

# **YOUTH for SUSTAINABLE DEVELOPMENT**

**20<sup>th</sup> Conference of Caretakers of the  
Environment International  
Ustroń – Katowice, Silesia Poland  
1- 7 July 2006**

**Post Conference Book**

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## **PREFACE.**

Progress is desired by all nations of the world. No sensible human being would intentionally try to curb it. However dynamic global development also results in negative changes to the natural environment, the effects of which may prove disastrous for the entire planet in the foreseeable future. Returning to a pre-industrial state and expecting nature to deal with repairing the damage by itself is unrealistic. What remains is sustainable development

The term "sustainable development" was first used more than twenty years ago at the United Nations General Assembly. At the 1992 Rio de Janeiro Earth Summit it was adopted as a commentary concerning the further development of humanity. At the same time, the Agenda 21 document was drafted. In one of its paragraphs all the countries encompassed by the agreement were obligated to "promote education, shape awareness and training within sustainable development and environmental protection." However, as discussed at the following summit in Johannesburg, the effects of the activities undertaken turned out to be less significant than expected. That is why the UNESCO announcement of the worldwide DECADE OF EDUCATION FOR SUSTAINABLE DEVELOPMENT was an important event. Everything should be done, if not to stop completely, then to at least slow down the further increase of environmental degradation. The best results can be achieved by proper education and sensitizing of the younger generation to environmental problems.

The long-standing activity of CARETAKERS OF THE ENVIRONMENT INTERNATIONAL, an independent organization established in 1986, embracing secondary school students and teachers whose interests are focused specifically on the issues of environmental protection has become a crucial part of these programs. In July 2006 the 20<sup>th</sup> annual CEI conference organized by CEI Poland was held in Silesia, in southern Poland.

During this meeting in Poland, young people from various countries of the world had an opportunity to present the results of the projects carried out in their countries over the past year. They were also able to become familiar with the environmental problems and the local community's achievements in the field of environmental protection in the highly

urbanized and industrialized region of Silesia. Organizing the CEI conference in Poland was held in order to ensure a larger participation of Polish and European youth.



*dr Antoni Salamon*  
*President CEI Poland*  
*Conference chairperson*



DAMIAN ZIMON  
ARCYBISKUP METROPOLITA  
KATOWICKI

### Uczestnicy Międzynarodowej Konferencji nt. „Youth for Sustainable Development”

Bezwzględna pogoń za dobrami materialnymi, chęć prześcignięcia się w nowych technologiach, którą obecnie możemy zaobserwować, nieuchronnie zbliża nas do katastrofy społeczno-ekologicznej. Bowiem w tym pędzie przestaje się liczyć człowiek i jego środowisko naturalne. W wielu wysoko rozwiniętych krajach istnieje zjawisko nadprodukcji; zjawisko konsumpcji nadmiernej, niepotrzebnej i szkodliwej dla środowiska. Autorytety przestrzegają przed konsekwencjami niszczenia środowiska naturalnego.

Ojciec Św. Jan Paweł II wielokrotnie odnosił się do kwestii ochrony środowiska i sprawiedliwego podziału dóbr, wskazując nam drogę jaką powinien pójść człowiek.

Ma to być droga prymatu etyki nad techniką, stosowanie pierwszeństwa człowieka nad rzeczą, ducha nad materią. Aby to osiągnąć konieczny jest duchowy rozwój człowieka wprowadzający ład moralny i harmonię z całym Kosmosem. Człowiek powinien posiadać takie cechy jak sprawiedliwość, odpowiedzialność i wstrzemięźliwość. Dobra Ziemi powinny być równo dzielone, postęp nie powinien dokonywać się kosztem dewastacji tego, co zostało nam dane przez Boga, odpowiedzialność za Ziemię spoczywa na nas. Zatem wstrzemięźliwość, samoograniczenie się w posiadaniu dóbr jest drogą do zrównoważonego rozwoju. Dlatego radością napawa fakt, że są podejmowane działania, takie jak to - służące edukacji młodzieży..

Życzę, aby wasz wzrost duchowy owocował uwrażliwieniem na drugiego człowieka i dobro jakim jest zdrowe środowisko naturalne. Abyście rozpoczęli proces wprowadzania nowego ładu moralnego opartego na globalnej ochronie środowiska, abyśmy nie tylko my przeżyli, ale także następne pokolenia.

Szczęście Boże!

+ Damian ZIMON

Katowice, dnia 15.06.2006 r.

## The Participants of the International Conference „Youth for Sustainable Development”

A ruthless pursuit of material goods and a desire to outdo one another at new technologies, which can be noticed at present, inevitably bring us closer to a socio-ecological disaster, because the man and his natural environment lose their importance in this crazy race. In many developed countries, the phenomenon of overproduction exists; the phenomenon of consumption – excessive, unnecessary and harmful to the environment. The authorities warn us of the consequences of the natural environment destruction.

The Pope John Paul II at many occasions talked about the protection of the natural environment and a just division of goods, indicating the path the man should follow.

It is to be a path of ethics prevailing over technology, of a man's importance greater than that of a thing, where the soul is more important than the matter. In order to achieve this, it is necessary for the man to grow spiritually, introducing a moral order and harmony with the universe. The man should possess qualities such as righteousness, responsibility and temperance. The goods of the Earth should be divided equally, progress should not be achieved at the cost of devastating what was given to us by God, since the responsibility for the Earth rests upon us. Temperance and self-limitation in possessing goods is a way to sustainable development. That is why I am filled with joy that actions such as this are undertaken to educate young people.

Let me wish you that your spiritual development may lead to the growth of your sensitivity towards fellow human beings and to the good we should all cherish, the natural environment. May you initiate the process of introducing the new moral order based on global natural environment protection, so that it is not only us who survive, but the future generations as well.

God bless you !

Abp Damian Zimoń

Katowice, June 15, 2006



Ustroń, 2 lipca 2006 r.

Sz. P.  
Antoni Salamon  
Prezes  
Caretakers  
of the Environment  
International

**Drodzy Uczestnicy XX. Konferencji  
„Młodzi dla Zrównoważonego Rozwoju”**

Jest mi niezmiernie miło, że miejscem konferencji związanej z zagadnieniami edukacji na rzecz zrównoważonego rozwoju oraz promującej nasze miasto jest Ustroń.

Żywię nadzieję, że oprócz realizacji programu konferencji poznacie piękno i uroki tego niezwykłego miasta, że pobyt w Ustroniu przyniesie Wam wiele satysfakcji, przeżyć estetycznych i niezapomnianych wrażeń.

Życząc miłego pobytu jestem przekonany, iż zabierzecie ze sobą piękne wspomnienia z udziału w konferencji i z pobytu w Ustroniu.

Burmistrz Miasta Ustroń

Ireneusz Szarzec

Dear participants of the 20th Conference,  
“Youth For Sustainable Development”,

I am extremely pleased that you have chosen our town-Ustroń as the place for the conference connected with educational issues for sustainable development thus promoting our town.

I hope that apart from realising the programme of the conference you will be able to get to know the beauty and charm of this unusual town. I also hope that your stay here will bring you a lot of satisfaction, aesthetical experiences and unforgettable impressions.

Wishing you a pleasant stay here I am convinced that you will take back with you beautiful memories of the conference and of your stay in Ustroń.

The mayor of Ustroń  
Ireneusz Szarzec



## **HONOURABLE PATRONAGE.**

The conference was held under the honourable patronage of **Mr. Michał Seweryński**, the Minister of Education and Science of the Republic of Poland\*, and Mayors of cities:

**Mr. Piotr Uszok**, Mayor of Katowice,

**Mr. Marek Kopel**, Mayor of Chorzów,

**Mr. Zbigniew Szandar**, Mayor of Siemianowice Śląskie.

## **SCIENTIFIC PATRONAGE.**

University Centre for Environmental Studies of Warsaw University held the scientific patronage of the CEI 2006 conference. Conference program was assisted by scientists from:

Warsaw University:

**dr Anna Kalinowska**

**dr Anna Batorczak**

University of Silesia:

**dr Piotr Skubala**

**dr Ryszard Kulik**

AGH University of Science and Technology in Kraków:

**dr Tomasz Bergier**

Sendzimir Foundation:

**M. Sc. Karolina Maliszewska**

## **CEI BOARD MEMBERS (ATTENDING)**

**Andrew Cox**

**Isabel Abrams**

**Cris Leibner**

**Dan Hoynacki**

**Birgitta Nordén**

**Fatima Almeida**

**Anne Marie Begg**

**Antoni Salamon**

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\* Since 1 June 2006 Mr Roman Giertych was designated as Ministry of Education.

