The Annals of "Dunarea de Jos" University of Galati
Fascicle I – 2008. Economics and Applied Informatics. Years XIV - ISSN 1584-0409

EU Strategies and the Role of Education for Sustainable Development

Cornelia Elena TUREAC
Anca Gabriela TURTUREANU

"Danubius" University of Galati

Abstract. In June 2006 the European Union decided upon a new Strategy for Sustainable Development. Together with the Lisbon Strategy that was revised in 2005, there is now some coherence between the two strategies which had been conflicting before. The renewed Strategy for Sustainable Development includes aspects of production and consumption and promotes a knowledge society. The renewed Lisbon strategy lists eco-innovation and environmental technology as one of the areas which are important for competitiveness. The Lisbon Strategy and the Strategy for Sustainable Development are now seen to be mutually enforcing and complementary, with the Strategy for Sustainable Development focussing on a long-term overarching objective. One special item which has now been included in the EU Strategy for sustainable development is education for sustainable development, which provides an additional link to the Lisbon Strategy, which focuses on the knowledge society. The European Support Centre and the Austrian Chapter of the Club of Rome have established a large European network on environmental education which is in line with the targets of the EU Strategy for Sustainable Development.

1. The Lisbon Strategy in 2000

The Lisbon Strategy was agreed upon by the Lisbon European Council in March 2000 and was designed as a new political strategy for the European Union *"in order to strengthen employment, economic reform and social cohesion as part of a knowledge-based economy"*.

The Council stated that a *"radical transformation of the European economy"* was required as a consequence of globalisation and the challenges of a new knowledge-driven economy. The Council analysed the strengths and weaknesses of the European Union. Among the strengths there were low inflation and interest rates, remarkably reduced public sector deficits and a healthy balance of payments as well as a generally well-educated workforce and social protection systems. The weaknesses were seen in the area of employment (15 million Europeans were out of work at that time) and in an underdeveloped services sector, particularly in the area of telecommunications and the Internet.

The strategic goal for the European Union according to the 2000 Lisbon Strategy can be characterised by the most frequently cited phrase from the document. The Union wanted *"to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion"*. Aspects of the strategy were an information society for all, establishing a European area of research and innovation and creating a friendly environment for starting up and developing innovative businesses, esp. SMEs.

Two items in the key phrase are remarkable: The first one is the focus on competitiveness. The 2000 Lisbon Strategy did not only argue that Europe should be competitive, but it claimed that Europe should be the most competitive economy in the world (which requires that other economies remain less competitive). The 2000 Lisbon Strategy was not an agenda for a global partnership, but for European leadership. The wording sounded different than in the expansion of the EU Strategy for Sustainable Development "Towards a Global Partnership for Sustainable Development" . The second item is the use of the term "sustainable economic growth". Did it mean that economic growth should be in line with the three dimensions of sustainability or did it just mean permanent and high economic growth? Actually it seems that the second interpretation was applicable, because environmental problems did not play a special role in the Lisbon Strategy. The document stated simply that achieving the goal required an overall strategy aimed at:

- *preparing the transition to a knowledge-based economy and society by better policies for the information society and R&D, as well as by stepping up the process of structural reform for competitiveness and innovation and by completing the internal market;*
- *modernising the European social model, investing in people and combating social exclusion;*
- *sustaining the healthy economic outlook and favourable growth prospects by applying an appropriate macro-economic policy mix.*

The physical base of the economy, a healthy environment and intact natural systems were not described as being under major threats and measures for environmental sustainability were not an essential part of the document. The focus was just on growth itself (3% were indicated as a realistic prospect). An explanation may be derived from the Council's understanding of the corresponding relationships:

"The shift to a digital, knowledge-based economy, prompted by new goods and services, will be a powerful engine for growth, competitiveness and jobs. In addition, it will be capable of improving citizens' quality of life and the environment."

The knowledge-based economy was not only regarded as the tool that provided economic growth, it was also supposed to lead to a better environment. Thus the Lisbon Strategy was a document based on technology-optimism. The new information technologies were supposed to solve our environmental problems. But what would happen if the technologies didn't have the positive effects as assumed?

