



Sustainable Development

Education for Sustainable Development





Foreword

This document presents the work of the Norwegian Directorate for Education and Training in the field of education for sustainable development in the Norwegian primary, lower secondary and upper secondary education system. The purpose of the publication is to clarify goals, priorities and activities for the period 2005-2008. The greatest challenge is to ensure that competence in the school system is systematically developed over time, enabling the school sector to make an active contribution to sustainable development.

The document is intended for educational policy-makers, school administrators at various levels, school owners, school owners and heads of schools. It is also intended for co-operating partners involved in Education for Sustainable Development, because education for sustainable development often involves co-operation between the school and actors outside the school. It is important to clarify roles and responsibilities. An overview of the actors and their respective responsibilities is given in Appendix 1.

The document clarifies the thematic contents of education for sustainable development, describes the current situation in the sector and points out challenges. This is the background upon which goals and activity areas are formulated and responsibilities assigned.

The document is a contribution to Norway's implementation of both the United Nation's Decade for Education for Sustainable Development (2005-2014) and the European strategy for education for sustainable development developed under the auspices of UNECE (United Nations Economic Commission for Europe). It is also part of the realization of the Baltic-Nordic strategy Baltic 21E.

Education in the area of sustainable development is founded on knowledge in the sciences and situates this knowledge in meaningful contexts. Education in sustainable development will therefore support the strategy for strengthening math, science and technology. Sustainable development is about values and will support work with values issues in schools. It is also about letting pupils' efforts to learn also be useful for the local management, thereby helping to strengthen the pupils' self-respect, motivate and inspire pupils to become actively involved and improve the learning environment in the school. This means that there is also a clear connection to the strategy to improve children's environment for learning and development. Because it is about developing competence to act, sustainable development will also support the strategy for entrepreneurship in schools.

Education in sustainable development is about gaining insight into democratic processes, and it will help develop the pupils' understanding of democracy. Information- and communication technology (ICT) is used in the Norwegian programmes for sustainable development, and education for sustainable development can also be related to the strategy for ICT in schools.



Innhold

1. Sustainable development and the role of education	4
1.1 What is sustainable development?	4
1.2 What is education for sustainable development?	4
1.2.1 The United Nation's definition	5
1.2.2 European strategy	5
1.2.3 Baltic-Nordic strategy, Baltic 21E	6
1.2.4 National level	6
2. Status	8
2.1 National strategy for environment and development	8
2.2 International co-operation	9
2.2.2 "Environment and school initiatives"	9
2.3 Network for environmental education	10
2.4 Other activities	11
3. The basis for education for sustainable development	12
3.1 Background	12
3.2 Curriculum guidelines	12
3.3 Teaching plans	13
3.4 Competence-building	13
4. Challenges	15
4.1 Background	15
4.2 The school owner or local level	15
4.3 The school level	15
5. Strategic priorities: vision, goals and activities	15
5.1 Vision	15
5.2 Prioritized areas: activities and responsibilities	16
5.2.1 Teaching plans and teaching resources	16
5.2.2 Network-building and communication	17
5.2.3 Evaluation and reporting	18
5.2.4 International co-operation within education for sustainable development	19
6. Roles and responsibilities	20
Appendix: Overview of background documents	



1. Sustainable development and the role of education

1.1 What is sustainable development?

The United Nations Decade for Education for Sustainable Development was initiated at the United Nations summit on environment and development in Johannesburg in 2002. The United Nations General Assembly later decided that the period 2005-2014 would be designated the United Nations decade for education for sustainable development, and that UNESCO would be responsible for international co-ordination of the decade.

The United Nations General Assembly appointed a commission in 1984 to elucidate the interconnections between environment and development, the World Commission on Environment and Development. The commission's definition of sustainable development is:

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

As a response to the report of the WCED, the United Nations organised a conference in Rio de Janeiro, Brazil, in 1992. This conference led to several agreements that participating countries committed themselves to, and Agenda 21 was developed. Agenda 21 is an action plan for work with sustainable development in the next century. It describes among other things the broad participation of citizens which is required to create a sustainable development.

Norway's national strategy for sustainable development was launched in spring, 2004. It describes sustainable development as follows: *A sustainable development requires that we view our activities in a generational perspective and use caution when making decisions that will leave permanent impacts and influence our descendents' freedom of choice and possibilities to fulfil their own needs, or even to survive. A fundamental principle is therefore that we must respect the limits of what nature can tolerate, and base policy on the precautionary principle.*

The Constitution of Norway Article 110b

“Every person has a right to an environment that is conducive to health and to natural surroundings whose productivity and diversity are preserved. Natural resources should be made use of on the basis of comprehensive long-term considerations whereby this right will be safeguarded for future generations as well.

In order to safeguard their right in accordance with the foregoing paragraph, citizens are entitled to be informed of the state of the natural environment and of the effects of any encroachments on nature that are planned or commenced.