## **EXPERTS.**

Forest District Office in Ustroń:

**Leon Mijal** district forester

**Wiktor Naturski**

**Magdalena Mijal**

**Krystian Śliwka**

**Sławomir Kohut**

Forest District Office in Kobiór:

**Piotr Tetla** district forester

**Izabela Pigan**

Water Board in Goczałkowice:

**Michał Nowak**

Water Management and Rehabilitation in Łąka:

**Bogdan Borek**

## **CONFERENCE GUESTS.**

**Marian Knappek** representing Ministry of Environment of Poland

**Kazimierz Szabla** director of National Forests Katowice

## **ORGANIZING COMMITTEE.**

Conference CEI 2006 was organized by CEI Poland and Catholic High School in Katowice:

**Antoni Salamon** president

**Andrzej Kita**

**Bożena Kurzeja**

**Agnieszka Paruzel**

**Patrycja Gajek**

**Bartłomiej Wojtacha**

**Sebastian Łysiak**

**Barbara Salamon** headmaster

**Maciej Grec**

**Ludwika Wołasewicz**

**Joanna Schmitz**

**Monika Domańska**

**Michał Krzak**

**Katarzyna Jabłońska**

## CONFERENCE PROGRAM

Day	Hour	Place	Group 1	Group 2	Group 3	Group 4	Group 5
Saturday 1-07	07:00-24:00	Center	Transport from Katowice and Kraków airports, The welcome's and accommodation of the conference participants.				
	18:30-22:00	Dobka	Supper. Participant's integrational meeting.				
	22:00-23:00	Center	Information for teachers (Conference Hall). CEI Board meeting, 24:00 lights off.				
Sunday 2-07	07:00-08:00	Center	Breakfast.				
	08:00-13:00	Oświęcim	Visit to Auschwitz concentration camp. Parallel activity – visit to Cieszyn.				
	13:00-14:00	Center	Lunch.				
	15:00-20:30	MDK	Opening ceremony. Opening lecture. Supper. National presentations.				
	20:30-22:00	Center	Teacher's meeting. Youth's preparation of presentations and posters.				
	22:00-23:45		Other activities, 24:00 lights off.				
Monday 3-07	07:00-08:00	Center	Breakfast.				
	08:30-12:30	Field trip Center	WS1	WS1R	E1	E2	E3
	12:30-14:00	Center	Lunch.				
	14:00-18:00	Center Field trip	E4	WS8	WS1	WS1R	WS8R
	18:30-19:30	Center	Supper.				
	20:00-23:00	Center	Project presentations – session 1 (Conference Hall)..				
	23:00-23:45	Center	Other activities, 24:00 lights off.				
Tuesday 4-07	07:00-08:00	Center	Breakfast.				
	08:00-14:30	Wieliczka	Salt Mine Chamber "Warsaw". Natural Resource Unification Ceremony. Lunch.				
	14:30-18:00	Field trip	WS7	E3	WS8	WS8R	WS7R
	18:00-19:00	Center	Supper.				
	19:00-23:00	Center	Project presentations – session 2 (Conference Hall). 24:00 lights off.				

Wednesday 5-07	07:00-08:00	Center	Breakfast.				
	08:00-12:00	Field trip	WS4	WS7	WS5	WS7R	WS1
	13:00-16:00	Katowice	Silesia City Center – an example of revitalization of postindustrial areas in Katowice.				
	17:00-19:00	Center	Project presentations - poster session.				
	19:00-20:00	Center	Supper.				
	20:30-22:00	Center	Preparation of conference results presentation. Teacher's meeting – evaluation.				
	22:00-23:45	Center	Other activities, 24:00 lights off.				
Thursday 6-07	07:00-08:00	Center	Breakfast.				
	08:00-12:30	Field trip	WS8	W9	WS7	WS5	WS9
	13:00-14:00	Center	Lunch.				
	14:00-17:00	Field trip	WS12	WS11	WS12	WS11	WS12
	18:30-23:00	MDK	Official closing ceremony of 20 <sup>th</sup> CEI Conference. Presentation of conference results. Talents parade. Farewell.				
Friday 7-07	07:00-08:30	Center	Breakfast (last meal).				
	07:00-20:00		Check out. Farewell. Transport to Katowice and Kraków airports.				

MDK – Culture City Hall in Ustroń

## LECTURES:

### 1. Decade of Education for Sustainable Development Looking for Values crucial not only for 10 years;

Anna Kalinowska, Director of University Centre for Environmental Studies, Warsaw University, Poland.

### 2. Learning and Practice: adapting how we understand and manage social and ecological systems;

Jan Sendzimir, Sendzimir Foundation, Austria.

## **EDUCATIONAL CLASSES:**

**E1:** "Ecological footprint" – how much environment do I use up?

**E2:** Are you friends of the Earth?

**E3:** Solving social conflicts resulting from different perceptions of environmental issues. Environmental game.

**E4:** Climate changes.

## **FIELD WORKSHOPS:**

**WS1, WS1R:** Natural resources in the education for sustainable development. Observing the flora and fauna of Polish forests through direct contact with nature on natural paths. Path Czantoria.

**WS4:** Revitalization of deteriorated areas of Chorzów – presentation of the city of Chorzów project and visiting already finished structures.

**WS5:** Revitalization of deteriorated areas of Siemianowice Śląskie – presentation of the city project and visiting already finished structures.

**WS6:** The natural reserve „Żubrowisko” as an example of the reconstitution of endangered species of animals (bisons). Pszczyna. (will be changed)

**WS7, WS7R:** Economy of energy: top-pump power station. Porąbka - Żar.

**WS8, WS8R:** Water management, sewage treatment plant in Goczałkowice and Łąka.

**WS9:** Natural medical attractiveness of Ustroń – presentation of how therapeutic mud and springs of ferrous water have been used. Ustroń-Zawodzie.

**WS11:** Cleaning the World: Czantoria. Ustroń.

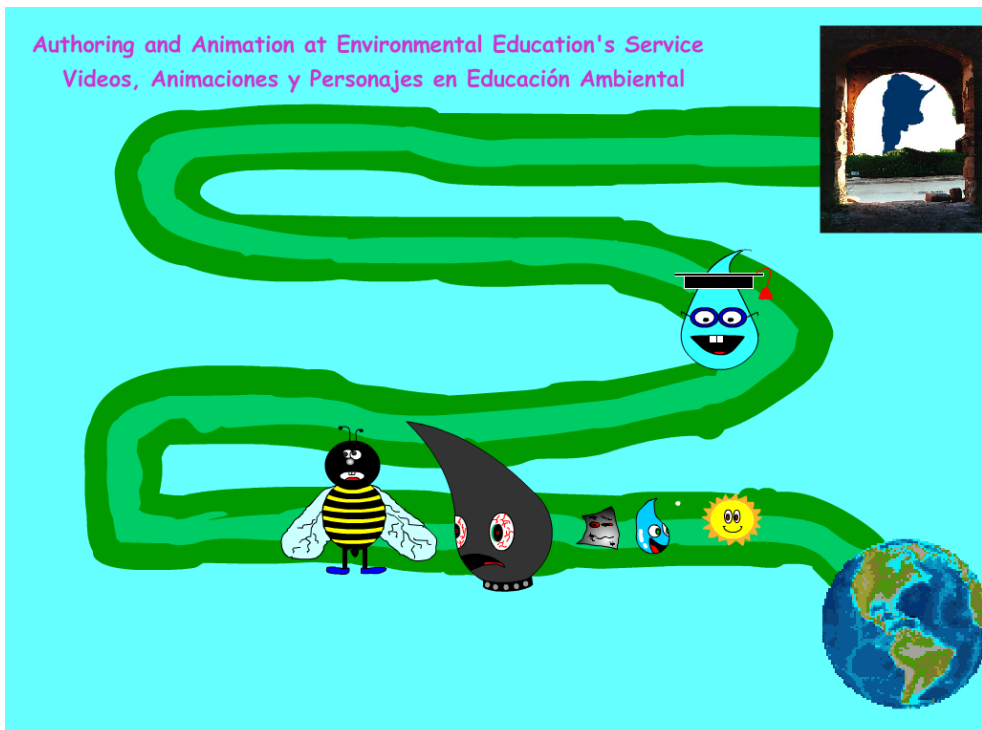
**WS12:** Cleaning the World: Boulevards on the Vistula. Ustroń.

## ABSTRACTS

### **Authoring and Animation at Environmental Education's Service.**

Leonel Damián Di Cocco, Iván Alen Butorovich, Pascualina De Gisi: Instituto Pizzurno de Enseñanza Integral Lanús Oeste, Asociación Guardianes del Ambiente Lanús, Provincia de Buenos Aires, Universidad de Buenos Aires ARGENTINA.

The following task consists of an educational project designed to generate environmental responsibility and awareness throughout learning and “leisure-educational” activities. It includes authoring in animation, featuring interactive hosts, as a means to provide environmental knowledge. All



characters have been created by the students, and they show us some nature's processes, and human needs related to environment. The characters themselves report those facts; and, these stories will help teaching students.

Besides since students are responsible for the animation themselves; environmental knowledge is also provided and taught through the entire authoring process, at a previous stage. Necessities behind this project are those of the aims of school as responsible for training studies, which will be effective when it comes to providing them with profound environmental awareness and responsibility. Education is the most effective, powerful and resourceful of means we hold to advise students' on environmental protection. Authoring, cartoon, and education can make the teaching-learning continuity easier and develop students' environmental responsibility. Students need to be introduced to their environment in light of their skills, and it is the school's mastering purpose to guide them through. So, what is at stake here, is a common place; for both, trainers and trainees. They could work as a team by means of some cohesive, supportive and integrating activities. This aspect also fosters and focuses on technological fix and improvements, imagination and creativity, knowledge; and overall a suitable analysis promoting reflection, and eventually wisdom. Environmentally-based cartoons promote therefore, thinking, analyzing, acting spontaneously and with effective results, enriching knowledge and opening new gateways to opportunities.

