The UNESCO Associated Schools Project

In conjunction with

The International Network for Information in Science and Technology Education

The Baltic Sea Project

NEWSLETTER No. 1 1994

132 "HOT SPOTS" LISTED

THE BALTIC SEA IN DANGERZONE !

POISENED WATER !

WHO'S GOING TO PAY FOR THE ENVIRONMENT ?

ECOLOGICAL PROBLEMS

The United Nation's long-expected conference on environment and development in Rio de Janeiro in Brasil is now in the past. There was a great deal of talking and negotiating and many contracts were signed. The main purpose was to find solutions to the global environmental problems. Now is time for action.

When it comes to improving the state of the Baltic Sea need to be reduced radically. The state of the Baltic Sea, and the responsibility of all the Baltic Sea nations and of all the people of influence of the Baltic Sea.

Our way of life, however, is in deep conflict with the state of the environment. Recent studies show that people consider the quality of their environment to be a central contributory factor in their well being. People are concious and worried about the condition of the environment. however, most of us are highly aware of the state of the environmental problems. according to research results we feel powerless and indecisive in the face of environmental problems. In spite of that, the recognition of the relationship between our way of life and the state of the environment has not yet been transformed into direktion.

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The Baltic Sea Project

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COVER: MÄRI LINDSTRÖM OCH LISA LÅNGSTRÖM
LOGOTYPE: KARIN PETERSON OCH KJELL-ÅKE HOLMBERG/HOMPE

Students seek political solutions to save the Baltic Sea

While we are pleased that the seals in the Baltic Sea are now recovering, we have received new warnings. The warnings are about a mysterious disease which scientists fear will wipe out all the salmon as well as other fish species in the Baltic. More about this may be found in the newspaper cuttings.

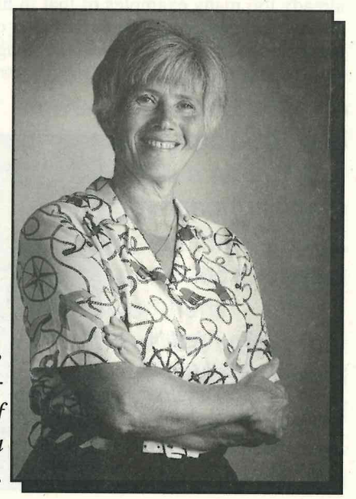
Once again we are reminded that the Baltic is one of the world's most polluted seas and that it is our responsibility to try to save it. This is where the Baltic Sea Project plays a major role and we are proud that so many schools want to become BSP-schools and work with the project.

During the last year many schools have worked with the theme "Save the Baltic Sea". One concern which our schools share is to find solutions to environmental problems in the Baltic region.

Our students have studied the effects of environmental pollution, they have discussed possible causes, but above all we have encouraged them to suggest actions. In their search for answers, have asked themselves what individual can do, what can be done on the local level, on the national level and in collaboration with other countries.

Comparing suggestions

It has not been easy for our students to find solutions to the environmental problems of the Baltic Sea.



Siv Sellin, general co-ordinator of the Baltic Sea Project.

Unfortunately, no textbook has all the answers. For this reason, it will be interesting for our students to compare their suggestions for political solutions with the suggestions we on the editorial board have received from environmental activists from countries around the Baltic Sea. The question we have asked is: "What political decisions are needed to save the Baltic Sea?" which is also the title of an article in this issue.

Student efforts to find solutions to the Baltic's environmental problems will form the basis of discussions between students at the conference "Save the Baltic Sea," to be held in Karlskrona, Sweden, in September. Important questions and suggestions for solutions which they bring up will be later presented in a panel debate with the Environment Ministers from countries in the Baltic Sea Project.

Improved environmental education

If we succeed in instilling a love of nature in children and young adults, then we will have laid the foundation for their involvement in environmental issues which will motivate them to address threats to the environment.

Thus, the Baltic Sea Project works towards improved environmental education based on a love for nature which you can see from many examples in this newsletter. This issue also contains many good examples of how environmental education can be developed into interdisciplinary studies.

One example of this is the theme "All the Meadow Flowers" which involves music teachers and biology teachers.

Inspiration from Agenda 21

Right now school children and young adults all over the entire world are following up the Conference on Environment and Development and Agenda 21, the conference's basis of action.

Our objective is to make BSP schools forerunners in striving for an environment education imbued with the ideas presented in these documents. For example, this issue reports on some of the Baltic schools which have begun studying Agenda 21 in order to inspire their environmental education programs.

BO KJELLÉN ABOUT THE RIO TEXTS

Positive response among the young

The Rio Conference on Environment and Development in 1992 was really a quite extraordinary event. The Conference had been prepared over several years through long international meetings and the delegates had come to know each other well. As the Secretary General of the Conference, Maurice Strong of Canada put it: "this has been an extraordinary human experience". And as we all left Rio de Janeiro after the final difficult negotiations, I think we all had a feeling of accomplishment. I have no doubt that these feelings were also shared by the Heads of State and Governments who had met in Rio for the first ever Earth Summit.

But this satisfaction was also mixed with a sense of concern. Would the results of the Conference have the necessary effect? Would Agenda 21, the Rio declaration and the other documents have any real impact in the real world? Or would they just be new pieces of paper in an international environment with so many other concerns to tackle?

A good follow-up to Rio

It may be too early to pass final judgement on this basic issue. Of course it is true that there are many other problems in the world of today. No doubt the unemployment situation is the major concern of young people in most countries these days. But I think we can safely say that Rio was not just another conference. There is an intense activity going on in the multilateral organisations and in all countries to ensure a good follow-up to Rio.

I think that the main reason is that the Rio recommendations are in tune with the time: young people today are much better informed than their elders about the long-term dangers of global environmental deterioration. And I also think that they see more clearly the links between the global environment and the need for development in the third world. Therefore the Rio texts have met a positive response among the young. Indeed, the criticism I often meet when discussing the Rio process is that we did not go far enough, that the results were too cautiously dressed in vague diplomatic language.

Preparing educational tools

One essential recommendation of the main document from Rio, Agenda 21, was on the need to use the educational system to influence people and make them understand the importance of sustainable development. Chapter 36 of Agenda 21 contains a number of recommended activities which aim at reorienting the educational system at all levels to meet the Rio objectives. In particular, governments are recommended to review curricula to "ensure a multidisciplinary approach, with environment and development issues and their sociocultural and demographic aspects and linkages".

Another recommendation in the same chapter says that "countries should cooperate with each other and with the various social sectors and population groups to prepare educational tools that include regional environment and development issues and initiatives, using learning materials and resources suited to their own requirements."

These texts are certainly not great literature. They are negotiated in long and often rather tedious meetings – but they represent a consensus among Governments of action which they intend to take and a commitment to work in the direction laid out in Agenda 21. The Swedish Government has for instance taken a number of measures in different fields over the last two years to give effect to the Rio results. The Ecocycle Bill is one example, the recent general bill on sustainable development is another (1993/94:111)

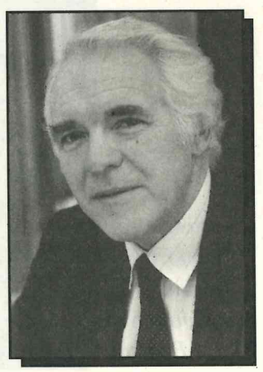
At the same time it is clear that the role of Governments is limited. Better understanding for the requirements and needs of the environment and sustainable development cannot be decided centrally. It has to rest mainly on the contributions of people at the local level, on the commitment by individuals. Otherwise there is no way in which the Rio results can have a real effect.

Agenda 21 and BSP fits neatly

In this erspective it is obvious that the Baltic Sea Project fits neatly into the message from Rio. It seems to correspond exactly to the aims of the texts I have just quoted. In looking at the impressive results achieved so far and the extensive networking between schools and young people that has been established through the project, I feel both satisfaction and enthusiasm.

The problems of the Baltic Sea illustrate so much of what Agenda 21 and the Rio process tries to teach us: we have to understand that environmental problems can only be solved in international cooperation, based on a multidisciplinary approach. And it has to start in the schools, to make the young generation aware and knowledgeable of the many different problems that relate to the environment.

The cooperation around the Baltic is gaining more and more international attention, within the framework of an increased concern for the regional seas and for the management of coastal zones. Shared resources – such as the Baltic – could be a source of potential conflict. There are already too many examples of that in history. But it can also be a mighty driving force for better cooperation and a better understanding of the need to manage these resources in a responsible way.



Bo Kjellén, head of the Swedish Delegation to the Rio Conference.

BEATRICE ASK

Important to link global perspectives to local and every day contexts

KUNGSFOTO AB

Beatrice Ask is Minister for Schools and Adult Education in the Swedish Government.

Young people are a valuable resource in the effort not only to bring awareness but also to create an active society to solve the threats to global survive.

Concern for our future is of vital and great importance to people all over the world. The threat to the environment in a global perspective is far-reaching and difficult to handle. Although awareness of the global threat has increased there is a lot more to be done. Most information and knowledge about global threats is supplied by the news media. This is often done in a fragmentary and frightening manner.

Important task of fostering

Schools have the important task of fostering clear awareness of and concern about economics, social, political and ecological interdependence and of providing every person with opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment.

In Sweden the School Act states that everyone who is working in school shall provide respect for human dignity and respect for our common environment. Both the local and global aspects, the immediate and remote environment, and the connection between the two must be a starting point for education in this respect.

It is also very important that dedication to environmental issues in the schools does not become an isolated and occasional part of school work. It must instead be a fixed purpose and a long-term effort. Linking questions of complex and global perspectives to local and everyday contexts makes it easier to gain perceptions about how to deal with environmental problems.

BSP an effective tool

In this the Baltic Sea Project is an effective tool for creating and developing educational approaches and joint programmes for environmental and international education by interlinking schools within the country and schools in the countries surrounding the Baltic Sea.

Schools where youngsters strive for the same aim, not only to understand the complex interrelationships between resources, economics, politics and social systems but also to gain competence in order to take an active part in preventing damage to and repairing the environment for a better future.

PROTECTION PROGRAMMES IN GOVERNMENT

••The National Baltic Sea Environment Protection programme has been presented to the Latvian Government by the Latvian State Minister of the Environment Indulis Emsis. It seem Latvia will participate in Common Baltic Sea protection project for all countries near the Baltic Sea

Atmoda,LATVIA

RIVER GAUJA THREATENED

••In 1975, an oil processing plant in Riga began to pollute the Inculans area with sulphuric acid. These pollutants have now accumulated to the proportions of a lake, over 1.5 km² in area.

Ten years from now the Gauja River will be threatened. The Lantvian-American company Baltec has begun to try to save the area, and Danish geologists are also involved.

Labrit, LATVIA

WISH FOR INDEPENDENT ENERGY

••Cheap and independent energy and protected environment. Is it possible? The Baltic states have a dangerous inheritance: Ignalina atomic power station (Lithuania), lake with radioactive waste Sillame (Estonia), atmoic submarine base in Paldiski (Estonia). The paper discussed about problems and gave information in the massmedia in other countries.

Diena, LATVIA

CHEMICAL WEAPONS INTO THE SEA

••After World War II, chemical weapons were deposited in the Baltic Sea in containers which experts say are now corroding and threatening to distinegrate. This is a great danger to the sea, but no one seems to know how to solve the problem.

Atmoda, LATVIA

HAZARDOUS WASTE UNWELCOME

••Company **Premex anstalt**, registered in Liechtenstein, suggested a new industrial building for burning of hazardous waste. This could be built in Latvia to solve the problems of other countries. The Latvian Minister of Energy and the Minister of Environment had different opinions about this. Society and Mass media were very active in this discussion.

Diena, Labrit, TEV, Atmoda, LATVIA

NONE CHANGES IN AIR POLLUTION

••Air pollution levels have not changed for the last two years in Latvia. A little bit higher level than is allowed for is the case for the biggest cities. There is also a problems with the rivers and the Baltic Sea. The people in Latvia, however, do not have to worry because the pollution level is not dangerous for their health.

TEV, LATVIA

NEW LAW ABOUT USING PESTICIDES

••The new law about using pesticides and other chemicals for agriculture in Latvia has been prepared by the Ministry of Agriculture

Labrit, LATVIA

M74 – AN ECOLOGICAL CATASTROPHY

••A mysterious disease is threatening to wipe out the entire population of salmon as well as cod and other fish species.

The disease was discovered in 1974 and was called M74 – M for mysterious. Now the M stands for environment–related ("miljörelaterad") since scientists maintain that organic environmental toxins such as PCB and DDT cause the disease. During the 90's 60-100 percent of the fry at large salmon farms in Sweden have died while 20 years ago only 10 percent were lost.

TV 2, SWEDEN

NOTES

SHOPS SUSPECTED OF ECO-CRIME

••In Landskrona, in southern Sweden, the municipal environmental authorities decided to see what hazardous chemicals were on the shelves of some 600 shops. They were looking for nickel-cadmium batteries, brake linings containing cadmium, environmentally hazardous automobile shampoos, and graffiti-removing agents.

They found 200 products dangerous to human health, 13 of which were banned chlorinated solvents, 200 of which were hazardous batteries of different brands, and 28 of which were prohibited pesticides.

The authorities have requested the district attorney to consider whether there is a suspicion of eco-crime in these cases.

Sveriges Natur, SWEDEN

NO TO NEW SHIPPING LANE IN STOCKHOLM

••The Stockholm County Administrative Board rejected a new shipping lane in the archipelago for the large ferries trafficking the Sweden-Finland routes.

Their decision included the statement that more stringent exhaust requirements were needed, as well as restrictions on vessel size and speed limits.

Sveriges Natur, SWEDEN

ECO-COUCH AS COMPOSED WASTE

••Two companies in Sweden, SAMHALL and IKEA, have produced an "eco-couch" for vegetarian household waste.

Under the lid, there are two containers for composting, using a kind of worm called the "tiger worm" as the "sanitation worker".

Does it smell? Not if you do it right, according to the manufacturer.

Miljö, energi, teknik i Sverige, SWEDEN

SEK 1.7 BILLION FOR BALTIC SEA RESCUE PLAN

••The final document from the Baltic Sea Conference in Warsaw held in early May 1994 concluded that political cooperation must be extended and the action plan implemented. Measures to alleviate all the problems are estimated cost SEK 1.7 billion.

DN, SWEDEN

INVITATION

Do you want to make the cover for BSP Newsletter? Send your drawing before October 15 to:

Siv Sellin
BSP Newsletter
National Agency for Education
106 20 Stockholm
Sweden

Remark: The proportion of the drawings have to be 24 x 42 cm.

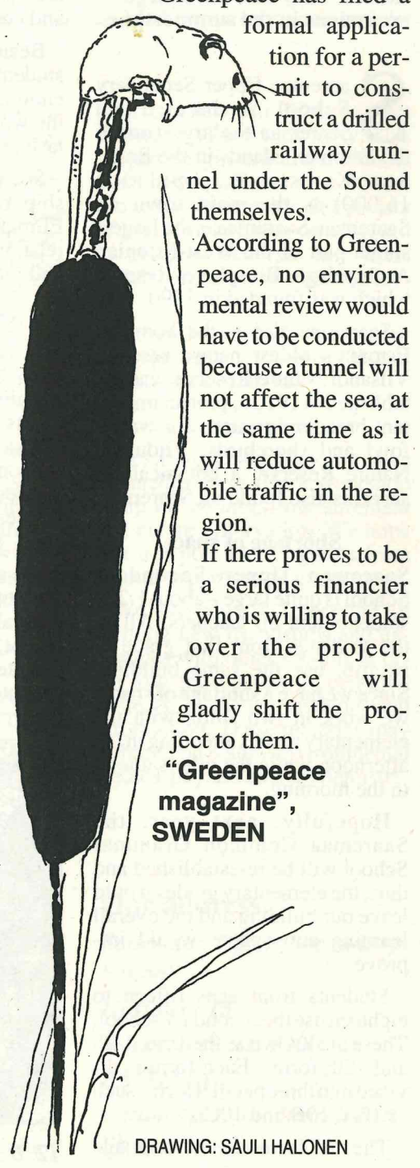
GREENPEACE WANTS TO BUILD A TUNNEL

••Greenpeace has filed a formal application for a permit to construct a drilled railway tunnel under the Sound themselves.

