

Environmental Education – the path to Sustainable Development

#### Promoting a sense of responsibility through environmental education



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The United Nations has designated the period 2005 to 2014 as the decade of "Education for Sustainable Development". The objective is to integrate the concept of sustainable development in education processes around the world. Environmental education is an integral aspect of this concept. It is a process of action-oriented, political learning. The European Green Dot programme is making a significant contribution to making people promote sustainable development.

#### Green Dot – promoting environmental awareness and motivating people



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The Green Dot and partner organisations have contributed in creating routine attitudes, values and actions, and establishing a European platform for environmental awareness. They promote active citizenship through diverse local, regional and national education programmes for the entire education chain. Many of the activities are realised in partnership programmes with manufacturing and retail enterprises, authorities and recycling companies.

#### Environmental education as a means of promoting European integration

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No other political objective is more dependent on successful cooperation than sustainability. The Green Dot environmental education programme's internationally networked projects are therefore focused towards European integration. Young people in various countries learn to share responsibilities as well as practise democracy by working on solutions together as a group. Two prominent examples are the 1st European Youth Eco-Parliament and the Baltic Sea Project.



#### Sustainability needs networked thinking and action







Bernard Hérodin President of PRO EUROPE

Peter Zühlsdorff President of PRO EUROPE

#### "To understand the complexity of environmental issues is a path to sustainable development."

After the world summit in Johannesburg in autumn 2002, the United Nations designated the period 2005 to 2014 as the decade of "Education for Sustainable Development". To achieve sustainable development, it is necessary to change people's ecological, economic and social perceptions. The challenge that countries around the world therefore face is to integrate the concept of sustainable development in their education processes.

Environmental education is a central aspect of the process of change towards sustainable development. It is time we realised that the environment is not just a factor in this game, but a game in itself; a game in which we are all players and on which our future existence depends. Environmental problems such as climate change jeopardise our prosperity and our economic development. We all contribute to environmental problems and, as a result, we can only solve them on the basis of cooperative action. Environmental education, like education for sustainable development, is based on building awareness and identification with personal living environments. It is therefore not merely the conveyance of knowledge, but a process of learning about the concept of political action.

Based on this knowledge, the European Green Dot systems have managed in recent years by way of comprehensive and high-impact environmental education programmes and communication measures to enhance popular awareness for the environment and create the basis for a new awareness of responsibilities. The daily task of waste separation has had an ecological and economic impact on packaging and individual attitudes towards the environment. In the same way that sustainable development is a challenge facing every member of society, the Green Dot organisations implement many environmental education measures within the scope of public private partnerships together with municipal authorities, political organisations, educational establishments, the business community, associations and institutions.

PRO EUROPE will remain committed to ensuring the success of these measures at national and international level, and encourage their transfer to other sectors.

Bernard Hérodin

Peter Zühlsdorff

Sustainable development is a process of social change that must be experienced by all members of society.



# Promoting a sense of responsibility through environmental education

The United Nations has designated the period 2005 to 2014 as the decade of "Education for Sustainable Development". The objective is to integrate the concept of sustainable development in education processes around the world. This necessitates the sensitisation and involvement of all persons responsible in political and business communities, citizens, teachers, students and schoolchildren. The Green Dot organisations in 24 European countries and their partners in the UK and Canada accept their responsibility for the future and have in recent years made substantial contributions to ensuring people are aware of how important it is to adapt their behaviour and lifestyles to promote sustainable development.

Sustainability as a core action of the United Nations The United Nations Conference on Environment and Development held in Rio de Janeiro in 1992 first brought the issue of sustainable development to the attention of the public. Following the 1987 report of the Brundtland Commission to the UN World Commission on Environment and Development, more than 170 nations approved Agenda 21, a far-reaching platform to achieve sustainable development. "Sustainability is a development which fulfils the needs of the present generation without risking that future generations



cannot fulfil their own needs and choose their own lifestyle." This is the definition of sustainability provided by the World Commission on Environment and Development, headed by the former Norwegian Prime Minister, Gro Harlem Brundtland. The principle of sustainability is based on three equally important dimensions: social equality, ecological compatibility and economic efficiency (sustainability triangle). Any consideration of one of the three dimensions in isolation jeopardises sustainable development.

At the Johannesburg Summit in 2002, it was agreed to assess new forms of education and educational programme content to ensure communication of the concept of sustainability to the younger generation as these will be our future decision makers. They are also more receptive and they can assume the task of communicating the concept to adults. "Our biggest challenge in this century is to take an idea that All citizens play a decisive role in the prevention of environmental pollution.

sounds abstract, sustainable development, and turn it into a reality across the world", said UN Secretary General, Kofi Annan. The objective is to provide all kinds of people with educational opportunities that enable them to acquire knowledge and values, as well as to adopt the behaviour and lifestyles that are necessary to make the future worth living and to bring about positive social change.

#### Building awareness and community involvement

Sustainable development is a concept for living and working in the 21st century. However, we cannot rely only on a topdown approach. Sustainable development is a process of social change that must be experienced by all members of society. In order to realise it, society as a whole – politics, industry and consumers – must be willing to both accept and implement a policy of transition to sustainable management practices. Learning to play an active role in the creation of an ecologically compatible and economically efficient world in which social equality prevails is not an automatic process. This is why education is a vital prerequisite for the worldwide promotion of sustainable development.

Education for sustainable development comprises the subjects of environmental protection, the efficient utilisation of natural resources, the maintenance of the ecosystem and responsible attitudes among members of society and the business community. Environmental education is thus an integral aspect for sustainable development. It deals with the subject of environmental



Environmental education deals with the subject of environmental problems...

... why they occur and what behavioural modifications we have to make.

problems, why they occur and what behavioural modifications we have to make in order to eliminate them. "Learning about how to live and act more sustainably equips all of us – individuals, families, groups, businesses and governments – to make decisions about how we use the resources available to us. Sustainable development education and awareness-raising to a wide and diverse audience is therefore important to ensure that we all understand both why and how we should take action which will be of most general benefit", said Charles Clarke, UK Secretary of State for Education and Skills.

