para. 33). These reports will also serve as a regional contribution to the assessment of progress in the implementation of the United Nations Decade of ESD.

(e) Key stakeholders are encouraged to provide the secretariat with their reports on programmes or activities that support the implementation of the Strategy.

(f) Deadlines for submission to the secretariat will take into account United Nations document management procedures and will be communicated by the secretariat in due course.

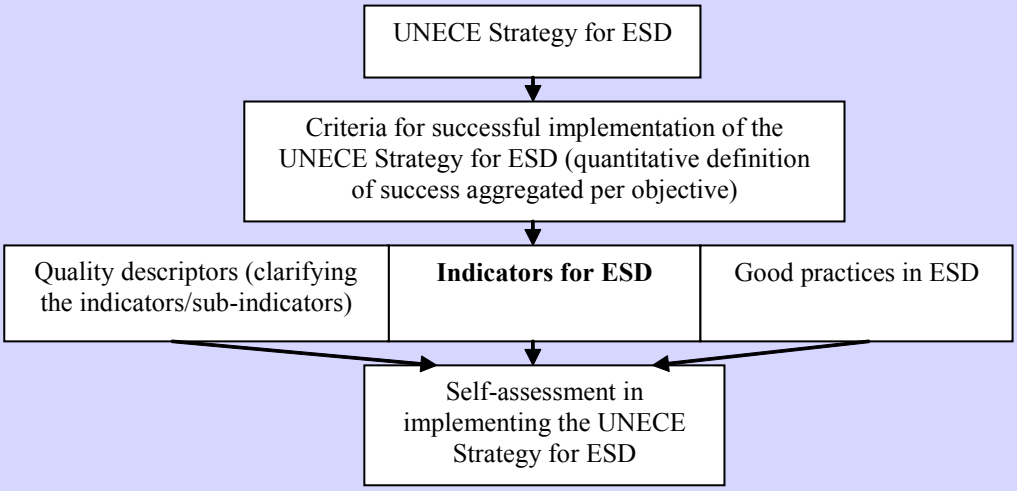
(g) Meetings of the Steering Committee will be a forum for considering reports. The “Environment for Europe” Ministerial Conferences will be informed of progress as appropriate, and will be encouraged to hold joint environment/education sessions as needed.

Although the ”yes/no” part of sub-indicators is required to be reported on in phase I (by 2007) and the “descriptive” part in phase II (by 2010) and phase III (by 2015), countries were encouraged to report on the full set of indicators at the end of each phase, to the extent possible, in line with a country’s progress in implementing the ESD. Those countries that volunteered to participate in a pilot reporting already in phase I (by 2007) were advised to report on the full set to the extent possible. Countries not ready for the pilot reporting were invited to complete only the “yes/no” part and, if feasible, also the “descriptive” part. This exercise replaced the initially foreseen questionnaire and its results laid down the basis for preparing the first progress report on implementation of the Strategy for the Belgrade Ministerial Conference.

Given the complex nature of ESD and the differences in the interpretation of indicators in the different national contexts across the UNECE region, some additional tools, closely interconnected with each other, were developed to facilitate the review of implementation (figure I), such as a set of criteria to assess successful implementation of the Strategy (annex I) and a list of descriptors to the reporting format (annex II). The collection of good practices in ESD in the UNECE region, carried out jointly with UNESCO, was used as much as possible in the development of the descriptors.

4 Countries with a federal structure will submit one consolidated report based on subnational/State inputs.

Figure I: Learning from each other



B. Recommendations for the reporting process

17. To ensure high-quality answers in the NIRs, Governments should:

(a) Strengthen cooperation between the environment and education sectors;

(b) Strengthen multi-stakeholder participation in preparation of the NIRs. It is very important to prepare the NIRs in a transparent and participatory manner. One option could be establishing stakeholder groups to support the national reporting process.

(c) Recognize the self-assessment exercise as a means to learn from the implementation;

(d) Support the NIRs with examples and good practices. The inclusion of examples and/or references, e.g. links to websites, documents, etc. during the preparation of the NIRs would be crucial to assessing the progress achieved by countries in an objective way, and would substantially facilitate the exchange of experience and good practices.

(e) Present good practices and NIRs in an interactive and user-friendly way through the UNECE website. The use of information and communications technology should be enhanced, which could provide various information and documents related to the implementation of the process through the UNECE website in a user-friendly way. This might require additional resources, but would vitally support and further ESD implementation. For instance, one service might be to provide user-friendly access to the NIRs allowing for information searches by objective, indicator, or sub-indicator. Another useful service might be revising the website providing good practices to enable searches for good practices related to objectives of the Strategy (for more information refer to the Workplan of Implementation for phase II of the UNECE Strategy for ESD, ECE/CEP/AC.13/2008/5, part C and annex IV).

(f) Organize trainings for NFPs on the use of the reporting format and on the meaning of indicators.

(g) Build capacity in ESD at all levels, in particular in the field of monitoring and assessment the implementation of the ESD Strategy should be a learning process in itself. The development of a specialized training programme for different target groups would be useful for supporting these capacity-building activities.

III. INDICATORS

A. Scope

The indicators are determined by the objectives of the Strategy. They reflect both aspects: "the implementation" as a process, and "the effectiveness of the implementation", as a qualitative feature of the process and of the outcome, including long-term effects of ESD. Thus, the set of indicators reflect input measures as well as output and outcome of the implementation. Therefore, the assessment cannot be made by using a single indicator, but can only be reflected after considering the set of indicators.

The indicators focus on ESD issues and not on SD as such. In other words, they measure the effectiveness of the implementation of ESD (as set out in the Strategy), not the progress of SD (e.g. progress in biodiversity, climate change, etc.). Obviously, indicators are easier to find and track for formal education than for non-formal and informal education. Therefore, the indicators focus on the formal education, without, however, diminishing the importance of the other two forms of education, in particular their possible negative consequences (e.g. some TV and other advertisements counteract the promotion of SD).

The current set of indicators reflects the state of art and it is the best possible result in accordance with the UNECE Strategy itself, the mandate of the Expert Group, the availability of data and methodology, and the common understanding between different countries, educational systems, cultures and languages. Moreover, the current set of indicators, revised following the pilot reporting exercise, would possibly require a further revision following the reporting exercises for phases II and III and the feedback received from the countries on the workability and feasibility of the indicators and requested information for reporting.

Most of the indicators, as well as the methodology used for their development, could be adapted and used by other regions, and therefore could serve to Governments and stakeholders as an efficient tool to assess the progress in ESD within the United Nations Decade of ESD.

B. Nature of indicators

No single indicator or sub-indicator should be seen as indicative of quality in its own right. Rather, it is the combination of answers that will indicate the state of progress in, and the effectiveness of, implementation of the UNECE Strategy for ESD (see paras. 42–44).

The indicators and the reporting mechanism are meant not "to compare" but rather to enable countries of the region to "learn and develop" in the area of ESD, so that the region becomes a "learning region".

An indicator points to an issue or condition. Its purpose is to show how well a system is working. Indicators should be based, as much as possible, on the available data. However, some proposals for a new data collection policy should be adopted due to the complexity and innovative nature of ESD. This last point is particularly important for the information on qualitative issues. Indicators are as varied as the types of systems they monitor. However, there are certain characteristics that effective indicators have in common: they should be relevant, easy to understand, representative, reliable, obtainable from governmental and other reliable sources and available against feasible costs. Indicators can be quantitative (absolute figures or ratios) and qualitative (description or rating), as appropriate.[5]

C. Concept of use

The Strategy addresses (a) input measures, (b) a wide range of activities and (c) expected effects with regard to the implementation of ESD. It also illustrates the complex nature of ESD. Therefore, it is important to measure the effectiveness of the implementation of the Strategy throughout the whole implementation process, starting from the initial measures on governance up to the possible effects in society. In this respect, indicators are considered within a clearly defined evaluation model that would help countries to measure the implementation process in a comprehensive and realistic way (annex IV). Four types of indicators are identified: "checklist indicators", "input indicators", "output indicators" and "outcome indicators":

(a) "Checklist indicators" provide information on initial policy, legislation, regulatory and governance measures taken by a Government in order to implement the Strategy (e.g. whether a coordinating mechanism is in place, whether the Strategy is translated into national/State language(s)).

(b) "Input indicators" provide information on a broader spectrum of activities taking place in terms of the implementation of the Strategy (e.g. amount of public authority money invested in the ESD materials, proportion of publicly supported research on ESD).

5 Qualitative indicators might be presented: (a) in a form of description; (b) by using rating with the clear explanatory notes for each rate (e.g. 0 – SD concept not present in any of the subjects; 1 – SD concept integrated into 50% of the subjects, etc.); and/or (c) by using marks (e.g. +++ high; ++ medium; + low).

(c) "Output indicators" provide information on the results of these activities (e.g. performance of trained teachers, number of businesses involved in ESD projects, ratio of educators who received training on ESD issues).

(d) "Outcome indicators" provide information on the possible impact due to the implementation of the Strategy, in particular its qualitative aspect in terms of values, attitudes and choices in favour of SD (e.g. learning outcomes resulting from ESD partnerships, community-based projects and business involvement).

26. To monitor the progress of the implementation of the ESD Strategy made by each country, there is a need to describe the current situation per country. Baseline data shows the existing situation in relation to an issue at a certain point in time. Data for 1 January 2006 will be used as baseline data. The differences in starting points for different countries with respect to the implementation of the Strategy and, therefore, to the outcome of the evaluation based on the indicators, will be taken into account.

D. Overview of indicators

The set comprises 18 indicators with 49[6] sub-indicators structured according to the six issues for reporting, which follow the objectives of the Strategy. There are 46 qualitative sub-indicators and eight quantitative indicators, of which five are of a dual nature. The sub-indicators are of several types: 11 sub-indicators are "checklist", 30 are "input" (of which 1 is of a dual type), 8 are "output" and 1 is "outcome". The format of indicators/sub-indicators consists of two parts: a "yes/no" part[7] and a "descriptive" part.

The list of indicators includes, in addition to specification of the type of indicator, information on "means and sources of verification", and is meant as guidance to help NFPs find the information necessary to complete the indicators (ECE/CEP/AC.13/2006/5, annex I). In some countries, the information might be available in sources relevant to "environmental education" or "development education", which might not necessarily be viewed as ESD but which could nevertheless provide relevant information for populating the indicators on ESD.

Template tables are annexed to the set of indicators. This approach enables simplification while retaining the substance of the initial set of indicators to the greatest extent possible. It also provides countries with a user-friendly template requiring them to select predefined boxes as relevant.

The International Standard Classification of Education (ISCED), and in particular the classification of levels of education (annex V), was used for developing the indicators for ESD. ISCED was designed by UNESCO in the early 1970s to serve "as an instrument suitable for assembling, compiling and presenting statistics of education both within individual countries and internationally". It was approved by the International Conference on Education (Geneva, 1975), and was subsequently endorsed by the UNESCO General Conference when it adopted the Revised Recommendation concerning the International Standardization of Educational Statistics at its twentieth session (Paris, 1978). The present classification, now known as ISCED 1997, was approved by the UNESCO General Conference at its twenty-ninth session in November 1997. It was prepared by a task force established by the Director-General for this specific purpose and is the result of extensive consultations of global representation. ISCED 1997 covers primarily two cross-classification variables: levels and fields of education.

The specific for higher education issues are addressed in the set of indicators through footnotes across all objectives in order to translate some of the currently used school system terminology into terminology appropriate for the higher education system.

E. Assessment

The assessment mechanism behind the indicators is based on the answers to the sub-indicators that would provide input into the indicator's assessment. It is not feasible to sum up the answers to the sub-indicator in a quantitative way to build sound data for the indicator as such. Therefore, the indicator has to be presented as a qualitative judgment of the sub-indicators. To evaluate the answers provided in the annexed templates/tables, and consequently assess the sub-indicators, a "scoring key" was developed. Following the "tailor-made" approach a variety of rankings is used, expressing numbers, percentage, amounts and state of a process. To ensure consistency across the indicator set, these are expressed as a six-category scale from A (minimum) to F (maximum). For some of the templates/tables, the distribution of ticks is more important than the raw number of ticks. The number of ticks can be used for the country's own monitoring process.

Countries are encouraged to undertake a so-called self-assessment exercise following completion of the reporting format. This would imply for countries on voluntary basis to self-assess the status of the implementation of the respective indicator on the basis of the answers to the sub-indicators. The self-assessment exercise would be a valuable addition to the information provided in the reporting format and would help to minimize, to the extent possible, the subjectivity of the conclusions

6 One sub-indicator (2.1.3) was added as a result of the revision exercise undertaken after the pilot reporting.

7 A "no" answer should be selected also in the case of "not applicable", and explanation provided on why it is not applicable.

drawn by an independent expert when preparing a synthesis reports on progress in implementing the Strategy across the region. Moreover, the self-assessment would provide countries with the opportunity to reflect on the national progress in implementing the Strategy.

F. Pilot reporting

The first reporting exercise (pilot reporting) took place at the end of 2006/beginning of 2007, in time for the Belgrade Ministerial Conference. The 36 reports submitted proved that reporting was a useful tool for Governments and at the same time it engendered conclusions on certain areas where improvement vis-à-vis the set of indicators was needed. In response to feedback received from countries on the indicators' workability and feasibility, a limited number of indicators were revised by presenting them in a more explicit way with a few additional specifications. The revisions include the addition of one new sub-indicator (2.1.3) dedicated to teaching/learning methods under the indicator 2.1 and a few modifications and additions to the annexed templates-tables. In addition, a list of descriptors containing explanatory notes to each indicator/sub-indicator, was prepared, which would serve as a supporting tool to enhance reporting by Governments (see chapter IV and annex II). This would ensure better understanding of indicators by Governments on the one hand, and on the other would allow for distilling meaningful conclusions on the status of the Strategy's implementation in a given country.

G. Contribution to the review of implementation of the United Nations Decade of ESD

The UNECE indicators and the established reporting mechanism constitute an important contribution from the UNECE region to the global monitoring and evaluation process for the United Nations Decade of ESD, ensuring synergies and mutual benefits. The decisions by the Vilnius High-level Meeting and by the ministers of education and environment in their Joint Statement on ESD at the Belgrade Ministerial Conference provide for the submission of a single report on the implementation of the Strategy that would also serve as a report on the implementation of the United Nations Decade of ESD. Taking into account the differences and similarities of the UNECE reporting format and the UNESCO questionnaire to assess the implementation of the United Nations Decade of ESD, the NIRs and other available information on ESD implementation in the region represent a valuable regional contribution to assessment of implementation of United Nations Decade of ESD. UNECE will therefore provide UNESCO with NIRs, regional synthesis reports and other relevant information.

IV. QUALITY CRITERIA

The need to develop quality criteria for the successful implementation of the UNECE Strategy for ESD, was identified, with a view to facilitate/support the interpretation of the indicators/sub-indicators, which depends substantially upon the national context. Therefore, both quantitative and qualitative approaches have been used as appropriate. In addition, examples of good practice for relevant indicators/sub-indicators could demonstrate how ESD principles could be implemented within specific contexts.

A. Criteria to assess successful implementation of the Strategy

From a quantitative perspective, a minimum level of achievement has been specified in a form of a set of criteria/thresholds to assess successful implementation of the UNECE Strategy for ESD (annex I). Progress can thus be monitored in subsequent phases of the implementation scheme. The set of criteria follows the objectives of the Strategy. A great deal of information on quality criteria for the school/project level already exists[8] , therefore, this set ofcriteria target the policy level.

B. Descriptors

The definition of quality should be based on the principles described in the Strategy. These principles suggested the qualities or values that one would look at in judging "good" practice. Making these values explicit could be achieved by translating them into illustrations or examples of good practice. This reasoning led to the idea of developing "descriptors" to explain the meaning of "good" practice, as a follow-up to the qualitative approach.

In trying to keep the set of indicators short and concise, the descriptive part of many of the qualitative indicators/sub-indicators was sometimes not clear enough. The descriptors are designed to clarify the meaning of the indicators/sub-indicators. The list of descriptors is structured to include:

8 E.g. "Quality criteria for ESD schools" developed by the School Development through Environmental Education and Environment and School Initiatives (ENSI) networks.

(a) A reference to the indicator/sub-indicator, as well as their type and likely sources of information;

(b) A description of those sub-indicators that re quired some additional clarification of their meaning and expected reporting information;

(c) The relevant quote from the Strategy;

(d) Examples, i.e. good practices and case studies or references to the relevant places where these could be found (annex II).

The list of descriptors is an organic phenomenon and therefore its field "examples" would require updates in line with the evolution of the implementation process (e.g. for each of the implementation phases of the Strategy, revisions might be necessary to keep abreast with developments in SD and ESD).

V. GOOD PRACTICES

A set of examples of good practice in ESD would facilitate a clearer understanding of how ESD might be better implemented at the national level. To this end, good practices were collected jointly by UNESCO and UNECE in preparation for the Belgrade Ministerial Conference. Good practices offer a wealth of experience and could be a key tool to promote ESD in the region and worldwide during next two phases of the Strategy implementation. Since the successful outcome of this joint endeavour, the collection of good practices has continued through a dedicated website (http://www.unece.org/env/esd/GoodPractices/index.html).

In developing the list of descriptors, efforts were made to classify these good practices according to the indicators and sub-indicators within the UNECE reporting format. As a follow-up to this, a more appropriate template was developed for the collection of good practices illustrating the indicators/sub-indicators, thereby effectively supporting the understanding of both the expected results and the actions needed for successful implementation (ECE/CEP/AC.13/2009/6).

VI. A BALANCED APPROACH

In an effort to resolve the tension that exists between those who see ESD as a means of changing behaviour (instrumental view) and those who consider it to be a more learner-centred process (the emancipatory view), the two interrelated approaches of ESD[9] are explained below:

(a) "ESD 1" provides information and develops skills with a view to achieving a predetermined behaviour change. This is important because some behaviours are self-evidently beneficial. While the preferred sustainable behaviour is made explicit, building up learners' capacity to learn is often implicit;

(b) "ESD 2" Builds our capacity to think critically about and beyond sustainability messages ("learning to learn"). This includes testing SD ideas and exploring the contradictions inherent in sustainable living. In this approach, building the capacity to learn is explicit, whereas sustainability messages may be implicit. This is learning as SD (i.e. recognizing that SD is inherently a learning process).

These two forms can be seen as complementary sides of the same "ESD coin". Even as we deliver a strong ESD 1-style programme of pro-environmental learning, ESD 2 is likely to be taking place. Vare and Scott (2008)[10] extend this argument further by suggesting that we cannot deliver ESD 1 or ESD 2 in isolation.

Achieving a balance between ESD 1 and 2 is important. ESD 1 is essential to planning for the future, but too much ESD 1 could make society more unsustainable, either because people feel they need to be told what to do next or because they learn to resist the encouragement of experts. ESD 2 helps us survive and thrive in the future, but while ESD 2 may build resilient, self-confident people, these capacities are of little use isolated from critical knowledge of sustainability issues.

9 Vare, P. and W. Scott (2007), "Learning for a Change: exploring the relationship between education and sustainable development", *Journal of Education for Sustainable Development*, vol. 1, no. 2, pp. 191–198.

10 Vare and Scott (2008), *Education for Sustainable Development: two sides and an edge*, DEA, United Kingdom. PDF file downloadable at: http://www.dea.org.uk/uploads/4453d22a64a184b4f76a113996448fcf/dea_thinkpiece_vare_scott.pdf.

Annex I

CRITERIA TO ASSESS SUCCESSFUL IMPLEMENTATION OF THE UNECE STRATEGY FOR EDUCATION FOR SUSTAINABLE DEVELOPMENT

1. Criteria to assess success in [the implementation of] ensuring that policy, regulatory and operational frameworks support the promotion of education for sustainable development

(a) Basic prerequisites for the implementation of the Strategy have been achieved (see the format for reporting, sub-indicators 1.1.1, 1.1.2, 1.1.3 and 1.2.7);

(b) ESD is explicitly mentioned in national legislation and/or national policy documents (see the format for reporting, sub-indicators 1.2.1 and/or 1.2.2 and/or 1.3.1 and/or 1.2.3 and/or 1.2.4);

(c) A national ESD action plan is being developed and implemented through an interdepartmental and multi-stakeholder process (see the format for reporting, sub-indicators 1.1.4, 1.2.5 and 1.2.6).

2. Criteria to assess success in [the implementation of] promoting sustainable development through formal, non-formal and informal learning

(a) Themes related to social and environmental and economic dimensions are addressed in the curricula at a minimum of four of the ISCED levels (see the format for reporting, appendix 1 (a));

(b) These themes are addressed in an integrated manner (see the format for reporting, sub-indicator 2.2.1, table and column (b));

(c) The four learning competencies are addressed covering at least three expected outcomes (see the format for reporting, appendix 1 (b), column one);

(d) There is at least one national programme to support the implementation of "a whole-institutional approach";

(e) ESD is addressed in a statutory quality assessment system in at least one ISCED level;

(f) At least one examples is given of SD issues being addressed in both non-formal and informal education (see the format for reporting, sub-indicators 2.5.1 and 2.5.2);

(g) The example(s) given in 2.5.3 demonstrates how evaluation results of non-formal and/or informal education have been used to improve practice (see the format for reporting, sub-indicator 2.5.3);

(h) Most of the stakeholder groups are involved in a wide range of educational activities (see annex 2).