According to Greenpeace, no environmental review would have to be conducted because a tunnel will not affect the sea, at the same time as it will reduce automobile traffic in the region.

If there proves to be a serious financier who is willing to take over the project, Greenpeace will gladly shift the project to them.

"Greenpeace magazine", SWEDEN



DRAWING: SAULI HALONEN

ACTIVITIES AT SAAREMAA UPPER SECONDARY SCHOOL

Monitoring of wetlands popular projects

Teachers at Saaremaa Upper Secondary School, located on Saaremaa, here tells about there comprehensive environmental education programme. Despite shortage of space they manage to teach both nature oriented classes and regular classes. They also have large excursions in the summertime.

Saaremaa Upper Secondary School is located on Saaremaa, the largest one of the Estonian islands in the Baltic Sea. Kuressaare (population 16,000) is the main town on Saaremaa. Saaremaa is the largest single part of the West-Estonian Archipelago Biosphere Reserve which was founded in 1990.

Saaremaa also is the home of Estonia's oldest nature reserve. Vilsandi Nature Reserve was established in 1910 to protect important breeding grounds for waterfowl and shorebirds. Viidumäe Nature Reserve, a botanical reserve, is also found on Saaremaa.

Shortage of space

Saaremaa Upper Secondary School is quite large – about 1,200 students and 80 teachers. All of the students, from first grade to twelfth, use the same building. Since we have a shortage of space, we work in two shifts with the elementary grades attending in the afternoon while the others attend in the morning.

Hopefully, next year, the Saaremaa Common Grammar School will be re-established and thus, the elementary grades would leave our building and the overall learning atmosphere would improve.

Students from ages fifteen to eighteen use the secondary school. These are known as the 10th, 11th and 12th forms. Each form is divided into three parallel forms such as 10A, 10B and 10C.

The "A" forms are the language oriented forms (they study English and/or German more than the other forms). The "B" forms are the "nature" classes (they study biology, geography, chemistry and ecology according to a special program). These classes all began their work two years ago. The "C" forms are specialised in math, physics and computers.

Besides ordinary schoolwork, students go out for sports, sing in choirs, go hiking and take part in the work of drama groups. Regularly, students have parties.

So far, our school fosters friendship relations with Vantaa and Elimäki Schools in Finland. These relations are based mainly on sports and music.

Nature oriented classes

Our nature oriented classes are open to Saaremaa students from the ninth form and up. Advertisements and articles, published in the local newspapers, give information about the nature biased classes and registration for the classes.

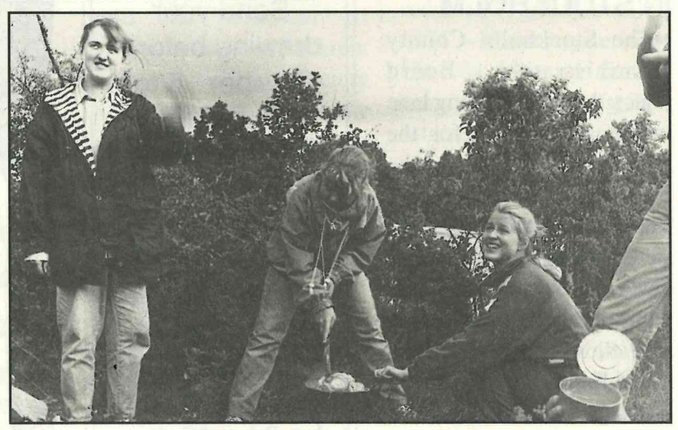
By January, all interested students are registered. In the beginning of April, these students take special tests to determine whether or not they may enter our nature oriented classes. Usually, most of the interested students are admitted (around 25 to 30 students). Following this, the admitted students attend a three day workshop in the forest surrounding Kärla village (15 km from Kuressaare) in the summer.

The purpose of the summer workshop is threefold: First, students become acquainted with each other; second, the initial steps of plant, animal and bird identification are carried out and finally, students have the chance to see whether they wish to continue with the nature oriented program.

Contacts outside school

The nature oriented classes devote a lot of time to environmental study, biology, chemistry and geography. A group of young teachers is responsible for the work of the nature oriented classes. There are two biology, physics and English teachers, one chemistry and one geography teacher involved in conducting the "B" program.

We also have contacts with several persons outside our school. We plan all of our actions ourselves and we do not let the administration of our school impede or influence us. In short, we work independently. Fortunately, our school administration accepts our activities and supports our work with finances if available.



12. B class from Saaremaa Upper Secondary School at a BSP camp.

The subjects studied by our nature oriented classes are diverse. Usually the subjects vary from year to year depending on the availability of particular teachers.

Special courses are taught on the plants and animals of Estonia and on environmental protection and nature conservation. Within these courses, students study such subjects as healthy eating, acid rain, and the impact of salt/sand winter road mixtures on the island's water quality.

Nature hikes

Active learning is encouraged in our nature oriented classes. As a part of our Baltic Sea Project involvement, our students engage in coastwatch, the bioindication of pollution, the measurement of water pollution on and around Saaremaa and the observation and counting of local birds.

Also, our students enjoy observing and participating in environmental exhibits, particularly the ones on the mainland.

In addition, the "B" forms often go on nature hikes in order to practice and perfect observational methods in studying animals and plants. During the school year, students take part in study trips to several points of environmental interest in Estonia.

One recent trip was to the forest and swamps of Alutaguse. Each school year ends with a two week practical training in labs and workshops on the subjects of nature research and pollution measurement.

Large excursion

However, our environmental education doesn't end with the school year. Each summer, one large excursion takes place. All three nature oriented classes take part.

The three places visited include the northeastern Estonian industrial region where the excavation of phosphorite and oil shale have caused environmental problems along with the negative impact of chemical factories and power Stations of this region; the hilly landscape of southern Estonia and the large swamps of western Estonia.

Our nature oriented curriculum

Saaramaa School students trying to "go" on water from one islet to another.

allows for and encourages independent studies by students. These optional individual projects are supervised by a cooperating teacher.

At the time of graduation, those students who have chosen to undertake an independent project must present and defend their investigative work in much the same fashion as is done at the university level. One popular independent project involves the monitoring of wetland birds and raptorial birds.

Education in regular classes

Environmental education is not limited to our nature oriented courses. Other examples are the study of energy problems, radioactivity, waste treatment and measuring methods in physics and biology, the study of poisonous wastes and cleaning of these, in chemistry, the compilation and processing of data obtained from research, in computer science and through the study of environmental reviews in foreign language magazines.

Also, our students are involved in activities organised by the Nature Centre for Young Scientists.

Involved in international projects

Along with our involvement with the Baltic Sea Project, our school is involved in the Air Pollution Project directed by Norway. Last autumn we began monitoring acid rain and will continue this spring. Under this project we will also make ozone observations using tobacco plants.

This year we will start working with the new Air Filter project directed by Tartu University. This project originated from Illinois State and is offered to us by the Slovenian University. The project offers a simple, hands-on approach to building accurate air filters which can measure pollution levels.

Currently, we are discussing our involvement with the EE-Net project out of Latvia.

Future plans

This spring, 19-22 May, we have planned to organise a workshop camp on pollution measurement and nature observation. We hope that it is possible for guests from abroad to participate in our camp.

We are always interested in forming new friendships and exchanges with other schools in order to work together on common projects, exchange students and information. These relations may be based on nature/environmental studies, physics and/or chemistry.

Our address:

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ESTONIA
Contact person: Indrek Peil
Physics teacher

THE LIFE OF RUMEX MARITIMUS AT PIKKU HUOPALAHTI

Botanical observations lead to unexpected results

Rumex maritimus was chosen to serve as botanical study subject for the science group at Meilahti senior secondary school in Helsinki. The plant grows at Pikku Huopalahti which is a small bay in the Gulf of Finland.

The group was especially interested in how a protected species like *Rumex maritimus* would thrive in its habitat planned to be a residential area.

Rumex maritimus was originally found at Pikku Huopalahti in 1950. This means that it has survived there for over 40 years by means of self-semination.

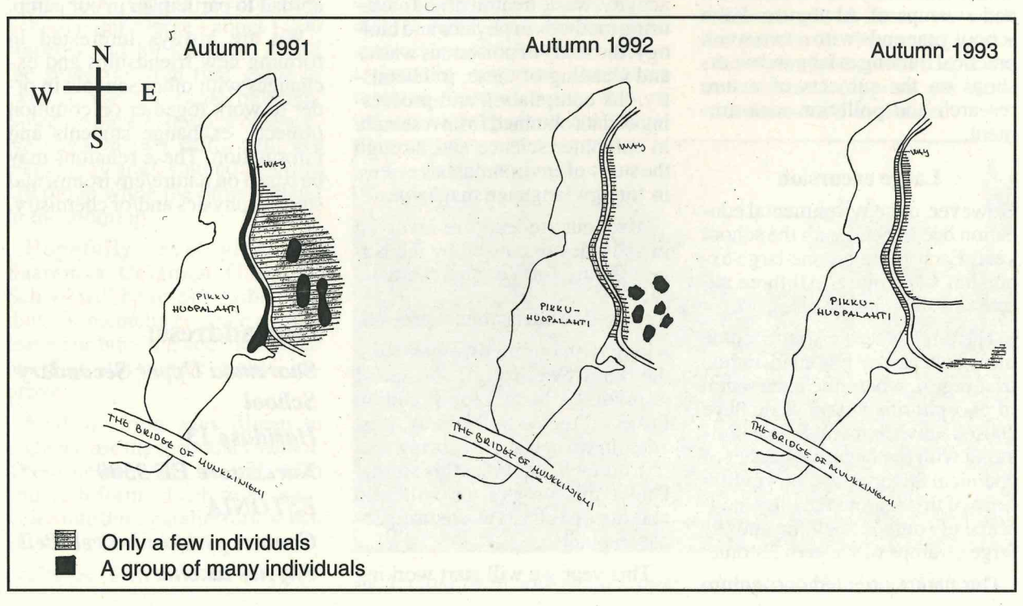
A big population 1991

In the autumn 1991, the group went to Pikku Huopalahti to assess the amount of *Rumex maritimus*. The population comprised thousands of individuals. There were, e.g. 1565 individuals on a spot measuring 3 x 2 meters. The number of individuals had multiplied in comparison with calculations made by V. Erkamo (Memoranda soc. fauna flora fennica 50: 7 - 9). The group drew the conclusion that the population of *Rumex maritimus* at Pikku Huopalahti might grow even more abundant in the future. What occurred, however, was quite the opposite.

Bulldozers invaded

Many changes had taken place by the autumn of 1992. Bulldozers had invaded Pikku Huopalahti. The road following the shoreline had been elevated and widened whereby *Rumex maritimus* waterfront populations had been buried. Waste earth dumped into the area had also covered and suffocated a considerable number of *Rumex maritimus* plants and by desiccation rendered the area less propitious for the growth of *Rumex maritimus*.

Rumex maritimus thrives in moist and muddy areas. At that time, *Rumex maritimus* was protected by law and there was a ▶



Inland school works with Water Quality Programme

The Robert Bosch Comprehensive School in Hildesheim – a UNESCO associated school for many years – deals with ecology and environment education in many ways. Besides making ecological topics part of the normal curriculum, we have also been offering projects and workshops on environmental issues.

Our aim is direct and multidimensional learning organized "on location" wherever it makes sense and is possible.

Besides the numerous environmental projects carried out by our school in the environs of Hildesheim, we have also heeded UNESCO's call to its associated schools to take part in the Baltic Sea Project – despite the fact that Hildeshiem is not even situated on the coast.

Dealing with the large ecosystem of the Baltic Sea has made it possible for us to work with environment education in a practical way as a multidimensional learning process, especially in dealing with the fate of the small porpoise, an endangered final link in the foodchain of this shallow sea.

Four field trips

Besides teaching cognitional and intellectual aspects of ecology, we have made four field trips, one a year from 1990 to 1993, which have focussed on the emotional and affectionate effects of ecology on mankind as well.

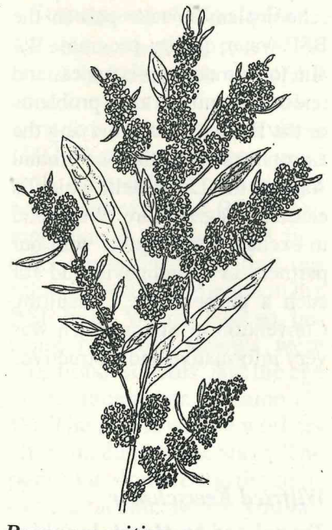
The pupils' work with the flora and fauna of shallow waters, ornithological studies in ecology and behavior, botanical studies of the salt mires and actual contact with the dolphin-like small porpoise, gave our pupils, who were between 16 and 18 years old, a positive emotional attitude towards the environment.

At first sight, the landscape is relatively intact, beautiful and a natural place for learning, and this enhanced the pupils' positive attitude towards nature.

Continuing work in the BSP

From September 6th to September 9th, 1993, the Fifth International Consulting Convention of the participants in the BSP was held in Sundsgaarden near Helsingborg on the Sound. Besides the traditional member countries – Denmark, Sweden and Finland – there were many delegates from East European countries on the Baltic coast: ▶

▶



Rumex maritimus

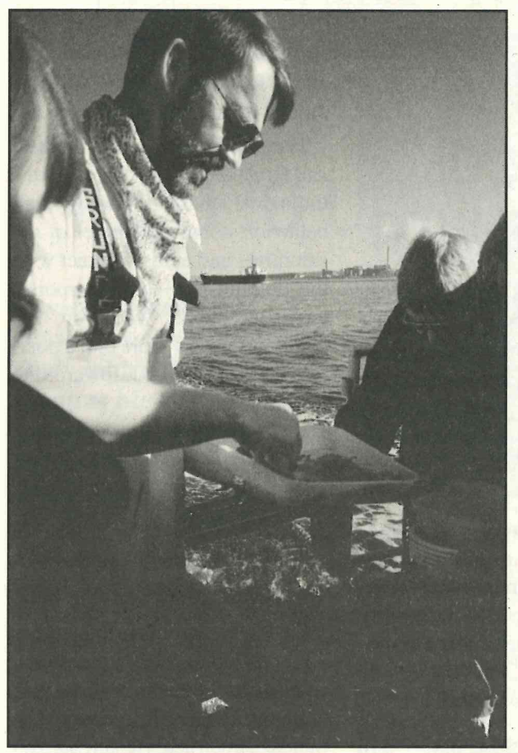
prohibition against picking it, transferring it or even collecting its seeds. It was, however, possible to implement a residential area plan at Pikku Huopalahti where the protected plant grew without protests.