The State authorities shall issue further provisions for the implementation of these principles.”

1.2 What is education for sustainable development?

1.2.1 The United Nations definition

2005-2014 is the Decade for Education for Sustainable Development (DESD). The United Nations gives the following description of education for sustainable development:

Education for sustainable development has three key areas: social environment, natural environment and economy. It must be recognized that these three areas are interconnected.

Education for sustainable development reflects the need for high quality education:

- Education for sustainable development should permeate all curriculum plans and not constitute a separate subject
- The education should help establish the values and principles underpinning sustainable development
- The education should stimulate critical thinking and problem solving
- The education should be based on methodological diversity to promote the learning process
- Students and pupils should themselves participate actively in decisions about the methods to be used

The education should address local as well as global topics.

1.2.2 European strategy

United Nations Commission for Europe (UNECE) has formulated a European strategy for education for sustainable development, ESD. This exemplifies the United Nations definition and creates a vision for the European work in this field.

“Our vision for the future is a region that embraces common values of solidarity, equality and mutual respect between people, countries and generations. It is a region characterized by sustainable development, including economic vitality, justice, social cohesion, environmental protection and the sustainable management of natural resources, so as to meet the needs of the present generation without compromising the ability for future generations to meet their needs¹.

Education, in addition to being a human right, is a prerequisite for achieving sustainable development and an essential tool for good governance, informed decision-making and the promotion of democracy. Therefore, education or sustainable development can help translate our vision of sustainable development into reality.

Education for sustainable development develops and strengthens the capacity of individuals, groups, communities, organizations and countries to make judgements and choices in favour of sustainable development. It can promote a shift in people’s mindsets and in so doing enable them to make our world safer, healthier and more prosperous, thereby improving the quality of life. Education for sustainable development can provide critical reflection and greater awareness and empowerment so that new visions and concepts can be explored and new methods and tools developed.

Education shall make the people more competent and confident and increase their opportunities for acting for a healthy and productive life in harmony with nature and with concern for social values, gender equity and cultural diversity.”

The aims of the UNECE-strategy are:

- To ensure that policy, regulatory and operational frameworks support ESD
- To promote ES through formal, non-formal and informal learning
- To equip educators with the competence to include sustainable development in their teaching
- To ensure that adequate tools and materials for ESD are accessible
- To promote research on and development of ESD
- To strengthen cooperation on ESD at all levels within the UNECE-region.

¹ See “Our Common Future”, 1987. Report from the World Commission on Environment and Development.

1.2.3 Baltic-Nordic strategy, Baltic 21E

A common Baltic-Nordic strategy for education for sustainable development, Baltic 21E, has been ratified. The strategy has the following goals for schools:

The individual learners should have the knowledge, values and skills to be active, democratic and responsible citizens and participate in decisions at the individual as well as at different levels within the society, locally and globally, to create a sustainable society. Learners in vocational education should also have skills and competencies relevant to their future professions.

“According to the United Nation vision, education for sustainable development should provide knowledge, experiences and attitudes, which allow the pupil to contribute to a sustainable development. Knowledge from several disciplines is a prerequisite for being able to contribute to a sustainable development. Education for sustainable development should develop the pupils’ ability and will to understand how various phenomena are interconnected and to analyse issues in an interdisciplinary perspective. It is necessary, but not sufficient, to want development to proceed in a sustainable direction. We must also know what needs to be done to promote this kind of development. We need knowledge about ecological interactions and about the interactions between nature and society.”

1.2.4 National level

The national document presented here is based on the international recommendation. In accordance with the United Nations definitions, education for sustainable development includes developing the ability and the will to understand the interconnections among issues and to analyse problems in an interdisciplinary perspective. To make decisions favouring sustainable development requires knowledge from several disciplines. It often involves conflicts of interest. Because of the complexity of such questions, education needs to promote the ability to think critically and solve problems.

A number of academic themes are central to education for sustainable development. Priorities may change from year to year, but climate, environmental toxins, biological diversity and our patterns of consumption are key issues. The following alphabetical list provides topics that schools can use as a starting point in education for sustainable development. The contents of each topic and specific issues or decisions related to the topic should be examined from a social, economic and ecological perspective.

Refuse and recycling

The increasing amount of refuse is a challenge for a sustainable society. Education must increase awareness of how the amount of refuse can be reduced, how materials can be recycled and how refuse containing environmental toxins can be handled responsibly.

Biological diversity

Loss of biological diversity is also a serious threat toward sustainable development. Understanding of interactions in nature and the interplay of humans with their natural environment is a precondition for making reflected choices that will protect biological diversity on the earth. Education about this topic should reflect the economic, health, aesthetic and ethical significance of biological diversity.

Participation and democracy

Broad participation and a feeling of responsibility are fundamental in a sustainable development perspective. One significant condition for participation and democracy is that barriers created by society hindering equal participation be removed. Universal access is a strategy to promote equality and equal opportunities. The school is an important

actor in ensuring that members of a democracy understand their rights and responsibilities.

