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

**GUIDANCE FOR REPORTING ON THE IMPLEMENTATION OF THE UNECE¹
STRATEGY FOR EDUCATION FOR SUSTAINABLE DEVELOPMENT**

Note by the Expert Group on Indicators for Education for Sustainable Development²

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 is 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 United Nations Economic Commission for Europe.

² This document is submitted after the official deadline for documents due to time constraints.

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I. INTRODUCTION

1. The UNECE Strategy for Education for Sustainable Development (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 Kiev³. This comprehensive Strategy has three phases of implementation to be completed by 2015. It is being implemented in cooperation with the United Nations Educational, Scientific and Cultural Organization (UNESCO) and is the UNECE region's contribution to the United Nations Decade of ESD (2005–2014).

2. At the Belgrade Ministerial Conference⁴, 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.

3. 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.

4. 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.

5. 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

³ Fifth Ministerial Conference “Environment for Europe”, Kiev, 21–23 May 2003.

⁴ Sixth Ministerial Conference “Environment for Europe”, Belgrade, 10–12 October 2007.

adapted to address specific needs by developing more localized benchmarks and sets of indicators into a national set of indicators for ESD.

6. The following documents provide information relevant to the reporting:
 - (a) UNECE Strategy for ESD (CEP/AC.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);
 - (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 work plans (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

8. 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.

9. 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.

10. 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.

11. 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

12. 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).

13. 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)

14. The main elements for the reporting procedure are as follows:

(a) UNECE member States should prepare reports⁵ 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.

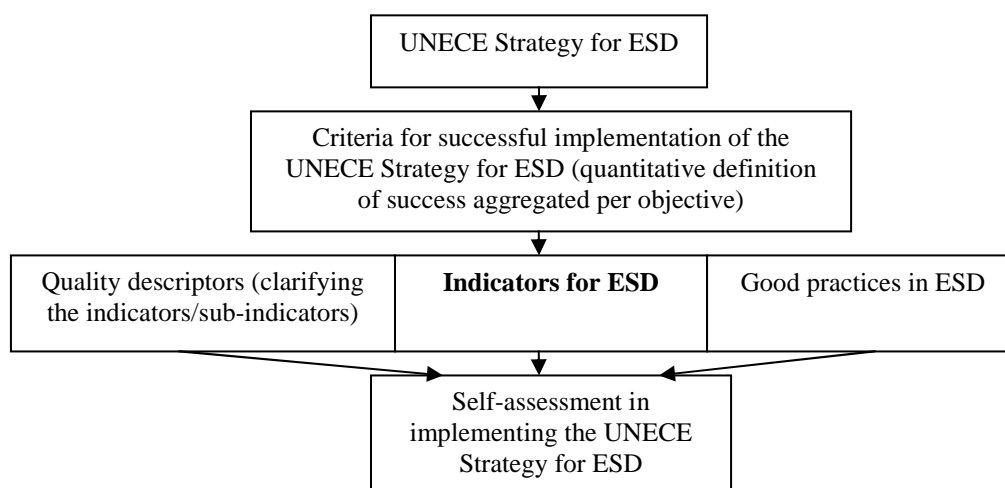
15. Although the "yes/no" part of sub-indicators is required to be reported on in phase I (by 2007) and the "descriptive" part in phase II (by 2010) and phase III (by 2015), countries were encouraged to report on the full set of indicators at the end of each phase, to the extent possible, in line with 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.

16. 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

⁵ Countries with a federal structure will submit one consolidated report based on subnational/State inputs.

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.

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 Work Plan 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

18. 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.

19. The indicators focus on ESD issues and not on sustainable development (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).

20. 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.

21. 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

22. 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).

23. 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”.

24. 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.⁶

C. Concept of use

25. 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).

(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

⁶ 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).

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

27. The set comprises 18 indicators with 49⁷ 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” part⁸ and a “descriptive” part.

28. 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.

29. 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.

30. 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.

31. 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.

⁷ One sub-indicator (2.1.3) was added as a result of the revision exercise undertaken after the pilot reporting.

⁸ A “no” answer should be selected also in the case of “not applicable”, and explanation provided on why it is not applicable.

E. Assessment

32. 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.

33. 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 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

34. 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 Education for Sustainable Development

35. 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

36. 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

37. 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 exists⁹, therefore, this set of criteria target the policy level.

B. Descriptors

38. 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.

39. 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:

(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 required some additional clarification of their meaning and expected reporting information;

⁹ E.g. “Quality criteria for ESD schools” developed by the School Development through Environmental Education and Environment and School Initiatives (ENSI) networks.

(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

40. 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>).

41. 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

42. 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 ESD¹⁰ 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).

¹⁰ 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.

43. 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)¹¹ extend this argument further by suggesting that we cannot deliver ESD 1 or ESD 2 in isolation.

44. 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.

¹¹ 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 education for sustainable development (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)?	
	<i>Type:</i> Qualitative; “Checklist”	<i>Sources of information:</i> 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?	
	<i>Type:</i> Qualitative; “Checklist”	<i>Sources of information:</i> 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	

	<p>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).</p> <p>The focal point could be a person or a unit. Some countries have more than one focal point, which implies that communication between them should be well organized.</p>
Relevant passage(s) from the Strategy:	<p>42. Each country is responsible for implementing this Strategy. [...] To this end, it is recommended that countries should [...] designate a focal point.</p> <p>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. [...].</p>
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?	
	<i>Type:</i> Qualitative; “Checklist”	<i>Sources of information:</i> 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 ¹ . 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	

¹ Some countries have introduced a “knowledge management approach”.

