
Editorial

EE

B

u

|

|

e

t

i

n

no

23

A

u

g

u

s

t

2

0

0

2

The 20th Environmental Education Association of Southern Africa (EEASA) Conference, “Environmental Education Processes for Sustainable Development”, is just around the corner! The Conference begins on 18 August and runs through to 21 August 2002 in Gaborone, Botswana. EEASA has come a long way since its inception 20 years ago in a small farming town in KwaZulu-Natal. The theme for this years EEASA conference coincides with the World Summit on Sustainable Development (WSSD), which follows closely. The recommendations made during the EEASA conference will contribute to the environmental education processes discussed at the Summit and Governmental and Non-Governmental bodies, at the Summit, will be addressing the environmental crisis facing the world at present. This World Summit is a follow-up to the Earth Summit held in Rio de Janeiro in 1992. It will be interesting to learn of what changes have taken place and how many issues raised those some ten years ago have been addressed.

The first article from the Ministry of Environment in the Seychelles, refers to environmental commitment that has been taking place over the last ten years and the management plans and projects that have been implemented. The three articles following this, reflect on the Eco-Schools programme and the recent Eco-Schools workshop held in South Africa. These are articles by Mmaphefo Seleke from Botswana, Immaculate Kijjaggulwe from Uganda and Jayantee Naugah and Khemraj Sooknah from Mauritius. Bridget Ringdahl reports on *Sanitation Works?*, particularly in response to the outbreak of cholera in areas within South Africa. Bridget looks at learning support materials used in visits to various schools in KwaZulu-Natal.

Congratulations is in order for the Ecological Youth of Angola (JEA) as they were awarded the prestigious UNEP Global 500 Award. JEA has been committed to work in the environmental field since 1991 and are therefore deserving of this award. Alberto Mendes reports on this event in Portuguese. Sanele Cele has written an article about our past, present and future state of mind. Sanele discusses how our history has affected the various lifestyles we lead today and challenges our state of mind with valid concerns. The School Environmental Policy Project is a Botswana NETCAB project which Doreen McColaugh reports on. This makes note on how the National Conservation Strategy (NCS) has been influential in environmental education in Botswana and has encouraged ministries for support.

In Judy Mann-Lang’s recent visit to the Zoo School in the United States of America, Judy is able to share with us the goals and proceeding of the course attended. The article from UNEP speaks of the important role ecosystems play in the sustainable development of our environment. This has been condensed into the *World Atlas of Biodiversity*.

The course developers’ network of the SADC-REES is up and running as reported by Helen Springall Bach and Justin Lupele. The course developers met at Rhodes University to put the network into place and it involves various education institutions in countries within the SADC region. To recognise World Environment Week, the City of Cape Town hosted a Youth Environmental School (YES) Programme. This is reported on in our second-to-last article. In our final article Vlady Russo suggests the need for journalists to develop a critical eye when it comes to documenting events.

There are, and have been some exciting developments and regionalisation taking place within the SADC region. These EE activities are noted on pages 30-31 and cover various Attachment Programmes as well as international courses and workshops held.

The resource on *Indigenous knowledge & education*, compiled by Rob O’Donoghue and Helia Lotz-Sisitka, shares a collection of occasional papers relating to indigenous knowledge, with its readers.

With two major environmental conference about to happen in the next few weeks, 2002 proves to an interesting and challenging year in terms of addressing the environmental crisis.



Contents

ARTICLES

Seychelles' Commitments to the Environment.
Ministry of Environment **3**

Workshop on Eco-Schools Partnership in Africa.
Mmaphefo Seleke **4**

School Environmental Education Programme in Uganda.
Immaculate Kijjaggulwe **5**

Environmental education networking at regional level for sustainable development.
Jayantee Naugah and Khemraj Sooknah **8**

Sanitation works?
Bridget Ringdahl **10**

JEA vence prémio do PHUA Global 500.
Alberto Mendes **13**

The state of mind: The past, today and the future.
Sanele Cele **14**

Hopes for Botswana's NETCAB School Environmental Policy Project.
Doreen McColaugh **19**

Zoo School USA.
Judy Mann-Lang **21**

Wildlife Atlas Underlines Vital Role of Ecosystems in Reducing Poverty and Delivering Prosperity ahead of the World Summit on Sustainable Development.
UNEP **24**

Course Developers' Network Up and Running.
Helen Springall Bach & Justin Lupele **26**

