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

**DRAFT LIST OF DESCRIPTORS<sup>1</sup> FOR ESD INDICATORS<sup>2</sup>**

*WORKING PAPER*

Prepared by the Chair of the Expert Group on Indicators for ESD  
with the assistance of the secretariat

**Introduction**

This is a working paper containing the draft list of descriptors developed by the Expert Group on Indicators for ESD. The descriptors aim at supporting the qualitative aspect of the reporting process by providing a more detailed description, as well as identifying examples and good practices for each indicator/sub-indicator. In conjunction with the informal guidance for reporting, descriptors will serve as a valuable tool to enhance the implementation process, its monitoring and evaluation, as well as to facilitate the exchange of experience (by sharing good practices) amongst countries, thereby contributing to the “Learning from each other” process. For more details about the concept of descriptors, please refer to the progress report on the work of the Expert Group submitted to the third meeting of the Steering Committee (ECE/CEP/AC.13/2008/4).

The working paper is still under development and aims to provide a general overview of the descriptors. The Steering Committee may wish to decide to extend the mandate of the Expert Group to finalize this tool. A proposal for the extension of the mandate is provided in Information Paper No. 1.

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<sup>1</sup> Descriptors comprise of rationale, evidence, criteria and good practices, and aim at describing and explaining those indicators and/or sub-indicators that were not clear to the National Focal Points who filled in the questionnaire. They are complemented with good practices and/or examples. Some definitions are already given in the informal guidance for reporting, possibly these two documents could be merged. Good practices in ESD are available on the UNECE website: <<http://www.unece.org/env/esd/GoodPractices/index.html>>.

<sup>2</sup> This document was not formally edited. The informal guidance document with some updates to be made will serve as an introductory part for the list of descriptors.

**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**

<b>Sub-indicator 1.1.1</b>	<u>Is the UNECE Strategy for ESD available in your national<sup>3</sup> language(s)?</u>
Description:	
Relevant quote from the Strategy :	42. Each country is responsible for implementing this Strategy. To include SD perspectives throughout education, strong political support will be necessary at all levels of governance. To that end, it is recommended that countries should translate this Strategy into their official language(s), and, as appropriate, language(s) of minorities, and distribute it to the relevant authorities and designate a focal point.
Illustration (examples/good practices/case studies):	<u>Sweden</u> : "UNECE Strategi för Utbildning för hållbar utveckling" Available at <a href="http://www.regeringen.se">www.regeringen.se</a>

<b>Sub-indicator 1.1.2</b>	Have you appointed a national focal point to deal with the UNECE Strategy for ESD?
Description:	The national focal point (NFPs) is designated by the Government as the central body in charge of coordinating ESD-related activities under the framework of UNECE Strategy for ESD at the national and international levels. The NFPs is in charge of preparation of the national implementation report (NIR). The NFPs serves also as a mailing box or contact person for the UNECE secretariat. 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.
Relevant quote from the Strategy/Vilnius framework :	42. (Strategy) Each country is responsible for implementing this Strategy. To include SD perspectives throughout education, strong political support will be necessary at all levels of governance. To that end, it is recommended that countries should translate this Strategy into their official language(s), and, as appropriate, language(s) of minorities, and distribute it to the relevant authorities and designate a focal point.  13. (Vilnius framework) To ensure efficient regional governance and communication, focal points for education for sustainable development are required in all UNECE member States and in relevant international organizations.
Illustration (examples/good practices/case studies):	

<b>Sub-indicator 1.1.3</b>	Do you have a coordinating body for implementation of ESD? <i>Please specify its mandate and coordinating mechanism. Please also specify whether its mandate covers implementation of the UNECE Strategy for ESD.</i>
Description:	The coordinating body is a group of people that forms an appropriate representation of all involved stakeholders; it ensures and strengthens the cooperation within and between government(s), NGO's and other stakeholders in the field of ESD.
Relevant quote	47. There is a need for a coordination mechanism for implementing the Strategy at the

<sup>3</sup> 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 substate entities.

from the Strategy :	State level, as well as for sharing information and stimulating partnerships among different actors <sup>4</sup> . 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.
Illustration (examples/good practices/case studies):	<u>In Armenia</u> : an inter-institutional Commission has been established by the Decree of the RA Minister of Education and Science in 2005 with the aim to coordinate and facilitate the implementation of the Strategy following its adoption. The Commission consists of representatives of different ministries, institutions and NGOs, specialists on education, environmental protection and sustainable development, scientists, lecturers and others. The objective of the Commission is defining national priorities for implementation of the provisions of the Strategy and developing a National Implementation Plan.

<b>Sub-indicator</b> <b>1.1.4</b>	Do you have a national implementation plan for ESD? <i>Please specify whether this plan includes implementation of the UNECE Strategy for ESD.</i>
Description:	The UNECE Strategy should be transposed into a national implementation plan (NIP) for ESD. The NIP should be adopted by the Government.
Relevant quote from the Strategy :	48. National <sup>19</sup> (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.
Illustration (examples/good practices/case studies):	<u>Austria</u> – Development of national strategy for ESD (governmental); <u>Finland</u> – national strategy and guidelines for ESD (governmental); <u>Nordic Council of Ministers</u> – Strategy for SD (subregional). <i>These are available on the website:</i> < <a href="http://www.unece.org/env/esd/GoodPractices/index.html">http://www.unece.org/env/esd/GoodPractices/index.html</a> >

<b>Sub-indicator</b> <b>1.1.5</b>	Are there any synergies at the national level between UNECE ESD process, the UNESCO global process on the UN Decade of ESD, <sup>5</sup> and other policy processes relevant to ESD? <i>Please specify</i>
Description:	In 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 synergies and mutual benefits. A national platform to facilitate coordination of activities should be established to bring together e.g. NFP for the UNECE Strategy, National Commission to UNESCO, and other relevant actors.
Relevant quote from the Strategy :	1. The mandate to develop the Strategy derives from the statement made by the UNECE Environment Ministers at their fifth “Environment for Europe” Conference (Kiev, May 2003). The Strategy benefited from experience gained both within the region and globally. It is a contribution to and in line with the Framework for a draft implementation scheme for the United Nations Decade of Education for Sustainable

<sup>4</sup> Some countries introduced „knowledge management approach“.

<sup>5</sup> The United Nations General Assembly in its resolution 57/254 of 20 December 2002 proclaimed the 10-year period beginning on 1 January 2005 the United Nations Decade of Education for Sustainable Development.

	Development developed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and should be used as a foundation for the regional implementation of the Decade and outcomes of the World Summit on Sustainable Development.
Illustration (examples/good practices/case studies):	<p><u>Baltic region:</u> Connected to <u>An Agenda 21 for Education in the Baltic Sea Region – Baltic 21E</u> <a href="http://www.baltic21.org">www.baltic21.org</a></p> <p><u>Sweden:</u> A lot of seminars has been carried out among other things in preparing for the international conference in Gothenburg in march 2008 e.g. <a href="http://portal.unesco.org/education/en/ev.php-URL_ID=53025&amp;URL_DO=DO_TOPIC&amp;URL_SECTION=201.html">http://portal.unesco.org/education/en/ev.php-URL_ID=53025&amp;URL_DO=DO_TOPIC&amp;URL_SECTION=201.html</a></p> <p><i>[We need examples in carrying out joint activities at the national/subnational/local levels, including organizing trainings, seminars, conferences with participation of all relevant national actors (in charge of UNECE strategy, UN DESD, and other policy processes relevant to ESD).]</i></p>

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

<b><u>Sub-indicator</u></b> <b><u>1.2.1</u></b>	Is ESD reflected in any national policy <sup>6</sup> document(s)? <i>Please specify and list major document(s)</i>
Description:	
Relevant quote 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. 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.</p>
Illustration (examples/good practices/case studies):	<p><u>Armenia:</u> In 2006 the Council of Safety and the Ministry of Defense developed “National Safety Strategy” program. The program underwent the process of wide discussions including by the National Parliament. The proposals on SD principles made by scientific sector and NGOs were included in the Strategy. Presently, the Strategy is adopted by the Government of RA.</p> <p><u>Sweden:</u> The National Strategy for Sustainable Development: a development of the national strategy for sustainable development was launched in March 2006. This is the</p>

<sup>6</sup> Policy documents may include national strategies, plans, programmes, guidelines and the like.

	third version of the Government's view on sustainable development and plans in order to attain a sustainable development. Education has a central role in this work.
<b>Sub-indicator 1.2.2</b>	Is ESD: (a) addressed in relevant national education legislation/regulatory document(s); and (b) included in your national curricula and/or national standards/ordinances/ requirements; at all levels of formal education, as understood by your education system in accordance with ISCED? <sup>7</sup> <i>Please specify for (a) and (b). Fill in the table by ticking (V) as appropriate.</i>  <i>[Explain better the need „to specify“ in addition to ticking the table!]</i>
Description:	
Relevant quote 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.
Illustration (examples/good practices/case studies):	<u>Armenia:</u> (a) In 2001 the Law on “Environmental Education” was adopted in the Republic of Armenia. According to the Law, environmental education should be provided to the person during his/her whole lifetime, starting from childhood till the age of maturity for formation of environmental outlook and understanding to participate in the process of environmental protection and conservation. It is stated as well that “The formation of person’s ecological culture should necessarily contribute to SD...” (b) In 2004 “State Educational Concept of General Education” (State Curriculum and State Standards of Secondary Education) and “State Standards of Vocational Education” were adopted by the Ministry of ES, in which separate sections are devoted to ESD. <u>Sweden:</u> A National Act on Higher Education was adopted stipulating the inclusion of Sustainable Development into all study programmes and courses at the higher education level.  <u>Sweden:</u> According to the Swedish Education Act and the curricula for the whole school system democracy forms the basis of the national school system. The Education Act (1985:1100) stipulates that all school activity shall be carried out in accordance with fundamental democratic values and that each and everyone working in the school shall encourage respect for the intrinsic value of each person as well as for the environment we all share This is transformed into syllabi for courses and subjects at all levels of the Swedish school system that include the aim of education for sustainable development. <a href="http://www.sweden.gov.se/sb/d/574/a/21538">http://www.sweden.gov.se/sb/d/574/a/21538</a> and <a href="http://www3.skolverket.se/ki03/front.aspx?sprak=EN">http://www3.skolverket.se/ki03/front.aspx?sprak=EN</a>
<b>Sub-indicator 1.2.3</b>	Are non-formal and informal ESD addressed in your relevant national policy and/or regulatory document(s) and operational frameworks? <i>Please specify.</i>
Description:	Explanation of the difference between ‘informal’ and ‘non formal’ is given in the Guidance.