	ESD and to develop a national implementation plan (NIP). Similar bodies exist in other countries, including in Greece, Lithuania, the Netherlands and Slovenia.
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Sub-indicator 1.1.4	Do you have a national implementation plan for ESD?	
	<i>Type:</i> Qualitative; “Checklist”	<i>Sources of information:</i> 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?	
	<i>Type:</i> Qualitative; “Checklist”	<i>Sources of information:</i> 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	1. The mandate to develop the Strategy derives from the statement made by the	

passage(s) from the Strategy:	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):	<p>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.</p> <p>The list of UNECE focal points can be found at: (http://www.unece.org/env/esd/contacts.htm).</p> <p>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).</p>

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)?	
	<i>Type:</i> Qualitative; “Checklist”	<i>Sources of information:</i> Government reports
Description:	Policy documents may include national strategies, plans, programmes and guidelines. References to sustainable development are increasingly 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:	<p>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.</p> <p>50. Policy, legislation, operational frameworks and curricula should include and support ESD.</p>	
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	
	<i>Type:</i> Qualitative; "Input"	<i>Sources of information:</i> 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):	<p>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.</p> <p>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.</p> <p>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).</p> <p>(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).</p> <p>(b) This aim of education for sustainable development is transformed into</p>	

² Refer to paragraph 29 of this document.

	<p>syllabi for courses and subjects at all levels of the Swedish school system (http://www3.skolverket.se/ki03/front.aspx?sprak=EN).</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>
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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?	
	<i>Type:</i> Qualitative; “Checklist”	<i>Sources of information:</i> 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:	<p>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.</p> <p>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.</p> <p>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.</p> <p>55. Key actions to achieve this could be to: [...] introduce and develop management systems for SD in formal educational institutions and non-formal</p>	

	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)?	
	<i>Type:</i> Qualitative; “Checklist”	<i>Sources of information:</i> 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 the United Nations Convention to Combat	

	<p>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.</p> <p>The <i>Czech State Programme of Environmental Education and Public Awareness</i> includes a paragraph on “Information, awareness and consultancy for the general public”. This paragraph covers i.e. “information” (media of all types and information services for mass media, activities for general public and awareness for sustainable consumption).</p> <p>Public awareness is addressed in <i>Folkbildning of the future, its role and objectives</i>, 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/).</p> <p>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. 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 <i>Orientamenti e obiettivi per il nuovo quadro programmatico per l'educazione all'ambiente e allo sviluppo sostenibile</i>, 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.</p> <p>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.</p> <p>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.</p>
<p>Sub-indicator</p>	<p>Does a formal structure for interdepartmental cooperation relevant to ESD exist in your Government?</p>

1.2.5	<i>Type:</i> Qualitative; “Checklist”	<i>Sources of information:</i> 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:	<p>10. The Strategy encourages interdepartmental, multi-stakeholder cooperation and partnerships, thereby stimulating investment of material and human resources in ESD.</p> <p>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.</p> <p>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; [...].</p>	
Example(s):	<p>The Armenian inter-institutional commission for the Strategy is described above in the descriptor for sub-indicator 1.1.3.</p> <p>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.</p> <p>Two interdepartmental agreements, one for cooperation on environmental education (EE), and the second for cooperation on ESD were signed in the Czech Republic, between the Ministry of Environment and the Ministry of Education in 1999 and 2004, respectively. The first is connected with development and implementation of the State Programme of Environmental Education and Public Awareness; the second includes aims of ESD. There is also an interdepartmental working group under the Ministry of Environment which focuses on EE and promoting environmental awareness.</p> <p>In Greece, the Hellenic National Committee for ESD was established as a high-level coordinating body with consultative status. The Ministers of Education, of Development and of Environment, Physical Planning and Public Works and</p>	

participate with representatives of the Hellenic National Commission of UNESCO, several major NGOs and academia. There is a plan for its further limited expansion in the near future to include representatives of other stakeholders.

The Dutch National Programme on ESD, “Learning for Sustainable Development”, is conducted by a steering committee that includes representatives from seven ministries (Environment, Agriculture, Water Management, Foreign Affairs and Development Aid, Economic Affairs, Education and General Affairs (the Prime Minister) and representatives from provincial and local authorities and water boards. The national UNESCO Commission and the National Commission on SD (NCDO) serve as advisers. To enhance the voice of other stakeholders, an “alliance for the Decade” serves as an advisory platform in which NGOs and other stakeholders participate (<http://www.senternovem.nl/lvdo/english.asp>).

In Slovenia, there are two groups working on the government level to promote ESD. At the Ministry of Development, there is an interdepartmental council responsible for the SD. Part of this council deals specifically with ESD and introducing ESD to general public. At the Ministry of Education, there is another interdepartmental group responsible for including ESD in all levels of formal education.

The project, “Course for Sustainability: Strategies, Methodologies and Actions for civil servants of Kazakhstan”, is being carried out in 2008/2009 jointly by Venice International University (VIU), the Regional Environment Centres for Central and Eastern Europe (REC-CEE) and Central Asia (CAREC) as a local partner, with the support of Agriinnova and Central European University (CEU) with funding from the Italian Ministry for the Environment, Land and Sea and BG Group (a corporate partner). The course aims to enhance the capacities of key senior government officials from different ministries and agencies to ensure that the policies and programmes are more sustainable. The course consists of four modules: the introductory module took place in Astana, and other three modules in Venice. The course modules were developed by an international team of experts from Kazakhstan, VIU, REC-CEE, CEU, Governments and other institutions. (www.sustainablecee.net)

Within its training programme related to sustainability (<http://www.rec.org/REC/Programs/Training.html>), REC-CEE is organizing two courses: (a) a course on Sustainability: strategies, methodologies, policies and actions for Central and Eastern Europe (for key government officials); and (b) a course on Local sustainability and action (for local communities, national institutions).

National Commission for Education for Sustainable Development was established by the Government of Lithuania on 31 May 2006. This Commission comprises representatives of 12 ministries as well as UNESCO, the Industrial Confederation and the Association of Municipalities. The Vice-Minister of Education and Science was nominated as its chairperson.

Sub-indicator 1.2.6	Does a mechanism for multi-stakeholder cooperation on ESD exist with the involvement of your Government?	
	<i>Type:</i> Qualitative; “Checklist”	<i>Sources of information:</i> 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:	<p>10. The Strategy encourages interdepartmental, multi-stakeholder cooperation and partnerships, thereby stimulating investment of material and human resources in ESD.</p> <p>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.</p> <p>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;</p> <p>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 [...].</p>	
Example(s):	<p>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”.</p> <p>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.</p> <p>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.</p> <p>The Government of the United Kingdom is working with the Sustainable</p>	

	<p>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.</p> <p>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).</p> <p>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.</p>
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Sub-indicator 1.2.7	Are public budgets and/or economic incentives available specifically to support ESD?	
	<i>Type:</i> Qualitative; “Input”	<i>Sources of information:</i> 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:	<p>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.</p> <p>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.</p>	
Example(s):	<p>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.</p> <p>The Dutch national programme “Learning for Sustainable Development” has its</p>	

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.