There is more to environmental education than simply learning about environmental protection. This is impressively demonstrated by the anti-littering campaigns that are regularly implemented in many towns and cities throughout Europe: "Initiatives where citizens clean up towns and cities do not just have the effect of cleanliness. They encourage citizens to act in a responsible way and to appreciate public goods", said Jacques de Pastors, General Manager of "Vacances Propres" in France.

Littering is a problem that affects society as a whole. People who litter demonstrate a lack of social responsibility, having little regard for nature and for the protection of public goods. Littering is considered by society as annoying, which in a way is an important prerequisite to remedy it. A strategy to tackle littering should be multidimensional for success:

- There is a need for continuous public education to influence behaviour. Education makes people aware of which environmentally harmful acts are prohibited. This was confirmed in a survey by the Allensbach opinion research institute which was commissioned by Duales System Deutschland AG in 2002.<sup>1</sup>
- Public places need to be kept clean and bins have to be available at appropriate places to dispose of waste.
- Consistent penalties need to be imposed for people who litter.

The assumption of responsibility by every individual plays a central role in the achievement of environmentally responsible behaviour and therefore sustainable development. All citizens play a decisive role in the emission of greenhouse gases (transportation, buildings), waste generation and other types of environmental pollution.

For example, private households in Germany account for more than 29 per cent of the energy consumed in Germany, which is higher than the amount consumed by the industrial

Source:

1] "Umweltwissen und Umweltbildung 2002", conducted by the Institut für Demoskopie Allensbach and commissioned by Duales System Deutschland AG, Allensbach Archiv, IfD survey 7033, October/November 2002 · www.ifd-allensbach.de, www.gruener-punkt.de



The development and installation of environmentally friendly technologies...

... have to be accompanied by a modification of usage patterns.

sector  $(25.3 \text{ per cent})^2$ , and this figure continues to increase (see also Figure 1). This is a general international tendency (see Figure 2)<sup>3</sup>.

#### Sources:

- 2] Federal Environmental Agency, "Umweltdaten Deutschland online" · www.env-it.de
- 3] European Commission, "Green Paper Towards a European strategy for the security of energy supply", 2000 · http://europa.eu.int
- 4] OECD Environment Directorate, International Energy Agency, "International Energy Technology Collaboration and Climate Change Mitigation

   Case Study 3: Appliance Energy Efficiency", 2005
   www.iea.org
- 5] ATLAS Project by European Network of Energy Agencies on behalf of Directorate General XVII of the European Commission http://europa.eu.int/comm/energy\_tranport/atlas/homeu.html

### Figure 1: Development of energy consumption by end use in Germany

in petajoule (1 PJ=0.024 million tonnes of oil equivalent)



Since 1973, primary energy demand in the residential sector in OECD countries has grown more than all other sectors apart from transport. Residential appliances and equipment use 30 per cent of all electricity generated in OECD countries, producing 12 per cent of all energy-related CO<sub>2</sub> emissions. They are the second largest consumer of electricity and the third largest emitter of greenhouse gas emissions.<sup>4</sup> In Europe most residential energy is consumed for space heating, water heating and domestic appliances (see Figure 3).<sup>5</sup>

Public authorities play a key role educating citizens about the necessity of modifying their behaviour, as well as creating an appropriate framework and incentives.

A practical example is the project of the European Union aimed to reduce energy consumption and CO<sub>2</sub> emissions from 2006 onwards by introducing energy performance standards for existing and new buildings. Building the appropriate framework implies that, on one hand, industry must provide the necessary technologies and services and meet the appropriate consumer demand. This, together with appropriate promotional programmes, will provide the necessary incentive to make investments.

However, the installation of an environmentally friendly heating system alone will not solve environmental problems. Politicians and members of the business community therefore need to educate citizens that the purchase of a modern, energy-saving heating system has to be accom-



The assumption of responsibility by every individual plays a central role in the achievement of environmentally responsible behaviour and of new technologies like solar energy.





Source: European Commission

Figure 3: How do private households use the energy? Breakdown of energy consumption by end use in the domestic sector throughout the EU *in per cent* 





The Green Dot has made a significant contribution...

... to promoting a stronger sense of responsibility for waste.

panied by a modification of usage patterns. The environment derives few benefits from an energy-efficient system that is operated when windows are open.

#### Waste separation has triggered a learning process

One effective instrument of promoting an awareness for environmental responsibility is waste separation, a concept that is now applied on a widespread basis throughout Europe. As an act that is performed every day, it "opens the door" to the establishment of permanent behaviour patterns. Waste separation sensitises people to environmental issues. It triggers a learning process that results in people being more attuned to their environmental behaviour and it encourages them to take further measures to protect the environment.





A representative study implemented by the French opinion research institute, Sofres, confirms that the separation of waste performs an important educational function. In 2000, Eco-Emballages, the French Green Dot organisation, questioned around 6,000 citizens in France about their attitudes to waste separation (see Figure 4):

- 93 per cent of people believe that it contributes to improving the quality of the environment and their living space.
- 83 per cent of people who separate their waste said that they would be willing to pick up litter and put it into a bin. 74 per cent of people who do not separate their waste would do the same.
- 78 per cent of respondents stated that they had been more aware of environmental issues since they started separating their waste. They are more willing than others to use the car less frequently and to save electricity and water.<sup>6</sup>

A study by Ipsos in 2003 supports these findings. It discovered that 98 per cent of the French are convinced that waste separation is important for the environment.<sup>7</sup> The results of the study show that everyday actions such as waste separation, which are learned and performed with conviction, are more effective than acts performed as a result of orders, bans and quota requirements. Educational measures, information and campaigns convince citizens that it makes sense to act in a certain way, and they then act in the same way in other areas of their lives. In the long term, environmental education promotes the social If environmental issues play an important role in school lessons, this has a positive effect on the children's interest in the environment.

change that is necessary for sustainable development. It is a platform for a new awareness of responsibility and encourages the desired behaviour.

