The Global Forum for Environmental Education Volume 6, Number 1, Page 2


Colofon

This magazine has been printed by the European Platform for Education, Almeer, The Netherlands.

Frontpage: Murmansk, by Igor Moshkin

The Global Forum for Environmental Education is a publication of Caretakers of the Environment International. The Forum is to be published three times a year. Contributions, articles, drawings, cartoons, pictures are actively welcomed and suggestions are most welcome and invited. Any of the above or inquiries should be sent to:

The Global Forum for Environmental Education

Orema b.v.
Van der Valk, Buitenweg 180 Y
2552 ZD Leiden, The Netherlands

Duplication of this magazine is allowed, provided it is properly referenced.

Editors in chief: Frisja Gravenberch & Arjen Wals, Netherlands,

Editorial Board: Jan Aptekeer, Netherlands, editor
Raymond Jowett, Scotland, editor
Chris Liebert, USA, editor
Kathryn Gravenberg, Canada, editor
CEI Secretary: Joke Wals, Netherlands.

Subscription Information: subscriptions should be paid directly to COTEL, Rabobank Leiden, number 376-896967.

Individuals: Dfl. 15.
Schools: Dfl. 30 (+4 copies)
Library/Institutions: Dfl. 60.

Participants in the annual international Caretakers of the Environment Conferences automatically receive The Forum by paying their registration fee.

Colofon

Esta revista se ha impreso en la Plataforma europea para la Educación, Almeer, Países Bajos.

Pagina de inicio: Murmansk por Igor Moshkin

El Foro Global de Educación Ambiental es una publicación de Caretakers of the Environment Internacional. El Foro se publica tres veces al año. Estamos abiertos a todo tipo de contribuciones, artículos, dibujos, caricaturas, fotografías, etc. y sugerencias a las cuales deban dirigirse a los encargados de las mismas.

The Global Forum for Environmental Education

Orema b.v.
Van der Valk, Buitenweg 180 Y
2552 ZD Leiden, Países Bajos

Se permite la reproducción de la revista. Agradeceremos, sin embargo, que se haga referencia.

Redactores jefes: Frisja Gravenberch & Arjen Wals, Países Bajos.

Anexo Editorial:
Jan Aptekeer, Países Bajos, editor
Raymond Jowett, Escocia, editor
Chris Liebert, EEUU, editor
Kathryn Gravenberg, Canadá, editor
CEI Secretario: Joke Wals, Países Bajos.

Información suscripción: pagos de la suscripción para traslado directo a nuestra cuenta, COTEL, Rabobank Leiden, nº 376-896967.

Prestaciones: individual: Dfl. 15.
Clases (cada 4 copias): Dfl. 30.
Instituciones: Dfl. 60.

Participants in the annual international Caretakers of the Environment Conferences automatically receive the Forum by paying their registration fee.

Los participantes de las conferencias anuales reciben The Forum el primer año, junto con la cuota de suscripción.

Published with the support of:
The Caretakers of the Environment, Canada; Caretakers USA; SLO (Dutch National Institute for Curriculum Development).

1996 conference address:
Sintermeesr College
Valkenburgerweg 219, 6419 AT Hoorn, The Netherlands
Tel: +31-45-71181 or +31-45-711664, Fax: 31-45-716094
e-mail: simonc@glo.tue.nl, tue.nl
Editorial

The ninth Conference of the Caretakers of the Environment in Murmansk has been a most impressive experience for all participants. Katherine Graves from Nova Scotia in Canada, expresses that in her contribution to this issue of Global Forum. At this particular conference, the teachers met twice to exchange their experiences during the 1994/1995 school year. Also initial plans to strengthen international contacts in between future conferences were discussed. The report by Frits Gravenberch from the Netherlands highlights this and invites all of you all to return information which will be circulated in an effort to improve international cooperation among teachers and students.

Preparations for the 10th Conference of the Caretakers of the Environment in Kerkrade in the Netherlands where the organisers face the responsibility of hosting the international group of environmental educators in this country for the second time are in full swing now! Wim Diederik, also on behalf of his fellow organisers, explains the plans the team from Sintermeerton High School has been putting together, so far.

In the majority of Dutch secondary schools, environmental topics are being dealt with in natural sciences classes, mostly. However, recently a group of Dutch geography and economy teachers and German started a project called 'The conflict between Economy and Ecology' in short, jointly with staff members of both the Wittenburgs University of Munster and the SLO (the Dutch National Institute for Curriculum Development) in Enschede. As Frits Gravenberch explains in his contribution, a particular approach for teaching students about conflicting interests between thinking economically and acting ecologically, is going to be field tested in this project which is also sponsored by the EU (European Union).

Jan Apothekeke has decided to resign as chief editor of the Global Forum. Jan is the founder of Global Forum and from its very start the editor in chief. He has agreed though to provide assistance to the new editor in chief during the 'interregnum' and we would like to thank him very much not only for that but also for all the wonderful work he did, which delivered excellent issues of this journal.

Frits Gravenberch & Arjen Wals

Editorial


Preparativos para la conferencia décima de los Guardiánes del Ambiente en Kerkrade en los Países Bajos están en plena actividad ahora! Wim Diederik, también en nombre de sus compañeros, explica los planes el equipo de Sintermeerton Colegio ha sido hablándos, tan lejos.

Un grupo de geografía holandesa y maestros de economía y un grupo de maestros sociales de ciencia en la Munster área en Alemania hubieron como en el enero de 1995 prever un proyecto llamado El conflicto entre Economía y en suma de Ecología, juntamente con socios de personal de ambos la Universidad de Wittenburg de Munster y el SLO (el holandés Instituto Nacional para Desarrollo de Plan de estudio) en Enschede como Frits Gravenberch explica en su contribución en este número, un acceso particular por estudiantes del enseñar sobre intereses del oponerse entre el pensar económicamente y acción ecológico, serán campo probaría en en este proyecto que también es patrocinado por el EC (Comunidad Europea).

Jan Apothekeke ha decidido dimiitir redactor como principal de Foro Global. Ha convenido aunque proveer ayuda a los redactores nuevos en jefe durante el 'interregnum' y nos gustaría agradecer le muchísimo no solamente para ése pero también para todo el trabajo maravilloso hizo, que entregaba números excelentes de este diario.

