
THE GLOBAL FORUM

for Environmental Education



**Global Network of
Teachers and Students**

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Colofon

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c/o CEVNO

Nassauplein 8

1815 GM Alkmaar, The Netherlands

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Chief editor: Jan Apotheker, Netherlands,

Secretary: Joke Wals, Netherlands,

Editor: Arjen Wals, USA/Netherlands,

Translator: Amalia Bosch Benitez, Spain

Editorial Board:

Noibi Abayomi, Nigeria, editor

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The International Board of Caretakers of the Environment International consists of:

Richard Parish, President, Churchill School, Churchill, Avon BS19 5QN, England,

Telephone: (0934) 854046 or 852771

Ana P. Aranda, Vice President, ICONA, Sección de Educación Ambiental, Gran Vía de San Francisco 35, 2800S Madrid, Spain,

Telephone: (1) 347-6053

Joke Wals, Secretary, CEVNO, Nassauplein 8, 1815 GM Alkmaar, The Netherlands,

Telephone: (072) 118502

Edward Radatz, Treasurer, 13422 Stardust Blvd, Sun City West, Arizona 85375, USA

Telephone: (602) 542-0021

Arjen Wals, Director/Networking, 430 Marengo Ave, Forest Park, Illinois 60130, USA

Telephone: (708) 771-3227

Isabel Abrams, Director/Communications, 2216 Schiller Ave, Wilmette, Illinois 60091, USA

Telephone: (708) 251-8935

Colofón

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Redactor jefe: Jan Apotheker, Países Bajos,

Secretaria: Joke Wals, Países Bajos,

Editor: Arjen Wals, EEUU, Países Bajos,

Traducción: Amalia Bosch Benitez, España

Junta Editorial:

Noibi Abayomi, Nigeria, editor

Frits Gravenberch, Países Bajos, editor

Raymond Jovett, Escocia, editor

Walter Leal Filho, Brasil, editor

Chris Leibner, EEUU, editor.

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La Junta Internacional de Caretakers of the Environment se compone de:

Richard Parish, presidente, Churchill School, Churchill, Avon BS19 5QN, Inglaterra,

teléfono: (0934) 854046 o 852771.

Ana P. Aranda, vice presidenta, ICONA, Sección de Educación Ambiental, Gran Vía de San Francisco 35, 2800S Madrid, España,

teléfono: (1) 347-6053.

Joke Wals, secretaria, CEVNO, Nassauplein 8,

1815 GM Alkmaar, Países Bajos,

teléfono: (072) 118502.

Edward Radatz, tesoroero, 13422 Stardust Blvd, Sun City, Arizona 85375, EEAA,

teléfono: (602) 542-0021.

Arjen Wals, director/redes, 430 Marengo Ave, Forest Park, Illinois 60130, EEAA,

teléfono: (708) 771-3227

Isabel Abrams, director/comunicación, 2216 Schiller Ave, Wilmette, Illinois 60091, EEAA,

teléfono: (708) 251-8935

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From the editor.

Just before vacation time we present you this years last issue. In September we will continue with volume 2.

Looking back on the first four issues I think we have improved. The outward appearance of the Forum is now satisfactory. The contents of the articles have also been good. I hope the Forum has been the answer to the wish most of the participants expressed during the Bristol Conference. It is up to you to send me more and different articles and material. I feel we still have too little student material. If you send in an article please try and add things made by students; artwork, drawings, stories, poems, things like that.

The importance of the Forum as a means of communication is clear, just as the importance of the network of Caretakers of the Environment(CEI) is clear. The impact of global involvement in environmental care, just as the global effect of environmental problems on students and teachers alike, is such that environmental education is becoming increasingly important. Environmental Education is a means by which a change in attitude can be achieved in the young people of the world. The Caretakers Network helps spread environmental education through the world, and gives teachers and pupils the opportunity to get new ideas, to get more involved, start new projects, involve the community etc.

Because the Caretakers International meet only once a year, the importance of the Forum is evident. It is the means of communication between the members of CEI, and gives them a chance to acquaint themselves with the successful projects of others. It also gives students an opportunity to present themselves and their work to other students. In the next issue we will publish an article from a student from Zambia.

One of the problems we encounter is a language problem. A large part of the Caretakers is Spanish speaking. We have solved that partially by having abstracts in Spanish. If there are people who would like to have a Spanish translation of an article or if you wish to send in articles or material in Spanish please do so, we will translate the article for you. The same goes for material made by students.

I would like to thank all the authors who send in material that was published in the Forum, and I would like to thank the editors for the help and advise they gave during the first year.

Those of you who will attend the 5th International CEI conference in Cusco, Peru, this august, I wish an enjoyable and fruitful conference

Jan Apotheker, chief editor.

Del redactor jefe.

Al filo de las vacaciones presentamos el último número de este año. En septiembre entregaremos el siguiente número.

Volviendo la vista atrás hacia nuestros cuatro primeros números creemos que hemos mejorado. La presentación del Forum es satisfactoria. Los contenidos de los artículos también han sido buenos. Espero que Forum haya dado respuesta al deseo unánimemente expresado durante la Conferencia de Bristol. Está en manos de todos ustedes enviar nuevos artículos y material. Nos parece que aun disponemos de escaso material procedente de los alumnos. Si envían artículos por favor procuren enviar también material realizado por alumnos tales como dibujos, historias, poemas y cosas similares.