In Slovenia, the Ministry of Education prepared two separate public tenders concerning ESD. The first (Social and Civic Competences, €1,371,000) supports school networks to work on themes concerning ESD in cooperation with other initiatives (NGOs, researchers etc.). The second public tender is designed for educating teachers on ESD topics. In 2009, the Ministry of Education and Sport will offer every school a budget specifically for ESD activities.

In Armenia, one third of the themes that got thematic financing of scientific and scientific-technical activity from the State budget deal with the main directions of sustainable development, and the environmental conventions. Some themes that received finance in these networks touch upon subjects, such as alternative energy sources, risk factors and human health, and biotechnologies. The latter are among the country's scientific priorities. In the period 2008–2010, an application study “Promoting SD through formal and non-formal learning” is being carried out at the Armenian State Pedagogical University.

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

	<p>development values and priorities;</p> <p>(b) Promote training programmes for school directors and teachers oriented to create knowledge and skills on sustainable development;</p> <p>(c) Increase awareness among families and entire school community on initiatives to promote sustainable lifestyles also by adopting new technologies tools;</p> <p>(d) Strengthen the academic curricula in order to develop professional skills on sustainable development widening the job demand on sustainability;</p> <p>(e) Promote specific projects to improve eco-efficiency in school buildings considering them as “learning places”.</p> <p>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).</p> <p>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.</p>
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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?	
	<i>Type:</i> Qualitative; “Checklist”	<i>Sources of information:</i> 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:	<p>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.</p> <p>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.</p>	

	<p>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.</p>
<p>Example:</p>	<p>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”.</p> <p>Education represents a component of the “Concept of Transition of the Republic of Kazakhstan for Sustainable Development for 2007–2024”.</p> <p>A chapter on education and research is included in the Strategy for Sustainable development (2003) of Lithuania.</p> <p>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.</p> <p>One of the tenets of the Swedish National Strategy for Sustainable Development is that ESD means lifelong learning, so education at all levels and all types of education shall be permeated with an SD perspective (http://www.regeringen.se/sb/d/3142).</p> <p>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).</p> <p>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</p>

	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.
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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?	
	<i>Type:</i> Qualitative; "Input"	<i>Sources of information:</i> 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 diverse themes in ESD requires a holistic approach.	
Example(s):	<p>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).</p> <p>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</p>	

	<p>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).</p> <p>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).</p> <p>Key themes are included into the new national curriculum to be introduced in Lithuania from the 2008/09 school year.</p> <p>Key themes are included into the general compulsory course for HEIs in Kazakhstan, titled “Ecology and sustainable development”.</p> <p>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).</p>
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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?	
	<i>Type:</i> Qualitative; “Input”	<i>Sources of information:</i> 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	11. The Strategy encompasses the basic provisions of Education for All: Meeting our Collective Commitments ³ .	

³ The Dakar Framework for Action, UNESCO, 2000.

Strategy:	<p>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.</p> <p>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.</p>
Example(s):	<p>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).</p> <p>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. Analyzing 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 <i>Collection of Good Practices in ESD</i>: (http://www.unece.org/env/esd/GoodPractices/list.html#R).</p> <p>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 <i>Every Child's Future Matters</i> (http://www.sd-commission.org.uk/publications.php?id=578).</p> <p>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).</p> <p>ESD learning outcomes are addressed in the SD Cross-Curriculum being introduced in Lithuania from the 2008/2009 school year.</p> <p>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).</p> <p>Learning outcomes are explicitly addressed in the "Framework for Learning Global Development" (http://www.bne-portal.de/coremedia/generator/unesco/de/Downloads/Hintergrundmaterial__nat</p>

	ional/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_2022Bildung_20f_C3_BCr_20nachhaltige_20Entwicklung_20in_20der_20Schule_22.pdf).
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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?	
	<i>Type:</i> Qualitative; “Input”	<i>Sources of information:</i> 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:	<p>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. [...].</p> <p>33. To be effective ESD should:</p> <p>[...] (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;</p> <p>(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; [...]</p>	
Example(s):	<p>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 <i>Handbook on Methods used in EE and ESD</i>, which is also available online (www.medies.net) in English, French and Arabic.</p> <p>In Slovenia, several new teaching learning methods have been incorporated in the reform of primary education introducing a nine-year primary school. As well,</p>	

	<p>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.</p> <p>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.</p>
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Indicator 2.2 Strategies to implement ESD are clearly identified

Sub-indicator 2.2.1	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	
	<i>Type:</i> Qualitative; “Input”	<i>Sources of information:</i> Education institutions and Ministries responsible for Education
Description:	<p>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.</p> <p>(a) Building SD/ESD into existing subjects (for HEIs, this means courses/disciplines);</p> <p>(b) Treating SD/ESD as a cross-curriculum/interdisciplinary theme where many subjects contribute;</p> <p>(c) Offering specific courses, programmes or seminars on SD/ESD</p> <p>(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);</p> <p>(e) Other approaches specific to your country.</p>	
Relevant passage(s) from the Strategy:	<p>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.</p>	

	<p>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; [...]</p> <p>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.</p>
<p>Example(s):</p>	<p><i>(a) ESD is addressed through existing subjects</i></p> <p>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 <i>Collection of Good Practices in ESD</i> (http://www.unece.org/env/esd/GoodPractices/list.html#E).</p> <p><i>(b) ESD is addressed through a cross-curriculum approach</i></p> <p>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).</p> <p>SD is formally linked to four subjects in the National Curriculum of the United Kingdom (see example under 2.1.1).</p> <p>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).</p> <p><i>(c) Provision of specific subject programmes and courses</i></p> <p>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 <i>Collection of Good Practices in ESD</i> (http://www.unece.org/env/esd/GoodPractices/list.html#G).</p> <p>The National Curriculum of the United Kingdom views SD as a cross-cutting theme (see 2.1.1)</p>