<sup>7</sup> International Standard Classification of Education (ISCED), UNESCO, 1997 ([http://www.unesco.org/education/information/nfsunesco/doc/isced\\_1997.htm](http://www.unesco.org/education/information/nfsunesco/doc/isced_1997.htm)).

<p>Relevant quote from the Strategy :</p>	<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: stimulate competence development for staff in the education system, including actions for the leaders to increase their awareness of SD issues; develop criteria for validating professional competence in ESD; introduce and develop management systems for SD in formal educational institutions and non-formal education settings; include SD-related issues in training and re-training programmes for educators for all levels of education; and encourage educators, including those involved in non-formal and informal education, to share experiences.</p>
<p>Illustration (examples/good practices/case studies):</p>	<p><u>Sweden:</u> Yes, in the Government Bill for Adult Education 2005/06:192 “ Learn, grow and change” and in the Regulation for State Grants to Liberal Adult Education (1991:977, last change is due 2007-02-01). The reason for State Grants to liberal adult education is specified in 7 fields of action, and one of them is “Health, sustainable development and global justice.”</p>

<p><b>Sub-indicator</b> <b>1.2.4</b></p>	<p>Is public awareness in relation to ESD addressed in relevant national document(s)? <i>Please specify.</i></p>
<p>Description:</p>	
<p>Relevant quote from the Strategy :</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>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.</p>
<p>Illustration (examples/good practices/case studies):</p>	<p><b>We need good practices</b> related to the meaning of public awareness (for instance radio and television campaigns, mass media).</p> <p><u>Armenia:</u></p> <ul style="list-style-type: none"> <li>- RA Constitution, the Paragraph 10 of which is on Formation of Environmental Outlook.</li> <li>- RA Law on Environmental Education.</li> <li>- Aarhus Convention, ratified by the Republic of Armenia in 2001, in partnership with the OSCE 6 regional Aarhus Centres have been established aimed at raising the awareness of population on different environmental issues (target issues for ESD).</li> </ul> <p><u>Czech Republic:</u></p> <p>In the State Program of the Environmental Education, Training and Public Awareness approved by the government in 2000 is a special paragraph on “Information, aware-</p>

	<p>ness and consultancy for general public”. It includes Information (media of all types and information services for mass media, activities for general public and awareness for sustainable consumption), environmental consultancy and citizens’ participation in decision making process.</p> <p><u>Sweden:</u></p> <ul style="list-style-type: none"> <li>- The National Strategy for Sustainable Development: a development of the national strategy for sustainable development was launched in March 2006. This is the third version of the Government’s view on sustainable development and plans in order to attain a sustainable development. Education has a central role in this work.</li> <li>- In 2006 The Council of Adult Education made a document called Folkbildning of the future, its role and objectives, where this is addressed.</li> <li>- The Council of Adult Education of the future, its role and objectives. This document is about what role and which objectives “folkbildning” – the Swedish liberal, non-formal and voluntary education system comprised of folk high schools and study associations – shall have in the future. The text is a result of a comprehensive process involving 117 conferences nationwide at which 7,000-8,000 people participated. These conferences have been documented. The majority of those who participated in these conference discussions are themselves active in folk high schools and study associations. This final overall document is consequently the voice of Adult Education.</li> </ul>
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<p><b><u>Sub-indicator 1.2.5</u></b></p>	<p>Does a formal structure for interdepartmental<sup>8</sup> cooperation relevant to ESD exist in your government? <i>Please specify.</i></p>
<p>Description:</p>	<p>‘Interdepartmental’ means ‘between state bodies’. For instance, the Ministry or Ministries that hold(s) the initiative on ESD should work together on ESD with (many) other Ministries;</p>
<p>Relevant quote from the Strategy :</p>	<p>10. The Strategy encourages interdepartmental, multi-stakeholder cooperation and partnerships, thereby stimulating investment of material and human resources in ESD.</p> <p>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.</p>
<p>Illustration (examples/good practices/case studies):</p>	<p><u>Armenia:</u> An inter-institutional Commission regulating the activities of the UNECE ESD strategic program has been established by the Decree of the RA Minister of Education and Science in 2005. The Commission involves representatives of different ministries, institutions and NGOs, specialists on education, environmental protection and sustainable development, scientists, lecturers and others.</p> <p><u>Canada:</u> National ESD Council and Regional Working groups (governmental)</p> <p><u>Czech Republic:</u> Interdepartmental cooperation agreement on environmental education and awareness between Ministry of Environment and Ministry of Education ex-</p>

<sup>8</sup> Between state bodies.

	ists. Also, interdepartmental working group in environmental education and awareness issues under the Ministry of Environment works. Working group on UNECE ESD Strategy was established in 2006 and works since then.
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<b>Sub-indicator</b> <b>1.2.6</b>	Does a mechanism for multi-stakeholder cooperation on ESD exist with the involvement of your government? <sup>9</sup> <i>Please specify.</i>
Description:	The government is involved in this mechanism for multi-stakeholder cooperation. The mechanism is available for the long term and guarantees the possibility of continuous interaction between multi-stakeholders.
Relevant quote from the Strategy :	10. The Strategy encourages interdepartmental, multi-stakeholder cooperation and partnerships, thereby stimulating investment of material and human resources in ESD. 26. ESD requires multi-stakeholder cooperation and partnership. The main actors include governments and local authorities, the education and scientific sectors, the health sector, the private sector, industry, transport and agriculture, trade and labour unions, the mass media, non-governmental organizations, various communities, indigenous peoples and international organizations.  46... However, close and effective cooperation with other public authorities as well as with stakeholders is also required, in particular with authorities responsible for economy.  50. Policy, legislation, operational frameworks and curricula should include and support ESD. Key actions to achieve this could be to: 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.
Illustration (examples/good practices/case studies):	Examples of some mechanisms are platforms, assemblies, consultation and knowledge networks. <u>Armenia:</u> Since 2002 a "National Commission for Sustainable Development" has been established and it has been working in Armenia, according to the resolution of the Government of Armenia. It comprises representatives from scientific and non-governmental organizations.  <u>Czech Republic:</u> All mentioned interdepartmental mechanisms include NGOs as representatives of the non-formal learning institutions.  <u>The Netherlands:</u> SD in the entire formal education system (governmental)  <u>Sweden:</u> through consultations in the preparations of new laws as well as through temporary groups in relation to specific projects.

<sup>9</sup> For explanation see paragraph 46 of the Strategy.

<b><u>Sub-indicator</u></b> <b><u>1.2.7</u></b>	Are public budgets and/or economic incentives available specifically to support ESD? <i>Please specify.</i>
Description:	Financial incentives (public budget/ economic incentives) are used as an instrument specifically for the support of ESD. Because ESD is of an integrated nature, it implies that for this sub-indicator financial budgets for one single theme (for instance health, energy saving) should not be included in the response.
Relevant quote 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 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.
Illustration (examples/good practices/case studies):	<u>The Netherlands:</u> .... <u>UK:</u> ... <u>Italy:</u> ...

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

<b><u>Sub-indicator</u></b> <b><u>1.3.1</u></b>	Is ESD part of SD policy(s) if such exist in your country? <i>Please specify.</i>
Description:	ESD is an important tool for realization of different SD policy goals. On the other hand, ESD benefits from development and realization of SD policy concepts and strategies.
Relevant quote from the Strategy :	43. Effective implementation of the Strategy requires its provisions to be integrated into the planning, investment and management strategies of the State and local government for all levels of education and for all educational institutions and organizations. At the same time, the implementation should be in accordance with and benefit from other relevant State, bilateral and multilateral initiatives. The legal, economic and communication instruments should be adapted to the State's circumstances. Thus, countries would implement the provisions, as appropriate, in relation to their legislation, policies and operational frameworks.
Illustration (examples/good practices/case studies):	<u>Sweden:</u> in the National Strategy for Sustainable Development, launched in March 2006. This is the third version of the Government's view on sustainable development and the plans in order to attain a sustainable development. Education has a central role in this work.

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

### **Indicator 2.1 SD key themes are addressed in formal education**

To achieve goals of sustainable development in societies ESD is the main prerequisite.