Energy

The steadily increasing demand for energy presents a range of global challenges related to environmental impacts, peace, security of energy supply and the increasing cost of energy. A more diverse and environmentally friendly energy system including renewable energy sources, energy efficiency measures, introduction of environmentally friendly technology and flexible energy supplies is a prerequisite for sustainable development.

Consumption, resources and global distribution

Scarcity of important natural resources and inequitable global distribution of resources contribute to poverty and constitute a threat to sustainable development. Education must create greater awareness of patterns of consumption and the need to manage the earth's resources wisely and equitably. Education must also give pupils insight into how this can be done within existing physical, social and economic framework conditions.

Outdoor recreation and experiences in nature

The Report to the Storting no. 39 (2000-2001) "Outdoor recreation" says that outdoor recreation and experiences in nature provide a platform for each person's contribution to a sustainable development. Outdoor experiences should have a central place in education, not least because good experiences in nature give children inspiration and knowledge enabling them to taking responsibility for sustainable development. The right of free access to nature is important.

Health

Good public health is an important part of sustainable development of society. Our surroundings – both material and cultural conditions – have a great impact on our lifestyle and health. Qualities of the local community or neighbourhood affect people's opportunities to be physically active as well as their feeling of being safe and belonging. There is a need to communicate what we know about these interactions. Knowledge should be provided about global health challenges such as HIV/Aids.

Conflicts of interest

Ensuring that all people on earth have their basic needs fulfilled requires sustainable exploitation of nature and equitable distribution of resources. Conflicts of interest often arise when various concerns are weighed against each other. User interests and protection interests are often in direct conflict. Learning to handle conflicts of interest is part of education for sustainable development.

Climate and air quality

Global climate change is one of the most central environmental challenges we face. Climate change can have serious undesirable consequences for the conditions for life for people, plants and animals. Education must aim to provide insight into the mechanisms behind the human-caused climate changes we observe today, and into likely trends in the future if the premises are not changed. Local air pollution can have damaging effects on both health and the environment.

Cultural heritage sites

It is important to preserve our cultural heritage. We can build upon the experiences of our ancestors. The past helps to form the future, and we should preserve the remaining traces of our predecessors. The way we use and re-use cultural heritage sites helps strengthen a sustainable development perspective. Pupils should be encouraged to participate in management of cultural heritage sites in a reflected and scientifically cor-

rect manner. This will create the basis for a sustainability perspective on the local surroundings.

Nature areas

Loss of natural areas is a threat to biological diversity. When natural areas are developed, important natural resources can be lost, both as related to food production and recreation. Conflicts of interest will often exist in questions of land development. Education should promote the view that choices should be made on the basis of knowledge.

Water resources

Water is vital for life on earth and access to clean water is a human right. Nevertheless, clean water is a limited resource for many. Access to clean water is a major challenge in work for a sustainable development. Education about water should emphasize its cultural, ecological and economic significance.



2. Status

Evaluations from national and international research- and development projects on environment and development provide information about what works well and identify central challenges facing the school system in the field of education for sustainable development.

2.1 National strategy for environment and development

The Ministry of Education developed a strategy for environment and development in the education system for the period 1995-1999. A research-based evaluation of the implementation of the strategy was conducted in 1999². The evaluation concluded the following:

- The contents of education for environment and development were not clear. The connection between local and global environmental challenges was weak.
- The evaluation confirmed that schools become inspired when actors outside the school show interest in using their project results
- A wider learning arena outside the school, as emphasized in curriculum guidelines from the 1990's, is important to promote education for environment and development
- The organisational culture at each school can either encourage or hinder education for sustainable development
- Limited access to learning arenas in nature, outside the school, can hinder environmental education
- The will and the ability to work across disciplinary boundaries appeared to be inadequate
- In order to win acceptance, it was important to make explicit the interconnections between education for environment and development and other school priorities
- The schools lacked the competence, opportunities and capacity to co-operate with actors outside the school. It was a problem for schools that they were offered teaching materials and -programmes from many actors
- There was a great potential for schools to support the local environmental management by working with Local Agenda 21. Local Agenda 21 provided a good framework for the local co-operation.

² Evaluation of the strategy for environment and development in the education sector. Rogalandsforskning 1999.

2.2 International co-operation

Norway has participated in several international research- and development programmes on education for sustainable development over the past 20 years. Under the auspices of the Nordic Council, school co-operation in this area has been established in several periods. Several activities (meetings and conferences) have been carried out in co-operation in UNESCO that has developed competence in the field. As part of the United Nations Decade for Education for Sustainable Development (2005-2014), the United Nations Economic Commission for Europe (UNECE) has developed a European strategy for education for sustainable development. In the Nordic-Baltic arena, co-operating groups have been established and a strategy for education for sustainable development has been established, Baltic 21E. These strategies include recommendations and further specification of what characterizes education for sustainable development. The Norwegian document on education for sustainable development presented here is in accordance with the international recommendations. One programme, which began under the leadership of OECD, is presented in the following section as a representative example of results from the international research- and development work in the field.