Frits Gravenberch & Arjen Wals
The Global Forum for Environmental Education Volume 6, Number 1, Page 4

From the International Board

As a grassroots, low-budget organization CEI highly depends on the active participation of its members. The energy of many teachers and students from around the world is now bringing us the 10th anniversary conference to be held in the Netherlands (where the first conference was held in 1987). The Global Forum is already entering its sixth volume. An achievement made possible only by your contributions and of course the dedication and commitment such as displayed by Jan Apotheker who was editor-in-chief for almost five years (thanks Jan!). CEI/Portugal has been working on a CEI-database for quite some time now, the results of which will become available soon. Once again an activity initiated by a very active and dedicated group of people.

The last conference in Murmansk was organized in very challenging circumstances but the organizers succeeded because they were resourceful, inventive and committed to the idea of linking people students and teachers from around the world, in an attempt to link cultural and environmental sensitivity. CEI is extremely grateful to the Murmansk organizers for the memorable conference they put together. We are excited about the prospect of having a Russian branch of our network.

Inevitably the 10th conference will be different in many ways, but the common thread of all conferences -using the host country as a laboratory to investigate environmental issues and concerns and investigating the extent to which these issues and concerns are similar or different elsewhere in the world- will remain. Since it is the 10th anniversary conference we invite participants who have attended other conferences to bring 'artifacts of the past' which could become part of the CEI exhibition (photo's, T-shirts, logo's, etc., related to old conferences).

For 1998 we already have a conference planned on the island of Ireland. However, we have so far been unable to find a site for the 1997 conference. Therefore I encourage anyone of you to seriously explore the possibility of hosting the 11th CEI-conference. Should you be interested please write us and we will send you a package on what it entails to organize such a conference. Let me end by wishing you all a very happy and-if you will allow me to use the word-sustainable 1996. See you all in Heerlen/Kerkrade!

Arjen E.J. Wals (president CEI)

Del Consejo Internacional

Como las raíces de hierba, CEI bajo la organización de presupuesto atentamente depende en la participación activa de sus socios. La energía de muchos maestros y estudiantes de alrededor del mundo ahora nos traen la 10 conferencia de aniversario estar habrá en los Países Bajos (donde tuvo la primera conferencia en 1987) 0. El Foro Global ya entró su sexto volumen. Una realización hizo posible solamente por sus contribuciones y por supuesto la dedicación y compromiso tal como ilustra por Jan Apotheker que era redactor en jefe por casi cinco años (agradezca Jan!). CEI/Portugal ha estado trabajando en un base de datos de CEI por bastante algo tiempo ahora, los resultados de que se hará disponible pronto.

Se organizó la conferencia pasada en Murmansk en muy circunstancias del desafío pero el organizador lograron porque tenían recursos buenos y eran inventivos y constan a la idea de estudiantes de personas del vincular y maestros de alrededor del mundo, en un ensayo vincular cultural y ambiente sensibilidad” CEI es extremadamente agradecido al Murmansk organizador por la conferencia memorable pones juntos. Somos agradecidos de la perspectiva del tener un ramo Russo de nuestra red.

La 10 conferencia será diferente en muchos con seguridad de modos, pero el hilo común de todo el usar de conferencias el país de anfiteatro como un laboratorio investigar punto en disputa ambiente e intereses y el investigar la extensión al cual estas puntos en disputa e intereses son semblantes diferente en otra parte en el mundo quedar. Desde es la 10 conferencia de aniversario invitamos participantes que hemos asistido a otras conferencias traer [artefactos] del pasado el cual podría hacerse parte de la exhibición de CEI (foto’s, camisetas, ‘logo’), etc., se llevó bien con conferencias viejas.

Para 1998 nosotros ya tenia una conferencia contó con la isla de Irlanda. Sin embargo, tenemos hasta aquí estuvimos incapaces de encontrar un sitio para la 1997 conferencia. Por lo tanto animo cualquiera de Ud. seriamente explorar la posibilidad de existencia un anfiteatro para la 11 conferencia de CEI. Le tiene que tiene interés a favor escribirnos y le mandaremos un paquete sobre lo que envuelve organizar tal una conferencia. Dejaste le termino por el desear todo un muy contento 1996. Veale todo en Heerlen!

Arjen E.J Wals (presidente de CEI)
CARETAKERS OF THE ENVIRONMENT INTERNATIONAL

Ninth Annual Conference: Murmansk 1995
“Impressions of the Russian Arctic”
Kathryn Graves

Abstract
The ninth annual Caretakers Conference in Murmansk, Russia had as focus on the survival of the people and the fragile sandy land in the Arctic. Quality of life, production and ecosystem are inseparable. Our mutual environmental security is emphasized in the recommendations set forth at this conference.

Our bus trip from Ivalo, Finland to Murmansk, Russia was subtly spectacular, although the border crossing took much too long. Survival immediately came into play as we had to literally push our bus over a sandy stretch of road that was under construction. It was an eerie experience at 11pm with polar daylight illuminating our way. Returning along the same stretch of road one week later we walked.

It was the ninth international conference of Caretakers of the Environment that brought us to that isolated stretch of the highway last June. The week-long experience found us being lectured to, told stories, sung and danced for, as we soaked-up as much of the place as was graciously served. Meetings with the International Board usually went on until midnight. I think it was one of the most demanding Caretakers’ conferences yet. In many ways the trip was about survival: survival of the people and of a fragile, sandy land in the Arctic. We saw a lot of the Kola peninsula and the paralysed Murmansk Harbour. “Nothing has moved in two years in this harbour,” I wondered: How will these economic factors define the situation in the environment? The people showed signs of great courage as they survive salaries cut in half, diminished commodities and a city that has recently lost half its population with the removal of most military in the region. Making a living is therefore a huge issue.

Benefits to the students and teachers of the Kola Peninsula who attended the conference came by way of naming the “country thinking” that “all is well” when in fact the international presence strongly pointed to the opposite. Assuring ecological security at the national level in Russia is financially impossible as the country goes through a 1930’s-like great depression.