A few survivors 1993

In the spring 1993, prospects looked far from rosy for *Rumex maritimus*. In the autumn 1993, the group visited the site again and found only a few survivors of a population of thousands of *Rumex maritimus*. The plants found were stunted and less than 10 cm tall. In normal conditions, *Rumex maritimus* can attain a height of 60 cm. A new road had been built on top of the most important habitat of *rumex maritimus*.

The future of *Rumex maritimus* at Pikku Huopalahti is overshadowed by dark clouds devoid of even a silver lining.

Kirsi Hilden,
Katja Mantere
Jaana Peltoniemi
Sini Salmela
Teachers at Meilahti school
Helsinki



The marine biologist Arne Samuelsson demonstrates the bottom fauna of the Sound during the BSP conference at Sundsgården.

▶ Estonia, Latvia, Lithuania, Poland and Russia.

The Federal Republic of Germany did not send a national committee, but was represented by project participants from Kitzeberg and Hildesheim. Unfortunately, because of this the German delegation was not able to give a detailed report on activities in Germany. However, the projects reported on by delegates from the other countries can serve as models for reorganizing the German Baltic Sea Project.

It has become obvious to us that besides interdisciplinary studies on protecting the Baltic Sea, the best way for us to achieve cooperation on a national level would be to agree on a working schedule, regardless of whether the topics are similar or different.

Coordinated by the Rungsted Grammar School north of Copenhagen, a number of Danish and Swedish BSP schools work with a water quality program. This project entails measuring the water quality along the coastline of the Baltic Sea and can easily be done by younger pupils.

Such a semi-scientific study program is a good method of getting first hand knowledge of the main ecological problems of the Baltic Sea. One of these is the aggressive eutrophication of the sea through nitrates and phosphates.

Right impression

In addition, the data gathered from different locations by Danish and Swedish schools are collected in small publications. Although this work is restricted scientifically, the pupils get the right impression about working on a local level to address a global problem.

Such a project must be interesting and exciting for a pupil living in Nakskow on the island of Lolland who knows that a group of pupils a thousand kilometers away, in the north of Sweden on the Gulf of Botnia have tested the same water. It is also exciting to think that there are thirty groups of pupils around the Baltic Sea doing just this and achieving great results!

More than once it was pointed out in Sundsgården that local activities in Denmark and Sweden are not limited actions but in different ways deal with ecological, social and political aspects of environmentalism as well.

This leads to the question of whether or not German BSP schools should proceed in the same fashion to increase cooperation – which has not been very close so far. Of course, schools situated on the Baltic Sea have an advantage over inland schools. The "inlanders" get the opportunity to work with the topic perhaps only once a year on a week-long field trip or by other means of excursions and projects.

Exchange wanted

The Robert Bosch Comprehensive school plans to take part in the BSP water quality program. We aim to help our pupils understand one of the main survival problems of the Baltic Sea by studying the eutrophication of the Sea around Aarö in the Little Belt, which is caused by agriculture. We intend to exchange test results with our partners in Scandinavia and for such a purpose the Consulting Convention in Sundsgården was very informative and instructive.

Wilfried Kretschmer
Translated by Horst-Joachim

Asta Pranskuté
10 class
Klaipeda School No 8
did the drawing
1992

Students in tailoring and building are working with the BSP together

Biruta Sereikiene Builders' school and Daiva Lesauskiene Tailors' school here give examples on how two schools in the same town, Klaipeda, began to cooperate within the BSP frame. Since the autumn 1993 they are working with the Air pollution project Europe (Acid Rain Project).

We would like to tell you about how the BSP helped to create friendship between two schools. Our schools are in the same city Klaipeda (Lithuania). Our city is near the Baltic Sea. In Klaipeda city the population is more than 220,000. It is the port and an industrial town too. We love our own town and we are interested in Klaipeda and the ecological problems of the Baltic Sea.

Now about our schools. One of them is the tailors' school. There are 619 pupils in this school. Most of the pupils in the tailors' school are girls. The other is builders' school. There are 575 pupils in this school and most of the pupils in the builders' school are boys.

Standpoint of life similar

All began when we, two teachers from these schools (BSP coordinations in the schools), went to a seminar in Latvia in 1992. We were not acquainted with each other, because we began to work in the BSP not so long ago. Already at the first talks we understood, that our schools would cooperate in the BSP field. We decided so, because both our schools were vocational schools, and the age of the student was the same 15-19. The pupils will be workers after finishing the schools. The pupils view on life and the environmental education is similar.

Besides we are not specialists of nature study. We are the teachers of speciality and we are interested in the Baltic Sea ecology. All these things connected us.

Trips to the coast

And our dreams came true. The pupils welcomed the friendship idea very warmly. It was great. They wanted to have a meeting immediately. So one group of girls and another group of boys have involved themselves in the same BSP programmes. They began to organize trips to the coast together and to have parties together too. Common work in the BSP connect us in this way and now we are doing a lot of things together.

We are going out to watch the coast, counting midwinter water-birds and watching the breeding birds in spring. In the autumn of 1993 we began to work in the Air pollution project Europe (Acid Rain Project).

So far we have managed to build up friendship between two schools in Klaipeda. This is a good start but we would like to have contacts with other schools like ours from other countries. If you want to, you could write us.

Biruta Sereikiene
BSP liaison person in Builders' school
Daiva Lesauskiene
BSP liaison person in Tailors' school

Address:

Biruta Sereikiene	Daiva Lesauskiene
Builders' school	Tailors' school
Taikos pr.67	Puodziu 1Q
5802 Klaipeda	5800 Klaipeda

ROYA SECONDARY SCHOOL

Seeking more friends around the Baltic Sea

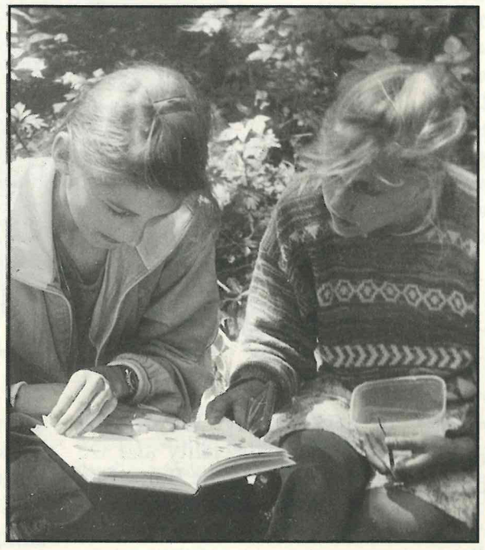
Roya secondary school is one of many schools situated on the Baltic sea. There is a close connection between the school and the Baltic sea in Roya. The school is situated in a wonderful place We are proud of clear air, the pines and the nice beach, Inita Iamane writes.

In the 70-80s there were the popular competitions "Do you love the sea?" in our school. These competitions were organized among Latvia's schools which are situated on the Baltic sea.

In 1990 we took part in the international programme which is connected with the sea observation.

The first one was a programme Coastwatch 90. From that time our school became a coordinator of this programme in Latvia.

At this moment we have taken part in several international programmes and have extended our activities observing rivers and lakes, too.



Ilze Mürnéu and Anete Seina on summer hike.

Camping with Germany

In the summers of 1991 and 1992 we organized international camps with German youth where we were acquainted with ecological problems in North Germany and with our nature and its problems.

Now there is an ecological group in our school. The group conducts school work in this *green movement.* There are children of 12-18 years old in it. We have also taken part in several international conferences and have arranged seminars in our school.

It is already tradition to have a meeting with Coastwatch programme schools in the end of October. In spite of financial problems in Latvia the number of participants increases. When we are together we talk about our work, play several games, make acquaintance with problems in Roya and of cause we rest.

In November 1993 we organized Coast watch coordinator seminar where two representatives from all the nine states around the Baltic Sea were invited to participate.

Environmental School

In the summer of 1993 we and the Education Ministry organized a seminar where teachers - specialists from Sweden and Denmark - acquainted us with their work.

For several years we have close cooperation with *Latvian Children Environmental School*, which organizes different studies, seminars and games.

Although the main work is connected with our students and our environment, *Joint works* of cleaning are organized twice a year. EKO group also has organized cleaning of the beach and the river. We cooperate with Slitere State Reservation. We did *cleaning of the wood* after the storm.

Drawing exhibitions

We have already a tradition to take part in different drawing exhibitions. Besides we can watch these works at school too. Children like to draw about the sea. Our children's works are exhibited also in Denmark and Sweden.

In this school year, for several weeks, the Baltic Sea is in the centre of attention in our school. We organize the marathon "around the Baltic sea". Taking part in this the marathon, we have possibility to be in every of all the nine states around the Baltic sea. We must solve crosswords. This competition is extended.

The crosswords are published in our local newspaper and therefore village inhabitants also take part in it. At the end of marathon there will be competition of songs about the sea, competition of students' creative works, as well as a section where children will be able to show their knowledge about all the nine countries, about their history, sport, literature, art and music.

Some rivers were observed from the beginning to their mouth into the sea. Here is Baiba Kreicbeuga taken water samples.

ECO group

Students of the ECO group have chosen some theme on which they are working in this school year.

Some students sum up dates of the Coastwatch 93 programme with the help of computer, some of the enumerate birds in our surroundings, some organize games for junior pupils.

Many problems are very acute in our village. One of them is connected with the bad conditions of *the cleaning system* and our municipality which is not interested in solving this problem.

Due to bad planning in several places the dunes are damaged and we have not reached any results in solving the problems. Sometimes drinking water is alarming, therefore we try to make water analyses in wells and *water plumbing*.

Summer hikes

Summer hikes guided by the teacher Egils Muchiens are very popular now. Then some of the rivers were observed from their beginning to their mouth into the sea.

Last year we made observations of the Gipna, we made analyses and made description of the river and its nature.

So our life flies in Roya secondary school. We try to take part in several activities, to express our opinion. We regularly write about our work in our local newspaper and make speeches in the Roya TV. We are glad when our student and teacher group in ECO increases.

We have found many friends in several schools in Denmark and Sweden, but we would like to have more.

I would like to wish all the Baltic Sea project schools many good ideas in 1994 and gifted organizers guiding this work.

Ineta Iamane

Teacher at Roya Secondary School

Coastwatch coordinator in Latvia

THE FIRST CONTRIBUTION TO THE KARLSKRONA CONFERENCE

❒❒ The BSP coordinator got this as the first contribution to the Karlskrona conference. It was an envelope on which Emma from one of the Chapman school in Karlskrona have made a beautiful painting. We think it is a very good example on how you could spread the message of the bad condition of the Baltic Sea. An envelope passes a lot of hands before reaching the receiver. We are only sorry that we could not show the colours.

And Emma, you and all the other students in BSP schools, are welcome to participate with a new drawing for the cover on the next edition of BSP Newsletter (see the invitation on page 7).

Competitions Exhibitions Excursions Seminars

Lódz is the second Polish biggest city (ca. 800.000 inhabitants). This urban agglomeration is situated in the central Poland, on the watershed between the two biggest Polish rivers – Vistula and Odra. Halina Wróblenska, headmaster at XII Liceum Ogólnokaztalcace, hope that cooperation within the BSP network will be helpful in solving their problems about shortage of drinking and industrial water.

Before joining the BSP, for many years environmental issues have played an important role in education in our school, especially in the subject biology. In this area we obtained many successes. The active participation of the young in the 3rd Biological and Ecological Olympiad became the most serious and important achievement. Fifteen students represented our school in regional competitions, one schoolgirl got the title Degree of candidate of Biological Olympiad in year 1991/92.

Prizes of first degree

Such Dendrological Contest as "My Forest" and others organized by Polish League for Nature Protection caused a great interest among pupils. The participation in the contests ended in many successes and prizes of first degree.

Students' interests initiated at classes are being developed and continued during the preparations for students' ecological seminars organised by Technical University of Lódz. The students prepare individual works and lectures, dealing with some ecological subjects. The great achievement was, when teachers of biology were honoured by congratulation letters from the Rector of Technical University in Lódz.

Every year at our school area there were organised Ecological Days, devoted to various problems, as for example: urban green belt, environmental threats of great urban agglomerations – Lódz as an example.

Exhibitions and popular scientific lectures were prepared as well. We invite students from others schools, guests from different institutions, such as Department of Environment Protection from local authorities, Ecological Foundations PRO-NATURA.

Students from biology-chemical classes have organized an exhibition "Insects World", which was seen by 1320 pupils from many Lódz schools.

Visiting nature reserves

In the programmes of touring excursions e.g. to Jelenia Góra and Walbrzych District, heavily destroyed by chemical and coal industries, in which our pupils of all classes take part, the problem of nature preservation are considered. The youth have visited most of nature reserves of our region.

Researches of the youth and their developeing ecological interests will allow us to broaden our activities in this field, especially the experimental one. Prepared BA students and teachers of biology, chemistry and geography programme "Situation of Pilica River and Sulejów Reservoir – Part of Baltic Sea Catchment Area" obtained the acceptance of the most pupils.

We do hope that cooperation within the BSP network will be very helpful for us in solving environmental and methodological problems.

Halina Wróblewska
Headmaster

Reports about distribution of polluting industries in Baltic countries

It is my pleasure to give information about activities carried out in the framework of the BSP by one of the Sankt-Petersburg educational establishments, that is the Academician Gymnasia of the Sankt-Petersburg State University – an educational and scientific complex for talented children from the North-Western region of Russia, Alla Korobkina writes.

On the basis of the above Gymnasia UNESCO Centre – Sankt-Petersburg is going to hold an International Seminar "Ecology in science education" (May 23-26, 1994) and a summer ecological course for teachers and pupils aged 14-17, who are interested in protection of the environment, in particular, that of the Baltic Sea region, and also wishing to do the sights of historical and cultural places of Sankt-Petersburg (July 10-17, 1994).

Biology main subject

Biology is one of the main subjects in the curriculum of the above Gymnasia. The students of the Gymnasia have an opportunity to be educated in the comprehensive course "General biology" and in a number of special subjects including the ecological ones. There has been developed and are being given the courses "Botany of superior plants and the basic knowledge of the plants' ecology", "General ecology" and so on.

A new theme "Current issues of the Baltic countries" was started in the framework of the course "Socio-economical geography of the world". The students prepared a number of reports and abstracts on the "Distribution of polluting industries in Baltic countries" and "Rectification of the Baltic Sea area" subjects under the supervision of teacher N. Shlyikova.

The classes are being conducted not only in the Gymnasia itself, but also in well-equipped laboratories of the Biological and Physiological Research Institutes as well as on the basis of a number of University's Chairs.

Studies of Finnish Gulf coast

The field studies being conducted in different geographical regions are the essential part of the school biological education. Thus in 1993 Mrs. Antonova I.B., the assistant professor of the biological department of the State University, conducted field studies on the Finnish Gulf's coast for the Gymnasia's 11th grade students. These studies were carried out in the framework of the course "Botany and the basic knowledge of the plants' ecology".

The students investigated some places on the southern coast of the Finnish Gulf from Izhora to Bolshaya Strelnya, which are situated in the rest and industrial zones of Sankt-Petersburg. The students observed the development of the superior water plants and their specific diversity in water with different degree of pollution.

There were investigated 12 reservoirs (rivers and brooks) that flow into the Gulf. The students collected a lot of materials for anatomy-morphological studies of plants in polluted waters. At present, the collected materials are being treated by the students.

Individual research activities

The field studies are also being exercised in other regions of Russia. For exemple, during the last three years they were conducted on Kurshskaya spit of the Baltic Sea (supervisor - Fedorichenko T.G., the teacher of biology).