2.2.2 “Environment and school initiatives”

Norway has participated in an OECD project called “Environment and School Initiatives” (ENSI) since 1986. School researchers and school administrators from many countries have participated in this project. The goal has been to find out whether environmental education is an appropriate instrument for school development at the pupil-, teacher- and school level.

- At the pupil level, the project has been concerned with developing the pupils’ ability to take initiative, co-operate, formulate issues, collect information, construct knowledge and draw conclusions.
- At the teacher level the focus has been on teachers’ ability to construct arenas for learning, lead the educational activities, co-operate across disciplinary boundaries and co-operate with actors outside the school.
- At the school level, the project has examined the impacts of this kind of educational practice on the way schools organise learning activities.

Conclusions from the ENSI project can be summarized as follows:

- Pupils were inspired by co-operation between the school and actors outside the school
- Teachers were inspired by co-operation with colleagues across disciplines and by network co-operation with other schools
- Co-operation between schools and research institutions appeared to be of mutual benefit and to promote the pupils’ learning
- The pupils were adept at collecting information, drawing conclusions and communicating their findings to local decision-makers and the press
- Teachers found an interdisciplinary approach to be productive
- Schools can participate in work with Local Agenda 21 and contribute concretely to work for sustainable development.

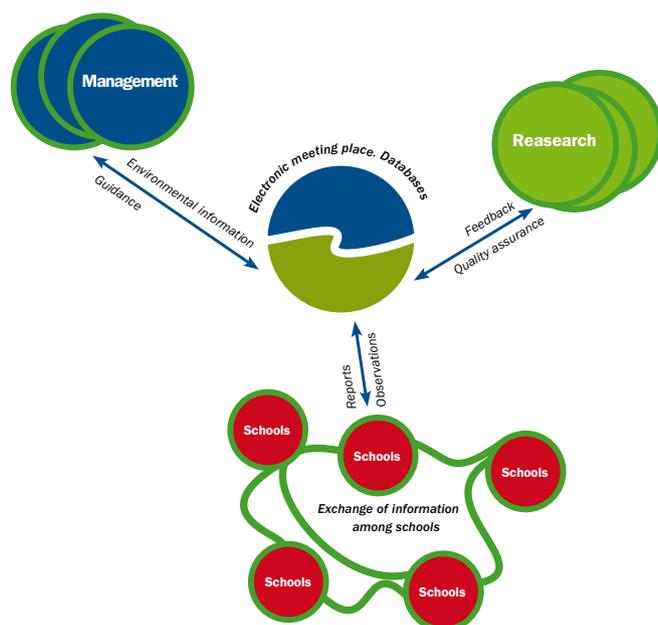
2.3 Network for environmental education

Evaluation and research- and development projects have shown that as long as schools receive support and guidance, it is easy to make good projects in schools. However, schools often revert to their previous practice after the project period is over. The challenge is to establish structures that provide schools with continuous support. This is one

of the reasons that www.miljolare.no was established in 1997 and later expanded.

Østlandsforskning evaluated this tool in 2001. They concluded that it was a good instrument, but that it was not utilized well enough in schools. The Directorate for Education and Training has later conducted campaigns using this tool in which the activities required use of the website. An overview of the results is shown in the box below.

Using the website, pupils find information about themes related to sustainable development and enter the results of their own work. The intention of the programme is, among other things, to promote intersectoral co-operation and action-oriented learning in the local environment, and to integrate global perspectives. The school has the opportunity to present its work to the public and to exchange ideas and co-operate with other schools. Up-to-date environmental information is ensured by linking www.miljolare.no with www.miljostatus.no, the Ministry of Environment's website providing information on the Norwegian state of the environment. The Directorate for Education and Training co-operates with ministries including the Ministry of the Environment, Ministry of Children and Equality, and the Ministry of Agriculture and Food as an integral part of www.miljolare.no. Co-operation has also been initiated with organs such as the Norwegian Consumer Council, The Ideas Bank, Grønn Hverdag and Sabima.



***In 2003, 700 schools participated in a campaign about indoor climate
In 2004, 200 schools participated in monitoring road dust, 183 schools in "energy monitoring" and 42 in a competition about water resources.
In 2005, 220 schools participated in a campaign on cultural heritage and 274 in a water quality investigation
The energy campaign is now run as an annual event, and 204 schools participated in 2005.
In 2005 a competition called "Water in a local and global perspective" was arranged, with 55 of the participants entering a report.
During 2005 more than 530 participants have sent in reports about 5573 activities within www.miljolare.no. More than 2684 schools and 184 other participants are registered users of the website.***

2.4 Other activities

An activity called Rainmakers related to the increasing interest in sustainable energy has been initiated in co-operation between Enova and the Directorate for Education and Training. Class sets of a book containing a story in which energy is a main theme have been sent to schools. Enova has engaged Norsk Gallup to document use of the book. The report indicates that 70% of all fifth grade pupils have read the book and many pupils have given feedback including their reflections about the future of the earth.