	<p>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”.</p> <p><i>(d) Stand-alone projects</i></p> <p>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 <i>Collection of Good Practices in ESD</i>: (http://www.unece.org/env/esd/GoodPractices/list.html#I).</p> <p>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 <i>Collection of Good Practices in ESD</i>: (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”.</p> <p>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.</p>
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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?	
	<i>Type:</i> Qualitative; “Output”	<i>Sources of information:</i> Education institutions, funding agencies
Description:	<p>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.</p> <p>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.</p>	

	<p>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).</p>
<p>Relevant passage(s) from the Strategy:</p>	<p>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.</p> <p>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.</p> <p>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; [...]</p> <p>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.</p>
<p>Example(s):</p>	<p>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).</p> <p>A new (2008) law pertaining to all universities in Greece encourages the adoption of the whole-institution approach.</p> <p>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/).</p> <p>Many Swedish schools are applying a whole-institution approach with the principles of an environmental management system (EMAS and ISO 14001,</p>

	<p>adjusted for school children) in their work on SD (http://www.hsr.se/sa/node.asp?node=40)</p> <p>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 through 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.</p> <p>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.</p>
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Sub-indicator 2.3.2	Are there any incentives (guidelines, award schemes, funding, technical support) that support a whole-institution approach to SD/ESD?	
	<i>Type:</i> Quantitative; “Output”	<i>Sources of information:</i> 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):	<p>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.</p> <p>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/)</p> <p>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).</p>	

	<p>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/.</p> <p>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/Ausgezeichnete_20Offizielle_20Dekade-Projekte.html).</p> <p>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 <i>Raising standards: making sense of the sustainable schools agenda</i> (www.ssatrust.org.uk/eshop).</p>
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Sub-indicator 2.3.3	Do institutions/learners develop their own SD/ESD indicators for their institution/organizations?	
	<i>Type:</i> Qualitative; “Output”	<i>Sources of information:</i> Education institutions, funding agencies
Description:	<p>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.</p> <p>See also description of whole-institution approach under 2.3.1 above.</p>	
Relevant passage(s) from the Strategy:	<p>See relevant passages from the Strategy under 2.3.1 above.</p>	
Example(s):	<p>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</p>	

	<p>education” to participative initiatives such as Agenda 21.</p> <p>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/).</p> <p>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?PagelD=470).</p>
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Indicator 2.4 ESD is addressed by quality assessment/enhancement systems

Sub-indicator 2.4.1	<p>(a) Are there any education quality assessment/enhancement systems?</p> <p>(b) Do they address ESD?</p> <p>(c) Are there any education quality assessment/enhancement systems that address ESD in national systems?</p>	
	<i>Type: Qualitative; “Input”</i>	<i>Sources of information: Education institutions and Ministries responsible for Education</i>
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	

	<p>(http://www.umweltbildung.de/395.html?&fontsize=7&print=).</p> <p>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/).</p> <p>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.</p> <p>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).</p>
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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?	
	<i>Type:</i> Qualitative; “Input”	<i>Sources of information:</i> 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:	<p>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; [...]</p> <p>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.</p> <p>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</p>	

	know-how and distribution channels to pass reliable information and key messages on SD-related issues.
Example(s):	<p>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 <i>Collection of Good Practices in ESD</i>: (http://www.unece.org/env/esd/GoodPractices/list.html#B).</p> <p>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.</p> <p>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)).</p>

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?	
	<i>Type:</i> Quantitative; “Input”	<i>Sources of information:</i> 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. ⁴	

⁴ See also the framework for a draft implementation scheme for the United Nations Decade of Education for Sustainable Development.

	<p>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.</p> <p>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.</p> <p>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.</p>
Example(s):	<p>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 <i>Collection of Good Practices in ESD</i>: (http://www.unece.org/env/esd/GoodPractices/list.html#A).</p> <p>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 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.</p> <p>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).</p> <p>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</p>

	<p>(http://www.mvonderland.nl/english/).</p> <p>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_isl_and_sustainable_development.html).</p> <p>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).</p>
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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?	
	<i>Type:</i> Qualitative; “Input”/“Outcome”	<i>Sources of information:</i> 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):	<p>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.</p> <p>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.</p> <p>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</p>	

(<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?	
	<i>Type:</i> Qualitative; “Input”	<i>Sources of information:</i> 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:	<p>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.</p> <p>36. [...] Partnerships among NGOs, Governments and the private sector would add significant value to ESD.</p> <p>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.</p>	
Example(s):	<p>“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 <i>Collection of Good Practices in ESD</i> (http://www.unece.org/env/esd/GoodPractices/list.html#S).</p> <p>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 inter-disciplinary in nature. Stakeholders in this ESD programme also include civil society organizations and former students. See the <i>Collection of Good Practices in ESD</i> (http://www.unece.org/env/esd/GoodPractices/list.html#S) and the GEDUC website (http://www.geduc.org/projets/metacours.html).</p> <p>The Baltic University Programme, coordinated by Uppsala University (Sweden) since 1991, involves national and local TV companies in Finland, Latvia and</p>	

	<p>Poland, municipalities/local administrations, the Union of Baltic Cities and NGOs (http://www.balticuniv.uu.se/).</p> <p>The Government of the United Kingdom has established an NGO “sounding board” to test their ESD initiatives (see 1.2.6).</p> <p>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). 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.</p> <p>In Germany, the United Nations Decade of ESD is organized as a multi-stakeholder process (see 1.2.6 and www.bne-portal.de).</p>
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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?	
	<i>Type:</i> Qualitative; “Input”	<i>Sources of information:</i> 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:	<p>“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.”</p> <p>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.</p> <p>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</p>	

	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):	<p>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.</p> <p>The pilot course “Ecology and sustainable development” was introduced in 2008 with undergraduate programme at the Pavlodar State Pedagogical Institute in Kazakhstan.</p> <p>In Sweden, SD/ESD is introduced within in initial teacher training in optional and compulsory courses, and most institutions that train teachers to cooperate or use materials from the Global School for education of global SD (http://www.denglobalaskolan.com/).</p>