City of Cape Town hosts a Youth Environmental School (YES) Programme.
YES **28**

Developing a critical eye.
Vlady Russo **29**

EE EVENTS IN THE SADC REGION

Attachment Programme in Portuguese for Mozambicans. **30**

Special Attachment Programme in Botswana. **30**

Rhodes University / SADC International Certificate in Environmental Education **30**

World Summit on Sustainable Development. **30**

Gold Fields Course Leading to the Rhodes Certificate in Environmental Education **31**

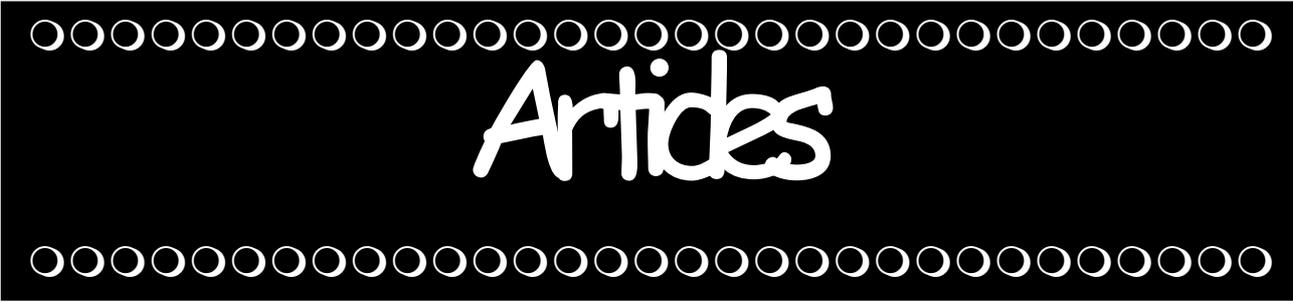
Eco-Schools Partnerships for Africa Workshop in South Africa a success. **31**

Environmental Education Processes in Formal Education. **31**

RESOURCES

Indigenous Knowledge and Education **32**





Seychelles' Commitments to the Environment

The Government of Seychelles is strongly committed to a sustainably managed environment, which is the foundation of the economy of the country. Plans and projects have been implemented in the last 10 years targeting issues of global and local significance.

Key principles guide the sustainable management of the environment of Seychelles: The **Constitution** states that it is the right of every person to live in and enjoy a clean, healthy and ecologically balanced environment. **Agenda 21** formulated at the Rio Earth Summit has guided the preparation of the environmental management plans. Seychelles has signed most **international agreements and treaties**, and was, for example, the second country to sign the Convention on Biological Diversity.

To put these words in action and to prioritise and organise projects, management plans have been prepared. The **first Environment Management Plan of Seychelles (EMPS)** covered the period **1990 to 2000**. It was a joint effort of the Government of Seychelles, UNDP, UNEP and the World Bank. The plan presented to the donors in a meeting in Paris in February 1990 raised pledges of

US\$40 million. Ten years later about 90% of the projects were implemented. The **second Environmental Management Plan** covers the period **2000 to 2010** and was prepared with the assistance of the World Bank, but largely led and driven by Seychellois. It is now being implemented.



A product of the first EMPS, the **Environmental Protection Act** was enacted in **1994**, with additional legislation progressively put in place covering a wide array of environmental issues, including noise emission standards, solid waste, removal of sand and gravel, protection of trees, etc. It gave the legislative framework for the proper use of natural resources and the management of the environment.

Actions taken by the Government of Seychelles with the assistance of the civil society do not only focus on issues of

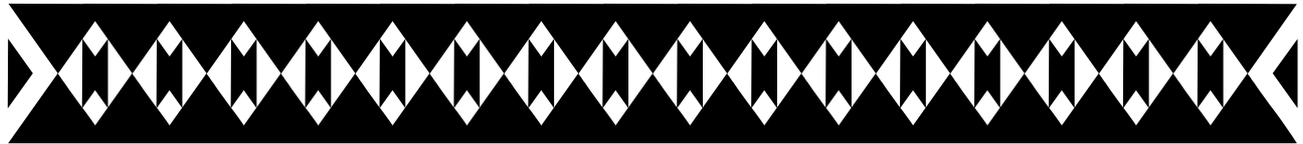
global importance. There is a strong commitment towards ensuring that every Seychellois benefit in their everyday life of a **clean and healthy environment**.

Environmental education has been introduced at all levels of the national education curriculum. Solid wastes are now disposed of in a professional manner. Sewerage systems are being extended and water is now treated before reaching the sea.