# **The River Mur**

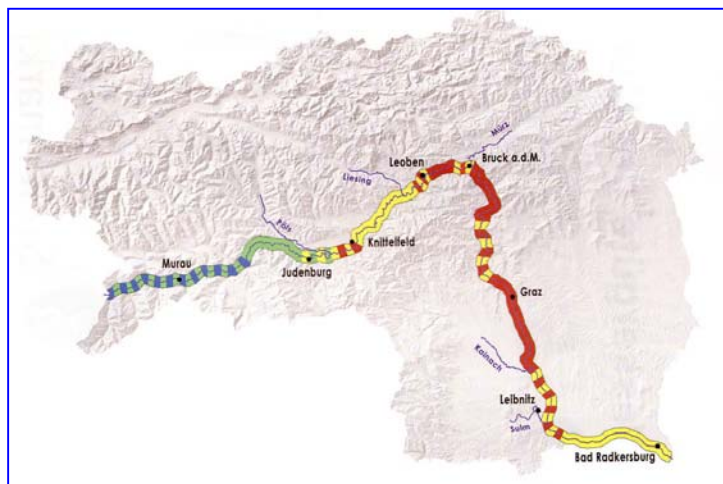
## **A successful ecological way of revitalisation in order to increase biodiversity**

Johanna Bischof, Thomas Bärnthaler, Katharina Frischer, Andrea Haid, Lisa Mannsberger, Florian Uhl, Barbara Uhl, Johann Mischlinger, Hertraut Scheucher: Bundesgymnasium und Bundesrealgymnasium Judenburg AUSTRIA.

*Since the early eighties pupils of our school have been determining the water pollution of this river by using different chemical and trend index methods. We have also supported the municipalities and local authorities with various sustainable ideas for revitalisation to increase the biodiversity of this sensitive ecosystem.*

### **1. A short topographical and historical approach**

The river Mur has its spring in the alpine region of the neighbouring province Salzburg. The river runs through the whole of Styria, the southeast



province of Austria and is about 330 km long. In Lagred near the Hungarian border it flows into the river Draa. The river Mur is a habitat for 60 plant, 225 avian, 19 amphibian and reptile as well as 43 fish species.

Until the late eighties the Mur was said to be one of the most polluted rivers in Austria because of the emissions from paper mills and steel factories near the banks. Today the Mur has largely recovered and it is once again home to fish species which are very sensitive to pollution. For this reason the Styrian government appointed the Mur “River of the year 2001”. Despite various ecological measures terrapins and beavers have completely disappeared.



## 2. Methods used for estimating the river water quality

### ▪ Water quality and pollution zone

Pollution zone 1 means that animals have the best conditions to live there. Water of this zone is clean, only slightly contaminated and poor in nutrients. These conditions mostly occur in regions of springs or in mountain streams. The water is clear almost all of the year and rich in oxygen. The ground is stony, gritty or sandy. Ammonia is hardly traceable. The opposite of zone 1



is zone 4. Rivers of this zone are highly polluted, often due to discharge of waste water. They are cloudy and covered with organic slime. You will hardly find fish there, but micro organisms, fungi and bacteria in huge amounts. The oxygen level in the water often reaches zero, because of its decomposition by micro organisms. Consequently poisonous substances and metabolites might endanger aquatic species. The content of ammonia amounts to several mgs per litre.

### ▪ Organisms adapted to rivers



In the course of evolution species have had to adapt to their environment as much as possible. Plants and animals that are too specifically adapted to their surroundings are in danger of becoming extinct. But surviving also depends on the ecological potency, which is the capability of adapting itself to the environment. Trout and plecoptera for instance have a narrow ecological potency and can only live in cool water which is rich in oxygen. Their occurrence in waters indicates good conditions. They function as so called biological indicators.

### ▪ Estimating water quality by index and chemical methods

The sabrobity index method (trend index method) is based on the observation of different macroinvertebrate groups which disappear as the nutrient content of a river increases. During our analyses we also observed various biological indicators, such as the appearance of *Leptomitius lacteus* (fungi) and *Sphaerotilus natans* (actinomycetes). We also examined the oxygen content, the BSB5 and the ammonia content and tried to spot various kinds of water plants and iron-II-sulphide stains on stones.

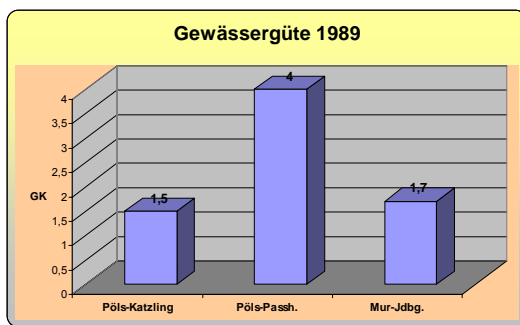
### 3. Biological treatment of sewage water from the paper mill “Pöls Zellstoff AG”

The biological treatment of sewage water in the purification plant started in 1990 and since then it has been processing the sewage water of the paper mill and also the sewage water of the neighbouring villages. The purification plant has to manage up to 52800 m<sup>3</sup> waste water per day, 1500 m<sup>3</sup> of which is produced by the public.

The waste water produced by the paper mill is carefully recycled. It is cooled (energy is gained) and cleaned by sedimentation and neutralisation.

These techniques provide the required temperature, the specific milieu and the breeding ground for different bacteria and micro organisms. These are adjusted to an optimum to break down the sewage substances. The

last test carried out by the governmental authority has confirmed that waste water can be processed as follows:



Material which can be filtered:	90,8 %	Need of biological oxygen	99,1 %
Need of chemical oxygen:	71,2 %	AOX (absorbable org. halogens)	65,5 %

All conditions as far as the water is concerned have been complied with the limits according to the law or even fallen below these limits.

#### 4. Changing water quality during the last few decades

In fact, the biological water purification plant of the paper mill Pöls has successfully



improved the water quality of the rivers Pöls and Mur. The degree of pollution of the river Pöls in Passhammer, which is downstream from the pulp mill, has been minimized and as a result the water quality has improved from zone 4 to zone 2.

The water quality of the river Mur in Falkendorf upstream from our hometown Judenburg shows results between zone 1 and 2 due to little human influence. If we examine the water quality over the whole of Styria, we can observe a great improvement since 1965:

Whereas from the 60s until the 80s the river Mur showed large sections of highly polluted water (zone 4) downstream from Zeltweg the situation has continuously improved since the 90s due to environmental measures. Therefore the river Mur has experienced an increase in biodiversity.

#### 5. Examples of successful revitalisation in order to increase biodiversity

The goal of a revitalisation project upstream from Judenburg is the restoration and preservation of the river landscape. A branch of the river Mur in St. Peter is not only shelter for Hucho sp. and lampreys, but an important area for the fauna when the river is in flood.



Especially for Hucho hucho, which belongs to the group of salmon, the

river Mur represents one of the few natural breeding grounds. So the project ensures the existence of these endangered species. Not only do these new habitats improve the natural environment, but they also help to increase biodiversity.



Another project is called "Milestones of the Mur". Pupils of our school had the opportunity to take part and work scientifically as well as creatively. During this project 2,5m high, colourfully painted pillars were set up every five kilometres from Murau to Judenburg. They are meant to remind people of the need to preserve a diverse running-water- ecosystem. In addition labels for drinking water bottles were

designed, in order to illustrate the fundamental importance of water for life. Students of our school proudly presented the bottles to Mr. Seitinger (official of the environmental authority of Styria).



"Take a look around the floodplain" is a pilot project of an innovative co-operation between agriculture, tourism, environmentalists and the municipality St. Peter. Together they are trying to protect this culturally and naturally precious landscape and to make it accessible to visitors to the local area. Under the slogan "Take a look around the floodplain", for which our school has designed a



logo, the ecological diversity of the floodplain and the characteristics of the "floodplain forest" are explained. A marked educational path leads the visitors through the landscape. The main aim of this project is to show the importance of sustainable agriculture in order to preserve biotopes.



**BG/BRG Judenburg is a grammar school,**

which is attended by about 800 pupils.

Main branches: Languages, Science&Nature, Music&Arts and IT (information technology)

Participation in the following international projects: GEYC (Global Environmental Youth Convention), BSP (Baltic Sea Project of UNESCO) and etwinnig (schoolpartnership with other countries within the European Union)

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## **Taking Food Seriously, In And Out Of School**

Kathryn Graves: Nova Scotia, CEI CANADA.

Professional dietitians and nutritionists who work with schools will find their efforts more rewarding if they can be part of a community-based approach involving schools, families and school food providers.

Every day in Nova Scotia, teachers experience the effects of what research indicates: one in six Nova Scotian children come to school without adequate nourishment. In terms of making substantial improvements in student performance and raising the quality of life in schools, it's hard to think of any one measure that gives more value than taking food seriously, in and out of school. As providers of food, schools are in an ideal position to teach by doing, and to extend the benefits through students to their families. Many schools in Nova Scotia offer breakfast and other supplementary programs to ensure that students are properly nourished for learning.