La importancia que tiene Forum como vehículo de comunicación es evidente, al igual que la relevancia que tiene como red Caretakers of the Environment(CEI). El impacto que supone una mayor implicación mundial en los temas de cuidado ambiental, así como el efecto global de estos problemas ambientales sobre alumnos y estudiantes es de tal índole, que han hecho que la educación ambiental haya adquirido más y más importancia. La Educación Ambiental es el medio que nos permitirá cambiar la actitud de la gente joven en el mundo. La Red de Caretakers ayuda a difundir la educación ambiental en todo el mundo y ofrece a los profesores y alumnos la ocasión de abrirse a nuevas ideas, de implicarse más, de comenzar nuevos proyectos de otros. Además, pueden presentar a los demás alumnos el trabajo realizado por otros estudiantes o por sí mismos. En el próximo número publicaremos un artículo de un alumno de Zambia.

Uno de los problemas con el que nos encontramos es el del idioma. Una gran mayoría de Caretakers es hispanohablante. Hemos intentado paliar el problema parcialmente añadiendo resúmenes en español. Por eso animamos encarecidamente a aquellas personas que quieran escribir algún artículo o enviar algún material en español a que lo hagan, y si desean que se le traduzca un artículo completo del inglés al español, que lo soliciten y nos encargaremos de traducirlo. Lo mismo vale para el material que envíen los alumnos.

Aprovecho la ocasión para dar las gracias a los autores que enviaron el material publicado en el Forum, y también a los editores que nos ayudaron y aconsejaron durante el primer año.

Jan Apotheker, redactor jefe.

Global Education through Local Involvement: The Global Rivers Environmental Education Network

by Thomas I. Ellis, Arjen E. Wals, and Mare Cromwell, U.S.A.

Abstract: Through the University of Michigan's innovative GREEN (Global Rivers Environmental Education Network) project, teachers all over the world are taking students down to their local river and teaching them to monitor water quality, analyze watershed usage, identify the socioeconomic determinants of river degradation, and present their findings and recommendations to local officials. These students are also exchanging their data and insights—via computer network—with other students doing the same thing in other watersheds, other regions, and other cultures throughout the world. GREEN thereby empowers students, not only to learn in depth about their local environmental problems, but also to act on their discoveries, and to share their knowledge in a global, cross-cultural context.

La universidad de Michigan ha lanzado un proyecto innovador, GREEN (Global Rivers Environmental Education Network). Red Mundial de Educación Ambiental de Ríos, que impulsa a los profesores de todo el mundo a que lleven sus alumnos a los ríos de su localidad y les enseñen a vigilar la calidad del agua, a analizar el uso de las reservas de agua, a identificar los determinantes socioeconómicos de la degradación del río, y a presentar sus resultados y recomendaciones a las autoridades locales. Estos alumnos intercambian igualmente sus datos y sus opiniones a través de la red informática de otros alumnos que están haciendo la misma labor en otras reservas de agua, otras regiones y en otras culturas de todo el mundo. GREEN anima de esta manera no sólo a que los alumnos aprendan sus problemas ambientales locales en profundidad, sino que además los anima a que pongan en actividad sus descubrimientos y compartan sus conocimientos en un contexto global e intercultural.

"Globalization" is a word you commonly hear in educational circles these days. It refers to the widely acknowledged need of schools to equip their students for an interdependent, shrinking world, linked by a closely coupled world economy. But this shrinking world is also brought closer together by massive environmental problems and challenges that transcend national and even continental boundaries, and that we can address only through an unprecedented degree of global cooperation. One major challenge that will increasingly confront environmental educators is to develop curricula and instructional strategies that present local environmental issues in a global perspective but without overwhelming the students or making them feel hopeless. How can we educate and empower students to take action on local issues, while simultaneously developing within them a global, cross-cultural perspective on these issues? How can we best educate this first generation of truly planetary citizens to assume responsibility for their shared, imperiled habitat?

One promising new

approach to meeting this challenge is the Global Rivers Environmental Education Network (GREEN), recently initiated by Professor William B. Stapp of the University of Michigan School of Natural Resources. Still in its early stages of development, GREEN is an international network which seeks to bring secondary school students, teachers and communities around the world closer together through the bond of studying and improving our common river systems. The network is thus an expanding

global communication system that can provide students, teachers, and other professionals with the opportunity to exchange their thoughts and experiences concerning issues affecting their local rivers and watersheds. By inviting participants to reflect on ways that land and water usage and cultural perceptions influence river systems and vice versa, the network encourages them to learn about and become involved in complex, real-world concerns that extend across all boundaries. In this way, GREEN achieves three interrelated goals:



- it acquaints students with the environmental problems and characteristics of their local watershed, giving them "hands on" experience in the theory and practice of chemical, biological, and sociological research;

- it empowers students through community problem solving strategies, thereby enabling them to see the relevance of subjects they learn in school to the "real world;" and

- it promotes intercultural communication and understanding thereby fostering awareness of the global context of local environmental issues, and of the significance of cultural differences in choosing effective problem-solving strategies.

Rivers were chosen as the central research focus and central metaphor of the project primarily because they are a reliable and informative index of the environmental quality of their watersheds. But rivers also form a nexus for relating chemistry to biology, and for relating the physical sciences to the social sciences and humanities, since rivers bind together the natural and human environment from the mountains to the sea, and from farmland to the inner city. In fact, 85% of the world's human population lives on or near a river. For these reasons, the study of rivers and watersheds forms a coherent curricular framework for the study of a wide range of environmental issues and problems. Rivers also have played a major role in the development of every culture on Earth, so the study of rivers also forms an ideal basis for learning about cultural diversity, and for engaging in cross-cultural dialogue.