The best way for realizing the creative abilities of the students is to carry out the individual research activities. For exemple, the 3rd year student of the biological faculty of the State University and the former student of the Gymnasia D. Mirin together with the 10th grade students elaborated under the supervision of Antonova I.S., the assistant professor, a new methodology for identifying the degree of water pollution caused by heavy metals through defining the Lemna minoz near highways.

O. Arhipova and Y. Elsukova, the 11th grade students, have studied the anatomy-morphological changes of water plants in reservoirs with different degree of pollution situated on the coastal line of Finnish Gulf (supervisor – Antonova I.S., the assistant professor).

Alla Korobkina
BSP-coordinator
for Sankt-Petersburg

An invitation from St. Petersburg

Our secondary school N 395 is interested in different environmental problems. Our pupils make a lot of environmental researches on the banks of the Gulf of Finland and one of the nearest rivers Svanovka.

They are from 7 to 16 years old. There are eleven forms in the school. The teachers of our school try to include the news about environment and used it in biology but also in the lessons of psychics.

We have already organised an international conferens and the swedish schools and our children have opportunity to speak and to participate in the conferences together with foreign students.

We are interested in broadening our contacts and to build bridges across to different countries. We would like to invite teachers and pupils from other countries to communicate with us. We are ready to invite them to live in our families and to show them the interesting and beautiful places in St. Petersburg.❤ ❤

The director Sergeeve S.P.
Secondary school N 395
Prospect veteranoe house N 135
St Petersburg, Russia

MEASUREMENTS IN VALLENTUNA RIVERS AND LAKES

BSP aroused interest in the surroundings

A cold autumn morning in the beginning of November 1993 the students of natural sciences from Vallentuna Gymnasium went out to six different test areas. They wanted to study the quality of the water of the River Långhundraleden as a part of the Baltic Sea Project.

Each group was responsible for a range of measurement and the subsequent laboratory work.

The areas were located in Vallentuna, which is one of the northern suburbs of Stockholm, the capital of Sweden. The rural district of Vallentuna is geographically large but it has only 23 000 inhabitants.

The tests were taken in water courses adherent to the stream Långhundraleden. This stream was once a river which was used by the Vikings as a navigable channel. Långhundraleden is our largest discharge to the Baltic Sea and it was therefore a natural choice for our positions of measurement.

At the time of writing it is almost six months since we did our tests and we are soon about to repeat them. This is to get a fresh report on the environmental situation.

Långhundraleden

Långhundraleden is an old trade route used by the Vikings to transport commodities from Uppsala to dwellings around the coasts of the Baltic Sea. The public vessels frequented the river in the 19th century but today the river has decreased as a result from overgrowth.

The surroundings consist of fields and mixed forests, often with small hillocks interspersed in the landscape. The area is full of agricultural activity. Långhundraleden and Garnsviken are also popular recreation areas. Långhundraleden discharges into the Baltic Sea.

Places of measurements

The first place of measurement is a small river called **Holmbroån.** The stream comes from a swamp and has after that passed an agricultural area. It is surrounded by fields and it is turbid and shallow. This place is chosen in order to examine the discharges of nitrates from the surrounding fields.

The second place of measurement is another small river. It is called **Lillån** and it has one inflow from the small society of Kårsta-Ekskogen. It is a quite clear river surrounded by fields and the main reason to choose this place was to examine the contents of phosphorus (coming from the households in the area).

The two rivers gather and run further on to the third place of measurement, **Helgösjön**. Helgösjön is an eutrophic and cloudy lake surrounded by reed. Apart from the earlier mentioned rivers it has an inflow called Kyrkån which comes from the little society of Frösunda.

The fourth place of measurement is a river called **Helgöån** which comes from Helgösjön. It is cloudy and shallow and it is surrounded by fields and pasture land.

The next place of measurement, the fifth, is a small river called **Husaån**. The water has now passed a lake and has run through a swamp. The place was chosen to examine whether the rate of nitrates has decreased because of the swamp. The streams is surrounded by fields and pasture land.

The sixth and last place of measurement is an oblong and eutrophic lake called **Garnsviken.** The water has run through an agricultural area, a swamp and it has passed a motor way before reaching Garnsviken. After Garnsviken the water leaves the rural district of Vallentuna and runs further on into the Baltic Sea.

Vallentuna students testing the water quality of the Husaån.

Values of measurements

pH

The results from this autumn, 1993, were lower than those of last spring. Is this a sign of a coming acidification or is it natural for the pH values to be lower in the autumn because of the carbonic acid assimilation? We might get the answer in May 1994.

Conductivity

All the values have increased since last spring. This might be a consequence of lower pH values (this means higher concentration of hydrogen ions and metallion). The results are though within the normal values of the Swedish lakes.

The hardness of water

Långhundraleden flows through areas rich of hine. The values are a bit higher than those of last spring. The lower pH-values might be a reason as magnesium and calcium ions are set free from the soil into the water.

Alkalinity

All the values are still high but there has been a small reduction at all the measuring places. When the alkalinity is high the ability to buffer is good and the water can then resist the acid rain.

The oxygen percentage

The oxygen values this autumn have been a little bit confusing. The oxygen percentage ought to be lower in autumn when the plankton production has ceased. But the values this spring was higher except for Holmbroån – where the results was the same – and Garnsviken – where it was much higher.

Nitrate- nitrogen

The contents were high and have increased since last spring, except in Husaån where a gratifying reduction has take place. Maybe Vadasjön has worked as a nitrogen trap after all.

Ammonium-nitrate

These values are also high. Reduction has taken place in Holbroån, Garnsviken and Helgöån. We hope that the values keep getting lower.

BSP instructive

The Baltic Sea Project has been very instructive and aroused an interest for our surroundings. We feel that it is important to maintain the Baltic Sea as a project of international cooperation. Because it is only together that we can improve the condition of the Baltic Sea.

Eva Gustafsson, Teacher and the following students of Natural sciences:

Introduction: ***Gabrielle Sjöstedt and Henrik Wanntorp***

Places of measurement: ***Katrin Holmström***

Values of measurement: ***Caroline Serrander and Jacob Sjögren***

BSP Vallentuna gymnasium

Values of measurements - Långhundraleden

May 17, 1993

	Temp, °C	pH	Cond,µS/cm	Hardn dH	Alk, mekv/l	O2, mg/l	O2, %	PO4, mg/l	NO3, mg/l	NH4, mg/l
Holmbroån	15	7.57	0.548	12.54	2.91	8.1	80	0.07	0.5	0.32
Lillån	13	7.64	0.253	6.27	1.73	8.7	83	0.18	0.2	0.33
Helgösjön	17	7.43	0.376	9.18	2.21	6.7	69	0.14	0.4	0.38
Helgöån	-	7.55	0.372	9.07	2.28	7	-	0.05	0.6	0.24
Husaån	17	7.31	0.386	9.07	2.21	5.7	58	0.06	1.01	0.25
Garnsviken	16.5	7.93	0.351	8.32	1.85	9.4	96	0.09	0.8	0.32

November 16, 1993

	Temp, °C	pH	Cond,µS/cm	Hardn dH	Alk, mekv/l	O2, mg/l	O2, %	PO4, mg/l	NO3, mg/l	NH4, mg/l	Biol.test
Holmbroån	0	7.36	0.577	13	2.14	11.65	80	0.24	1	0.54	*
Lillån	0.7	7.55	0.27	7.6	1.62	12.35	86	0.15	0.47	0.22	Fragilari
Helgösjön	3	7.2	0.45	11.5	1.9	10.05	75		0.63	0.36	
Helgöån	2	7.14	0.46	11.8	1.98	10.15	73	0.18	0.63	0.34	
Husaån	1.3	7.33	0.43	11	1.92	9.9	70	0.17	0.73	0.35	Fragilari
Garnsviken	2	7.39	0.37	9.4	1.71	10.8	78	0.13	0.8	0.35	

* oscillatoria, tabellaria, synedra capituta, much microsystis

The ions in the table have the following charges: PO_4^{3-} NO_3^- NH_4^+

STUDIES OF WATERBIRDS

A method of longterm monitoring the abundance of breeding birds

Pupils in the biology classes of Lilleküla High School, Tallinn, Estonia, have long-term experience in bird ecology study programmes in the framework of the BSP. The build up of a common network for waterbirds studies on the coast of the Baltic Sea is in progress.

– Linda Metsaorg is looking forward to support in the project.

1. Choose approximately 7-8 km long route in the landscape. It could well be of a circular shape, so the route starts and ends in the same point.

2. The route could well run through different biotopes, just those typical to the very area studied. However, routes in a single type biotope make further analyses much easier.

3. Establish a minimum of 20 counting points on the route. There should be more points located in woodlands than in open biotopes.

4. The shortest distance recommended between the points in woodlands is 250-300 m, in an open area - ca. 400-500 m.

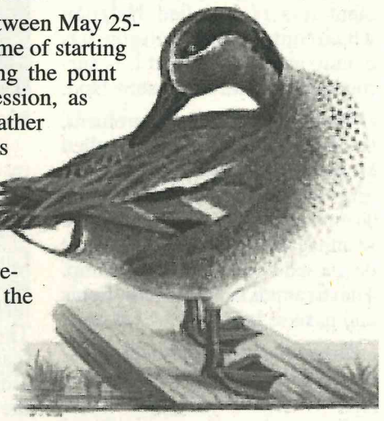
5. The biotope features in every counting point should be briefly recorded. As all the points would be passed in every counting session, it would be easier to re-find them, if the points were located near to some characteristic landscape feature, like a rock, a ditch, a big tree, etc.

6. While passing the route, the observer(s) moves from one point to another, stopping for five minutes in each point, recording all the seen and heard birds, first in the notebook, later filling in the census sheet.

7. All the seen and heard birds despite their distance from the observer, are to be recorded.

8. Observer(s) should take caution not to detect the same bird twice.

9. Date (between May 25-June 20), time of starting and finishing the point counting session, as well as weather conditions and occurring disturbing factors, should be recorded into the final form.



DRAWING: M V WRIGHT

Anas crecca

A count of waterbirds washed ashore

This project was initiated by the International Beached Bird Survey (IBBS) Scheme, coordinated by Mr. Henrik Skov from Denmark, Linda Metsaorg writes.

The aim of this project is to study the mortality rate of wintering waterbirds and the impact of sea pollution on birds and, hence, locate the most dangerous places because of oil pollution, in order, where necessary, to take measures to protect birds.

The survey is carried out as follows:

The coastline is traversed as long as possible (to cover appr. 10 km). All the dead birds washed ashore are counted.

Counting should proceed just after the breaking up of the ice-cover, or, if there is no permanent ice-cover, immediately after the severest winter period has passed.

The starting and finishing points should be marked, so it would be possible to locate them on the map (it would be of help, if you could measure the length of the surveyed stretch of coastline yourself also).

The number and species of birds found should be noted down, and, if possible, their sex, age and cause of death as well.

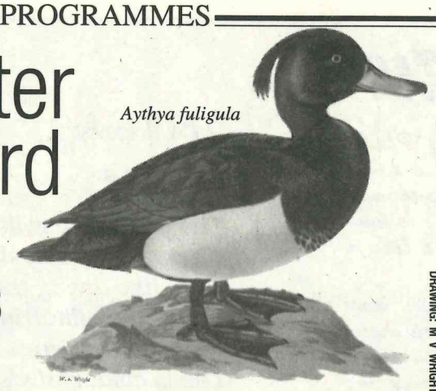
Sometime, the time of death could also be detected.

It is very important to estimate the level of oil pollution in the observed area. Thus, it is necessary to note whether the found bird is clean, moderately dirty or filthy (oily).

In the course of the counting survey, the counters are also asked to note down the number of dead seals, their species and age (young or adult).

Even if you have not found any dead birds or seals in your study area, this kind of information is most welcome.

Midwinter waterbird Counts 1993



Aythya fuligula

DRAWING: M V WRIGHT

Results

1. Time and counting sites

In the period from 10 January until 25 January 1993, midwinter waterbird counts were carried out at the coast of the Baltic Sea as well as on innerland waterways of four countries: Lithuania, Estonia, Finland and Denmark. 11 adults and 151 students had participated in the project. 14 different areas or sites were covered.

2. Weather conditions

Air temperature in counting sites varied from +5 - +9°C. Only on January 15 was a temperatur as low as - 2°C was registered on the island of Vormsi, northwest of Estonia.

The weather conditions had favoured the counting: the counters had stressed satisfactory visibility and ice conditions. In most places the water surface was all open and only in few places half-covered with ice. There had been calm as well as windy days during the counting trips.

3. Counting results

30 bird species were observed in 14 sites/areas .

The list of birds and the maximum number of individuals per site was the following:

Species	No of sites recorded	Max number of individuals	Species	No of sites recorded	Max number of individuals
Podiceps cristatus	1	2	Melanitta fusca	1	7
Phalacrocorax carbo	1	3	Bucephala clangula	15	600
			Mergus albellus	1	21
Ardea cinerea	3	4	Mergus serrator	1	13
Anas sp.	1	23	Mergus merganser	17	290
Cygnus olor	25	1400	Falco tinnunclus[1]	1	1
Cygnys cygnus	2	12	Fulica atra	6	555
Cygnus columbianus	1	2	Larus ridibundus	1	90
			Larus fuscus	1	20
Branta leucopsis	1	1	Larus argentatus	4	200
Branta bernicla	1	1	Larus marinus	1	3
Tadorna tadorna	3	27	Larus canus	2	3
Anas crecca	2	21	Larus sp.	3	80
Anas platyrhynchos	32	1450	Sterna sp.	3	20
			Sterna albifrons	3	166
Aythya fuligula	4	27	Sterna hiurundo	1	10
Aythya marila	2	30	[1] not a waterbird		
Samateria mollissima	2	3			
Clangula hyemalis	13	2600			

For further information contact:
Linda Metsaorg, Sopruse pst 220-82
EE 0034 Tallinn, Estonia

PROGRAMME:

Research of Air Quality almost ready

The programme Research of Air Quality by using lichens is now almost ready. For me as a coordinator it has been a very stimulating time and it has really been a good cooperation with Anne Kivinukk, Tallinn and Laima Galguté, Kaunas.

Many letters with ideas have crossed the Baltic sea. All of us have been in contact with investigators and we also have tested the material with groups of students in Estonia, Lithuania and Sweden.

During my Easter holiday I personally met Anne and Laima and we could have a final talk. Now we have a version of the test programme which we hope will be accepted in Karlskrona.

Birgitta Berggren
Sweden

An invitation...

Imagine you are approaching Planet Earth from space. What you see is a blue ball with splodges of brown. It is the only planet in the solar system known to have water and living things. Looks like a perfect home; let's come closer!

Diving through the atmosphere, you reach snow-covered mountainpeaks, deep green forests, rivers, lakes, meadows carpeted with flowers, all filled with amazing animals, one of which is us – human beings. Without the air, the water and the land, none of these living things could survive. But as you get closer, you see all of it being destroyed: ozone holes, polluted water, land erosion...

What's the problem?

It seems like some humans don't understand that we are part of a wonderful chain of life. By hurting any of the links, we are hurting ourselves. In our fear, in our selfishness, in our greed, we have created mega-cities, tons of unfriendly waste, wars, poverty – the problems lie right within us. It's only we who can solve them.

A solution plan "Agenda 21" was made up in 1992 to do something about this. It was signed by most of the world's leaders. But this is not enough. Speaking is not doing. Action is what is needed and it's needed now. This is why we children wanted to make our own edition of this Agenda.