In a presentation to the 2005 Canadian Research Institute for Social Policy (CRISP) Healthy Schools conference in Fredericton, NB, William Potts-Datema, of Harvard School of Public Health Action for Healthy Kids said: "Schools support student success. Including students, faculty and staff, well over 20% of the population work in schools every day. School breakfast seems to improve attendance and decrease tardiness. Breakfast is an effective way to improve academic performance and cognitive functioning among undernourished populations. Kids have to be healthy to learn and have to learn to be healthy."

We have suggested that Potts' concept of School Health Councils be adapted to develop Nova Scotia School Kitchen Councils on a school-by-school basis. Kitchen Councils build on the social and cultural capital of family and community volunteers. The effort can create productive partnerships of students, teachers, the school food service providers, nutritionists, administrators, school board and community members, farm or fisher families, rural and urban planners, and parents. Dr. Diane Finegood, Scientific Director of the Canadian Institute of Health Research Institute of Nutrition, Metabolism and Diabetes, said at the February 2006 conference, *What Are We Eating? Towards a Canadian Food Policy* (McGill Institute for the Study of Canada), "Through system change and recognition of the roles of the systems that control our environments, we can support learning

by creating opportunities for children to learn after having access to a healthy, nutritious breakfast”.

We can let food be the education by taking practical action related to improving nutritional health at affordable prices. School Kitchen Councils choose and generate activities that can have the greatest impact in their situation. Groups typically consider the quality of all food available on site; adequate time to eat meals; tips for parents on serving healthy breakfasts and packed lunches; providing training for school food service staff on preparing and promoting healthy foods; popularising schoolyard gardening programs; teaching students to choose and cultivate the sense of taste; having students get some fresh air before lunch. Buying locally grown food from local farmers’ markets is a great way to address lifestyle changes. We are working with Farmers’ Markets to bring schools to markets and vice versa.

A decision matrix (Table 1) can then be used to involve students in shaping Kitchen Council priorities.

Table 1 Categorizing potential interventions			
Certainty of effectiveness	Potential population impact		
	Low	Medium	High
High	Promising	Very promising	Most promising
Medium	Less promising	Promising	Very promising
Low	Least promising	Less promising	Promising

Swinburn et al. (2005)

The essence of a positive school community is vibrant youth. We will find solutions if nutritionists and teachers encourage this discussion to continue in home environments, allowing for full participation.

## **Resources**

### **Nova Scotia:**

Farmers' Markets of Nova Scotia ([www.nsfarmersmarkets.ca](http://www.nsfarmersmarkets.ca))  
Nova Scotia Nutrition Council ([www.nsnrc.ca/](http://www.nsnrc.ca/))  
Nova Scotia Agriculture Awareness Committee  
([www.gov.ns.ca/nsaf/agaware](http://www.gov.ns.ca/nsaf/agaware))

### **Canada:**

Canadian Association for Food Studies ([www.foodstudies.ca](http://www.foodstudies.ca))  
Breakfast for Learning ([www.breakfastforlearning.ca](http://www.breakfastforlearning.ca))  
Active Healthy Kids Canada ([www.activehealthykids.ca](http://www.activehealthykids.ca))  
Weight of the World  
([www.cbc.ca/montreal/features/weightoftheworld/success.html](http://www.cbc.ca/montreal/features/weightoftheworld/success.html))

### **International:**

School Health Policies and Programs Study  
([www.cdc.gov/HealthyYouth/SHPPS](http://www.cdc.gov/HealthyYouth/SHPPS))  
National Coordinating Committee on School Health and Safety  
([www.healthy-students.org](http://www.healthy-students.org))  
The Food Trust ([www.thefoodtrust.org](http://www.thefoodtrust.org))

### **Reference:**

[Swinburn B](#), [Gill T](#), [Kumanyika S](#). (2005). Obesity prevention: a proposed framework for translating evidence into action. [Obesity Reviews](#), 6(1): 23-33.

### **Contact information:**

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[kate.graves@gmail.com](mailto:kate.graves@gmail.com)



## **Our School, Our Ecosystem, Our Lives**

Gabriella Theodosiou, Ioanna Chrysostomou, Tasoula Aristarxou: Lyceum and Technical School of Polis Chrysochous, CYPRUS.

Our school participates in the “SOCRATES COMENIUS-1” program with four other European countries: England, France, Spain, Czech Republic. The duration period of the program is three years.

During the first year the students will deal with the improvement and configuration of the school environment, aiming at the reformation or re-designing of the school courtyard. The students will appreciate the importance of local environment and will work cooperatively with the other corporate schools and will share their experiences and their ideas for improvements in school environments. The program is incorporated in the school curriculum with as many participants as possible.



In the second year the program will be extended to the environment of a family. Through that different methods and policies will be evaluated and re-used in each country that participates in the program. The final objective is to direct young people towards methods which are friendly to the environment.

Finally in the third year, the project will be extended to the local community, so that everybody will be involved and that we will be able to achieve an increase in awareness of the general public in our environmental problems.

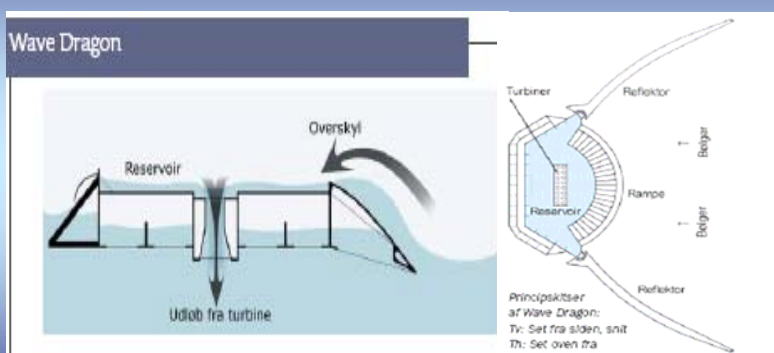
## Wave energy – A new kind of sustainable energy

Asbjør Heby, Morten Ginnerup, Anne Kristiansen, Sophie Bogoe, Søren Brun Faarbaek,  
Elisabeth Brun, Marie Thorlacius Ussing: Loevbakken 6, 9400 Noerresundby,  
DENMARK.

### Wave-energy



### The design of Wave Dragon



## **„Ecotourism” for a sustainable city**

Katerina Argiropoulou, Marita Zioutou, Alexia Keramida, Dimitra Manoura, Eirini Sveroni, Christina Stefopoulou, Demi Papadimitriou: Volos GREECE.

This year, students of the first grade of the 5<sup>th</sup> Lyceum of Volos in Greece, formed an environmental group with the aim to help ecological tourism and the sustainable development of our city. The group was split in two teams, one for ecological tourism and the other for sustainable development.



As the ecological tourism team, we visited places suitable for ecological tourism development and we studied the prerequisites and the impact of such development. We also looked at the development of ecological tourism in other parts of Greece and we were enchanted by the beauty of the major ecological tourist centre that we visited.

As the sustainable development team, we defined the term of a city with sustainable development and we realized that, for a city like Volos, it can be achieved through the sensitization and the participation of citizens and government.

When we finished our research and gathered the results from our activities we arrived at the following conclusions:

- ❖ The development of ecological tourism does not offer immediate economic benefits but it contributes to the development of tourism overall and the economic development of the country.
- ❖ The sustainable development of a city can be achieved through the will and conscientious participation of its citizens.

In particular, the two teams examined the urban traffic problem and the parks of Volos. In order to examine the traffic problem, we visited urban traffic specialists in our city. We studied the causes of the problem, its impact and possible solutions. Thus we realized that the problem is caused as much by the citizens themselves as by their vehicles. As the urban traffic team, we arrived at the following conclusions:

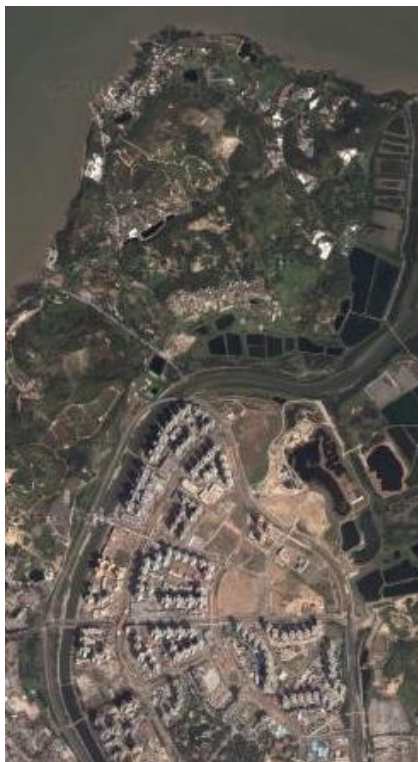
- ❖ The city has a serious parking problem which will be partially solved by multistory car parks currently under construction.
- ❖ There are problems with the public bus service as regards itineraries and frequency.

The other team of the group examined the city parks and green areas. It must be noted that, for a Greek city of this size, Volos has comparatively more green spaces than other cities. The largest urban park is the seaside St. Constantine's Park with green and recreational areas.

## Student Initiated Eco-tour

Tin Yi CHAN, Man Yu LI, Wing See LEUNG, Yin Fan LEUNG, Hin Yu WU, Chung Hang YEUNG, Hing Yi WONG, Chi Fai Thomas WONG: Queen Elizabeth School Old Students', Association Secondary School of Hong Kong SAR, CHINA.

