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DRAFT UNECE STRATEGY FOR EDUCATION FOR SUSTAINABLE DEVELOPMENT

Preamble

1.   UNECE Environment Ministers recognized that education was a fundamental tool for environmental protection and sustainable development and that environmental education had increasingly addressed a wide range of issues included in Agenda 21.They also endorsed the Statement on Education for Sustainable Development [1] at their Conference in Kiev (21-23 May 2003).

2.   They invited all countries to integrate sustainable development into their education systems at all levels from pre-school to higher education and in non-formal as well as informal education, in order to promote education as a key agent for change. They welcomed the proclamation by the United Nations General Assembly, at its fifty-seventh session (December 2002), of the United Nations Decade of Education for Sustainable Development starting in 2005, and agreed to take the lead in promoting it regionally.

3.   The Ministers were convinced that cooperation on education for sustainable development could help to ensure mutual understanding, strengthen trust between nations and respect for cultural values, develop friendly relations and tolerance between nations, and contribute to peace, security and welfare.

4.   To this end, they invited UNECE to work, in accordance with its mandate, with the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Council of Europe on a regional strategy for education for sustainable development, in a dialogue with all relevant international actors, including NGOs and major groups contributing to the United Nations Decade of Education for Sustainable Development led by UNESCO.

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[1] Statement on Education for Sustainable Development; fifth Ministerial Conference "Environment for Europe", Kiev, 2003.

I.   OBJECTIVE OF THE STRATEGY

5.   The main objective of the Strategy is to encourage UNECE member States to develop and strengthen the capabilities of individuals and societies to make judgments and choices in favour of Sustainable Development, thereby contributing to increasing their competence to achieve a healthy and productive life in harmony with nature.[2]

II.   SCOPE OF THE STRATEGY

6.   The Strategy is open to all UNECE member States. Other States may also follow it.

7.   The Strategy is addressed to public authorities, advising them on how to implement sustainable development concerns into their policies. Since education for sustainable development must take account of local, national and regional circumstances, it may place varying degrees of emphasis on the three aspects of sustainability, depending on the country and the field of education. Relevant policy documents should contain education and awareness-raising elements related to sustainable development.

8.   The Strategy benefited from experience gained both within the region and globally. It is based on: the Millennium Declaration and Plan of Implementation,[3] the Ministerial Statement to the World Summit on Sustainable Development,[4] Education For All: Meeting our Collective Commitments,[5] the Belgrade Charter[6] and Tbilisi Declaration,[7] Agenda 21,[8] Principle 10 of the Rio Declaration on Environment and Development,[9] Baltic 21E,[10] the Thessaloniki Declaration,[11] the Sixth Environmental Action Programme of the EU,[12] the Magna Charta Universitatum Europaeum,[13] Copernicus University Charter for Sustainable Development,[14] and the UNECE Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters.

9.   The Strategy was also derived from the Statement on Education for Sustainable Development[15] and the Basic Elements for UNECE Strategy for Education for Sustainable Development.[16] It is also a contribution to and in line with the Framework for a draft implementation scheme for the Decade of Education for Sustainable Development developed by UNESCO and should be used as a cornerstone for the regional implementation of the Decade.

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[2] The Rio Declaration on Environment and Development states that human beings are at the centre of concerns for sustainable development, and that they are entitled to a healthy and productive life, in harmony with nature (World Summit on Sustainable Development, UN, 2002; Plan of Implementation. p. 46).

[3] Plan of Implementation, World Summit on Sustainable Development, UN, 2002.

[4] Ministerial Statement to the World Summit on Sustainable Development, para. 31. UNECE Regional Preparatory Meeting for the World Summit on Sustainable Development, 2001.

[5] The Dakar Framework for Action, UNESCO, 2000.

[6] Belgrade Charter, UNESCO-United Nations Environment Programme (UNEP), 1975.

[7] Tbilisi Declaration, UNESCO-UNEP, 1977.