3. Criteria to assess success in [the implementation of] equipment of educators with the competence to include sustainable development in their teaching

(a) ESD is incorporated in initial and in-service training of educators within at least four ISCED levels (see the format for reporting, appendix 3);

(b) ESD is incorporated in the training of leadership and administrative staff within at least four ISCED levels (see the format for reporting, appendix 3);

(c) There is at least one national programme or initiative to support cooperation/networks/platforms on ESD among educators.

4. Criteria to assess success in [the implementation of] ensuring that adequate tools and materials for education for sustainable development are accessible

(a) A working system is in use to assure the quality of ESD tools and materials (see the format for reporting, sub-indicators 4.2.1);

(b) ESD tools and materials are available to at least three ISCED levels (see the format for reporting, sub-indicators 4.2.2) and at least one of the facilities included in the indicator 4.3 exists.

5. Criteria to assess success in [the implementation of] promoting research and development of education for sustainable development

(a) Research on ESD is carried out and supported (at least three of the sub-indicators, 5.1.1, 5.1.2, 5.1.3, 5.1.4 and 5.3.2, should be met);

(b) ESD actors are supported in contributing to ESD research and development (see the format for reporting, sub-indicator 5.2);

(c) Initiatives or mechanisms are described that

link the ESD research and development with practice (see the format for reporting, sub-indicator 5.3.1);

(d) ESD research involves interactive dissemination mechanisms (see the format for reporting, sub-indicators 5.3.1 and 5.3.2.).

6. Criteria to assess success in [the implementation of] strengthening cooperation on education for sustainable development at all levels within the UNECE region

(a) At least one example of international cooperation is provided under the indicator 6.1.

7. Criteria to assess success in [the implementation of] fostering conservation, use and knowledge of indigenous people in education for sustainable development

(a) Evidence shows that the role of indigenous people's knowledge is recognized in ESD.

Annex II

LIST OF DESCRIPTORS OF INDICATORS FOR EDUCATION FOR SUSTAINABLE DEVELOPMENT

1. These descriptors are meant to facilitate the understanding of the set of indicators. The examples provided are those that were available at the time the descriptors were developed. The compilation of good practices in ESD in the UNECE region was used to identify examples. Additional examples were provided by the Expert Group on Indicators for Sustainable Development. The information in this field therefore may be regarded as subjective and not representative for the entire region. Along with progress made in implementing ESD, new examples will be made available to illustrate the implementation of specific provisions of the Strategy. These new examples would be made available through the UNECE website in a user friendly way, and provided funds are available, would be structured by indicators/sub-indicators for easy of reference.

ISSUE 1. ENSURE THAT POLICY, REGULATORY AND OPERATIONAL FRAMEWORKS SUPPORT THE PROMOTION OF ESD

Indicator 1.1 Prerequisite measures are taken to support the promotion of ESD

Sub-indicator 1.1.1	**Is the UNECE Strategy for ESD available in your national language(s)?**	
	Type: Qualitative; "Checklist"	Sources of information: Government reports
Description:	See passage below.	
Relevant passage(s) from the Strategy:	42. Each country is responsible for implementing this Strategy. […] To that end, it is recommended that countries should translate this Strategy into their official language(s), and, as appropriate, language(s) of minorities, and distribute it to the relevant authorities […].	
Example(s):	The text of the Strategy is available on the UNECE website in the six official languages of the United Nations, and in at least 24 other languages (http://www.unece.org/env/esd/Strategy&Framework.htm)	

Sub-indicator 1.1.2	**Have you appointed a national focal point to deal with the UNECE Strategy for ESD?**	
	Type: Qualitative; "Checklist"	Sources of information: Government reports
Description:	The national focal point(s) (NFP) is designated by the Government and is responsible for follow-up to the implementation of Strategy within his/her respective country, as well as for the dissemination of information to all the relevant stakeholders. The NFP(s) should also ensure coordination of the positions of his/her respective country in the Steering Committee. Governments should inform the UNECE secretariat of any changes concerning their respective NFP(s). The NFP(s) is also in charge of preparation of the national implementation report (NIR). The focal point could be a person or a unit. Some countries have more then one focal point, which implies that communication between them should be well organized.	
Relevant passage(s) from the Strategy:	42. Each country is responsible for implementing this Strategy. […] To this end, it is recommended that countries should […] designate a focal point. 69. To ensure efficient regional governance and communication, the establishment of ESD focal points in all UNECE member States and in relevant international organizations is required. A steering committee consisting of representatives of the education and environment (or other relevant) sectors might be established to follow up the implementation of the Strategy. […].	
Example(s):	A list of ESD focal points is available on the UNECE website (http://www.unece.org/env/esd/contacts.htm).	

Sub-indicator 1.1.3	**Do you have a coordinating body for implementation of ESD?**	
	Type: Qualitative; "Checklist"	Sources of information: Government reports
Description:	The coordinating body is a group representing key stakeholders (including the NFP(s) for ESD); it ensures and strengthens cooperation within the Government and between Government(s), non-governmental organizations (NGOs) and other stakeholders in the field of ESD.	
Relevant passage(s) from the Strategy:	47. There is a need for a coordination mechanism for implementing the Strategy at the State level, as well as for sharing information and stimulating partnerships among different actors . One option is to set up a "national ESD platform" possibly under the umbrella of the councils on sustainable development or other relevant bodies, bringing together professionals from different sectors.	
Example(s):	In 2005, Armenia established an inter-institutional commission comprising representatives from different ministries, institutions, NGOs, experts on education, environmental protection and sustainable development (SD, scientists, lecturers and others. The commission's objective is to define and supervise national priorities for implementation of the UNECE Strategy for ESD and to develop a national implementation plan (NIP). Similar bodies exist in other countries, including in Greece, Lithuania, the Netherlands and Slovenia.	

Sub-indicator 1.1.4	**Do you have a national implementation plan for ESD?**	
	Type: Qualitative; "Checklist"	Sources of information: Government reports
Description:	The UNECE Strategy should be transposed into a NIP or a national action plan (NAP) for ESD. This plan should be adopted by the Government.	
Relevant passage(s) from the Strategy:	48. National (State) implementation plans should serve as a core element of implementation. Countries should decide on a body that will be responsible for drafting their national implementation plan. 49. The national implementation plan should be developed with a participatory approach. Thus, all relevant stakeholders should be involved. It should take into consideration the actual situation in a country. Recognizing that countries may wish to set their own priorities and schedules for implementation in accordance with their needs, policies and programmes, the provisions of this chapter could serve as a guide for this work. National implementation plans should address objectives, activities, measures, tentative timetable, means of implementation and evaluation instruments.	
Example(s):	The available plans can be accessed on the UNECE website (http://www.unece.org/env/esd/NAP.htm).	

Sub-indicator 1.1.5	**Are there any synergies at the national level between UNECE ESD process, the UNESCO global process on the United Nations Decade of ESD, and other policy processes relevant to ESD?**	
	Type: Qualitative; "Checklist"	Sources of information: Government reports; Reports of relevant Ministries
Description:	In terms of implementing ESD at the national level, all relevant international ESD-related processes and activities should be taken into account to avoid duplication and to ensure mutual benefits. NFPs for the UNECE Strategy should be encouraged to cooperate with the National Commission to UNESCO and other relevant actors (e.g. national coordinators for the United Nations Commission on Sustainable Development education caucus, European Union (EU) Strategy for SD, the Bologna process, Global Education, Baltic 21, and the Mediterranean Strategy for SD).	
Relevant passage(s) from the Strategy:	1. The mandate to develop the Strategy derives from the statement made by the UNECE Environment Ministers at their Fifth "Environment for Europe" Conference (Kiev, May 2003). The Strategy benefited from experience gained both within the region and globally. It is a contribution to and in line with the Framework for a draft implementation scheme for the United Nations Decade of Education for Sustainable Development developed by UNESCO and should be used as a foundation for the regional implementation of the Decade and outcomes of the World Summit on Sustainable Development.	
Example(s):	In several countries, e.g. Armenia, Greece, Lithuania and the Netherlands, both the NFPs for UNECE Strategy for ESD and the representatives of UNESCO National Commissions for ESD are represented in the national commission for ESD. The list of UNECE focal points can be found at: (http://www.unece.org/env/esd/contacts.htm). Coordinators of UNESCO National Commissions can be found on the National Commissions website: (http://www.unesco.org/ncp/index.php?lc=E&module=national_commissions&showall=1).	

Indicator 1.2 Policy, regulatory and operational frameworks support the promotion of ESD

Sub-indicator 1.2.1	**Is ESD reflected in any national policy document(s)?**	
	Type: Qualitative; "Checklist"	Sources of information: Government reports
Description:	Policy documents may include national strategies, plans, programmes and guidelines. References to sustainable development are increas ingly common in national policies. However, the fact that ESD is a process by which we learn to become more sustainable is often overlooked. This indicator is focused on policies that recognize and support learning.	
Relevant passage(s) from the Strategy:	43. Effective implementation of the Strategy requires its provisions to be integrated into the planning, investment and management strategies of the State and local government for all levels of education and for all educational institutions and organizations. At the same time, the implementation should be in accordance with and benefit from other relevant State, bilateral and multilateral initiatives. The legal, economic and communication instruments should be adapted to the State's circumstances. Thus, countries would implement the provisions, as appropriate, in relation to their legislation, policies and operational frameworks. 50. Policy, legislation, operational frameworks and curricula should include and support ESD.	
Example(s):	Education has a central role in the Swedish National Strategy for Sustainable Development launched in March 2006. This is the third version of the Government's view on sustainable development.	

Sub-indicator 1.2.2	**Is ESD: (a) addressed in relevant national education legislation/regulatory document(s); and (b) included in your national curricula and/or national standards/ordinances/ requirements; at all levels of formal education, as understood by your education system in accordance with International Standard Classification of Education (ISCED)[2]?**	
	Type: Qualitative; "Input"	Sources of information: Reports of relevant ministries
Description: See passage below.		
Relevant passage(s) from the Strategy:	50. Policy, legislation, operational frameworks and curricula should include and support ESD. Key actions to achieve this could be to: adopt frameworks for ESD for all levels of education; stimulate the development of interdepartmental and multi-stakeholder cooperation, including the establishment of consultative mechanisms, as appropriate; to integrate SD principles into the study programmes and special courses at all levels of higher education, especially in initial teacher training; improve the provision and management of education facilities towards SD and strengthen the connection between natural, economic, political and social sciences in interdisciplinary, multidisciplinary and specialized studies. Interdisciplinary and specialized studies should be properly balanced.	
Example(s):	In Armenia in 2004, the State Educational Concept of General Education (the State curriculum and standards for secondary education) and State Standards of Vocational Education were adopted by the Ministry of Education and Science, in which separate sections are devoted to ESD. In accordance with the Order by the Minister of Education and Science, the course "Ecology and sustainable development" must be introduced as a general obligatory course at all higher education institutions (HEIs) in Kazakhstan from September 2008.	

Contd. Example(s):	The Higher Education Act in Sweden was amended in 2006 to stipulate that universities shall, in all their activities (i.e. including education and research), promote SD (http://www.notisum.se/rnp/sls/lag/19921434.htm). (a) The Swedish Education Act (1985:1100) stipulates that all school activity shall be carried out in accordance with fundamental democratic values and that each and every person working in the school shall encourage respect for the intrinsic value of each person as well as for the environment we all share (http://www.sweden.gov.se/sb/d/574/a/21538). (b) This aim of education for sustainable development is transformed into syllabi for courses and subjects at all levels of the Swedish school system (http://www3.skolverket.se/ki03/front.aspx?sprak=EN). In Slovenia, ESD content is included in article 2 of the Act of Organization and Funding of Education. The aims of this Act appear at the beginning of national curricula for kindergarten, primary and secondary schools. In article 2 of the Primary School Act, under Basic Provisions, there are several goals covering SD themes. In article 60.d. of this Act, there are education plans describing the implementation of the whole-school approach. The Slovenian Ministry of Education and Sport has prepared Guidelines for ESD from preschool to pre-university education, including curricula and points to be considered in teaching in all subjects with connection to cross-curriculum themes. An SD cross-curriculum has been developed in Lithuania. It was introduced in the 2008/2009 school year as a component of the new national curriculum. In accordance with the Order by Minister of Education and Science, the course "Ecology and Sustainable development" must be introduced as a general obligatory course at all HEIs in Kazakhstan from September 2008.

Sub-indicator 1.2.3	**Are non-formal and informal ESD addressed in your relevant national policy and/or regulatory document(s) and operational frameworks?**	
	Type: Qualitative; "Checklist"	Sources of information: Government reports
Description:	See the explanation of the difference between "informal" and "non-formal" (see paras. 20–21 and 36–37 of annex III).	
Relevant passage(s) from the Strategy:	6. The aim of this Strategy is to encourage UNECE member States to develop and incorporate ESD into their formal education systems, in all relevant subjects, and in non-formal and informal education.	

2 Refer to paragraph 29 of this document.

Contd. Relevant passage(s) from the Strategy:	30. It is important to support non-formal and informal ESD activities, since they are an essential complement to formal education, not least for adult learning. Non-formal ESD has a special role as it is often more learner-oriented, participatory and promotes lifelong learning. Informal learning in the workplace adds value for both employers and employees. Therefore, the cooperation among the different actors involved in all forms of ESD should be recognized and encouraged. 34. Governments should be supportive of non-formal and informal learning because informed citizens and knowledgeable consumers are essential in enacting sustainability measures through their choices and actions, including local Agenda 21. 55. Key actions to achieve this could be to: […] introduce and develop management systems for SD in formal educational institutions and non-formal education settings; include SD-related issues in training and re-training programmes for educators for all levels of education; and encourage educators, including those involved in non-formal and informal education, to share experiences.
Example(s):	In the Swedish Government Bill for Adult Education 2005/06:192 (Learn, grow and change) and in the Regulation for State Grants to Liberal Adult Education, a rationale is given for State grants to liberal adult education in seven fields of action including "Health, sustainable development and global justice" (http://www.regeringen.se/sb/d/6312/a/60433). Armenia has become a party to international environmental conventions that contain articles on the provision of non-formal of environmental education in which NGOs can also actively participate.

Sub-indicator 1.2.4	**Is public awareness in relation to ESD addressed in relevant national document(s)?**	
	Type: Qualitative; "Checklist"	Sources of information: Government reports
Description:	National documents in relation to ESD may include broadcast strategies, public campaigns and criteria for supporting public awareness programmes on a range of SD issues (e.g. climate change, sustainable consumption and production (SCP), desertification and biodiversity). National public awareness documents may also exist for ESD per se; these would aim to promote learning in its own right.	
Relevant passage(s) from the Strategy:	35. Non-formal and informal learning, including public awareness programmes, should aim to provide a better understanding of the links between social, economic and environmental issues in local and global contexts, including a time perspective. Communities, families, the media and NGOs are important actors in raising public awareness on SD. 51. Raising public awareness of SD in and through institutions of formal education as well as communities, families, the media and NGOs should be encouraged.	
Example(s):	Paragraph 10 of Constitution of Armenia includes the principle of developing a pro-environmental outlook. This is supported by the country's Law on Environmental Education. Following the ratification of the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention) by Armenia in 2001, nine regional Aarhus Centres were established in partnership with Organization for Security and Co-operation in Europe (OSCE). These aim to raise public awareness of different environmental issues (target issues for ESD). As a Party to the the Convention on Biodiversity, the United Nations Framework Convention on Climate Change and	

Contd. Example(s):	the United Nations Convention to Combat Desertification, the Government of Armenia has assumed certain commitments and developed relevant action plans. The latter stipulate that annual reports covering also environmental education issues be submitted to the Government and to the Convention secretariats. Public awareness is addressed in Folkbildning of the future, its role and objectives, a document produced by the Swedish Council of Adult Education in 2006. The text of this document, which outlines a vision for liberal, non-formal and voluntary education system in Sweden, was prepared in over 117 conferences, involving 8,000 people nationwide (http://www.folkbildning.net/).

Sub-indicator 1.2.5	**Does a formal structure for interdepartmental cooperation relevant to ESD exist in your Government?**	
	Type: Qualitative; "Checklist"	Sources of information: Government reports
Description:	A formal structure could include a joint commission/committee/working group with involvement of all relevant governmental institutions. "Interdepartmental" means "between State bodies", e.g. the ministry or ministries that hold the mandate on ESD should work together with other relevant ministries and governmental institutions.	
Relevant passage(s) from the Strategy:	10. The Strategy encourages interdepartmental, multi-stakeholder cooperation and partnerships, thereby stimulating investment of material and human resources in ESD. 46. The cooperation, shared responsibility and leadership of all relevant State bodies should be recognized as an important mechanism for good governance and be strengthened. Education and environment ministries, in particular, should cooperate and take the lead in initiating and encouraging the further integration of SD concerns into formal education policies, programmes and curricula at all levels and assess the implementation of the Strategy. However, close and effective cooperation with other public authorities as well as with stakeholders is also required, in particular with authorities responsible for economy. 50. Policy, legislation, operational frameworks and curricula should include and support ESD. Key actions to achieve this could be to: […] stimulate the development of interdepartmental and multi-stakeholder cooperation, including the establishment of consultative mechanisms, as appropriate; […].	
Example(s):	The Armenian inter-institutional commission for the Strategy is described above in the descriptor for sub-indicator 1.1.3. For example, a national ESD expert council (NESDEC) has been established together with regional working groups in Canada. Its aim is to develop and strengthen the capacity of leaders from government, business, civil society and education sector so that they can work together to integrate ESD into the formal, non-formal and informal education systems. The target groups of NESDAC include the relevant federal government departments. In Italy in August 2007, the State and Regions Conference adopted an agreement for the National Programme for Environmental Education, Information and Training (INFEA) for the period 2007–2009. Since 2002 an initiative supporting best practices in environmental education has contributed to creating a national network of environmental education centres.	

Contd. Example(s):	Information is one of the three pillars of the programme, which aims to develop initiatives and projects that raising public awareness of ESD. INFEA also implements the policy framework document Orientamenti e obiettivi per il nuovo quadro programmatico per l'educazione all'ambiente e allo sviluppo sostenibile, adopted by the State and Regions Conference. This document contains two paragraphs on non-formal and informal education which devote particular attention to communications campaigns, media education, and public awareness on sustainable consumption choices. On 23 May 2008, the Italian Government adopted a specific law on the "Waste emergency in the Campania region". In this act, there are three articles on education programmes and proposals to realize school projects at local level on waste management and sustainable consumption. Following this act, and enhancing the public information on sustainable waste management, the Ministry for the Environment, Land and Sea also realized an advertising campaign on "Waste recycling in collaboration with the public TV. Slovenia has a National Environmental Protection programme with a clearly defined public awareness strategy. Article 146 of the Environmental Protection Act clearly prescribes funding schemes for programmes for raising public awareness. Countries that have ratified the Aarhus Convention are committed to raising public awareness on environmental issues; this may be reflected in national documents.

Sub-indicator 1.2.6	**Does a mechanism for multi-stakeholder cooperation on ESD exist with the involvement of your Government?**	
	Type: Qualitative; "Checklist"	Sources of information: Government reports
Description:	Mechanisms for multi-stakeholder cooperation on ESD may include committees, commissions and working groups. Such mechanisms should guarantee interaction among stakeholders over the long term. As a key actor, Governments should be involved in these mechanisms.	
Relevant passage(s) from the Strategy:	10. The Strategy encourages interdepartmental, multi-stakeholder cooperation and partnerships, thereby stimulating investment of material and human resources in ESD. 26. 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. 33. (c) Increase cooperation and partnerships among members of the educational community and other stakeholders. Further involvement of the private sector and industry in educational processes will help to address rapid technological development and changing working conditions. Learning activities in close relation with society will add to learners" practical experience; 50. Policy, legislation, operational frameworks and curricula should include and support ESD. Key actions to achieve this could be to: [...] stimulate the development of interdepartmental and multi-stakeholder cooperation, including the establishment of consultative mechanisms, as appropriate […].	

Example(s):	In accordance with a government resolution, a National Commission for Sustainable Development was established in Armenia in 2002. It comprises representatives from scientific and NGOs. The head of the Commission is Prime Minister. Ten ministers, several members of National Assembly as well as representatives from scientific, NGOs, the private sector and the United Nations are included in the Commission. One of the Commission's tasks is the "promotion of SD through formal and non formal learning". The Canadian body NESDEC and regional working groups are multi-stakeholder in their composition; their target groups include research institutes, national youth groups, teachers' federations and government officials. Interdepartmental mechanisms (included in the Interdepartmental Agreement for Environmental Education and one for ESD, see examples for 1.2.5 above) in the Czech Republic include NGOs as representatives of non-formal learning institutions. The Government of the United Kingdom is working with the Sustainable Development Commission to establish a group of NGOs to act as an informal "sounding board" regarding government ESD initiatives in England, Wales and Northern Ireland. In Sweden, multi-stakeholder engagement is ensured through formalized consultations in the preparation of all new laws as well as through temporary groups in relation to specific projects (http://www.regeringen.se/sb/d/1522/a/13504). A National Committee for Sustainable Development, with representatives from all educational institutions as well as from government, administration and civil societal organizations, was established in Germany in 2004. Its task is to set strategic priorities for the implementation process and to pursue political advocacy of ESD.