In the northwest part of Hong Kong, there are many valuable wetlands. One of the largest wetlands among there is the Mai Po Marshes. On 4<sup>th</sup> September 1995, the Mai Po and Inner Deep Bay areas were listed as a “Wetland of International Importance” under the Ramsar Convention. Queen Elizabeth School Old Students' Association Secondary School of Hong Kong is located in Tin Shui Wai, which is only 3.6 km from the Ramsar wetland. The school has been concerned about the conservation of the environment, and integrated eco-tourisms into its regular curriculum. Environmental education curriculum designed by the school is based on field trips and personal experiences, students understand about the environment, ecology and culture heritages as well as establish positive viewpoints in sustainable development. Through environmental education, the school hopes that the sense of environmental and culture protection can be



inculcated to the students. One of the most significant activities is training the students to be eco-tour guides and environmental caretakers. In recent years, students have participated in major organizing works of the ecological activities, and eco-tours become student-initiated rather than teacher-initiated gradually. In this school year, one group of students has organized eco-tours for two primary schools, which totally

include over 300 students. In the project, students of Queen Elizabeth School Old Students' Association Secondary School will share how and what they learn in the student-initiated eco-tours, and some eco-tour sites around Tin Shui Wai of Hong Kong.



## RAIN WATER HARVESTING

Atul Bhalla: Mira Model School New Delhi INDIA.

# Mira Model School



## THE RAIN WATER HARVESTING PROJECT

- **RAINWATER AVAILABLE FOR HARVESTING**  
Total rooftop and surface area: 16,200 Square metres (Sq.m)
- **Average annual rainfall in Delhi : 611 millimetres (mm)**
- **Total volume of rainwater harvested : 4,454 cubic metres (m<sup>3</sup>), or 44,54,000 litres**
- **This is 45 per cent of the total water harvesting potential.**

## **Through Good Governance and Ethics Towards a Sustainable Development: The Experience of Susa Valley, Italy**

Matilde Mundula: Istituto Comprensivo di Nole ITALY.

A number of experiences show that the exclusive use of sustainability criteria isn't always sufficient to orient sustainable development towards the complexity of the social requirements and to cope with them.

The result is that citizens don't accept a project and start actions against it.

So, time, money and precious social forces are wasted and the environment management is postponed.

In the Susa Valley (Turin, Italy), ordinary people and the local Government are fighting against the High Speed Railway, planned by the Italian Government without any Environmental Impact Evaluation (thanks to a special law for "Big Projects") and any sort of consultation with inhabitants of the area about their health and the defence of the environment.

Famous scientists, planners, economists and also showmen support the Susa Valley and its protest because there are objective environmental, economical and ethical reasons to change it.

During long years of protest, the inhabitants of this Valley have been learning what was necessary to understand the project and have been studying alternatives, directing all efforts towards a sustainable development for their area.

Hundreds of people participated in several meetings where scientists, engineers, sociologists and reporters shared their knowledge to offer everybody helpful tools to understand the plan and be able to effectively propose and support a valid alternative.

Then, the fight took to the streets: protests saw thousands of people (old and young, students and workers) demanding that Italian Government changed its plans.

The Local Government has always stood by its citizens and together they are carrying out a real example of a good governance.



We know that a good governance system depends on the development of factual knowledge shared by all the components of the society and this knowledge can bridge the positions and interests of different stakeholders, institutions and social groups and carry out a shared plan or project with mutual benefits.

In the Susa Valley we can see this development and hope that shared democracy can lead also to correct decisions for the benefit of the environment and the people.

Furthermore this case shows how ethical aspects are closely connected with sustainable development: the people of the Susa Valley are defending their health, the nature, their homes, but also their immaterial needs, their “environment” meant as a space where they achieve their happiness.

People want to have the right to knowledge and want to be allowed to speak, and their participation is improving their “sustainable” relationship with their environment.

### **USE YOUR BRAIN! SAY NO TO COMMONPLACES!**

Some useful tips about the Turin-Lyon High Speed Train (TAV) Project

- ⌘ Commonplace number 1: Without the Turin-Lyon High Speed Train the region of Piedmont would be isolated from Europe.

Piedmont is already well connected with Europe, especially through the Susa Valley, where there are already two state roads, a motorway, and a double-track railroad line (for both passengers and goods). There is also the so-called “train-motorway” - lorries are transported on special train shuttles. All these connections to France go through two natural passes and two artificial tunnels (the train and motorway tunnels of Frejus). All this in a valley which is, on average, only 1,5 km wide! And there is a river too, the Dora Riparia, which sometimes happens to flood...

- ⌘ Commonplace number 2: The existing railroad lines are overused. The existing railroad line is actually underused (only 38% of its potential). Lorry-shuttles are deserted (though they were used during the closing of the Frejus tunnel due to a fire), the direct link Turin-Lyon had to be cancelled as

there were no passengers, and the boasted flow of goods has actually decreased by 9% in the last year!

⌘ Commonplace number 3: The Turin-Lyon High Speed Train is essential to the economic revival of Piedmont.

What is true is actually the opposite! Diverting public resources (it's all public money!) from research, innovation, and implementation of industry (not only FIAT), this project will be “the last nail in the coffin” to the industry in Piedmont.

⌘ Commonplace number 4: The High Speed Train will clear the valley of lorries.

To begin with, in transporting the diggings from the tunnels to the stockpiling sites, the 10-15 year work-in-progress will bring something like 500 lorries a day (and night!) through the Valley and the Turin neighbourhood - and that would of course mean a dramatic increase of polluting elements and dusts. At the end of the Majestic Work, who can guarantee that goods will leave the motorway to move on the new high speed railroad? On the contrary, recent studies say that only 1% of the actual transport on wheels will move to railroad.

What an advantage!

⌘ Commonplace number 5: The inhabitants of the Susa Valley are selfish and don't care about the project's general benefits to Italy.

Currently 35% of all transports crossing the Alps go through the Susa Valley, and more than 4,500 lorries per day go along the Frejus motorway. On the other hand, 1,500 lorries a day go through the Mont Blanc in the Aosta Valley, where the number of lorries has been limited by law.

⌘ Commonplace number 6: The Turin-Lyon High Speed Train offers job opportunities for the inhabitants of Piedmont.

As is already happening in other places, it would only mean temporary work, as it mainly employs foreign manpower. Moreover, the firms in charge would use their own technicians and workers - as we say “wife and cattle from your own village”.

However, another figure would surely reach Turin and the Valley: the Mafia! There is already evidence of collusion in granting contracts for

preliminary geological studies... we can easily imagine what would happen with the real work!

⌘ Commonplace number 7: The new railroad track is mainly inside tunnels: what's the problem, then?

That is the problem, actually! The project foresees a 23-km. tunnel inside Mount Musiné, which has a high presence of asbestos. The excavator digging the tunnel will bring a huge number of asbestos fibres into the air, which will be spread everywhere by winds, reaching the very centre of Turin. Breathing asbestos (the mining or use of which was outlawed in 1977) causes a lethal and incurable cancer - pleural mesothelioma. Digging tunnels in such a place is thus illegal, criminal, and a great danger to public health!

Furthermore, the 53-km. Italian-French tunnel, excavated inside Mount Ambin, will meet rocks filled with uranium, and pollute aquifers and springs as well.

And more: a tunnel excavation requires many little service tunnels - they graciously call them "windows". There are 12 of them planned, each with its own construction site next to the villages. This would mean an inferno of noise, dust, and lorries going up and down, day and night, along the narrow streets for at least 15 years!

And still more: excavating such long tunnels in such a populated area would dry up (or pollute) all aquifers and waterworks, as has already happened in Mugello, an area between Florence and Bologna, where a judicial inquiry into environmental damage has recently been set up.

And more: the road system will be completely upset! For example, overpasses will be built for each site. Can these new roads be considered as compensation for the environmental impact of the whole work? From the Turin-Milan motorway, have a look at the Turin-Novara new high speed railroad track to get an idea!

⌘ Commonplace number 8: This work is good for the Italian Economy as it sets private capital in motion.

In fact, all the costs will actually be paid by public money - that is, by all of us! 20 billion euros taken from public funds, and paid to private companies, the General Contractors, with the Italian State vouching for them. No private concern would have ever risked a single euro on this work - especially after the failure of the Channel Tunnel! Public money for this

work will be diverted from existing (poorly-maintained) railroad tracks, from hospitals, schools, and other public services, and from research on the development of renewable energies.

Moreover, it has been calculated that management costs of the Turin-Lyon High Speed Train will be dramatically high, and that it will be losing money for decades (maybe 40.000.000.000 euros)

And furthermore: though the major portion of the track lies in French territory, the Italian Government will pay two thirds of the whole cost. No problem for them: we pay!



Commonplace number 9:  
Whoever is against the Turin-Lyon High Speed Train is against Progress.

Well, what exactly do we mean by progress? It should not be understood as infinite, unregulated growth. The Italian territory is rather small and overpopulated, and in the world as a whole, natural resources are limited, pollution and waste are increasing, and the oil supply is diminishing.