Through involvement in a network on local rivers, students share information, techniques and different approaches to problem-solving. They also can learn that their investigations have a purpose and are valued by their peers elsewhere in the world. The intention of this process is to motivate the students to further their understanding and work to resolve some of the water quality problems that they have discovered. GREEN is therefore a program designed to bring individuals closer together and encourage them to develop a sense of responsibility for their communities and their planet simultaneously.

Origin and Development of GREEN

The University of Michigan's School of Natural Resources began assisting schools with water monitoring in 1984 when students from

a High School in Ann Arbor became concerned about the health risks of wind surfing on the local Huron River. Their tests indicated that the river should not be used for body contact after heavy rain. From their data arose questions of upstream and downstream water quality, and the following year the program ex-



panded to three school systems monitoring the same river. Out of this small beginning grew the interactive Rouge River project, in which students from diverse socioeconomic classes—ranging from rural areas, through wealthy suburbs, to inner city Detroit—exchanged information via computer on the progressively deteriorating water quality of the river that connected them—and in the process learned about each other as well. This project has inspired schools in watersheds in all 50 states to set up similar watershed programs.

Now in its eighth year, this Rouge River Project has become part of a Great Lakes Basin project, involving thousands of students from multiple watersheds. These students, along with teachers, community leaders, government officials and university resource people are brought together through the linking of water systems and computers. Students learn about the local history, land usage and water quality of their watersheds in a hands-on project where they conduct nine chemical and biological tests of water quality. By means of an interactive computer conference, students share data, concerns, strategies and courses of action as they strive to improve the rivers that they researched. At the end of the project, students from all parts of the watershed meet at an annual student congress where they discuss the results of their monitoring activities, assess the state of the watershed, participate in workshops on various action-taking skills, and, finally, come up with concrete plans of action to improve the quality of the local watershed.

The concept of GREEN was developed in 1989, as the result of a seminar of graduate students led by William B. Stapp in the School of Natural Resources at the University of Michigan. During the summer of 1989, teams of student interns, educators, and consultants went abroad to conduct seminars on water monitoring and networking in 18 nations on four continents--Africa, Europe, South America, and Asia (including nations as disparate as Sweden, Austria, Swaziland, Ecuador, and Japan). Since that time, many of these countries have initiated their own school-based water monitoring programs. Taiwan, for example, has programs monitoring two rivers; schools in Germany have initiated an environmental monitoring network; and Israel is incorporating river studies into their new national Senior High School Curriculum. Over 35 nations are participating in GREEN in a variety of degrees, and water monitoring programs are active in almost twenty of these countries.

The basic elements of the original Interactive Water Monitoring Program for Schools are:

1. Simple, reliable tests that measure the nine parameters in the U.S. National Sanitation Foundation's Water Quality Index are performed at all sites on the same day to collect meaningful data about the river's quality. These tests measure Dissolved Oxygen, Biochemical Oxygen Demand, Phosphates, Nitrates, Total Solids, Turbidity, Temperature Change and Fecal Coliform. In addition students investigate the



presence and absence of benthic organisms. Tests are taught to teachers in workshops, and many schools are assisted by trained resource people.

2. The data are compared and shared along the watershed through a computer conference system and/or a student conference. From this joint analysis and interpretation,

students generate questions and concerns about their river. The data may also point to issues regarding local land use patterns.

3. The students build off their concerns by identifying particular problems, collecting additional information, and then planning to take action to improve the state of their river.

Educational Enhancement

GREEN is designed to focus on some of these critical water resource issues by involving secondary school students and teachers, professionals, and concerned citizens in exploring and re-evaluating how water is used as a resource. The learning process for GREEN participants involves monitoring local rivers to assess the conditions, sharing educational approaches and activities through a global network, and promoting activities which can have a beneficial effect on the environment.

This experiential approach towards education brings students out of the classroom by encouraging them to resolve real world problems. Experience has shown that people are more interested in what affects them directly. Captured on a personal level, this interest can lead to genuine learning that may inspire change for both the individual and the community. Developing a deeper understanding of their local environment and learning from the actions of other students can empower GREEN participants to become agents of change in their own world.

A river study also can be an interdisciplinary program, since the study of local water systems can be easily incorporated into humanities, social studies, geography and science classes to help students in becoming environmentally literate. Undertaking a watershed study can involve a series of interdisciplinary exercises that meld water ecology field studies into historical and sociological investigations of the local water and land-use systems. With this approach, students can understand the complex cause-effect links that have created local problems.

GREEN encourages participants to take the next step beyond the discussion of solutions by developing action-taking strategies. The network provides a medium for exchanging different methods of problem-solving and action-taking. Students can share experiences that were successful and not so successful as they develop strategies on what to do in their own community.

The global connection of the network introduces an entire series of educational oppor-

tunities into the realm of the classroom. As an international network that links students with others from different parts of the globe, GREEN allows these students to share perspectives and helps them discover that the water quality issues in their own communities in fact represent the local manifestations of global problems. As participants in the network, students can learn about similarities and differences that their local watershed shares with others, developing a sensitivity for the diversity of cultural, social and geographical systems that exist around the world. They also learn from alternative ways of solving water quality problems that have been employed in other regions. The network invites youth to acknowledge and respect different ways of thinking, feeling, and responding to the problems of river pollution and water quality, cultural sensitivity and environmental sensitivity go hand in hand.