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	

	<p>materials and guidelines were developed and published.</p> <p>Annual in-service training sessions are being organized in Slovenia for teachers of eco-schools, health-promoting schools and UNESCO-associated schools.</p> <p>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.</p> <p>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.</p>
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Sub-indicator 3.1.3.	Is ESD a part of training of leaders and administrators of educational institutions?	
	<i>Type:</i> Qualitative; “Input”	<i>Sources of information:</i> 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):	<p>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, cooks, housekeepers).</p> <p>In the United Kingdom, the Centre for Excellence in Leadership has published <i>Leadership for sustainability: Making sustainable development a reality for leaders</i> (www.centreforexcellence.org.uk).</p> <p>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 <i>Collection of Good Practices in ESD</i> (http://www.unece.org/env/esd/GoodPractices/list.html#U).</p> <p>In Sweden, leaders and administrators have received basic training of SD/ESD in some universities within Environmental Management Systems (e.g.</p>	

<p>http://www.mls.adm.gu.se/ and http://www.hig.se/miljo/).</p> <p>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/).</p>

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?	
	<i>Type:</i> Qualitative; “Output”	<i>Sources of information:</i> 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):	<p>A Forum of University Teachers in Czech Republic gathers those involved in ESD 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).</p> <p>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).</p> <p>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).</p> <p>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)</p> <p>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).</p>	

	<p>Many school teachers in Sweden are cooperating with the Global School (http://www.denglobalaskolan.com/).</p> <p>In Sweden there is also the HU2- network for SD in higher education (http://www.hu2.se/).</p> <p>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/).</p> <p>Other relevant networks are as follows:</p> <p>Slovenian national network of coordinators of the eco-schools. (http://www.drustvo-doves.si/es/?page=uvodang)</p> <p>United Kingdom Higher education partnership for sustainability in 2000–2003.</p> <p>United Kingdom Sustainability Integration Group Network (SIGnet) (www.sig-net.org.uk).</p> <p>Scottish Universities Network for Sustainability (SUNS) (www.suns.org.uk).</p> <p>Czech Eco-Counseling network (STEP) (http://www.ekoporadna.cz/).</p> <p>National network of Eco-schools (http://www.eco-schools.org/index.htm).</p> <p>Denmark: (www.uboportalen.dk).</p> <p>Norway: (www.miljolare.no).</p> <p>Poland: (www.OAI.pl).</p> <p>The Netherlands: (www.dho.nl) for ESD in Higher Education and (www.duurzamepabo.nl) for ESD in teacher education.</p> <p>MEDIES (www.medies.net).</p>
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Sub-indicator 3.2.2.	Are ESD networks/platforms supported by the Government in any way?	
	<i>Type:</i> Qualitative; “Input”	<i>Sources of information:</i> 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	

	<p>frameworks.</p> <p>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 actors⁵.</p> <p>75. The cost of implementing this Strategy should, in general, be borne by each country. Governments should therefore ensure that appropriate resources are available.[...]</p>
Example(s):	<p>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/).</p> <p>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.</p> <p>The national ESD network in Lithuania has permanent financial support from the Ministry of Education and Science.</p> <p>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.</p> <p>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).</p> <p>A Web portal (www.uboportalen.dk) is supported by the Danish Government.</p> <p>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.</p> <p>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.duurzaammbbo.nl/dmbo/web/)).</p>

⁵ Some countries have introduced the “knowledge management” approach.

	<p>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).</p> <p>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).</p>
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ISSUE 4. ENSURE THAT ADEQUATE TOOLS AND MATERIALS FOR ESD ARE ACCESSIBLE

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?	
	<i>Type:</i> Qualitative; “Input”	<i>Sources of information:</i> Relevant Ministries / public authorities
Description:	<p>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.</p> <p>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.</p>	
Relevant passage(s) from the Strategy:	<p>33. To be effective ESD should: [...] (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.</p> <p>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.</p> <p>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.</p>	
Example(s):	<p>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</p>	

	<p>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.</p> <p>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 <i>Collection of Good Practices in ESD</i> (http://www.unece.org/env/esd/GoodPractices/list.html#R).</p>
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Sub-indicator 4.1.2	Is public (national, subnational, local) authority money invested in this activity?	
	<i>Type:</i> Qualitative; “Input”	<i>Sources of information:</i> 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):	<p>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.</p> <p>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.</p>	

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?	
	<i>Type:</i> Qualitative; “Input”	<i>Sources of information:</i> Relevant Ministries / public authorities
Description:	<p>For (a), “supported” means “developed using public money”.</p> <p>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.</p> <p>In different countries in the UNECE region, different schemes exist for producing, adopting and/or testing and recommending materials. In all cases, Governments should:</p> <ul style="list-style-type: none"> • 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:	<p>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.</p>	
Example(s):	<p>“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).</p> <p>Forty countries from the EU and Eastern Europe, Caucasus and Central Asia (EECCA) have eco-schools programmes that include quality criteria for ESD materials and toolkits (http://www.eco-schools.org/).</p> <p>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).</p> <p>The Dutch organization for curriculum development (SLO) has prepared a</p>	

	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?	
	<i>Type:</i> Qualitative; “Input”	<i>Sources of information:</i> 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:	<p>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.</p> <p>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.</p> <p>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 [...].</p>	
Example(s):	<p><i>Trajnostni razvoj v solah in vrtcih</i> is a Slovenian magazine on ESD in kindergartens and schools (www.zrss.si).</p> <p>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.</p> <p>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).</p> <p>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.</p>	

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?	
	<i>Type:</i> Qualitative; “Input”	<i>Sources of information:</i> 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 <i>Bedrník</i> 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?	
	<i>Type:</i> Qualitative; “Input”	<i>Sources of information:</i> 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	

	<p>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.</p>
Relevant passage(s) from the Strategy:	<p>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.</p> <p>76. Governments should consider using budgets and economic incentives to finance ESD for all forms of education, [...].</p>
Example(s):	<p>The Government of the Republic of Moldova supported the establishment of a Centre for Environmental Information (http://www.cim.moldova.md/).</p> <p>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 <i>Collection of Good Practices in ESD</i> (http://www.unece.org/env/esd/GoodPractices/list.html#N).</p> <p>Under sub-indicator 4.1.1, see the support scheme for materials produced on EE/ESD in Greece.</p> <p>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)</p> <p>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.</p> <p>“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/).</p>
Sub-	Are approved ESD teaching materials available through the Internet?