2. The European Union Strategy for Sustainable Development in 2001

Many of the problems of the European Union had become worse in the late 90s, but the Lisbon Strategy ignored some of the major challenges, the analysis of weaknesses had been very incomplete. The Stockholm European Council decided that a EU Sustainable Development Strategy should complement the political commitment of the Lisbon Strategy by including an environmental dimension, recognising that in the long term, economic growth, social cohesion and environmental protection go hand in hand.

The "European Union Strategy for Sustainable Development" was discussed at the Gothenburg Summit. It identified the main threats to sustainable development:

- *Emissions of greenhouse gases from human activity are causing global warming. Climate change is likely to cause more extreme weather events (hurricanes, floods) with severe implications for infrastructure, property, health and nature.*
- *Severe threats to public health are posed by new antibiotic-resistant strains of some*

diseases and, potentially, the longer-term effects of the many hazardous chemicals currently in everyday use; threats to food safety are of increasing concern.

- *One in every six Europeans lives in poverty. Poverty and social exclusion have enormous direct effects on individuals such as ill health, suicide, and persistent unemployment. The burden of poverty is borne disproportionately by single mothers and older women living alone. Poverty often remains within families for generations.*
- *While increases in life expectancy are obviously welcome, combined with low birth rates the resultant ageing of the population threatens a slowdown in the rate of economic growth, as well as the quality and financial sustainability of pension schemes and public health care. Spending could increase by up to 8% of gross domestic product in many Member States between 2000 and 2040.*
- *The loss of bio-diversity in Europe has accelerated dramatically in recent decades. Fish stocks in European waters are near collapse. Waste volumes have persistently grown faster than GDP. Soil loss and declining fertility are eroding the viability of agricultural land.*
- *Transport congestion has been rising rapidly and is approaching gridlock. This mainly affects urban areas, which are also challenged by problems such as innercity decay, sprawling suburbs, and concentrations of acute poverty and social exclusion. Regional imbalances in the EU remain a serious concern.*

The analysis by the European Commission was based on a holistic approach, social problems were mentioned as well as environmental ones. The Commission called for urgent action and provided a list of proposals. Among them were:

- *Subsidies that encourage wasteful use of natural resources should be removed.*
- *Member states should consider how to make better use of public procurement to favour environmentally-friendly products and services.*
- *All policies must have sustainable development a their core concern.*

3. The International Dimension of Sustainable Development (2002)

In March 2002 the Barcelona Counil welcomed the submission of the Commission's communication "Towards a Global Partnership for Sustainable Development" which expanded the EU Strategy for Sustainable Development by addressing the Union's contribution to sustainable development at a global level. In the communication the Commission stated that *"Humankind is increasingly aware that it shares a common and interlinked future and that conflict and injustice on the other side of the world can have direct repercussions close to home"*. The communication set up priority objectives in the following areas:

- harnessing globalisation: trade for sustainable development,
- fighting poverty and promoting social development,
- sustainable management of natural and environmental resources,
- improving the coherence of European Union policies,
- better governance at all levels,
- financing sustainable development.

4. Lack of Growth and Lack of Sustainability !

Neither the 2000 Lisbon Strategy nor the 2001 EU Strategy for Sustainable Development became a success story. It became soon obvious that the European Union did not reach the economic growth it aimed at and in the area of sustainable development, negative trends continued.

One reason for the failure to reach sustainable development were the contradictions to the Lisbon Strategy and its technology-based optimism. A better quality of life and a better

environment should have been the consequences of the application of the new information technologies.

It is helpful to have a look at some documents which had been prepared before the Lisbon Strategy was decided upon, because they reveal the spirit and way of thinking that time. For example, the DG Information Society of the European Commission published 1998 a status report "Towards a Sustainable Information Society", in which there was a very optimistic forecast: *"No other technology than IST offers such a high potential of "Dematerialisation", that is, the same value added with much less resource input and environmental burdens,*
"

„It is clear that with the Information Society, new opportunities are emerging which will help to achieve both global environmental sustainability and continued economic growth; to achieve social goals of employment growth and local community development within a free market framework; and to enable greater access to work, services and mobility without congestion. This new opportunity for a triple win-win development is in stark contrast to the current debate on sustainability, notably in Rio and Kyoto, where the goals of sustainability are seen to be in conflict with economic growth, employment and industrial interests."

