

## **IV. LATEST ACHIEVEMENTS IN ENGINEERING, ECOLOGY AND ARCHITECTURE**

### **IMPLEMENTATION OF THE EDUCATION FOR SUSTAINABLE DEVELOPMENT IN ESTONIA**

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Estonia was among the states that signed the Rio documents in 1992. Progress in achieving a sustainable development path is a long-term objective of overriding importance for the Estonian Republic.

#### **Policy and policy documents regarding ESD**

According to the Agenda 21 we have started to review our national policies from the perspective of sustainable development and integrated sustainable development within national strategies and plans. The official documents stating the goals for environmental concern and sustainable development are:

**The Law on Sustainable Development (1995)** This Act sets out regulations on sustainable use of natural resources. The purpose of sustainable use of natural environment and natural resources is to guarantee an environment meeting human needs and necessary resources for economic development without causing any significant damage to the environment and maintaining natural diversity.

**The National Environmental Strategy (NES)** by adopted The Estonian Parliament in March 1997. There are set out ten priority goals for environmental policy. The first goal is The Stimulation of Environmental Awareness and environmentally friendly consumption patterns. Now was started to renew of The Estonian Environmental Strategy.

A second version of **The National Environmental Action Plan (NEAP)** approved in May 2001 and prepared to elaborate in details the actions necessary for implementation the policy goals of NES. In this version environmental educational actions have been changed to sustainable development actions.

In June, 2003 Tallinn Pedagogical University was finished the compiling a development strategy "**Sustainable Estonia 21**" (**SE 21**). The SE 21 is a strategy for state and all society. The SE 21 takes into consideration our traditional values, idea of a sustainable development and sets priority goals for policy and identifies long-term objectives/targets to be achieved by 2030 respectively. The strategy was presented to the government in June 2003.

#### **We have started to extent the ESD position in our educational system.**

The official documents stating the education for sustainable development goals are:

**An Agenda 21 for Education in the Baltic Sea Region – Baltic 21E** for the Education sector in the Baltic Sea Region with an action plan for implementing was adopted by the representative of Estonian Minister of Education the 24 January 2002.

The Estonian Parliament adopted in December of 2001 "**Estonian Strategy Research and Development "Knowledge based Estonia" 2002-2006**". One of main the goal is in Strategy Research and Development is the SD.

The sustainable development is presented in **The Estonian National Curriculum for Basic Schools and Gymnasiums** (adopted by Government in 2002) as a common topic to all subjects to our basic and secondary education. It means that SD issues have be taught in biology, geography, chemistry and physics lessons as well as in mathematics, history, local studies, music and other subjects..

**We have different implementation actions at school level:**

**"Schools for Sustainability in the Baltic States"** In July 2003 was finished project "Schools for Sustainability in the Baltic States". International 2-year co-operative project started in 2001 and was locally co-ordinated by REC country offices in Latvia, Lithuania and Estonia. This was family oriented project to promote the ideas of sustainable development among the youths. At the end of program an Estonian- Russian booklet of success stories from all three countries was published.

In spring 2001 was initiated an environmental education **project Windmill** ("Tuulik" in Estonian) by the Ministry of Foreign Affairs of the Netherlands (the Social Transition Program of Central and Eastern Europe MATRA)), the Ministry of the Environment and by the Ministry of Education of the Estonian Republic. The project support Estonian schools in developing school curriculum on the point of ESD and integrating ESD issues into the schoolwork plan."

In spring 2003 was initiated the sub- project **Windmill for Kindergartens** with co-operation Ministry of Environment and Tallinn Department of Education.

**The Baltic Sea Project.** The Baltic Sea Project (BSP) is an extensive environmental project, which is offering the activities for students and teachers of the region. Sustainable development is one of the themes of the BSP.

**"Naturewatch Baltic" in Estonia.** The main aim of the project is to raise the awareness of young generation in environmental issues so that they could make right decisions towards sustainable development.

**International Environmental Program GLOBE.** Target group: school students, about 70 teachers and 800 students are involved each year in Estonia.

**Green flag and Blue flag projects**

**Materials for schools:** We have started with schools, nature houses and Ministry of Education projects to develop teaching and methodological materials concerning ESD for schools and develop an Internet based portal with information on existing material

In the framework of project "**Windmill**" (in spring 2002) was published a teachers' book for lessons plans on the topic of environment and sustainable development "**TUULIKU TUNNID**" ([estonian](#), [russian](#) versions) and the

Environmental Diary for the 3rd-4th grade (in Estonian, Russian and English). By the end of the second year (in spring 2003) was published a methodical material for schools - Lessons plans on the topic of environment and sustainable development for social studies teachers'. Project's teaching-learning materials may found on the page: <http://www.emieco.ee/cms/eesti/trykised>

### **High Education**

Tallinn Pedagogical University and Tartu University have acted as a promoter of new educational ideas and as a centre for teacher training in Estonia.

The second international conference of JTET (Journal of Teacher Education and Training) and UNESCO network “**Sustainable Development, Culture and Education**” would be organized by Tallinn Pedagogical University next year in Estonia (14. – 16. April 2004 in Tallinn).

### **Competence development**

The need for training in ESD is extensive for officials, headmasters and teachers.

We have started to compile **The National Teachers' Pre-service and In-service Development Plan** from the point of ESD. This plan was presented to the Minister of Education in December 2003.

National Examination and Qualification Centre has already done the suggestions to universities to reorient teacher's pre-training and to develop the ESD and integrative teaching courses for students in main state universities.

### **Translation and distribution of Baltic 21E**

**An Agenda 21 for Education in the Baltic Sea Region – Baltic 21E** program has been translated into Estonian. It is available to the Internet on the [Ministry of Education and Research web-page](#).

Estonian Ministry of Education have nominated national ESD co-ordinators (one representative in formal education, one representative in high education and one representative in non-formal education field of the three working groups) to be the responsible co-ordinator in each field of education in Estonia, as well as for activities in collaboration with other countries in the Baltic Sea Region.

## **THE TASKS OF ESTIMATING THE WEAR AND COST OF BUILDING IN RECONSTRUCTION**

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Reconstruction of buildings and structures plays an important role in the construction projects. To preserve the original appearance of historic buildings is a fundamental goal. The need for reconstruction projects is due to a number of reasons, such as the economic requirements for the modernization of buildings,