<b><u>Sub-indicator</u></b> <b><u>2.1.1</u></b>	Are key themes of SD addressed explicitly in the curriculum/programme of study at various levels of formal education?  <i>[Which specific themes are of critical importance in your context and why? (include the question in the annex)]</i>
Description:	The question ask if key themes (see Annex 1) are addressed explicitly at national, regional level, and if there is an emphasis of certain themes. The aim of this indicator is to understand the range of themes currently being addressed by curricula, courses, and projects and the relative importance of these in different contexts. For the ISCED-5 and ISCED-6 the above mentioned themes should be included into obliga-

	tory/ optional courses and/or projects implemented by HEI.
Relevant quote from the Strategy :	15. Key themes of SD include among other things poverty alleviation, citizenship, peace, ethics, responsibility in local and global contexts, democracy and governance, justice, security, human rights, health, gender equity, cultural diversity, rural and urban development, economy, production and consumption patterns, corporate responsibility, environmental protection, natural resource management and biological and landscape diversity. Addressing such divers themes in ESD requires a holistic approach.
Illustration (examples/good practices/case studies):	<p><u>UK</u>: – Scotland’s Curriculum for Excellence addresses SD under the broad theme of Citizenship, this reflects national concern with the health of civil society. In England and Wales, the National Framework for Sustainable Schools identifies eight doorways through which schools can approach SD (Transport, Energy, Waste, Health, Water, Participation, Global Dimension +??). This framework is increasingly taken into account in the self-assessment of schools</p> <p><u>Italy</u>: Heliantus - Environmental Education Project. The project directed to schools in the South of Italy, and funded through National and FSE European contribution, propose teachers and students to plan projects and activities on 10 main issues, all related to the environment but concerning not only the natural environment issues but also rural and urban development, eating habits, cultural and artistic environment, settling history, etc. . The schools were working in local networks, one for each issue, providing teachers training and using action research methods for self-assessment.</p> <p><u>Armenia</u>: Integrated course on Health and Safety as part of the ESD project- Health and safety in various sectors of society where at the centre of the project. Case studies, environmental monitoring methods, researches on health and safety, emergency situations where used.</p>

<b><u>Sub-indicator</u></b> <b><u>2.1.2</u></b>	<p>Are learning outcomes (skills, attitudes and values) that support ESD addressed explicitly in the curriculum/programme of study at various levels of formal education?</p> <p><i>[Which specific learning outcomes do you consider of critical importance in your context and why?</i></p> <p><i>What teaching/learning methods are you using to achieve these outcomes? (change the annex) (include it in the annex + add in the annex a table on the “teaching-learning methods” issue) add another sub-indicator!]</i></p>
Description:	<u>The competencies listed in Annex 1 b, have been articulated according the principles of the UNECE ESD strategy and arranged</u> 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 different contexts.
Relevant quote from the 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> <p>33.(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</p>

	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;
Illustration (examples/good practices/case studies):	<p><u>Spain (Catalonia)</u>: Complex and critical thinking is addressed explicitly in the Spanish compulsory Schools general aims. The Autonomous University of Barcelona (UAB) in collaboration with the Catalonia Regional School for Sustainable Consumption, has built complex thinking based materials to be used in workshops and activities directed to primary and secondary schools in the region. The main features of complex and systemic thinking (as interdependency, local and global relationships, multi-causalities and multi-effects, space and time scales importance, diversity relevance, uncertainty and risk, constraints as complementary to possibilities, ...) are relevant features of the activities concerning different areas of consumption habits and lifestyles.</p> <p><u>Russian Federation</u>: ASEKO – Association for Environmental Education (since 2001): a course towards the whole institution approach to ESD. The course is implemented in schools and universities since 2002. It is characterized by an interdisciplinary approach, based on study of social-ecological-economic model of the world and practice-oriented model of outstrip (“futurized”) education. The following principles are implemented: mobility, adaptability of the content and teaching methods in accordance with new challenges in local, national, global communities; students’ comprehension of the processes on local-level with keeping in mind the “big picture” – processes in their country and in the world. Interactive teaching methods are envisioned with a particular emphasize on values and attitudes as well as implementation of information and communication technologies.</p> <p><u>UK</u>: The UK Government policy, <i>Every Child Matters</i> is a national policy that seeks to enhance the well-being of children and young people from birth to age 19. The Government's aim is for every child. The participation of children and young people; the policy is based on research that demonstrates how acting on children and young people’s views brings positive outcomes including increasing young people’s sense of citizenship and social inclusion and enhancing their personal development.</p>

<b>Sub-indicator</b> <b>2.1.3</b>	Are teaching/learning methods that support ESD addressed explicitly in the curriculum/programme of study at various levels of formal education?
Description:	
Relevant quote from the Strategy :	33.(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;
Illustration (examples/good practices/case studies):	

**Indicator 2.2 Strategies to implement ESD are clearly identified**

<p><b>Sub-indicator</b> <b>2.2.1</b></p>	<p>Is ESD addressed through: (a) existing subjects only? (b) a cross-curriculum approach? (c) the provision of specific subject programs and courses? (d) a stand-alone project? e) other approaches (please specify) (<i>add column e</i>)</p>
<p>Description:</p>	<p>The aim is to know about <b>the existence of national/regional strategies or programmes</b> that support one or more of the following approaches:</p> <p>a) by dealing with ESD in one or more existing subjects: E.g. urban development and pollution in geography and /or ecology and environmental protection in biology. Each particular theme should be considered in a holistic approach to demonstrate interrelationship of economic, social and environmental issues.</p> <p>b) proposing ESD as issue-based courses where many subjects are invited to give their contribution</p> <p>c) offering specific courses or programs in ESD</p> <p>d) offering or allowing schools and university to have ESD as a specific project work, intended as a discrete activity with its own time allocation rather than a teaching/learning method.</p> <p>For higher education institutions these distinctions would be equal to:</p> <p>a) courses and disciplines, b) interdisciplinary courses, c) separate, specified SD courses or seminars, and d) stand alone projects implemented by the department, faculty or inter-faculty structures.</p> <p>(a) particular SD themes integrated into existing courses; (b) SD as an overarching concept for interdisciplinary study programme; (c) specific interdisciplinary SD course; (d) a stand alone project – practical activities for SD or non-formal training program (note 14 must be changed)</p>
<p>Relevant quote from the Strategy :</p>	<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>Illustration (examples/good practices/case studies):</p>	<p><i>(a) ESD is addressed through existing subjects</i></p> <p><u>Estonia</u>: Projects for introducing ESD in pre-primary schools. 2 projects initiated by the Netherlands Ministry of Foreign Affairs and developed by the Estonian Ministry of Environment together with the Ministry of Education supported Estonian pre-primary in developing a school curriculum integrating ESD issues into the school workplan, preparing teaching materials for both Russian and Estonian language schools.</p> <p><i>(b) ESD is addressed through cross curriculum approach</i></p> <p><u>Germany</u>: 200 schools participated in a federal state programme, they were asked and supported to develop cross-curricular approach, the following is an example: As a contribution to the local Agenda 21-process a German public secondary school has decided to adopt the idea of ESD. Teachers decided to teach ESD related topics according to the official curriculum in different school subjects. One topic was water ecology, and as concrete activity the water analysis of an eutrophicated pond nearby the school has been proposed. In order to enable pupils to learn comprehensively about the links between eutrophication and different causes of pollution, workshops, pupils' projects, excursions and talks with experts have been arranged. The pupils suggested how to enhance the quality of the pond water and their suggestions have been discussed with the environmental health officer of the city.</p>

	<p>About 55 other examples which show how to teach ESD in an integrated manner through existing subjects can be found: <a href="http://www.transfer-21.de/daten/materialien/Orientierungshilfe/Guidecompetences_engl_online.pdf">http://www.transfer-21.de/daten/materialien/Orientierungshilfe/Guidecompetences_engl_online.pdf</a> The project transfer 21 is the following of this programme supporting the dissemination of this and others results.</p> <p>(c) <u>Georgia</u>: Introduction of courses on ‘Global Environmental politics’ at the Georgian Technical University, in the master course on Environmental Sciences. The course was strongly interactive, with discussion seminars led by students, and cross-disciplinary in character. The main aim was a better understanding of critical scientific and social issues related to meeting global SD goals. The course was very innovative in the Georgian University teaching landscape.</p> <p>(d) <u>Greece</u>: An agreement between Ministry of Education, Ministry of Interior, and local authorities support school waste recycling, which is linked to special courses and materials for ESD, especially for education on sustainable consumption and production. This scheme was introduced in response to UNECE strategy.</p>
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**Indicator 2.3 A whole-institution approach to ESD/SD is promoted**

<p><b>Sub-indicator</b> <b><u>2.3.1</u></b> <b><u>2.3.2</u></b> <b><u>2.3.3</u></b></p>	<p><b>2.3.1.</b> Are there examples of educational institutions adopting a “whole-institution approach” to SD/ESD at different school levels? (a) for formal institutions (b) for non-formal institutions (e.g. museums, art galleries, national parks, ...) (c) for non-education organizations (e.g. local authorities, business, NGOs, ...)</p> <p><b>2.3.2</b> Are there any incentives (guidelines, award scheme, funding, technical support) that support “a whole institution approach to SD/ESD”?</p> <p><b>2.3.3</b> Do institutions/learners develop their own SD/ESD indicators for their institution / organization?</p>
<p>Description:</p>	<p>A “whole institution approach” means that all aspects of an institution's internal operations and external relationships are reviewed and revised in light of SD/ESD principles. Within such an approach each institution would decide on its own actions, addressing the three overlapping spheres of Campus (management operations); Curriculum (teaching/learning and research) ; and Community (external relationships). A whole institution approach does not mean that all persons in the institution are individually involved, but that ESD is recognized as a common concern, and that the institution is working as a ‘learning organisation’, reflecting on their own aims and assessing procedures and activities taken in the field of ESD. In this kind of institution some methodological elements receive a high value: internal and external collaboration, learning how to learn strategies, future orientation, etc.</p> <p>The whole institution approach to ESD is developing in many countries, and the indicator don’t ask for ‘how many institutions’ are choosing this approach but only if the approach is practiced by some institution in each ISCED level.</p> <p>Institutions as Environmental Education Centres, or NGOs, or similar, that deal with informal or not formal education, are included in ISCED level 4, or 6 if they deal with teachers training.</p> <p><i>[change the footnote 18]</i></p>
<p>Relevant quote 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</p>