[8] United Nations Conference on Environment and Development, Rio de Janeiro, Brazil, 1992:

[9] UN Conference on Environment and Development, Rio de Janeiro, Brazil, 1992:

[10] An Agenda 21 for education for sustainable development in the Baltic Sea Region.

[11] Thessaloniki Declaration, UNESCO, 1997.

[12] The Sixth Environmental Action Programme of the European Union, 2001-2010.

[13] Magna Charter Universitatum Europaeum, Bologna, Italy, 1988.

[14] Copernicus University Charter for Sustainable Development, Rio de Janeiro, Brazil, 1992.

[15] Statement on Education for Sustainable Development.

[16] Basic Elements for a UNECE Strategy for Education for Sustainable Development, fifth Ministerial Conference "Environment for Europe", Kiev, 2003.

III. OVERALL GOAL FOR EDUCATION FOR SUSTAINABLE DEVELOPMENT

10.   All individuals should have the competence to contribute to sustainable development that meets the needs of the present without compromising the ability of future generations to meet their needs. Education for sustainable development should be based on an integrated approach to economic, social and environmental development.

11.   Education for sustainable development should develop the capacities of individuals and societies to work for a sustainable future. It is aimed at making people more knowledgeable, better informed, ethical, responsible, critical and willing to act for a healthy and productive life in harmony with nature.

12.   Owing to the links among the three dimensions of sustainable development, education for sustainable development demands an integrative, participatory and holistic approach in education.[17]

IV.   THEORETICAL BASIS

Force for the future: the role of education in achieving sustainable development

13.   Education, in addition to being a human right,[18] is a prerequisite for achieving sustainable development and an essential tool for good governance.

14.   It is a fundamental tool for improving patterns of consumption and production, laying the ground for research and development of technologies that may improve the environment, as well as for enabling people to integrate environmental, social and economic issues into their perceptions and actions, starting at a young age. It also provides people with knowledge and skills, and increases their capacities to act responsibly in both local and global contexts.

15.   As lifestyles and attitudes are established from an early age, the role of education is of particular importance for children.

16.   Education improves the capability of citizens, as well as their motivation, to assess information, participate in decision-making and take actions accordingly. Education serves society by providing a critical reflection[19] on the world and by promoting greater consciousness and awareness, enables new visions and concepts to be explored, and new techniques and tools to be developed.

Cornerstones: principles and approaches of education for sustainable development (ESD)

17.   Education should be seen as a **lifelong process** from pre-school to higher and adult education that involves its formal, non-formal and informal modalities.[20] Sustainable development (SD) should be addressed by all educational programmes at all levels, including vocational

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[17] Statement on Education for Sustainable Development.

[18] Statement on Education for Sustainable Development.

[19] Statement on Education for Sustainable Development.

[20] For detailed information on the forms of education, see Basic Elements for a UNECE Strategy for Education for Sustainable Development.

education, continuing education as well as training for teachers, decision makers and other professionals.

18.   There is a need to consider the **evolving nature of sustainable development** (SD), which makes lifelong learning and "life-wide" learning so highly importance. The development of a sustainable society should be seen as a process where the right answers and solutions are constantly changing as our experience increases.

19.   Environmental education, as it has evolved over many years in the region, has increasingly addressed the entire range of development issues and thus represents a core component of education for sustainable development. It is, therefore, necessary to continue to **reorient environmental education together with other fields of education**, in **an integrative approach,** towards sustainable development..

20.   Education for **sustainable development is a cross-sectoral issue**, encompassing economic, environmental and social dimensions, and therefore demands a holistic and interdisciplinary approach.

21.   Cross-sectoral cooperation should be encouraged at the international, regional and state levels involving stakeholders including public authorities, the education and science communities, the health sector, the private sector and industry, local communities, the media and non-governmental organizations. A **problem-analysis, process-oriented, participatory and partnership approach** is required. Dissemination and promotion of **good practices and networking** are also important. Education for sustainable development should consider **diverse local, national and regional circumstances.**

22.   **Respect for human rights and cultural diversity** are essential for achieving sustainable development. This implies showing tolerance to and respecting different types of social groups. The knowledge of indigenous people must be taken into account in the process of developing educational programmes.[21]

23.   Addressing the **ethical dimension,** including issues of equity between generations and equity in the present generation, is central to understanding sustainable development**. Responsibility** is inherent in ethics and becomes a practical matter in issues concerning the responsibilities of consumers and producers.