Sub-indicator 1.2.7	**Are public budgets and/or economic incentives available specifically to support ESD?**	
	Type: Qualitative; "Input"	Sources of information: Government reports
Description:	Public spending may take the form of funding for ESD within mainstream government activity (e.g. formal or vocational education) or it may include incentives such as awards and grant schemes that support particular learning processes. These may cover whole institutional approaches (see sub-indicator 2.3.1) or specific SD themes (see 2.1.1).	
Relevant passage(s) from the Strategy:	74. Ensuring adequate financial means to implement the Strategy is an important precondition for its success. To assess accurately the costs of implementing measures that are necessary to achieve the objective of the Strategy and the return on this investment, it is essential to understand the value of education in introducing SD policies and practices in society. Education should be seen as an investment that will pay off in the long term. 76. Governments should consider using budgets and economic incentives to finance ESD for all forms of education, including introducing scholarships on ESD and capacity-building in educational institutions. Efforts should be made to include ESD components in relevant bilateral and multilateral programmes. Partnerships may be formed and should be encouraged to seek support, including contributions in kind, from international funding agencies and the private sector.	

Example(s):	Funds specifically for ESD have been disbursed through a range of United Kingdom government agencies: the Higher Education Academy supports ESD in universities; in England, regions have received modest funding to support networking for sustainable schools and incorporating sustainable development in the vocational education sector. The Dutch national programme "Learning for Sustainable Development" has its own funding for ESD projects, programmes and research (annual budget, €5 million.), which is contributed by ministries and regional authorities. For specific projects, participating stakeholders also contribute to the costs (an approximate of 25 per cent, in addition to the collected funds). In addition, the Ministry of Environment and the Ministry of Agriculture hold annual tenders for educational projects and programmes (http://www.senternovem.nl/mmfiles/Webversie%20uitvoeringsplan%20LvdO%202008-2011_tcm24-266541.pdf). In the Russian Federation, the Federal Agency on Education of has provided support for several target projects for capacity-building for ESD promotion in HEIs. The learning modules for education for sustainable development in HEIs were developed and implemented at the universities for the following subject areas: geography, ecology, geology, economics, chemistry, philosophy. The Swedish Agency for Networks and Cooperation in Higher Education provided support to a network (HU2) of universities for a project to discuss and propose "Learning outcomes on different levels and in different disciplines in higher education for sustainable development" (http://www.hu2.se/nlhu2.htm). The Italian Government has re allocated funds (€8 million) for INFEA for the period 2007–2009. INFEA has demonstrated, through its previous experience, the effectiveness of strong and synergic cooperation between national and local authorities, which has allowed for the promotion of EE and ESD projects. Such initiatives have taken into account the valuable contribution that local traditional, natural and cultural heritage provides vis-à-vis finding appropriate solutions to current environmental, social and economic challenges. An interministerial agreement between the Italian Ministry for the Environment, the Ministry of Education and the Ministry of University and Research to promote ESD was signed on 30 January 2008. The objectives of the agreement are to: (a) Reorient formal, non formal and informal education towards sustainable development values and priorities; (b) Promote training programmes for school directors and teachers oriented to create knowledge and skills on sustainable development; (c) Increase awareness among families and entire school community on initiatives to promote sustainable lifestyles also by adopting new technologies tools; (d) Strengthen the academic curricula in order to develop professional skills on sustainable development widening the job demand on sustainability; (e) Promote specific projects to improve eco-efficiency in school buildings considering them as "learning places".

Contd. Example(s):	Within the framework of ENSI, the Hungarian Government launched the eco-school system, a network of schools that have been certified as sustainable after an application procedure. Consequently, they can join in meetings, exchange materials, establish contacts and participate in national and international in-service training programmes. The network thus provides a professional framework for schools to develop their own sustainability projects (www.okoiskola.hu). The Ubuntu Network (http://www.ubuntu.ie/) was established in 2005 to support teacher educators to integrate development education and ESD perspectives in to post-primary initial teacher education in Ireland. It is funded by Irish Aid, Department of Foreign Affairs.

Indicator 1.3 National policies support synergies between processes related to SD and ESD

Sub-indicator 1.3.1	**Is ESD part of SD policy(s) if such exist in your country?**	
	Type: Qualitative; "Checklist"	Sources of information: Government reports; Reports of relevant Ministries
Description:	SD is essentially a process of learning to do things differently. Therefore, ESD is an important tool for achieving SD policy goals. Conversely, ESD (or learning) will be enriched through the implementation of SD policies and strategies.	
Relevant passage(s) from the Strategy:	Vision: Education, in addition to being a human right, is a prerequisite for achieving sustainable development and an essential tool for good governance, informed decision-making and the promotion of democracy. Therefore, education for sustainable development can help translate our vision into reality. 13. There is a need to consider the evolving meaning of SD. The development of a sustainable society should, therefore, be seen as a continuous learning process, exploring issues and dilemmas, where appropriate answers and solutions may change as our experience increases. Learning targets for ESD should include knowledge, skills, understanding, attitude and values. 43. Effective implementation of the Strategy requires its provisions to be integrated into the planning, investment and management strategies of the State and local government for all levels of education and for all educational institutions and organizations. At the same time, the implementation should be in accordance with and benefit from other relevant State, bilateral and multilateral initiatives. The legal, economic and communication instruments should be adapted to the State's circumstances. Thus, countries would implement the provisions, as appropriate, in relation to their legislation, policies and operational frameworks.	
Example:	Education represents a component of the Estonian National Strategy on Sustainable Development (Sustainable Estonia 21, 2005) within the course of action "Intellectual and social support to knowledge society". Education represents a component of the "Concept of Transition of the Republic of Kazakhstan for Sustainable Development for 2007–2024". A chapter on education and research is included in the Strategy for Sustainable development (2003) of Lithuania. In the long term, National Economic Development Plan of Slovenia includes SD. ESD is mentioned as a way to include SD. The Ministry of Education and Sport prepared Guidelines for ESD from preschool to pre-university education, and has adopted UNECE Strategy.	

Contd. Example:	One of the tenets of the Swedish National Strategy for Sustainable Development is that ESD means lifelong learning, so education oat all levels and all types of education shall be permeated with an SD perspective (http://www.regeringen.se/sb/d/3142). The Czech State Environmental Policy (SEP) addresses ESD (http://www.env.cz/osv/edice-en.nsf/D19A3A3F73ABC1CBC125713800330A7C/$file/spzp_en.pdf). Chapter V, part 1. Increasing of Public Awareness of Environmental Issues, Environmental Education and Public Awareness of SEP (p. 36) states that "High public consciousness in the area of the environment is a basic precondition and a priority for successful implementation of the State Environmental Policy, and also of the National Strategy for Sustainable Development, which is currently being prepared". ESD is also addressed in the Czech Strategy for Sustainable Development, II. 4 Research and development, education (http://www.mzp.cz/AIS/web-en.nsf/pages/sustainable_development_on_national_level). The Italian Environmental Action Strategy for Sustainable Development identifies the priorities enclosed in the EU VI Environmental Action Plan, Climate, Nature and Biodiversity, Environmental Quality and Quality of Life in Urban Areas, Sustainable Use and Management of Natural Resources and Waste. The national and international commitments to which Italy has subscribed, in accordance with both the Lisbon and Gothenburg Strategies, identify objectives and actions for each four key areas and a number of SD indicators to monitor achievement. In this document, EE is considered a tool to reinforce the effectiveness of sectoral policies identified by the UNECE Strategy. The role of education (particularly EE) is to promote a wider awareness and an active participation of all citizens and young people to the Strategy's implementation.

ISSUE 2. PROMOTE SD THROUGH FORMAL, NON-FORMAL AND INFORMAL LEARNING

Indicator 2.1 SD key themes are addressed in formal education

Sub-indicator 2.1.1	**Are key themes of SD addressed explicitly in the curriculum/programme of study at various levels of formal education?**	
	Type: Qualitative; "Input"	Sources of information: Education institutions and Ministries responsible for Education
Description:	This question asks which key themes are addressed at different ISCED levels and if there is an emphasis on certain themes (see appendix 1(a) for the key themes stated in the Strategy; there is space to indicate additional themes). This indicator aims to understand the range of themes currently being addressed by national curricula, courses, and projects, and seeks to identify themes of critical importance for a given country). For ISCED levels 5 and 6, the above-mentioned themes should be included into obligatory/optional courses and/or projects implemented by HEIs.	
Relevant passage(s) from the Strategy:	15. Key themes of SD 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 responsibility, environmental protection, natural resource management and biological and landscape diversity. Addressing such divers themes in ESD requires a holistic approach.	
Example(s):	In the United Kingdom, the Scottish "Curriculum for Excellence" addresses SD under the broad theme of citizenship (http://www.ltscotland.org.uk/curriculumforexcellence/). In England, Wales and Northern Ireland, SD is one of seven cross-curricular dimensions in the National Curriculum which help give education relevance and authenticity. SD is also formally linked to four statutory subjects (citizenship, design and technology, geography and science). Climate change is now identified as a topic to be studied by all secondary school pupils (http://www.curriculumonline.gov.uk/Default.htm). The National Framework for Sustainable Schools in the United Kingdom identifies eight doorways through which schools can approach SD (food and drink; energy and water; travel and traffic; purchasing and waste; buildings and grounds; inclusion and participation; local well-being; and the global dimension). Although noncompulsory, this framework is increasingly taken into account in the self-assessment of schools (http://www.teachernet.gov.uk/sustainableschools/index.cfm). The United Kingdom Higher Education Academy's ESD project has produced a "guidance module" on sustainability called "Sowing Seeds". It consists of: (a) an introduction indicating different levels of engagement with sustainability; (b) a section indicating key sustainability concepts and learning outcomes by level from undergraduate to master's; and (c) appendices showcasing SD accompanied by web addresses and/or contact details. At the time of writing, the module is still under development (http://csf.plymouth.ac.uk/?q=node/585). The United Kingdom Higher Education Academy's ESD project has produced a "guidance module" on sustainability called "Sowing Seeds". It consists of: (a) an introduction indicating different levels of engagement with sustainability; (b) a	

Contd. Example(s):	section indicating key sustainability concepts and learning outcomes by level from undergraduate to master's; and (c) appendices showcasing SD accompanied by web addresses and/or contact details. At the time of writing, the module is still under development (http://csf.plymouth.ac.uk/?q=node/585). Key themes are included into the new national curriculum to be introduced in Lithuania from the2008/09 school year. Key themes are included into the general compulsory course for HEIs in Kazakhstan, titled "Ecology and sustainable development". The Slovenian curriculum for formal education in primary and secondary schools includes some SD themes integrated in various academic subjects, as does the Guidelines for ESD from preschool to pre-university education, which are integrated as cross-curricular themes. There are also three relevant networks, eco-schools, healthy schools and ASPnet UNESCO schools, in which schools and kindergartens can tackle SD themes through different innovative projects, e.g. those financed through European Social Fund (www.ekosola.si).

Sub-indicator 2.1.2	**Are learning outcomes (skills, attitudes and values) that support ESD addressed explicitly in the curriculum/programme of study at various levels of formal education?**	
	Type: Qualitative; "Input"	Sources of information: Education institutions and Ministries responsible for Education
Description:	The competencies listed in appendix 1 (b) reflect the principles of the Strategy. The learning outcomes are clustered under the four categories of competencies used by "Education for All" (learning to learn, learning to do, learning to be, learning to live and work together; see the Delors report (http://www.unesco.org/delors/). The aim of this sub-indicator is to understand the range of learning outcomes and general competencies currently being addressed by curricula or courses, and the relative importance of these in your country.	
Relevant passage(s) from the Strategy:	11. The Strategy encompasses the basic provisions of Education for All: Meeting our Collective Commitments[3]. 13. There is a need to consider the evolving meaning of SD. The development of a sustainable society should, therefore, be seen as a continuous learning process, exploring issues and dilemmas, where appropriate answers and solutions may change as our experience increases. Learning targets for ESD should include knowledge, skills, understanding, attitude and values. 18. Learners at all levels should be encouraged to use systemic, critical and creative thinking and reflection in both local and global contexts; these are prerequisites for action for sustainable development.	
Example(s):	Complex and critical thinking is addressed explicitly in the Spanish compulsory schools' general aims. The Autonomous University of Barcelona, in collaboration with the Catalonia Regional School for Sustainable Consumption, has developed materials for primary and secondary schools that link learners' consumption habits and lifestyles to principles of complex and systemic thinking (e.g. multiple perspectives, diversity, global/local interdependence, uncertainty and risk).	

3 The Dakar Framework for Action, UNESCO, 2000.

Contd. Example(s):	The Association for Environmental Education (ASEKO) in the Russian Federation has developed an interdisciplinary, practice-oriented model of "futurized" education for both pupils and teachers. Analysing the opinions of pupils and parents, a course was designed addressing "real life" as well as formal study, moving towards a whole-institution approach to ESD. The course uses interactive teaching methods with an emphasis on values and attitudes. It has been implemented in schools and universities since 2002. See Collection of Good Practices in ESD: (http://www.unece.org/env/esd/GoodPractices/list.html#R). The Government policy "Every Child Matters" in the United Kingdom seeks to enhance the well-being of children and young people from birth to age 19. It is based on research that demonstrated how acting on young people's views brings positive outcomes, including increasing a sense of citizenship and enhancing personal development. The Sustainable Development Commission in the United Kingdom has looked into ways in which SD can help meet the aims of this key policy document, and has issued the publication Every Child's Future Matters (http://www.sd-commission.org.uk/publications.php?id=578). Learning outcomes for SD at the higher education level have been addressed by the British Higher Education Academy's ESD project (see 2.1.1). ESD learning outcomes are addressed in the SD Cross-Curriculum being introduced in Lithuania from the 2008/2009 school year. The requirements of the Swedish Education Act (1985:1100), which include the aim of achieving ESD (see 2.1.2 above), have been transformed into syllabi for courses and subjects at all levels of the Swedish school system (http://www3.skolverket.se/ki03/front.aspx?sprak=EN). Learning outcomes are explicitly addressed in the "Framework for Learning Global Development" (http://www.bne-portal.de/coremedia/generator/unesco/de/Downloads/Hintergrundmaterial__national/Orientierungsrahmen_20f_C3_BCr_20den_20Lernbereich_20Globale_20Entwicklung.pdf) and in the policy paper "Education for Sustainable Development in Schools" (http://www.bne-portal.de/coremedia/generator/unesco/de/Downloads/Hintergrundmaterial__national/Empfehlung_20der_20Kultusministerkonferenz_20und_20der_20Deutschen_20UNESCO-Kommission_20vom_2015.06.2007_20zur_20_22Bildung_20f_C3_BCr_20nachhaltige_20Entwicklung_20in_20der_20Schule_22.pdf).

Sub-indicator 2.1.3	**Are teaching/learning methods that support ESD addressed explicitly in the curriculum/programme of study at various levels of formal education?**	
	Type: Qualitative; "Input"	Sources of information: Education institutions and Ministries responsible for Education
Description:	This question looks at the methods used to teach ESD themes and/or to achieve ESD learning outcomes at different ISCED levels. Methods listed in the Strategy are included in appendix 1(c) of the reporting format, with space for additional methods.	
Relevant passage(s) from the Strategy:	28. […] Therefore, education should retain its traditional focus on individual subjects and at the same time open the door to multi- and inter-disciplinary examination of real-life situations. […]. 33. To be effective ESD should: […] (d) Provide an insight into global, regional, national and local environmental problems explaining them by means of a life-cycle approach and focusing not only on the environmental impact, but also on the economic and social implications, addressing both the natural environment and that modified by humans; (e) Use a wide range of participatory, process- and solution-oriented educational methods tailored to the learner. Apart from the traditional ones, these should include among other things discussions, conceptual and perceptual mapping, philosophical inquiry, value clarification, simulations, scenarios, modelling, role playing, games, information and communications technology (ICT), surveys, case studies,excursions and outdoor learning, learner-driven projects, good practice analyses, workplace experience and problem solving; […]	
Example(s):	Teaching/learning methods are included in the Greek programmes of EE and ESD at various levels based on decisions of the different educational institutions. To facilitate expansion and use of a variety of methods, MEDIES (see 6.1.1) has published a Handbook on Methods used in EE and ESD, which is also available online (www.medies.net) in English, French and Arabic. In Slovenia, several new teaching learning methods have been incorporated in the reform of primary education introducing a nine-year primary school. As well, new teaching/learning methods that support ESD, addressing it explicitly in the curriculum/programme of study at various levels of formal education, will be developed by new projects (models). These will be financed by European Social Fund and will be launched in September 2010. Teaching methods in Denmark, already used in education institutions and also promoted in teacher training, are based on an action-competence approach, i.e. through project-organized group teaching. This approach includes all methods specified in paragraph 33(e) of the Strategy. Recently, a pilot project on teaching ESD was initiated by the Ministry of Education and is being carried out by the Danish Pedagogical University School of Aarhus University. The teaching materials resulting from this project will be made available in Danish.	

Indicator 2.2 Strategies to implement ESD are clearly identified

<table>
<tr><td rowspan="2">Sub-indicator 2.2.1</td><td colspan="2">Is ESD addressed through: (a) existing subjects only? (b) a cross-curriculum approach? (c) the provision of specific subject programmes and courses? (d) a stand-alone project? e) other approaches</td></tr>
<tr><td>Type: Qualitative; “Input”</td><td>Sources of information: Education institutions and Ministries responsible for Education</td></tr>
<tr><td>Description:</td><td colspan="2">The aim of this question is to identify the ways in which SD/ESD is integrated into programmes of study, including national/regional strategies or programmes that support certain approaches, e.g.

(a) Building SD/ESD into existing subjects (for HEIs, this means courses/disciplines);

(b) Treating SD/ESD as a cross-curriculum/interdisciplinary theme where many subjects contribute;

(c) Offering specific courses, programmes or seminars on SD/ESD

(d) Offering or allowing educational institutions to approach SD/ESD through specific projects that are intended as discreet activities with their own time frames rather than being tied to specific subject areas (in HEIs, these might be implemented by departments, faculties or inter-faculty structures);

(e) Other approaches specific to your country.</td></tr>
<tr><td>Relevant passage(s) from the Strategy:</td><td colspan="2">28. ESD demands a reorientation away from focusing entirely on providing knowledge towards dealing with problems and identifying possible solutions. Therefore, education should retain its traditional focus on individual subjects and at the same time open the door to multi- and inter-disciplinary examination of real-life situations. This could have an impact on the structure of learning programmes and on the teaching methods, demanding that educators change from being solely transmitters and learners change from being solely recipients. Instead both should form a team.

33. To be effective ESD should: (a) Be addressed in two ways: (i) through the integration of ESD themes across all relevant subjects, programmes and courses; and (ii) through the provision of specific subject programmes and courses; […]

50. […] curricula should include and support ESD. Key actions to achieve this could be to: […] strengthen the connection between natural, economic, political and social sciences in interdisciplinary, multidisciplinary and specialized studies. Interdisciplinary and specialized studies should be properly balanced.</td></tr>
<tr><td>Example(s):</td><td colspan="2">***(a) ESD is addressed through existing subjects***

In Estonia, a school curriculum integrating ESD issues into schools and kindergartens was developed by the Ministry of Environment together with the Ministry of Education, with support from the Ministry of Foreign Affairs of the Netherlands. See Collection of Good Practices in ESD (http://www.unece.org/env/esd/GoodPractices/list.html#E).</td></tr>
</table>

Contd. Example(s):	***(b) ESD is addressed through a cross-curriculum approach*** Two hundred schools in Germany participated in a federal State programme in which they were supported in developing cross-curricular approaches to ESD. For example, teachers in a public secondary school decided to teach SD-related topics, in accordance with the official curriculum, in different school subjects. One such topic was water ecology. Students investigated a nearby eutrophic pond. Links between eutrophication and different causes of pollution were explored through workshops, student projects, excursions and talks with experts. Students' suggestions for enhancing the quality of the pond were discussed with the city environmental health officer. Project Transfer 21 is now disseminating this and others results (http://www.transfer-21.de/daten/materialien/Orientierungshilfe/Guidecompetences _engl_online.pdf). SD is formally linked to four subjects in the National Curriculum of the United Kingdom (see example under 2.1.1). An SD cross-curriculum is being developed in Lithuania to be introduced from 2008/09 school year as a component of the new National Curriculum (see 1.2.2). ***(c) Provision of specific subject programmes and courses*** Courses on the topic "Global Environmental politics" at Georgian Technical University at both the bachelors and master's levels have proved to be highly innovative. The courses were interactive, with student-led, cross-disciplinary seminars. The main aim was to educate graduates with a better understanding of critical scientific and social issues, e.g. how resource management can help reduce social inequalities. See Collection of Good Practices in ESD (http://www.unece.org/env/esd/GoodPractices/list.html#G). The National Curriculum of the United Kingdom views SD as a cross-cutting theme (see 2.1.1) In Armenia, academic institutions including Yerevan State University, the Armenian State University of Economy and the Armenian State Pedagogical University offered courses on SD, e.g. "SD of human society", "SD and global security" and "The aims of millennium development as an important basis of SD". ***(d) Stand-alone projects*** Helianthus-Environmental Education Project works with young people and teachers in southern Italy to inform and educate them about today's crucial environmental issues. Funded through national and European contributions, the project focuses on 10 issues. Schools work in local networks, providing teacher training and using action research methods for self-assessment. See the Collection of Good Practices in ESD: (http://www.unece.org/env/esd/GoodPractices/list.html#I). In Armenia, an integrated course on health and safety was developed as part of a wider ESD project. Health and safety were explored in various sectors of society using case studies, environmental monitoring methods, research and emergency situations. See Collection of Good Practices in ESD: (http://www.unece.org/env/esd/GoodPractices/list.html#A). One of HEIs, namely the Yerevan Branch and Regional Training Centre of the Moscow State University of Economics, Statistics and Informatics, is using some of the Dutch experience in the course of "Education for Sustainable Development".