Progress should include understanding the limits to our exploitation of the earth. Progress should mean using in a better way what we already have, making it more efficient and lasting, cutting out

what is unnecessary, investing in intellectual and cultural growth more than in material growth.

The High Speed Railroad Turin-Lyon goes precisely in the opposite direction of fair and sustainable growth: it is an old-fashioned project, harking back to a time when the growth of transport was considered unlimited, when the focus was only on how fast and how many goods (tomorrow's waste) had to be transported, ignoring the value of quality and its core question: if - and why - it is really such a necessity to have all these goods transported!

No TAV Committee, August 2005.

## Art and Culture of Lithuania

Giedra Dagiliene: LITHUANIA.

### Art and Culture of the Mounds

Baltic Sea Region, X - XII century

Seskinės Secondary School of Vilnius city

LITHUANIA

Head Teacher

Giedra Dagilienė



**Land – Fire – Water – Air**  
**PEACE – FREEDOM – BEAUTY -**

## Biodiversity Netherlands 2006. The Trimbos

Anouk Beekhuis, Janneke Groenendijk, Anne Marneth: Marianum Groenlo The NETHERLANDS.

### *The project*

- \* Choose a type of vegetation and an area*
- \* The past of the area*
- \* Research the international, national and local legislation to protect the biodiversity*
- \* Research the decrease of biodiversity*
- \* Draw a conclusion about the influence of people on the biodiversity*
- \* Make a Biodiversity-Action-Plan*
- \* Build a website and communicate with students of other countries who are working on the same project*



*Not influenced*



*Influenced*

## Houses in the slums

Lianne Schol, Rianne van Loenen, Marinka de Jongh: Staring College Lochem The  
NETHERLANDS

### Ontwerpen moet je doen!

*Creativiteit in natuurwetenschappen en techniek*



## Houses in the slums

Lianne Schol, Rianne van Loenen en Marinka de Jongh

[www.techniek12plus.nl](http://www.techniek12plus.nl)

### Ontwerpen moet je doen!

*Creativiteit in natuurwetenschappen en techniek*

## The problem

- đ Houses in slums of Indonesia
- đ During rain-season under water
- đ Houses washed away
- đ Not enough money
- đ A lot of trash

[www.techniek12plus.nl](http://www.techniek12plus.nl)

## Noise pollution and addiction.

Biedak Marta, Deja Natalia, Hanna Miszczenkow, Staporek Łukasz: Catholic High School Katowice POLAND.

Few months ago the three of us (Natalia Deja, Łukasz Staporek, Hanna Miszczenkow) decided to do something about the project for the conference in Ustroń 20006.

Finally, we decided on doing a project about one of the ecological problems in our city Katowice – noise.



We measured the level of noise in crucial parts and places of our city.

Moreover, we met with Prof. Adam Lipowczan, chairman of the Scientific Council, to get the basics and theoretical knowledge about noise pollution. One more thing we also did was to organise a survey among students in our school.

Where there's will, there's a way....we started doing something serious.

We collected the information and then Łukasz put it all together on the PC.

In the end we discovered that noise is seemed neither as an ecological problem nor as an addiction. But our survey's showed that many young people are addicted to listening to loud music, they like living in crowded city and in the rush. And they aren't aware that in the future they will suffer from hearing problems, heart diseases, nervousness and many, many others serious symptoms.

What's interesting even people working in noise polluted areas aren't aware that they are protected by law and they don't use the rights they possess.

To sum up, we'd like to point out that noise has become a serious problem which we cannot ignore.



## Diversity and Sustainable Development in Katowice

Dominika Kubalska, Marta Podleśny, Joanna Kaczmarzyk, Krzysztof Rurański:  
Konopnicka LO Katowice, POLAND.



## **REuse, REduce, REcycle.**

Michał Urban: Gimnazjum nr 2, Chorzów, POLAND.

The Project “Reuse, Reduce and Recycle” focuses on and presents simple examples of how waste materials and rubbish produced in our houses can be reused, reduced and recycled in our households and in our local communities.

Because many people are not aware of this problem. I tried to show how I found out about this problem, my contribution to reducing, reusing and recycling the waste produced at home and what I do to improve the situation at home and what I did to improve the situation in my community.

I went on a tour round our blocks of flats and saw myself that people do not care for the environment and if they do, it is not sufficient. I made a survey on this topic and got the figures. I prepared a questionnaire on “What happens to your household waste” and I surveyed 30 people from our community. Then I made some little posters asking people and reminding them to reduce and reduce the wastes before they throw them. I put them up on the rubbish containers to read and follow. I recorded and filmed most of my activities, I made an interview with an owner of the metal recycling centre, I took some pictures as well. I showed the film and my poster to my friends at school, neighbours, relatives and friends to make them more aware of this issue. We can do a lot to reuse, reduce and recycle the rubbish and make our living environment cleaner and nicer to live in.

Hope it will work!

## **New horizons: choosing energy-efficient alternatives for a more sustainable in today's school.**

Maria Céu Tarouca: Escola Secundaria Jose Gomes Ferreira, Lisboa PORTUGAL.

### **Abstract:**

We would like our energy system at school to be a more sustainable one. Our first step is to make an energy diagnosis of the school, by comparing the consumption and registering it. After acquiring this data, we intend to monitor the energy consumption at school, thus involving in our project the greatest Portuguese energy company, EDP. Next, and after having researched on the most suitable efficient-energy solutions, we intend to set the basis in terms of a whole process of sustainable energy consumption at school, either by building up an informative panel inside school, or lighting the outdoor, using solar energy. Further on, we would like to see our school as a green one, belonging to the Green Light project.

### **Project description:**

1<sup>st</sup> – Contact ADENE in order to get technical support and to set the basis for a future cooperation

2<sup>nd</sup> – Make the energy diagnosis of the school (comparing various consumption and registering the acquired data)

3<sup>rd</sup> – Monitor consumptions (involving EDP)

4<sup>th</sup> – Research the most suitable energy efficient solutions

5<sup>th</sup> – Build up an informative panel, using solar energy or lighting the outdoor using a more sustainable energy

### **Simultaneously:**

- a group of students is attending the Young Masters Program, an online environmental course
- another group is working on the Cosmic Rays project (a telescope has been set in our school to capture cosmic rays and to find out how they get to Earth)
- a journalist follows up the students' work (António Granado, who was already with us last year)
- students will try to meet the European Commission energy goals
- ADENE, the Portuguese agency for energy, will play a leading role in the cooperation

- we will try to get INETI's help to build up the solar panel system

**Finally**, some students will attend 2 environmental conferences to let others know about their yearlong work:

- *YES06*, Youth Environmental Summit 2006, *Caretakers*, in July, in Poland
- *GEYC2006* – *Global Youth Environmental Conference 2006*, in November, in Dubai

**Teachers involved:**

Isabel Costa Marques (Portuguese)

Ivo Fernandes (Philosophy)

Margarida Graça (Maths)

Nuno Ferro (Physical Education)

Emília Estadão (Physics and Chemistry)

Teresa Reis (Biology and Geology)

M<sup>a</sup> Céu Tarouca (English and coordinator)

## RESPONSIBLE CONSUMPTION

- Each Portuguese family consumes an average of 3000 KWh per year = 300 €
- This annual consumption is responsible for the release of over 1,2 tons of carbon dioxide
- Portugal releases 4,38 millions tons of CO<sub>2</sub> each year being farther and farther from reaching the Kyoto Protocol goals

# Why protection of green city parks in urban areas improves quality of life ?

Maria Teresa Morgado Soares, Maria Helena Silva Costa, Guilherme Luís Teixeira dos Santos, Rute Salgueiro: Escola Secundária D. Filipa de Lencastre, Lisboa PORTUGAL.



Our project is structured in the following way : 5 parts followed by a conclusion. **The first part**, “Discovery – Learning to see the reality around us”, focuses on arborized areas and the description of parks and woods located in or near our Nation’s Capital - Lisbon. **The second part**, “Knowing our Environment”, takes what was done in the first part a bit further, by performing an analysis of the areas referred to in the first part, which takes us forward towards **part three** – “How are the green spaces of the community”. In this section we are going to talk about several tree species that exist in the areas described above, the importance of the green corridors for the city environment and a brief “Did you know that ...” session with several environmental curiosities. **Part four**, “Environmental



Critic – Social Conscience”, offers a critical view of the environment in our city, and has an important participation of the students who we worked with on this subject.

**Part five**, “Partnership among schools”, describes an intervention program, with the participation of the children in a sensibilization action for the community with the following objective : Bring up attention to the need to protect and preserve trees and green spaces in cities. And finally, in the **conclusion** we present some brief thoughts about the future.



## Aspea Jovem.

Fatima Almeida, Ana Almeida, Rita Azevedo: ASPEA PORTUGAL.





### **ASPEA JOVEM**

■ Aspea Jovem started on March 12<sup>th</sup> 2005 by young people with the main purpose of:

- Comprehension
- Dissemination
- Implementation



#### ***Earth Charter***

Just  
Sustainable  
Peaceful Society





## International Campaigns and Projects

### **GEYC**

(Global Environmental Youth Convention)



A global environmental project for young people run by the International Institute for Industrial Environmental Economics at Lund University in cooperation with Caretakers of the Environment International, Sweden.