indicator 4.3.3.	<i>Type:</i> Qualitative; “Input”	<i>Sources of information:</i> 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):	<p>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).</p> <p>See the Danish website devoted to the United Nations Decade of ESD (uboportalen.dk).</p> <p>The Finnish ENO-Environment online is a global virtual school and portal for SD (http://www.joensuu.fi/eno/basics/briefly.htm).</p> <p>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 <i>Collection of Good Practices in ESD</i>: (http://www.unece.org/env/esd/GoodPractices/list.html#P).</p> <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).</p> <p>See also the REC-CEE GREENPACK educational kit</p>	

	<p>(http://greenhorizon.rec.org/bulletin/Bull1111/recnews.html).</p> <p>WWF-UK: “Learning for Sustainability” – pupil online discussion. (http://www.wwflearning.org.uk/wwflearning-home/lfs-programme/)</p> <p>In Sweden, materials are available through the Global school. (see 2.6.1) (http://www.denglobalaskolan.com/).</p> <p>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).</p> <p>Germany: see 4.3.1.</p>
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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?	
	<i>Type:</i> Qualitative; “Input”	<i>Sources of information:</i> Relevant Ministries / public authorities
Description:	<p>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).</p> <p>Please specify by providing the most advanced examples of metadata on ESD teaching tools/materials available at the national level.</p>	
Relevant passage(s) from the Strategy:	See relevant passages from the Strategy under 4.3.3 above.	
Example(s):	<p>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).</p> <p>Data bases on international eco-schools project: (www.eco-schools.org).</p> <p>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).</p> <p>“Plug In2 the Environment” an eco-interactive experience, Malta. <i>Collection of Good Practices in ESD</i>: (http://www.unece.org/env/esd/GoodPractices/list.html#M).</p> <p>Polish Citizen Information Agency (http://oai.pl/) is a forum for exchanging</p>	

	<p>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 <i>Collection of Good Practices in ESD</i>: (http://www.unece.org/env/esd/GoodPractices/list.html#P).</p> <p>Serbian initiative “Interactive Farm” (http://www.interaktivnafarma.org/). <i>Collection of Good Practices in ESD</i>: (http://www.unece.org/env/esd/GoodPractices/list.html#S).</p> <p>Internet library on the website of the international NGO – Central Asian Regional Environmental Centre (www.carec.kz).</p>
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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?	
	<i>Type</i> : Qualitative; “Input”	<i>Sources of information</i> : Relevant Ministries
Description:	<p>“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.</p> <p>ESD-related research can be supported through institutional changes, new types of communication, different visions and approaches.</p>	
Relevant passage(s) from the Strategy:	<p>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.</p> <p>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.</p> <p>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; [...].</p>	
Example(s):	<p>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</p>	

	<p>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.</p> <p>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).</p> <p>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).</p>
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Sub-indicator 5.1.2	Does any research evaluate the outcome of the implementation of the UNECE Strategy for ESD?	
	<i>Type:</i> Qualitative / Quantitative; “Input”	<i>Sources of information:</i> 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. <i>See Learning from each other: achievements, challenges and the way forward – Report on progress in implementation of the UNECE Strategy for ESD</i> (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?
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	<i>Type: Qualitative; “Input”</i>	<i>Sources of information: Ministry of Education; Institutions of Higher Education</i>
Description:	<p>Research <u>on</u> 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.</p> <p>Research <u>addressing</u> ESD refers to SD-related studies (e.g. clean production, sustainable consumption and production, water management, sustainable energy) that include ESD components.</p> <p>The sub-indicator asks for the specification of any available programmes at both master’s and doctorate levels.</p>	
Relevant passage(s) from the Strategy:	<p>20. Higher education should contribute significantly to ESD in the development of appropriate knowledge and competences.</p> <p>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, [...].</p> <p>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.</p>	
Example(s):	<p><i>(1) (a) On ESD at the master’s level</i></p> <p>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/).</p> <p><i>(1) (b) On ESD at the doctorate level</i></p> <p>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.</p> <p><i>(2) (a) Addressing ESD at the master’s level</i></p> <p>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.</p>	

	<p>There are programmes addressing ESD at the master's level at the universities of Moscow and St. Petersburg in the Russian Federation.</p> <p>In Sweden, master's programmes are available in several universities. e.g. at Linköping University (http://www.tema.liu.se/tema-v/masterprogramme/).</p> <p><i>(2) (b) Addressing ESD at the doctorate level</i></p> <p>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).</p> <p>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/).</p> <p>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).</p>
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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?	
	<i>Type:</i> Qualitative; "Input"	<i>Sources of information:</i> 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):	<p>The Teacher Development Agency in the United Kingdom makes scholarships available to providers of master's-level programmes who run ESD courses.</p> <p>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.</p>	

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?	
	<i>Type:</i> Qualitative; “Input”	<i>Sources of information:</i> Ministry of Education; educational institutions
Description:	<p>Support can include institutional frameworks and policy measures, grant schemes, training, workshops, conferences, etc.</p> <p>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.</p> <p>Please provide information on:</p> <ul style="list-style-type: none"> (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):	<p>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).</p> <p>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.</p> <p>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.</p> <p>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</p>	

	<p>materials.</p> <p>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).</p> <p>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 <i>Good Practices in ESD</i>: (http://www.unece.org/env/esd/GoodPractices/list.html#P).</p> <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 <i>Good Practices in ESD</i>: (http://www.unece.org/env/esd/GoodPractices/list.html#A).</p> <p>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.</p>
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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?	
	<i>Type:</i> Qualitative / Quantitative; “Input”	<i>Sources of information:</i> Ministry of Education; governmental agencies outside education system; institutions of higher education, NGOs
Description:	<p>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)</p> <p>Please provide information on:</p> <p style="margin-left: 40px;">(a) Who provides the support;</p> <p style="margin-left: 40px;">(b) In what way;</p>	