Components of the GREEN Network

GREEN is currently establishing an infrastructure that will enable schools from all regions of the world to interact with one another, regardless of their technological resources. To this end, GREEN has developed several complementary means of sharing information and facilitating interaction among the participants:

A GREEN-Newsletter is sent to all participating GREEN countries twice a year, containing information about water quality projects and GREEN activities in various countries. Past newsletters have included regional progress reports, program status of countries, projects calendar, announcements, and the use of benchmarks as indicators of water quality.

The GREEN computer network, based on EcoNet, which is part of the San Francisco based Institute for Global Communication (an article on computernetworking and environmental education will appear in the second volume of the *Global Forum*, ed). It has sister networks in Australia, England, Canada, Nicaragua, Brazil and Sweden. Participants access the conference through a computer and modem connected to a telephone system that permits international

computer links.

The Sister School/Watershed system is akin to the "pen-pal" concept in which many students are already involved. However, a Sister School/ Watershed relationship will be a more intimate and structured means of information sharing. Schools from different regions will be matched so that students have the chance to develop a deeper understanding of the geography and local cultures of their Sister Schools, as well as sharing information about water quality and river systems.

How can schools get involved?

Becoming involved with GREEN is not complicated, and schools can go about it in a variety of ways, depending on their resources, their programmatic constraints, and their level of commitment. Educators may choose to start by developing their own local watershed monitoring program, using the nine tests that comprise the National Sanitation Foundation's Water Quality Index. Stapp and his associates at the University of Michigan School of Natural Resources have developed a Field Manual for Water Quality Monitoring to train teachers and students in conducting these tests. In the process of initiating a new program, individual teachers and resource persons may join GREEN to learn more about water monitoring methods and organizational strategies, and to receive the newsletter or sign on to the network.

As their water monitoring projects become established, schools can encourage their district offices and neighboring districts to establish similar programs throughout their watershed. School districts can also consult with the GREEN office at the University of Michigan for suggestions on how to incorporate these interactive river monitoring projects into their wider curriculum.

For further information about GREEN, contact:

The GREEN Project
School of Natural Resources
University of Michigan
430 E. University
Ann Arbor, MI 48109-1115

Student Conference: The Wadden Sea.

By Jan Apotheker, Egbert Holl, Frits Schließmann.

Abstract: At the Praedinius Gymnasium in Groningen, The Netherlands about 35 students from three different schools gathered from May 8 through May 11, 1991, and took part in a number of activities concerning the Wadden Sea. They presented to each other the projects they held in their own schools, studied the marine life of the Wadden Sea in the laboratory, and afterwards went out into the mud flats to study the same life in situ. At the end of the conference a declaration was passed by the participants.

En el Instituto de Enseñanza Media "Praedinius" de Groninga, Países Bajos, se reunieron unos 35 alumnos procedentes de diferentes escuelas del 8 de mayo al 11 de mayo de 1991, y participaron en una serie de actividades relativas a las marismas del Mar del Norte. Unas a otros fueron explicando los proyectos que se llevaban a cabo en sus respectivos colegios, estudiaron la vida marina de las marismas en el laboratorio y a continuación se internaron sobre la superficie lodosa de las marismas para estudiar "in situ" esta vida. Al término de la conferencia se aprobó una declaración.

Last May, about 35 students from three different schools gathered at the Praedinius Gymnasium in Groningen, the Netherlands, to study the environmental problems of the Wadden Sea, a mud flat area, stretching from the coast of Holland to Esbjerg on the coast of Denmark. The schools represented were: the 'Friedrich Paulsen Schule' from Niebüll, Germany, the 'Revisus College' from Deventer, and the 'Praedinius Gymnasium' from Groningen. The school from Esbjerg, Denmark, that planned to come, unfortunately could not take part, due

Yssel, a river flowing through Deventer, and through the Ysselmeer, which is connected to the Wadden Sea.

Students brought samples of the mud, taken at different places, and showed with a Geiger counter, that they were slightly radio-active.



They also showed water from different sources and asked the participants to classify them in order of smell and of clarity.

The group from Niebüll had brought quite some materials which showed the influence of different types of pollution on the environment of the Wadden Sea. They showed pictures of the effect of PCB's on the fertility of seals, of the influence of hunting on the bird population, of landwinning, etc.

The school from Groningen presented the results of their monitoring the quality of the Shallows area situated directly to the north of Groningen, using the "Coastwatch" (an EEC network, that annually analyzes the quality of the coastlines of European countries, ranging from Denmark to Greece) protocol, which involves the counting of living and dead animals, the observation of pollution, such as fishing nets, common waste plastics etc. They also measured pH, phosphate, nitrate and nitrite. The part of the shallows they investigated is relatively clean.



to exam problems.

The students presented to each other the projects they carried out at their schools on poster boards, and explained the posters to each other during a morning session. The school from Deventer reported a project that focused on measuring radio-activity in mud from the

The program of the conference encompassed three days of activities. The participants arrived on Wednesday to set up the displays, and departed to their host families, where they stayed for the rest of the conference. The conference was opened by the Groningen alderman concerned with education, and the director of the school, after which they visited the displays.