24.   **Educators**[22] can play an important role in facilitating dialogue between the authorities and civil society.[23]

25.   Learners at all levels should be encouraged to use **critical thinking** and reflection as a prerequisite for concrete action for sustainable development.

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[21] Plan of Implementation, World Summit on Sustainable Development
[22] Educators are teachers, lecturers, trainers and voluntary education leaders.
[23] Statement on Education for Sustainable Development

V. IMPLEMENTATION

26.   Each UNECE member country is responsible for implementing the Strategy. To that end, it is recommended that each country should translate the Strategy into its native language(s), distribute it to the relevant authorities and designate a focal point. Governments should play a proactive role in promoting and facilitating its implementation in their countries.

27.   Education together with training and research should be recognized as important tools for good governance that helps to attain sustainable development and integrate aspects of sustainability in all sectors of society.

28.   The leading role of Education Ministries or other equivalent State (national or subnational) bodies should be recognized and strengthened. They should initiate, encourage and coordinate the further integration of SD concerns into formal education policies and curricula at all levels, and assess the implementation of the Strategy. However, close and efficient cooperation with other public authorities as well as with all stakeholders is required.

29.   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 the Strategy should serve as a guide for this work.

30.   The implementation of the Strategy should be in accordance with and benefit from other relevant national, bilateral and multilateral initiatives. The legal, economic and communicative instruments should suit the national circumstances.

31.   In general, there is a good precondition for successful implementation of the Strategy: most countries in the region have established education systems, ensured access to basic education, equal rights to education for girls and boys, a high level of literacy, and professional educators, and developed a scientific potential and the active participation of civil society. However, there are challenges to be addressed in order to implement the Strategy. Among them are ensuring the means for the Strategy's implementation and for the development of national implementation plans on ESD.

32.   Special attention should be given to the countries in Eastern Europe, the Caucasus and Central Asia (EECCA) in solving their main problems in environmental education that are also relevant for education for sustainable development. These problems are: a lack of adequate teaching materials, the inefficient use of the capacity of higher education and research institutions, the shortage of skilled educators and insufficient awareness-raising. While implementing the Strategy in these countries, the following should be addressed: the introduction of SD issues in all forms and at all levels of education, the establishment of informational networks on ESD-related

issues, providing training on SD issues for all professionals, in particular for decision makers; and strengthening cooperation among public authorities and NGOs. [24]

33.　　　　Another challenge that should be addressed in South-Eastern Europe and EECCA is the poor quality of education for children living in rural areas.

34.　　Providing financial assistance and support to education, research and public awareness programmes in countries with economies in transition should be also considered.[25]

35.　　National (State) implementation plans should serve as a core element of implementation. They should address: the targets, the tools and the means to implement the Strategy.

National implementation plans

36.　　Education Ministries or equivalent State bodies should be responsible for drafting national implementation plans. To identify the main priorities, obstacles and gaps with regard to education for sustainable development, the existing legal and institutional framework, financial mechanisms, curriculum and relevant measures should be reviewed before a national implementation plan is developed.

37.　　It is recommended that all relevant stakeholders should be consulted during the development of the national implementation plan. The national implementation plan should address the following ESD targets: strengthening cross-sectoral cooperation, developing curriculum and teaching materials, developing the competence of educators, strengthening institutions of formal education, introducing alternative teaching methods, providing training, raising public awareness and ensuring means of implementation.

A.　　Targets

38.　　Four key identified targets are: to ensure the relevance of the curriculum to the key themes of sustainable development, to ensure appropriate teaching materials, to develop the competence of educators and to raise public awareness on sustainability and to develop understanding of it.