Contd. Example(s):	An agreement between local authorities and the Greek Ministries of Education and Interior supports school waste recycling. This is linked to special courses and ESD materials, particularly for education on sustainable consumption and production. This scheme was introduced in response to Strategy.

Indicator 2.3 A whole-institution approach to SD/ESD is promoted

Sub-indicator 2.3.1	**Do educational institutions adopt a "whole-institution approach" to SD/ESD?**	
	Type: Qualitative; "Output"	Sources of information: Education institutions, funding agencies
Description:	A "whole-institution approach" means that all aspects of an institution's internal operations and external relationships are reviewed and revised in the light of SD/ESD principles. Within such an approach, each institution decides on its own actions, addressing the three overlapping spheres of Campus (management operations), Curriculum (teaching/learning and research) and Community (external relationships). A whole-institution approach means that the strategy of the institution, and ultimately its culture, is oriented towards SD. The whole-institution approach to ESD is developing in many countries. The indicator doesn't ask "how many institutions" are choosing this approach, but only if the approach is practiced by some institutions in each ISCED level. This sub-indicator also asks whether the whole-institution approach is applied in institutions providing non-formal education (e.g. museums, art galleries, national parks) and informal education (e.g. local authorities, business, NGOs).	
Relevant passage(s) from the Strategy:	29. Formal education institutions play an important role in developing capacities from an early age, providing knowledge and influencing attitudes and behaviour. It is important to ensure that all pupils and students acquire appropriate knowledge of SD and are aware of the impact of decisions that do not support sustainable development. An educational institution, as a whole, including pupils and students, teachers, managers and other staff as well as parents, should follow principles of SD. 30. It is important to support non-formal and informal ESD activities, since they are an essential complement to formal education, not least for adult learning. Non-formal ESD has a special role as it is often more learner-oriented, participatory and promotes lifelong learning. Informal learning in the workplace adds value for both employers and employees. Therefore, the cooperation among the different actors involved in all forms of ESD should be recognized and encouraged. 33. To be effective ESD should: […] (b) Focus on enabling meaningful learning experiences that foster sustainable behaviour, including in educational institutions, the workplace, families and communities; […] 54. Educators, leaders and decision makers at all levels of education need to increase their knowledge about education for sustainable development in order to provide appropriate guidance and support. Therefore, competence-building efforts are necessary at all levels of both formal and non-formal education.	

Example(s):	In the United Kingdom, Plymouth University has adopted a whole-institution approach so that all aspects of university life support learning for sustainability. The University's Centre for Sustainable Futures works with staff from all departments to identify and integrate SD issues into their existing programmes of study. A questionnaire on students' perceptions gathered opinions and invited students to collaborate in the campus's sustainable management . Collaboration with the community has contributed to learning for sustainability across the region, and a strong concern for "learning how to learn" is reflected in the learning skills support for students and lecturers across all departments (http://csf.plymouth.ac.uk). A new (2008) law pertaining to all universities in Greece encourages the adoption of the whole-institution approach. In Sweden, most universities that have implemented Environmental Management Systems based on a Government directive to all public agencies apply a "whole-institution approach" by including education and research in addition to campus management in their environmental management system (c.f. http://www.mls.adm.gu.se/ and http://www.hig.se/miljo/). Many Swedish schools are applying a whole-institution approach with the principles of an environmental management system (EMAS and ISO 14001, adjusted for school children) in their work on SD (http://www.hsr.se/sa/node.asp?node=40) The main objective of Slovenian Eco-schools is a whole-school approach. This means that the eco-schools are required to prepare a strategy for all school operations throughout the school year. The strategy should include one or more ESD themes approached though different projects. Implementation of the strategy is constantly monitored through self evaluation by the school, as well as by random external evaluation by national coordinative bodies. School Agenda 21, a pilot project implementing SD strategies in schools, was started in Lithuania in 2000. School Agenda 21: (a) integrates SD issues into the school curriculum and practice; (b) promotes activities supporting sustainability in local community; and (c) encourages school management reform. These schools are currently acting as ESD consultancy centres.

Sub-indicator 2.3.2	**Are there any incentives (guidelines, award schemes, funding, technical support) that support a whole-institution approach to SD/ESD?**	
	Type: Quantitative; "Output"	Sources of information: Education institutions, funding agencies
Description:	See description under 2.3.1 above.	
Relevant passage(s) from the Strategy:	See relevant passages from the Strategy under 2.3.1 above.	
Example(s):	In 1999, the "Sustainable Universities" initiative was established by FORUM Umweltbildung to strengthen SD and integrate SD issues into the daily life of HEIs in Austria. The initiative includes development of a nationwide "sustainability award" for public HEIs. The main focus is on continuous processes of "sustainable higher education" and not on temporary projects, individuals or single events. The award is divided into eight different fields of action (e.g. curricula, operations, student initiatives). Universities can submit their contributions to this contest and in accordance with their individual strengths to win the award in one particular action field.	

Contd. Example(s):	In Sweden, the Sustainable School Award aims to support and inspire schools – from pre-primary to adult education – to become sustainable schools. The requirements, set by the Swedish National Agency for School Improvement, focus on educational leadership, teacher and staff training, teaching approaches, the active role of students and cooperation with the local community (http://www.skolutveckling.se/in_english/sustainable_development/) The foundation Stiftelsen Håll Sverige Rent awards a „Green flag“ for Eco-Schools (see 2.3.1), the Swedish branch of the international Foundation for Environmental Education (FEE; http://www.hsr.se/sa/node.asp?node=40). The Swedish Government directive to all public agencies served as an incentive for universities to start implementing environmental management systems. Implementation was supported with training and information from the Swedish Environmental Protection Agency. See: http://www.mls.adm.gu.se/ and http://www.hig.se/miljo/. Incentives that support a whole-institution approach in Germany are given in the context of the United Nations Decade of ESD. Organizations, projects and local authority districts can apply to become an official “decade project/district”. A jury decides whether the application documents refer to ESD and whether the projects are innovative. Successful applicants are officially awarded and launched on the Decade’s online portal (http://www.bne-portal.de/coremedia/generator/unesco/de/04__UN__Dekade __Deutschland/06__Dekade-Projekte/Ausgezeichnte_20Offizielle_20Dekade-Projekte.html). A whole-school approach is being encouraged in the United Kingdom by the publication of guidance documents. The Department for Children, Schools and Families has produced a range of such documents for sustainable schools, including guidelines for school governors and bursars plus planning tools for senior managers, e.g. a sustainable school self-evaluation tool (http://www.dfes.gov.uk/aboutus/sd). The Specialist Schools and Academies Trust has published Raising standards: making sense of the sustainable schools agenda (www.ssatrust.org.uk/eshop).

Sub-indicator 2.3.3	**Do institutions/learners develop their own SD/ESD indicators for their institution/organizations?**	
	Type: Qualitative; "Output"	Sources of information: Education institutions, funding agencies
Description:	Developing specific SD indicators within an institution requires discussion and negotiation of what SD means in that context; it is therefore an indication that learning for sustainability is taking place. This process can take place at all ISCED levels as well as within non-formal groups. See also description of whole-institution approach under 2.3.1 above	
Relevant passage(s) from the Strategy:	See relevant passages from the Strategy under 2.3.1 above.	
Example(s):	Thirteen Italian regions undertook a one-year action research process to develop quality indicators for all educational aspects covered by regional EE initiatives. The resulting set of quality indicators serves as a guideline for quality criteria in the different regions. These criteria cover many educational fields, from formal to non-formal education to information as "public education" to participative initiatives such as Agenda 21. In Sweden, the requirements of follow-up, audits, reporting and continuous improvements in the frame of environmental management systems have prompted universities to develop SD/ESD indicators and educational research in addition to campus management (http://www.mls.adm.gu.se/ and http://www.hig.se/miljo/). At Brighton University in the United Kingdom, users of each university site formed multi-stakeholder action teams to discuss ways to enhance the sustainability of their sites and to monitor progress. Their actions not only improved environmental performance, but also motivated staff and students to learn more about SD (www.brighton.ac.uk/sustainabledevelopment/index.php?PageId=470).	

Indicator 2.4 ESD is addressed by quality assessment/enhancement systems

Sub-indicator 2.4.1	**(a) Are there any education quality assessment/enhancement systems? (b) Do they address ESD? (c) Are there any education quality assessment/enhancement systems that address ESD in national systems?**	
	Type: Qualitative; "Input"	Sources of information: Education institutions and Ministries responsible for Education
Description:	This question aims to identify where ESD criteria are included in quality assessment systems for formal education (for different ISCED levels) as well as for non-formal and informal education.	
Relevant passage(s) from the Strategy:	45. The education sector consists of a broad field of actors with different regulatory management systems in different countries. It is also geared to people of different ages and in different positions in life. The challenge will be to address and implement necessary reform of policy-making and the operational framework of the education sector on a basis of trust, inclusivity and subsidiarity, and to encourage self-evaluation.	
Example(s):	German schools are, inter alia, invited to become eco-schools (an FEE initiative). This invitation includes an offer of self-assessment based on an integrative view of ESD. Self-assessment covers planning, school management, training, school life, lessons, skills and competencies, resources and cooperation with external partners. This initial step is followed by an action-planning workshop in which responsibilities are assigned. After one year, the output of the measures is re-evaluated (http://lbs.hh.schule.de/umwelterz/DGU/projekte/umweltschule/index.html). In addition, other initiatives have developed criteria and tools for the assessment of ESD in diverse educational institutions (http://www.umweltbildung.de/395.html?&fontsize=7&print=). Although ESD is not formally assessed in the United Kingdom, the government schools inspectorate (Ofsted) has investigated the impact of ESD on school performance. This may well be used to inform future inspections (http://www.ofsted.gov.uk/). Slovenian national coordination of eco-schools annually prepares national criteria in accordance with international criteria. The named criteria are part of the SD themes. All eco-schools are obliged to prepare annual reports on how they meet the national criteria. If they satisfy all the relevant criteria, they are awarded green flag. The ENSI international network developed a guidance document, based on case studies and comparative research, for schools that want to assess their whole-institution progress towards ESD. These guidelines have been translated into 14 languages and are now used by different school networks in different UNECE countries (www.ensi.org).	

Indicator 2.5 ESD methods and instruments for non-formal and informal learning are in place to support changes in knowledge, attitude and practice

Sub-indicator 2.5.1	**Are SD issues addressed in informal and public awareness-raising activities?**	
	Type: Qualitative; "Input"	Sources of information: Reports by the trade unions and professional associations, relevant ministries
Description:	The indicator asks for information on activities which seek to enhance public awareness concerning SD issues.	
Relevant passage(s) from the Strategy:	33. To be effective ESD should: […] (e) Use a wide range of participatory, process- and solution-oriented educational methods tailored to the learner. Apart from the traditional ones, these should include among other things discussions, conceptual and perceptual mapping, philosophical inquiry, value clarification, simulations, scenarios, modeling, role playing, games, information and communication technology (ICT), surveys, case studies, excursions and outdoor learning, learner-driven projects, good practice analyses, workplace experience and problem solving; […] 35. Non-formal and informal learning, including public awareness programmes, should aim to provide a better understanding of the links between social, economic and environmental issues in local and global contexts, including a time perspective. Communities, families, the media and NGOs are important actors in raising public awareness on SD. 37. Mass media is a powerful force in guiding consumer choice and lifestyles, especially for children and young people. The challenge is to mobilize their know-how and distribution channels to pass reliable information and key messages on SD-related issues.	
Example(s):	The National Environmental Forum of Belarus aims to achieve the broadest possible involvement of all sections of society in the environmental movement. It is traditionally conducted in three stages: (a) the district (municipal) level; (b) the regional forum; and (c) a national gala finale that includes awards for the winners of national competitions, an exhibition on modern technology in environmental management and protection, nature walks, trade fairs, stalls and a gala concert. See Collection of Good Practices in ESD: (http://www.unece.org/env/esd/GoodPractices/list.html#B). In Lithuania, a weekly radio programme ("Only One Planet") was part of a national radio broadcast on SD issues in the period 2002–2006. SD was also covered in the weekly programme "A Gate to Knowledge" in the period 2006–2008. From the start of the Local Agenda 21 movement in the Netherlands, several websites and i magazines have informed the public about SD issues. Towns and villages compete in an SD monitor: "the Local Agenda 21 Meter" (www.duurzaamheidsmeter.nl/english). Other examples of public-oriented sources of information include a pair of websites (www.earthday.nl and www.insnet.org/nl) and the joint NGO campaigns (e.g. the "HIER campaign" on Climate Change (www.hier.nu)).	

Sub-indicator 2.5.2	**Is there any support for work-based learning (e.g. for small companies, farmers, trade unions, associations), which addresses SD issues?**	
	Type: Quantitative; "Input"	Sources of information: Reports by the trade unions and professional associations, relevant Ministries
Description:	The sub-indicator asks for both the existence of work-based learning experiences that address SD issues and the existence of incentives or other forms of support at the national or regional levels. This may include State support, but also private-sector organizations promoting SD among their workforce, e.g. as part of their strategy for corporate social responsibility (CSR).	
Relevant passage(s) from the Strategy:	38. All sectors of the workforce can contribute to national, regional and global sustainability. The development of specialized training programmes to provide professionals and decision makers with the knowledge and skills to contribute to SD has been identified as a critical component of education for sustainable development. 39. Thus, vocational and continuing education have a very important role to play and should therefore be offered to decision makers and all professionals, especially those with a role in planning and management. It should be aimed at building knowledge and awareness of SD. Continuing education has two main activity areas: (a) upgrading knowledge and skills; and (b) providing new competencies needed in different professions and in different situations. Continuing education is one of the areas that would benefit from cooperation among the education sector, stakeholders and the community at large. 52. Professional skills and knowledge of sustainable development should be improved continuously and, consequently, be part of the lifelong learning of individuals including those in sectors such as public administration, the private sector, industry, transport and agriculture. The development of new knowledge and the need to introduce new skills in order to give more specific substance to the concept of SD will remain a constant need, as many areas of expertise are constantly developing. 53. Key actions to achieve this could be to: offer SD-related learning opportunities in continuing education for professionals, including those in planning, management and the mass media; encourage and support community-based SD awareness-raising activities; develop cooperation with NGOs and support their educational activities; promote cooperation among formal educational institutions and non-formal organizations as well as informal activities; encourage the media to inform and debate issues for SD to reach the general public.	
Example(s):	Over a one-year period (2004/2005) in Armenia, 103 deputies, parliamentary experts, members of the Constitutional Court and deputy ministers received a training session on sustainable development. A temporary parliamentary commission brought together members of the Government and the opposition, and resulted in SD concerns being reflected in the new draft Constitution. The process was covered by the media, thus raising wider public awareness. See Collection of Good Practices in ESD: (http://www.unece.org/env/esd/GoodPractices/list.html#A). The Greater Expectations Project in the south-west of England (United Kingdom) developed an accredited course called "Smart business thinking", which included systems thinking, learning about learning and recognizing values. Employees were trained to coach their colleagues through various	

Contd. Example(s):	learning programmes bearing these SD principles in mind. It has become part of the specification for some EU-funded projects to support general work-based learning in the region. Trainings on organic farming are organized in Lithuania since 2005 through the Regional Centres for Long-term Vocational Training of Farmers (http://www.zum.lt/mmc/index_english_centres.htm). To support businesses and their organizations in CSR efforts, a national platform MVO (Corporate Social Responsibility) was established to help with information, subsidies, good practices, conferences, knowledge and research (http://www.mvonederland.nl/english/). Sakhalin State University (Russian Federation), working in cooperation with the British NGO Living Earth Foundation and the Sakhalin Energy Investment Company, has established a Chair for Sustainable Development with an SD Unit that conducts a wide range of community projects in Sakhalin (http://www.livingearth.org.uk/russia_programmes/sakhalin_island/sakhalin_island_sustainable_development.html). More than 500 examples of good practice showing how companies managed to motivate their employees to contribute to SD are available through an online database (www.mimona.de).

Sub-indicator 2.5.3	**Are there any instruments (e.g. research, survey, etc.) in place to assess the outcomes of ESD as a result of non-formal and informal learning?**	
	Type: Qualitative; "Input"/"Outcome"	Sources of information: Reports by the trade unions and professional associations, relevant ministries
Description:	Assessing the results of non-formal and informal education presents a serious challenge. For this reason, this sub-indicator asks for details of efforts that have been made to evaluate the outputs and outcomes of these activities.	
Relevant passage(s) from the Strategy:	60. Key actions to achieve this could be to initiate and promote research on and development of: […] the economic effects of and incentives for ESD; ways of including aspects of SD and their local context in different subjects, giving priority to research that brings together the different dimensions of SD; indicators and evaluation instruments for ESD; and share the results of research and examples of good practices.	
Example(s):	During every second year in Greece, Elliniki Etairia (Hellenic Society for the Protection of the Environment and Cultural Heritage) makes a large sample survey on the general public's knowledge and understanding of and attitudes on environmental and SD issues (with a similar methodology to Eurobarometers). The survey looks specifically for correlations with major events and campaigns. One of the popular methods to "measure" the outcomes of ESD in SD behaviour is the "footprint method". Several applications of this method are available (e.g. www.wwf.be/eco-footprint/nl and www.duurzamevoetafdruk.nl/en/cms/home.asp). Further examples of international experience in footprint methodology can be found at: www.footprintnetwork.org. Research on the long-term effects of education is very seldom found. Benefiting from the long history of EE in the Netherlands, the Dutch Field Study Organization, with the Universities of Utrecht and Wageningen, has assessed changes in knowledge, attitudes and behavior of students attending EE courses 1, 7 and 15 years ago (http://www.veldwerknederland.nl/overzicht19#A476).	

Indicator 2.6 ESD implementation is a multi-stakeholder process

Sub-indicator 2.6.1	**Is ESD implementation a multi-stakeholder process?**	
	Type: Qualitative; "Input"	Sources of information: Reports by the trade unions and professional associations, relevant Ministries
Description:	See the passages below. Please note that these processes may also form part of the CSR strategies of private-sector organizations.	
Relevant passage(s) from the Strategy:	26. 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. 36. [….] Partnerships among NGOs, Governments and the private sector would add significant value to ESD. 73. Relevant stakeholders, including 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 should be invited to define their priorities and take responsibility for implementing and following up the Strategy.	
Example(s):	"Making plans: beginning by understanding" was a four-year programme of multi-stakeholder learning in Spain. Under the Ramsar Convention on Wetlands, Spain developed a National Plan on CEPA (Communication, Education & Public Awareness). During the process, the "P" for public became "P" for participation because of the way the process developed. Seminars involved managers, educators, administrators, NGOs, academics and private enterprises. As a result of these seminars, sustainable resource management was recognized as a continual learning process. See Collection of Good Practices in ESD (http://www.unece.org/env/esd/GoodPractices/list.html#S). Global/General Education University Association (GEDUC) runs a programme in Swiss universities comprising "meta-courses" in which students and tutors from different disciplines meet to discuss social/environmental issues that are interdisciplinary in nature. Stakeholders in this ESD programme also include civil society organizations and former students. See the Collection of Good Practices in ESD (http://www.unece.org/env/esd/GoodPractices/list.html#S) and the GEDUC website (http://www.geduc.org/projets/metacours.html). The Baltic University Programme, coordinated by Uppsala University (Sweden) since1991, involves national and local TV companies in Finland, Latvia and Poland, municipalities/local administrations, the Union of Baltic Cities and NGOs (http://www.balticuniv.uu.se/). The Government of the United Kingdom has established an NGO "sounding board" to test their ESD initiatives (see 1.2.6). Since 2002, the Mediterranean Information Office for Environment, Culture and Sustainable Development (MIO-ECSDE) has been facilitating the secretariats of two "circles": COMPSUD (Circle of Mediterranean Parliamentarians on Sustainable Development) and COMJESD (Circle of Mediterranean Journalists on Environment and Sustainable Development).	

Contd. Example(s):	These have as one of their objectives the thorough education of their members, and more generally that of Members of Parliament and journalists, on critical SD issues. Many meetings (on an almost annual basis) have already taken place. Efforts are being made to establish a third circle for women's organizations, in whose agenda ESD will be occupy a central position. In Germany, the United Nations Decade of ESD is organized as a multi-stakeholder process (see 1.2.6 and www.bne-portal.de).