Integrated approach improves educational programmes Political and structural frameworks must be conducive to reinforcing the collective willingness of members of society to act in a required way. In addition to the necessary infrastructures, incentive systems such as the provision of containers for waste separation, promotion schemes for energy-efficient buildings or the use of solar technology are necessary. The business community must ensure that the technology of these systems is available. Promoting the use of environmental-friendly technologies, products and services must be supported by the government and the industrial sector.

Integrated approach and action must be encouraged; it is necessary to offer appropriate information and education courses in schools, at vocational training establishments and in everyday life which reinforce this willingness and put it in a broader context. If environmental issues play an important role in school lessons, this will in turn have a positive effect on the children's interest in and knowledge of the environment. This is confirmed by the Allensbach survey "Environmental Knowledge and Education 2002" in Germany<sup>8</sup>.

Under the PRO EUROPE umbrella, the European Green Dot system offers a range of instruments and programmes

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#### Sources:

- 6] "Les Français, l'environnement et le rôle du maire", conducted by SOFRES and commissioned by Eco-Emballages S.A., 2000 · www.tns-sofres.com, www.ecoemballages.fr
- 7] "La perception par les Français du tri sélectif des emballages ménagers", conducted by IPSOS France and commissioned by Eco-Emballages S.A., 2003 · www.ipsos.fr, www.ecoemballages.fr
- 8] "Umweltwissen und Umweltbildung 2002", conducted by the Institut für Demoskopie Allensbach and commissioned by Duales System Deutschland AG, Allensbach Archiv, IfD survey 7033, October/November 2002 www.gruener-punkt.de, www.ifd-allensbach.de

at regional, national and international level to educate consumers. These include educational material for school curriculums. The Green Dot programme is making a significant contribution to education on sustainable development. More than 230 million consumers in 24 European countries separate their packaging waste for recycling – and they do so with conviction. The "Green Dot" has made a decisive contribution to promoting a stronger sense of responsibility among members of society for the waste they produce and it has also made them more aware of their own environmental behaviour.



Most of the educational activities developed by Green Dot organisations are aimed at children.

# Green Dot – promoting environmental awareness and motivating people

The Green Dot and partner organisations have contributed in creating routine attitudes, values and actions, and establishing a European platform for environmental awareness, through diverse local, regional and national education programmes and activities. Many of the activities are realised in partnership programmes with manufacturing and retail enterprises, authorities and recycling companies.

#### Diversity

Waste avoidance, resource conservation, energy efficiency and the protection of land, water, air and biodiversity – environmental education and communication will play a key role in shaping a sustainable society in the 21st century. "Global networking means that many institutions, especially schools and the media, will spread the message. We must put more emphasis on the importance of environmental issues in our everyday lives and the behaviour of every single citizen, and communicate these issues more effectively", said UNESCO President Koichiro Matsuura.

PRO EUROPE members have initiated numerous communication measures and projects in the field of environmental education that contribute to the sensitisation of the business community and the general public to the issue of waste.



Recycling and recovery of packaging...

... protects natural resources and lowers CO<sub>2</sub> emissions.

The introduction of packaging waste separation, highimpact communication and education programmes have successfully created routine attitudes, values and actions. The concept of waste separation and recycling have been successfully integrated into everyday life. Active confrontation with the problem of waste fosters an awareness for ecological issues. Waste separation is a first step to improving environmental behaviour as it is a daily task that everyone accepts.

Packaging is something that is necessary - for health protection, social, economic and environmental reasons. It has important functions and is consequently an indispensable product enhancer - especially for food products. First and foremost, it protects products from contamination (bacteria, changes in odour and taste, etc.) and from damage during transportation, handling and storage. Without packaging, many products would be inadequately protected and as a result would also become waste, having more severe consequences for the environment than the packaging and packaging production. "In developing countries, a lack of packaging or inadequate packaging causes between 30 and 50 per cent of the foodstuffs to decay before they even reach the consumers. In industrialised countries, product loss is only about two or three per cent", pointed out Professor Dr Dr Günter Grundke from the German Packaging Institute.

The functions that are performed by packaging are taken for granted by society even though their true value is not always appreciated. The only thing that people consciously perceive is the empty packaging because they buy products, not packaging. After product consumption, only packaging is left to be sorted which people become aware of at this stage. Many consumers then consider it to be useless. This constitutes a packaging paradox: packaging effectively protects products and, afterwards, it becomes a material that needs to be recycled or recovered.

In order to minimise the effects of packaging on the environment, the European Green Dot organisations have been successful in developing programmes to sensitise both manufacturers and consumers. At the same time thousands of companies have implemented environmental concepts into their daily business. They are cutting back CO<sub>2</sub> emissions, reducing the consumption of natural resources and avoiding waste. The avoidance and minimisation of environmental effects is an integral aspect of product and packaging development. More than 230 million Europeans sort their used packaging for recovery. More and more people are becoming aware of eco-friendly consumption. Less packaging is being deposited in landfill sites. The volume



Packaging is necessary for health protection, social and environmental reasons, but afterwards, it becomes material that needs to be recycled or recovered.



With educational programmes children and adults...

... learn about the necessity of sorting, recycling and reuse of packaging and packaging waste.

of recycled and recovered packaging increased considerably, between 1997 and 2001, the proportion of packaging that is recycled and recovered increased from 31 million tonnes (53 per cent) to 39 million tonnes (60 per cent). This protects natural resources, lowers CO<sub>2</sub> emissions and reduces landfill capacity requirements.<sup>9</sup>

#### PRO EUROPE supports active citizenship for sustainable development

Environmental education measures and programmes have been developed for the entire education chain, from pre-schools through vocational training establishments to comprehensive consumer communication measures.