1.　　Ensure the relevance of curriculum to the key themes of sustainable development

39.　　Providing individuals with knowledge and information on SD should become one of the main goals of the education system as a whole, both for formal and for non-formal education, from pre-school to higher education and adult education. As lifestyles and attitudes are established from an early age, it is important to start in pre-school to awaken and improve children's respect for nature, their understanding of interconnections between humans and nature, and their interest in and knowledge of SD .

40.　　In the field of environment, education should provide an insight into global, regional and local problems, and address patterns of production and consumption, covering the extraction of raw materials to the final disposal of products. Consumption and production should be explained

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[24] Environmental Partnerships in the UNECE region: Environment Strategy for countries of Eastern Europe, the Caucasus and Central Asia. Strategic Framework; Fifth Ministerial Conference "Environment for Europe", Kiev, 2003
[25] Plan of Implementation; World Summit on Sustainable Development

by means of a life-cycle approach, focusing not only on the environmental impact, but also on the economic, social and ethical dimension of consumption. Recycling and innovative technologies should also be addressed. Loss of biological diversity should receive particular attention.

41. ESD has a strong focus on environmentally tenable and economically efficient use of resources. This includes, among other things, energy efficiency and minimizing pollution and waste.

42. Respect for diversity and human rights is essential for achieving sustainable development and should, therefore, be addressed in the curriculum. The knowledge of indigenous people must be taken into account in developing educational programmes.[26] The role of participatory democracy[27] should also be considered, in particular as a means of managing conflicts in society and achieving justice.

43. Addressing the ethical dimension is central to understanding sustainable development. This raises questions of equity between generations – as underlined in the most common definitions of sustainable development – and equity in the present generation, e.g. gender equality, as well as relationships between humans and nature.

44. The difficult task for education is to put knowledge into a contemporary moral and ethical context.

45. Proposed measures:
(a) Introduce SD in formal, non-formal and informal education and address it in all subjects, courses and programmes;
Incorporate into the curriculum the key themes of SD, namely overcoming poverty, gender equality, health protection and promotion, environmental conservation and protection, rural transformation, human rights, sustainable production and consumption, peace and cultural diversity;[28]
(c) Strengthen the connection between natural, economic, political and social sciences in both interdisciplinary and specialized studies. In these studies interdisciplinary approaches and specialization should be properly balanced;
(d) Ensure that SD-related curriculum, promotes education that is consistent, continuous, progressing and logical; to the appropriate age and language of the learner and linked to local, regional and global problems. It should also interesting, optimistic, forward-looking and oriented to preventing and solving problems.

2. Develop the competence of educators

46. Appropriate training of educators and opportunities for them to share experiences are extremely important for the success of education for SD. With heightened awareness and knowledge of sustainable development and, in particular, sustainability aspects in the areas where they work, educators can educate better and set a good example.

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[26] Plan of Implementation, World Summit on Sustainable Development
[27] Agenda 21.
[28] Framework for a draft implementation scheme for the Decade of education for sustainable development, UNESCO, 2003.

47.   A number of countries in the region have a well-established system for training educators. Work on this objective should benefit from the existing experience as much as possible. Traditional teacher training and studies should be revised in order to include aspects of and the use of innovative approaches in teaching. Training should also be closely linked to the latest research findings on SD.

48.   Proposed measures:
(a)   Organise training on SD issues, as part of the general training of educators for all levels of education, both in teacher-training colleges and at continuing-education institutes;
(b)   Ensure that subjects for training address all the key themes of SD, and are linked to local, regional and global problems;
(c)   Ensure that training is provided for the educators of all disciplines and meets their needs;
(d)   Organize training on innovative teaching methodologies and technologies, such as interactive lessons, life-cycle analyses and the use of electronic tools.

3.   To ensure appropriate instruction materials

49.   The success of both teaching and learning is critically dependent on the content, quality and availability of teaching materials. These include, e.g. methodological, pedagogic and didactic publications, textbooks, visual aids, brochures with cases studies and good practices, electronic, audio and video resources. Such materials, however, are not available in all countries, and considerable efforts should be devoted to developing and reproducing them. This problem is relevant for the entire sector of formal education as well as for non-formal and informal education. The challenge is to ensure that they are relevant to SD and available.