We were fortunate to get the offer from the State Department for Tidal Waters to investigate the toxicity of the seawater and mud in the Wadden Sea in their laboratory. They used an apparatus called the "Microtox", which measures toxicity with the bacteria "Photobacterium phosphoreum". These bacteria cause the phosphorescent effect on sea waves. The strain used is extremely sensitive to toxic substances in general, and emits less light in toxic surroundings. The amount of light emitted is a measure for the toxicity of the sample. We had already collected some samples from the Wadden Sea, and these were measured by the students. It appeared that the water was not toxic, but that in one area the mud contained toxic material.

In the afternoon a laboratory period was held. We had gathered animals from the mudflats in the Wadden Sea, like periwinkle (*Littorina* sp.), wadsnails (*Hydrobia* sp.), flatmussel (*Macoma baltica*), cockles (*Cerastoderma edule*), mussels (*Mytilus edulis*), crabs (*Carcinus maenas*), seapocks (*Balanus balanus*), rag worm (*Nereis diversicolor*), lob worm (*Arenicola marina*). We studied these in the laboratory, using magnifying glasses, and noted the special adaptations the animals used for living in this area. On Friday we went out onto the mudflat area, and looked for these animals in



their natural habitat. It appeared that getting muddy all over, or getting stuck in the mud was a great unifying event for the whole group.

Before we went out on the mudflat area

we visited the seal center in Pieterburen. This center has been set up to serve as a hospital for seals in the Wadden Sea. We were told that the seal population has dropped dramatically because of pollution. Especially PCB's have a negative effect on the fertility of seals. Also their general health condition has been weakened by different types of pollutants. Because the seal is



at the end of a foodchain, polluting material is concentrated in them. About 25% of the seal population in the Wadden Sea has been in the center in Pieterburen. Generally they stay there several months until they are strengthened and well fed. Then they are released again in the Wadden Sea.

On Friday evening we had a forum discussion concerning the discharge of waste water in the Wadden Sea. Participants included a member of the Christian Democratic Party, a member of the Green Left Party, the veterinarian from the seal center in Pieterburen, and the environmental coordinator of AKZO, one of the major industries in Groningen, bordering on the Wadden Sea. An interesting discussion followed, in which the industry claimed that it only produces those things for which there is a demand, and leaves it up to the government to set up bans, or to the general public to diminish the demand for certain products. As soon as there is no demand, the industry will stop producing. The main argument from the representative from the seal center was that our own individual attitude towards the environment should change, and that attitude should influence the products we buy and use. The representatives from the political parties maintained that the industry has its own responsibility for pollution, and that government can only set up certain standards in the environmental permits they give.

At the end of the conference, on Saturday, the participants passed the following resolution:



" Everything alive is interesting, unless prospects are too dreary or bad. The past few days we concentrated on the cockles, mussels and worms of the Wadden. The participants from Niebüll, Deventer and Groningen came to the following practical conclusions:

- * Industrialization and population growth have put an increasing pressure on the environment during the last century,
- * the issue of industrial waste, and the negative effects of by products of intensive agriculture and cattle raising have contributed to the pollution of the seas. One of the worst examples of this process is the Wadden Sea, also called the pollution depot of the North Sea.
- * the proliferation of seals has diminished by a decreasing fertility caused by, among others, PCB's, that ended up in the Wadden Sea through the Rhine, Yssel and Ysselmeer.
- * Pollution is concentrated through plankton and fish in the food of predators like man and seal. The health of the non- vegetarians is threatened.
- * What is it that people are willing to do and , what is more important, stop doing, today , tomorrow and in the future to stabilise the environment and improve our environment into a better world to live in.

-We, the participants of this conference, have agreed to:
-do everything in our power to convince our local surroundings of the
-severity of the problems threatening the Wadden Sea
-try to increase the awareness of pollution of the environment
-decrease our own pollution of the environment by using less polluting
materials and consumer goods

All in all the conference proved again that getting together with students from different areas is very stimulating for everyone involved. It gives a general feeling of mutual understanding and friendship, and helps to focus on the problem at hand: the problems in the Wadden Sea.

The Baltic Sea Camp 1990

by Wolfgang Brummer and Kerstin Blomberg, Sweden



Abstract: In 1990 a group of 46 students and teachers gathered on the Swedish island of Gotland to discuss the problems of the Baltic Sea, situated between Sweden and Finland, and on the south by Denmark, Germany, Poland and Soviet Union. They discussed and investigated both environmental, political and peace issues. At the end of the conference they passed a resolution, expressing their concern, and the necessity to act now.

En 1990 un grupo de 46 alumnos y profesores se reunió en la isla sueca de Gotland para debatir los problemas del Mar Báltico, que baña al norte Suecia y Finlandia, y al sur Dinamarca, Alemania, Polonia y la Unión Soviética. Se analizaron tanto temas ambientales como políticos y se habló de paz. Al término de la conferencia aprobaron una resolución en la que expresaban su preocupación, y la urgencia de comenzar a actuar inmediatamente.

The Baltic Sea Camp 1990 deals with peace and environmental issues in and around the Baltic Sea. These issues have to a great extent been focused by political activities and mass media coverage during the past year. We are a part of the world and we are depending on each other wherever we live. That is the reason why our ambition has been to adopt a global approach to resolving peace and environment issues as well.