Our parents generation have led this planet down a path to destruction at a speed that is scary. But, even knowing this scenario, we must not be afraid. Worrying doesn't help to stop this madness. What we need is to step off this path of death.

We, the children of today, are maybe the last generation who still have the chance of doing it. We have to show the way for our parents and governments, and we have to tell them that we want to be listened to. To tell them, that the planet needs to be rescued. It cannot wait anymore.

This is your invitation. We won't have a second chance. We only have one home.

Daniela Zunec (21)
Croatia
Mia Björkqvist (19)
Finland

Marie Nordqvist

The Sea

The waves are rolling against the cliff.
The water is splashing, I get wet.
I feel like diving into
That blue, glittering water.
Fish and minerals of many colours:
Life is colourful also in the sea.
The sea starts foaming and I shall, too
if it makes me wet once more.

Satu Arsalo

My sea

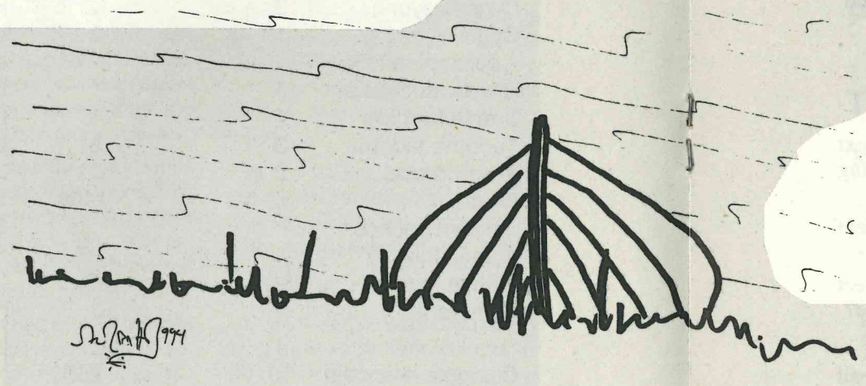
You, my dear dear friend,
you are the home for many,
the last resting place for many.

You, my dear friend,
you are my everything,
my home, my grave

I sink to you like a fool!

You are cool,
still angry,
still loving.

You, my sea
you are my everything.



Mia Björkqvist

In hearts of the children
there's a hope that lives forever
Listen to us; it's never
too late to get together
We can choose to plant the flowers;
the future can still be ours!

These poems and drawings came from the Childrens' Edition of Agenda 21 which was made by Puolalanmäki Upper Secondary School in Turku, Finland.

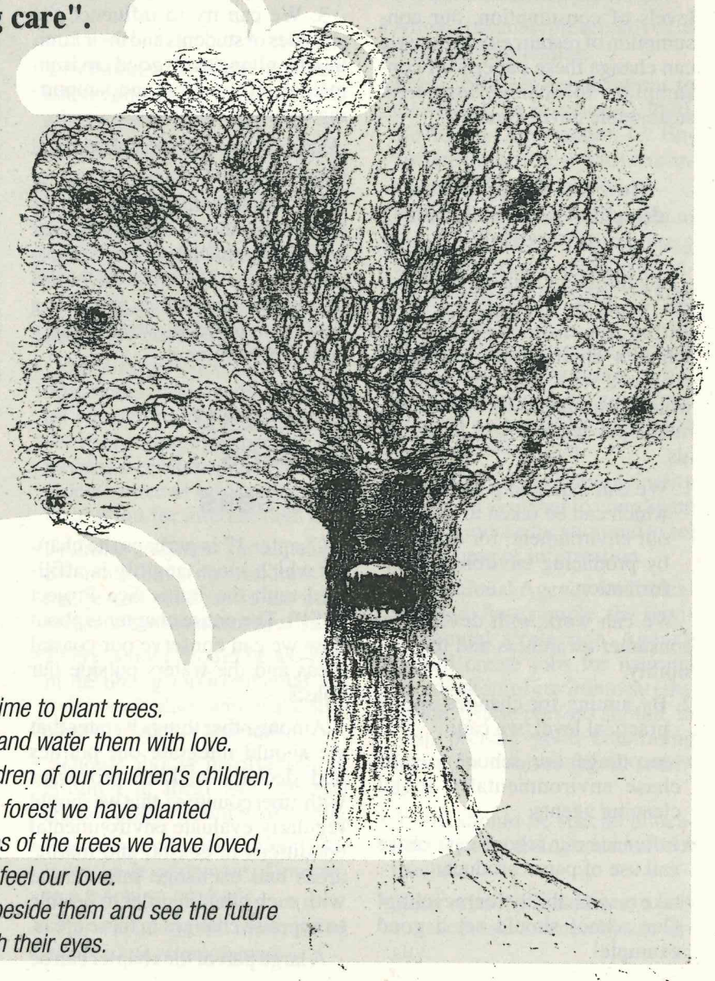
Drawings:

Sauli Halonen (Boat)

Lotta Löytönen (Tree)

Susanna Skytte

We don't need signs saying
"Keep off the grass" or
"Don't climb the trees".
"All we need is one big loving care".



Susanna Reunanen

Plant trees!

Now it's time to plant trees.
It's time to grow and water them with love.
So that when the children of our children's children,
Running in the forest we have planted
And sitting in the laps of the trees we have loved,
Can feel our love.
And so we will stand beside them and see the future
With their eyes.

Agenda 21 discussed among the teachers

A group of teachers from schools involved in the Baltic Sea Project (BSP) in Sörmland and Östergötland, Sweden, met at a seminar to discuss Agenda 21. A representative of the youth organization Q 2000, which works with Agenda 21, gave a lecture. Each school gave a short presentation of a chapter of the Agenda and following each presentation there was a discussion of how that chapter could be used in teaching. The following is a report on the four chapters discussed.

CHAPTER 4

Changing consumption patterns

This chapter deals with different levels of consumption, our consumption of resources and how we can change these patterns of consumption to achieve long-term sustainable development.

How can we apply these directives practically and concretely?

In addressing consumption, we can work on the practical level within the framework of the school's environment education program with various projects which can appeal to businesses, municipal leaders and individuals.

1. We can examine general steps which can be taken to improve our environment, for example, by producing environment information.

We can work with developing consumer awareness and responsibility.

2. By aiming for changes on the practical level, we can:

- encourage our school to purchase environmentally sound cleaning agents.
- influence our school's purchase and use of paper products.
- take responsibility for recycling! Our school should set a good example!
- find alternative products. Product packaging is a waste of resources.
- study industries and their waste products from the aspect of the full life cycle of products and processes.

3. We can try to influence the attitudes of students and their families, by giving them good environmental information and supporting their new attitudes.

Student groups can inform and inspire each other.

The municipality's Agenda 21 office and those responsible for environmental issues are important contacts. Q 2000 is an important organization which gets young people involved in working for a better environment.

CHAPTER 17

Oceans and seas

Chapter 17 is perhaps the chapter which most tangibly is affiliated with the Baltic Sea Project (BSP). The entire chapter is about how we can conserve our coastal areas and the waters outside our coasts.

Among other things it states that we should integrate our politics and decision-making processes with other countries, that we should regularly evaluate environmental conditions in coastal and marine areas and exchange information with each other in order to be able to appraise changes in these areas.

A large part of the chapter can be applied to the Baltic Sea and is entirely in agreement with the BSP in encouraging schools and countries to exchange information on regularly carried out tests, which the schools already do.

Chapter 17 also states that we should try to control the degradation of coastal waters through land-based activities which produce nitrogen and phosphorus and cause problems like eutrophication, which threaten the marine environment. The schools around the Baltic Sea can contribute to this control by testing their coastal areas regularly.

CHAPTER 25

The role of young people and school children

This chapter states that it is impertative to advance the role of youth and actively involve them in the protection of the environment and promotion of economic and development.

How can we apply these directives practically and concretely?

The students can read the text and then discuss the following questions:

a. How do politicians work to meet these objectives?

b. How should we work to meet these objectives in the future?

c. What do other countries do?

d. Is the timetable realistic for all countries?

e. How can we help other countries?

In Norrköping, Sweden, we have worked with the network Q-2000 and have started groups for young people who participate in the decision-making process by producing information on which politicians can base their decisions.

We can allow the students to come up with their own ideas of how they can influence decision-making processes.

CHAPTER 36

Promoting education Public awareness Training

Reorienting education towards sustainable development

- Education is critical for promoting sustainable development and improving the capacity of people to address environment and development issues.
- Indispensable to changing people's attitudes, achieving awareness
- Environment and development education should be integrated in all disciplines.

Governments should strive to update or prepare strategies aimed at integrating environment and development as a crosscutting issue into education at all levels within the next three years.

- A thorough review of curricula should be undertaken.
- Countries are encouraged to set up national advisory environmental education coordinating bodies, to encourage partnerships, to mobilize resources and to provide a source of information as a focal point for international ties.
- Training programs for all teachers should be set up to address the nature and methods of environment and development education.
- Every school should be assisted in designing environmental activity work plans with the assistance of students and staff.
- Schools should involve school children in local and regional studies on environmental health.
- Education authorities should promote the development of innovative teaching methods.
- The exchange of information needs to be strengthened.

Means of Implementation

- Give higher priority to environment education in budget allocations.
- Encourage twinning of universities in developed countries.

Increasing Public Awareness

- Educational material of all kinds should be based on the best available scientific information.
- UNICEF, UNESCO, UNDP and non-governmental organizations should develop support programs to involve young people and children in environment and development issues.

How can we apply these directives practically and concretely?

- Allow student representatives to take part in planning.
- Invite different organizations to the school, for instance, Q 2000, the Youth Organization for Environmental Studies and Conservation and Greenpeace.
- Persuade the school principal to give priority to interdisciplinary ways of working when distributing jobs to teachers and making up schedules.
- Point out to municipal politicians and school principals what Agenda 21 says about giving priority to environment education in budget allocation.
- Someone in each municipality should be assigned to coordinate environment education and to act as a source of information.
- The National Agency for Education and, for example, the Environmental Protection Agency should create jobs for national coordinators of environment education. These persons should, in turn, prepare good continuing education courses for all teachers.
- There should be special allocations for continuing education for teachers.
- Each school should have a personal contact at a nearby university.

INTERDISCIPLINARY TEACHING

Collaboration about environment in biology, civic and history

Based on our knowledge of biology and the environment, our objective was to comment on the environment at our own school, the municipal environment plan, Marianne Gustafsson and Ulla Persson writes. We had to give our views on the recommendations of the Conference on Environment and Development the municipal government had taken into consideration when preparing the proposal for a municipal environment plan.

We worked at three levels: The level of Östra Gymnasiet, Upper Secondary School, the municipal level and the global level.

We made use of all our lessons in biology, social studies and history and worked for more than five weeks. In addition, we succeeded in changing our schedules so that our classes would be scheduled close together which gave us long work periods . We had plenty of time for field trips, interviews, compiling material and preparing for presentations, which was a positive experience.

Seven groups

The class was divided into seven groups (at the students' request) one for each chapter in the environment plan: Air, noise, land conservation, water conservation, the indoor environment, waste and health and lifestyle. Our project began with a short environment history which presented some views of man as a social creature.

Each student was given a timetable in which a preliminary plan was to be approved by one of the teachers, and in this way was given the impetus to work to meet the objective. It was the students' responsibility to find out what knowledge was needed in order to form an opinion on whether or not a political decision was good or bad.

A good and rich dialogue between the students and us, the teachers, about the content of the groups' work was maintained at an intensive level throughout the entire project.

Holistic approach

We booked a special room for the day of our reports and in this way could avoid having to interrupt a report because someone else wanted to use the room. We could, thus, by ourselves decide when to take a break and when to eat. The variation in the reports and the desire for a holistic approach to work with the environment in general made it possible to us to manage a full day without getting tired.

The project ended with the chairman of the municipal environment committee and the person responsible for the environment plan, being invited to meet the students and discuss their views. Since the environment plan was still under consideration, our students' views could be seen as a sort of reply from a referral body.

Idea of decision-making

The political decision on the environment plan will be made in April and will be observed by the class, which then will get an idea of how the decision-making process at the municipal level works. In this way, the class will have been able to follow an important environmental issue from proposal to referral to a political decision, from the basis of their knowledge of biology.

All reports were video filmed and when showed afterwards gave us encouragement and inspired us to reflect on what we had done.

Both teachers and students were very pleased with these five weeks.

Marianne Gustafsson and
Ulla Persson
Teachers at Östra Gymnasiet,
Upper Secondary School
Umeå
Sweden

ENVIRONMENTAL ACTIVITIES AT NORREVÅNGSKOLAN

SEWING AND SINGING

Here, in the middle of the meadow flowers, the pupils realise why the meadow flowers are so nicely treated.

– It is important in environmental education to have practical things to do. Then the pupils are easily engaged in the theme, Kerstin Lennerstedt, teacher at Norrevångskolan in Eslöv, writes.

Among other things, they sew environmental shopping bags and do work for the protection of meadow flowers.

Environmental bags

All pupils in grade 7 sew an environmental bag. It is made of strong cotton material in natural colours. The pupils make an application on a round cotton piece. The application motif shall deal with our nature, for the rest fantasy may stream. When ready, the application is sewed to one side of the bag.

One year the pupils used frogs of different sizes as symbols for threatened nature. The application is supported with a few words of text printed with textile pens. This handicraft work is done during lessons in textile sloyd.

All environmental bags are exposed outside the dining-room of the school. The last year they have also been on exhibition in the town library and the town hall, where they have been much appreciated by persons outside school.

When doing the bags, we biology teachers discuss environmental questions with the pupils. We discuss pros and cons for cotton and plastic bags, our natural resources of cotton and plastics, the life of the different types of bags, and the final fate of the bags when no longer functioning.

During this spring 1994 we hope that pupils in our sister towns in Finland, Denmark and Norway are sewing similar bags. Then the pupils on exchange may bring bags for an exhibition in Eslöv.

Meadow flowers

"All the Meadow Flowers" is the theme also for pupils in grade 7. During spring term, the music teacher allows the pupils to sing some of our most famous folklore songs. Flowers are often mentioned in them.

But how do the flowers actually look? Then I come as a biology teacher and together with the pupils we seek and find the flowers in the flora.

The pupils make coloured drawings of them, they note facts about them, note if there exist old or local names to them, if and how we use them for practical purposes, and if there are popular beliefs about them.

The pupils are writing and painting and soon a wall is covered with the pupils' products, under the heading "All the Meadow Flowers". We finish this part with the decision to visit a meadow not far from the school.

Also a social science aspect

Then comes the social science aspect of meadows. We turn to the county administration and get the rules for the care of the meadow. Most meadows existing today are under natural protection regulations. Why is it so?

This turns the theme to geography. The pupils recognise that the meadow was an important part in an old farming systems, giving hay to the cattle which in turn produces the valuable manure for crop breeding in fields. Now meadows are a vanishing habitat.

This raises a discussion on farming yesterday and farming today. Then the pupils realise why the meadow flowers are so nicely treated in old folklore songs, and the pupils are back to the music aspects.

One May afternoon, when weather is usually very nice, we take the bikes to the chosen meadow. On arriving we are usually kindly met by two persons, the farmer, who is very proud of his fine meadow, and a man from the local Natural Protection Society. They tell us about the history of this meadow and how it is managed. May is the time of the year to clean the meadow.

Soon the pupils are doing some of the cleaning work, they collect twigs to be burnt, they pull up not-wanted plants as docks *(Rumex)*, and so on.

After about one hour of intense work, all persons enjoy juice and cakes in this lovely environment. The pupils themselves have done the cakes during the domestic training at school.