The programme “Learn with the forest” (LMS) is a co-operation between the Ministry of Agriculture and Food and the forestry and timber industries. In recent years 120-150,000 pupils each year have used the programme. In addition, more than 2000 teachers per year have participated in in-service training courses. There has also been close co-operation with many teacher training institutions. The website www.treeven.no focuses on how trees are used in society as it is a central part of the programme to promote trees among children and youth. The website www.energiveven.no is Learn with the Forest's tool for energy use, with emphasis on bioenergy.

The Ministry of Education and Research, the Ministry of Children and Equality and the European Union support the project “The Consumers Citizenship Network” as an effort for education for sustainable development. A main part of the project is to help pupils identify, evaluate and document creative initiatives in their local community related to sustainable consumption.

The United Nations Association of Norway in co-operation with GRID-Arendal and Hedmark University College has developed an interactive world atlas, Globalis. This is a tool to be used in conjunction with education for sustainable development, especially as related to the United Nations Millennium Goals. The Ministry of Foreign Affairs, NORAD and the campaign for the millennium goals support the project.

NORAD has provided economic support for a number of projects related to environment and development focusing on north-south perspectives. A number of non-government organisations provide training, and outdoor recreation interest groups conduct training in outdoor life and outdoor schooling. In addition, projects are being carried out on related topics over which it is difficult to provide a complete overview.

The brochure “YouthXchange – guidelines for a sustainable lifestyle” in Norwegian is patterned after the main English version produced by the United Nations Environmental Programme (UNEP) and UNESCO. YouthXchange is integrated into the United Nations Decade for Education for Sustainable Development 2005-2014. The brochure has been sent to all schools and is also available on the internet at www.miljolare.no/yxc .



3. The basis for education for sustainable development

3.1 Background

Periodic reports are made to the Storting about the government's environmental policy.

In Report to the Storting no. 21 (2004-2005) "The government's environmental policy and the state of the environment in Norway"³ the importance of education is pointed out. The report states that: "*Educational institutions are responsible for a significant proportion of knowledge development. The whole school system, including institutions that provide vocational training and higher education institutions, gives new generations knowledge, attitudes and skills that can be instrumental in bringing about sustainable development.*"

3.2 Curriculum guidelines

The national curriculum guidelines provide a set of goals and a framework for education. The school is to plan and implement the concrete educational activities in co-operation with the pupils. It is therefore important that schools interpret the specific subject curricula in light of the general part of the curriculum guidelines.

The "Knowledge promotion" reform guidelines include as one goal of the reform:

- To stimulate pupils, apprentices and teachers in training in their personal development and identity, in developing ethical, social and cultural competence and in their ability to understand democracy and democratic participation.

The general part of the curriculum guideline for primary and lower secondary school, secondary school and adult education, has a separate chapter devoted to the environmentally aware human being.⁴

"The interplay between economy, ecology and technology must make unique demands, scientific and ethical, on our age, if we are to ensure sustainable development. Education must therefore provide a broad awareness of the interconnection in nature and the interplay between humans and their habitat."

The plan states important principles for education for sustainable development:

- working methods that activate pupils and challenge the pupil's fantasy and creativity
- interdisciplinary co-operation and holistic knowledge
- the local community is to be used as a learning arena
- ethical issues are to be emphasized
- student evaluation methods are to take into account a broad concept of knowledge.

New curriculum plans for primary and lower secondary education have been developed and a sustainable development perspective has been included in many of the subject plans.

³ Report to the Storting no. 21 (2004-2005) "The government's environmental policy and the state of the environment in Norway."

⁴General part of the Curriculum Guidelines for primary and lower secondary school

3.3 Teaching plans

Education for sustainable development places demands on the school to develop pupils' knowledge, experience, attitudes and skills as well as competence to act. The education must encourage reflection and give opportunities to go into the subject matter in depth. A dilemma often arises between the need to study a subject in depth and the requirement for interdisciplinary insight. When planning educational activities, schools should consider how an interdisciplinary perspective could provide deeper insights into topics in the subject curricula.

In the primary school, especially, it is vital to expose pupils to good experiences in the outdoors and contact with nature. Pupils must be given opportunities at an early age to experience directly the values associated with being out in nature, including cultural landscape and cultural heritage.