	<p>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>Illustration (examples/good practices/case studies):</p>	<p><u>2.3.1. UK – Plymouth University.</u> The P. University decided to adopt a whole institutional approach in so that all aspects of university life support learning for sustainability. All departments are working together to identify and integrate SD issues in their existing curricula. A questionnaire on students’ perceptions of sustainability has been distributed to the students in order to collect their opinion and invite them to collaborate with the university staff in proposing solutions for a more sustainable management of the Campus use of resources. Collaboration with the community (NGOs, colleges and businesses) has also been set up so that the university can contribute to learning for sustainability across the region where the university is located. A strong common concern is about ‘learning how to learn’: a specific department promoting learning skills supports students and lecturers across all departments. This work includes support for teaching strategies and the development of critical and system thinking among students. A continuous systematic reflection on the activities and the results achieved is establish, inviting representatives of departments, students and external partners to document their achievements and to discuss future improvements.</p> <p><u>2.3.2 Austria: FORUM Umweltbildung</u> (since 1999): the initiative of “Sustainable Universities” was established in order to strengthen and to integrate the issues of SD in the daily life of HEIs in Austria. It includes raising the motivation for sustainable higher education as well as the institutionalization of ESD processes in HEIs, and supporting the pioneers in this field by the development of a nationwide “sustainability award” for public HEIs. Herein, the main focus is on continuous processes of “sustainable higher education” and not on temporary projects, single persons or single events. The award is divided into 8 different action fields (such as curricula, operations or students initiatives), universities can submit their contribution to this contest according to their individual strengths to win the award in one particular action field related to their own opportunities.</p> <p><u>Sweden:</u> the Sustainable School Award . The purpose of the Award is to support and inspire schools from pre-primary to adult education bodies to become a sustainable school, meeting the requisite set by the Swedish National Agency for School Improvement. The requisites deal with educational leadership, teachers and staff training, teaching approach and active roles of students, cooperation with local community. The development work must be documented and the ESD requisites are analysed and evaluated.</p> <p><u>Germany:</u> Incentives that support a whole institutional approach are given, e.g. within the context of the national activities according to the UN DESD: organisations, projects and even 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. If so and the applicants achieved the criteria and requirements, they can be officially awarded and are launched on the UN DESD online portal: <a href="http://www.bne-portal.de/coremedia/generator/unesco/de/04_UN_Dekade_Deutschland/06_Dekade-Projekte/Ausgezeichnete_20Offizielle_20Dekade-Projekte.html">http://www.bne-portal.de/coremedia/generator/unesco/de/04_UN_Dekade_Deutschland/06_Dekade-Projekte/Ausgezeichnete_20Offizielle_20Dekade-Projekte.html</a></p> <p><u>2.3.3</u> <u>Italy:</u> Quality Indicators for the regional systems for EE oriented to ESD. Thirteen Italian regions undertook a one year action research process in order to develop qual-</p>

	<p>ity indicators for all the educational aspects covered by regional EE initiatives. The set of Quality Indicators produced is working as guideline for the different regions Quality Criteria. The Criteria were covering many Educational fields from formal to non formal education, from information as ‘public education’ to participative initiatives – as Agenda 21 – considered educational contexts.</p> <p><u>ENSI Quality Criteria:</u> The ENSI international network developed a guideline, based on case studies and comparative research, for Schools who want to assess the quality of their whole institutional process toward ESD. Guidelines are translated in 14 languages and are now used by different networks of schools in different UNECE countries. <a href="http://www.ensi.org">www.ensi.org</a></p>
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<b>Indicator 2.4</b>	<p><b>ESD is addressed by quality assessment/enhancement systems</b></p> <p>(a) Do quality assessment/enhancement systems exist at the national level?</p> <p>(b) Do quality assessment/enhancement systems exist at other levels (e.g. NGOs, regional, local levels, ...)?</p> <p>(c) Do they include explicitly ESD?</p> <p><i>Please specify examples</i></p>
Description:	We want to see whether criteria on ESD are included in quality assessment systems for formal, non formal and informal education
Relevant quote 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.
Illustration (examples/good practices/case studies):	<p><u>Germany:</u> An ongoing invitation for schools to become an ECO schools (FEE initiatives) is in place. The recently revised tendering for participation includes an offer for a self-assessment in schools which is based on the integrative idea of ESD. Field of action to self-assess are e.g. planning, school-management, training, school life, lessons, skills and competencies, resources, co-operation with external partners. The self-assessment is only the first step in an ongoing enhancement process. It is followed by a workshop in which measures are planned and responsibilities are appointed. Round about one year later, the output of the measures is evaluated again.</p> <p>For further information:  <a href="http://lbs.hh.schule.de/umwelterz/DGU/projekte/umweltschule/index.html">http://lbs.hh.schule.de/umwelterz/DGU/projekte/umweltschule/index.html</a></p>

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

*Explanatory note:*

<b>Sub-indicator 2.5.1</b>	Are SD issues addressed in informal and public awareness-raising activities?
Description:	The indicator asks for initiatives which seek to enhance public awareness concerning SD issues.
Relevant quote from the Strategy :	<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 know-how and distribution channels to pass reliable information and key messages on SD-related is-</p>

	sues.
Illustration (examples/good practices/case studies):	<p><i>Good practice / example:</i></p> <p><u>Belarus:</u> The National Environmental Forum has traditionally been conducted in three stages district (municipal) level, the regional forum, and the national stage, which ends with the gala finale of the Forum which includes awards for the winners of national competitions, an exhibition on modern technology in environmental management and protection, nature walks, trade fairs, stalls, a gala concert.</p> <p><u>Germany:</u> The 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: <a href="http://www.bne-portal.de/coremedia/generator/unesco/de/01_Startseite/Englische_20Startseite.html">http://www.bne-portal.de/coremedia/generator/unesco/de/01_Startseite/Englische_20Startseite.html</a></p>

<b>Sub-indicator</b> <b><u>2.5.2</u></b>	<b>2.5.2</b> Is there any support for work-based learning (e.g. for small companies, farmers, trade unions, associations), which addresses SD issues?
Description:	The indicator asked for both: the existence of work-based learning experiences, which addresses SD issues, and the existence of incentives or other forms of support on a national or regional level.
Relevant quote from the Strategy :	<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>
Illustration (examples/good practices/case studies):	<p><i>Good practice / example:</i></p> <p><u>Armenia:</u> 103 key people, deputy and experts of the Parliament as well as members of the Constitutional Court had received during a year training session and international round tables about the paradigms of sustainable development, the progress in shifting civilization focus to SD, and the challenges that Armenia faces, in particular in the field of legislation.</p> <p><u>UK:</u> The Greater Expectations Project in the South West region of England developed an accredited course called Smart Business Thinking. This trains employees to coach their colleagues through learning programmes. The programme involves systems thinking, learning about learning and recognising values. It has become part of the specification for some European Union-funded projects to support general work-based learning in the region.</p>

<b>Sub-indicator</b> <b><u>2.5.3</u></b>	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?
Description:	Assessing the results of non-formal and informal education presents a serious challenge. For this reason, the indicator asks for details of efforts that have been made to meet this challenge.

Relevant quote 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.
Illustration (examples/good practices/case studies):	<u>Greece</u> : Elliniki Etairia (The Hellenic Society for the protection of the environment and cultural Heritage) every second year make a large sample survey on the knowledge, understanding and attitudes of the general public on main Environmental and SD issues (with similar methodology to Eurobarometers) looking for relations with major events and campaigns.

<b>Indicator 2.6</b>	<b>ESD implementation is a multi-stakeholder process</b>
Description:	Multi-stakeholder processes <b>in the introductory part of the report</b> , rather than in this indicator. For higher education institutions: This covers the issue of <b>university “outreach”</b> (meaning a wide spectrum from regional integration, business cooperation and trans-disciplinarity to eco-procurement and research-education-cooperation).
Relevant quote from the Strategy :	26. ESD requires multi-stakeholder cooperation and partnership. The main actors include governments and local authorities, the education and scientific sectors, the health sector, the private sector, industry, transport and agriculture, trade and labour unions, the mass media, non-governmental organizations, various communities, indigenous peoples and international organizations.  36. .... Partnerships among NGOs, governments and the private sector would add significant value to ESD.
Illustration (examples/good practices/case studies):	<u>Spain</u> : – Making plans: beginning by understanding. Under the Ramsar Convention on Wetlands Spain developed a National Plan on CEPA (Comunication, Education & Public Awareness) in the conceptual framework of the ‘white book on EE in Spain’ where the national strategy is presented. Mixed seminars included managers and educators, public administrations, NGOs, academia, enterprises. The ‘P’ of Public awareness was turned by participants in ‘Participation’ and the participants in the seminar turned to be participants in the whole plan;  <u>Switzerland, GEeduc</u> : Global/General Education (since 2005): a higher-education course (meta-course) on ESD in French-Swiss and Swiss Universities. <u>Stakeholders/partners</u> : universities, non-governmental organizations, students and former students, teachers, civil society.  <u>Sweden</u> : the Baltic University Programme (BUP) coordinated by the Upsala University (since 1991): <u>Stakeholders/partners</u> : national and local TV companies in Finland, Latvia and Poland; municipalities/local administration, the Union of Baltic Cities; non-governmental organizations.

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

**Indicator 3.1 ESD is included in the training<sup>10</sup> of educators.**

The category of educators includes “teachers, lecturers, trainers and all other professionals with educational tasks, as well as voluntary education leaders” (Guidance for Reporting).

<sup>10</sup> ESD is addressed by content and/or by methodology.