50.   Proposed measures:
(a)   Involve teachers and trainers in the preparation and testing of teaching materials;
(b)   Ensure the appropriate availability of teaching materials;
(c)   Encourage the use of modern technologies, such as electronic, audio and video resources;
(d)   Create Internet portals on information on SD and facilitate access to relevant teaching materials through the Internet;
(e)   Ensure that teaching materials are developed and reproduced at the lowest cost;
(f)   Explore the possibility of providing institutions of formal education, in particular kindergartens and schools, with free teaching materials ;
(g)   Ensure that teaching materials are appropriate to the curriculum and to the target audience (age, profession, social group), and that they are attractive and relevant to the local conditions.

4.   Raise public awareness and develop understanding of sustainability

51.   To make progress towards more sustainable societies requires a population that is aware of the goals of sustainability and has the knowledge and the skills to contribute to them. Informed citizens and knowledgeable consumers can help communities and governments enact sustainability measures and move towards more sustainable societies.

52.   Public awareness programmes should address the key themes of sustainable development and be aimed at providing a better understanding of the links between social, economic and environmental issues.

53.   The media, families, communities and NGOs are important actors for raising public awareness of SD. This should be recognized and governments should consider supporting informal learning. The role of the mass media is essential in guiding consumer choice and lifestyles, especially for young people. The challenge is to mobilize their know-how and distribution channels to pass reliable information and key messages on SD-related issues.

54.   Non-governmental organizations have been deeply involved in environmental education and various issues of SD. They are important messengers of informal education, able to transmit scientific knowledge and facts into easily understandable information. Their unique role of mediators between governments and the general public should be recognized and put to advantage.

55.   Proposed measures
(a)   Reflect the importance of raising public awareness of SD in national policy documents;
(b)   Encourage the media to promote environmentally friendly goods and services and sustainable lifestyles;
(c)   Facilitate the sharing of information on SD-related issues among the mass-media;
(d)   Encourage the organization of special courses for journalists on SD-related issues using the facilities of relevant institutions, such as press and media centres, and NGO facilities;
(e)   Encourage the organization of joint workshops, inviting the media and different experts to discuss SD-related issues;
(f)   Approach the media to take part in various SD related events, such as exhibitions, seminars, performances and festivals;
(g)   Strengthen the capacity of the public authorities to work with the media and give high priority to SD issues in their press releases;
(h)   Improve access to information, public participation in decision-making and access to justice in environmental matters
(i)   Encourage and support community-based events on SD;
(j)   Support NGO activities on SD and closely cooperate with them.

B.   Tools

56.   The targets could be reached by: strengthening cross-sectoral cooperation, strengthening the role of formal education institutions, introducing innovative teaching approaches, providing training on sustainable development issues for all professionals, encouraging research on ESD

1.   Strengthening cross-sectoral cooperation

57.   Due to the broad spectrum of actors involved in work on ESD and considering the complexity of SD, cross-sectoral cooperation is absolutely vital for the successful implementation of the Strategy. The main actors, including governments, the education and science communities, the health sector, the private sector and industry, international organizations, the mass media, local communities and non-governmental organizations, should work together on its implementation.

58.   Proposed measures: set up a "national platform on ESD" under the umbrella of the councils on sustainable development (or other relevant bodies), bringing together professionals from different sectors such as public authorities, the private sector, industry, science, education, health, the media, NGOs and international organizations. The platform would serve as a coordination mechanism for implementing the Strategy at the State level and for sharing information.

2. Strengthening the role of formal education institutions

59.   Formal education institutions (kindergartens, schools, institutions of higher education) play an important role. They provide people with knowledge and significantly influence behaviour and mindsets. It is, therefore, very important to ensure that all pupils and students, including future educators, acquire appropriate knowledge of SD and are aware of the negative impact of unsustainable development.