Participation is also a key aspect. Education for sustainable development should provide opportunities for pupils to select activities. Thus, pupils can be allowed to choose among concrete tasks such as clearing and maintaining footpaths and outdoor recreation areas, surveying biological diversity, monitoring water quality, tracking energy use, etc. It is important to create learning arenas such that the products of the pupils' work of learning can be stored and be useful to society. In planning the instruction the school may therefore contact various local actors to get an overview of locations that can be used and possible tasks for the school to carry out. The local government authorities, organisations and local businesses have an important role to play by providing good learning arenas.

3.4 Competence-building

Report to the Storting 30 (2003-2004) "Culture for learning" signals a significant effort to build competence in Norwegian education, and a strategy has been developed for competence building in primary, lower secondary and secondary education.⁵ School owners are to consider which competence-building activities should be given priority and contribute to developing, approving and implementing plans for competence building. To build competence for education for sustainable development, each school must therefore include this topic in their normal school plans.

To build competence for sustainable development in schools it is important to provide instruction in the subject content and to build an interdisciplinary perspective on a foundation of solid subject knowledge. The instruction should be founded on knowledge from the natural sciences, social sciences and economics. It is also necessary to provide training in how to move about in nature and learn in nature.

Education for sustainable development doesn't contain a set of given answers, but rather must stimulate each pupil to develop his or her own standpoint based on knowledge and insight. Analysis of teaching plans will be an important element in the competence-building activities.

⁵ Competence for development. Strategy for competence-building in the primary, lower secondary and secondary education 2005-2008".



4. Challenges

4.1 Background

International and national evaluations show that schools need support and guidance if sustainable development is to be an integral part of education.

Education for sustainable development challenges and requires the school system to:

- Integration of education for sustainable development into educational activities as part of the school's ordinary activities.
- Development of attitudes of responsibility and solidarity with the poor people of the world and with future generations. Learning arenas must be established that will give pupils the experiences needed to do this.
- Understanding of the barriers created by society that prevent participation and democracy.

4.2 The school owner or local level

The challenges for school owners and schools are:

- To include activities in school plans and municipal plans that ensure that sustainable development becomes an integral part of education.
- Clarify the responsibility of school leaders for sustainable development.
- Facilitate co-operation between schools, the municipal management, non-government organisations and business.

4.3 The school level

The challenges at the school level are to:

- To recognize the connections between education for sustainable development and other priority development areas in education
- Relate local issues to a national and global perspective, and have the ability to make the global challenges concrete
- Have the competence to address and handle issues about which there are conflicts of interest in the local community
- Establish co-operation with schools in other countries that are working with sustainable development issues.



5. Strategic priorities: vision, goals and activities

5.1 Vision

A primary and secondary education system that contributes to sustainable development.

Goals:

- The pupils have real influence as participators in education for sustainable development which is based on experiences, action-oriented, and which provides depth of understanding.
- The teachers have the competence needed, and necessary framework conditions are present, to conduct education for sustainable development in which social-, natural resource-related- and economic aspects are integrated.
- Norway has well-developed networks and co-operation between schools, relevant departments, non-government organisations and research institutions at the national, regional and local level. An internet-based system facilitates communication and information spreading.
- Through continual evaluations, reporting and development work, knowledge is gained regarding education for sustainable development, which gives a basis for further development of the activities.
- Norway participates in international fora for the purpose of exchanging research results and improving the quality of education for sustainable development, both in Norway and in other countries.

5.2 Priority areas: activities and responsibilities

5.2.1 Teaching plans and teaching resources

	Activities	Responsibility/co-operation	Status
1	Develop materials on sustainable development themes and the competence goals of the curriculum, and ensure that these are available to schools	Directorate for Education and Training, in co-operation with relevant institutions (interdepartmental group, Enova, The Ideas Bank, Grønn Hverdag, etc.). Relevant centres of competence in directorates and within teacher training participate.	External actors continually inquire about co-operating to create a focus on particular themes. This is tied to www.miljolare.no .
2	Sustainable development in the curriculum guidelines	Directorate for Education and Training	Sustainable development is integrated into curriculum guidelines where relevant