We have also wanted to emphasize the situation of children and young people in the light of the UN convention on the Rights of the Child, which passed in November of 1989.

Anyhow, how was a project as the Baltic Sea Camp born? What facts contributed to the fact that it can be carried through? We believe these things spring from the insight of mutual dependence, which tells:

- * That pollution does not know of national borders.
- * That offences committed by each region of the Baltic area also influence the other parts.
- * That we must make joint decisions for our common good.
- * That the impasse of the arms race has made us realize that we can't create security and stability by force of arms but that security for all of us arises from disarmament, sincerity and international exchange.

Breeding Ground

The first seed of thought then had to find an appropriate breeding ground. We don't think it is a mere coincidence that a small country board of education as that of Gotland was willing to support our project wholeheartedly. Local autonomy and scope of action have a tendency of being greater and stronger on islands. For the same reasons we chose an island exchange instead of turning to central authorities in the capitals.

Another fact that also contributed to the

breeding ground is the rapid revolutionary development in Eastern Europe during the last years. Thoughts of an exchange between East and West, that just a few years ago were looked upon as naive or impossible, gained ground as well as the insight of mutual dependence.

These facts and the strong response our ideas received when we presented the project at our visit to the different islands, gave us inspiration and it was important that this meeting was realized. The work with the Baltic Sea Camp started long before the winds of change started blowing over Eastern Europe.

Exchange of dreams

The aim of the camp that we started at the beginning of the work and according to which we were working can be summed up accordingly:

1. We wanted to make it possible for young people and teachers from the big islands of the Baltic to meet and to get to know each other in order to:

- * strengthen the feeling of togetherness,
- * make lasting acquaintances,
- * get an exchange of our living conditions and future dreams,
- * discuss under what threats we are living and what we can do about these,
- * show pupils works on peace and environmental issues.

2. To address methodological and pedagogical problems of: How do you teach about peace and environmental questions in a fruitful way? To what view of the future does our teaching lead?

3. To obtain the view of the researchers on the threats that we are exposed to in the Baltic and how to manage these.

4. To develop action programs for a continued cooperation on peace and environmental issues.

Preliminary Work.

We decided to use plenty of time for preparations to make the project deeply rooted in Gotland as well as in school authorities and schools on the invited islands. We also wanted the delegates to be prepared before the camp started.

At a general meeting on the 31st of January 1989 we started a non-profit association named the Baltic Sea Camp 1990. When applying for money there is often a demand for an association with rules, a board, etcetera. We also wanted to broaden the active interest for



the camp and its aim - that more interested people should participate.

The association quickly received 37 member organizations on Gotland and one on the Isle of Åland. This fact contributed to our feeling of great support for the project and provided a good platform to work from.

In the preliminary work we used a lot of time making acquaintances with various backgrounds. We visited the embassies of all the countries, bordering on the Baltic Sea. We also visited all the invited islands except the island of Bornholm, and during these visits we spoke with persons at the local school authorities, school administrators and teachers. We were very kindly received and our invitations were accepted with seriousness and enthusiasm.

Economy.

A lot of time has been spent on the search for money to support the project and to write a great amount of individual grant applications. Money was needed not only for the camp, lectures, travels but also for the preliminary work.

Until the very end we have been strained getting both ends meet, but when the camp began, we had got a positive response from 46 of our applications and we understood that we could manage economically.

Our ambition, however, always was that the camp should not be paid with money from the local government, but that we should manage the financing in another way. Nevertheless the local government of Gotland early gave a guarantee for the Baltic Sea Camp.

Like rings on the water.

All the time we have looked upon the Baltic Sea Camp as a process that started with the idea and that afterwards was to spread out like rings on the water. Among other things three schools on Gotland established partner schools on the Isle of Saaremaa before the start of the camp.

With pleasure we can now state the rings continue to spread and that all the islands will continue to cooperate in the future. We believe in the importance of personal commitment and the importance of the individual and the idealistic organizations as promoters of the peace and environmental work: *"The power of the powerless"*

It is a very famous saying which goes: *"We have not only inherited the earth from our forefathers, we have also borrowed it from our children."*

It is the same with the Baltic Sea - we have borrowed it from our children. The Baltic Sea is our common sea and we must work together so it also will be a common sea for generations to come.

And as our disarmament ambassadress Maj-Britt Theorin said at the opening ceremony: *"Friendship between people is the biggest threat against war."*

Baltic Sea Camp Resolution:

The Baltic Sea Camp 15-25 of June 1990 on Gotland, Sweden.

We are 50 students and teachers from 7 islands in the Baltic Sea, representing all the seven countries around the Baltic.

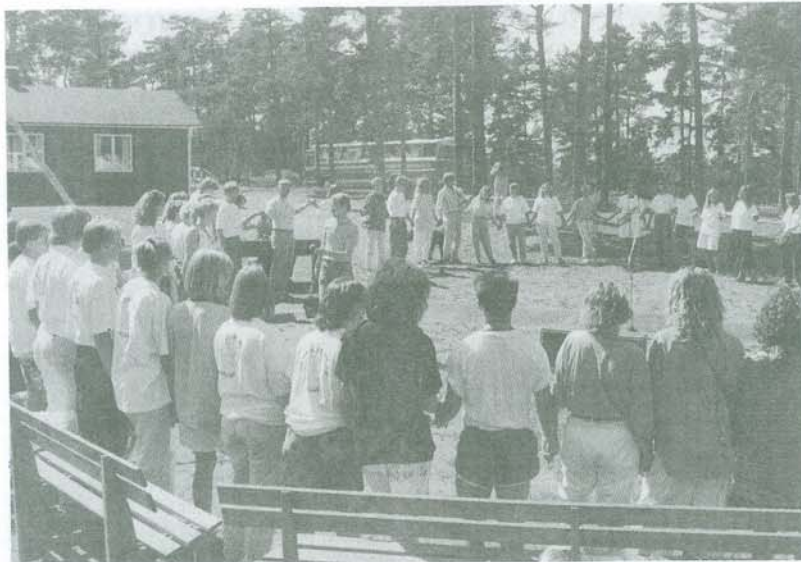
We want to see this Baltic Sea Camp as a starting point for a better understanding between people.