Waste avoidance, as an integral part of sustainable development, is dependent on an active citizenship. For this reason, many of the educational activities developed by Green Dot organisations are aimed at children. Making the school environmentally friendly and working to improve the local environment are promising examples of such work. Children who are confronted with the problem of waste at an early age develop an entirely different sense of responsibility for the environment and therefore also for common welfare. They will have better chances in future to contribute to solving ecological, economic and social problems if they are aware of how these relate to each other.

The Green Dot organisations and partners also promote active citizenship through close cooperation with national and local institutions on the development of integral approaches, many projects are developed and implemented in conjunction with local authorities, educational institutions and business partners.

### Integration of environmental education into school curriculums

The Green Dot organisations have developed educational programmes and teaching materials for schools. They communicate the complex subject of sustainable development in a fun and didactic way and enable its integration into the curriculum. Gérard Bonhoure, Chief Inspector of the French National Education: "Today's school curricula should include more consistent and coherent environmental education elements." Green Dot is contributing to closing this gap.

Since 2000, Ecoembalajes in Spain has been cooperating with Ecovidrio, Ministry for the Environment, APAS (Association for the Promotion of Socio-Cultural Activities) and the Foundation for Biodiversity to develop didactic education materials for teachers and schoolchildren between the ages of eight and twelve. The environmental guides focus on sorting, recycling and reuse of packaging and packaging waste. 1,600 schools and around 170,000 children are currently using the materials.

Ecoembalajes also supports the "Values from Aldeas Infantiles S.O.S." school programme that is run by the foundation of the same name. A teaching unit on the sub-



Latvijas Zaļais Punkts foster responsible environmental behaviour with efficient public activities...



... and the "Green Dot School".

ject of waste separation and recycling was developed and distributed to 3,750 schools.

At the end of 2004, a total of around 257,000 children aged between six and twelve were taught this subject for one month. Afterwards, they produced their own calendar made of environmental materials.<sup>10</sup>

The aim of the French programme "Les ateliers de Rouletaboule" is also to foster positive and responsible environmental behaviour among children. Eco-Emballages and the association network Ecole et Nature have been successfully implementing this comprehensive educational programme in municipalities for over ten years. More than two million children in over 1,000 municipalities have already taken part. At various workshops, the 3 to 14-year-olds learn about the effects of packaging on the environment and work together to find solutions. They also learn to argue their case in democratic debates. The objective of the project is to identify the responsibility of every individual for his or her consumer habits and attitudes to waste. Eco-Emballages has also entered into a partnership with the educational publisher, Nathan, to develop classroom sessions with practical exercises on the subjects of waste, CO2 and water specifically for primary school teachers.<sup>11</sup>

Latvian schools also accord high priority to providing teachers with theoretical and practical training so that they can change attitudes to waste and consumer habits. In September 2001, Latvijas Zaļais Punkts established the "Green Dot School". The rate of schools joining the project increases by 15 to 20 per cent every curricular year. 220 schools with 90,000 children are now taking part in the project, this constitutes 30 per cent of all educational establishments in Latvia. With the assistance of the "On the Green Dot Track" textbook, which is recognised by the Ministry for Education, the children learn why it is important to conserve natural resources, to sort used packaging and to learn how



"Les ateliers de Rouletaboule": French children learn about the effects of packaging and their own responsibility.

#### Sources:

- 9] The PRO EUROPE brochure entitled "Effective packaging effective prevention" (2004) provides detailed information about the prevention of environmental pollution and packaging waste recycling • www.pro-e.org
- 10] Ecoembalajes España, S.A. · www.ecoembes.com
- 11] Eco-Emballages S.A. · www.ecoemballages.fr

Children learn why it is important to treat natural resources and waste with care: classroom sessions in Norway (picture above) and Belgium (picture below).

packaging is recycled. In practical exercises, they are familiarised with the proper procedure for separating waste. Green Dot has provided the appropriate waste containers for schools free of charge.<sup>12</sup>

ÖKO-Pannon is realising similar projects at pre-schools, primary and high schools in Hungary. The Green Dot organisation has developed an "Integrated Waste Management Education Programme" which takes a complex, methodical education approach. The programme shows the entire lifecycle of packaging from production, through retail, waste separation and recycling. Worksheets, exercise books, painting books, storybooks, comics, textbooks, classroom sessions and other materials were developed for teachers. According to the motto of "Teaching the teachers", environmental seminars for teachers and education experts are held in cooperation with the municipal authorities and municipal waste management companies. The programme has acquired national significance within only two years and it is supported by the Ministry for the Environ-



Various activities and competitions instruct people on environmentally compatible behaviour.





The British competition "Bin to Win" for schoolchildren...

... and "Teaching the teachers" in Hungary.

ment and the National Public Education Institute. Although only 15 schools in three cities participated in the 2002/2003 school year, as many as 300 schools in 17 cities with 144,000 children took part in 2004/2005.<sup>13</sup>

Environmental education has also been successfully established at Belgian primary schools, where 2,000 classroom sessions are held every year on the subject of the problems associated with waste to help promote environmental awareness. FOST plus, in cooperation with regional authorities, offers a ready-made, balanced educational classroom curriculum concerning all aspects of waste management. One of the practical learning instruments is a recycling kit which illustrates the different steps in the recycling process.<sup>14</sup>

Parents are also involved in various school projects. For example, Materialretur in Norway has partnered with local governments and waste management companies over the country to develop a school project consisting of a textbook on waste separation and recycling, the "www.loop.no" website and a guided tour of a waste-recycling company. The children learn why it is important to treat natural resources and waste with care, how waste is collected and separated and what happens to it after it is recycled. The parents have to help the children with the exercises and homework.<sup>15</sup>

The above examples are only a small selection of the diverse environmental education activities that are imple-

mented for children in all 26 countries. They make it clear that initiatives which provide both practical skills and theoretical background knowledge are most effective in motivating people to be environmentally aware.

All projects go beyond the mere acquisition of knowledge to convey an understanding of sustainable development. They provide children with the capability to act and instil the necessary values of partnership and responsibility that are essential for community living. This is demonstrated by the British PRO EUROPE partner, Valpak's education programme.