There was generally assumed that by help of new information technologies, real products and services would be replaced by virtual ones. The virtual economy, primarily a service economy, was assumed to decouple economic growth from resource consumption. Virtual meetings should replace physical conferences. These assumptions seemed to be supported by research which showed that people in many industrial countries tended towards postmaterialistic attitudes and values. Of course there is no doubt that information technology enables dematerialisation to a degree as no other technology did before. But this does not necessarily mean that overall resource consumption is reduced. The industrial society had for example replaced the agricultural society mainly with respect to the workforce. People moved from agricultural work to work in industry. On the material level, the industrial society did however add to the agricultural society. Via a positive feedback even more agricultural products could be produced than before.

In 1840 Justus von Liebig had published his findings about the application of chemistry in agriculture which resulted in the broad use of fertiliser and an increase of the cereals production. In parallel, even though IT workforce substitutes industrial workforce, the information society may produce even more industrial goods than the industrial society - again due to a positive feedback. Such a pattern of development might lead to an ecological disaster.

One of the mechanisms that prevent information technology from reducing overall resource consumption is the Rebound Effect. Increases in ressource efficiency result in lower prices for products and therefore consumption increases to such a high level that the relative resource savings are compensated by the general growth: For example, some centuries ago only very privileged people could afford an orchestra. The resource consumption of the individual orchestra was high, but there were not many of them. Today information technology makes it possible to enjoy music with devices like CD or MP3 players which consume much less resources than an orchestra. But they have become so cheap that millions of people can use them and the overall resource consumption has increased (obviously it is not easy to bring the social and the environmental dimension of sustainability together).

Some areas, in which the increasing resource use is directly visible are:

- Energy consumption: A contemporary PC with a monitor has an energy consumption during use which is comparable to the metabolic turnover of a human being;
- Paper consumption: The "paperless office" is realized only slowly and restrictions to printing in the offices or at home are not so much due to cost of paper but result rather

from high cost of toner and ink cartridges;
- There is a "mountain" of electronic waste that grows year by year and contains still quite a variety of hazardous chemicals.

There are even more areas, where a reduction of resource consumption did not occur: travel did not decrease. People are today as mobile as they have never been before, and there seems to be a close relationship between communication and travel behaviour. There was already in the pre-Internet age a correlation between the number of messages sent by people, beginning with letters and later including phone calls, and the number of kilometres travelled. The increase of the two entities was in parallel. Did people in the past forecast that because of telephone calls, which bridge distances easily, they would travel less, and that television would replace holiday trips because they could see foreign countries comfortably from their home? E-mail and videoconferences, was the argumentation since the late 90s, would result in
a replacement of motorways for cars by information highways. But no such trend has been observed. We use the new technologies to increase our communication activity, while at the same time travel statistics show that traffic continues to grow.

It is not an accident that the release of the Lisbon Strategy in March 2000 coincided with the peak of the IT hype at the stock exchanges. On March 10th, 2000, the NEMAX All Share peaked at 8546 points and then began to follow the trend shown by the NASDAQ which lost 2/3 of value between March 2000 and April 2001. The Lisbon Strategy was clearly a child of the euphoric mood related to information technology which dominated discussions at the turn of the century.

5. The Revision of the Lisbon Strategy in 2005: Steps Towards Sustainability

In March 2005 the European Council met in Brussels and stated that five years after the launch of the Lisbon Strategy, the results were mixed. Alongside undeniable progress, shortcomings and obvious delays were detected. Therefore the Council called for urgent action. To that end, it was regarded to be essential to relaunch the Lisbon Strategy without delay and re-focus priorities on growth and employment. Europe should renew the basis of its competitiveness, increase its growth potential and its productivity and strengthen social cohesion, placing the main emphasis on knowledge, innovation and the optimisation of human capital. The Council welcomed also the Commission's communication "Working together for growth and jobs – A New Start for the Lisbon Strategy" submitted for the midterm review." The Council6 identified the following vital strands of the relaunch:
- knowledge and innovation - engines of sustainable growth,
- an attractive area in which to invest and work,
- growth and employment making for social cohesion.

The Council also reaffirmed at the occasion of the relaunch of the Lisbon Strategy that the Lisbon Strategy itself is to be seen in the wider context of the sustainable development requirement that present needs be met without compromising the ability of future generations to meet their own needs.