“Quality of life” to the people in this region depends on people’s productivity and includes the objective of zero unemployment. This, I believe, offers a hope for the future in a country of low-end technology where counting on people to be on-site and make decisions is a remembered way of life. Even where forms of production are identified as less than effective (e.g. hot houses and fish hatcheries) the people seem to measure strongly in favour of societal and cultural benefits and are on-hand to manage the outcomes. Environmental degradation appeared in the forms of air pollution, acid rain, nuclear threat, chemical pollutants from nickel production, fish stocks cut by half within the memory of a 70-year-old, unsolved waste disposal, weakness in the protection of natural resources. Successionally, the ecosystem is non-brittle (that is, it should be able to bounce back). However:
- the water cycle weakened by pollutants
- the mineral cycle is not sustainable as the soil in many areas has died due to human activities. For instance, renewal of deforested areas is a huge problem. With neither the soil nor money...
available for restoration, the problem cannot be addressed - the energy flow focuses primarily on nonrenewable, invisible capturing of sunlight: oil, coal, metals
- Natural communities will experience ongoing survival issues as denial and reluctance are coupled with outdated development ideas.

The Russian students identified an old proverb: "measure seven times before you cut" and agreed that this has not been applied to the environmental planning of the area. Indeed, personnel with the necessary skills to perform environmental services seemed scarce.

Any follow-up activity to the conference must be "people-to-people", as money alone will not necessarily reach the grassroots. It is also worthwhile facilitating Russian environmental educators coming to Canada to experience a more pro-active approach. Key field workers have been identified. Further discussions must follow within our own network.

We, Caretakers Nova Scotia/Canada, had support from many in the field of Environment and Education in Canada to be able to attend this conference, and we wish to thank you all very much.
A slide show of the Murmansk conference was held at the Student Provincial Environmental Conference (SPEC) last October. For more information regarding environmental education workshops and resources please contact:

Kathryn Graves
Caretakers Nova Scotia/Canada
Phone: 902-423-4043
Email: graves@duncan.alt.ns.ca

Recommendations from the ninth CEI conference
Murmansk - June 16, 1995
"We, the delegates of the IX International- Caretakers of the Environment Education Conference held in Murmansk Russia, 12-18 June 1995, have observed the fragile beauty of the Arctic - Kola Region and are concerned. We encourage international support for Russia (particularly the Kola Peninsula) in the field of environmental education. We would like to promote community-directed environmental consciousness regarding the fragility of the area. We intend to support the Kola Peninsula in its long-term environmental planning and to advise young people on how they can educate within their communities. We have identified the need for international support in the preparation of environmental education materials. We encourage the Kola Peninsula Community of the Arctic to identify manageable problems in caretaking the environment."

Proclamation of Russian Delegates to the 9th CEI-conference
"We request all people of good will on Earth to support us in helping solve ecological problems. The division between humans and nature has sharpened in this century: forests are dying, rivers are polluted as are oceans, soils are exhausted, species are disappearing and biodiversity is reducing rapidly. Meanwhile people's health is getting worse. Chronic and genetic diseases are on the rise and the life expectancy in many countries is on the decline.

We believe that each country should provide their citizens with the opportunity to live in a healthy environment and to overcome the detrimental conditions some people live in as a result of destruction of their environment. We insist on the restoration and preservation of nature.

We address the leaders of all kinds: let the state of the environment and people's health become a guiding force of all your actions. Economic activity should always be accompanied by ecological analysis. Information on environment and ecology should be available to all citizens.

We address the citizens of our planet: let us all do everything possible to improve the environment of our country.

We address all children on Earth: may you learn in your lifetime to understand and care for nature and the environment."
Abstract
At the '95 conference of the Caretakers the teachers reported their projects during the 94/95 school year and made initial preparations for the '96 conference in Kerkrade, in the Netherlands.

During two sessions at the 1995 conference in Marmande the teachers discussed possibilities to improve information exchange among schools as well as to establish joint preparations for the 1996 conference in Kerkrade during the 1995/1996 school year. It was decided to investigate the following topics.

1. Young Reporters,
The objective here is to pull together expertise available among CEI-teachers in teaching students how to develop skills in conducting an environmental survey and report back the outcomes to the local/regional/national community.
Andrew Cox from Ireland offered to act as a 'liaison officer' and will provide teachers who showed interest with recommendations on basis of his own experience so far, shortly.

2. Comparing Environmental Laws and Regulations
The objective here is to pull together expertise available among CEI-teachers in teaching students how to establish the extent to which environmental laws and regulations are enforced in the various countries exchange the results and make recommendations for improvement. Fred Hall of Canada offered to act as a 'liaison officer'.

3. Successful Didactical Approaches
Over the last years a lot of expertise has been developed among CEI-teachers. To stimulate pulling together all information available Frits Gravenberch and Arjen Wals will send out a format to enable teachers to send in their experiences in a concise format.

Resume:
En el '95 conferencia de los Guardianes los maestros informaron sus proyectos durante el 94/95 año de escuela y hacen preparativos iniciales para el '96 conferencia en Kerkrade, en Los Países Bajos.

4. Environmental Auditing
The objective here is to pull together the expertise available among CEI-teachers in teaching students about the various ways in which people deal with energy and waste. David Clarke Houston from Northern Ireland has offered to act as a liaison officer.

5. Social implications of living in protected areas
The idea here is to collect information on ways in which people live in protected nature reserve areas. Ana Naciano from Portugal has offered to act as a liaison officer.

6. The environmental impact of outdoor recreation
The idea here is collecting on environmental impacts of recreational activities such as rock climbing, mountain hiking, fishing and hiking. So far, nobody has offered to act as a liaison officer.

7. Environmental monitoring of lakes
The idea here is to collect information on ways to monitor the environmental quality of lakes. So far, nobody has offered to act as a liaison officer but we could start from experiences gathered by Norwegian schools and the University of Bergen while using a lake monitoring network.

8. Seeds of biodiversity
The idea is to monitor and improve biodiversity on schoolgrounds by collecting and exchanging seeds that are compatible with the local vegetation. Potentially a network of schools monitoring biodiversity could be started. Isabel Abrams of CEI has offered to act as a liaison officer.
Survey
In a previous mailing we invited all of you to send in information which would enable us to continue and try to start off the information gathering and information exchange. Unfortunately, to date just a very small number of responses got back to us. Therefore, we would like you to copy this page, answer the questions and return the form to us, at your earliest convenience.

Which project(s) will you conduct in the 1995/1996 school year?

A. Title of the project:

B. What are your aims/objectives:

C. Which one of the eight topics are included in your project?

D. What major student activities do you envisage?

E. What other important learning activities do you envisage?

F. Provided that particular theme groups will be established according to the eight themes mentioned, what theme group(s) would you like to join?