60.   Proposed measures:

(a)   Introduce sustainable management practices within the institutions of formal education: to minimize pollution and waste, save energy and water in daily activities, and encourage suppliers of products and services to act in a sustainable manner;

(b)   Encourage the institutions' personnel, including managers, teachers and other staff, to develop their competence in SD-related issues;

(c)   Introduce "ESD" and "SD" as fields of specialization, and encourage the development of masters, postgraduate, PhD and postdoctoral programmes in both these fields;

(d)   Introduce SD in the curriculum of different faculties to raise the awareness of different professionals of how their work affects the environment, the economy and society;

(e)   Encourage and support cooperation among educators and researchers to promote knowledge on SD and skills in ESD, and to share experiences, good practices and teaching approaches.

3. Introducing innovative teaching approaches[29]

61.   Within the context of ESD, environmental problems are linked closely to social and economic dimensions. Consequently, ESD has to empower target groups to work in an open dialogue to identify and resolve conflicts of interest between different groups in our societies. Learners should, therefore, be encouraged to use critical thinking and reflection as a prerequisite for action. [30]

62.   ESD focuses on enabling learning experiences that engender a sense of meaning and on fostering sustainable behaviour in educational institutions, the workplace, families and communities. This involves both providing knowledge in systematic ways and helping learners to deal with identified problems and look for possible solutions. In addition, education should retain its traditional focus on individual subjects and open the door to the multidisciplinary examination of complex, real-life situations.

63.   Teaching that is geared simply to passing on knowledge should be recast into an approach in which teachers and students work together to acquire knowledge and play a role in shaping the environment of their educational institutions. Furthermore, rather than having communication from the top down, students should be allowed to participate in decisions on how they are to learn. This means making greater use of classroom projects and experimental learning methods, focusing on the broad spectrum of themes that are part of sustainable development.

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[29] For detailed information on teaching approaches, see Basic Elements for UNECE Strategy for Education for Sustainable Development (Addendum)

[30] Statement on Education for Sustainable Development

64.	ESD involves initiatives for developing a culture of mutual respect in communication and decision-making. Shifting the focus away from educators being the transmitters and learners as the recipients towards team structures and social continuity should be considered. Instead of prescribing organizational rules from above, ways to negotiate binding rules with learners and assign responsibility to them might also be explored.
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65.	Teaching and learning practices should be democratic. Furthermore, gender equality and equal opportunities for different social groups should be ensured for all learners.

66.	Education should develop closer relations with the outside world with the aim of opening up educational facilities to society. Lifelong learning in the form of revitalizing skills has become increasingly important. Learning activities in close relation with society will add practical experience. Rapid technological development and changing working conditions require educational institutions to cooperate closely with business and industry. Flexible and varied learning methods tailored to the learner could be explored to meet learners' needs for additional skills and new knowledge. Similarly, there is a need for increased cooperation and partnerships among members of the educational community and stakeholders.

67.	Proposed measures:
Introduce innovative teaching and learning approaches;[31]
(b)	Balanced both traditional and innovative approaches, taking into consideration the target audience (age, profession, social group);
(c)	Bring learning activities in close relation with society and into direct contact with the actual subject of study. Simulations, experiments, field studies and excursions should be encouraged;
(d)	Encourage use of modern technologies for education, such as audio and video lessons and information and computer technology.

## 4.	Providing training on sustainable development issues to all professionals

68.	All sectors of the workforce can contribute to local, regional and national sustainability. The development of specialized training programmes to provide professionals, in particular decisionmakers with the knowledge and skills to perform in a sustainable manner has been identified as a critical component of education for sustainable development.[32]

69.	Vocational education and training (both in-service and outside) and continuing education should be offered to all professionals, especially those with a role in planning and management. It should be aimed at building knowledge and awareness of SD. Continuing education has a very important role to play. It has two main activity areas: upgrading knowledge and skills, and providing new competencies needed in different professions. Sectors such as public administration, industry, transport, commerce, the mass media and agriculture are all relevant. Professional skills and knowledge of SD should be strengthened preferably on a continuing basis and should be part of individuals' lifelong learning. Continuing education is one of the areas that would benefit from cooperation among the education sector, stakeholders and the community.