The Council welcomed also a Communication by the European Commission which included actions to promote growth and jobs and defined the relationship between the Lisbon Strategy and the Strategy for Sustainable Development: *"The Lisbon Strategy is an essential component of the overarching objective of sustainable development set out in the Treaty: improving welfare and living conditions in a sustainable way for present and future generations. Both Lisbon and the sustainable development strategy contribute to ensuring this goal. Being mutually reinforcing, they target complementary actions, use different instruments and produce their results in different time frames."*

An essential step towards sustainability in the renewed Lisbon Strategy was the inclusion of environmental technology as a potential engine for growth and jobs. This was added to the however still dominating role of information technology:

"The European Council reiterates the important contribution of environment policy to growth and employment, and also to the quality of life, in particular through the development of ecoinnovation and eco-technology as well as the sustainable management of natural resources, which lead to the creation of new outlets and new jobs. It emphasises the importance of energy efficiency as a factor in competitiveness and sustainable development .''
"Eco-innovation and environmental technology should be strongly encouraged, particularly in energy and transport, with particular attention paid to SMEs and to promoting ecotechnology in public procurement. In addition to its growth in the internal market, this sector has considerable export potential. The European Council invites the Commission and the Member States to implement the action plan for eco-technology as a matter of urgency, including by specific actions on a time scale agreed with economic operators. The European Council reaffirms the importance of the objective of halting the loss of biological diversity between now and 2010, in particular by incorporating this requirement into other policies, given the importance of biodiversity for certain economic sectors.

6. The Revision of the EU Strategy for Sustainable Development in 2006

During the review of the Strategy for Sustainable Development, there were several stakeholder events with civil society representatives, one of them organized by the European Support Centre and the Brussels-EU Chapter of the Club of Rome. Many representatives from civil society complained about the dominance of the Lisbon Strategy and the ideology of economic growth and the lack of progress towards sustainable development. There have been ideas to include the two European Strategies, the Lisbon Strategy and the EU Strategy for Sustainable Development, into one comprehensive document. However, the fear dominated that in such a single European Strategy the economic part of the Lisbon Strategy could dominate and the environmental and social concerns of the Strategy for Sustainable Development might play a minor role. Therefore, the further existence of a stand-alone document on sustainable development was regarded as important and even the time intervals of the monitoring of the two strategies were chosen differently. There will be reports on progress related to the Lisbon Strategy every year, whereas the monitoring of the Strategy for Sustainable Development takes place only every 2nd year.

The new Strategy for Sustainable Development has 7 priority areas, some of them being more or less related to the priority areas of the 2001 strategy:

- climate change and clean energy
- sustainable transport
- sustainable production and consumption
- conservation and management of natural resources
- public health
- social inclusion, demography and migration
- global poverty and sustainable development challenges

The major changes are the inclusion of both the EU-internal and the global dimension of sustainable development in one document and the inclusion of the priority area on "sustainable production and consumption: "*The main challenge is to gradually change our unsustainable consumption and production patterns...*". Production and consumption are thus not left just to the Lisbon Strategy, the Sustainable development tries to direct also the economic sector. Among the operational objectives and targets in this area, there are:

- Promoting sustainable consumption and production by addressing social and economic development within the carrying capacity of ecosystems and decoupling economic growth from environmental degradation.
- Improving the environmental and social performance for products and processes and encouraging their uptake by business and consumers.
- Aiming to achieve by 2010 an EU average level of Green Public Procurement (GPP) equal to that currently achieved by the best performing Member States.
- The EU should seek to increase its global market share in the field of environmental technologies and eco-innovations.

Finally the relationship between the two strategies is defined as complementary: *"The EU SDS and the Lisbon Strategy for growth and jobs complement each other. The SDS is primarily concerned with quality of life, intra- and inter-generational equity and coherence between all policy areas, including external aspects. It recognises the role of economic development in facilitating the transition to a more sustainable society. The Lisbon Strategy makes an essential contribution to the overarching objective of sustainable development focusing primarily on actions and measures aimed at increasing competitiveness and economic growth and enhancing job creation."*

And the renewed EU Strategy for Sustainable Development claims to provide a framework: *"The EU SDS forms the overall framework within which the Lisbon Strategy, with its renewed focus on growth and jobs, provides the motor of a more dynamic economy...."*. Will the the Strategy for Sustainable development really frame the economic policies of the EU? At least, during the renewal of the two EU strategies, there have some linkages been created, such as the role of eco-innovation in achieving the Lisbon targets of growth and jobs and by the inclusion of the role of the knowledge society in achieving a sustainable development.