ISSUE 3. EQUIP EDUCATORS WITH THE COMPETENCE TO INCLUDE SD IN THEIR TEACHING

Indicator 3.1 ESD is included in the training of educators

Sub-indicator 3.1.1.	**Is ESD a part of educators' initial training?**	
	Type: Qualitative; "Input"	Sources of information: Educational institutions, Ministry of Education
Description:	Initial educators' training means studies undertaken by new teachers/lecturers/ trainers to obtain the required licence/certificate/diploma in order to become a qualified teacher. Some lecturers may be required to follow ESD-related courses as part of their PhD studies. (Also, see passages below).	
Relevant passage(s) from the Strategy:	"31. Appropriate initial training and re-training of educators and opportunities for them to share experiences are extremely important for the success of ESD. With heightened awareness and knowledge on sustainable development and, in particular, SD aspects in the areas where they work, educators can be more effective and lead by example. Training should also be closely linked to the relevant research findings on SD." 54. Educators, leaders and decision makers at all levels of education need to increase their knowledge about education for sustainable development in order to provide appropriate guidance and support. Therefore, competence-building efforts are necessary at all levels of both formal and non-formal education. 55. Key actions to achieve this [develop the competence within the education sector to engage in ESD] could be to: stimulate competence development for staff in the education system, including actions for the leaders to increase their awareness of SD issues; develop criteria for validating professional competence in ESD; introduce and develop management systems for SD in formal educational institutions and non-formal education settings; include SD-related issues in training and re-training programmes for educators for all levels of education; and encourage educators, including those involved in non-formal and informal education, to share experiences."	
Example(s):	Three Greek universities (the University of Athens, the University of Thessaloniki and the University of Ioannina) collaborate on an EE/ESD course in the two-year postgraduate intra-university science (chemistry) teaching programme (DICHINET). The course leads to an MSc with possibilities to continue for a PhD. Approximately half of the students each year are educators already working in primary or secondary schools who have obtained paid "leave of absence" (from the Ministry of Education or their employers in the case of private schools) in order to upgrade their knowledge in this field. The pilot course "Ecology and sustainable development" was introduced in 2008 with undergraduate programme at the Pavlodar State Pedagogical Institute in Kazakhstan. In Sweden, SD/ESD is introduced in initial teacher training in optional and compulsory courses, and most institutions that train teachers cooperate or use materials from the Global School for education of global SD (http://www.denglobalaskolan.com/).	

Sub-indicator 3.1.2.	**Is ESD a part of the educators' in-service training?**	
	Type: Qualitative; "Input"	Sources of information: Educational institutions, Ministry of Education
Description:	Educators who are already involved in formal, non-formal and informal education should develop appropriate competences for implementing ESD at all levels and in all forms of education. Within this training, the content of SD (key themes) and methodology should be equally important. Even experienced teachers and those working in higher education institutions require in-service programmes so that they can revise/update their knowledge and practice in this area.	
Relevant passage(s) from the Strategy:	See relevant passages from the Strategy under 3.1.1 above.	
Example(s):	In Armenia, an integrated course for teachers (both schools and HEIs) was developed in the period 2005–2008 to provide relevant knowledge and practices in the field of health and safety. It includes: (a) review of international experience; (b) the establishment of a work plan and a syllabus; (c) the organization of training tutorials and use of active teaching methods. Teaching materials and guidelines were developed and published. Annual in-service training sessions are being organized in Slovenia for teachers of eco-schools, health-promoting schools and UNESCO-associated schools. In-service training programme for teachers of secondary schools on climate change issues in 2005–2007 was delivered in five Central Asian countries: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. The programme was organized by CAREC in cooperation with the British NGO Field Studies Council. An in-service training programme for school teams has been run in Lithuania by the Ministry of Education and Science since 2006 as the main activity of the national ESD network. The programme is led by a group of university researchers and advanced teachers.	

Sub-indicator 3.1.3.	**Is ESD a part of training of leaders and administrators of educational institutions?**	
	Type: Qualitative; "Input"	Sources of information: Educational institutions, Ministry of Education
Description:	The sustained implementation of ESD in any institution will rely on the leadership and management of that institution. Leadership and administrative staff of educational institutions should develop appropriate competences for implementing ESD according to their responsibilities (please refer also to the description in 2.3.1 and passages quoted under 3.1.1).	
Relevant passage(s) from the Strategy:	See passages 54 and 55 from the Strategy under 3.1.1 above.	
Example(s):	Annual in-service training sessions on sustainable school management are being organized in Slovenia for teams of kindergartens and schools involving both teachers and technical staff (e,g, principals, cleaners, cookers, housekeepers). In the United Kingdom, the Centre for Excellence in Leadership has published Leadership for sustainability: Making sustainable development a reality for leaders (www.centreforexcellence.org.uk). During 2000–2003, seminars were organized and toolkits developed by Forum for the Future (a British NGO) for senior management of HEIs. The aim of the training was to empower senior management to structure sustainability into strategic and operational planning processes, research policies and curriculum planning. See Collection of Good Practices in ESD (http://www.unece.org/env/esd/GoodPractices/list.html#U). In Sweden, leaders and administrators have received basic training of SD/ESD in some universities within Environmental Management Systems (e.g. http://www.mls.adm.gu.se/ and http://www.hig.se/miljo/). In Germany, more than 150 multipliers participate in training programmes that empower them to assist educational organizations to put ESD into action and/or to enhance organizational planning related to ESD (http://www.transfer-21.de/index.php?p=230; http://www.bne-ganztagsschule.de/).	

Indicator 3.2 Opportunities exist for educators to cooperate on ESD

Sub-indicator 3.2.1	**Are there any networks / platforms of educators and/or leaders/administrators who are involved in ESD in your country?**	
	Type: Qualitative; "Output"	Sources of information: Educational institutions, relevant Ministries
Description:	Networks are an important resource for ESD, as they enable the sharing of experience and good practices, valuable discussions and the development of innovation and facilitate peer learning at all levels. Networks may be based on SD themes, ISCED levels or localities, or they may seek to work across traditional boundaries. Networks/platforms can also function as virtual meeting places, using ICT.	
Relevant passage(s) from the Strategy:	[…] 55. Key actions to achieve this [develop the competence within the education sector to engage in ESD] could be to: […] and encourage educators, including those involved in non-formal and informal education, to share experiences."	
Example(s):	on university level. It also invites other stakeholders to participate in the regular meetings (conferences). This university-level forum was established for interdisciplinary dialogue in 1998 (http://cozp.cuni.cz/COZPENG-1.html). The South-West Learning for Sustainability Coalition is a regional network in the United Kingdom that brings together educators from all levels and all sectors covering formal, non-formal and informal education. Information is shared each month and occasional meetings are held by videoconference (www.swshaper.net). PEEKPE is the Pan-Hellenic Union of Educators on EE and ESD. It has approximately 2000 members and sponsors many activities in Greece, including training seminars (www.peekpe.gr). A national ESD network was established in Lithuania in 2006 involving school teams (teachers, administration) and university researchers interested in SD/ESD. (a website is under development; www.pprc.lt) A centre for learning SD is being established in Gotland (Sweden) to contribute to knowledge development in countries with greatest poverty (http://www.sida.se/sida/jsp/sida.jsp?d=137&a=33906&language=en_US). Many school teachers in Sweden are cooperating with the Global School (http://www.denglobalaskolan.com/). In Sweden there is also the HU2- network for SD in higher education (http://www.hu2.se/). Apart from the German examples mentioned in 3.1.3, there is, inter alia, a network for institutions of higher education (http://www.eco-campus.net/). Other relevant networks are as follows: Slovenian national network of coordinators of the eco-schools. (http://www.drustvo-doves.si/es/?page=uvodang) United Kingdom Higher education partnership for sustainability in 2000–2003. net.org.uk). Scottish Universities Network for Sustainability (SUNS) (www.suns.org.uk). Czech Eco-Counseling network (STEP) (http://www.ekoporadna.cz/). National network of Eco-schools (http://www.eco-schools.org/index.htm). Denmark: (www.uboportalen.dk).	

Contd. Example(s):	United Kingdom Sustainability Integration Group Network (SIGnet) (www.sig-Norway: (www.miljolare.no). Poland: (www.OAI.pl). The Netherlands: (www.dho.nl) for ESD in Higher Education and (www.duurzamepabo.nl) for ESD in teacher education. MEDIES (www.medies.net).

Sub-indicator 3.2.2.	**Are ESD networks/platforms supported by the Government in any way?**	
	Type: Qualitative; "Input"	Sources of information: Educational institutions, relevant Ministries
Description:	Support from Governments and/or local authorities may include assistance through direct funding, in-kind help and political and/or institutional support. This may be important in providing continuity for some networks. Under this sub-indicator, you also should mention those national activities that are based on international networks (e.g. eco-schools).	
Relevant passage(s) from the Strategy:	43. Effective implementation of the Strategy requires its provisions to be integrated into the planning, investment and management strategies of the State and local government for all levels of education and for all educational institutions and organizations. At the same time, the implementation should be in accordance with and benefit from other relevant State, bilateral and multilateral initiatives. The legal, economic and communication instruments should be adapted to the State's circumstances. Thus, countries would implement the provisions, as appropriate, in relation to their legislation, policies and operational frameworks. 47. There is a need for a coordination mechanism for implementing the Strategy at the State level, as well as for sharing information and stimulating partnerships among different actors . 75. The cost of implementing this Strategy should, in general, be borne by each country. Governments should therefore ensure that appropriate resources are available.[…]	
Example(s):	The National Network of Centres for Environmental Education and Public Awareness is a joint programme carried out by Pavučina (the Association of Centres for Environmental Education), the Czech Union for Nature Conservation – and since 2004 – STEP (the Network of Ecological Advisory Centres). The programme is supported by the Czech Ministry of the Environment through a public contract. In 2001, the Czech Government approved the State Programme for Environmental Education and Public Awareness. Since then, the Ministry has issued a call for project contracts based on the State Operational Plan for the current State Programme for Environmental Education and Edification (EVVO) (www.mzp.cz/). The PEKPEE national network on EE and ESD (see 3.2.1.) is supported by Greek national and local authorities on a project/activity basis. The national ESD network in Lithuania has permanent financial support from the Ministry of Education and Science. The Slovenian national network of coordinators of eco-schools is supported by the Government (10 per cent) and local communities (20 per cent). ASP net schools are supported by National Institute of Education, which is financed by the Ministry of Education.	

Contd. Example(s):	Higher education partnership for sustainability in the period 2000–2003 supported by the higher-education funding councils in the United Kingdom, the Department of Transport and other miscellaneous sources and matched funding. The Sustainability Integration Group Network (SIGnet), supported by the. National network of Eco-schools, is partially financed by the Department for Education and Skills and the Government (more than 40 per cent). A Web portal (www.uboportalen.dk) is supported by the Danish Government. In Norway, a website (www.miljolare.no) is supported annually from the Directorate for Education and Training, as well as by several other institutions that support the programme in varying amounts. Three networks are supported by the Dutch programme, Learning for Sustainable Development: DHO (Sustainability in Higher Education); Duurzame Pabo (ESD in teacher colleges); duurzaam MBO (Sustainability in Vocational Training and Further Education (http://www.duurzaammbo.nl/dmbo/web/). In Sweden, the Centre for Learning SD (see 3.2.1) is supported by the Swedish International Development Agency (Sida) (http://www.sida.se/sida/jsp/sida.jsp?d=137&a=33906&language=en_US). The Swedish Agency for Networks and Cooperation in Higher Education provided support for the project to develop learning outcomes in higher education (see 1.2.7 and http://www.hu2.se/nlhu2.htm)

ISSUE 4. ENSURE THAT ADEQUATE TOOLS AND MATERIALS FOR ESD ARE ACCESSIBLE

Indicator 4.1 Teaching tools and materials for ESD are produce

Sub-indicator 4.1.1	**Does a national strategy/ mechanism for encouragement of development and production of ESD tools and materials exist?**	
	Type: Qualitative; "Input"	Sources of information: Relevant Ministries / public authorities
Description:	In any country, ESD will be enhanced by appropriate tools and materials, and this may be facilitated by a national strategy in this area. Materials produced in cooperation with international organizations may be also included. Governments (ministries of education, environment and others) should be aware of the range of materials being produced, so that they can support the sharing of experience related to these materials.	
Relevant passage(s) from the Strategy:	33. To be effective ESD should: […] (f) Be supported by relevant instruction materials, such as, methodological, pedagogic and didactic publications, text-books, visual aids, brochures, cases studies and good practices, electronic, audio and video resources. 56. Materials for ESD at all levels need to be developed, both for general courses and specialist education and for self-study and be adapted to the local conditions and needs. 57. Key actions to achieve this could be to: stimulate the development and production of materials for educators, learners and researchers for all levels of education and training, especially in local languages; encourage the development and use of electronic, audio, video and multimedia resources and visual aids for both learning purposes and sharing information; facilitate access by electronic means and the Internet to resources and information relevant to ESD; ensure coherence between materials for formal, non-formal and informal learning, develop relevant dissemination strategies.	
Example(s):	There are two schemes for the encouragement of the production of ESD tools and materials in Greece. First, there are occasional open calls for the production of such materials. The most recent, in 2008, addressed ESD material for protected areas, national parks, etc., for educators, students, rangers and the wider public. The second pertained to the more than 50 EE/ESD centres (KPE) throughout Greece, corresponding to more or less one per each prefecture of the country. These are supported by the Ministry of Education and local authorities. At these centres, schools can spend one or more days working on ESD projects, visiting protected areas in the vicinity, etc. The centres receive support to produce the materials they need and to consider appropriate ways to carry out EE/ESD programmes in their areas. The Romanian national health education programme aims to ensure sustainable national prevention programmes for children, adolescents and youth (ages 7 to 18–20) in Romanian schools in order to develop responsible attitudes and behaviours. See Collection of Good Practices in ESD (http://www.unece.org/env/esd/GoodPractices/list.html#R).	

Sub-indicator 4.1.2	**Is public (national, subnational, local) authority money invested in this activity?**	
	Type: Qualitative; "Input"	Sources of information: Relevant Ministries / public authorities
Description:	Governments have a key role in ensuring that appropriate investments are made in the production of ESD tools and materials. Governments may undertake to provide resources themselves, in cooperation with donors or by providing a strategic framework that encourages participation by the private and/or voluntary sectors. Such developments can include translation, as appropriate, dissemination and the exchange of information between different national governmental bodies (ministries, agencies, other authorities), and may refer to budgets at all the levels of governance.	
Relevant passage(s) from the Strategy:	See relevant passages from the Strategy under 4.1.1 above.	
Example(s):	In Slovenia, a public tender is organized, with support provided by the Ministry of Education and the Ministry of Environment, to produce educational materials and tools, distribute the materials and tools free-of-charge and to organize workshops for teachers where they can learn to use new materials and tools. In the Netherlands, the Ministries of Agriculture and the Environment have an annual tender procedure for developing ESD and EE projects and materials. The Ministry of Foreign Affairs has a tender for development education, which addresses many ESD themes.	

Indicator 4.2 Quality control mechanisms for teaching tools and materials for ESD exist

Sub-indicator 4.2.1	**Do you have quality criteria and/or quality guidelines for ESD-related teaching tools and materials that are: (a) supported by public authorities? (b) approved by public authorities? (c) tested and recommended for selection by educational institutions?**	
	Type: Qualitative; "Input"	Sources of information: Relevant Ministries / public authorities
Description:	For (a), "supported" means "developed using public money". By "quality", we mean that ESD tools and materials take into consideration content, methodology and design (including the environmental impact of production) as well as processes to review effectiveness. Such criteria may be developed for use at the national, subnational or local levels. In different countries in the UNECE region, different schemes exist for producing, adopting and/or testing and recommending materials. In all cases, Governments should: • Encourage the development of quality criteria and/or quality guidelines for ESD-related materials • Encourage mechanisms/conditions for assessment and testing the ESD-related materials	
Relevant passage(s) from the Strategy:	32. Teaching and learning in ESD are greatly enhanced by the content, quality and availability of instruction materials. Such materials, however, are not available in all countries. This is a problem for entire sector of formal education as well as non-formal and informal learning. Therefore considerable efforts should be devoted to developing and reproducing them. Coherence between the instruction materials of formal and non-formal education should be encouraged and the challenge is to ensure that they are relevant to SD and locally affordable.	
Example(s):	"Quality Criteria for ESD Schools" have been developed, as guidelines to enhance the quality of ESD, in collaboration with the international network ENSI and with financial support from the European Commission (http://www.seed-eu.net/webpage.php?modul=publications&publid=1&puboffset=2). Forty countries from the EU and EECCA have eco-schools programmes that include quality criteria for ESD materials and toolkits (http://www.eco-schools.org/). The Council for Environmental Education in the United Kingdom has produced a set of guidelines for the production and content of educational materials (http://www.defra.gov.uk/sustainable/defra/educpanel/sustdevcop/03.htm). The Dutch organization for curriculum development (SLO) has prepared a handbook on ESD which describes what ESD could be in a "free" curriculum, including in the development of materials (http://www.slo.nl/over/maatschappelijk/themas/duurzameontwikkeling/; available in English soon).	

Sub-indicator 4.2.2.	**Are ESD teaching tools/materials available: (a) in national languages? (b) for all levels of education according to ISCED?**	
	Type: Qualitative; "Input"	Sources of information: Relevant Ministries / public authorities
Description:	To ensure their effectiveness, ESD materials and tools should be made available, where appropriate, in national languages and local languages. This will facilitate access to materials at all ISCED levels as well as for local communities, NGOs, academia and the mass media.	
Relevant passage(s) from the Strategy:	21. ESD should take into account diverse local, national and regional circumstances as well as the global context, seeking a balance between global and local interests. 56. Materials for ESD at all levels need to be developed, both for general courses and specialist education and for self-study and be adapted to the local conditions and needs. 57. Key actions to achieve this could be to: stimulate the development and production of materials for educators, learners and researchers for all levels of education and training, especially in local languages […]; ensure coherence between materials for formal, non-formal and informal learning […].	
Example(s):	Trajnostni razvoj v solah in vrtcih is a Slovenian magazine on ESD in kindergartens and schools (www.zrss.si). Magazine and newsletters of eco-schools in the UNECE region and in other countries are available both at international (www.eco-schools.org) and national (e.g. www.ekosola.si) levels. The GREEN PACK, a multimedia curriculum kit on environmental protection and SD for primary schools, was launched by REC-CEE in 2001. It has been translated into national languages of Albania, Azerbaijan, Bosnia and Herzegovina, Bulgaria, the Czech Republic, Hungary, Montenegro, Poland, Russian Federation, Serbia, Slovakia, the former Yugoslav Republic of Macedonia and Turkey (see 6.1.1). An educational set on climate change for secondary schools (five posters, a CD, a video and a manual for teachers) was produced by CAREC in cooperation with the British NGO, Field Studies Council in 2005–2006. Initially, the set was produced in Russian as per the countries' request; in 2007 it was translated into five Central Asian languages – Kazakh, Kyrgyz, Tajik, Turkmen and Uzbek –and disseminated to national pilot schools.	

Indicator 4.3 Teaching tools and materials for ESD are accessible

Sub-indicator 4.3.1	**Does a national strategy/mechanism for dissemination of ESD tools and materials exist?**	
	Type: Qualitative; "Input"	Sources of information: Relevant Ministries / public authorities
Description:	Governments can ensure accessibility to ESD tools and materials (e.g. via libraries, the Internet, educational centres, conferences, workshops). A national strategy/mechanism for dissemination of ESD tools and materials should facilitate access to these materials for educators and other concerned actors at all ISCED levels and may include non-formal and informal education. The effective dissemination of these materials may be achieved by amending existing national provisions for the dissemination of educational tools and materials. This sub-indicator asks for the description of any such strategy/mechanism and whether it covers all ISCED levels.	
Relevant passage(s) from the Strategy:	57. Key actions to achieve this could be to: stimulate the development and production of materials for educators, learners and researchers for all levels of education and training, especially in local languages; encourage the development and use of electronic, audio, video and multimedia resources and visual aids for both learning purposes and sharing information; facilitate access by electronic means and the Internet to resources and information relevant to ESD; ensure coherence between materials for formal, non-formal and informal learning, develop relevant dissemination strategies.	
Example(s):	In the Czech Republic, dissemination is done through the Pavucina network of NGOs, which includes some 100 organizations that share educational products, and which produces the journal Bedrnik to support teachers in the field of environmental pedagogy. Tools and materials for different educational institutions are online accessible on an NGO website (http://www.umweltbildung.de/materialien.html). Furthermore, materials for schools are available in a database established in conjunction with the federal-State programme "Transfer 21". The programme aims to disseminate ESD to 10 per cent of the grammar schools of the participating federal States (http://www.transfer-21.de/index.php?p=40).	

Sub-indicator 4.3.2	**Is public authority money invested in this activity?**	
	Type: Qualitative; "Input"	Sources of information: Relevant Ministries / public authorities
Description:	Governments can support the dissemination and sharing of tools and materials through a variety of means (e.g. websites for practitioners, information centres, conferences). This may include dissemination among educators or the exchange of information between different national governmental bodies (e.g. ministries, agencies, other authorities) at all levels of governance. Dissemination can be supported directly with public money or in cooperation with donors; State funding may also be used to stimulate dissemination and sharing by voluntary and/or private sector organizations.	
Relevant passage(s) from the Strategy:	57. Key actions to achieve this could be to: stimulate the development and production of materials for educators, learners and researchers for all levels of education and training, especially in local languages; encourage the development and use of electronic, audio, video and multimedia resources and visual aids for both learning purposes and sharing information; facilitate access by electronic means and the Internet to resources and information relevant to ESD; ensure coherence between materials for formal, non-formal and informal learning, develop relevant dissemination strategies. 76. Governments should consider using budgets and economic incentives to finance ESD for all forms of education, […].	
Example(s):	The Government of the Republic of Moldova supported the establishment of a Centre for Environmental Information (http://www.cim.moldova.md/). The Norwegian Environmental Education project serves as a tool for ESD. The Environmental Education network functions as a meeting place for schools, research institutions and public management. It provides continuous support to schools. See the Collection of Good Practices in ESD (http://www.unece.org/env/esd/GoodPractices/list.html#N). Under sub-indicator 4.1.1, see the support scheme for materials produced on EE/ESD in Greece. The Government of Tajikistan, in cooperation with the Organization for Security and Co-operation in Europe, supported the establishment of the Environment Information Resource Centre (http://www.osce.org/item/7773.html) The Government of Ireland (Irish Aid, Department of Foreign Affairs) is part funding the DevelopmentEducation.ie website (http://www.developmenteducation.ie/), a development and human rights education resource maintained by a consortium of organizations based in Ireland. The site contains a broad range of materials that explore a variety of development issues and topics using cartoons and photographs in education, campaign actions, and a range of other materials. "Information on the Environment" (ENFO) is Ireland public information service on environmental matters, including SD. The service was established by the Department of the Environment and Local Government (http://www.enfo.ie/).	