	(c) The total amount spent annually over the reporting period.
Relevant passage(s) from the Strategy:	<p>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.</p> <p>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.</p>
Example(s):	<p>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).</p> <p>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).</p> <p>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.</p>

Sub-indicator 5.3.2	Are there any scientific publications: (a) specifically on ESD? (b) addressing ESD?	
	<i>Type:</i> Qualitative; “Input”	<i>Sources of information:</i> Education and research institutions; relevant Ministries; NGOs; publishers
Description:	<p>For “on ESD” and “addressing ESD”, please refer to the description under sub-indicator 5.1.3.</p> <p>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).</p> <p>Scientific publications should include both printed and electronic versions. This sub-indicator can include reviewed as well as non-reviewed publications.</p>	
Relevant passage(s) from the Strategy:	<p>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.</p> <p>60. Key actions to achieve this [promote research on and development of ESD]</p>	

	could be to [...] share the results of research and examples of good practices.
Example(s):	<p>The following publications have been published in the Czech Republic:</p> <p>Činčera, Jan, <i>Environmentální výchova: od cílů k prostředkům</i>. (Environmental education: from goals to tools) Brno, Paido, 2007, ISBN 978-80-7315-147-8, 116 pp.</p> <p>Horká, Hana, <i>Výchova pro 21. století. Koncepce globální výchovy v podmínkách české školy</i>. (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.</p> <p><i>Envigogika</i>, 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.</p> <p>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.</p> <p><i>Environmental Education Research</i> 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)</p>

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

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 networks on ESD?	
	<i>Type:</i> Qualitative / Quantitative; “Input”	<i>Sources of information:</i> Report of relevant authorities
Description:	<p>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).</p> <p>Please specify global, regional and/or subregional networks.</p> <p>In the case of “support”, please specify what kind of support.</p>	

<p>Relevant passage(s) from the Strategy:</p>	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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 accordingly⁷.</p> <p>68. Key actions could be to: strengthen existing regional and subregional alliances and networks working on ESD and encourage twinning programmes,</p>
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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.

	<p>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.</p> <p>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.</p>
Example(s):	<p>The Ministries of Education and of Environment in five Central Asian countries (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) are together with an NGO network on ESD and are included in the Central Asian Working Group (CAWG) on ESD.</p> <p>In the Baltic region, there are the Baltic University Programme (http://www.balticuniv.uu.se/) and Baltic 21E (http://www.baltic21.org/).</p> <p>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.</p> <p>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/).</p> <p>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).</p>

Sub-indicator 6.1.2	Do educational institutions/organizations (formal and non formal) in your country participate in international networks related to ESD?	
	<i>Type:</i> Qualitative / Quantitative; “Output”	<i>Sources of information:</i> Report of relevant authorities
Description:	<p>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).</p> <p>Please specify the participating educational institutions/organizations (formal and non-formal), and list the major networks in which they are involved.</p>	
Relevant passage(s) from the Strategy:	See relevant passages from the Strategy under 6.1.1 above.	
Example(s):	<p>Many institutions from different countries participate in the following networks:</p> <p>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)</p> <p>Global Seminar – a worldwide learning community (http://www.globalseminar.org/)</p> <p>Baltic Sea Project (BSP) (http://www.bspinfo.lt/)</p> <p>Foundation for Environmental Education (FEE) (www.fee.org).</p> <p>Environment and Schools Initiatives (ENSI) (http://www.ensi.org/).</p> <p>International Network on Reorienting Teacher Education Towards Sustainability (http://unesdoc.unesco.org/images/0014/001433/143370E.pdf)</p> <p>In the Baltic region: Baltic University Programme (http://www.balticuniv.uu.se/) and Baltic 21E (http://www.baltic21.org/)</p> <p>MIO-ECSDE (www.mio-ecsde.org): see MEDIES (www.medies.net).</p> <p>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).</p> <p>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).</p> <p>Examples of informal cooperation through bilateral or multilateral projects</p>	

	<p>include :</p> <p>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/).</p> <p>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/).</p> <p>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).</p> <p>IUCN Commission of Education and Communication (http://cec.wcln.org/index.php?module=pagesetter&func=viewpub&tid=11&pid=124).</p> <p>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).</p>
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Sub-indicator 6.1.3	Are there any State, bilateral and/or multilateral cooperation mechanism/agreements that include an explicit ESD component?	
	<i>Type:</i> Qualitative / Quantitative; “Output”	<i>Sources of information:</i> Report of relevant authorities
Description:	<p>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).</p> <p>Cooperation can be regarded both from donor and beneficiary perspectives.</p> <p>Please specify the major examples.</p>	
Relevant passage(s) from the Strategy:	<p>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 Convention⁸, the United Nations Millennium</p>	

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

	<p>Development Goals⁹ and Quality Education¹⁰ by promoting transparent, inclusive and accountable decision-making as well as people's empowerment.</p> <p>27. ESD should promote provisions of multilateral relevant international agreements related to SD.</p> <p>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.</p> <p>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 accordingly¹².</p> <p>In addition, see the relevant passages from the Strategy under 6.1.1 above.</p>
Example(s):	<p>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).</p> <p>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.</p> <p>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.</p>

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.

	<p>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.</p> <p>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.</p> <p>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 <i>From Environmental Education to Education for Sustainable Development</i> by F. Webster (FSC, United Kingdom). See the <i>Collection of Good Practices in ESD</i>: (http://www.unece.org/env/esd/GoodPractices/list.html#U).</p>
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Sub-indicator 6.1.4	Does your Government take any steps to promote ESD in international forums outside the UNECE region?	
	<i>Type:</i> Qualitative; “Output”	<i>Sources of information:</i> 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:	<p>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 Goals¹³ and Quality Education¹⁴ by promoting transparent, inclusive and accountable decision-making as well as people’s empowerment.</p> <p>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.</p>	

¹³ United Nations Millennium Declaration, The General Assembly, 8th plenary meeting, 2000.

¹⁴ Ministers of Education Joint Communiqué, 32nd General Conference of UNESCO, 2003.