We also want to see this possibility to create the Baltic Sea as a sea of peace.

The time has now come to more actively fight for a better environment and for peace.

We want to extend this idea and the result that has come out of the camp to the whole world.

Now and in the future we all depend on each other, regardless of where we live. Our soil, air and water are polluted, the deserts in the world are spreading, hunger, poverty and diseases are growing. Resources should be used



to stop this as opposed to using them to develop weapons of destruction. The security system based on terror has brought only more and more insecurity. The arms race is already consuming the resources necessary for the survival of the poor people.

We will also quote Lisbet Palme from her lecture at our camp:

"Common security and international understanding mean to establish and maintain contacts between countries and people, and to support each other by practical solidarity work and by exchanging experiences. Children cannot wait, their bodies and minds are shaped now."

As a background we want to put into the resolution some facts:

- * every day 40000 children die from preventable diseases.

- * every day the whole world spends 2500 million US dollars for armament.

- * one nuclear submarine costs as much as to feed 20 million children during one year.

- * 12- 15 million hectares of tropical rainforests are spoiled every year by clear cutting and burning.

- * the environment is poisoned every day by chemicals.

We have the possibility and strength to solve the problems and to create a better future.

Therefore we want to give the following message:

- * Organize camps like ours in different parts of the world.

- * Stand up against the enormous armament all over the world.

- * Stop the nuclear weapons.

- * Give help to the third world.

- * The UN Convention on the Rights of the Child should be ratified as soon as possible by all the nations. A broad information and an active implementation of the Convention is important.

- * Future development should be based on solidarity and justice.

We want to emphasize the importance, not only to talk, but to **ACT**. Act for our common future. Therefore we, the delegates of the Baltic Sea Camp 1990, demand that everybody will listen to our message and act.

We are the world.

We are the future.

We want to live together in peace.

We want to live in a clean environment.

KENYA YOUTH ASSOCIATION COUNCIL'S NATIONAL ENVIRONMENT CONSERVATION VOLUNTEERS PROJECT.

By Perin S. Fitter, regional coordinator, Nairobi, Kenya

The Kenya Youth Association Council undertakes a number of projects. The first includes increasing awareness of participants by tree planting, soil conservation etc. The second involves the display of films, using a mobile film unit. The last is a student exchange program, set up with a number of countries, especially, the UK.

"The Kenya Youth Association Council" (Consejo de la Asociación de la Juventud de Kenia), ha emprendido una serie de proyectos. El primero pretende incrementar la concienciación de los participantes en la plantación de árboles, conservación del suelo, etc... El segundo abarca la exhibición de películas, utilizando una unidad móvil de filmación. El último consiste en un programa de intercambio de estudiantes organizado con una serie de países, entre los que destaca el Reino Unido.

Kenya Youth Association Council established its Environment Conservation Volunteers project since January 1987. The project is involved in the promotion of environment conservation education programs for the youths and members of the public. The program mobilizes youths from primary schools and secondary schools.

Aims and objectives of the project are as follows:

1. To educate young and old to appreciate their wildlife heritage and the need to conserve the environment.
2. To promote domestic tourism.
3. To promote practical conservation, educational programs, particularly among the youth and create awareness in the wise use of the natural resources.
4. To educate members of the society of the cultural and economic values of the natural resources.

The National Environment Conservation Education Program includes tree planting and soil conservation projects which are done in close consultation with the Presidential Commission on Soil Conservation and on Forestation, Ministry of

Agriculture, Ministry of Environment and Natural Resources, Ministry of Education, Provincial Commissioner and District Commissioner. About 500 youths along with members of the public participated in the planting, making terraces, doing gully control in areas having serious problems of soil erosion. These practical demonstrations have a lot of impact both on the youths and the community on the need to



conserve the soil.

Kenya Youth Association Council organizes three soil conservation seminars per year for the students, teachers and out of school young farmers, sponsored by SIDA. During these seminars we have a series of lectures, practical activities such as laying of terraces using line level, working at the tree nursery, and field trips to nearby national parks and we show some films. As a result of these seminars many students and teachers have initiated projects such as nurseries, small scale farm projects within their school campus. We are looking for more funding for the seminars so that more participants can benefit, and initiate new projects.



Another program which is very much in demand is the mobile film unit. We have been able to create environmental awareness through film shown in primary schools and secondary schools. We use the mobile film unit a lot in rural areas. The films we use have been screened on wildlife and soil conservation. We also have a series of video cassettes on pollution, pesticides, ozone etc., but we are unable to screen them as we lack a video projector. We are looking for a sponsor who would consider donating the video projector so that our program can be effectively presented to a wide audience with up-to-date information on various environmental issues.