Kerstin Lennerstedt, teacher
Norrevångskolan
Eslöv, Sweden

TEST ON THE ENVIRONMENT

Students asked their local politicians

?!?

The pupils from the Secondary School, Jändelskolan used this test to check the knowledge of environmental issues of their local politicians.

1.Why should the living cell be the obvious starting point in discussing environmental issues? (3 of the answers below are correct).

A. The living cell is the smallest building block of all organisms.

B. If you compare human cells with cells from seals, birds of prey or otters, you have to get as low as the molecular level to find isolated differences.

C. All cells can produce, while human beings can never produce.

D. Only plant cells - green cells - can produce without simultaneously demolishing and destroying more than they build up. For this reason, we must co-operate with the green cells when we wish to produce. This is the basis of the principle of ecocyclic thinking.

2.Which of these statements builds correctly on the fundamental principles of ecocyclic thinking? (3 of the answers below are correct).

A. Man must not make any changes at all in nature.

B. Our economies are completely dependent on ecology.

C. Everything is spread, and ultimately there is only one activity that can counteract spread: production of green cells.

D. If we wish to have long-term production, it must be developed in interplay with natural ecocycles.

3.Natural ecocycles are the basis of continued welfare and health, but we are not living in accordance with these ecocycles today. Which answers describe what happens when an ecocycle is broken? (3 of the answers below are correct).

A. The accumulations of visible waste are growing.

B. We are building up more and more resources.

C. The amounts of molecular waste, meaning molecules that are not recovered, either by man or nature - are increasing in the atmosphere, water and soil, and ultimately even in plants, animals and mankind.

D. It is becoming more and more difficult to extract natural resources - both non-living, finite resources such as oil and other minerals, and living, renewable resources such as fish and the raw materials of the forest.

4.We use compounds that are alien to nature both in industry and in our homes. How can we avoid permanent damage to nature from such substances? (2 of the answers below are correct).

A. By recirculating the compound completely, for instance in factories, i.e. not allowing it to be discharge in the environment, either in the production process, in flue gases, in effluents or as waste.

B. It must be possible to collect such compounds in filters.

C. If the compound is leached out into the environment, it must be able to be broken down into the substances that normally occur there.

D. If we only release a little at a time, nature may adapt.

5.The opposite of thinking in terms of the principle of ecocycles is known as linear thinking — extracting raw materials and energy at the one end, using them, and then allowing the waste products to leave the process at the other end to be disseminated in the environment. A society will inevitably move backwards economically if it does not apply the principle of ecocycles. Why is this true? (3 of the answers below are correct).

A. It becomes increasingly expensive to extract natural resources because of the waste of finite resources and the damage being done to the renewable ones.

B. Most countries work in accordance with the principle of ecocycles today, which will lead to an untenable competitive situation for those who do not do so.

C.Visible waste and molecular waste are increasing. This will lead to increasing costs to society for environmental clean-up and health care, etc.

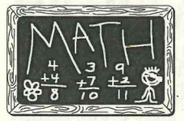
D. It is a poor way of preparing for the markets of the future, and no contingency plans are made. This will mean being taken by surprise.

The correct answers:

1. a,b, and d
2. b,c, and d
3. a,c, and d
4. a and c
5. a,c, and d.

The pupils got the questions from The Natural Step, Environmental Institute.

Emissions from shipping



Every day the Baltic sea is crossed by a lot of ships carrying goods and people. Shipping is a very fuel-efficient way of transport. But up to now the emissions from the engines have been very large.

This is due to the use of fuel oil with high sulphur content and no exhaust fume treatment. In Sweden the total emissions of sulphur dioxide amounts to 128 000 tons per year, of which 19 percent is due to shipping. The corresponding values for nitrogen oxides are 406 000 tons and 16 percent.

These gases account for the main contributions to acidification, eutrophication and oxygen depletion in the sea.

But recently a new ferry named Aurora - "The red light of dawn"- has been put into operation. It traffics the route from Helsingborg in Sweden to Helsingør in Denmark. It works on fuel with extra low Gsulphur content and it has cathalytic exhaust fume treatment.

Thus the emissions are reduced by at least 80 percent for sulphur dioxide and 95 percent for nitrogen oxides!

PROBLEMS:

1. How many tons would the emissions of sulphur dioxide decrease if all Swedish ships used the same fuel as Aurora?

2. How many tons would the emissions of nitrogen oxides decrease if all Swedish ships had cathalytic exhaust fume treatment as Aurora?

3. For comparison: A non-cathalytic car emits about 1.4 grams of nitrogen oxides per kilometre, and it runs about fifteen thousands of kilometres in a year. How many cars would the decreased emissions from shipping correspond to?

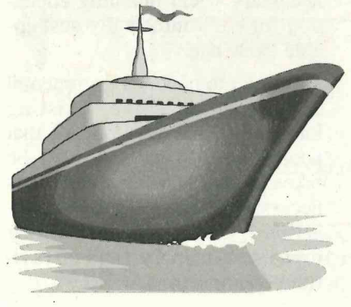
4. Try to find values on the emissions from shipping of your own country and carry through the corresponding calculations.

Mats Areskoug
Malmö School of Education
Sweden

Answers to the problems in NEWSLETTER, nr 2 1993 p 29

a) The lowest emission is at 27 km/h
b) A car will emit 2.2 g/km at 90 km/h
c) A car will emit 1.3 g/km at 80 km/h
d) The emission will decrease with 41 percent

Thank you for your solutions to the problems "Traffic speeds effect pollution". The prize is a T-shirt and it is sent to Linda Hansson, Degeberga, Sweden, who was the first to send correct answers.



Please send the solution to the above problems before October 15th to

Siv Sellin
National Agency for Education
106 20 Stockholm
Sweden

ESTONIAN GREENS

PUBLIC AWARENESS AND ENVIRONMENTAL EDUCATION

– Today in developing the relations between man and environment urbanisation together with people's alienation from the nature is most remarkable, Valdur Lahtvee of the Estonian Green party writes.

– The lack of concern of people for nature and the environment both at home and at work originate in this alienation.

To get real concrete and good results in restoration of environment in the Baltic Sea area the efforts must be made in every level: state local municipality and grassroot level. Wide public awareness of environmental issues is the only guarantee for successful protection of the Baltic Sea. Development of environmental education and distribution of environmental information should be one of the foundation stones of an ecologically sustainable society.

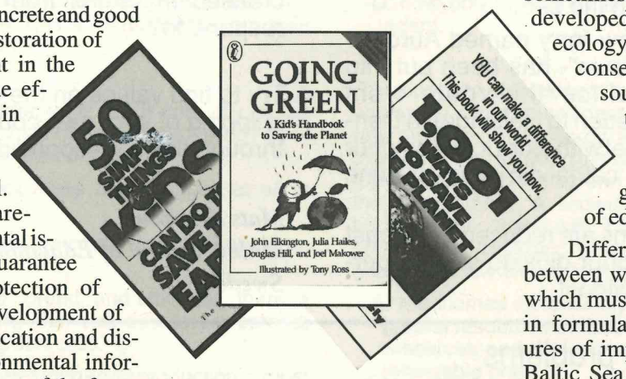
Public awareness

Most important in Public awareness (PA) is the availability and truthfulness of information about the environmental situation and the environmental accidents ongoing and planned projects influencing the environment and living conditions etc. Free access of the citizens to the information (not classified) must be guaranteed by the law.

Also the regular informing of the people about the current environmental situation and in case of environmental accidents must be binding for the local authorities.

Using the mass media: radio, TV and newspapers play an important role in rising PA in the environmental field. Both environmental authorities and NGOs must more actively use media for informing public about environmental questions For acquainting closely the journalists to the environmental issues, special training courses and trips are necessary.

Special education programmes via TV are most favourable and international cooperation in the Baltic sea area to prepare and implement such programmes must be supported.



A lot of books about Save the earth/ the planet/the world have been published during the recent years.

Publishing environmental popular scientific literature for a wide range of readers, including children and also elderly people has almost stopped in the eastern countries due to the poor economics. This very important tool for PA must be supported by launching international projects and also a lot of Nordic experience and knowledge can be used.

Environmental tourism is not yet recognised as an important tool for rising of PA. Economical and methodical support of private enterprises in order to develop family, nature, soft, countryside etc. tourism gives also good results. Governmental institutions and NGOs must take responsibility in developing this field.

Environmental education

Environmental education (EE) as a tool for formation of life style and consumption habits of the people, establishing work culture and spreading experience and know-how in nature management and protection is well recognised but sometimes not enough efficiently developed. Basic education in ecology, sustainable living and conservation of natural resources and environmental protection should be improved and integrated to a much greater extent in all fields of education.

Difference in life standards between west and east is a factor which must be taken into account in formulating needs and measures of improving the EE in the Baltic Sea area. Positive experiences should be distributed between HELCOM countries as well supporting bilateral cooperation.

In the framework of HELCOM, there is a need for creation of national plans for EE, including plans to integrate EE into school education on all levels. The use of both official and informal channels are necessary when planning education for environmentally sustainable existence.

In order to make environmental education attractive, existing knowledge and the concern that people already have, should be taken as the starting point. It is necessary that people can find education specially relevant to their own interests in the field of environmental problems.

Possibilities for direct contact with the surrounding environment and for learning through experience should also be available.

Educational skills important

The content of and methods used in EE need careful and often specific planning for different groups of society. EE is most important for the youngsters for shaping minds towards sustainable living and stressing lasting values in relations between human and nature.

Teachers and instructors of every subject must be able to educate students using environmental issues. Much more general and extensive must be education skills of teachers of biology, geography and chemistry.

Workers and staff of companies which are involved in exploiting of natural resources , producing waste or which activities influence the environment must be trained in environmental matters to rise every mans concern for environment. Also to the military staff must be given EE.

Education of the specialists, who will work directly in the nature and environment protection must be improved. Decision makers, politicians of local and state authorities need to be trained on environmental issues.

Some concrete tools and possibilities for EE can be formulated for different groups.

Pre-school-age: EE via family, children's picture-books, family-nature-tourism; children's TV programmes etc.

School-age: EE via every subject or study; specialised classes for EE; after school activities in nature houses, clubs, study circles etc.; environmental literature according to the age; summer courses for nature studies and works in nature; specific tourism.

Adults: EE via educational centres run by NGOs with state support; specialised folk high schools; training courses in working places; informative programmes in mass media; wide range of literature etc.

All levels can be more detail described like "Latvian University programmes" or "Estonian after school activities" in Nature houses.

NGO's ROLE IN PA& EE
Valdur Lahtvee
Estonian Greens

How can we overcome the crisis of modern society?

Technological Fix
- Green technology
- Development of efficient solar cells
- Energy-efficient motor car
- Removal of toxic materials
- Bio-technology

Social Fix
- Environment assessment
- Green tax
- Green labelling
- Environmental education

Cultural Fix
- To change the lifestyle based on consumerism
- To change economy-first philosophy
- To change our dietary practice tamed to eat lot of meat
- To overcome the culture of dichotomy
  - ◊ between human beings and nature
  - ◊ between mind and material
  - ◊ between development and underdevelopment
  - ◊ between good and evil
  - ◊ between East and West
- To revive our valuable traditional cultures
  - ◊ voluntary poverty
  - ◊ less is more
  - ◊ small is beautiful

Mr Seung-hwan
Republic of Korea
Asp-coordinator

What political decisions are needed to save the Baltic Sea?

THIS QUESTION WAS ASKED OF SOME PEOPLE AROUND THE BALTIC SEA WORKING WITH ENVIRONMENTAL ISSUES

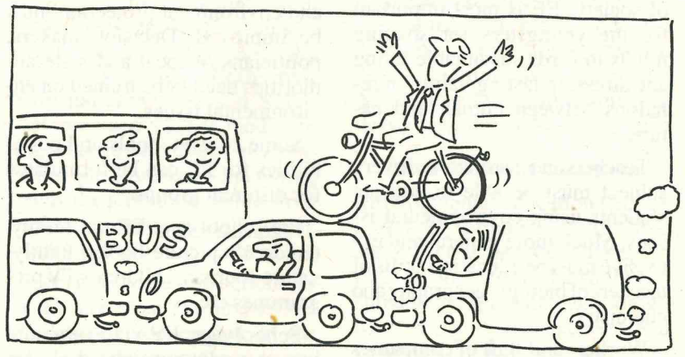
Ulla Klötzer Vice president of the Finnish Green Party

Saving the Baltic Sea is a great challenge to all countries surrounding its in many respects sensitive ecological area. However, we must keep in mind that this task is only a part of a huge project i.e. saving the planet.

For example scientists estimate that one fifth of all plant and animal species will disappear over the next ten years with a so called "business as usual" approach.

With this in mind we have to request our governments here in the Baltic Sea region to make radical decisions in order to save the environment in our region. We need a totally new approach that can also be used as a model for other parts of the world.

- The Nordic countries must reserve in their budgets 1-2 percent of the BNP for environmental cooperation with the Eastern European countries around the Baltic. (This must not influence the support for the developing countries.)
- All investments that are made in the Eastern European countries must be approved according to their environmental consequences. Projects not fulfilling the demands for a sustainable development must not be accepted by the financing countries.
- Environmental and citizens movements must be given an active role in the decision-making process as well as in the survey work concerning the state of the environment. They must also be heard when the priority of the projects is decided upon.



- A Task Force project must be set up to find solutions for shut downs of the old nuclear reactors in Ignalina and Sosnovy Bor.
- All governments in the Nordic countries must prohibit the exports of dangerous waste (chemicals, radioactive waste) to Eastern European countries.
- All governments around the Baltic Sea must make decisions about the reduction of the use of pesticides and synthetic fertilisers. This should be made by introducing a phase-out tax on pesticides and synthetic fertilisers to prevent the widespread pollution of air, water, soil and food. The taxes should be raised progressively until the use of pesticides and synthetic fertilisers has been phased out.
- A Baltic Sea Task Force project on Agriculture and Environment should be set up in order to convert the agricultural system into ecological agriculture.
- Pollution caused by manure from intensive animal production must be prevented.
- The infrastructure for transportation and travelling in the Baltic Sea region must be based on efficient boat-railway links.
- Shut down factories which are polluting the Baltic Sea.

Ramunas Povilanskas, EUCC Baltic coordinator Lithuania

In my opinion, two basic political documents are already adopted by the Baltic Sea community: Joint Comprehensive Baltic Sea Environmental Action Programme and new Helsinki Convention.

At this moment the most important and urgently needed action is to shift from words to implementation of the Programme, especially in the field of technological transfer, human resource development, pollution control and coastal management in Eastern Baltic countries.

Concerning nature conservation, there is a strong need that all Baltic Sea countries should ratify and follow the Ramsar and Bonn Conventions.

There is also a need for an international legislation concerning regulation of human activity in the coastal zones of Europe (including the Baltic Sea). Such a document is currently being developed by the European Union for coastal Conservation.

Gunnar Norén, Executive secretary Coalition Clean Baltic (a network for 25 environmental NGO´s in the Baltic region)

During the 1970s it had already become evident that international cooperation was necessary to handle the environmental problems of the Baltic Sea. An example of decisions that have been taken is the one in 1988 when the countries around the Baltic Sea decided to decrease the discharges of phosphorous, nitrogen, toxic organic substances and heavy metals by 50 percent up to 1995. Today we can see that the goals are far from being attained Concrete political actions have been lacking.

We need to set clear binding targets with committed time-tables and checkpoints towards complete implementation of new decisions and commitments already made.