### **Ecoclubs**



### **CEI**

(Caretakers of the Environment International)

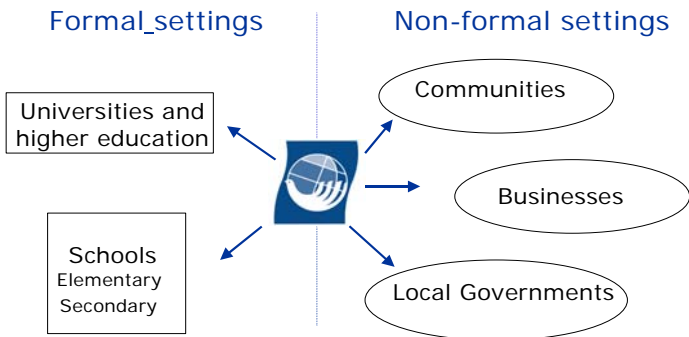


**CARETAKERS**  
OF THE ENVIRONMENT INTERNATIONAL

# Earth Charter.

Fatima Almeida: PORTUGAL

**One of the priorities of the Earth Charter Initiative is to advance the educational uses of the Earth Charter**



**The Earth Charter represents a global ethic for a sustainable way of living**

**The core themes of the Earth Charter answer the needs of our society.**

## Earth Charter Core Themes

*Need:* An advanced understanding of our shared global problems

*Need:* A framework for being able to critically evaluate one's situation

*Need:* A culture of collaboration



- Interdependence
- Critical Challenges and Choices
- The Community of Life
- Differentiated responsibility
- Peace and Nonviolence
- Universal Responsibility
- Partnerships

**The Earth Charter uniquely meets the educational challenges of the 21<sup>st</sup> century**



# **An Adventure Along the Banks of the River Tejo**

Jose Antonio Pereira: Escola Secundaria do Monte de Caparica PORTUGAL.

## *Educational Resources in Environmental Education*

This work proposal aims at enlarging knowledge about the *Environment*, through the promotion of Environmental Education amongst Educators, Teachers and the children of Pre-school Education and the 1st Cycle of Basic Education.

It is intended to facilitate education and to improve reflection on Environmental Education practices in the study of the *Local Environment*.

It is hoped that all the intervening persons become active participants in the defence of the environmental assets which are part of the natural wealth of the Municipality of Almada, particularly with respect to the Tejo river bank areas, whose particularities are important to preserve for the future.

This resource is based on exploratory observational visits and the collection of material. The itineraries planned to constitute significant “worlds of knowledge and wisdom”, as much for the children as for the educators, teachers and, indirectly, for Educational Supervisors. About 750 children are involved in each academic year, using three planned exploratory itineraries: *Farm*, “*Cristo Rei*” *Beach* and “*Tijolo*” *Beach*. We are currently working on the provision of new trails and support materials.

Regarding the practical implementation of this educational resource provided by the City Hall of the Municipality of Almada, it is important to note that timely training was provided to the educators and teachers in order to proceed with the dissemination of the project and to give it visibility amongst the relevant authorities: the monitoring of the visits can be accomplished by the teaching staff.

In this manner, we intend to guarantee the maximum use of this resource in its scientific and educational spheres and to enable an increase in the participation of schools and children, without damaging the quality of the environment.

### *General Goals*

- **Support** the teachers of this Cycle in the pursuit of their profession and particularly in the Study of the Environment, motivating them to undertake field activities and Environmental Education;
- **Create an awareness** amongst children with respect to the historical, cultural and natural environments of the communities they live and circulate in;
- **Contribute** to the children's understanding of their interaction, in a responsible manner, within the society they belong to, so as to implement healthy living environments;
- **Live** experiences which are related to the environment in order to understand the surrounding Environment;
- **Motivate** the formation of bonds of cooperation and friendship among children, families, teachers, authorities and the community in general;
- **Enable** the emergence of other motivations for the development of Environmental Education projects and of citizens who are conscious of the need to preserve the Environment.

### *Exploratory visits*

The City hall of the Municipality of Almada has made the following resources available to support educators and teachers, not only in the field work, but also in the classroom:

1. A bus with a minimum of 33 places;
2. Pressed card drawing boards, exploration *guide-books*<sup>1</sup> for the children;
3. Guide-books for the teachers;
4. Magnifying glasses, compasses, disposable gloves and plastic bags (for the collection of material);
5. Educational Materials for use subsequently to the visits: collection of fossils, herbarium and slides.

### *To the discovery of the environment by playing the scientist*

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<sup>1</sup> Guiões = guide-books; mas tinha notebooks na primeira versão, que significa cadernos...

This municipal educational resource, in support of the Study of the Environment, indicated the need of additional and integrated action, with a regular, systematic and multi-disciplinary character, consisting of different curricular and non-curricular components.

This experience guided the project *"To the discovery of the environment by playing the scientist"* (2001/2005), which sought, fundamentally, to contribute to the development of *essential skills in Science* involving children at Pre-school and 1st Cycle Education, valuing the elements of games and creativity as structural factors in relevant and significant learning.

This was an educational and training project aimed at educators and teachers, at the responsibility of the Training and Skills Centre of Western Almada<sup>2</sup> - PROFORMAR, in partnership with the Group of Schools of Trafaria, Group of "Maria Montessori" Schools (Monte de Caparica) and the Municipality of Almada.

The project focused on the construction of knowledge, favouring natural curiosity, observation, the sharing of experiences and the assumption of new role-playing carried out by the children, educators and teachers, in particular, and by the educational community in general. The work with educators and teachers and the field trips with children are the basis of work in the classroom at an experimental level.

Approximately 650 children, 50 educators and teachers, 1 nursery-school and 10 primary schools of Monte de Caparica and Trafaria were involved in this experimental project.

Its implementation evolved from a successful educational experience to cover a more enlarged group of schools, at these same teaching levels, within the Municipality of Almada.

### *Educational materials for use after the visits*

A variety of educational material was developed at the level of work in the classroom, with the children, for the purpose of making full use of this

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<sup>2</sup> Centro de Formação e Competências Nónio de Almada Ocidental

educational resource. This material will be available for circulation (*under a temporary loan regime*) amongst the nursery-schools and other schools in the Municipality of Almada which participate in the visits, through written request.

Given that one of the objectives of the visits was the observation and collection of fossils, a **Fossil Collection** was created with 63 species, properly organized and supported by a *Teacher's Supporting Notebook*. This is aimed at providing some general knowledge on fossils and their importance in understanding and gaining knowledge about the Earth.

In a similar manner, a reference **herbarium** and three **slide collections** were built – again properly organized, digitally supported and two of them have a *Teacher's Supporting Notebook*. These can soon be found at the site: [www.almada.cidade.digital](http://www.almada.cidade.digital).

## Sustainable Energy Resources.

Kylie Sim, Gail Webster, Tracy Murray: Northfield Academy SCOTLAND.

### Our project

- Save energy and money around the school
- Introduce solar panels and wind power turbines
- Reduce carbon emissions



### Proposal

- Introduce new sustainable energy resources to help our School become more environmentally friendly
- Obtain permission from Senior Management Team
- Agreement of Local Council
- Raise necessary funding

## The Environment in our Life.

Jose Casanova Otero, Alvarez Fernandez Francisco Javier, Gonzalez Ruiz Olivia, Otero Diaz Joel, Lopez Filomena Denis: IES A Pinguela Monforte de Lemos SPAIN.

### Coordinating school:

.- *IES A Pinguela (Monforte de Lemos – España)*

### Partner schools:

.- *Katolickie Liceum Ogólnokształcące (Katowice-Polonia)*

.- *Istituto Comprensivo di Nole (Nole-Turin-Italia).*

**Project Summary:** Firstly the members of Comenius met during an international environment Congress **Caretakers of Environment**, held at Pracatinat (Turín-Italia) in 2002. There we set up our partnership through a project on environment that we called: **The Environment in our Lives**.

Throughout this project we try to recover some aspects or spaces in our environment that are worth protecting and being preserved, encourage cooperation and the exchange of opinions amongst teachers and students at schools, to learn and improve new languages and to use new technologies to establish comparative studies in the environmental field. In order to achieve all this we carry out the following activities:

Our project had **three central actions**:

- Recovery of a **Trekking Route (The Mills' Route)**, where we got two labour camps and staff from the local Council involved.
- Design of a **Didactic Unit** based on The Mills' Route (involving almost all subjects studied at school: botanics, geology, history, ethnography, biology, etc.), this guide has also a **docotomic key** to enable to classify all trees and bushes found along the route.
- Production of a **Fountain Catalogue** for our region. In this catalogue we locate a number of fountains (over 50), with data collected from GPS and pictures. The catalogue will be given to Monforte's Health Town Councillor in order to carry out water analysis and signal any possible problems.

These three actions had a number of specific tasks that were completed with collaboration from almost all departments within our school and most of the school students who are involved on the project.

**We wish to make a remark upon three important aspects:**

1. International visits: each school sent a number of students to visit the other two schools; which was a very positive experience and a big incentive for students to work on the project.
2. Number of agents that got involved: the project surpassed the school's expectations and there was an active collaboration from Monforte's Council, mass media and project „Voz Natura“, that enabled us to publish our work in the newspaper „La Voz de Galicia“ and on the Congress at Galicia, assisting more than 15000 students from all over Galicia. Collaborations included economic support.
3. Broad dissemination: through newspapers, tv, radio and mainly presenting our work on **International Environment Congresses**, as **Caretakers of Environment** or **Young Master Program** (Univ of Lund - Sweden). That allowed us to present our work on Congress in China, Greece and Egypt.