G. Are you willing to act as a liaison officer for one of the themes ... Yes ... No

H. If yes, which one:

Please return your comments to:
SLO
c/o Frits Gravenberch
P.O. Box 2041
7500 CA Enschede
The Netherlands
CEDER: CEI '96 CONFERENCE,
Netherlands, June 9-16, 1996
Dick Gebuis

Abstract:
The '96 CEI conference is going to take place in a wonderful historic environment in the province of Limburg in the city of Kerkrade which is located in the south of the Netherlands. Dick Gebuis explains the conference program briefly and invites all of you very cordially to participate in the 10th annual conference of the Caretakers of the Environment International.

At Sintmeerteencollege in Heerlen we are organising the 10th International Caretakers of the Environment-conference for students and teachers from all over the world, that we have called CEDER. This year the central theme will be "Environment and Development". The conference takes place from the 9th until the 16th of June, at the historical Abbey-conference-centre of Rolduc, in Kerkrade. Of course the unique Caretakers concept of joined teacher-student-activities will serve as our framework. But we also try to have participants work on specific investigations, develop concrete solutions to environmental problems and make all kinds of useful presentations. This is why we will be working in seven themes:

1. Industrial Development
   Although it is only part of the solution, many industries and factories in our country are trying to work as environmentally friendly as possible. Logo of Sintmeerteen High School Kerkrade has many enterprises working in all kinds of ways with plastics. It will be interesting to see how they are trying to reduce the environmental problems included in the ways they manufacture their products. Students and teachers will be informed during workshops and demonstrations, visit several firms and debate the results of their environmental policies. At the end they will present the Kerkrade-Environment-Award.

2. Developing Environment
   Humans have a potential to destroy the Earth, but they can also decide to recreate nature, too. The region of our school Limburg, changed from a mining district into an office-district. That means that black places become green again. Dirty black hills of coal were given back to nature. Also on the waterside of the river Maas, many important changes concerning the natural environment are taking place. Challenging issues to hear about, to think of and to work on. For instance by adopting a small spot area near to the school, to create a beautiful landscape.

3. Energy
   We use energy day and night: to manufacture products, to work, to live. Energy is especially a well-known theme, when we think of sustainable and non-sustainable resources. What is the situation like in the Netherlands, how are things changing, how can the attitude of people be changed?

4. Environmental Education
   Schools all over the world try to develop EE-programs and teachers of many different subjects explore how they can pay attention to the world we live in, in their lessons. Here of course we can learn a lot of each other. Participants can try to create for instance an ecological town. They will try to integrate several subjects of teaching, as well as all the different aspects of environmental education and environmental ethics. At the same time they will have to evaluate the different ways to achieve the goals that are set.

5. The Global Neighborhood
   The North may have reached the limits in its economical development, does this mean that the South should not develop anymore? Sintmeerteen has adopted five development-projects from all over the world (in Ghana, Kenya, Peru, Irian Jaya and Bosnia). In this week students and teachers from all over the world are welcomed to work on these projects (after they have been trained in development policy): to advise, to collect money etc. Of course they will end with a big presentation.

6. Art and Environment
   Thinking of the world we live in, is not only reality, but needs also imagination. Imagination in words, in paintings, in art-work, in music. This can improve the awakening of consciousness, but it also can
improve our views on reality. And it helps other people to understand our views when they are reading our words and looking at our images. And above all we can show our relation with Mother Earth. The students will meet writers, artists, painters and poets. They will read a novel about a very nice part of Belgium and will go there with the writer of it. And in the end, they will write, paint and rhyme themselves.

7. Outdoor Re-creation

We like to enjoy ourselves in nature: walking, recreating, sporting. But by going out in big masses, we destroy and wreck a lot. Mountain-bikes, rock-climbers, alpine-champions, survival heroes can become nature’s worst enemies. Participants of this theme speak with specialists, do some research, visit a wildlife park in Germany and work on a recreation-ground at the conference-centre.

For two days we will work in workshops in Rolduc, two days will be excursions. The first official conference-day (10th of June) will be an ice-breaking day. The evening of that day will be spent with the official opening-ceremony. Every evening of the week will include particular social and cultural events. At the end of each day we will mix the groups in order to establish a special type of assimilation in a creative way.

Every day a general-lecture will be given on a particular environmental issue. And of course there will be room enough for free-time and sporting events. The last official conference-day (the 15th of June) will be the day of presentation, reflection, closing-ceremony, dinner and saying goodbye. At the end of a very gorgeous week! A week for everyone who is interested in the environmental issues, but with enough variety to interest also those students who are not a specialist in a particular environmental subject and those teachers who do not only teach the pure ecological topics.

And the most important thing is: we don't invite you to come, sit and think, but we challenge all of you to do something, to be active in a whole range of things. For sure we hope that you will bring your own projects along. And that doesn't mean only projects about our theme. We are looking forward to your well prepared displays as a contribution to a very nice exhibition. We would like to send you special information on the size of your displays in case you have a project on Environment and Development.

Conference Location

We are very happy to have you hosted at Rolduc Conference centre in the city of Kerkrade. Kerkrade there fore is the main conference location. Some activities will take place in Heerlen.

Our high school is located in the city of Heerlen, in the province of Limburg, the southernmost part of the Netherlands. Sintarnemsterencollege is a young, dynamic secondary school with about 1200 students.

Let us join the world in Limburg!
We hope to meet a lot of you at our place!

The conference is meant for teachers and students in upper secondary schools. The students must be 15 years or older. The conference fee will be US $ 200, plus the CEI Membership fee of $ 25, for teachers and $ 15 for students. The conference fee includes all food, lodging and field trips.

Information about CEDER can be requested at:

Sintarnemsteren College
Valkenburgerweg 219
6419 AT Heerlen
The Netherlands
tel 0031/45/5711664
fax 0031/45/5715094.

You can also register for the conference at the above address. Please do so before January 30th 1996 or soon thereafter!
The Global Forum for Environmental Education Volume 6, Number 1, Page 11

CONNECTING CHILDREN TO NATURE
by Marlon Smit
Wageningen Agricultural University
Department of Agricultural Education
Hollandseweg 1, 6706 KN Wageningen, The Netherlands

Abstract
"Pupils need authentic experiences in nature as a basis for developing a connection with the natural environment," as Marlon Smit from Wageningen Agricultural University in the Netherlands reported in his research among Dutch experts in Environmental Education for 8 to 12 year old children. The article offers various examples of so called 'learning contents' which stimulate students to connect to nature.