Sub-indicator 4.3.3	**Are approved ESD teaching materials available through the Internet?**	
	Type: Qualitative; "Input"	Sources of information: Relevant Ministries / public authorities
Description:	Governments should enable free access through the Internet to teaching materials for all concerned actors (educators, learners, individuals and organizations). Teaching materials produced by international programmes can also be disseminated directly via the Internet. In some countries, only approved or recommended materials are allowed to be used in the formal education system. Thus it is of particular importance to learn whether the approved materials are made available through the Internet.	
Relevant passage(s) from the Strategy:	57. Key actions to achieve this could be to: stimulate the development and production of materials for educators, learners and researchers for all levels of education and training, especially in local languages; encourage the development and use of electronic, audio, video and multimedia resources and visual aids for both learning purposes and sharing information; facilitate access by electronic means and the Internet to resources and information relevant to ESD; ensure coherence between materials for formal, non-formal and informal learning, develop relevant dissemination strategies.	
Example(s):	In the United Kingdom, the Carbon Detectives Kit is a website designed to allow pupils to calculate the impact of their school in terms of carbon emissions. The "carbon footprint" per pupil is calculated and presented with different levels of detail, and actions are encouraged for pupils and whole school management. (www.carbondetectives.org.uk). See the Danish website devoted to the United Nations Decade of ESD (uboportalen.dk). The Finnish ENO-Environment online is a global virtual school and portal for SD (http://www.joensuu.fi/eno/basics/briefly.htm). A Polish initiative on geology and ecology provides Internet-based lessons on geology and ecology issues accessible from the Geological Museum website. The lessons target pupils from the primary to the secondary level. The Internet-based lessons were developed to help facilitate regular lessons taking place in school computer labs. The site is notable for its innovative graphic design, the high quality of pictures presented and the full set of Internet-based lesson plans it offers. The teachers using the site can receive electronically the lesson plans and tests. See the *Collection of Good Practices in ESD* (http://www.unece.org/env/esd/GoodPractices/list.html#P). A Slovenian website on eco-schools (www.ecosola.si) and an international website on eco-schools (www.eco-schools.org). Website on ASPnet šole: UNESCO ASPnet (www.unesco-asp.si); R.A.V.E. SPACE – (http://www.rave-space.org/). Links are available on website of Ministry of Education and Sport (http://www.mss.gov.si). See also the REC-CEE GREENPACK educational kit (http://greenhorizon.rec.org/bulletin/Bull111/recnews.html). WWF-UK: "Learning for Sustainability" – pupil online discussion. (http://www.wwflearning.org.uk/wwflearning-home/lfs-programme/) In Sweden, materials are available through the Global school. (see 2.6.1) (http://www.denglobalaskolan.com/). MIO-ECSDE (www.mio-ecsde.org) facilitates the Mediterranean Initiative on Education for Sustainability (MEDIES), whose website includes online educational materials on ESD at (www.medies.net). Germany: see 4.3.1.	

Sub-indicator 4.3.4	**Is a register or database of ESD teaching tools and materials in the national language(s): (a) accessible through the Internet? (b) provided through other channels?**	
	Type: Qualitative; "Input"	Sources of information: Relevant Ministries / public authorities
Description:	All concerned actors (e.g. educators, pupils, students, kindergartens, schools, universities, NGOs, academia, the mass media) should have easy access to this metadata (i.e. a registry or database) on existing teaching tools and materials. The database should be available in the national language possibly via the Internet or other means (e.g. libraries, information centres). Please specify by providing the most advanced examples of metadata on ESD teaching tools/materials available at the national level.	
Relevant passage(s) from the Strategy:	See relevant passages from the Strategy under 4.3.3 above.	
Example(s):	The German portal for the UN DESD activities is intended to concentrate the information on (E)SD projects, activities etc. and to guide the attention to the relevance of (E)SD issues: (http://www.bne-portal.de/coremedia/generator/unesco/de/01__Startseite/Englische_20Startseite.html). Data bases on international eco-schools project: (www.eco-schools.org). The "Teachernet' website hosted by the Government of the United Kingdom has an area dedicated to sustainable schools with a range of policy documents, guidelines and case studies: (www.teachernet.gov.uk/sustainable schools). "Plug In2 the Environment" an eco-interactive experience, Malta. Collection of Good Practices in ESD: (http://www.unece.org/env/esd/GoodPractices/list.html#M). Polish Citizen Information Agency (http://oai.pl/) is a forum for exchanging news and experience. It also sponsors a project on the "Use of IT and multimedia in education for sustainability in Poland"(http://ucbs.geo.uw.edu.pl). See the Collection of Good Practices in ESD: (http://www.unece.org/env/esd/GoodPractices/list.html#P). Serbian initiative "Interactive Farm" (http://www.interaktivnafarma.org/). Collection of Good Practices in ESD: (http://www.unece.org/env/esd/GoodPractices/list.html#S). Internet library on the website of the international NGO – Central Asian Regional Environmental Centre (www.carec.kz).	

ISSUE 5. PROMOTE RESEARCH ON AND DEVELOPMENT OF ESD

Indicator 5.1 Research on ESD is promoted.

Sub-indicator 5.1.1	**Is research that addresses content and methods for ESD supported?**	
	Type: Qualitative; "Input"	Sources of information: Relevant Ministries
Description:	"Support" means efforts and means to stimulate research on ESD content and methods, including governmental grant schemes, grants from trusts and foundations, political priorities, guideline documents and evaluation frameworks. ESD-related research can be supported through institutional changes, new types of communication, different visions and approaches.	
Relevant passage(s) from the Strategy:	41. For ESD to become part of an agenda for change towards a more sustainable society, education itself must be subject to change. Research that might contribute to ESD should be encouraged. 58. There is a need for research and development activities in different areas of ESD, such as effective learning methods, evaluation tools, formation of attitudes and values, school/institutional development and implementation of ICT. Research and development on ESD should offer a continuing basis in developing ESD. 60. Key actions to achieve this [promote research on and development of ESD] could be to initiate and promote research on and development of: the content of ESD and teaching and learning methods; the economic effects of and incentives for ESD; ways of including aspects of SD and their local context in different subjects, giving priority to research that brings together the different dimensions of SD; […].	
Example(s):	Areas of research in the Czech Republic include the development of active learning methods, analysis of educational goals within different branches of education for sustainability, evaluation of effectiveness of the ESD and research in the field of philosophy of education. SD is a research priority of the Czech National Policy of the Research and Development; however, this theme does not cover ESD sufficiently. For allocation of finances the responsible body is the Governmental Council for Research and Innovation, an institution for research coordination and information management. Research grants for ESD are available, inter alia, from the Ministry of Environment. Formas, the Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning, encourages and supports scientifically significant research related to sustainable development. Formas is a governmental research-funding agency related to several ministries (http://www.formas.se/default____529.aspx). The Higher Education Funding Councils of England and Wales both support university projects on SD/ESD that include a strong element of research (e.g. http://csf.plymouth.ac.uk).	

Sub-indicator 5.1.2	**Does any research evaluate the outcome of the implementation of the UNECE Strategy for ESD?**	
	Type: Qualitative / Quantitative; "Input"	Sources of information: Relevant Ministries
Description:	The sub-indicator refers to evaluation of the UNECE Strategy itself. Research that evaluates outputs and outcomes can include reflection, action research, questionnaire surveys, data analysis, etc. The level/scale of research (e.g. national, subnational, local, school, pilot) should be specified.	
Relevant passage(s) from the Strategy:	60. Key actions to achieve this could be to initiate and promote research on and development of: the content of ESD and teaching and learning methods; the economic effects of and incentives for ESD; ways of including aspects of SD and their local context in different subjects, giving priority to research that brings together the different dimensions of SD; indicators and evaluation instruments for ESD; and share the results of research and examples of good practices. 78. […] Evaluation methods and indicators for the implementation of ESD, in particular qualitative ones, should be developed.	
Example(s):	At the time of writing, the implementation of the Strategy was in its initial stage, hence limited information on outcomes was available. See Learning from each other: achievements, challenges and the way forward – Report on progress in implementation of the UNECE Strategy for ESD (ECE/BELGRADE.CONF/2007/INF/3 - ECE/CEP/AC.13/2007/2); (http://www.unece.org/env/esd/belgrade.htm).	

Sub-indicator 5.1.3	**Are post-graduate programmes available: (1) on ESD: (a) for the master's level? (b) for the doctorate level? (2) addressing ESD: (a) for the master's level? (b) for the doctorate level?**	
	Type: Qualitative; "Input"	Sources of information: Ministry of Education; Institutions of Higher Education
Description:	Research on ESD includes both the theoretical and operational aspects of ESD, e.g. educational concepts, methodology, philosophical principles applied in ESD, methods and tools for implementation, indicators of success, efficiency/effectiveness of programmes, appropriateness of institutional settings and tools and materials. Research addressing ESD refers to SD-related studies (e.g. clean production, sustainable consumption and production, water management, sustainable energy) that include ESD components. The sub-indicator asks for the specification of any available programmes at both master's and doctorate levels.	
Relevant passage(s) from the Strategy:	20. Higher education should contribute significantly to ESD in the development of appropriate knowledge and competences. 50. […] Key actions to achieve this could be to: adopt frameworks for ESD for all levels of education; …to integrate SD principles into the study programmes and special courses at all levels of higher education, […].	

Contd. Relevant passage(s) from the Strategy:	60. Key actions to achieve this could be to initiate and promote research on and development of: the content of ESD and teaching and learning methods; the economic effects of and incentives for ESD; ways of including aspects of SD and their local context in different subjects, giving priority to research that brings together the different dimensions of SD; indicators and evaluation instruments for ESD; and share the results of research and examples of good practices.
Example(s):	*(1) (a) On ESD at the master's level* London South Bank University (United Kingdom) has been offering a master's programme in education for sustainability since 1994. Initially supported by the NGO WWF, the course has traditionally attracted a high proportion of overseas students (http://www.lsbu.ac.uk/efs/). *(1) (b) On ESD at the doctorate level* The DICHINET postgraduate programme in science (chemistry) teaching in Greece (see 3.1.1.) offers ESD as one of its courses for all post-graduate students. Those who wish to specialize on ESD devote the major part of their second year and prepare their MSc thesis on ESD. If they wish, they can continue their studies for a doctorate on ESD. *(2) (a) Addressing ESD at the master's level* A university lecture course on the theory and practice of SD is under preparation in Armenia. A special course at the master's level on "Geo-ecology in the context of SD" is available at Yerevan State University. There are programmes addressing ESD at the master's level at the universities of Moscow and St. Petersburg in the Russian Federation. In Sweden, master's programmes are available in several universities. e.g. at Linköping University (http://www.tema.liu.se/tema-v/masterprogramme/). *(2) (b) Addressing ESD at the doctorate level* In the Czech Republic in 2007, a PhD programme ("Environmental Studies", at Charles University's Faculty of Humanities) was initiated that is a synthesis of different aspects of SD, including education in an interdisciplinary framework (through a system of tutors). In Sweden, an example of doctoral level programmes is the VINNOVA Centre of Excellence for Sustainable Communications at the Royal Institute of Technology (http://www.csc.kth.se/sustain/research/). A recent compendium gives a description of German research facilities and universities / departments that offer academic studies in ESD and SD: (www.leitfaden-nachhaltigkeit.de).

Sub-indicator 5.1.4	**Are there any scholarships supported by public authorities for post-graduate research in ESD: (a) for the master's level; (b) for the doctorate level?**	
	Type: Qualitative; "Input"	Sources of information: Ministry of Education; institutions of higher education
Description:	"Support by public authorities" can include policy measures, institutional frameworks and direct financial assistance. When answering for this sub-indicator, please provide additional information, e.g. on who provides the funding and who is eligible to apply.	
Relevant passage(s) from the Strategy:	76. Governments should consider using budgets and economic incentives to finance ESD for all forms of education, including introducing scholarships on ESD […].	
Example(s):	The Teacher Development Agency in the United Kingdom makes scholarships available to providers of master's-level programmes who run ESD courses. The Higher Education Funding Council for England (HEFCE) has provided the University of Gloucestershire with funding for PhD candidates in active learning that have often had an ESD focus. The University also offers annual PhD scholarships specifically in ESD, but these are funded by the University.	

Indicator 5.2 Development of ESD is promoted.

Sub-indicator 5.2.1	**Is there any support for innovation and capacity-building in ESD practice?**	
	Type: Qualitative; "Input"	Sources of information: Ministry of Education; educational institutions
Description:	Support can include institutional frameworks and policy measures, grant schemes, training, workshops, conferences, etc. Activities may include pilot projects, action research, social learning and/or multi-stakeholder teams, as well as the introduction of innovative teaching methods and materials, participatory processes, etc. Please provide information on: (a) What kind of support is given; (b) Who provides it; (c) What kind of innovation and capacity-building is supported; (d) The total amount spent annually over the reporting period.	
Relevant passage(s) from the Strategy:	76. Governments should consider using budgets and economic incentives to finance ESD for all forms of education, including […] capacity-building in educational institutions.	
Example(s):	For information on the innovative practices of the Czech National Network of Centres for Environmental Education and Edification, see the following website (http://www.mzp.cz/AIS/web-pub.nsf/$pid/MZPMNF7YNKJQ). Pavucina is a national network of 100 EE centres in the Czech Republic. It was established in 1999 with governmental support. Participating NGOs ensure that the programme maintains controlled EE and ESD standards and grants access to methodological help for new NGOs, to further education for their workers, and to exchange of experience within the Czech Republic as well as abroad. One EE Centre (Lipka) is seeking to multiply the effects of ESD by identifying five key issues in the region. (http://www.interaktivnafarma.org). An innovative aspect of this initiative is that 16 partners have come together to identify regional problems and provide solutions to them. The Czech Eco-Counseling Network (STEP) aims to introduce a more green/ sustainable mode of operation including public procurement. STEP also provides education and methodological support for eco-counsellors and the offices of public institutions initiating green public procurement (GPP) and sustainable consumption activities. The creation of a common learning environment at university level (involving five Prague universities) has resulted in the increased mobility of students, interdisciplinary courses, new teaching methods and innovative teaching materials. Cooperation in ESD in Sweden between researchers, students and relevant actors in a community near Gothenburg have developed scenarios for sustainable development in the community (http://www.chalmers.se/gmv/EN/projects/esd_chalmers).	

Contd. Example(s):	The Internet-based lessons provided by a Polish initiative on geology and ecology (http://www.pgi.gov.pl) aim at creating widely available lessons on geology and ecology issues accessible from the Geological Museum website. A focus of the project is the use of ICT and multimedia in education for sustainability in Poland (http://www.ucbs.geo.uw.edu.pl). See the Good Practices in ESD: (http://www.unece.org/env/esd/GoodPractices/list.html#P). The main objective of an Austrian Government initiative promoting sustainable universities is to strengthen and to integrate the issues of SD into the daily lives of HEIs, including through a "sustainability award contest". See the Good Practices in ESD: (http://www.unece.org/env/esd/GoodPractices/list.html#A). The Ubuntu Network (http://www.ubuntu.ie/) in Ireland works to contribute to teacher educators' abilities to engage with development education and ESD. It is a collaborative network of teacher educators using action research methodologies to enhance their learning and to reflect on their teaching experiences. It achieves this through its working methodologies and processes, through membership and associations with a wide range of organizations, and through collaborative research work. The network is funded by Irish Aid, Department of Foreign Affairs.

Indicator 5.3 Dissemination of research results on ESD is promoted.

Sub-indicator 5.3.1	**Is there any public authority support for mechanisms to share the results of research and examples of good practices in ESD among authorities and stakeholders?**	
	Type: Qualitative / Quantitative; "Input"	Sources of information: Ministry of Education; governmental agencies outside education system; institutions of higher education, NGOs
Description:	Support may include funding, institutional frameworks and policy measures. Mechanisms may include training, workshops, conferences, summer schools, journals, periodicals, networks, etc. (NB: a specific question on scientific publications is found below, in 5.3.2) Please provide information on: (a) Who provides the support; (b) In what way; (c) The total amount spent annually over the reporting period.	
Relevant passage(s) from the Strategy:	59. The results of research and development efforts should be shared with actors locally, regionally and globally, and incorporated into different parts of the education system. 60. Key actions to achieve this [promote research on and development of ESD] could be to […] share the results of research and examples of good practices.	

Example(s):	Specific institutions that may focus on this area include the Centre for Research in Education and the Environment (CREE) at the Department of Education, University of Bath, United Kingdom. The work of CREE researchers focuses on educational issues relating to the environment and sustainability. Learning is shared with other institutions through a programme of workshops and seminars, and also through publications and the CREE website (http://www.bath.ac.uk/cree). The National Foundation for Educational Research is supported by the Government of the United Kingdom. The Foundation publishes research papers on a number of ESD themes located on a searchable database (http://www.nfer.ac.uk). The Czech Governmental Council for Research and Innovation provides a comprehensive system for the dissemination of research results; however, in common with many other such national systems, it has yet to include concrete information on ESD. On the other hand, ESD grants very often require dissemination mechanisms.

Sub-indicator 5.3.2	Are there any scientific publications: (a) specifically on ESD? (b) addressing ESD?	
	Type: Qualitative; "Input"	Sources of information: Education and research institutions; relevant Ministries; NGOs; publishers
Description:	For "on ESD" and "addressing ESD", please refer to the description under sub-indicator 5.1.3. Publications should not be understood as single articles; rather, they should be understood as "publications" in the sense of journals, magazines, books, monographs, conference proceedings, etc. (i.e. as a collection of articles). Scientific publications should include both printed and electronic versions. This sub-indicator can include reviewed as well as non-reviewed publications.	
Relevant passage(s) from the Strategy:	59. The results of research and development efforts should be shared with actors locally, regionally and globally, and incorporated into different parts of the education system. 60. Key actions to achieve this [promote research on and development of ESD] could be to [...] share the results of research and examples of good practices.	
Example(s):	The following publications have been published in the Czech Republic: Činčera, Jan, Environmentální výchova: od cílů k prostředkům. (Environmental education: from goals to tools) Brno, Paido, 2007, ISBN 978-80-7315-147-8, 116 pp. Horká, Hana, *Výchova pro 21. století. Koncepce globální výchovy v podmínkách české školy.* (Education for the twenty-first century: the concept of the global education under Czech school conditions) Brno, Paido, 2000, 127 pp., ISBN 80-85931-85-0. *Envigogika,* an electronic peer-reviewed journal (http://envigogika.cuni.cz), focuses on ESD research. Electronic media also provides an environment for interactive contributions to the content and to mutual dialogue with a broader public.	

Contd. Example(s):	An example of a doctoral dissertation on ESD in Sweden can be found in: Björneloo, I.,), "Innebörder av hållbar utveckling - en studie av lärares utsagor om undervisning" (The content of sustainable development – a study of what teachers say in their teaching). (Göteborg Studies in Educational Sciences, 250). Gothenburg, Acta universitatis gothoburgensis, 2007. *Environmental Education Research* is an international refereed journal that publishes papers and reports on all aspects of EE and ESD. (http://www.tandf.co.uk/journals/carfax/13504622.html)

ISSUE 6. STRENGTHEN COOPERATION ON ESD AT ALL LEVELS WITHIN THE UNECE REGION

Indicator 6.1 International cooperation on ESD is strengthened in the UNECE region and beyond

Sub-indicator 6.1.1	**Do your public authorities cooperate in/support international networks on ESD?**	
	Type: Qualitative / Quantitative; "Input"	Sources of information: Report of relevant authorities
Description:	Public authorities may engage in international cooperation on ESD either by active participation and direct involvement in forums and networks, or by supporting the activities of networks (e.g. through international cooperation). Such networks may include those of UNECE and UNESCO, or regional networks such as MEDIES (the Mediterranean Education Initiative for Environment and Sustainability). Please specify global, regional and/or subregional networks. In the case of "support", please specify what kind of support.	
Relevant passage(s) from the Strategy:	62. There is a need at the regional level to review and facilitate the implementation of the Strategy and support cooperation on ESD. The regional process should take into account other developments that take place in connection with the United Nations Decade on Education for Sustainable Development and be seen as a contribution to the global initiatives on ESD. 63. The region has a wealth of experience in international cooperation on education, especially in higher education. A number of national and subregional networks, education, working groups, networks and associations of universities, programmes and partnerships have started work on the development of multidisciplinary forms of education to devise solutions to the problems linked to sustainable development. The challenge is how best to use their experience and potential to promote ESD. Another challenge is research into ESD-related issues, which still does not have a prominent role internationally. There is also a need for international cooperation on ESD in pre-school and school education. 65. The complex nature of ESD requires that, in addition to the education community, other relevant international actors should be invited to work in partnership to implement the Strategy. This is especially relevant for international cooperation aimed at improving SD related knowledge and skills for different professionals and decision makers.	