As a complement, several project activities were carried out at different school subjects, like:

- Previous ideas questionnaire.
- Photo contests, to choose pictures to make calendars translated into Polish, Italian, Galician, Spanish and English and shared with our partners.
- Winner exhibition.
- Didactic games with drawings of trees and bushes found along the trekking route.
- Money collection to be sent to Asian tsunami victims.
- Celebration of Tree, Environment and Earth's Day, helping public institutions during several activities.
- Trekking route which is promoted by Monforte's Council and it's carried out together with students and teachers from Poland and Italy. [http://www.jrcasan.com/rutasc/ruta\\_molinos.htm](http://www.jrcasan.com/rutasc/ruta_molinos.htm) .

- Collaboration with "Asociación de Amigos de la Ribeira Sacra", to make a catalogue of natural goods in order to apply for „Humanity inheritance for the Sil Canyon.“
- First National Contest on tales, legends and traditions for the "Ribeira Sacra"
- Web site development <http://www.jrcasan.com> where we publish all project materials at link [http://www.apinguela.com/Comenius/proyecto\\_comenius.htm](http://www.apinguela.com/Comenius/proyecto_comenius.htm)
- Web publication on analysis results from region fountains to be accessed by individuals at link <http://www.jrcasan.com/fuentes/fonte/fuentesdemonforte.htm>.
- Communication amongst three schools, we used Spanish, Italian and English. since Spanish is taught at the Polish school. We used mainly e-mail; but also fax and post mail for special shipments.

This year the project has been finished with a great deal of work done and a lot of good friends , who we expect to be in touch with in the future. We will also publish our future works via the web.



## **Sustainable future.**

Klara Eldforsen, Julia Nordén: Lund SWEDEN.

### **The main problem**

The main problem is that people don't know how much water and electricity they actually use every day. They see numbers and figures, but don't realize how much they over-consume.

We have come up with a solution that we think can work...

### **THE SOLUTION**



Every household gets a certain amount of kWh and liters of water to household with each month.

If a household exceeds this amount, they will have to pay for every extra liter or/and kWh.

To avoid over-consumption, the cost of every extra litre/kWh will be set very high.

# YMP GEYC 2006.


Birgitta Nordén: SWEDEN




## Young Masters Program (YMP) and Global Environmental Youth Convention (GEYC)

International Institute for Industrial Environmental Economics (IIIEE) & Learning Lund  
at Lund University  
CEI 2006 POLAND 5 July 2006

Birgitta Nordén



Lund University





## **Roosevelt's Conservation Crew.**

Ashley Doucette, Licia Epstein, Jimmy Kolodziej, Adam Williams:  
Roosevelt & Von Stauben High School, Chicago USA.

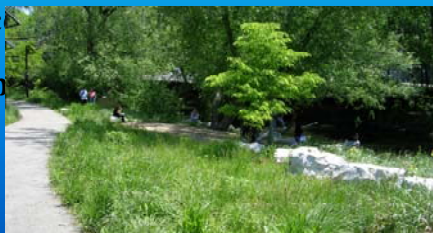
### **Chicago River Clean Up May 13, 2006**



## **Why is Service Learning Important?**

**A national study of Learn and Serve America  
suggests that effective service-learning  
programs**

- improve grades
- increase attendance
- develop students' p  
responsibilities.



## Fisherman's Bend Restoration.

Tyler Brown, Emily Bunker, Devon Decembre, Ryan Parker, Carol Russell, Bridgette Schooler: Salem, Oregon USA.

### Lessons Learned:



- Digging holes in rocks is challenging!
- How to plant a tree
- Where to plant the various natives
- Plant development
- Plant ID
- Teamwork
- Ownership of our efforts
- Importance of design

### Outcomes

- Over 1500 CEI YES'05/YES work hours at site since June 2005
- We are only six of the 28 W3 students who worked on this project, with the help of another 180 students in our Youth Enviro Squad
- People who visit the site will learn of the value of restoration



## **The Effects of Cigarette Butt Litter**

### **January 2005-June 2006**

Daniel Firester, Tyler Wang, Viktor Zlatanich, Rhonda Rigrodsky, Evan Smith, Roselle Mironer: The Birch Wathen Lenox School Earth Club, New York USA.

Birch Wathen Lenox School Earth Club students learned about the environmental effects of cigarette waste in New York City.

A representative from the New York City Department of Environmental Protection Agency came to BWL in order to provide necessary background information about harmful cigarette litter in New York City's various waterways. She presented agency statistics about common sources of litter in New York City.

The Earth Club advisor also performed a simple demonstration for the students: a cigarette was dissolved into a beaker of water so that students could see the water color change from clear to brown. They researched the chemical composition of cigarettes to learn about pollutants.

A data collection sheet was designed by the students to record their observations in the field. When it was ready, Earth Club members explored cigarette litter in streets nearby Birch Wathen Lenox. They gained firsthand knowledge of the problem by observing the poor condition of trees surrounded by cigarette butts. The students also noticed that sidewalk storm drains were an ineffective filter for small objects.

In January 2005, students collected cigarette litter data for East 77<sup>th</sup> Street, (between Third and Park Avenues), which was selected for its heavy pedestrian traffic. Directly in front of Lenox Hill Hospital, students counted 105 cigarette butts, and they also discovered a total of 163 for the entire south side of East 77<sup>th</sup> Street. The group was shocked to discover the grand total of 618 for both sides of the street.

Students decided to combat the problem through community involvement.

They contacted New York State Senator Liz Kruger, who assisted the Earth Club in presenting its data to Lenox Hill Hospital. In response, the

hospital placed two disposal units in front of its main entrance, and put up anti-smoking signs.

In June 2006, the BWL Earth Club revisited East 77<sup>th</sup> to ascertain the impact of the Lenox Hill Hospital ashtrays. Cigarette disposal units and signs appeared to have a significant impact; there were 468 fewer cigarette butts on East 77<sup>th</sup> Street, than previously observed.

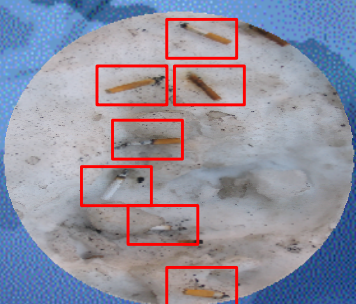
The BWL Earth Club learned that its work was far from finished. At the June 2006 field observation, Earth Club students counted 982 cigarette butts on East 78<sup>th</sup> Street, one block north of Lenox Hill Hospital. They learned that environmental awareness and protection is an ongoing process.

*Prepared by the students and faculty of the Birch Wathen Lenox School Earth Club.*

## The Damage Caused By A Single Cigarette

A cigarette still burning.

QuickTime™ and a Motion JPEG OpenDML decompressor are needed to see this picture.



- Cigarette filters discarded on the street take approximately four years to biodegrade.
- A cigarette harms the environment as well as the smoker, who faces an increased risk of contracting lung disease.
- Cigarettes exposed to flammable material are potential fire hazards.
- Precipitation forces cigarettes down storm drains, where nearby rivers and reservoirs become contaminated.

5



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T-teacher, S- student/F-female, M-male.

## CONFERENCE PHOTO



## OPENING CEREMONY





## AT WORK



















IN SALT MINE

## **ACKNOWLEDGEMENTS:**

### **Dear Participants,**

of the 20th Caretakers Conference in Ustroń, I would like to express our cordial gratitude to you for your great contribution to the Conference. Your project presentations, posters and final presentations were the essential content of the Conference. It is your work and your engagement that determines the result of it. We consider this result as very good. We hope as well, that the things you learned during the field trips, will help you to develop yourselves.

It was a great pleasure to host you in Ustroń. Hopefully you enjoyed your stay and also got to know about our country - Poland. The Globe is vast. It is good to realize that in many small places on our Planet there are people thinking and feeling like us, people you can call Friends.

We are looking forward to meeting you again. We hope you are already enjoying the time back home, safe and sound. Best regards and wishes of success.

### **We address the words of gratitude to authorities, organizations and members of the public.**

Without your help, goodwill and cooperation the realization of the conference would not be possible. It is to you, that we direct our most sincere gratitude for the financial help we received and for the involvement of your people in dealing with matters concerning the conference. We would like to say a special thank you to all members of public who supported the conference financially or worked on its behalf.

Your invaluable support assured us that spreading the idea of sustainable development among young people is very important. This help and involvement are factors without which the success of the conference would not be possible. We would like to thank you all.

*On behalf of the organizers*  
*Antoni Salamon*

## **LIST OF SPONSORS AND SUPPORTERS.**

**Narodowy Fundusz Ochrony Środowiska i Gospodarki Wodnej  
w Warszawie**

**Wojewódzki Fundusz Ochrony Środowiska i Gospodarki Wodnej  
w Katowicach**

**Wydział Kształtowania Środowiska Urzędu Miasta Katowice**

**Urząd Marszałkowski Województwa Śląskiego**

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