5.2.2 Network-building and communication

	Activities	Responsibility/co-operation	Status
1	Maintain and develop intersectoral co-operation at the national level. Initiate and support intersectoral co-operation at the regional level	Directorate for Education and Training in co-operation with interdepartmental group and County Governors	A group has been established at the national level. Similar groups should be established tied to the County Governors' office. This will improve co-ordination of efforts directed toward schools.
2	Ensure effective co-operation among schools and between schools, management agencies, research institutions, non-government organisations and business	Directorate for Education and Training in co-operation with interdepartmental group and selected municipalities. www.miljolare.no is used as a tool for this.	Co-operation has been initiated with the Ministry of Environment's and the ***KS The Norwegian Association of Local and Regional Authorities. This is linked to www.miljolare.no and includes research and non-government organisations
3	Maintain, develop and operate www.miljolare.no and ensure that it supports the work of municipalities and schools with action-oriented education for sustainable development	Directorate for Education and Training in co-operation with ministries/directorates contracts research institutions and other relevant partners (Bergen University, the Natural Science Centre, other universities, Norwegian Institute for Air Research, and others)	Continue the co-operation between www.miljolare.no and www.miljostatus.no . Researchers assure the quality of pupils' work. The results of educational activities can be useful for society.
4	Facilitate the participation of schools as actors in national programmes (monitoring of water quality, biological diversity, indoor environment)	Directorate for Education and Training in co-operation with interdepartmental group contracts research institutions. Tasks for pupils are related to the competence goals in the natural science and social science curriculum. Pupils become motivated, gain insight and learn basis skills. Must be related to point 3.	The system for this has been developed. There is a high potential for co-operation between schools and the local community.
5	Co-operate with the Norwegian Research Council's research campaign each autumn	Directorate for Education and Training in co-operation with the research council and relevant research institutions. Themes should be appropriate for the competence goals in the curricula. The pupils are to observe, collect information and register their findings on the internet. This promotes the development of basic skills and insight. Schools receive guidance from a research institution.	Campaigns have been conducted the past 3 years. There is a new topic each autumn.

5.2.3 Evaluation and reporting

	Activities	Responsibility/co-operation	Status
1	Consider use of international quality indicators related to education for sustainable development	Directorate for Education and Training contracts research institutions	An international indicator set is being developed. Norway has indicated that it could test the indicator set in autumn 2006
2	Sustainable development is integrated into the reporting systems in the education sector	Directorate for Education and Training and the County Governors' offices	This will be implemented as a part of normal reporting routines
3	Survey the extent of education for sustainable development and document how this is integrated into the school subjects	Directorate for Education and Training announces funds for such a survey	Work to be done in 2007-2008
4	Results of research and development work within education for sustainable development are communicated to the sector	This can be international reports or reports by research institutions that are made available	Publication on the Directorate for Education and Training's web site, the School Network and www.miljolare.no

5.2.4 International co-operation within education for sustainable development

	Activities	Responsibility/co-operation	Status
1	Follow up the Baltic 21E strategy and UNECE's strategy for education for sustainable development	Directorate for Education and Training in co-operation with interdepartmental group. An internet-based tool www.sustain.no is being developed based on experience with www.miljolare.no	The Directorate for Education and Training has been asked by the Ministry of Education and Research to participate in an international group to follow up the UNECE strategy
2	Participate in and follow up UNESCO's work for education for sustainable development in the period 2005-2014	Directorate for Education and Training in co-operation with interdepartmental group	See point 1 (same request)
3	Participate in and contribute to further development of an international research- and development programme about use of ICT in education for sustainable development.	Directorate for Education and Training in co-operation with an international group including participants from Finland, England, Austria, Hungary and others. This is a continuation of the programme Environment and School Initiatives.	An application for funding will be submitted to the Comenius 3 programme in 2006
4	Participate in The Globe programme	Globe is a worldwide programme in which the central operations are financed by the USA. The Directorate for Education and Training contracts a Norwegian co-ordinator who provides supervision to the Norwegian schools in the programme	The task has been contracted to West-Telemark resource centre and West-Telemark secondary school
5	Participate in the United Nations YouthXchange programme	The Ideas Bank participates in the international project and gives feedback to the Norwegian efforts	This material has been sent to all schools



6. Roles and responsibilities

	Education sector	Other sector
Central	<p>Directorate for Education and Training</p> <ul style="list-style-type: none"> -set goals for facilitation of activities in the education sector -ensure that sustainable development is integrated in curriculum guidelines -contract research institutions to conduct centrally-initiated research and development work -set requirements for reporting on work carried out -evaluate and test the activities -ensure that information about new and initiated activities is available to schools -give information about in-service and further training offerings -promote development of appropriate learning resources in this field 	<p>Ministry of Environment, Norwegian Pollution Control Authority, Directorate for Nature Management, Directorate for Cultural Heritage, Norwegian Polar Institute, Norwegian Mapping Authority (Statens kartverk), Directorate for Health and Social Affairs, Ministry of Children and Equality, and others</p> <ul style="list-style-type: none"> -produce general information materials on central topics -maintain and update "Environmental status" information at the national level -ensure sufficient breadth in the approach to sustainable development -argue for the priorities of the public management in terms of the values represented -support the education authorities in work with development projects with national transferability -have overall responsibility for availability of information and explanatory material for the school sector
Regional government level	<p>County Governor's office</p> <ul style="list-style-type: none"> -evaluate conditions and report on needs to the central authorities -report on activities to the central level -follow through on tasks and special activities assigned from the central level 	<p>County Governor/county departments</p> <ul style="list-style-type: none"> -contribute to implementing the activities in the plan -have an overview of the status of the environment in the county and maintain up-to-date information the Miljøstatus internet site -co-operate with municipalities, for example by identifying relevant tasks for schools -help assign localities to be monitored and/or restored
Municipality and county municipality (school owner) level	<p>School owner</p> <ul style="list-style-type: none"> -develop municipal plans -ensure political approval of the plan -provide supervision to schools -train teachers -facilitate the co-operation of schools with other departments and organisations; implement concrete activities 	<p>Municipal departments</p> <ul style="list-style-type: none"> -orient schools about the municipality's zoning plan, local challenges and relevant action plans -mediate contact between schools and the authorities, municipal departments and organisations regarding local resource issues
School level	<p>Head of school</p> <ul style="list-style-type: none"> -develop local plans in which sustainable development is integrated into the overall strategy for the school -contribute to planning and implementation of relevant tasks integrated into educational activities 	