The website, www.recycle-more.co.uk, contains comprehensive information on materials specifically focussed at consumers and schools. The annual "Bin to Win" competition has resulted in hundreds of children aged up to eleven taking the initiative and developing their own projects to deal with environmental problems at their schools.

At one primary school with a graffiti problem, the pupils spent the summer holidays repainting it. To fund the activity

Sources:
12] Latvijas Zaļais Punkts, NPO, Ltd. · www.zalais.lv
13] ÖKO-Pannon p.b.c. · www.okopannon.hu
14] asbl FOST PLUS vzw · www.fostplus.be
15] Materialretur AS · www.materialretur.no



Children in the United Kingdom developed their own projects to deal with environmental problems at their schools.



"Pack the future": a German vocational training project in the decade of "Education for Sustainable Development", developed by Duales System Deutschland AG.

#### Sources:

- 16] Further information at www.recycle-more.co.uk, www.green-dot.org.uk
- 17] "Les jeunes et l'éco-citoyenneté", Junior City, 2004 · www.ecoemballages.fr
- 18] Further information at www.packthefuture.de, www.gruener-punkt.de
- 19] Rekopol Organizacja Odzysku S.A. · www.rekopol.pl
- 20] Repak Ltd · www.repak.ie

the school set up a "redecoration committee" and asked all the pupils to bring in old paint and decorating equipment on a certain day. At another primary school, the pupils addressed the litter problem in their playground. A litter committee was formed and they held Breakfast Club meetings and persuaded the school administrators to open the dining room during the morning break. They did this because most waste is deposited on the school playground during the morning break.<sup>16</sup>

A study implemented in 2004 by the French institute, Junior City, shows that these environmental education programmes are effective, 74 per cent of 300 children aged nine to fourteen years who took part in the survey said they do not throw paper on the ground anymore. 69 per cent separate their waste and 74 per cent know the meaning of the word "ecology"; 30 per cent feel responsible even if they expect in the first hand that political institutions and adults become active as well.<sup>17</sup>

#### "Pack the future" in vocational training

In addition to school education, the United Nations' Agenda 21 programme also mentions vocational training as one of the most important prerequisites for the development of human resources and the simplification of the transition into a sustainable world. In order to promote high awareness among vocational trainees for environmental and development issues, and to ensure that the principles of sustainable development are applied in the world of work, Duales



"Cleaning the world": a very successful ...

... anti-littering campaign in Poland.

System Deutschland launched the "Pack the future" competition in conjunction with the National Institute for Vocational Training and the German Association for Plastics Recycling in 2003.

Vocational trainees throughout Germany were requested to conduct research at their companies into examples of environmental protection and resource conservation, to explain them and to demonstrate in-company optimisation. The entries focused on innovative technologies, processes and concepts for conserving energy, waste, water and raw materials. The "Pack the future" project has now been recognised and endorsed by the United Nations as an official German project in the decade of "Education for Sustainable Development 2005–2014".<sup>18</sup>

#### Towards a modern learning society

In accordance with the objective of lifelong learning, the national Green Dot organisations' activities extend far beyond school education. They implement high-impact communication programmes and various activities, thereby contributing to environmental education in all areas of life and age groups. "We invite all people to play an active role and motivate them to be committed in their spheres of action to conserving natural resources and promoting a clean environment. We instruct them on environmentally compatible behaviour, thereby facilitating active citizenship and encouraging them to motivate other people", said Bernard Hérodin, President of PRO EUROPE. The best example of this is the numerous anti-littering campaigns. Rekopol in Poland partnered with local authorities to initiate the "Cleaning the World" campaign in 2003.<sup>19</sup> Repak in Ireland has been sponsoring the national "Tidy Towns" competition and "An Taisce National Spring Clean" campaign since 2003. Repak provides bags in different colours for the national spring clean campaign so that the collected plastic bottles and cans can be sent for recycling.<sup>20</sup>

In 2003 FOST Plus initiated pilot projects in several Belgian towns and cities with different operational and communicative approaches to reduce littering. In Aalst, the resources of the urban cleansing department were optimised and officials were asked to act as watchdogs on the streets. The project was supported by an impressive poster campaign with the slogan "Keep Aalst tidy!".

In a Ghent district that is frequented by students, a communication campaign with the slogan "Students don't do it in the street" was launched. It included cartoons and the installation of



"Keep Aalst tidy!" Anti-littering campaign in Belgium.



Promoting environmental awareness: The Spanish "Train of Environment"...

... and the German clean countryside campaign.

additional waste bins. The experience gained during these pilot projects will be helpful in anti-littering projects on a larger scale.<sup>21</sup>

In conjunction with major brands the French Green Dot organisation implements the "Vacances Propres" project every summer. The project is associated with a large-scale communication campaign in the holiday regions that encourages people to collect waste and sort used packaging in order to respect the environment.<sup>22</sup>

In 1998, Green Dot Germany and many partners from the business community initiated the "Aktion Saubere Landschaft" (clean countryside) campaign. Since then, more than 10,000 individual projects have been realised. They include litter collecting on public squares, various activities and competitions with numerous cooperation partners such as environment ministries, the German Sports Association, the German Local Community Association (Städte- und Gemeindebund) and UNESCO.<sup>23</sup>



In France, several campaigns such as "Vacances Propres" in cooperation with municipalities or "Métamorphose" with retailers were accomplished.

The local Green Dot organisations also implement numerous local and national activities and campaigns to raise the general public's awareness about waste separation and recycling. These make clear how important resource conservation, energy efficiency and CO<sub>2</sub> emission reduction are. For example, Ecoembalajes dispatched a "Train of Environment" with a mobile exhibition through 18 Spanish cities in 2004. The exhibition, which was visited by more than 113,000 people, provided information about the benefits of sustainable development - from the use of clean energy through the protection of forests and oceans to ecological transport and waste separation. The Spanish Minister for the Environment christened the train and welcomed the idea as an "innovative initiative to promote environmental awareness among citizens". The tour was coordinated by the Ministry for the Environment and supported by various organisations and enterprises.24

Cooperation with manufacturing and retail enterprises is a cornerstone of the Green Dot organisations' national consumer information and education programmes.