7. The Role of Environmental Education

A step towards the Lisbon Strategy is also done in a section on "cross cutting Policies Contributing to the Knowledge Society" which has now been included into the EU-Strategy for Sustainable Development. Like in the economic area, even though taking up some terminology for the Lisbon agenda, there is a special focus and a special interpretation in the EU Strategy for Sustainable Development, for example:

„Education is a prerequisite for promoting the behavioural changes and providing all citizens with the key competences needed to achieve sustainable development. Success in reversing unsustainable trends will to a large extent depend on high-quality education for sustainable development at all levels of education including education on issues such as the sustainable use of energies and transport systems, sustainable consumption and production patterns health, media competence and responsible global citizenship.

"Education can contribute to greater social cohesion and well-being through investments in social capital and by ensuring equal opportunities, citizens´ participation especially of disadvantaged groups to achieve a higher degree of awareness and understanding of the complexity and many interdependencies in today's world. Education that provides women and men with competences that increase their employability and lead to high quality employment is also key in strengthening the competitiveness of the EU"

Education will play a major role in achieving sustainable development because the next twenty years of the century will be decisive. Decisive with regard to the solution to the main problems of our planet, already clearly discernible today, problems which need to be resolved as the population steadily increases: adequate food supplies, a healthy and worthwhile living environment for everyone, and the opportunity to be an accepted member of the global

community are some of the key areas. Sustainability and the environment are issues that transcend regional, national and continental borders: they concern everyone and every part of our global community.

We have a lot of knowledge about the destruction of the environment which is going on and in many countries there is a high environmental awareness - but not yet enough and there is not yet enough action. How can we avoid the increase of resource consumption that might arise from further economic growth and larger parts of the world population having Western living standards? Environmental education will be an important tool. The forthcoming generation, its representatives being school children and students, is a main target group for measures aimed at raising environmental awareness.

There are two main reasons for the importance of the educational sector related to sustainable development:
1. The principal opinion shapers for the forthcoming generation and, consequently, those capable of bringing about a change of awareness within the population at large are teachers and professors.
2. The young generation has influence on the generation of parents, for example when they remind them to separate waste.

But how to reach the target groups? Information should flow easily in the Internet age, we are flooded every day with bits and bytes. However, finding useful information is not a easy. This is why the European Support Centre and the Austrian Chapter of the Club of Rome started an initiative entitled "European Environmental Information" which is based on the idea of a network. The EEE initiative aims at the increase of awareness for our major environmental problems and at fostering the exchange of ideas on environmental education. An on-line database has been created that presents information from almost all European countries. It includes today the largest European on-line collection of environmental education projects and is supported by the City of Vienna and by Bank Austria Creditanstalt

The 270 projects are presented by a short abstract and a project description. The description gives also the link to the project website, which makes it possible to get more comprehensive information on individual projects. The database has various search functions which makes its use very convenient. The projects can be sorted according to: the theme, like chemistry, climate and energy, agriculture, gardening, health, resources, sustainable development, traffic, waste and water; the age group addressed by the project, like children, juveniles and adults; the country of origin. Presently there are projects from 32 European countries described on he EEE website. The EEE initiative facilitates also international exchange of experiences and know-how as a prerequisite for closer co-operation between the European countries.

References

1. *Presidency Conclusions, Lisbon European Council, 23 and 24 March 2000*
2. *The European Union Strategy for Sustainable Development, Office for Official Publications of the European Communities, Luxembourg 2002, ISBN 92-894-1676-9*
3. *Towards a Global Partnership for Sustainable Development, Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions COM(2002) 82 final*
4. *Towards a Sustainable Information Society, European Commission 1998*
5. *The Sustainable Information Society - Vision and Risks, Thomas Schauer 2003, ISBN 3-89559-042-8*
6. *Presidency Conclusions of the Brussels European Council (22 and 23 March 2005) 7619/1/05*
7. *Council of the European Union, Brussels 2006, 10348/06*
8. *Council of the European Union, Brussels 2007, 25787/07*