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[31] These are participatory, cooperative, integrative, holistic, interactive, interdisciplinary, multidisciplinary, action- and process-oriented, problem development and problem solving, and involve critical thinking, social learning, reflection, dynamic qualities and team work. (see Basic Elements for UNECE Strategy for Education for Sustainable Development Addendum)

[32] Framework for a draft implementation scheme for the Decade of Education for Sustainable Development

70.   Proposed measures:
(a)   Organize in-service training and continuing vocational training at -relevant institutions for all professional groups, including decision makers;
(b)   Ensure that training programmes address the key themes of SD, but at the same time take into consideration the needs of different professions and the relevance to their areas of work. Special attention should be given to subjects linked to the primary responsibility of a professional and its economic, social and environmental impacts.

5.   Encouraging research on education for sustainable development

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

72.   Encouragement should be given to research regarding content of ESD and teaching and learning approaches, as well as to the integration of sustainability aspects in different academic disciplines. The challenge would be to also introduce research into indicators and evaluation instruments for ESD.

73.   Experience-based development and development initiated out of a desire for change or improvement in education, e.g. introducing "ECO" schools and the "Green School Award", are also important. In addition, more examples of good practice in ESD need to be identified and used to support development.

74.   The results of research should be taken into account when developing national legislation, policies, curricula and approaches.

75.   Proposed measures:
(a)   Initiate and promote research and development into the content of and approaches to ESD;
(b)   Initiate and promote research into the psychological and sociological aspects of SD including motivation, values, attitudes and behaviour;
(c)   Initiate and promote research into: the economic effects of and economic incentives for ESD; indicators and evaluation instruments for such education; the integration of SD into different disciplines;
(d)   Encourage and support research programmes based on interdisciplinary approaches and conducted by teams consisting of specialists from different fields;
(e)   Promote the dissemination of the results of research and examples of good practice
(f)   Introduce scholarships for PhD and postdoctoral research into SD and ESD.

C.   Means of implementation

1.   Legislation, policies and institutional framework

76.   To ensure the effective implementation of the Strategy, it is recommended that countries should review their legislation, policies and institutional framework and adapt them, as appropriate, to the needs of ESD.

77.   The education sector consists of a broad field of actors with different regulatory management systems in different countries. They are also geared to people of different ages and in different positions in life. The challenge will be to reform policy-making and the institutional framework of the education sector on a basis of trust, inclusivity and subsidiarity, and to encourage self-evaluation. It is important that those responsible for formal education should take the lead in intergovernmental cooperation with other State authorities to implement the Strategy.

78.   Proposed measures:
(a)   Improve the legal framework by ensuring that sustainability aspects are clearly incorporated into different laws, especially those on education;
(b)   Include education into state policies for sustainable development, and ensure that they embrace the entire educational sector and apply to all educational programmes and curricula;[33]
(c)   Put ESD on the agendas of State councils on sustainable development, councils of ministers or other relevant bodies;
(d)   Encourage politicians at all levels to emphasize the importance of ESD

2.   Financial matters

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

80.   In principle, each country should finance the implementation of the Strategy. Governments should therefore ensure that appropriate resources are available.

81.   Proposed measures:
(a)   Consider using national, provincial and local budgets and economic incentives to finance ESD;
(b)   Include an item on ESD in all relevant bilateral and multilateral programmes;
(c)   Seek support from international funding agencies and the private sector, including contributions in kind;
(d)   Include an education-for-sustainable-development component in project for twinning cities.

VI.   REGIONAL AND SUBREGIONAL COOPERATION

82.   Education for sustainable development is a subject that can help to ensure mutual understanding, strengthen trust between nations and respect for cultural values, develop friendly relations and tolerance, and contribute to peace, security and welfare.[45] Consequently, a regional framework to review and facilitate the implementation of the Strategy, and support cooperation on ESD is needed.

83.   The region has a wealth of experience in international cooperation on education, especially in higher education. A number of networks and associations of universities have started work on the development of multidisciplinary forms of education to devise solutions for the problems

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[33] Statement on Education for Sustainable Development

linked to sustainable development. The challenge is how best to use their experience and potential to promote of ESD.