Appendix: Overview of background documents

Acts and regulations

- Lov 17.07.1998 nr. 61 om grunnskolen og den vidaregåande opplæringa (opplæringslova).
- Lov 04.07.2003 om frittstående skoler (friskolelova).
- Forskrift til opplæringslova 28.06.1999 nr. 722 med senere endringer.
- Forskrift om miljørettet helsevern i barnehager og skoler m.v. 01.12.1995 nr. 928.
- Forskrift om systematisk helse-, miljø- og sikkerhetsarbeid i virksomheter 06.12.1996 nr.1127.

Guidelines

- Veileder om §9a, om elevenes skolemiljø og informasjonsbrosjyre om elevenes skolemiljø til elever og foreldre (oktober 2004)
- Større lokal handlefrihet i grunnopplæringen. Om organisering av opplæringen (Opt. §8-2). Informasjons- og veiledningshefte
- NOU 2005:8 Likeverd og tilgjengelighet

Reports to the Storting (Parliament)

- St. meld. nr. 30 (2003-2004) Kultur for læring, Utdanningsdepartementet
- St. meld. Nr. 16 (2004-2005) Leve med kulturminner
- St. meld. nr. 16 (2002-2003) Resept for et sunnere Norge, Helsedepartementet
- St. meld. nr. 39 (2000-2001) Friluftsliv. Ein veg til høgare livskvalitet, Miljøverndepartementet
- St. meld. nr. 49 (2003-2004) Mangfold gjennom inkludering og deltakelse
- St. meld. nr. 39 (2001-2002) Oppvekst- og levekår for barn og ungdom i Norge
- St. meld. nr. 46 (1988-89) «Om miljø og utvikling», MD
- St. meld. nr. 13 (1992-93) «Om FN-konferansen om miljø og utvikling i Rio de Janeiro»
- St. meld. nr. 58 (1996-97) «Miljøvernpolitikk for en bærekraftig utvikling», MD
- Nasjonal strategi for bærekraftig utvikling, Utenriksdepartementet 2004
- NOU 2005:5 Enkle signaler i en kompleks verden, Statens informasjonstjeneste 2005
- St. meld nr.21 (2004-2005) Regjeringens miljøvernpolitikk og rikets miljøtilstand
- St. meld nr. 40 (2002-2003) «Nedbygging av funksjonshemmede barrierer»

Strategies/action plans

- Strategi for kompetanseutvikling i grunnopplæringen 2005-08, Kompetanse for utvikling.
- Regjeringens strategi om likeverdig utdanning i praksis (2004- 09).
- Realfagstrategien
- Regjeringens handlingsplan for fysisk aktivitet
- Regjeringens handlingsplan mot rasisme og diskriminering (2002-06)
- Utdannings- og forskningsdepartementet & Utdanningsdirektoratets strategi for dokumentasjon og forskning i grunnopplæringen 2005-08 Kunnskap for utvikling (2005-08).
- Kompetanse for utvikling. Strategi for kompetanseutvikling i grunnopplæringen 2005-2008
- Regjeringens handlingsplan for økt tilgjengelighet for personer med nedsatt funksjonsevne. Plan for universell utforming innen viktige samfunnsområder
- Soria Moria-declaration

International documents

- United Nations environmental education programme, IEEP, UNESCO/UNEP, 1977
- Intergovernmental Conference on Environmental Education, Tbilisi (USSR) October 1977
- UNEP-UNESCO Congress Environmental Education and Training, Moscow, 1987
- Curriculum Guidelines for the primary, lower secondary and secondary school and vocational training and adult education, general part, 1993
- Agenda 21 for Education for Sustainable Development in the Baltic Sea region, Baltic 21E, January 2002
- Economic Commission for Europe, Committee on Environmental Policy, December 2004, CEP/AC 13/2005/3
- United Nations Decade of Education for Sustainable Development 2005-2014, October 2004
- United Nations Millennium Goals

Utdanningsdirektoratet
Postboks 2924 Tøyen
0608 Oslo

Internett: www.utdanningsdirektoratet.no
Bestillingstorget: bestilling.utdanningsdirektoratet.no
E-post: bestilling@utdanningsdirektoratet.no
Telefaks: 23 30 13 89