Introduction
Why is it important that children are connected to nature? I believe establishing a relationship with the natural world is important for developing a broader concern for the environment. As Sales (1989, 13) points out: "We love the people that we are close to because we have developed a relationship with them. We have grown to love them. If children never have the opportunity to develop a relationship with the plant kingdom, they will spend their lives sharing the earth with strangers instead of friends."

Schools can play an essential role by creating situations which allow children to connect and identify with nature, particularly in those cases where the home environment is not able to provide similar situations.

But how can schools contribute to the development of children's (8-12) connectedness to nature? This is the main question of my research. The answers to this question relate to learning contexts, goals, processes and contents. In this article I will focus on appropriate 'learning contents' for environmental education.

To gain information for my research I have reviewed literature, existing theories and the expertise of five people working in the field of environmental education. These participants are educational specialists who work in the Netherlands as teacher trainers, teachers at field study centres and other specialists working directly or indirectly with children.

Resumen
Alumnos necesitan experiencias auténticas en la naturaleza como un base para desarrollar la actitud hacia un Ambiente Natural, como Marlon Smit de la Universidad Wageningen en los Países Bajos informa en su investigación entre educadores sobre Educación Ambiental para 8 a 12 años. El artículo ofrece varios ejemplos de cómo se pueden desarrollar estas actividades.

Learning contents
The concept of 'learning contents' can be distinguished but not be separated from the concept of learning processes. Decisions on content always affect decisions on learning process and vice versa. This is illustrated by the four sub themes the participants were most explicit about.

1. Comprehensive
Nature is a very complex concept and in order to do justice to the complexity of nature the contents of environmental education should be comprehensive. As Marianne (one of the participants) put it:

   "That is why I have never experienced nature in my education, because it is fragmented into a thousand pieces."

In order to become connected to nature, nature has to become part of our daily lives and we should come to realize that we are part of nature, and nature is part of us. Children should be able to experience nature as a whole, only then can they come to experience being part of nature. The participants are in favour of using basic ecological principals, like the water cycles, food chains etc., when teaching about nature, because these subjects show how everything in nature is interconnected and how we as humans are part of this intricate system.

2. Interdisciplinary learning was brought up as a good means for comprehensive study and experience of nature. Interdisciplinary learning projects should include biology and geography, as well as arts, mathematics and music etc. By including many...
subjects in interdisciplinary work, we create room for children's individual interests and abilities. This is important because if you want children to feel part of nature and to care for nature, you will have to make room for their personal interest and background.

Action and exploration
If connectedness to nature, in the sense of feeling part of it and caring for it, is the aim, learning contents should stimulate children to act and explore. Through being with nature, touching it, sensing it we can create a relationship with it. Part of the reason why connecting children to nature is thought important is the assumption that connectedness to nature will lead to responsible action in favour of nature. Children will have to learn how to identify with nature. The best way to learn this is by playing with objects and materials from nature, exploring them and caring for them. Or as Marianne said:

"I believe that children should get the chance to learn by doing things themselves, not just by exploring but also by making things, caring for things and playing with things."

Children like to touch, play and explore. These highly sensual experiences should be used as a starting point for meaningful learning processes. What children discover through these experiences can become a basis for further learning processes during which they anchor and deepen their knowledge cognitively as well as affectively through investigation, exchange of experiences, art, discussion, exhibitions, care activities etc.

All participants plead for more outdoor education; learning about nature in nature. In cases where going out is not possible, they suggest to bring nature into the classroom, e.g. by taking in shells, and leaves, or a deserted bird's nest etc. Objects should be real, because movies and pictures can not be touched or cared for, just looked at. "Hands on" experiences confront children directly with reality. Learning through 'immediate experience' transcends just learning about objects and allows for the development of connectedness and compassion.

In life we learn through experience and discovery. In other words, living is learning. Things we learn through experience often have existential implications. Developing connectedness to nature is also meant to have an existential impact. Connectedness should become a permanent way of being. Therefore learning through discovery is recommended.

In addition to what is said by the participants, experiences should get a follow up. By reflecting on experiences and sharing them with others, first hand experiences become even more meaningful. Sharing also requires an open attitude towards others and by making comparisons children can learn to look critically at their own and other peoples' experiences, opinions and values.

Familiar and close to daily life

Earlier I mentioned that learning about nature has to become part of the daily life of children. Which implies that it should become part of all school subjects. But the contents also has to relate to children's daily life. Children have to be able to relate to it. So talking about the extinction of whales is not very suitable for Dutch children, as it is far beyond what they are able to see and experience in their daily life. The birds in the school garden would be a more appropriate subject in this case.

Of course children are confronted with world problems like pollution, through news media and television. These subjects should not be avoided, but it is important that the problems are brought back to a level on which children can do something about it themselves. As Marijke said:

"I believe that it is very important that children can relate to it. Something like, okay, there are very big environmental problems, we are the cause of them, but if you scale it down to your own level, you can do something about it."
One of the participants also remarked that learning contents should always emerge from the children themselves. In other words, the daily life of children should become a starting point. At the onset of a interdisciplinary learning project, for example, the teacher could ask questions to the children about what is important to them and what their concerns are. When the learning contents is distilled in this way it will be far more interesting and recognizable for children, and they will be more involved with the subject.

Sequential and sustained

"I think it is very important that children are really involved in what goes on in the classroom. That they are really interested and want to know about it. Teachers then should not think in terms of lessons or hours but in terms of processes that they start, and through which children can develop themselves." (Marijke)

Marijke and the other participants made a plea for long term activities, and repetition of activities such as keeping track of seasonal changes. Another advantage of following change is that things alter. Children are more interested in things that change. Static phenomena often remain unnoticed by children.

The participants also indicated that contents should be linked to prior and future activities, in a continuing development. Environmental education often consists of "at random activities" with no seeming connection. Although this is hard to measure, it can be assumed that these kind of activities will not have a long lasting effect. It is very important therefore, to build up activities from the first years in school until the last, and from the first day of the week until the next. If learning about nature is continually present, and activities that are logically linked are repeated, it is more likely that a lifelong effect can be achieved.