<b>Sub-indicator</b> <b>3.1.1.</b>	Is ESD a part of the initial educators' training?
Description:	<p>Initial educators' training means studies to gain teacher's (lecturer's, trainer's diploma)/license.</p> <p>SD and ESD issues should be integrated into study programmes for teachers (lecturers, trainers) in order to develop appropriate competences for implementing ESD Strategy at all levels and forms of education. Within the study programmes, the content of SD (key SD themes) and methodology of ESD should be equally important. Such programmes should be based on SD and ESD research and/or analysis of the best practices.</p>
Relevant quote from the Strategy:	<p>“31. <u>Appropriate initial training and re-training of educators</u> and opportunities for them to share experiences <u>are extremely important for the success of ESD</u>. 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>“Develop the competence within the education sector to engage in ESD: &lt;...&gt; 55. Key actions to achieve this could be to: stimulate competence development for staff in the education system, including actions for the leaders to increase their awareness of SD issues; develop criteria for validating professional competence in ESD; introduce and develop management systems for SD in formal educational institutions and non-formal education settings; <u>include SD-related issues in training and re-training programmes for educators for all levels of education</u>; and encourage educators, including those involved in non-formal and informal education, to share experiences.”</p>
Illustration (examples/good practices/case studies):	<p><u>Greece</u>: course on ESD in the University of Athens as a component of the science education (DICHINET).</p> <p><u>Kazakhstan</u>: a pilot SD module within the bachelor study programme for teachers at the Pavlodar State Pedagogical Institute.</p> <p><u>Lithuania</u>: based on ESD criteria, the assessment of study programmes for initial teacher education (both bachelor and master level) in Lithuanian universities and colleges was carried out by Kaunas University of Technology.</p> <p><u>Sweden</u>: ESD module is introduced within initial teacher training system.</p>

<b>Sub-indicator</b> <b>3.1.2.</b>	Is ESD a part of the educators' in-service training?
Description:	<p>Educators who already are involved in formal, non-formal and informal education should develop appropriate competences for implementing ESD Strategy at all levels and forms of education. Particularly, teachers of higher education institutions need special trainings on SD and ESD methodology to be able to renew their courses. Within the in-service training programmes, the content of SD (key SD themes) and methodology of ESD should be equally important. Such programmes should be based on SD and ESD research and/or analysis of experiences.</p>
Relevant quote from the Strat-	<p>“31. <u>Appropriate initial training and re-training of educators</u> and opportunities for them to share experiences are extremely important for the success of ESD. With</p>

egy:	<p>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>“Develop the competence within the education sector to engage in ESD: 54. Educators, leaders and decision makers at all levels of education <u>need to increase their knowledge about education for sustainable development</u> in order to provide appropriate guidance and support. Therefore, <u>competence-building efforts are necessary at all levels of both formal and non-formal education</u>.</p> <p>55. Key actions to achieve this could be to: <u>stimulate competence development for staff in the education system</u>, including actions for the leaders to increase their awareness of SD issues; <u>develop criteria for validating professional competence in ESD</u>; introduce and develop management systems for SD in formal educational institutions and non-formal education settings; <u>include SD-related issues in training and re-training programmes</u> for educators for all levels of education; and encourage educators, including those involved in non-formal and informal education, to share experiences.”</p>
Illustration (examples/good practices/case studies):	<p><u>Armenia</u>: for the period of 2005-2008 an integrated course for teachers (both school and HEI) was developed to provide relevant knowledge and practices in the field of health and safety. It includes (a) review of international experience; (b) the establishment of a work plan and a syllabus; (c) the organization of training tutorials and use of active teaching methods. Teaching materials and guidelines were developed and published.</p> <p><u>Lithuania</u>: a national in-service training programme on ESD for school teams was launched in 2006. The program is leading by the group of university researchers and advanced teachers. After the completion of the programme schools are accredited as ESD consultancy centers.</p> <p><u>Slovenia</u>: annual in-service training sessions is being organized for teachers of eco-schools, health promoting schools, UNESCO associated schools.</p> <p><u>Central Asia</u>: in-service training programme for teachers on SD and climate change issues was introduced in 5 countries by Central Asian Regional Environmental Centre (CAREC) in cooperation with NGOs – FSC, EcoObraz, EcoCenter, BIOM.</p>

<b><u>Sub-indicator 3.1.3.</u></b>	Is ESD a part of training of leaders and administrators of educational institutions?
Description:	<p>To be efficient, ESD should cover not only school curriculum or study programmes of higher education institutions, but also practical activities/life at the institution, project work, external relations and activities in the society. Therefore, implementation of ESD Strategy depends very much on relevant management of the institution and supporting of variety of activities.</p> <p>Leadership and administrative staff of educational institutions should develop appropriate competences for implementing ESD Strategy according to their responsibilities. Relevant study programmes and in-service training programmes should include the main principles of the management (governance) compatible with the ESD policy principles. Such programmes should be based on SD and ESD research and/or analysis of the best practices.</p>

<p>Relevant quote from the Strategy:</p>	<p>“Develop the competence within the education sector to engage in ESD: 54. Educators, <u>leaders and decision makers</u> 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 could be to: stimulate competence development for staff in the education system, <u>including actions for the leaders to increase their awareness of SD issues</u>; develop criteria for validating professional competence in ESD; <u>introduce and develop management systems for SD in formal educational institutions and non-formal education settings</u>; 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.“</p>
<p>Illustration (examples/good practices/case studies):</p>	<p><u>Lithuania</u>: SD policy module is introduced in 2006 within the master study program in public administration at the Mykolas Romeris University.</p> <p>Slovenia: annual in-service training sessions on sustainable school management is being organized for teams of kindergartens and schools involving both teachers and technical staff (cleaners, cooks, housekeepers).</p> <p><u>United Kingdom</u>: in the period of 2000-2003 seminars were organized and toolkits developed by Forum for the Future for senior management of higher education institutions. The aim of the training is to empower senior management to structure sustainability into strategic and operational planning processes, research policies and curriculum planning.</p>

**Indicator 3.2 Opportunities exist for educators to cooperate on ESD.**

<p><b><u>Sub-indicator 3.2.1.</u></b></p>	<p>Are there any networks / platforms of educators and/or leaders/administrators who are involved in ESD <b>in your country</b>?</p>
<p>Description:</p>	<p>Sharing of experience and good practices, developing and discussing innovations, peer consulting, etc., represent an important recourse in developing appropriate competences for implementing ESD Strategy at all levels and forms of education. Different thematic networks could be established in order to stimulate cooperation on various ESD aspects involving educators, and/or leaders/administrators. Except of international cooperation based on various networks and platforms it is important to cooperate <b>at the national level</b> in identifying and working on the national ESD priorities. Networks /platforms could also function as a virtual meeting places (Internet web sites).</p>
<p>Relevant quote from the Strategy:</p>	<p>“Develop the competence within the education sector to engage in ESD: &lt;...&gt; 55. Key actions to achieve this could be to: stimulate competence development for staff in the education system, including actions for the leaders to increase their awareness of SD issues; develop criteria for validating professional competence in ESD; introduce and develop management systems for SD in formal educational institutions and non-formal education settings; include SD-related issues in training and re-training programmes for educators for all levels of education; <u>and encourage educators, including those involved in non-formal and informal education, to share experiences.</u>“</p>
<p>Illustration (examples/good practices/case studies)</p>	<p><u>Czech Republic</u>: Forum of University Teachers gathering those involved in SDE on university level and also invite other stakeholders to participate in the regular meet-</p>

studies):	<p>ings (conferences).</p> <p><u>Czech Republic</u>: Eco-Counseling network (STEP).</p> <p><u>Greece</u> : PEKPEE national network on EE and ESD (appr. 2000 educators).</p> <p><u>Lithuania</u>: national network of schools – ESD consultancy centers.</p> <p><u>Slovenia</u>: national network of coordinators of the Eco-schools.</p> <p><u>United Kingdom</u>: Higher education partnership for sustainability in 2000-2003.</p> <p><u>United Kingdom</u>: Sustainability Integration Group Network (SIGnet).</p> <p><u>United Kingdom</u>: national network of Eco-schools.</p> <p><u>Denmark</u>: <a href="http://www.uboportalen.dk">www.uboportalen.dk</a></p> <p><u>Norway</u>: <a href="http://www.miljolare.no">www.miljolare.no</a></p> <p><u>Poland</u>: <a href="http://www.OAI.pl">www.OAI.pl</a></p>
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<b><u>Sub-indicator 3.2.2.</u></b>	Are ESD networks/platforms supported by the Government in any way?
Description:	<p>To ensure a permanent character of ESD networks / platforms it is important to get support from the Government and/or local authorities including assistance through direct funding, in-kind help, political and institutional support. Each the UNECE country should have at least one national programme or initiative.</p> <p><i>(INTERNATIONAL COOPERATION BELONGS TO ISSUE 6)</i></p>
Relevant quote from the Strategy:	<p>“43. <u>Effective implementation of the Strategy requires its provisions to be integrated into the planning, investment and management strategies of the State and local government</u> 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>“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 sub-regional or region-wide projects.”</p>
Illustration (examples/good practices/case studies):	<p><u>Czech Republic</u>: Eco-Counseling network (STEP) supported by the Ministry of the Environment.</p> <p><u>Greece</u>: PEKPEE national network on EE and ESD (appr. 2000 educators): supported by <i>[need help from Michael!]</i></p> <p><u>Lithuania</u>: national network of schools – ESD consultancy centers: supported by the Ministry of Education and Science as well as by participating schools.</p> <p><u>Slovenia</u>: national network of coordinators of the Eco-schools supported by the Government 10 % and local communities - 20%.</p> <p><u>United Kingdom</u>: Higher education partnership for sustainability in 2000-2003 supported by the UK higher education funding councils (HEFCE, SHEFC, HEFCW, DELNI), Department of Transport and other miscellaneous sources and matched fund-</p>

	<p>ing.</p> <p><u>United Kingdom</u>: Sustainability Integration Group Network (SIGnet) supported by the Department for Education and Skills.</p> <p><u>United Kingdom</u>: national network of Eco-schools: supported by the Government more than 40%.</p> <p><u>Denmark</u>: <a href="http://www.uboportalen.dk">www.uboportalen.dk</a> supported by the Government.</p> <p><u>Norway</u>: <a href="http://www.miljolare.no">www.miljolare.no</a> supported yearly from the Directorate for Education and Training, several other institutions support the programme in varying amount.</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.**