In France, Eco-Emballages has developed on-pack promotions, mainly for children, in partnership with retailers and fillers. The packaging of various products, such as biscuits, yoghurts or cereals, were for example furnished with cartoons on environmental themes and consumers were offered the opportunity to order a Natur' Quiz. This quiz is a sort of Trivial Pursuit<sup>™</sup> with questions on the environment. "Vacances Propres" in France encourages people in holiday regions to collect waste and to respect the environment.

The Green Dot organisations' environmental education programmes and activities have ensured that waste separation and packaging recycling are now successful European models, and they have therefore established the framework for sustainable closed-loop recycling management. At the same time, they have firmly anchored the necessity of behaviour that promotes sustainable development in the collective awareness. This is confirmed by various independent studies.

Citizens throughout Europe believe that recycling and recovery are the best concept for waste elimination. In Germany, nine out of ten households separate their waste<sup>25</sup>, in Sweden, 81 per cent<sup>26</sup> and in Spain 73 per cent<sup>27</sup>. In Norway, opinion polls have revealed that around 60 per cent of citizens believe that waste separation and recycling are important for the environment.<sup>28</sup>

Active waste separation is a method of environmental education. This was shown in a survey by Cofremca-Sociovision in France, which was commissioned in 2000 by Eco-Emballages. The French welcome the fact that by performing simple acts, they can make a positive difference to the environment. According to the study, the introduction of waste separation in one municipality was praised by the mayor as a concrete project with a positive impact on the environment.<sup>29</sup> In Germany, 95 per cent of citizens believe that by separating and sorting waste they can make a positive contribution to reducing environmental pollution.<sup>30</sup>



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- 21] asbl FOST PLUS vzw · www.fostplus.be
- 22] Eco-Emballages · www.ecoemballages.fr
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- 28] Materialretur AS · www.materialretur.no
- 29] Eco-Emballages published a summary of the study's findings in the brochure "Les Français aujourd'hui – Je trie, donc je suis" · www.ecoemballages.fr
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The 1st European Youth Eco-Parliament offers young people the opportunity to participate in the decision processes.

# Environmental education as a means of promoting European integration

No other political objective is more dependent on successful international cooperation than sustainability. The Green Dot environmental education programme's internationally networked projects are therefore focused towards European integration. When young people from any country are confronted with environmental issues, they also naturally consider cultural and social influences and thereby learn to share their responsibilities as well as practise democracy by working on solutions together as a group.

The effects of environment damage do not stop at national borders, therefore the potential benefits of common policies with respect to environmental protection are self-evident. "Environmental education has become an important pillar of sustainable development, a pillar that is set to increase in importance in the years to come", said Karl-Heinz Florenz, Chairman of the Environmental Committee of the European Parliament. Section 25 of Agenda 21 encourages the active participation of young people in the decision processes to promote environmental protection, as well as economic and social development, because this will influence their lives and have an impact on their future. In conjunction with young people and their organisations, every country should initiate a process that promotes dialogue between youth and government



At the 2nd International PRO EUROPE Congress in Berlin the young parliamentarians...

... handed their White Paper to Karl-Heinz Florenz.

at all levels. This will offer young people the opportunity to incorporate their opinions in government decisions – including the implementation of Agenda 21. Education on environmental topics should also be an integral part of this process to encourage our youth to become the responsible citizens of tomorrow.

#### 1st European Youth Eco-Parliament

PRO EUROPE, the umbrella organisation of all 24 Green Dot systems and its cooperation partners, has therefore begun to accept this challenge. In autumn 2003, it joined forces with the French environmental education network, Ecole et Nature, to launch the 1st European Youth Eco-Parliament and in so doing, created a youth platform to enable their involvement at both national and European level.

The patrons were Laurence de la Ferrière, the first woman to cross the Antarctic single-handed, and Rupert Neudeck, the founder of the refugee aid organisation, Cap Anamur. "The reason I have chosen to support the European Youth Eco-Parliament is precisely because it has that spirit of action, participation and solidarity that encourages a greater sense of responsibility in everyone, as the Earth is our common property that we must all protect", said Rupert Neudeck about the project.

In project work at their schools over a five-month period, more than 2,700 schoolchildren aged between 14 and 16 from ten countries (Austria, Belgium, Czech Republic, France, Germany, Great Britain, Hungary, Poland, Spain and Turkey) developed proposals to improve environmental protection in Europe and recorded it in a White Paper targeted at European political representatives.

Its content is modelled on the 6th Environmental Action Programme "Environment 2010 – Our future, our choice", and it contains five resolutions and 15 tangible proposals on the subjects air, energy, food, water and waste. The work was based on the observation of local environmental problems and managed with the help of teachers and mentors from each of the participating recovery organisations in each participating member state. Examples of the action proposals made by the young people are:

- · The promotion of recycled paper and laws against wasting water.
- An undertaking on the part of government institutions to install recycling zones on their premises.
- The establishment of the right to a balanced and organic diet in the European Constitution.

The 1st European Youth Eco-Parliament convened in September 2004 at the 2nd International PRO EUROPE Congress in Berlin where 120 democratically elected schoolchildren were sent to represent their working groups as a pan-European delegation. In a parliamentary session, the young parliamentarians adopted the White Paper and handed it over in an end-of-



The young parliamentarians analysed environmental problems in Europe ...

... and presented their project at a European level.

session ceremony to Karl-Heinz Florenz. "The impressive commitment of the students outside of their lessons shows that youth in Europe is worried about the environment and is seeking solutions beyond their national borders. We take this very seriously and shall be dealing intensively with their analyses and demands", promised Florenz.