84.   Another challenge is research into ESD-related issues, which still does not have a prominent role internationally. There is also lack of international cooperation on ESD in pre-school and school education.

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

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

87.   There is also a need to strengthen subregional cooperation in order to work closely on subregional experiences and attain the best practical results.

88.   Proposed measures:
(a)   Governance:
(i)   Use the "Environment for Europe" framework as a partnership platform for regional cooperation on ESD and the UNECE Committee on Environmental Policy as a body to review the progress in the Strategy's implementation in accordance with the Committee's work programme;
(ii)   Ensure efficient regional governance and communication by establishing ESD focal points in all UNECE member States and in relevant international organizations;

(b)   Networking and Programmes:
(i)   Strengthen existing regional alliances, associations and networks of educational institutions working on ESD and encourage other actors to get involved in their activities;
(ii)   Streamline existing regional programmes and mechanisms for ESD, and encourage twinning at all levels, including "twinning-universities" and "twinning-schools" projects, to work jointly on SD issues;
(iii)   Use, as appropriate, existing international binding instruments such as the Aarhus Convention to raise awareness of SD;
(iv)   Facilitate the sharing of best practices, innovations and information of national experiences and projects in development cooperation on ESD related issues, e.g. by using information and computer technology tools and developing a web site, hosted by UNECE;
(v)   Encourage regional programmes focused on children of pre-school and primary school age;
(vi)   Increase the number of scholarships for ESD to facilitate study, training and research abroad;

(c)   Events:
(i)   Encourage regional symposia, festivals, exhibitions, seminars and other events to raise awareness of ESD and SD itself;
(ii)   Focus on one or several SD-related subjects each year within the region and organize appropriate events on that issue.

VII.   ASSESSMENT OF THE STRATEGY'S IMPLEMENTATION

89.   A joint session of the Committee on Environmental Policy and representatives from Education Ministries or equivalent State bodies responsible for education in UNECE member States might be organized every second or third year to discuss progress in the Strategy's implementation, starting from October 2006.

90.   At their Ministerial Conference "Environment for Europe" in 2007, Ministers may wish to discuss progress in the Strategy's implementation based on national and other relevant reports. The UNECE secretariat could prepare a consolidated progress report on the basis of the information provided. Environmental performance reviews may also include an assessment of the reviewed country's education for sustainable development.

91.   To assess the status of implementation of the Strategy, a time frame and indicators should be set. Introducing SD aspects into all forms and levels of education is a long process and, consequently, the outcome can be measured only over a long period of time.

92.   Time frame:

(a)   Short-term objectives (by 2010):
(i)   Each country should have decided to adapt its legislation, policies and institutional frameworks to the needs of education for sustainable development;
(ii)   The legal framework, financial mechanisms and educational activities should have been reviewed, the obstacles and gaps with regard to ESD should be identified and the national implementation plans should be drafted;
(iii)   The proposed measures should be well under way;

(b)   Long-term objectives (by 2015):
(i)   All countries in the region should have made considerable improvement in ESD;
(ii)   Continuous follow-up should be organized within the State;
(iii)   The implementation should be assessed and, based on this assessment, the implementation plans should be reviewed and if necessary, revised.

93.   Indicators. Work could begin on defining indicators for the implementation of the Strategy to address some or all of the following issues:
(a)   Adoption of the legal framework and institutional structure to the needs of ESD;
(b)   Establishment of a framework for cross-sectoral cooperation on ESD in each country and in the region;
(c)   Relevance of the curriculum to the key themes of SD;
(d)   Aavailability of competent educators;
(e)   Including SD aspects in in-service and continuing vocational training for educators, policy makers and other professionals;
(f)   Research and development into ESD, including scholarships for PhD and postdoctoral research;
(g)   Competence in SD of learners and educators;
(h)   Active interaction of institutions of formal education and society;
(i)   Availability of sustainable-development oriented programmes and advertisements on TV and radio;
(j)   Support of NGO activities on SD-related issues.