Also connecting children to nature is difficult to plan within certain hours because nature is not static. Teachers will have to use possibilities at the moment to try and create connectedness to nature. The chance of finding these possibilities is much bigger when nature is continually present in learning.

Michaél gave an example of a school in England, where a television screen was set up in front of the classroom. A camera was located outside, in front of a bird’s nest and during the whole day the children could monitor what was happening in the nest. When something exciting happened, the lesson was interrupted to give full attention to the bird’s nest. In this case children can not touch the bird’s nest or the bird, and it could be recommended to combine watching the screen with exploratory activities (as was advised with ‘action and exploration’). Children could study an old bird’s nest for example, or try to make their own bird nest from twigs, feathers etc, previously collected outdoors.

A complaint often heard by teachers is that they do not have enough time for long term activities or to work on projects. Since students have to take tests at the end of the year, they feel that they have to transfer a lot of cognitive knowledge and that this leaves them no room for, for instance, discovery learning or interdisciplinary projects. But when connectedness to nature is the aim, meaningful learning is essential in order to achieve a lasting change in attitude and personal growth.

"The senses being the explorers of the world, open the way to knowledge" - Maria Montessori
Discussion
This research was done with 8 to 12 year old children in mind, but is this way of teaching not important for older children, also? Why is it that as soon as we get into higher education, learning becomes almost solely the transfer of cognitive knowledge? Does our ability and interest to explore and using our senses disappear when we are twelve years or older? I do not think so.

Personally I believe that every human being, young or old, should be able to experience nature in many ways throughout life. Both, during most of our stay within the formal education system and during our adult life, we are indoors using only our eyes to read and our ears to listen, other senses are used to a much lesser extent. Can we connect to nature while living such a closed life? According to Cohen (1993, 1995) both the destruction of the Earth’s environment and people’s isolation, stress and dysfunction stem from a fundamental denial of our connectedness to nature. And by reconnecting with nature, not surprisingly, we reverse our disorders. In order to achieve meaningful learning in environmental education, contents has to contain the three H’s: head, hand and heart!

References

Note: This article is a summary of a paper written for a conference on Global Education, organized by the Ontario Teacher’s Federation, which was held in Toronto Canada, in October 1995.

Oh noth - you have waxed your wings
one last time in the candle I lit for reading.
But now I read your pain instead,
Is this the cost of my savoring a few more pages of tale and you,
you sacrifice wing and flight and life?

What other deaths, what other loss to create that candle, that wick, the flame?
is this nothing?
must there always be this cost and I TAKE?

Would it be better for costs to be unknown, distant?
irradiated fish miles from my lamp?
poisoned mountains of coal tailings
so far, that no one watches seedlings struggle
and fail to take root?

massive river obstructions - damned!
salmon crying in frustration as they try to pass,
to taste their home, and spend a final spawn in peace?

Should we not call it the grid of loss,
a constraining net of electrical lines,
chooking the biodiversity to homogenize the land?

Belize, Jan, 1995
Marc Cronwell, environmental writer and educator
NATURE AND HUMANS,

a new approach of environmental education

by Marc Mozzi
Rue du Roc du Midi, Moulin Vent, 66100 Perpignan, France

Abstract
As Marc Mozzi puts it: "A new dimension has to be provided, a sort of invitation to more open and really natural spaces. In this article he sketches a process of development in which the project at his school evolved from conducting water quality monitoring in a local context into developing a new concept 'Nature' as a basis to Environmental Education, while extending contacts from people in your local community to colleagues from overseas.

Introduction
After four years of involvement in environmental education and manifold actions (exhibitions, leaflets, works in the fields promotion of recycling, restoration of a picnic area) the project that we have called 'S.E.A.U.*' enters now a new stage. The success of the previous actions of our group which is also a member of the French Foundation Nicolas Hubert par la Nature et l'Homme was a triggering factor for the setting up of a new type of school subject in the third and fourth year, specifically oriented towards environmental education which has become as elective as-for instance Latin. The local representatives of the Ministry of Education gave their approval and a two hour period included in the time table for a multidisciplinary approach of the environment (Biology, Humanities, English, French, arts). For us, it was clear that environmental education had to lean on a specific administrative and educational structure.

International cooperation
This new structure enabled us last year to concentrate on the survey of the riverbanks, the wildlife and the quality of the water of the river and to exchange data and documents with other French schools and a school in Colerain in N. Ireland. It also allowed partners to take part in the project and come into the school, so much so that the people in charge of the irrigation canals of the valley soon connected and asked for a two-way exchange and partnership whose first stage was to restore a picnic area around a fountain along the river and the canals; it took a long time clearing the walls and the ground from weeds and collecting the cans of beer bottles, plastic bags...

The nature trail
Little by little, our survey of water lead us to concentrate on the canals themselves, their history (back to the 9th century), the way they are used, their management, their role. And we naturally came to make propose to present them, to introduce them to the local population and the tourists (in French, in Catalan and in English) and to ask for respect. Then the idea of setting up a natural trail around and across the river came to our minds and this is the next stage, a new dimension. That trail would allow people to walk along the canals which are of real interest, then along the river and its dramatic scenery at the foot of hills covered with trees, garrigue and pach-brool, then the trail would cross the river on a little bridge and lead to an abandoned 13th century church and hamlet, where we are planning to grow a Mediterranean garden; then back to town along the other bank along a lane overlooked by the famous 'cheminées de fée' (a little 'Colorado like' scenery). Penetrate will introduce the...
wilde life and natural and cultural heritage of the place as well as they will urge to respect the environment.

Community resources

Such a project demands a lot of support and experts. The contacts we had in the last few years, the dissemination of our project lead us to create an association 'AU FIL DE L’EAU', gathering our students and different people such as firemen, responsible people from other local associations (e.g. culture, pottery), local developers, environmentalists and councilors.

The development of a project, the credibility of a group of people working on a project requires an structure such as an association which is able to promote, fund and implement an idea or plan efficiently. This is the only way to make the policy-makers pay attention to you.