He kept his promise and invited an ambassador youth delegation to the European Parliament in Brussels to present their project at an even higher European level. In May 2005, the President of the European Parliament, Josep Borrell, Environment Commissioner Stavros Dimas and Karl-Heinz Florenz welcomed delegates of PRO EUROPE's Youth Eco-Parliament® from six delegate countries at a reception in the European Parliament building. Other guests at the event, which took place under the official patronage of President Borrell, included HRH Prince Laurent of Belgium in his role as the President of the Royal Institute for the Sustainable Management of Natural Resources and the Promotion of Clean Technologies, as well as numerous Members of the European Parliament and Commission along with international members of the press and representatives from Pro-Europe national recovery organisations.

At the reception President Borrell, Commissioner Dimas and MEP Florenz officially received the White Paper on the Environment. In their speeches. Commissioner Dimas and President Borrell, both welcomed the initiative and the commitment of the young participants and encouraged them to continue their engagement in environmental matters. "To see young people understanding and accepting the challenge to fight for the protection of the environment and sustainable development is very encouraging. It is yet more proof for the European Parliament and its Environment Committee that we should not stop our activities and put further work in this issue", commented Mr Borrell.

#### Education, democracy and citizenship

For the young people involved, participation in the Youth Eco-Parliament was an opportunity to experience a form of democracy and exercise citizenship. The Pro-Europe members cooperated intensively with schools in their countries, providing help for students, guides for teachers as well as dedicated national and international websites (www.eyep.info). The schemes also provided national coordination and mentors to enable the different project groups in schools around each country to feel that they were becoming part of a much greater European experience.

The working methods adopted by the students included: field work with external stakeholders to ensure that they stayed in touch with real problems and workable solutions; group work to build national and international solidarity; creative thinking to devise new ways of solving problems and working together; cross-disciplinary work to ensure a comprehensive approach; and debate to prepare for reallife democracy.



EYEP delegates from six countries met in Brussels...

... and presented their proposals to the European Parliament and to Prince Laurent of Belgium (back row, 4th from left).

"Discovering the topic and defining the environmental project" was the first project phase in which the schoolchildren in their classes or working groups selected one of the five topics in the 6th Environmental Action Programme. During this period they analysed and exchanged ideas, and gathered information on their chosen topic.

"Managing the local project on the environment" was the second stage. Here, the pupils attempted to find solutions to the problems observed on the ground. They produced their own hypotheses and checked the relevance of these through scientific measurements, detailed observations, technical visits to sites such as a wastewater purification plant, a waste treatment centre, or through interviews with politicians and environment professionals, as well as surveys carried out on local residents. The following stage was "Communication". In this phase the children were required to publish their work in order to promote local awareness and generate individual and collective commitment. This helped them to improve their ability to summarise their know-how and discover the most effective means of communication for each given situation.

The final stage was "Evaluation and prospects". This enabled lessons to be drawn from their experience with regard to the acquisition of knowledge and know-how. It also enabled future plans to be drawn for the activities to be carried out by the young people of future Eco-Parliament projects. The communication platform that connected all the national project groups internationally was the internet. The website www.eyep.info enabled students to follow the progress of the projects, put their ideas online and collectively write the White Paper. The 1st Youth Eco-Parliament<sup>®</sup> was in fact so successful, and so well received by both national and European institutions that the PRO EUROPE council decided to make it a regular event. Following requests from other national recovery organisations outside of Europe, e.g. from Canada, the EYEP has now also become the YEP (Youth Eco-Parliament<sup>®</sup>).



Due to its great success the Youth Eco-Parliament will be continued as a regular event.



Within the scope of the Baltic Sea Project UNESCO publishes the "Learners Guide" series...

... with best-practice examples of school projects on specific themes such as fisheries, tourism or forestry.

#### The Baltic Sea Project

Another example of successful European cooperation is the "Baltic Sea Project". Launched in 1989 by Finland in seven countries within the framework of UNESCO's Associated Schools Project Network (ASPnet), it was the first regional project to unite a specific environmental education topic with intercultural learning. "The Baltic Sea project is visionary in that it anticipated by many years a concept which has since been endorsed at the highest political level", said Elizabeth Khawajkie, International Coordinator, Associated Schools Project Network, UNESCO. Today, around 300 schools in all nine Baltic states are involved in the project: Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden. The project's objective is to raise awareness about



offizielles Projekt

der Weltdekade

2005/2006

The project "Learner's Guide No. 7" on the subject of recycling received the award as an official contribution from Germany for 2005-2006.

the region's environmental problems and promote understanding about the scientific, social and cultural aspects of the interdependencies between mankind and nature. The Baltic Sea project creates networks of schools and stimulates the development of teaching methods for education about environmental and sustainable development ideas. It is supported by the Green Dot organisations in Estonia, Germany, Latvia, Lithuania, Poland and Sweden. The projects centre on the themes of sustainable agriculture, energy, education, forestry, fisheries, industry, tourism and transport.

The "Learner's Guide" is a series of publications published by UNESCO within the scope of the Baltic Sea Project. Best-practice examples of school projects on specific themes are presented, and educational guidelines for project implementation are provided. Green Dot Germany is currently working with its partner organisations in Poland, Estonia, Latvia, Lithuania and Sweden, as well as further partners, to develop the "Learner's Guide No. 7" on the subject of recycling. This "Learner's Guide No. 7" will explain the implementation of European environmental policy in the areas of waste and recycling management. It aims to present best-practice examples in the field of recycling and encourage pan-European commitment to a clean environment and better living conditions. The project runs from 2004 to 2006 and will be realised by one to two schools in each of the nine Baltic States, a group of students at the University of Hamilton in New Zealand, an environmental

The Baltic Sea Project deals with regional environmental problems and promotes understanding of the interdependencies between mankind and nature.

expert from New Delhi, India, a representative of the environmental education network GLOBE in Alabama, USA and a school in Zimbabwe, Africa. Their objective is to familiarise schoolchildren and teachers around the world with the concept of recycling and to provide examples of measures to incorporate the concept of "Think global – act local" into the school curriculum.