Contd. Relevant passage(s) from the Strategy:	66. Experiences and needs vary in different parts of the UNECE region. Subregional cooperation needs to be strengthened. This would make it possible to work closely on those issues that are of high importance for a given subregion, thereby helping countries to attain the best practical results. 67. Further assessment of the needs in different subregions is required. Special emphasis should be given to the countries in Eastern Europe, the Caucasus and Central Asia (EECCA)[6] and South-Eastern Europe in solving their main problems in environmental education and in education for sustainable development. Some of their problems are lack of adequate instruction materials, the inefficient use of the capacity of higher education and research institutions, the shortage of skilled educators and insufficient awareness raising as well as a lack of interdepartmental and multi-stakeholder cooperation on ESD. Another challenge that should be addressed in South-Eastern Europe and EECCA is the poor quality of education for children living in rural areas and the lack of financial and human resources to develop ESD in those areas. Thus, providing capacity-building, financial assistance and support to education, research and public awareness programmes on SD in countries with economies in transition should be recognized as an important issue and be considered by Governments, relevant organizations and donors accordingly[7] . 68. Key actions could be to: strengthen existing regional and subregional alliances and networks working on ESD and encourage twinning programmes, bilateral cooperation and partnerships; use, as appropriate, existing international legally binding instruments such as the Aarhus Convention and other relevant agreements to raise awareness of SD; facilitate the sharing of good practices and experiences, innovations and information of national experiences and projects in development cooperation on ESD-related issues, e.g. by using ICT tools and the website of UNECE; include ESD in relevant bilateral and multilateral programmes; encourage the participation of NGOs and other major groups in international cooperation on ESD; encourage and coordinate international events for SD awareness raising; and encourage the share of experience. 75. The cost of implementing this Strategy should, in general, be borne by each country. Governments should therefore ensure that appropriate resources are available. Many of the proposed actions can be incorporated into ongoing development work in the education sector. Some actions could be more easily carried out as subregional or region-wide projects.
Example(s):	The Ministries of Education and of Environment in five Central Asian countries (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) together with an NGO network on ESD are included in the Central Asian Working Group (CAWG) on ESD. In the Baltic region, there are the Baltic University Programme (http://www.balticuniv.uu.se/) and Baltic 21E (http://www.baltic21.org/). MEDIES (the Mediterranean Education Initiative for Environment and Sustainability) is a Type II Initiative in Greece. It was launched in Johannesburg in 2002 and is serviced by MIO-ECSDE (the Mediterranean Office for Environment, Culture and Sustainable Development). It is a wide network of formal and non-formal educators at all levels from all around the Mediterranean and beyond, and includes an interactive website (www.medies.net). MEDIES offers many educational materials in different languages (also available online,) as well as training courses for educators.

6 See also "Environmental partnerships in the UNECE region: Environment Strategy for countries of Eastern Europe, the Caucasus and Central Asia. Strategic Framework" Fifth Ministerial Conference "Environment for Europe", Kiev, 2003 (ECE/CEP/105/Rev.1).

7 See also Plan of Implementation; World Summit on Sustainable Development.

Contd. Example(s):	REC–CEE has initiated the development and launching of the GREEN PACK, a multimedia curriculum kit on environmental protection and sustainable development for primary schools. In cooperation with REC country offices, since 2001 the GREEN PACK was introduced in Albania, Azerbaijan, Bosnia and Herzegovina, Bulgaria, the Czech Republic, Hungary, Montenegro, Poland, Russian Federation, Serbia, Slovakia, the former Yugoslav Republic of Macedonia and Turkey. In these countries, the GREEN PACK has been supported by the ministries, municipalities, foreign donors and business, in particular the Toyota Environmental Activities Grant Programme (http://www.rec.org/REC/Programs/Greenpack/). In various countries, eco-schools materials and materials on climate change are supported by both national and local public authorities (http://www.eco-schools.org/projects/climatechange.htm).

Sub-indicator 6.1.2	**Do educational institutions/organizations (formal and non formal) in your country participate in international networks related to ESD?**	
	Type: Qualitative / Quantitative; "Output"	Sources of information: Report of relevant authorities
Description:	A broad range of educational institutions (e.g. schools, HEIs, NGOs) engage in a variety international networks (e.g. exchange programmes, international projects and networks). Please specify the participating educational institutions/organizations (formal and non-formal), and list the major networks in which they are involved.	
Relevant passage(s) from the Strategy:	See relevant passages from the Strategy under 6.1.1 above.	
Example(s):	Many institutions from different countries participate in the following networks: Global Higher Education for Sustainability Partnership (GHESP) (http://portal.unesco.org/education/en/ev.php-URL_ID=34701&URL_DO=DO_TOPIC&URL_SECTION=201.html) Global Seminar – a worldwide learning community (http://www.globalseminar.org/) Baltic Sea Project (BSP) (http://www.bspinfo.lt/) Foundation for Environmental Education (FEE) (www.fee.org). Environment and Schools Initiatives (ENSI) (http://www.ensi.org/). International Network on Reorienting Teacher Education Towards Sustainability (http://unesdoc.unesco.org/images/0014/001433/143370E.pdf) In the Baltic region: Baltic University Programme (http://www.balticuniv.uu.se/) and Baltic 21E (http://www.baltic21.org/) MIO-ECSDE (www.mio-ecsde.org): see MEDIES (www.medies.net). International Federation for Sustainable Development and Fight to Poverty in the Mediterranean-Black Sea (F.I.S.P.M.E.D.) (http://www.battibaleno.it/FISPMED.htm).	

Contd. Example(s):	Regional Centres of Expertise (RCEs) on ESD have been established in a number of UNECE region countries with the support of the United Nations University-Institute of Advanced Studies (UNU-IAS), e.g. Belgium, Germany, Kyrgyzstan, the Netherlands, Spain, the United Kingdom, , etc. At the time of writing, 55 RCEs had been established worldwide. (http://www.ias.unu.edu/sub_page.aspx?catID=108&ddlID=183). Examples of informal cooperation through bilateral or multilateral projects include : VCSE (Virtual Campus for Sustainable Europe), an e-learning project with partner universities in the Czech Republic, Germany, Greece and the Netherlands, is the successor to COPERNICUS in the e-learning area (http://www.vcse.eu/). PASDEL (Practicing Sustainable Development) is an e-learning project with partner educational institutions in Belgium, the Czech Republic, France, Poland, Romania and the United Kingdom (http://www.pasdel.eu/). The World Environmental Education Congress (WEEC) takes place every two years. The Permanent Secretariat is based in Turin, Italy (http://www.environmental-education.org//index.php?option=com_frontpage&Itemid=2). IUCN Commission of Education and Communication (http://cec.wcln.org/index.php?module=pagesetter&func=viewpub&tid=11&pid=124). InWent is a non-profit organization based in Germany with worldwide operations dedicated to human resource development, advanced training and dialogue; it also offers training in ESD and development education (www.inwent.org).

Sub-indicator 6.1.3	**Are there any State, bilateral and/or multilateral cooperation mechanism/ agreements that include an explicit ESD component?**	
	Type: Qualitative / Quantitative; "Output"	Sources of information: Report of relevant authorities
Description:	This sub-indicator asks for formal cooperation mechanisms. Cooperation may cover development aid with an ESD component within or outside the UNECE region and any other ESD-related cooperation. (NB: This should not be confused with 6.1.1, which focuses only on networks). Cooperation can be regarded both from donor and beneficiary perspectives. Please specify the major examples.	
Relevant passage(s) from the Strategy:	12. The Strategy supports the implementation of the communication, education, public participation and awareness-raising provisions of multilateral environmental and other relevant agreements. It should also support the implementation of principle 10 of the Rio Declaration on Environment and Development, the Aarhus Convention[8] , the United Nations Millennium Development Goals[9] and Quality Education[10] by promoting transparent, inclusive and accountable decision-making as well as people's empowerment. 27. ESD should promote provisions of multilateral relevant international agreements related to SD. 44. Countries should identify their existing obligations regarding communication, education and public participation and awareness-raising in international environmental and other relevant agreements in order to address these in a coherent manner through ESD. 67. Further assessment of the needs in different subregions is required. Special emphasis should be given to the countries in Eastern Europe, the Caucasus and Central Asia (EECCA)[11] and South-Eastern Europe in solving their main problems in environmental education and in education for sustainable development. Some of their problems are lack of adequate instruction materials, the inefficient use of the capacity of higher education and research institutions, the shortage of skilled educators and insufficient awareness raising as well as a lack of interdepartmental and multi-stakeholder cooperation on ESD. Another challenge that should be addressed in South-Eastern Europe and EECCA is the poor quality of education for children living in rural areas and the lack of financial and human resources to develop ESD in those areas. Thus, providing capacity-building, financial assistance and support to education, research and public awareness programmes on SD in countries with economies in transition should be recognized as an important issue and be considered by Governments, relevant organizations and donors accordingly[12] . In addition, see the relevant passages from the Strategy under 6.1.1 above.	

8 The UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, Aarhus (Denmark), 1998.

9 United Nations Millennium Declaration, The General Assembly, 8th plenary meeting, 2000.

10 Ministers of Education Joint Communiqué, 32nd General Conference of UNESCO, 2003

11 See also Environmental partnerships in the UNECE region: Environment Strategy for countries of Eastern Europe, the Caucasus and Central Asia. Strategic Framework; Fifth Ministerial Conference "Environment for Europe", Kiev, 2003.

12 See also Plan of Implementation; World Summit on Sustainable Development.

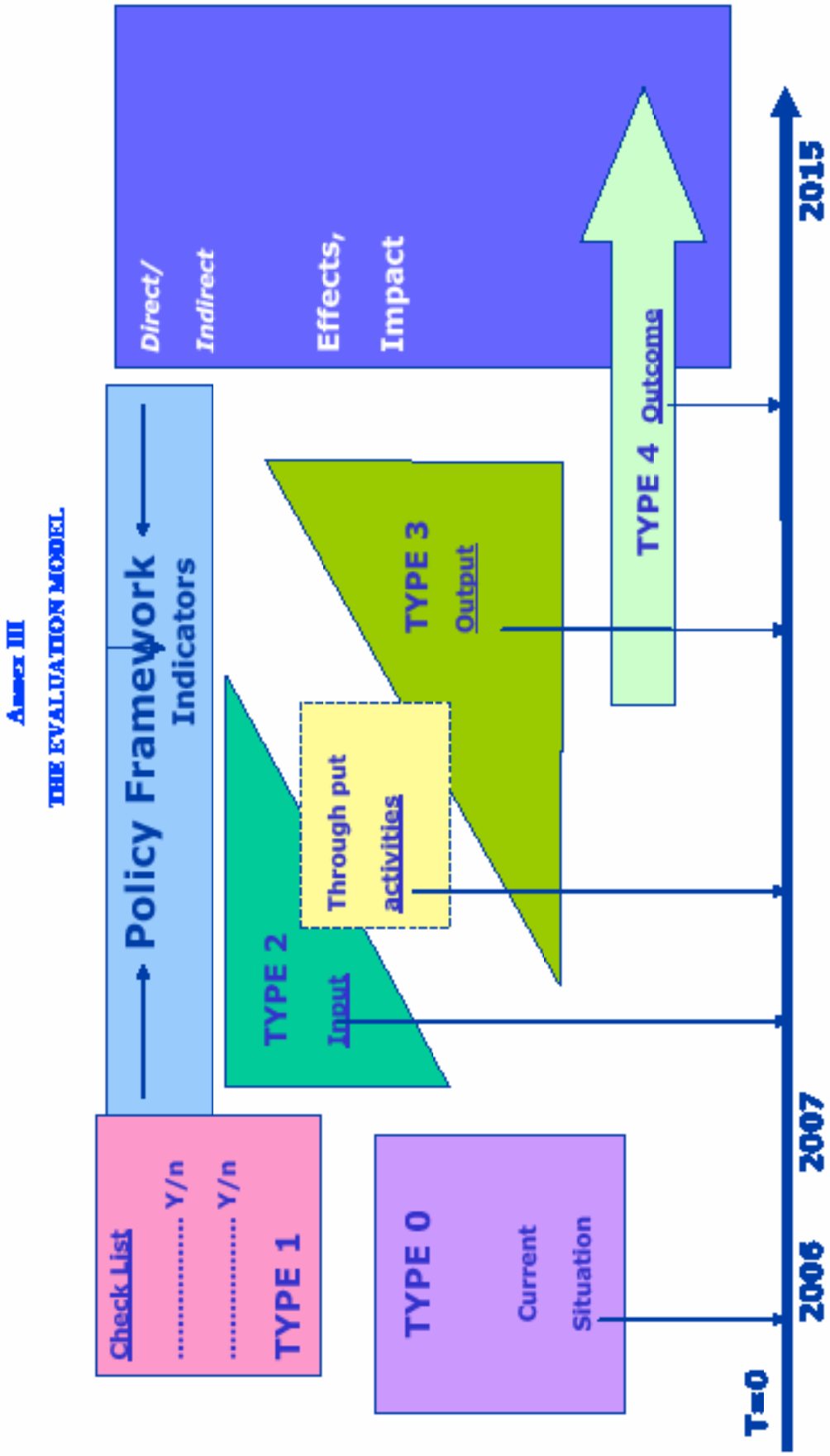
Example(s):	Baltic 21, the education component of the SD strategy for the Baltic Sea Region, was launched in 2000. It involves 10 countries in the subregion. Ministries of education and science are responsible for implementing coordinated ESD activities (www.baltic21.org). The new list of eligible projects to be supported by the Hellenic Development Aid (Ministry of Foreign Affairs) includes ESD projects and ESD components in development projects. Since 2003, preparation of the annual ESD reports of and corresponding conferences in five Central Asian countries (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) has been organized by CAREC. Governmental institutions, academic and NGOs represent the Central Asian countries. The Netherlands has memorandums of understanding (MOUs) with Belarus, Hungary, Poland and Ukraine that can be used for ESD projects. The country also provides funding for the ESD process of UNECE. At the Fifth Ministerial Conference "Environment for Europe" (Kyiv, 2003), the United Kingdom Department for Environment, Food and Rural Affairs launched its own "Environment for Europe" fund. This fund specifically prioritized ESD projects involving United Kingdom-based organizations and EECCA countries. The funding scheme ran for two years. The "Learning for Life" Centre in Uzbekistan, a joint project of the Ministry of Education, the British NGO FSC and Uzbek NGO Atrof-Muhit va soglom hayot, assists with the transition from EE to ESD. Its objective is to support the process of introducing ESD in Uzbekistan through modern technology and new ideas on environmental protection, e.g. the adaptation and translation of the book From Environmental Education to Education for Sustainable Development by F. Webster (FSC, United Kingdom). See the Collection of Good Practices in ESD: (http://www.unece.org/env/esd/GoodPractices/list.html#U).

Sub-indicator 6.1.4	**Does your Government take any steps to promote ESD in international forums outside the UNECE region?**	
	Type: Qualitative; "Output"	Sources of information: Report of relevant authorities
Description:	This question concerns activities that promote the ESD experiences of the UNECE region outside the region. Examples may include sessions of the United Nations Commission for Sustainable Development, the conferences of the parties/meetings of the parties of international conventions and the meetings of the Mediterranean Commission of SD. Please list and describe.	
Relevant passage(s) from the Strategy:	12. The Strategy supports the implementation of the communication, education, public participation and awareness-raising provisions of multilateral environmental and other relevant agreements. It should also support the implementation of principle 10 of the Rio Declaration on Environment and Development, the Aarhus Convention, the United Nations Millennium Development Goals[13] and Quality Education[14] by promoting transparent, inclusive and accountable decision-making as well as people's empowerment. 64. Regional and subregional forums that bring together members of the education community, such as civil servants, educators and researchers, and other relevant actors to share their experience and good practices on SD- and ESD-related issues should receive high priority.	
Example(s):	The Government of Greece, in close collaboration with MIO-ECSDE, organized a Mediterranean meeting in Athens to launch the United Nations Decade of ESD in the Mediterranean and present the UNECE Strategy in the region. The meeting agreed to prepare a Mediterranean Strategy for ESD using the UNECE Strategy as a "blueprint", and mandated Greece to promote it. The relevant work is ongoing in cooperation with many related actors. In Sweden, the Centre for Learning SD, supported by the Swedish International Development Agency (Sida), is being established in Gotland to contribute to knowledge development in countries experiencing the greatest poverty (http://www.sida.se/sida/jsp/sida.jsp?d=137&a=33906&language=en_US). In the framework of the Marrakech process on sustainable consumption and production (SCP), Italy is chairing an international task force on education for sustainable consumption. This task force, launched in May 2006, has the aim of promoting, at the international and regional levels, the introduction of SCP principles in formal curricula. The first concrete result of the task force's work is the document "Here and Now: Education for Sustainable, a collection of guidelines and recommendations for introducing education for sustainable consumption in formal learning processes. This document was prepared in cooperation with Hedmark College, the United Nations Environment Programme (UNEP) and UNESCO, under the guidance of an expert nominated by the task force secretariat. Furthermore, the United Nations Commission on Sustainable Development represents the appropriate international forum where the interdisciplinary content of ESD can be emphasized. Within this approach, Italy has integrated ESD principles in the preparatory documents for the last Commission session.	

13 United Nations Millennium Declaration, The General Assembly, 8th plenary meeting, 2000.
14 Ministers of Education Joint Communiqué, 32nd General Conference of UNESCO, 2003.

ISSUE 7. FOSTER CONSERVATION, USE AND PROMOTION OF KNOWLEDGE OF INDIGENOUS PEOPLES, AS WELL AS LOCAL AND TRADITIONAL KNOWLEDGE IN ESD

Description:	This reporting issue is intended to elicit relevant information on your country situation regarding the conservation, use and promotion of knowledge of indigenous people, as well as of local and traditional knowledge in ESD. Indigenous knowledge should be valued and conserved as an integral part of ESD, alongside other types of knowledge, e.g. scientific, local and experiential knowledge. Indigenous, traditional and local knowledge refers to the mature, longstanding traditions and practices of indigenous or regional communities. In many cases, indigenous, traditional and local knowledge has been orally passed down through the generations from person to person. Indigenous, traditional and local knowledge can be expressed through stories, legends, folklore, rituals, songs and even laws. Making use of such knowledge helps to raise the self-esteem of indigenous people. This issue investigates whether inclusion of indigenous peoples in society is ensured. In some countries, minority rather than indigenous groups exist, and/or society has a multicultural character. This issue also refers to these groups and multicultural societies.
Relevant passage(s) from the Strategy:	17. ESD should foster respect for and understanding of different cultures and embrace contributions from them. The role of indigenous peoples should be recognized and they should be a partner in the process of developing educational programmes. Traditional knowledge should be valued and conserved as an integral part of ESD.
Example(s):	For example, in Canada, the Government of Nunavut, a Canadian territory, has developed initiatives directed towards the Inuit population. In 2004, the Government of Nunavut described the education system as needing to be built within the context of Inuit Qaujimajatuqangit (which translates as “that which is long known by the Inuit”) and that the raising and teaching of children and the care of those in need are a collective community process. Inuuqatigiit: the Curriculum from the Inuit Perspective lays the foundation for education to this indigenous group. SD in its broadest definition is a core value of Inuit life and is thus becoming the foundation of education. In Kyrgyzstan, traditional knowledge on biodiversity conservation has been collected and used. The Kyrgyz writer Akayeva Zhyldyz uses Kyrgyz legends and stories as a resource for EE and ESD for children. The Kazakh National Academy of Education has implemented a scientific investigation and review on the integration of Kazakh national traditions into the educational system. This work has produced a list of recommendations. In its pilot NIR, Croatia refers to activities such as the collection and preservation of folk and traditional costumes, music and dance, and the integration of knowledge on traditional fruits and herbs in school curricula. Most countries have similar activities, including traditional agriculture. The new Norwegian curriculum for the 10 years’ compulsory education and upper secondary education considers the specific needs of the Sami people. As stated in one competence’s aim: “The students shall be able to: […] Provide examples on how management of natural resources and changes in the environment will have an impact on indigenous people in Norway and in other countries. […]”


Annex III
THE EVALUATION MODEL
Policy Framework
Indicators
Check List
..... Y/n
..... Y/n
TYPE 1
TYPE 0
Current
Situation
TYPE 2
Input
Through put
activities
TYPE 3
Output
TYPE 4 Outcome
Direct/
Indirect
Effects,
Impact
T=0
2006
2007
2015

Annex IV

LEVELS OF EDUCATION AT A GLANCE (INTERNATIONAL STANDARD CLASSIFICATION OF EDUCATION (ISCED), 1997)

How to determine the level of a programme				
Proxy criteria for contents		Name of the level	Code	Complementary dimensions
Main criteria	Subsidiary criteria			
Educational properties School or centre-based Minimum age Upper age limit	Staff qualification	Pre-primary education	0	None
Beginning of systematic apprenticeship of reading, writing and mathematics	Entry into the nationally designated primary institutions or programmes Start of compulsory education	Primary education First stage of basic education	1	None
Subject presentation Full implementation of basic skills and foundation for lifelong learning	Entry after some six years of primary education End of the cycle after nine years since the beginning of primary education End of compulsory education Several teachers conduct classes in their field of specialization	Lower secondary education Second stage of basic education	2	Type of subsequent education or destination Programme orientation
Typical entrance qualification Minimum entrance requirement		(Upper) secondary education	3	Type of subsequent education or destination Programme orientation Cumulative duration since the beginning of ISCED level 3
Entrance requirement, Content, Age, Duration		Post-secondary non tertiary education	4	Type of subsequent education or destination Cumulative duration since the beginning of ISCED level 3 Programme orientation
Minimum entrance requirement, Type of certification obtained, Duration		First stage of tertiary education (not leading directly to an advanced research qualification)	5	Type of programmes Cumulative theoretical duration at tertiary National degree and qualification structure
Research oriented content, Submission of thesis or dissertation	Prepare graduates for faculty and research posts	Second stage of tertiary education (leading to an advanced research qualification)	6	None

GLOSSARY OF THE REPORTING GUIDANCE

CHAPTER VII

GLOSSARY

The glossary was revised by the UNECE Expert Group on Indicators for ESD, jointly with UNESCO to reflect the recent developments in ESD. The glossary is largely based on the UNECE document with explanatory notes to the UNECE Strategy for ESD (CEP/AC.13/2004/8/Add.2) that was developed in 2004, adding only minor corrections and amendments. This revised glossary also includes terms of the UNESCO glossary developed in 2008 to accompany the global monitoring and evaluation of implementation of the United Nations Decade of ESD.