Concepts of nature

We were quite pleased with the project, quite hopeful and enthusiastic. But very quickly, another idea, another question emerged: is the setting up of an area oriented towards the presentation and preservation of nature a real representation of nature? The concept of nature nowadays in our modern societies may be summarised in the three following statements:

- Nature is pure and essential for humans needs it, they use it for their every day, their health and the development of industry and agriculture.
- Nature is polluted, in danger because of man and industry; so it must be protected from man and looked after.
- Nature also and often represents a danger to humans in a period when modern man can’t do without comfort, protection, safety and assistance; so this danger can’t be accepted. So humans are tempted to give nature a rational order, to domesticate it, to enclose it into parks, reservations etc... That way, nature seems at the same time domesticated and protected. But is it really nature?

Discussion

If we accept the idea of nature as something which is not the result of a human will or decision or action, the question emerging then is: What can we do first, to protect the areas which are not natural? What can we do secondly to urge people to connect to it and to respect it?

An example which is quite telling: in a protected area in France, signs invite people to remain on the signposted paths and lanes, as in a museum or a cemetery. Will nature become a huge elephants! cemetery or a sort of Euro Disney with eco Mickey’s as guides or curators? One of the ways may be the raising of the consciousness of nature as living on its own and the development of emotional responses to all the situations we can deal with in a genuine natural environment; astonishment, fear, admiration, expectation, solitude which are the first steps towards respect and self-fulfilment; feelings you can’t have in a park or a reservation (at least not in Europe). In the end we all knew that it was not enough to set up a ‘nature trail’ for pedestrian and mountain bikers. A new dimension has to be provided, a sort of invitation to discover more open and really natural spaces. Places where people have their place if they respect life. That is a new dimension given to environmental education which is slowly emerging. The main issue is to bridge the gap between the purely local project oriented towards the preservation of the environment and the wider philosophical concept of the concept of nature on planet Earth.

On our modest and humble level, the only way we found, apart from ‘green classes’, was... another signpost maybe. We don’t know exactly what there will be on it; so your suggestions will be welcome. Anyway, we know it will only be the first stage of a new type of local action based on a philosophy of harmony, respect, action and self-fulfilment.
Environmental Briefs

Northern Call for the Environment
International Conference on Environmental Education, Savoelinna, Finland, June 26-30, 1996

The Conference will be a discussion forum and a learning arena for Nordic and other developers of environmental education. Its idea is to penetrate and reflect new innovations of constructive theories of learning and teaching in environmental education. The Conference will focus on three specific themes.

Objectives
- to present and discuss Nordic advancements in environmental education
- to find out ways to raise the quality of environmental education
- to mediate experiences of good teaching practices
- to intensify the multiplier effect of innovations in environmental education through active cooperation between European countries

Themes
- Conflicting interests in the use of natural resources (Initiative of the Nordic Council Ministers on environmental education)
- Ecologically enlightened life styles (the country of St. Michel is a demonstration region for the implementation of Agenda 21)
- Landscape as a dialogue between nature and culture

Program
The program consists of speeches, presentations, workshops, discussions and visits to environmental research centres. On its main elements is to share experiences of the Nordic project of environmental education which has been implemented in all five Nordic Countries since 1991.

Further Information
Liisa Häskeläinen
Phone +358-0-7747 7267
Telefax +358-0-7747 7869
E-mail liisa.jaaskelainen@oph.fi

Water, Water Everywhere, But ... Where's Everywhere?

Water, Water Everywhere, But ... Where's Everywhere? is an integrated curriculum designed with real-life lessons that students will relate to their everyday lives. It's format includes comprehensive lessons that build upon each other and allows experiential learning to occur. Designed to be used as an integrated curriculum, each area can be used separately. However you decide to use this unit, one thing is for sure: You and your students will have a great time learning!!

This integrated unit:
- includes complete lesson plans for all subject areas.
- includes assessment tools.
- includes daily readings related to learnings in all subject areas.
- includes outline pages for planning.
- builds on learnings from other subjects so that students receive 'linked learnings' instead of 'learning in isolation'.
- is designed around today's real-life concerns: What do we do when our water runs out? And how do we protect and keep our water supply from pollutants?
- is designed for all subject areas and includes ways to incorporate the related arts subject areas.
- can be used in individual subject areas: math, science, social studies, language arts, and reading.
- includes motivational strategies and techniques that empower your students to want to learn.
- is user-friendly.
- uses proceeds from the sales to support water education projects.

Further Information
PKI EcoPublishing
P.O. Box 210
Hackett, AR 72937-0210
United States
Environmental Briefs

The first Pan-African Wildlife Club Generator

The African Wildlife Club movement (WCM) started in Kenya following a seminar in Tsavo National Park in 1968; since then the concept has spread not only to many African countries but also to other parts of the world.

In Africa, the WCM is often the prime vehicle for communicating messages about environmental conservation to large numbers of young people. After more than two decades there is a wealth of experience and expertise covering all aspects of Club activities, administration and management. A pooling of resources would allow not only the well-established groups but others just starting out to benefit from this wealth, sharing successes (and failures) and avoiding ‘re-inventing the wheel’.

ICCE is planning to bring together key Wildlife Clubs organizers from a number of countries for a ten day Wildlife Club Generator in Africa during 1995. It will culminate in a 3-day writing workshop to produce the first Wildlife Clubs Handbook, a potentially valuable and innovative resource which will be useful not just in Africa but which can also be readily adapted by Clubs in other parts of the world.

The proposal has so far received enthusiastic endorsement from Club leaders in Zambia, Botswana, Kenya, Tanzania and Zimbabwe as well as from the African Wildlife Foundation, IUCN East Africa and the Royal Society for the Protection of Birds. ICCE is currently looking for both a venue and for sponsorship to enable the Generator to take place, and would be delighted to hear from anyone who would like to be involved or offer financial or practical support.

Further information
Mark Boulton, ICCE Director
Greenfield House, Gilling Power UK - Cheltenham
GL54 5TZ

Reef Alarm Phone

What is the Reef Care Alarm Phone?
The coral reef, source of all life in the waters surrounding Curacao and pillar of Curacao's economy, is rapidly disappearing. With the help of volunteers and supporters, Reef Care Curacao wants to prevent the coral reef from disappearing in the next 20 to 40 years. To accomplish this we need your help.

The Reef Alarm Phone is a telephone number where all violations against the reef as well as peculiar events can be reported. The reports are kept up to date in order to get a better view on the problems the reef is facing. So make use of the possibility to help save Curacao’s most unique environment for the future.