Our average attendance is about 600 to 700 students per day between 3 films shown in the schools. Teachers very much value the mobile film unit program which is both educational and entertaining.

Kenya Youth Association Council has played a major role in the promotion of domestic tourism by organizing educational trips to the national parks and national reserves throughout the year. About 10,000 students benefit each year from these field trips. The idea of wildlife conservation cannot be effective unless the youth is exposed to wild life and gets a chance to develop an appreciation for it. My personal experience over the course of the last 20 years has been that children want to see more and more of the country when the opportunity arises. From 1987 on we have had a series of youth exchange programs, between our own teachers and youths and their counterparts in England, Scotland and Northern Ireland.

We have already sent two groups of 15 Kenyans in 1989 and 1990 and all the participants have valued the idea of Youth Exchange Program between various countries. The criteria

for the selection of the participants are strictly based on their involvement in environmental conservation education programs such as tree nurseries, tree planting, small scale farming, etc.. We would like to acknowledge the support from the Commonwealth Youth Exchange Secretariat and the Honorable members of the Parliament and permanent dignitaries



for the financial assistance in sponsoring the participants. The exchange has now become an annual event for the members of the Kenyan Youth Association Council. Kenya Airways went out of their way to give special air fare for the participants. We have been able to sell Kenya to other countries. Kenya Youth Association Council would be very keen to initiate Youth exchange Program with other countries.

Kenya Youth Association Council Environment Conservation Volunteers Project is a Non Government Organization operating on a self supporting basis. The project earns the revenue from the hire of a bus donated by SIDA. Funds raised from the bus are utilized to maintain the bus, cover office expenses, and pay the salaries of four staff members. The staff has worked around the clock to cover all the expenses. The organization has also managed to acquire a new 18 seat minivan on hire purchase. The new vehicle was very much needed for the mobile film unit program, office work and the Youth Exchange Program.

Kenya Youth Association Council would like to organize an International Conference on Environmental Education in Kenya in June 1994 under the auspices of the "Caretakers of the Environment International". We would like to invite 150 delegates which would include teachers and youth involved in environmental education programs. We sincerely hope that UNEP will provide the basic facility for hosting the conference.



GLOBESCOPE

The Second International Conference on Education and Global Ecology.

October 11-13, 1991; Pocono Manor, Mt. Pocono, PA, USA

Teachers, educator and scientists are invited to attend the Second International Conference on Education and Global Ecology for three days of paper sessions, workshops, panels and delighting in the fall foliage of the beautiful Pocono mountains. If you are interested in global climate change research, and policy and innovations in college and secondary science education, save this time on your calendar.

The conference is sponsored by the U.S. NSF-funded Global Laboratory Project at the Technical Education Research Centers.

If you are interested in attending, write, call or fax **Sara Burke at TERC, 2067 Massachusetts Avenue, Cambridge, Massachusetts 02140. Phone: 617-547-0430; FAX: 617-349-3535.**

INDIAN ASSEMBLY OF YOUTH

The Indian Assembly of youth announces the start of the Indian chapter of Caretakers of the Environment International. Chairman of the chapter is Mr Ravi Dutt. The Indian chapter will present itself at the 5th International Caretakers Conference in Cusco, Peru. For more information contact: **Mr Ravi Dutt, Indian Assembly of Youth, 16, Northend Complex, Ramakrishna Ashram Marg, New Delhi-110 001, India**

ENVIROCON 91

ENVIROCON 91 is an opportunity for educators in environmental areas to:

- obtain up to date information from active researchers,
- discuss environmental education with a group from a wide range of backgrounds,
- be challenged to integrate issues of ethics, culture and politics with environmental science,
- share ideas by contributing to the program

- obtain transferable teaching materials for use in your own classroom or the great outdoors. The conference will take place from Monday, 2 September to Wednesday, 4 September, 1991, inclusive. Cost will be an enrolment fee of \$ 120, and lodging about \$ 61 per day. The conference will be held at LINCOLN UNIVERSITY, Canterbury, New Zealand.

For further information contact: **Betty Shore, Continuing Education Officer, PO BOX 84, Lincoln University, Canterbury, New Zealand. Phone: (03) 252-811, ext 8349.**

EARTHWORKS

Earthworks - Environmental Awareness Resource and Training Handbook is a new and comprehensive resource which offers a total approach to environmental youth work, covering policy development, training and ideas for action.

Earthworks is the result of three years direct experience with young people and youth workers involved in the Council for Environmental Education's Youth and Environment Project. Earthworks is based on and aims to encourage good environmental youth work practice in both the statutory and voluntary youth sectors. You can order from the **Council for Environmental Education, Faculty of Education and Community Studies, University of Reading, London Road, Reading RG1 5AQ, United Kingdom.** The price is £ 7.95 plus £ 2.00 postage and handling.

The waterboard in Sydney, Australia, is coordinating a new program: **STREAMWATCH**. STREAMWATCH provides opportunities for schools and communities to investigate and increase awareness and knowledge of watersystems by providing free water quality test kits to schools in the Sydney area, and modems for schools which want to be part of Keylink, a computer networking system which links to other schools in Australia and around the world. Streamwatch has schools fieldtest the program in 1990 so as to enhance the program for 1991. For more information contact: **STREAMWATCH, Waterboard, PO BOX A53, Sydney South, N.S.W. 2000, Australia.**