As a result of the "Learners Guide" series, the Baltic Sea Project has become a globally significant source of input for environmental education projects. For example, ten students from the Auguste-Viktoria School in Flensburg, northern Germany, developed 24 indicators for sustainable development in connection with the "Education" theme. With their results, they wanted to show politicians and other people who are responsible for the administration of the town the current development of Flensburg towards sustainability.

At the same time, they wanted to motivate other schools to do the same research in their own towns in order to obtain comparative data. For example, the indicators that were analysed included:

- Waste minimisation with respect to the amount of household waste (in kilograms per person per year) between 1996 and 2001.
- Reductions in electrical energy consumption (in kilowatt hours per person) from 1990 to 1999.

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Other indicators that were analysed included the handling of non-renewable resources, economic balances, cultural opportunities and fair distribution of income. "In examining the indicators, the students gained very good experience as well as an overview of the ecological, social and economic situation of their own cities. They began to feel responsible for their city and became more familiar with the local Agenda 21 and its global aims", said Franziska von Gadow, biology and chemistry teacher, European Commissary and coordinator of the European Comenius project.<sup>31</sup>





#### Sources:

32] "Education for Sustainable Development: Baltic 21 – An Agenda 21 for the Baltic Sea Region", Learner's Guide No. 5, 2003, Danish Ministry of Education in cooperation with UNESCO and Amtsgymnasiet i Sønderborg, ISBN 87-987489-2-0



True to the Agenda 21 motto of "From words to action", the pupils at the largest school in the Estonian city of Tartu introduced waste separation. "School is the most suitable place for this kind of beginning: the environment awareness of pupils will influence families and eventually other enterprises, such as the parents' workplaces", explained Urmas Tokko, teacher of biology and chemistry at the school. They also placed notices around the school to raise people's awareDue to international environmental education programmes young people learn to exchange views and to take responsibility for proposals for action.

ness about other environmental issues: "Did you leave the lights on?" and "Consume rationally!" are just two examples. Thus, investment in the environmentally friendly management of waste and rubbish was combined with education on sustainability for the pupils and adults connected to the schools.<sup>32</sup>

Once a year, representatives of all 300 participating schools meet to evaluate the project and to plan future activities. "The initiatives of the Baltic Sea Project over the last 14 years are exemplary in their integration of local, national and regional levels, but also because they have inspired and served as a blueprint for other ASPnet projects such as the Caribbean Sea Project or the Zambezi River Project", said Elizabeth Khawajkie von ASPnet.

#### Conclusions

The 1st European Youth Eco-Parliament and the Baltic Sea Project have served a pilot function for sustainable development and continue to serve as a source of inspiration for others. They impressively show how pan-European projects can raise the environmental awareness of children and young people, whilst at the same time offering them the opportunity to consider various economic, social and cultural aspects in neighbouring countries. The youngsters learn to exchange views, to understand each other, to take responsibility for local and national proposals for action, and to work collectively on proposals for a common purpose.



To cope with the challenges of life in the 21st century...

... such as the slashing and burning of rain forests well educated people are needed.

### Sustainability needs networked thinking and action

Global environmental issues, such as the greenhouse effect, the decimation of biological diversity and the consumption of finite resources can only be solved on the basis of more intensive international cooperation. People with an understanding of the ecological, economic and social correlations at global level are needed to overcome these challenges. PRO EUROPE is playing a pioneering role in achieving this aim.

PRO EUROPE is committed to promoting international cooperation on environmental topics. By encouraging such cooperation between its member organisations, stakeholders in the fields of politics and business along with NGOs and consumer organisations, PRO EUROPE aims to promote networked thinking in society as a whole. "It will only be possible to continue the necessary process to sustainable behaviour if all areas of society work together and support each other", said Bernard Hérodin, President of PRO EUROPE, PRO EUROPE already acts as a European network to help organise the exchange of experience and know-how between its 25 European member organisations. This ranges from the establishment of bilateral contacts to the organisation of regular meetings between all systems. Different working groups on various specialised topics such as packaging waste prevention, environmental education and consumer awareness have been created to exchange experiences and facilitate international cooperation. In addition, about four years

ago, PRO EUROPE began working with a recovery system outside Europe: C.S.R. based in Ontario, Canada, has worked for more than ten years to promote and implement fair and equitable stewardship programmes in the area of material recovery and recycling. PRO EUROPE, both as an entity and through the individual activities of its members has also established links with other worldwide recovery organisations. In the Far East, the Japanese Container and Packaging Recycling Association (JCPRA), industry coalitions like CEMPRE from Brazil, and the municipal government of Buenos Aires are all facing up to similar environmental challenges to those of Europe and are therefore, like us, looking for partners to help identify and share their experiences of appropriate solutions. PRO EUROPE intends to continue investigating, developing, publishing and promoting best practice in order to support sustainable development. To this end, we invite everyone to join this track so that together we can meet all requirements necessary to make our future society really worth living in.

Green Dot compliance schemes in Europe

- Austria: ARA Altstoff Recycling Austria AG E-mail: araag@ara.at www.ara.at
- Belgium: asbl FOST Plus vzw E-mail: fostplus@fostplus.be www.fostplus.be
- Bulgaria: EcoPack Bulgaria Jsc E-mail: n.doychinov@ecopack.bg
- Cyprus: Green Dot (Cyprus) Public Company Limited E-mail: admin@cydot.com.cy www.cydot.com.cy
- Czech Republic: EKO-KOM, a.s. E-mail: info@ekokom.cz www.ekokom.cz
- Estonia: ERO Estonian Recovery Organisation E-mail: eto@eto.ee
- France: Eco-Emballages S.A. E-mail: info@eco-emballages.fr www.ecoemballages.fr
- Germany: Der Grüne Punkt Duales System Deutschland AG E-mail: international.affairs@dsd-ag.de www.gruener-punkt.de
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   www.greendot.ca, www.csr.org
- United Kingdom: Valpak Ltd E-mail: richard.barnish@valpak.co.uk www.green-dot.org.uk

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