We would like to present some of our proposals on how to improve the situation in the Baltic Sea. More proposals for action can be found in the CCB Baltic Sea Action Plan from April 1992.

- Application, development and financial support for introduction on a larger scale of effective ecologically oriented solutions-(using ecological engineering) for waste-water treatment instead of traditional purification systems. (Ecotechnology seeks to apply systems such as aquaculture wastewater treatment, use of wetlands, reed and soil beds composting system not using water as a medium of transport).
- Establish environmental charges to minimize the use of fertilizers and pesticides.
- Discharge of chlorinated organic substances in pulp industry bleachery effluents should be eliminated.
- Rapid introduction of extension emission standards for nitrogen oxides and sulphur dioxides at all new and extension large combustion plants
- Effective environmental charges should be introduced, starting with one on emission of nitrogen oxides, on road transport, railway, aviation, and sea transport in order to promote more environmentally acceptable means of transport.
- Development and implementation of national and international schemes in the Baltic Sea area for the application of financial measures to promote increased use of renewable sources of energy (such as solar, geothermal and wind) that do not give rise to emission of nitrogen oxides or sulphur dioxide.
- Open-sea fishing of salmon in the open Baltic should be stopped to save the wild Baltic salmon.
- A ban on all oil exploration and exploitation.
- Support to organizations for information that helps consumers to buy environmentally friendly products.

Raitis Bukovskis Environmental Protection Club of Latvia

In order to save the Baltic Sea the following measures are necessary:

- To get agreements between states around the Baltic sea about natural resource using.
- To fulfil the resolutions signed at the high level conference in Gdansk 1993.
- To proclaim the environmental issue as a priority in all policy levels for states all around the Sea.
- To consolidate the efforts in all levels of society to save the Sea.

Not to make only agreements, but also to be aware about it in every day life.

Peer Nørgaard Teacher, representative in CCB, active in BSP Nature-guide Denmark

For me the simplest answer will be: Stop pollution – and then clean up! But – I know, it can only be a dream.

Then the first step is to follow up all political decisions made over the years. All countries around the Baltic have agreed on many environmental decisions for a decrease of pollution. It seems only to be "words on paper".

The politicians have to have the topic: "Save the Baltic" in mind, in all decisions, that have an influence on the Baltic Sea.

It has been decided that the pollution from cartraffic should decrease but at the same time the decision is about to be taken to build a car-bridge between Denmark and Sweden.

It has been calculated that the cartraffic will increase eight times if the bridge is built. A better decision would be a railway-tunnel under the Sound.

One of the biggest problems of the Baltic Sea is eutrophication and the spread of toxic substances. Necessary decisions should be taken to decrease the use of synthetic fertilizers and pesticides.

We are all personally responsible for some of the pollution of the Baltic Sea.

Therefore, education of all people about the environmentally bad situation of the Baltic Sea and how we could act in an better way should start immediately.

Pollution is spoiling the Baltic Sea every minute – the Baltic Sea cannot wait!

Everyone can contribute to stopping environmental pollution

– There is a lot you and other people can do yourselves to save the environment.

Lars Alvin from Stockholm Water Co. gives some examples important to keep in mind when using water in households and industries.

In a very popular US sports broadcast, the Super Bowl, viewers were encouraged not to use their bathrooms during intermissions. If all the viewers would flush their toilets at the same time, waste water treatment plants would be flooded. To avoid flooding the plants, a large number of the viewers must, voluntarily, avoid using their toilets during breaks.

Personal engagement needed

The situation is similar with the problems of environmental pollution, that also requires cooperation and efforts from a large number of people to stop it.

One big difference is that the effect is visible almost directly when millions of people have flooded a plant by flushing their toilets at the same moment, while damage in the environment is sometimes noticeable first after years of discharges of harmful substances.

The similarity between the problems is that they both call for all people to act. None of them are problems that can be left for organisations or authorities to solve, they need personal engagement and participation from people.

The key issues are therefore to make people aware of the importance of their own behaviour, and encourage them to learn how to change and choose a lifestyle that corresponds to the demands of nature. It is therefore of fundamental importance what to work with in school on these issues.

There are a lot of things we all can do, that will bring down the flows of harmful substances to nature.

Soap-based detergents better

At home, we can use degradable detergents only. Very rarely is there a real need of the commonly sold strong detergents, e.g. chlorinated or ammonia based ones. Detergents contain tensides (surfactants), of which some are not treatable in a waste water treatment plant.

Some tensides are poisonous, others might form hazardous compounds during degradation in the treatment plants. These formed compounds are sometimes more toxic than the tenside they originate from. Choose detergents based on soaps or detergents that are declared to be fully degradable and you will know that your cleaning up will not cause any damage in nature.

PHOTO: CATHARINA WIKSTRÖM

Do not ever discharge broken mercury thermometers, white spirit or other solvents, paint, oil, pesticides or photo-chemicals into the sewer system.

Ask for such detergents in your shop if you can not find them, they are available on the market!

When doing your laundry, be careful not to use more washing-powder than you really need to. An excess of washing-powder will result in large amount of chemicals to the treatment plant, with no use for you or your laundry.

Do not ever use chlorinated liquids, e.g. hypo-chlorite, as bleach in the washing machine. Under high temperature conditions they might react with the dirt (that is organic matter) and form toxic chlorinated organic compounds, known as AOX.

Always choose washing-powders that are declared to be environmentally friendly. In many countries there exist marking-systems for products regarded to be environmentally friendly.

Sensitive sewer system

Do not ever discharge white spirit or other solvents, paint, broken mercury thermometers, oil, pesticides or photo-chemicals into the sewer system. These are not treatable in a waste water treatment plant and will therefore cause damage if they are let out.

It is not always easy to get and to interpret the information given about a products qualities from an environmental point of view. A task that could be given to pupils is to visit stores and check some products, e.g. detergents, for information about their environmental characteristics.

If the information on a product is insufficient or inadequate, the manufacturer should be contacted for more detailed information. This would both serve the purpose of bringing the information, as well as putting a pressure of demand for environmentally adapted products on the manufacturer.

Studying industrial activities

In environmental education it is natural to study the legislation that regulates and permits industrial activities and outlets. Local environmental authorities could be helpful with case-studies.

Visits and long-term follow-ups of outlets and environmental measures from nearby industries would be illustrative.

I am also sure that it could play an important role if a school could show the industries in their neighbourhood that their pupils continuously are following the industrial activities from an environmental viewpoint.

To conclude, there are a lot of things we all can do to contribute to stopping environmental pollution. The most important thing is to change our way of behaviour and question if we are doing or choosing the right things.

Learning more about nature will help us to find the most environmentally friendly way to go. Here schools has a very important role to play. I am happy to see that the Baltic Sea Project is supporting and catalysing that process in the countries around the Baltic Sea.

Lars Alvin Stockholm Water Co.

Stockholm Water Co. is owned by the city of Stockholm. 650 employees serve about one million citizens with tap water and waste water purification, and do also perform restoration of overnutried lakes.

May 1994 to September 1994

- **May 6-7, 1994.** Seminar for teachers on the interdisciplinary programme "Rivers" in Tomelilla, Skåne.
- **May 4-8, 1994.** International Environmental Seminar for five schools from Estonia, Finland, Germany and Sweden at the Kalevankankaan koulu in Mikkeli, Finland.
- **May 10, 1994.** The last date for report of participation in the Karlskrona conference.
- **May 10-12, 1994.** The 4th Estonian BSP annual meeting will be held in north Estonia. Guests from other BSP countries are welcome.
- **May 23-26, 1994.** International seminar "Ecology in science education" in St Petersburg.
- **May 30-June 3, 1994.** International environmental camp school organised by Meri-Pori Upper Secondary school
- **May 30-June 4, 1994.** Coastwatch Environmental Education Camp, Stensunds Folkhigh school, Trosa, Sweden.
- **June 13-17, 1994.** A international course on interdisciplinary teaching: The Baltic Sea, Our Common Responsibility - Environment, Culture and History, Nyköping, Sweden.
- **June 27-July 2, 1994.** A BSP camp with field studies and orienteering competition in Latvia.
- **July 10-17, 1994.** A summer ecological course for teachers and pupils aged 14-17 in St Petersburg.
- **September 5-8, 1994.** The international Baltic Sea conference "Save the Baltic Sea" will be arranged for students and teachers in Karlskrona, Sweden.
- **September 9, 1994.** The 6th International Consultation of the BSP in Karlskrona, Sweden.

The Vice President of the United States, Mr. Albert Gore, Jr. writes to the Swedish Prime Minister Carl Bildt

"I would like to invite you to join the United States in a worldwide effort to help preserve the global environment. This initiative, the Global learning and Observations to benefit the Environment (GLOBE) program, will link school children and their teachers worldwide in data gathering and scientific experiments designed to monitor the environment..."

"...The primary benefits of this initiative will be to:

- heighten individual awareness throughout the world of the global nature of the environmental impact of human activities on the earth
- further scientific understanding of the earth through a worldwide network of school-based environmental observation points and
- support education and curriculum development by allowing children to take an active role in collecting scientifically meaningful data to monitor the health of both their local and global environment..."

"...As part of the Earth Day activities on April 22, 1994 I will be sharing the preliminary design of the GLOBE concept in a televised WorldNet presentation and will issue an open invitation to the schools of the world to join me in this endeavour..."

SUMMER COURSE

Environment • Culture /Science • Education

A summer ecological course is to be held for teachers and pupils aged 14-17 who are interested in protection of the environment, in particular, that of the Baltic Sea region, and also wishing to do the sights of the historical places of Sankt-Petersburg and become familiar with the culture of our city.

Time and location: July 10-17, 1994, An academician Gymnasia of the Sankt-Petersburg State University, Old Petershof, Sant-Petersburg, Russia.
Old Petershof is a worldfamed historical and architectural complex noted for its well-known palace and part ensembles as will as for the famous fountains and situated in the suburb of Sankt-Petersburg.

Organizers: UNESCO Centre – Sankt-Petersburg together with the Academician Gymnasia of the Sankt-Petersburg State University for talanted children from Sankt-Petersburg and also from the North-Western region of Russia.

The programme includes: Lectures on the ecological situation in the Baltic sea region; practical and laboratory studies for pupils; excursions; visits to the Zoologoical museum, to the Sankt-Petersburg State University and to the Nuclear power station; a cultural programme.

Accomodation: Dormitory of the Academician Gymnasia of the Sankt-Petersburg State University, Old Petershof.

Total cost: US $ 35 per day (accomodation in single, double rooms and rooms for three persons, meals, training and cultural programmes).

Travel cost: The travel cost will be carried by the participants themselves.

The applications for participation in summer course should contain the names, dates of birth, addresses of the participants (please, mention sex) as well as the names, addresses, fax and phone numbers of schools.

The application are to be sent to:

BSP representative for Sankt-Petersburg Mr. Stanislav Babich
UNESCO Centre in Sankt-Petersburg
28, Chaikovsky str.
191194 St. Petersburg
Phone: 7 812 272-31-20
FAX: 7 812 273-27-12

"Save the Baltic Sea"

Conference for schools around the Baltic Sea September 5-8 1994 in Karlskrona

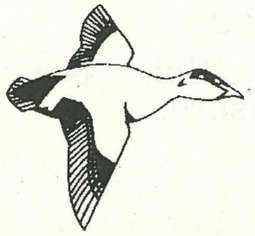
PRELIMINARY PROGRAMME

Day 1 - Monday September 5
10.00 Registration
11.30 Lunch
13.00 Opening of the conference: Colin Power, UNESCO, Paris, Beatrice Ask, Swedish Minister for Schools and Adult Education and Ulf P Lundgren, Director General, National Agency for Education.
Prof. Bengt-Owe Jansson, Stockholm Center for Marine Research, Stockholm, Sweden, "The Baltic Sea – How Does it Actually Work?"
Dr Anna Trzosinska, Institute of Meteorology and Water Management, Poland , "Eutrophication of the Baltic Sea - Causes and Long Term Effects"
15.00 Break
15.30 *Sverker Sörlin, Professor, Environmental History, University of Umeå, Sweden*, "Our New Contract with Nature"
17.30 Dinner
19.00 Guided walk tour of the city
20.00 Welcoming party

Day 2 - Tuesday September 6
8.30 *Tore Söderqvist, Research Assistent, the Beijer Institute Sweden.* "Bringing the economy and the environment together: Economics of a Baltic Sea clean-up"
9.30 Coffee Break
10.00 Workshops
11.30 Lunch
13.00 Ecological excursion
17.30 Dinner
19.00 Ecumenic sermon "Our Common Sea", Trefaldighetskyrkan

Day 3 - Wednesday September 7
8.30 *Bodil Jönsson, Associate Professor, University of Lund, Sweden* , "Baltic Contract with Future"
10.00 Poster presentations
11.30 Lunch
13.00 International round table discussions
Student present their different suggestions for solutions to the Baltic sea pollution. The groups decide on which suggestions for solutions they want to present at the panel discussion
Teacher present their educational experiences from the project "Save the Baltic Sea". What is good environmental education and how is it achieved, will be the topic for the discussion
19.00 International Evening hoasted by the Municipality of Karlskrona

Day 4 - Thursday September 8
9.00 Visiting museums and schools
11.30 Lunch
13.00 – Panel Discussion. In the Panel: Ministers of environment from the nine countries neighbouring the Baltic Sea, etc
15.00 Closure of the conference. Departure



Proceedings in the Baltic Sea Project

The objectives of the BSP are to

- increase the awareness of the students about the environmental problems in the Baltic Sea area and to give them an understanding of the scientific, social and cultural aspects of the interdependence between man and nature
- develop abilities of the students to study changes in the environment
- encourage students to participate in developing a sustainable future

The BSP works by the following means

- building network of ASP schools, INISTE teachers and educational institutions in the Baltic Catchment Area
- creating and developing educational approaches and joint programmes for environmental and international education
- organizing joint activities and events and publishing the BSP newsletter and other relevant information.

The educational approach for the BSP is to

- achieve a balance between a holistic view and individual subject studies
- change the role of the student from passive recipient to active constructor
- change the role of the teacher from supervisor to guide in a learning process
- use network to provide participants with opportunities to learn and pass along new ideas
- use international cooperation as an inherent element of school work

Main activities October 93 to March 94

❒ The main activity for the 93/94 school year has been the preparations for **the Baltic Sea Conference in Karlskrona, September 5-8, 1994.**

In the schools the students have been working with the theme **"Save the Baltic Sea"**. The work has been suggested to contain field studies and identification of the sources to the problems. The students have been suggested to look for what action should be taken: what can I do myself, what can be done on local, on national and on international level. Presentation of results in school or, in the local community was expected.

The schools that were interested in taking part in the conference have sent an essay of two pages to the national coordinators. On the bases of these essays around 45 of the 180 BSP schools have been chosen to attend the Karlskrona conference.

The organizers of the Karlskrona conference is the Swedish National Agency for Education in cooperation with the Baltic Institut and the City of Karlskrona.

Several institutions in Karlskrona are actively taking part in the preparations for the conference.

The city of Karlskrona will lodge the students and provide an International Evening. Chapmanskolan in Karlskrona is taken part in the responsibilities of the city. They are preparing the excursion, the programme book, decorating the exhibition hall, the conference hall, the entertainment, the guiding, the documentation, a song book etc.

A major part of the preparations of this conference for students and teachers is consequently being taken care of by students guided by their teachers. Financial support is obtained from UNESCO and the Swedish Institut.