For example, in case of:
- anchoring on the reef
- dumping of waste
- spearfishing
- killing of sea turtles
- sighting of a rare animal
- coral or sponge spawning

Further information
The Reef Alarm Phone
Reef Care Curacao
Netherlands Antilles
Tel/Fax: 599-9-368120

Implementation of Environmental Education in the Community, CEPE '96, October 22-27, 1996, Harnosund, Sweden

The fifth Conference on Environmental Education in Europe welcomes teachers, educators and in-service training managers from schools and NGO’s as well as from public services, business and industry. Central in the conference will be the challenge of developing community-based Agenda 21’s and to reflect on the achievements in this area since the Rio-conference.

Further information
CEEPE '96, KIC & Mid Sweden University
S-871 88 Harnosund, Sweden
Fax: +46 611 86160
E-mail: Rune.Wikstrom@sth.mh.se
Environmental Briefs

EE activities in Africa
by Aysefa Teshome Gibe

I believe that Caretakers of the Environment International is an organization that is fully committed to make mother earth more habitable for life on it to sustain and further assure its sustainability to continue developing the quality of life everywhere on it. I am convinced that this noble idea can be translated into reality only and only if the world community is able to speak the same language concerning environment and environmental issues.

One of the important ways designed to bring this into reality is by participating through the media of the International Conference annually organized by Caretakers of the Environment International, by contributing relevant articles to the Global Forum and, most importantly, by creating acquaintance and friendship among and between delegates everywhere. I am a lover of nature myself but I learned and understood more about the overall environmental problems and the far reaching destruction on life overshadowed our planet from the 1994 4th Conference held at Dyce Academy in Scotland. There the delegates agreed and pledged to contribute their own share towards the fulfillment of the objectives of Caretakers of the Environment wherever they are.

Current Activities in UN Region 14

- In moving towards the fulfillment of the objectives of the conference, the Caretakers have been doing the following activities in my region:

- I tried to explain the main objectives of Caretakers to UN’s region 14 Education Bureau officials and school directors to understand and do all they can to implement these objectives.
- First we formed Nature Clubs in each of the 25 Technical and Academic senior secondary schools in the region. Then we continued forming Nature Clubs in the 52 Junior secondary schools where there are 1200 teachers and 49,544 students.
- We prepared Club guidelines and we made each Club from its own Committee to run and manage environmental education programmes in their respective schools.
- I prepared and submitted projects requesting financial and material support for the schools’ Clubs. With the help of the materials and money the clubs obtained they are teaching the students and undertaking consistent environmental education programme activities. The result is remarkable.
- A three day training workshop was organized and conducted at region level from May 25-27, 1995 to teachers and students who are Club leaders and coordinators from the 25 senior secondary schools and experts from education bureau.
- Those who participated in the training workshop at Regional level in turn gave training workshops at school level in their respective schools for teachers and students in each of the 25 senior secondary schools in Region 14.
- To make the teaching of the Clubs more meaningful and practical in our region we selected 6 junior and 6 senior secondary schools to serve as experimentation and demonstration schools for the rest of the other schools in the region. We arrange visits and exchange of programmes among and between the schools for further developments.

Participants in a reforestation project in Sierra Leone.
EE in Africa (continued from pg. 19)

- We supply the Clubs with relevant video and audio tapes as part of teaching to students through the schools mini-media for strengthening and developing the school club activities.
- We are about to finish preparing a source book on environmental education programmes for the schools in our region. This book will help students as well as teachers to understand and appreciate their immediate and remote environments.

Moving towards sustainability

All the activities listed and explained above are also being carried out in different parts of Africa. In order to strengthen and develop EE activities in our region, we do and repeat these activities annually. This, no doubt, paves the way for sustainability in the region - in our country. My love for nature, the Aberdeen conference in which I participated, the Global Forum on EE materials and the FAO have committed us to further increase the volume of our activities on EE in the region in particular and the expansion of EE activities anywhere and everywhere in general. Thus, we can fairly say now that the 'Caredalers' has begun developing in our region through the process of changing the traditional outlook of people on their environment. We are helping people, especially the youth to understand the wider meaning of environment, to use it wisely, to develop it and finally pass it to the new generation. Our life on earth will be meaningful only if we succeed to develop this culture wherever we are.

Further information

Asfaram Tekbesraw Gebre
P.O. Box 33 198, Addis Ababa
Ethiopia

Clean up the world

One of the most significant developments of Clean Up the World since 1993 has been the increasing variety of activities. Organising Committees have introduced in their local communities, Clean Up the World is not just about removal of rubbish, it is about empowering individuals and communities to do something positive for the environment and create a strong awareness of environmental issues which will lead to action.

To Participate

You must officially register to take part in Clean Up the World 1996. Re-registration from 1995 is not automatic. Please apply for Request for Details forms as soon as possible to ensure early delivery of the 'How To Do It', and be recognised in the final Report. Make sure you...
- Form an Organising Committee (join with other registered Committees in your area).
- Return Letter of Understanding, Request for Initial Details & Local Media contact forms.
- Contact local municipal government, local business groups and youth groups and seek their support for the campaign.
- Identify clean-up sites and other project.
- Send regular updates to CUW Headquarters (include media cuttings and photos).
- Notify CUW headquarters if you need assistance.
- Return any Questionnaires or other forms sent out from this office as soon as possible.

Further Information

Clean Up the World Pty Limited
c/o E.Harris Street, Pyrmont Sydney
NSW 2009 Australia
Tel: (02) 922 0700 Fax: (02) 922 0761
E-mail: cuw94@peg.apc.org

Pollution Stinks!

Pollution Stinks is the title of CEl-president Arjen Wals' book on young adolescents' perceptions of nature and environmental issues. A Swedish/Dutch publisher OPULUS Press is now distributing the book. At the center stage of the three year study documented are children age 11-13 from some of the poorest areas in urban USA. A main thesis is that these people who are most directly exposed to environmental threats are also the ones who receive little environmental education or education for change. Environmental education should beware of becoming elitist. How can environmental education better build upon the lives, perceptions and ideas of young people? The book (244 pages, 24.95 US $ includes shipping and handling) is full of anecdotes, descriptions and curriculum ideas. For an order form write: OPULUS Press, Valk Buamaweg 180, 2352 JD Leidschendam, Netherlands Fax: +31 71 5890 68.