Example(s):	<p>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.</p> <p>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).</p> <p>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 Consumption”, 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.</p> <p>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.</p>
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ISSUE 7. FOSTER CONSERVATION, USE AND PROMOTION OF KNOWLEDGE OF INDIGENOUS PEOPLES, AS WELL AS LOCAL AND TRADITIONAL KNOWLEDGE IN ESD

Description:	<p>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.</p> <p>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.</p> <p>This issue investigates whether inclusion of indigenous peoples in society is ensured. In some countries, minority rather than indigenous groups exist, and/or</p>
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	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):	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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. [...]”</p>

Annex III

GLOSSARY

1. The glossary was revised by the UNECE Expert Group on Indicators for Education for Sustainable Development (ESD), jointly with the United Nations Educational, Scientific and Cultural Organization (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.
2. **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 concrete environmental 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.
3. **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.
4. **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.
5. **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).

6. **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.

7. **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 equal 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.

8. **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.

9. **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 (ECCE) 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.

10. **Ecological basic education** (environmental education in its 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.

11. **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).

12. **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.

13. **Educators** include teachers, lecturers and trainers as well as facilitators, guides and interpreters.

14. **Environmental education** and education for sustainable development (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.

15. 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.

16. 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.

17. **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.

18. **Formal learning** takes place in education and training institutions, leading to recognized diplomas and qualifications.

19. **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 understanding 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.

20. **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.

21. **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.

22. **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.

23. **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.

24. **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).

25. **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.

26. **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.

27. **Learners** are pupils, students and participants of training sessions.

28. **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.

29. **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.

30. **Learning** is the process through which knowledge, values and skills are developed. The processing of information 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).

31. **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.

32. **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.

33. **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.

34. **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.

35. **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.

36. **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.
37. **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).
38. **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.
39. **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.
40. **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.
41. **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.
42. **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.
43. **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.
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44. **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).
45. **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.
46. **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.
47. **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.
48. 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.

49. **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.

50. **Sustainable development** is defined as development “that meets the needs of the present without compromising 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.

51. **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.

52. **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.

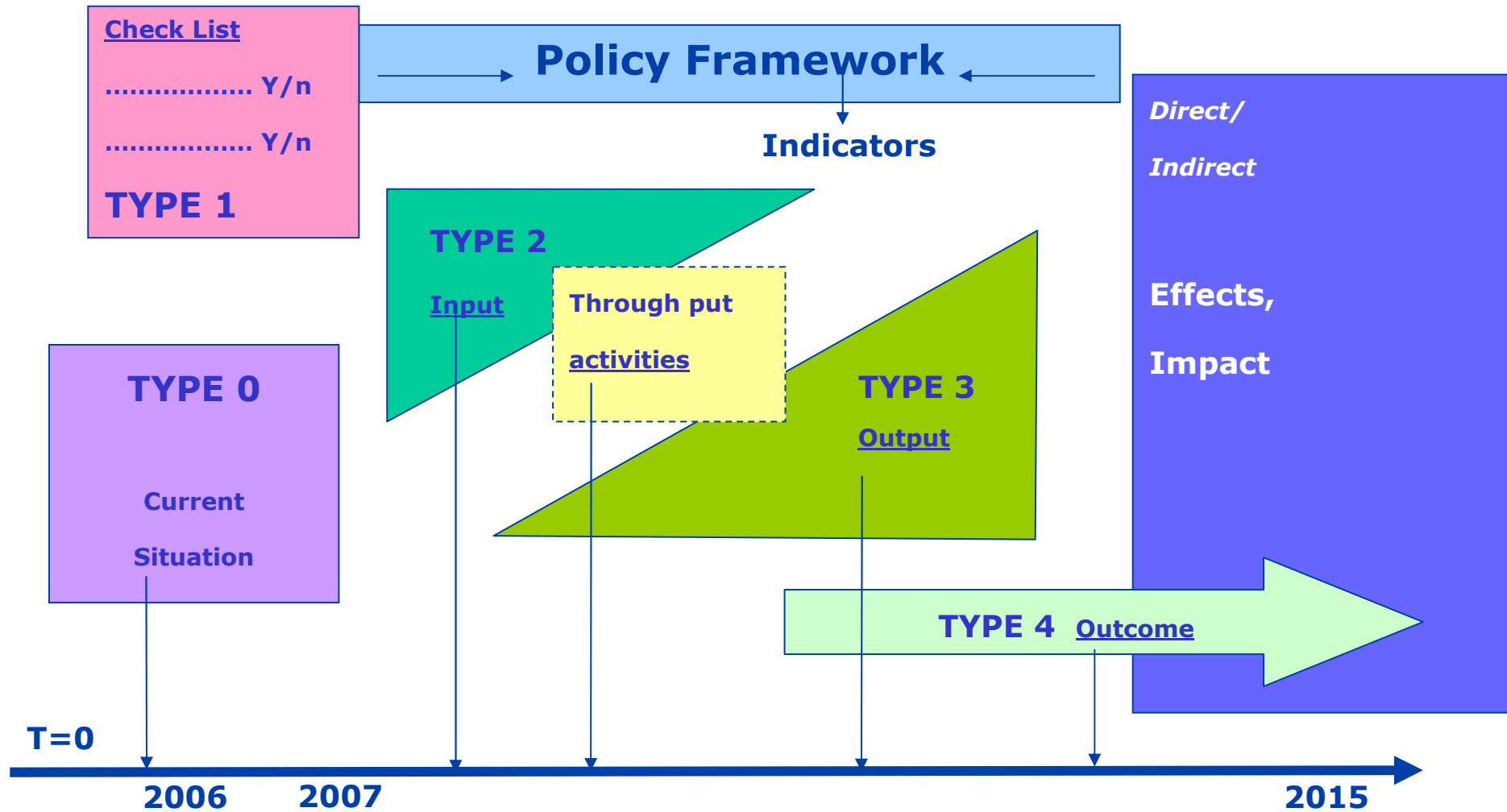
53. **Tertiary or higher education.** Tertiary education also referred to as third stage or third level of education; it also includes vocational education. Higher education is normally taken to include undergraduate and postgraduate education. It is education at a higher level than secondary school, and is usually provided in distinct institutions such as universities.

54. **Training** is learning a skill through practical application.

55. **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.

56. **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.
57. **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.
58. **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.
59. **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.
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Annex IV
THE EVALUATION MODEL



Annex V

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