Action-oriented teaching and learning approaches emphasize that ESD aims to contribute to sustainable changes in society and the environment. It is thus recommended that ESD should involve concenvironmental actions taken by students and other target groups as integrated parts of teaching and learning processes. An action is targeted at change: a change in a person's lifestyle, in the local society or in the global society. And an action is intentional. The action-oriented approach has two main goals: to contribute to the development of students' own competences to take action and to facilitate sustainable changes in the short and the long term.

Case-study method is a teacher-directed analysis of a given environmental issue, within which students, working in small groups, use and elaborate mainly secondary sources of information (provided by the educator, e.g. printed material, guest speakers, films, videotapes) in order to explore and draw conclusions on the particular issue.

Conceptual and perceptual mapping. Concept mapping is considered as a representational educational tool for showing the relationship between one entity, concept, etc., and another, building relationships and links between them and representing them in a figure, schema or map (concept map). In brief, the main differential points between the interrelated terms of "conceptual", "concept" and "perceptual" mapping are the following:

(a) Perceptual mapping is the construction of a schema by the human mind when experiencing, capturing images and perceiving the observable features of the world, as well as the links among them;

(b) Conceptual mapping refers to the development of abstract schemata by the human mind to conceptualize, give meaning to and include an "object" (regularity) into the individual's conceptual net;

(c) Concept maps are the concrete graphical expressions of such abstract schemata; however, even before the conceptualization and creation of conceptual maps, the human mind first constructs.

Continuing education/training covers activities aimed at updating, refreshing or extending knowledge and skills gained during basic education/training. In-service training is education for employees to help them develop their skills in a specific discipline or occupation (increasing the qualification system is also part of the in-service training).

Critical thinking in this context means that ESD should be ideologically aware and socially critical, thereby recognizing that no educational values are politically neutral. In general, critical thinking can be defined as how individuals consciously adapt information into their own understanding within their existing values, interests and knowledge. This general definition applies to critical thinking in learning processes, but it is important to emphasize the willingness to take open-minded approaches by both learners and teachers, particularly to various cultural, economic, ecological, political and social issues. At best, critical thinking could lead to socio-cultural and intellectual flexibility with an understanding that, in addition to human capabilities, all information is principally related to place and time.

Democratic process According to Agenda 21, it is imperative that youth from all parts of the world should participate actively in all relevant levels of decision-making processes because these processes affect their lives today and have implications for their futures. In addition to their intellectual contribution and their ability to mobilize support, youth bring unique perspectives that need to be taken into account (see Agenda 21, chapter 25). Furthermore, municipalities should undertake a consultative process with their populations and achieve a consensus for the community (Agenda 21, chapter 28). Democracy has traditionally been understood as e qual rights and opportunities for all people to participate in decision-making in the institutions and issues that concern them. This well-established tradition also stresses the strong role of sovereignty particularly among nations. Rapid economic and environmental globalization during recent decades has provided a challenge to achieving sustainable development for all people in their everyday lives, although possibly not visible nevertheless exists.

Dynamic qualities in the learning process mean an emphasis on qualities in educational activities that engage learners in active and participative positions and assign teacher and learner more reciprocal roles that respect the existing knowledge and ability of the learner. Dynamic qualities can be seen as opposed to static qualities, which are more mechanical and see teaching and learning as little more than a transfer of information and the learner as a passive recipient.

Early childhood care and education. Programmes that, in addition to providing children with care, offer a structured and purposeful set of learning activities either in a formal institution (pre-primary or ISCED 0) or as part of a non-formal child development programme. Early childhood care and education programmes are normally designed for children from age three and include organized learning activities that constitute on average the equivalent of at least two hours per day and 100 days per year.

Ecological basic education (environmental education in tits classic form) concerns learning to know and to appreciate the living and non-living environment and the role of personal behaviour in this respect. In ecological basic education, learning is directed at the learning objectives of the individual, who wants to develop him or herself by attaining knowledge of ecological processes or mastering skills, e.g. to support environmental interests. Ecological basic education can often be perceived in primary education, in the work carried out in information centres in nature areas and in activities of nature-directed organizations.

Education for sustainable development is still developing as a broad and comprehensive concept, encompassing interrelated environmental, economic and social issues. It broadens the concept of environmental education, which has increasingly addressed a wide range of development subjects. Education for sustainable development reflects the parent term "sustainable development". It encompasses various elements of development and other targeted forms of education. (see chapter III of the UNECE Strategy for ESD, CEP/AC.13/2005/3/Rev.1).

Education is derived from the Latin educare, meaning to rear or foster, which in turn comes from educere, which means to draw out or develop. While this developmental and transformative meaning retains currency, it has largely been overshadowed by transmissive ideas relating to instruction and teaching. Education (as a verb) is commonly used to describe a process; as a noun, it can be shorthand for the "education system", which involves policies, institutions, curricula, actors, etc.

Educators include teachers, lecturers and trainers as well as facilitators, guides and interpreters.

Environmental education and ESD are considered by many to be equivalent. In practice, however, there are differences. Environmental education (EE) typically focuses on the environmental impact on society of pollution, waste water, emissions from cars, factories, etc., their causes and effects and how to reduce them, as well as concerns for nature and nature protection. ESD more often focuses on the use of natural resources and the importance of their renewability (sustainability). Different methods of mapping resources, such as ecological footprints or material flows, are pedagogical tools in ESD, especially at the university level. Negative environmental impact is in the first instance seen as a consequence of the unsustainable use of resources. It is also recognized that a good environmental situation will not develop unless people have a decent social and economic situation, and that a healthy environment is a prerequisite for a vital economy in the long term. Thus environmental, social and economic aspects are interwoven in ESD. Ethics and justice, as expressed in democratic government and social and global responsibility, become important components in the larger context of ESD.

The view of environmental issues in the education system has gradually changed from being viewed as a knowledge-related problem to being seen as a conflict between man and nature; today, environmental issues are also considered as a conflict between different human interests. This has implications for the approaches to be used. In early EE, the transmission of scientific facts was the most common method used. This approach was later further developed and combined with active student involvement and problem-solving approaches. Today, the conflict-oriented perspective of ESD, based on society as a whole, implies a focus on the democratic process. One important approach is thus a discussion among students in which different views are aired and debated. The purpose is to ensure that students actively and critically evaluate alternatives and develop skills in forming arguments based on knowledge and related ethical issues.

At the end of the period 1996–1999, three relatively new definitions were emerging, which structured the broadly interpreted EE concept: ecological basic education, learning for livability and learning for sustainability. These three parts of EE (see descriptions below) can be distinguished in theory. In practice, the lines are not that clear. Many EE activities and projects will cover a little of everything. The diagram below shows that the influence impact of the EE work area is different for each part.

Formal education. Formal education defines learning which takes place in primary, secondary and tertiary educational institutions. It is education that is provided by institutions like the system of schools, colleges, universities and other educational institutions that fall under the sphere of formal learning. Formal education can be characterized by a continuous "ladder" system of full-time learning and usually caters to an audience between the ages of 5 and 25. A certification of the learning achieved may be conferred.

Formal learning takes place in education and training institutions, leading to recognized diplomas and qualifications.

Holism is the belief that anything natural is connected to everything else and that each thing is a part of the whole, which is more important than the parts that make it up. The term "holistic" in this context refers to an un-

derstanding in which learners and learning processes are seen in a holistic or coherent view, i.e. learners and their needs/motivations are seen as "whole persons" (including spiritual and emotional), and learning processes as professional, personal, disciplinary, social, etc.

Informal education is learning that takes place in daily life without clearly stated objectives. The term refers to a lifelong process whereby every individual acquires attitudes, values, skills and knowledge from daily experiences and the educative influences and resources in his/her environment – e.g. family and neighbours, work and play, the marketplace, the library and mass media.

Informal learning is a natural accompaniment to everyday life. Unlike formal and non-formal learning, informal learning is not necessarily intentional learning, and as such may not even be recognized by the individuals themselves as contributing to their knowledge and skills.

Initial educators' training means studies undertaken in some countries by new teachers/lecturers/trainers to obtain the required licence/certificate/diploma in order to be a qualified teacher. Some lecturers may be required to follow ESD-related courses as part of their PhD studies.

Integration needs to be seen at the opposite end of the spectrum from fragmentation/segregation/disintegration. Integration in this context is understood as integration of subjects, departments, educational institutions and their communities, and also of what has been called the five dimensions of an educational institution: its ethos, curriculum (if there is one), pedagogy, organization and management, and community. Integrative efforts aim at systemic change across all areas and dimensions, reflecting sustainability rather than just "piecemeal" change in one area. Integration also means more emphasis on educational activities that include interdisciplinary and transdisciplinary inquiry, reflecting that no subjects, factors or issues exist in isolation. Inter- and transdisciplinary inquiry has the potential to break free of disciplinary perceptions and traditions so as to create new meanings, understandings and ways of working. Simply putting disciplines together, by contrast, is often no more than the sum of the parts.

Interdisciplinary approach. The emphasis is on the interconnections between different perspectives. Interdisciplinary approach courses at the college or university level involve two or more different subjects; cooperation within a common framework shared by the disciplines involved. Some countries have introduced the "knowledge management" approach (see below).

Key themes of sustainable development include, inter alia, 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 responsibility, environmental protection, natural resource management and biological and landscape diversity. Addressing such diverse themes in ESD requires a holistic approach.

Knowledge management is about bringing together the demand and supply of knowledge. This knowledge is based on understanding and experiences: the best working methods, new ideas, creative "solutions", breakthrough processes, skills, etc. It concerns knowledge with an added value that promotes wisdom and provides understanding. Knowledge management is thus not only about storing data. The premise of knowledge management is not so much that there is a lack of knowledge and understanding concerning learning processes with respect to sustainability, but that this knowledge is not sufficiently available. This knowledge has to flow and be available in a wider circle wherever needed. Connecting knowledge and understanding with "adjacent" sectors and policy areas is crucial.

Learners are pupils, students and participants of training sessions.

Learning for livability is directed at making and keeping the school, the schoolyard, the street, the estates and the city liveable. In primary school, children learn about waste segregation, preventing street litter, clearing litter together, internal environmental care, etc. Learning for livability has an important behavioural component and is concerned with the "here and now". Learning for livability often takes place in residential and industrial estates: together, students learn about the best approaches to enhancing livability. In some aspects, the activities are more like "information, communication, participation, public awareness", as in a traditional view of "education" as an "emancipative way of learning". Using EE as a policy tool (for environment, nature, area development policies) has – despite raising some debate – developed quickly, as have the more traditional practices of EE.

Learning for sustainability. The key concept here is sustainable development. An often used description of SD is the following: a well-balanced development of the three perspectives economy, physical living environment and society. "Well-balanced" means that future generations as well as developing countries can supply their needs. SD focuses on the "here and now" in combination with "there and then". SD is a subjective concept, which means that sustainability cannot be imposed from above. It is a joint consideration of interests, opinions, norms and values, and therefore is formed by the dialogue between different actors.

Learning is the process through which knowledge, values and skills are developed. The processing of informa-

tion results in a relatively stable change in the behaviour of an individual or organization. Learning is absorbing information and integrating information and considerations in such a way that this leads to different choices and different behaviours. Information (e.g. data, basic information) is connected with our knowledge, experience and norms and values as well as with the way we lead our lives (i.e. giving meaning to life).

Learning processes are often described at the individual level, although they can be acquired at three levels:

(a) As a learning person: namely, individual skills, self-development, one's individual position in society, having ability to contribute sustainable society;

(b) Within the learning organization: the organization tries to improve the quality of its own structure and performances. The qualification "learning organization" applies only if there are sufficient numbers of individuals who adopt a behavioural change leading to changes in the structure and performances;

(c) Within the learning society: an addition of learning processes of different organizations and individuals with their own perspectives, but with a cumulative effect.

Lifelong learning is learning throughout life, either continuously or periodically. Lifelong learning stimulates and empowers individuals to acquire all the knowledge, values, skills and understanding that they require throughout their lifetime, and to apply these with confidence, creativity and enjoyment in all roles, circumstances and environments.

Life-wide learning enriches the concept of lifelong learning by drawing attention to the breadth of learning, which can take place across the full span of our lives at any one stage in our lives. The life-wide dimension brings the complementarity of formal, non-formal and informal learning into sharper focus. It reminds us that useful and enjoyable learning can and does take place in the family, in leisure, in community life and in daily working life. Life-wide learning also makes us realize that teaching and learning are activities that can be changed and exchanged in different times and places and through different roles. Not all the categories may be coherent – informal learning can, for example, also take place in classrooms – but the categories reflect the understanding that learning takes place not only in classrooms.

Modelling aims to recreate the main aspects of what occurs occasionally during an event (phenomenon) in nature or in the laboratory or even in society. Models are created based on multiple analogies that may function as the "building blocks" of the model.

Multidisciplinary approach refers to looking at an issue from many knowledge or practical disciplinary perspectives, but not integrating them. The multidisciplinary approach involves different subjects of study in one activity, without changes in disciplinary and theoretical structures.

Non-formal education is education that is sustained and organized, but does not follow the continuous "ladder" system of learning that formal education does. It takes place within and outside educational institutions and caters to all age groups, be they out-of-school children, illiterate adults or workers needing certain work skills.

Non-formal learning takes place outside and sometimes parallel to mainstream systems of education and training, and does not typically lead to formal certificates. Non-formal learning may be provided at the workplace and through the activities of civil society, organizations and groups (e.g. youth organizations, trade unions and political parties). It can also be provided through organizations or services that have been set up to complement formal systems (e.g. arts, music and sport classes or private tutoring to prepare for examinations).

Philosophical inquiry is an approach based on the examination of the deeper motivations and consequences of human activities with an impact on the environment and/or society and their ethical justification.

Problem-based learning is characterized by contextualized problem-setting and situations. The content of the course of study is introduced in the context of real-world problems. Problems or cases from the real world are used as a means to motivate and initiate students' learning processes, i.e. acquiring a predetermined content and at the same time developing transferable personal competencies (interpersonal skills, critical thinking, etc). The distinctions between problem-based learning and other forms of cooperative or active learning are often blurred, because they share certain features.

Problem-oriented means that instead of organizing the teaching around topics from one of the usual disciplines, the subject concerns an issue or a problem.

Process-oriented in this context means widening the scope in planning, pedagogy, didactics, etc. in educational activities, from a narrow content focus to an awareness of learning and education as processes, thereby highlighting the activities, the dynamics, the actors, the phases and the relation between areas more than the decontextualized content of information.

Professional education, which can be professional training or qualification raising, is aimed at specialists of different ages. This system is adult-oriented and may be

a part of higher education, which prepares specialists for the fast-evolving requirements of the changing world and consequently for new professional spheres.

Project work is characterized by problem orientation, product orientation, interdisciplinarity, coherence between theory and practice, and joint planning by teachers and students. The issue or problem in focus has to be found in the surrounding world (authenticity) and the relevant knowledge from subjects and disciplines has to be chosen according to the problem in focus. Project work is both an individual and collective learning process based on scientific principles (action research) that aim at finding possible solutions/proposals for change (the product); the answers are not given in advance.

Role playing is traditionally based on asking learners to portray certain well-defined persons, e.g. a local authority officer, a farmer, an ecologist, a consumer, in the context of a particular issue or a given situation, with clearly defined values, and to seek a resolution. (In some cases, the characters portrayed can even be animals in the food chain or the "spirits" of the forest, etc. In such cases, these activities can also be termed "theatrical games", which are usually played by younger pupils).

Scenarios are analyses of hypothetical problems, their impacts and possible solutions done by examining a series of alternative combinations of critical parameters and hypotheses. Through scenarios, we try to predict the consequences of changes by using extrapolation.

Simulations refer to cases in which a certain number of data are reproduced in another context: the simulated learning situation is provided to learners and the assumed "replica" usually reflects an issue and situation of the real world, linking the class with environmental realities. Studies have identified four basic types of simulation methods: role playing, case studies, computer simulations and other games.

Social learning The development of knowledge and understanding has both personal and shared elements. The term social learning often refers to an understanding emphasizing that learning is always a social process because it always takes place in a social setting or context. The practices that learners take part in, the means and technology that they learn to use, the skills or insights that they develop have a social context. Furthermore, cooperation or being part of a certain division of labour is often the situation for learners. Social interaction allows learners to relate or mirror their ideas, insights, experiences and feelings to those of others. In this process of "relating to" or "mirroring", these personal ideas, insights, experiences and feelings are likely to change as a result. This mirroring may lead learners to rethink their ideas in the light of alternative, possibly contesting, viewpoints or ways of thinking and feeling. At the same time, (learning) experiences that are shared with others are likely to gain in importance. However, the term " social learning" is sometimes also used to characterize certain educational settings or processes whereby a group, organization or whole society is collectively engaged in competence development. In this sense, social learning is used to broaden the meaning of learning in relation to its normally very individualistic meaning. It includes learning by individuals, but recognizes that groups as a whole can learn. Arguably, progress towards sustainability is dependent on such learning.

The idea behind social learning is that people do not learn alone, or not as usefully as possible, by means of individual routes, but that they also learn – and often learn better – by relating their personal experiences to the experiences of others. It is assumed that other people play an important role in the recognition, formulation and generalization of individual experiences. In social learning, four elements ("axes") that provide the basis for learning processes can be distinguished:

(a) Action: people have to be able and prepared to consider themselves as people who can actively take their own situation in hand (motivation). The organizers of the learning process are therefore required to approach participants as competent actors and to review what they can do themselves;

(b) Cooperation: people have to be able and prepared to collaborate with others. This presents an area of tension of consensus and dissensus in a group;

(c) Reflection: people have to be able (to learn) to reflect on what they have done, i.e. they must be able to look back, evaluate, draw conclusions and translate them into changed behaviours;

(d) Communication: a pre-condition for social learning is that people can communicate about learning, explain and demonstrate it to others, i.e. can transfer the experience.

Survey method involves the collection of primary data, data analysis, reaching conclusions and presenting them. The survey is an "autonomous" learning method, though it could be conducted in the framework of a project or a problem-solving process. In general, surveys are carried out through questionnaires, opinion sheets (opinionnaires) and interviews, to elicit information on individuals' opinions and attitudes towards the issue studied. Conducting survey research is a student-centred method. It is very effective for developing communication and investigation skills and raising awareness on a variety of issues.

Sustainable development is defined as development "that meets the needs of the present without compro-

mising the ability of future generations to meet their own needs" (World Commission on Environment and Development Report, 1987). Sustainable development is a complex issue, encompassing economic, environmental and social dimensions. In other words, development is essential to satisfy human needs and improve the quality of human life. At the same time, development must be based on the efficient and responsible use of all of society's scarce resources – natural, human and economic.

Sustainable society is one that persists over generations – one that is sufficiently far-sighted, flexible and wise not to undermine either its physical or social systems of support.

Teacher education/training consists of programmes of study organized for teachers' training (pre-service or in-service). It is normally required for teaching at the various levels of education.

Tertiary or higher education. Tertiary education also referred to as third stage or third level of education; it also includes vocational education. Higher education is normally taken to include undergraduate and postgraduate education. It is education at a higher level than secondary school, and is usually provided in distinct institutions such as universities.

Training is learning a skill through practical application.

Value clarification is a method to encourage learners to clarify their thoughts, feelings and commitments, and thus enrich their awareness about their own values, clarifying the latter's exact content and full meaning.

Vocational/further education can be described as part of the adult-education and lifelong learning process. It enables learners: (a) to acquire the knowledge and skills to adapt to changing techniques and working conditions; (b) to further their social development, by giving them access to new knowledge and qualifications; and (c) to contribute to cultural, economic and social development. Such courses may lead to professional certification by authorized institutions.

Whole-school approaches (e.g. eco-schools, sustainable schools, enviro-schools) seek to engage all aspects of a school – including curriculum, school governance, pedagogy, resource consumption and landscaping – to create a more sustainable school.

Work-based education can be defined as learning that takes place within the work or professional context. It accredits or extends the knowledge and learning skills of employees.

Workplace experience. The system of knowledge, skills, feelings and views formulated by a learner, usually a worker, through interactions with others and the environment after a period of work in one particular place.