<b>Sub-indicator</b> <b>4.1.1</b>	Does a national strategy/ mechanism for encouragement of development and production of ESD tools and materials exist?
Description:	To meet obligations on the UNECE Strategy each UNECE country should have an adequate tools for ESD available; the Government has to encourage development and production of ESD tools and materials. The national strategy on ESD should therefore acknowledge there is a need for ESD tools and materials and the government (ministries of education, environment, and others) requires insight in what is already produced.
Relevant quote from the Strategy :	<p><i>Strategy:</i></p> <p>9. The <u>Strategy is addressed to governments</u>, motivating and advising them on how to develop policies and practices that incorporate sustainable development into education and learning with the involvement of educators and other stakeholders...</p> <p>33. <u>To be effective ESD should:</u> (f) <u>Be supported by relevant instruction materials</u>, such as, methodological, pedagogic and didactic publications, textbooks, visual aids, brochures, cases studies and good practices, electronic, audio and video resources.</p> <p>42. <u>Each country is responsible for implementing this Strategy...</u></p> <p>48. <u>National (State) implementation plans</u> should serve as a core element of implementation. Countries should decide on a body that will be responsible for drafting their national implementation plan.</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>
Illustration (examples/good practices/case studies):	<p><u>Albania</u>: environmental education book.</p> <p><u>Armenia</u>: Course of lectures on the theory and practices of SD and relevant textbooks.</p> <p><u>Romania</u>: National health education programme.</p> <p><u>Slovenia and in 40 countries (EU countries, EECCA countries)</u>: Eco-schools programme, materials and toolkit.</p> <p><u>UK</u>: NGO Field Study Council - Schools ecological footprint tool kit</p> <p><u>REC-CEE</u>: - Green Pack educational kit in Poland, Hungary, Bulgaria – 10 countries of SEE, in EECCA countries - in Azerbaijan and Russia.</p>

	<u>CAREC with NGO FSC (UK)</u> : - climate change educational set (5 posters, CD, video, manual for teachers) in 5 CA countries – Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan developed in Russian and 5 CA languages
<b><u>Sub-indicator</u></b> <b>4.1.2</b>	Is public (national, subnational, local) authority money invested in this activity?
Description:	Governments should provide appropriate investments into development ESD tools and materials, translation into national languages, dissemination and exchange of information between different national governmental bodies (ministries, agencies) on budgets at all the levels. Also governments could invite partners from international organizations, donor countries and private sector to support ESD tools and materials and develop cooperation in this sphere.
Relevant quote from the Strategy :	<i>Strategy:</i> 9. The <u>Strategy is addressed to governments</u> , motivating and advising them on how to develop policies and practices that incorporate sustainable development into education and learning with the involvement of educators and other stakeholders.  33. To be effective ESD should: <u>(f) Be supported by relevant instruction materials</u> , such as, methodological, pedagogic and didactic publications, textbooks, visual aids, brochures, cases studies and good practices, electronic, audio and video resources.  <u>56. Materials for ESD at all levels need to be developed</u> , both for general courses and specialist education and for self-study and be adapted to the local conditions and needs.
Illustration (examples/good practices/case studies):	<u>Slovenia</u> : Public tender and support by the Ministry of Education and Ministry of Environment of producing educational materials and tools.  Cooperation of governments, REC and FEE with Toyota foundation to support the Green Pack educational kit and Eco-schools materials/materials on climate change.  <u>Kazakhstan</u> : local environmental funds from taxes - for development of new educational materials (Karaganda oblast) and motivation of business sector to provide support of the educational materials and tools.

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

<b><u>Sub-indicator</u></b> <b>4.2.1</b>	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?
Description:	Good quality teaching materials for ESD are required. Good quality means that the idea of ESD is properly transferred into new materials in different domains (for example in health, economic, social studies, etc.). Over time more and more ESD materials that meet the standards of the quality criteria or quality guidelines will become available. Governments should: <ul style="list-style-type: none"> <li>- develop quality criteria and/or quality guidelines for ESD-related materials;</li> <li>- establish clear mechanisms/conditions for producing the materials for ESD;</li> <li>- provide appropriate expertise of the materials produced by different organizations;</li> </ul>

	- and support cooperation/partnership in this sphere.
Relevant quote from the Strategy :	<p><i>Strategy:</i></p> <p>32. Teaching and learning in ESD are greatly enhanced by the <u>content, quality</u> 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> <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: <u>stimulate the development and production of materials</u> for educators, learners and researchers for all levels of education and training...</p>
Illustration (examples/good practices/case studies):	<p><u>40 EU and EECCA countries:</u> Eco-schools programme, materials and toolkit.</p> <p><u>Romania:</u> National health education programme.</p> <p><u>Lithuania:</u> Masters' Program development "Multidisciplinary study program on SD in society".</p> <p><u>Kazakhstan:</u> Center "Uchebnik" (Textbook) under the Ministry of Education and Science of Kazakhstan - expertise of educational materials by the Ministry of Education and Science of Kazakhstan.</p>

<b>Sub-indicator</b> <b>4.2.2.</b>	Are ESD teaching tools / materials available: (a) in national languages? (b) for all levels of education according to ISCED?
Description:	All educational ESD materials and tools should be available not only in UNECE languages, but in national languages of the countries as well. Countries should provide appropriate translation of the existing ESD materials into national languages or to develop new educational/teaching materials for ESD in national language. ESD tools and materials should be available to at least at three ISCED levels. This will help to provide access to the ESD materials for all interested persons and organizations (kindergartens, teachers and students of schools, universities, NGOs, academia, science, mass media, etc.), including local communities.
Relevant quote from the Strategy :	<p><i>Strategy:</i></p> <p>21. ESD should take into account diverse <u>local, national and regional circumstances</u> as well as the global context, seeking a balance between global and local interests.</p> <p>33. To be effective ESD should:</p> <p>(f) Be supported by <u>relevant instruction materials</u>, 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 <u>be adapted to the local conditions and needs.</u></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, <u>especially in local languages...; ensure coherence between materials for formal, non-formal and informal learning...</u></p>

Illustration (examples/good practices/case studies):	<p><u>Slovenia</u>: National magazine on SD in kindergartens and schools.</p> <p>Magazine and newsletters of Eco-schools in European countries.</p> <p>Green Pack educational kit (for secondary schools) adaptation and translation into national languages in CEE and EECCA countries.</p> <p><u>CAREC</u>: climate change educational set for secondary schools (5 posters, CD, video, manual for teachers) was produced in Central Asia at the first stage - in Russian, and according to the countries' request - translated into 5 Central Asian languages – Kazakh, Kyrgyz, Tajik, Turkmen and Uzbek, and disseminated in national schools.</p>
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#### Indicator 4.3 Teaching tools and materials for ESD are accessible.

<b>Sub-indicator 4.3.1.</b>	Does a national strategy/mechanism for dissemination of ESD tools and materials exist?
Description:	<p>Teachers and other interesting persons and organizations (kindergartens, students of schools, universities, NGOs, academia, science, mass media, etc.) can easily access existing teaching materials and tools (via libraries, Internet, educational centers, conferences, workshops, etc.).</p> <p>Governments should provide support for making teaching tools and materials for ESD accessible.</p>
Relevant quote from the Strategy :	<p><i>Strategy:</i></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 <u>development and use of electronic, audio, video and multi-media resources and visual aids</u> for both learning purposes and <u>sharing information; facilitate access by electronic means and the Internet to resources and information relevant to ESD</u>; ensure coherence between materials for formal, non-formal and informal learning, <u>develop relevant dissemination strategies.</u></p> <p><i>Vilnius Framework:</i></p> <p>D. Use of web-portal.</p> <p>12. <u>“A web-portal on ESD would be an important tool to facilitate the sharing of good practices, innovative approaches, experiences, projects and other information....”</u></p>
Illustration (examples/good practices/case studies):	<p><u>Foundation for Environmental Education (FEE)</u>: Eco-schools materials, CD on «Sustainable Mobility» project, etc.</p> <p><u>Eco-schools in Europe</u> - as experimental centers of future generation to a better world</p> <p><u>Czech Republic</u>: through the PAVUCINA network of NGOs that includes some 100 organizations sharing educational products, and produces journal Bedrnik for support teachers in the field of environmental pedagogy.</p> <p><u>Kyrgyzstan</u>: “School Green Land” project</p> <p><u>REC Caucasus</u>: establishing Centre for of ESD.</p> <p><u>CAREC</u>: - sub regional conferences on ESD in Central Asia as a mechanism of dissemination new educational materials.</p> <p>Network of EE/ESD Centers in Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, and Turkmenistan)</p>
<b>Sub-indicator 4.3.2.</b>	Is public authority money invested in this activity?
Description:	Each UNECE member country has obligation to provide support for development of

	teaching tools and materials on ESD and translation them into national languages. Support from state budgets is required. At the first stage of implementation of the Strategy, financial assistance to some parts of the region, in particular EECCA and countries of South-Eastern Europe, is crucial to help those countries to start the process.
Relevant quote from the Strategy :	<p><i>Strategy:</i></p> <p>9. <u>The Strategy is addressed to governments, motivating and advising them on how to develop policies and practices</u> that incorporate sustainable development into education and learning ...</p> <p>42. <u>Each country is responsible for implementing this Strategy...</u></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...</p> <p>71. <u>Governments should play a proactive role in promoting and facilitating the Strategy's implementation in their countries.</u> They should assess and regularly follow up its implementation at all levels of governance.</p> <p>72. <u>Local educational authorities and institutions of formal education are encouraged to take on responsibility</u> for implementing the relevant provisions of the Strategy and monitoring it.</p> <p>76. <u>Governments should consider using budgets and economic incentives to finance ESD for all forms of education,</u> 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>
Illustration (examples/good practices/case studies):	<p><u>Moldova:</u> government supported establishing Centre for Environmental information.</p> <p><u>Netherlands:</u> PPP-tool as a kind of game on sustainable decisions in policy making</p> <p><u>Norwegian:</u> EE project as a tool for ESD</p> <p><u>Tajikistan:</u> government in cooperation with OSCE supported establishing Centre for Environmental Education.</p> <p><u>Latvia:</u> "Good cooperation for Good Practice – Methodological materials on ESD"</p> <p><u>Uzbekistan:</u> "Learning for Life" Centre to assist the transition from EE to ESD (Ministry of Education, NGO FSC (UK) and NGO Atrof-Muhit va soglom hayot)</p>