The programme for the conference was discussed and approved of at the Fifth International Consultation and is presented in this Newsletter. The most important part of the conference will be the international round table discussions for students on suggestions for solutions to the environmental problems of the Baltic Sea. Their suggestions will be presented through a panel discussion to the public.

❒ All the BSP schools have now sent in their registration forms now and a new **Catalogue of School Activities** will be published and sent to the schools during the spring.

❒ The **editing committee for the BSP Learners´ Guide** had a meeting in February where Liisa Jääskeläinen handed over the responsibility to Hannu Kuitunen, new Finnish coordinator. It was decided that some examples from the work with the theme "Save the Baltic Sea" should, if possible, be included in the book "Working for a Better Water Quality of the Baltic Sea".

❒ The general coordinator was invited to attend a **workshop "Ostsee, Öffentlichkeit und Schule"** for German BSP-teachers at the Regionales Pädagogisches Umveltzentrum in Kitzeberg March 14-17, 1994.

❒ A preparatory meeting "Environmental Education and Training Network" in **the South Eastern Mediterranean Sea Project (SEMEP)** was held in Athens March 21-22, 1994. The meeting was attended by Anders Falk, Secretary General of the Swedish National Commission for UNESCO.

Siv Sellin

The Mediterranean Project

A new methodology was proposed for the present phase of the Mediterranean project. Each school participating in the project renewed their application by selecting one of the three general themes:

- The Mediterranean landscape
- The Mediterranean coast line.
- The cultural and artistic heritage of the Mediterranean.

Each general theme has a technical coordination and pedagogic advice.

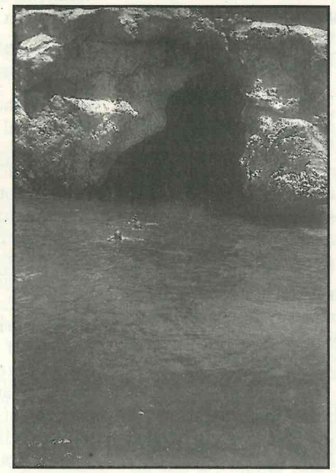
The Spanish schools participating in the theme "J" met last February 3 and 4, in the Environmental centre of Bell-Lloc (La Roca del Vallés/Barcelona) developing a training program about telecommunications network.

Computer sciences are a new step in the development and understanding of global environmental problems. It provides students with opportunities to apply their new knowledge by engaging them in cooperative team work that links students in classrooms on a global scale.

The participants in the theme "3" will meet next April 27 to develop a special section about "Music, dances and musical instruments".

Italian schools are very interested in their subject.

Next July, 25-31, an international workshop on cultural and ecological themes, with students from France, Italy, Spain, Tunisia, Croatia, Albania, Israel and Palestine, will take place in Impúries (Costa Brava/ Girona).



The Mediterranean, now a polluted sea. In this cave there used to live seals.

Miguel Martí
ASP National coordinator
Spain

The North Sea Project

There will be a change in the coordination of the North Sea Project. The new coordinating body will be the National Education Office in the Agder County in Norway. There will be a meeting for the coordinators in the autumn. Norway is counting on an increased activity in all the countries around the North Sea.

Astrid Sandås
The ministry of Education, Research, and Church Affairs
Oslo
Norway

The South Eastern Mediterranean Project (SEMEP)

The Baltic Sea Project can be said to have served as a model for other regional projects, the latest one being SEMEP – The South Eastern Mediterranean Project. The Organisation for Vocational Education and Training in Greece (OVET) has proposed to UNESCO an educational cooperation in the form of a network on environmental education.

March 21 – 22, 1994, OVET invited representatives from Cyprus, Egypt, Greece, Israel, Italy, Tunisia to a preparatory meeting in Athens. UNESCO, Headquarters, took part in the meeting through Maria Malewri. Sweden, as coordinating country of BSP, was invited to inform the participants of experiences from the BSP.

During the meeting a number of issues relating to the project was brought up such as the objectives, the organization, working methods, target groups etc. It is foreseen that the project will be started at a meeting in Athens in October, this year.

By then OVET and other participants in the preparatory meeting have had sufficient time to reflect on various ideas presented and the projectideas will be finalized.

Anders Falk
Secretary General of the Swedish National Commission for UNESCO

DENMARK

❒ **Rungsted Gymnasium:** In August 1993 we had a visit from Roya School, Latvia. We organised a course for about 20 teachers and 20 pupils.

At the moment Steen Ussing is registering teaching materials. At the gymnasium we have an exhibition about the Baltic Sea.

The database for Water quality has been modified to the situation in the parts of the Baltic Sea with low salinity and it shall be included in the "Learners Guide". It is our intention to make the results available both on paper and on a diskette.

Bornholms Gymnasium: Outside the BSP there have been organised courses with participants from Latvia and Stetzin. We have taken part in the island project at Fehmar. Our biology-team has visited Poland.

Nakskov Gymnasium: Good contact with Smiltene, Latvia. 40 pupils and teachers visited Latvia. Outside the BSP there has been a teacher exchange with St. Petersburg.

Krogløvskolen: In June we had a visit from the Swedensee School in Latvia, it was a 7th grade and that gave some languageproblems.

An 8th grade has paid a visit to Latvia.

The school has made coast-watch along 30 km of the Baltic coast.

6th grade has contacts with a school in Sweden, geography, history and culture around the Baltic Sea.

All classes above 6th grade have contacts with schools in other countries around the Baltic.

Boestoftesskolen does continue with coast-watch.

National coordinator:
Mr Johannes Bang
Dir. Primary and Lower Secondary Education
Ministry of Education,
Frederiksholms Kanal 26
DK-1220 Copenhagen.
Phone +45-339-25 000
Fax +45-339-25 302

ESTONIA

❒ In the previous two years Estonian Youth Nature House has organized English language camps for students of the BSP schools in Estonia to practise the spoken language.

This year we are planning to combine environmental education and language practice in a little bit different way – there will be a joint workcamp for students aged 16 to 18. We are expecting some students from England too.

The purpose of the camp is restoration and cleaning up the nature monuments as Keila-Joa falls, riverbedsand surrounding parks, also removal of household refuse left in these sites by the Soviet troops.The project will allow to:

- solve some environmental problems via voluntary charity work
- give knowledge and practical experience to the students about different problems of nature conservation and environment protection
- use help of the biologists, foresters and other specialists in rising environmental awareness
- restore and clean up nature monuments having big historical and natural value to Estonia
- give a chance to youngsters manual work
- give our students from BSP schools the possibility to practice English language together with the students from other countries
- introduce Estonia, its culture and nature to the students.

The work will be done by youngsters under the guiding of nature conservation specialists on voluntary bases, without pay. The organisation of the camp, board, lodging and transportation of the participants will be provided for. Realization of the project will be in the result of Estonian Youth Nature House. Estonian Green Movement and international environmental BGO Goalition Clean Baltic.

A camp will be held from **June, 19th to 28th, 1994, in Keilja-Joa,** 20 km from Tallinn at the seaside. There will be excursions to Tallinn and Parnu and a two days trip to north-eastern part of Estonia with visiting the wonderful Lahemaa National Park and also the most polluted districts in the neighbourhood.

If there is somebody who is interested to join the environmental camp and to spend 10 days of midsummer in Estonia. Please contact the national coordinator of the BSP immediately.

The 7th spring seminar for the Estonian BSP schools will be held in May, 10 to 12, 1994. The small village Karepa is situated on the coast of the Baltic Sea. On the first day there will be an excursion to the Pandivere upland which is the most important watershed district in Estonia. Practical works as bird watching, coast geology, botany and river watching are planned. The seminar will end with discussions about the BSP activities in schools and preparations for the Karlskrona conference.

National coordinator:
Maris Laja
Estonian Youth Nature House
Mustamäe tee 59
EE-0006 Tallinn
Estonia
Phone+372-2-527 793
Fax +322-2-237 557

FINLAND

❒The 40th anniversary seminar for the ASP-schools was held in Rauma in January 1994. During the seminar the future of the BSP in Finland was discussed. Following three topics were seen essential in the future development:

1. Developing of local environmental networks. Networks will be established within schools, institutes and industries which are interconnected by the same river, lake or other geographical factor.
   - The River Kymi Project has already started. It is coordinated by Risto Hamari from Langinkostekn lukio (Langinkoski secondary schoold).
   - Next autumn a national meeting will be organised to advance the creation of local projects.
2. The need for the central coordination and guidance will decrease as a result of the local activity.
3. The development of BSP will take place under the umbrella: "Schools as learning and activity centres", which is a general theme launched by the National board of Education for the development of schools.

E-mail will be tried to help communication between BSP-members. Freenet-Finland will publish a bulletin board for BSP where international visitors are welcome.

The biomonitoring programme will be tried in BSP-schools during an action week this spring. The draft version of the programme was sent to the schools and schools will try and evaluate it.

The Finnish National coordinator for BSP has changed.

National coordinator:
Hannu Kuitunen
The National Board of Education
Box 380
00531 Helsinki
e-mail: hakuitun@freenet,hut.fi
tel. +358-0-77 47 7347 (mon) 755 3252 (other weekdays)
fax +358-9-77 47 7335 (mon) 755 7125 (other weekdays)

GERMANY

❒ In November 1993 I started with the coordination of the German BSP schools. I needed nearly three months to get a general view of the activities because especially the schools in the new federal counties had many difficulties. At this moment there are ten schools officially working in the BSP. But there are three or four schools more that also are interested in working in the project.

I began my work with a course especially for the German BSP teachers to raise more motivation. This course took place in Kitzeberg (near Kiel) from 13th to 17th of March 1994. It was titled "School, Baltic Sea and Public" and was organised by Andreas Weßling from the RPU in Kitzeberg and the UNESCO. In these three days we practised the water quality program from Rungsted Gymnasium, Denmark, and decided, that all German schools should use this program.

Besides we produced a live TV-film (30 minutes) with three interview partners about the water quality of the Kieler Förde. The film was taken to the air by the OK Kiel (Open Channel). It was a great event for all participants.

The next great action could be a Summer-Work-camp for German schools in summer 1995. I am trying to find a place on the Baltic Sea Coast where we can do a practice contribution to save the Baltic Sea. In these days I write several letters to find a suitable region.

National coordinator:
Mrs. Gisela Knipper
Hauptstrasse 14
D-38274 Klein Elbe
Phone +49-5345-1984
Fax +49-5345-622

LATVIA

❒ In the BSP "School activities" issue you can find some new schools started to work in BSP in Latvia.

During this school year our BSP schools like other BSP participants are actively working for the conference "Save the Baltic Sea" having the best wishes for taking part in the Karlskrona conference in Sweden.

The international camp for the environment and Sports will be held in Jaunburtnieki Basic School (Valmiera district - area of the Northern Vidzeme Regional Nature Production Complex) from June 27th to July 2nd 1994. Now we have received applications from Estonia, Lithuania and Sweden. At the same time the Seminar for BSP teachers will be held.

After BSP annual meeting "The Coast watch" programme have found participants not only near the sea coast. Now Lake and Stream watchers are participating in this programme. The biologists from the monitoring station "Salaca" have joined us in this work.

This spring "The Small rivers investigations" project will be realised in Latvian BSP schools. Hopefully it takes easy rivers project preparing for BSP common programme.

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LITHUANIA

❒ There are now 17 schools involved in the BSP, five of them Coast watch schools..

The new wider possibilities for schools located far from the Baltic Sea to participate in the BSP became available after three new programs - Phenologic studies, Research of air quality by using lichens and River project were proposed.

Trying to help teachers with the BSP activities we gathered together a group of sex scientists who help us in preparing detailed methodologies adapted to our local conditions and level of environmental education.

NATIONAL COORDINATORS

There were held two meetings in December - one of them in Vilnius for the hew BSP schools, where the members met with this group of scientists and discuss their problems, another - in Klaipeda for Coast watch schools. Costa watch schools organised exhibitions "Peace, Security and International Friendship" and "I love the Baltic Sea".

In April, 20-24 we are planning a workshop for BSP teachers in Drúksiai. They will also have a possibility to visit the nuclear power plant. We are going to present the multidisciplinary "River" project. Teachers will be trained theoretically and practically. We think, that prepared etnocultural material "Meaning of water in the Balt's ethnoculture", could be interesting for the BSP schools in other countries.

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POLAND

❒ After revision of the membership of schools within the UNESCO ASP, which was done by Ministry of Education and Polish Commission for UNESCO, amongst all of 88 ASP schools, 21 of them declared to be an active member of BSP family. Of these 17 are upper secondary schools /2 private/ and 4 primary schools.

Only 4 schools /Dziemiany, Sopot, Szczecin, Ustka/ are localized in towns and villages on the Baltic Coast. Others schools represents many different regions, as for example Coal District of Upper Silesis or strongly polluted and damaged Sudety Mountain.

Many different teaching methods and different approaches are used in the process of teaching and learning, e.g. lectures, contests, quizzes, special subject days, exhibitions, field and research works. Many locally developed methods are used in those schools.

The most popular common programmes, which the new BSP schools want to join are:

"Research of air quality by using lichens", "Water quality" and "River project". According to informations received, most schools have already good relations, contacts and exchange with schools from abroad.

March of 11, in Ministry of Education was held the meeting of headmasters or ASP liaison persons from nearly every ASP schools. It could be said, that BSP is the strongest and most popular project within ASP. Participants involved in BSP declared to have meetings once or twice a year, aimed at improving the methods used to study environmental issues, enchancement teachers competence and promoting the cooperation between schools in the country and abroad. We do hope that such a meeting will be very helpful in establishing the common programmes and networking activity.

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RUSSIA

❒ There are 4 schools involved in the BSP. There will be arranged an international seminar "The ecology in science education" May 23-26, 1994 in Sankt-Petersburg. Six students, two teachers and the coordinator from each of the BSP countries have been invited to attend the seminar. There will be a contest of videotopics on ecology made by the students.An ecological summer course for teachers and pupils aged 14-17 will be arranged in Sankt-Petersburg July 10-17, 1994.

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SWEDEN

❒ There are 54 schools involved in the BSP in Sweden. The Water quality programme, Coastwatch BSP, River project, Research of air quality by using lichens, Phenological studies and many locally developed methods are used in the school. We are slowly getting more subjects like civics, history and art involved in the BSP activities. The developing of the multidisciplinary programme Rivers is continuing in a seminar in May.

Five new subregional networks have been formed around active BSP schools on the secondary level (age 13-15). Around 20 teachers took part in each meeting and the program contained a lecture, presentation of environmental projects and discussions about how to develop them. The meetings have for instance led to in-service training courses. A group of teachers arranges several BSP-activities like poster exhibitions and water quality studies as part of a big environmental fair. There are four subregional networks of upper secondary schools. A seminar was arranged in one of these groups on the theme "Agenda 21 and the school".

International contacts are a very important part of the activities in the BSP in Sweden. The schools are continuing their contacts with other countries. The new possibility to apply for scholarships for international contacts between schools have been greeted with satisfaction by the schools.

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Teachers and students in the Baltic Sea Project will meet at the Conference in Karlshamn, September 1994. We are looking forward to see you there.

APPEAL

Will you contribute to the Newsletter? We welcome

- **short notices about the situation in the Baltic Sea from newspapers in your country**
- **articles about your work with environmental problems in your school.**
- **suggestions for solutions to environmental problems in the Baltic Sea**
- **educational ideas**

The next issue will be published in Januar 1995.
Press stop: October 15.
Please write in English. If it is possible send the article on disc as well. We prefer Macintosh / Word. Send pictures too. If there are people in the picture, please name them. Thank you.

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