<b><u>Sub-indicator 4.3.3.</u></b>	Are approved ESD teaching materials available through the Internet?
Description:	<p>Governments should make teaching materials accessible for interested persons and organizations by all appropriate means (Internet, newsletters, libraries, data bases, seminars, conferences, educational/informational centers).</p> <p>Teachers and other interesting persons and organizations (kindergartens, teachers and students of schools, universities, NGOs, academia, science, mass media, etc.) can easily access existing teaching materials and tools (libraries, Internet, conferences, workshops, etc.) by all means including Internet.</p>
Relevant quote from the Strat-	<p><i>Strategy:</i></p> <p>57. Key actions to achieve this could be to: stimulate the development and production</p>

egy :	<p>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 multi-media resources and visual aids for both learning purposes and sharing information; <u>facilitate access by electronic means and the Internet to resources and information relevant to ESD</u>; ensure coherence between materials for formal, non-formal and informal learning, develop relevant dissemination strategies.</p> <p><i>Vilnius Framework:</i> D. Use of web-portal. 12. <u>“A web-portal on ESD would be an important tool to facilitate the sharing of good practices, innovative approaches, experiences, projects and other information....”</u></p>
Illustration (examples/good practices/case studies):	<p><u>Czech Republic</u>: online environmental education encyclopedia (Enviwiki <a href="http://www.czp.cuni.cz/enviwiki">www.czp.cuni.cz/enviwiki</a>) and also e-learning tools that use its opportunities (texts and interactive options) in education. The encyclopedia provides links to numerous teaching materials that are available on internet.</p> <p><u>Denmark</u>: DESD web-site <a href="http://uboportalen.dk">uboportalen.dk</a></p> <p><u>Finland</u>: ENO-Environment online – A global virtual school and portal for SD</p> <p><u>UK</u>: NGO Field Study Council - Schools ecological footprint tool kit</p> <p><u>Poland</u>: use of IT and multimedia in ESD</p> <p><u>Slovenia</u>: web-site on eco-schools - <a href="http://www.ecosola.si">www.ecosola.si</a> and international web-site on eco-schools – <a href="http://www.eco-schools.org">www.eco-schools.org</a></p> <p><u>REC-CEE</u>: web-page on the Green Pack educational kit</p> <p><u>CAREC</u>: web-site <a href="http://www.carec.kz">www.carec.kz</a>, which includes educational materials on ESD</p> <p><u>WWF-UK</u>: “Learning for Sustainability” – pupil online discussion</p>

<b><u>Sub-indicator 4.3.4.</u></b>	Is a register or database of ESD teaching tools and materials in national language(s): (a) accessible through the Internet? (b) provided through other channels?
Description:	Teachers and other interesting persons and organizations (kindergartens, teachers and students of schools, universities, NGOs, academia, science, mass media, etc.) can easily access existing teaching materials and tools (libraries, Internet, conferences, workshops, etc.) by all means including Internet.
Relevant quote from the Strategy :	<p><i>Strategy:</i> 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 multi-media resources and visual aids for both learning purposes and sharing information; <u>facilitate access by electronic means and the Internet to resources and information relevant to ESD</u>; ensure coherence between materials for formal, non-formal and informal learning, develop relevant dissemination strategies.</p> <p><i>Vilnius Framework:</i> D. Use of web-portal. 12. <u>“A web-portal on ESD would be an important tool to facilitate the sharing of good practices, innovative approaches, experiences, projects and other information....”</u></p>
Illustration (examples/good practices/case studies):	<p>Data bases on international eco-schools project – <a href="http://www.eco-schools.org">www.eco-schools.org</a></p> <p><u>Malta</u>: “ Plug In2 the Environment – and eco-Interactive experience”</p> <p><u>Poland</u>: OAI.pl (Citizen Information Agency) – forum for exchanging news and ex-</p>

periences and “Use of IT in ESD Serbia: Interactive Forum” CAREC: Internet library and data bases on the web-site <a href="http://www.carec.kz">www.carec.kz</a>
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**ISSUE 5. PROMOTE RESEARCH ON AND DEVELOPMENT OF ESD**

<b>Indicator 5.1</b>	<b>Research<sup>11</sup> on ESD is promoted</b>
Description:	ESD requires institutional changes, new types of communication, different visions and approaches of education and research. Research helps to find more relevant and effective forms of ESD and should therefore be promoted. Evaluation of ESD practices would provide support for stakeholders on policy level to build a firm basis for further development and improvement of ESD. To do so networks of all ESD actors <b>could be</b> established in order to disseminate research results and contribute to ESD research as a whole. Research on ESD gives the possibility to identify opportunities and barriers for development of ESD: for example finding necessary competences for teachers, improving and innovating educational materials and methods. Research helps us to understand how ESD can be implemented in different types of education. It can help to develop the concept of ESD according to the Strategy.
Relevant quote from the Strategy :	41. For ESD to become part of an agenda for change towards a more sustainable society, education itself must be subject to change. Research that might contribute to ESD should be encouraged.
Illustration (examples/good practices/case studies):	<u>Finland</u> : Baltic21 Education Sector – Cooperation for ESD at national and regional level <u>Italy</u> : Quality Indicators for regional systems of EE towards SD <u>Lithuania</u> : Research of initial training programs, focussing on integration of SD issues in education <u>Poland</u> : Good practices in ESD <u>Spain</u> : (Basque Autonomous Community) – School Agenda 21 <u>Sweden</u> : research for SD is a priority and financing is available from the Swedish Research Council

<b>Sub-indicator 5.1.1</b>	<b>Proposition for rephrasing of question: Is research that addresses content and methods for ESD supported?</b>
Description:	Support that can stimulate research on ESD includes governmental grant schemes, grants from trusts and foundations, political priorities, guideline documents, and evaluation frameworks.
Relevant quote from the Strategy :	<i>Promote research on and development of ESD</i> 58. There is a need for research and development activities in different areas of ESD, such as effective learning methods, evaluation tools, formation of attitudes and values, school/institutional development and implementation of ICT. Research and development on ESD should offer a continuing basis in developing ESD.  60. Key actions to achieve this could be to initiate and promote research on and development of: the content of ESD and teaching and learning methods; the economic ef-

<sup>11</sup> These includes support from various sources, such as state, local authorities, business and non-governmental sources.

	fects 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;...
Illustration (examples/good practices/case studies):	Another example 2: There is a list of competences that educators requires in order to contribute to good ESD practices <u>Czech Republic</u> : areas of research – development of active learning methods, analysis of educational goals within different branches of education for sustainability, evaluation of effectiveness of the ESD, research in the field of philosophy of education. Sweden – research for SD is a priority and financing is available from the National Scientific Council

<b>Sub-indicator 5.1.2</b>	<u>Proposition for rephrasing the question: Does any research evaluate the outcome of the implementation of the UNECE Strategy for ESD?</u> <i>Please specify what kind of research (topic and methods).</i>
Description:	Reflection on the implementation process and its outcomes are necessary for the further development and improvement of the process.
Relevant quote from the Strategy :	60. Key actions to achieve this could be to initiate and promote research on and development of: ... 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
Illustration (examples/good practices/case studies):	<u>Not (yet)</u>

<b>Sub-indicator 5.1.3</b>	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? ( <i>provide different explanation!</i> ) Please note the difference between ‘ <b>specifically on ESD</b> ’ and ‘ <b>addressing ESD</b> ’. <i>See also sub-indicator 5.1.3</i> Examples – research <b>on</b> ESD: research on educational concepts, methods, philosophical principles applied in ESD. Examples – research <b>addressing</b> ESD: action research – how is situational understanding developed in the context of curricula?; indicators of success, efficiency/effectiveness of programmes, appropriateness of institutional and other background etc (provide different explanation)
Description:	
Relevant quote from the Strategy :	20. Higher education should contribute significantly to ESD in the development of appropriate knowledge and competences.  50. ... Key actions to achieve this could be to: adopt frameworks for ESD for all levels of education; ...to integrate SD principles into the study programmes and special courses at all levels of higher education, ...
Illustration (examples/good practices/case studies):	<u>Armenia</u> : - preparing a course of lectures for universities on the theory and practice of SD <u>Czech Republic</u> – accredited PhD. program “Environmental Studies” (Charles University, Faculty of Humanities) that is a synthesis of different aspects of SD including education in an interdisciplinary framework (system of tutors).  <u>Sweden</u> : – Master’s level available for example <a href="http://www.bth.se">www.bth.se</a> , <a href="http://www.uu.se">www.uu.se</a> . Doctoral level for example <a href="http://www.lu.se">www.lu.se</a> .

<b>Sub-indicator 5.1.4</b>	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?
Description:	Please provide some additional information, e.g.: Who provides the funding? Who is eligible to apply?
Relevant quote 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 ...
Illustration (examples/good practices/case studies):	UK example ...

<b>Indicator 5.2</b>	Development of ESD is promoted
Description:	Research should contribute to the development of ESD within the society. Examples are: innovative development of teaching methods and materials, group learning, participatory processes, etc. Please explain what kind of methods support the development of ESD, while involving cooperation of research and educator community?
Relevant quote from the Strategy :	20. Higher education should contribute significantly to ESD in the development of appropriate knowledge and competences.
Illustration (examples/good practices/case studies):	<i>Good practice</i> Cooperation between regions in <u>Italy</u> ( <i>Michela's input</i> ) <u>Austria</u> : Schools and NGO's are supported by the government in 'developing by doing'. <u>Czech Republic</u> : creation of a common learning environment on university level (5 Prague universities involved) – increased mobility of students, interdisciplinary courses, new teaching methods, innovative teaching materials. <u>Sweden</u> : Cooperation in ESD between researchers, students and actors in a local community to develop scenarios for sustainable development in the community.

<b>Sub-indicator 5.2.1</b>	Is there any support for innovation and capacity-building in ESD practice? <sup>12</sup>
Description:	Please provide some additional information, e.g.: Who provides the support? In what way? What kind of innovation and capacity building is supported?
Relevant quote 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.
Illustration (examples/good practices/case studies):	<u>Poland</u> : Good practices in ESD <u>Czech Republic</u> : <b>National Network of Environmental Education Centres PAVUCINA</b> (100 EE Centers involved) was established in 1999 as a result of systematic support of development of a network of these organisations on the territory of the Czech Republic. Via the participating NGOs, the Programme ensures a controlled EE and ESD standard, access to methodical help for the beginning NGOs, and access to

<sup>12</sup> Activities may include pilot projects, action research, social learning, multi-stakeholder teams.

	<p>further education for their workers, exchange of experience on the level of the Czech Republic as well as abroad, access to information, etc.</p> <p><b>Lipka – Environmental Education Centre</b> Aim is to multiply the effect of education for sustainable development by identifying 5 key issues in the region. Innovative is the aspect of 16 partners coming together identifying regional problems and providing solutions to them.</p> <p><b>Czech Eco-Counselling Network (STEP)</b> Aim is to introduce approach of green/sustainable public procurement and way of operation, to provide education and methodological support for eco-counsellors and offices of public institutions starting with green public procurement (GPP) and sustainable consumption activities.</p>
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<b>Indicator 5.3</b>	Dissemination of research results on ESD is promoted
Description:	In order to improve ESD, the results of research on ESD should be made available and accessible. Dissemination of the research results should be an interactive process that benefits both those who use the research products as well as the researchers themselves. Results of research on ESD should be made available and accessible through different media and levels of expertise for example by translating them from theory into practice of stakeholders; feedback from ESD community supported.
Relevant quote from the Strategy :	59. The results of research and development efforts should be shared with actors locally, regionally and globally, and incorporated into different parts of the education system.
Illustration (examples/good practices/case studies):	<p><u>Finland</u>: Baltic21 Education Sector – Cooperation for ESD at national and regional level</p> <p><u>Poland</u>: Good practices in ESD</p> <p><u>Spain</u>: making plans: beginning by understanding, The Spanish seminar on Education &amp; Communication for Wetlands</p> <p><u>ENSI</u> project on international ..... number 38 Natalia</p> <p><u>Czech Republic</u>: electronic peer- reviewed journal Envigogika. Electronic media provides environment for interactive contributing to the content and to mutual dialogue with wide public.</p> <p><u>Sweden</u>: Baltic university program <a href="http://www.balticuniv.uu.se/">http://www.balticuniv.uu.se/</a></p>

<b>Sub-indicator 5.3.1</b>	Is there any public authority support for mechanisms <sup>13</sup> to share the results of research and examples of good practices in ESD <sup>14</sup> among authorities and stakeholders?
Description:	<p>The results of research should be fed back into practice and translated into language that allows practitioners to use it and improve their practices.</p> <p>Please provide some additional information, e.g.:</p> <p>Who provides the support?</p> <p>In what way?</p> <p>Please specify and provide the total amount annually over the reporting period</p>
Relevant quote	<b><i>Promote research on and development of ESD</i></b>

<sup>13</sup> E.g. conferences, summer schools, journals, periodicals, networks.

<sup>14</sup> E.g. 'participatory approach'; links to local, regional and global problems; integrative approach to environmental, economic and social issues; orientation to understanding, preventing and solving problems.

from the Strategy :	60. Key actions to achieve this could be to ... share the results of research and examples of good practices.
Illustration (examples/good practices/case studies):	<u>Czech Republic</u> : the logic is just opposite – authorities such as Ministry of Environment formally (through project schemes) require research for “informed decision making process”

<b>Sub-indicator 5.3.2</b>	Are there any scientific publications: (a) specifically on ESD? (b) addressing ESD?
Description:	Highly theoretical research on ESD is desirable as it promotes changes of scientific thinking and changes in university / research institutions and criteria (emergence of new scientific disciplines, study programmes etc.). Practically oriented research is valuable as it improves the ESD practice. Please note the difference between ‘ <b>specifically on ESD</b> ’ and ‘ <b>addressing ESD</b> ’. <i>See also sub-indicator 5.1.3</i> Examples – research <b>on</b> ESD: research on educational concepts, methods, philosophical principles applied in ESD. Examples – research <b>addressing</b> ESD: action research – how is situational understanding developed in the context of curricula?; work-based learning, indicators of success, efficiency/effectiveness of programmes, appropriateness of institutional and other background etc.
Relevant quote from the Strategy :	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.
Illustration (examples/good practices/case studies):	<u>Sweden</u> : – a university website <a href="http://www.chalmers.se/gmv/EN/projects/esd_chalmers">http://www.chalmers.se/gmv/EN/projects/esd_chalmers</a>

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

<b>Indicator 6.1</b>	<u>International cooperation on ESD is strengthened within the UNECE region and beyond</u>
Description:	To improve ESD practices nationally cooperation with and experiences from countries regionally and subregionally is useful
Relevant quote from the Strategy :	68. Key actions could be to: strengthen existing regional and subregional alliances and networks working on ESD and encourage twinning programmes, bilateral cooperation and partnerships; use, as appropriate, existing international legally binding instruments such as the Aarhus Convention and other relevant agreements to raise awareness of SD; facilitate the sharing of good practices and experiences, innovations and information of national experiences and projects in development cooperation on ESD-related issues, e.g. by using ICT tools and the web site 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.  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.
Illustration (examples/good practices/case studies):	<u>MEDIES</u> : Mediterranean Educational Initiative for Environment and Sustainability / network of educators , interactive web page, educational materials in many languages, training courses for educators. Serviced by MIO/for Environment, Culture and Sustainable Development

<b>Indicator 6.1.1</b>	Do your public authorities cooperate in/support international networks on ESD?
Description:	Your government engages in the international cooperation on ESD either by direct involvement in the international organizations like UNESCO or by support of educational networks.  Please specify for national, subnational and local levels and list major networks??? <i>[change the descriptor]</i>
Relevant quote from the Strategy :	See 6.1
Illustration (examples/good practices/case studies):	<u>Sweden</u> : Baltic University <a href="http://www.balticuniv.uu.se/">http://www.balticuniv.uu.se/</a> and Baltic 21E - <a href="http://www.baltic21.org/">http://www.baltic21.org/</a>

<b>Indicator 6.1.2</b>	Do educational institutions/organizations (formal and non formal) in your country participate in international networks related to ESD
Description:	Educational institutions such as school engaging in international networks, e.g. exchange programs, international projects, networks exchanging experiences, etc. Please specify. List major major networks
Relevant quote from the Strategy :	See 6.1 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.
Illustration (examples/good practices/case studies):	Copernicus BBCC Global Seminar UNESCO Reorienting Teacher Education Towards Sustainability Working Group Sweden: Baltic university <a href="http://www.balticuniv.uu.se/">http://www.balticuniv.uu.se/</a> and Baltic 21E - <a href="http://www.baltic21.org/">http://www.baltic21.org/</a> Rather informal cooperation within bilateral or multilateral projects: VCSE (Virtual Campus for Sustainable Europe e-learning project – partner universities in the Netherlands, Germany, Greece, Czech Republic – and constantly growing) PASDEL (Practicing Sustainable Development through E-Learning project) – partners educational institutions France, Belgium, Romania, Czech Republic, United Kingdom, Poland)

<b>Indicator 6.1.3</b>	Are there any state, bilateral and/or multilateral cooperation mechanism/agreements that include and explicit ESD component This question partly overlaps question 6.1.1. and unnecessarily complicates the evaluation rather than contributing to reflection.
Description:	Please specify and list the major ones. <i>[Describe more precisely!]</i>
Relevant quote from the Strategy :	27. ESD should promote provisions of multilateral relevant international agreements related to SD.
Illustration (examples/good practices/case studies):	Baltic 21E - <a href="http://www.baltic21.org/">http://www.baltic21.org/</a>

<b>Indicator 6.1.4</b>	Does your government take any steps to promote ESD in international forums outside the UNECE region <i>[This question partly overlaps question 6.1.1. and unnecessarily complicates the evaluation rather than contributing to reflection.]</i>
Description:	Please list and describe. <i>[Describe more precisely]</i>
Relevant quote from the Strategy :	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.
Illustration (examples/good practices/case studies):	Task Force on SCP; IUCN; ...

**ISSUE 7. FOSTER CONSERVATION, USE AND PROMOTION OF KNOWLEDGE OF INDIGENOUS PEOPLES IN ESD**

<b>ISSUE 7.</b>	Foster conservation, use and promotion of knowledge of indigenous peoples in ESD <i>[To include/refer also to the traditional and local knowledge!]</i>
Description:	<p>Indigenous knowledge should be valued and conserved as an integral part of ESD, alongside other types of knowledge, such as scientific, local and experiential. Indigenous, traditional and local knowledge refers to the matured long-standing traditions and practices of certain indigenous or regional communities. Traditional knowledge also encompasses the wisdom, knowledge, and teachings of these communities. In many cases, indigenous, traditional and local knowledge has been orally passed for generations from person to person. Some forms of indigenous, traditional and local knowledge are expressed through stories, legends, folklore, rituals, songs, and even laws.</p> <p>This issue investigates whether it is ensured that indigenous peoples are not excluded from society. In some countries minority groups rather than indigenous groups exist, and/or society is of a multicultural character. This issue also refers to these groups/multicultural society. In practice projects and initiatives actively promoting the renewal and use of indigenous knowledge exist. As we may learn valuable knowledge from indigenous people, and it can be used in order to improve ESD, this knowledge is documented, available and accessible.</p> <p>To add text on self-esteem of indigenous people ...</p>
Relevant quote	17. ESD should foster respect for and understanding of different cultures and em-

<p>from the Strategy :</p>	<p>brace 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.</p>
<p>Illustration (examples/good practices/case studies):</p>	<p><u>In Kyrgyzstan</u>: traditional knowledge in the sphere of biodiversity conservation was collected and used.</p> <p><u>Croatia</u>: 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.</p> <p><u>Canada</u>: has developed initiatives directed towards the Inuit population. In 2004, the Canadian Government described the education system as needing to be built within the context of <i>Inuit Quajimajatunqagit</i> (which translates as “that which is long known by Inuit”) and that the raising and teaching of children and the care of those in need are a collective community process.</p> <p><i>Inuuqatigiit: the Curriculum from the Inuit Perspective</i> lays the foundation for education to this indigenous group. Sustainable development in its broadest definition is a core value of Inuit life and is thus becoming the foundation of education.</p> <p><u>In Norway</u>: the curriculum for the 10 years’ compulsory education considers the specific needs of the Sami people.</p>

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