Detailed Environmental Impact Assessments have to be produced and approved by the Ministry of Environment before any major developments (industrial, tourism) can proceed further. Regular monitoring and inspection will not only take place during construction but also during the operation phase to make sure that engagements are respected and to provide guidance in order to minimise the impact on the environment.

*Contribution from the Ministry of Environment, Seychelles.
PO Box 445, Victoria, Mahe
Tel: +248-224644
Fax: +248-224500
E-mail: lena@seychelles.sc*





Workshop on Eco-Schools Partnerships in Africa

Mmaphefo Seleke

The International Environmental workshop was held from 11-14 June 2002 in Hilton, South Africa. It was about the Eco-Schools programme and Local Agenda 21. The workshop was attended by more than 28 senior government officers in charge of environmental education processes in their respective areas, as well as senior staff of Non-Governmental Organisations.

The participants are active in promoting and implementing Environmental Education in both formal and non-formal Education systems, in Eastern and Southern African Countries. They have the potential capacity and are very active in the implementation of Agenda 21. They are intrinsically motivated towards environmental education for sustainable development within their respective countries. That is, countries need to be well developed without interfering with the ability of future generations, to meet their own environmental needs.

There were several objectives stipulated for the workshop such as, to establish good networking to extend the programme on Eco-Schools and make good links between school initiatives and Eastern Africa.

The workshop was organized



Seleke with her colleagues Sesanyana and Sengalo.

and sponsored by the following:

- United Nations Environmental Programme
- Foundation for Environmental Education (FEE) in co-operation with Share-Net
- South African Development Community (SADC) Regional EE Programme
- Kenya Organisation of Environmental Education

The resource persons for the workshop were from Africa, China, Denmark, Germany and Portugal.

The workshop was well organised and the participants were divided into three main groups in which each had a topic to work on. The participants worked hard and managed to produce draft guidelines for Eco-

Schools in Africa. The draft will be edited and when completed it will be used during the establishment and implementation of the Eco-Schools programme in Eastern and Southern Africa. There were presentations of country papers by the participants.

The participants were taken out for a drive and saw beautiful places such as Howick and Durban. The most interesting place visited in Durban was the Sea World Education Centre. The participants received certificates of participation.

Mmaphefo Seleke works for the Department of Teacher Training and Development in Botswana and she can be contacted at:

Tel: +267-328351

Fax: +267-328382

P/Bag T01, Tlokweg,

Botswana



School Environmental Education Programme in Uganda

Immaculate Kijjaggulwe

The School Environmental Education Programme (SEEP) in Uganda works on the same principle as the Eco-schools programme in Kenya and Europe. It started in 1996 and is coordinated by the National Environment Management Authority (NEMA).

SEEP was piloted in six secondary schools following a whole school approach and has spread to over 3 000 schools in selected districts (19 out of 50) throughout the country.

Environmental Education (EE) in Uganda is entrenched in the Constitution of the Republic of Uganda and several enabling policies on Environmental Education have enhanced the progress. Through EE activities, the school community is made aware of the value of the natural environment and its resources and is encouraged on the basis of this awareness to play an active role in the environmental conservation process and sustainable development.

One of the components for SEEP is the school community link where schools carry out common activities with the parents, surrounding communities, local authority, private sector, NGOs and any other interested parties. Other areas of school life that promote EE are utilized e.g. school open days,



Immaculate Kijjaggulwe

regulations, sports, drama, festivals, clubs and so on.

How does SEEP work?

After attending in-service teacher training in EE, the participants from different schools are given the guidelines to facilitate the development of the SEEP in their respective schools. An EE coordinator is appointed by the school.

An EE committee comprising of teachers, pupils, local councillors, support staff, parents and a school management committee representative, is formed.

An Environmental Education coordination structure is determined with representatives from each group and school

administration office as the overall managers.

Goals, objectives and operational guidelines are set in consultation with other sectors in the school e.g. club leaders, patrons, school projects, class teachers etc.

An Environmental Audit is carried out by members of the EE committee and other interested groups. Audits normally include water sources, plants in the school compound, waste management, general sanitation, cooking facilities, safety on the compound and others.

Based on their findings an environmental action plan is developed spelling out the activities, time frame and resources required i.e. man-power, materials and finances. An action plan is then implemented.

Monitoring and Evaluation activities set off immediately as the implementation starts.

The schools are required to document, share and disseminate their successes and challenges.

The National EE Co-ordinator (NEMA) receives and compiles reports about the school activities. They are included in the NEMA newsletter. Some schools have their own newsletters and brochures.

Some successful EE activities in schools.

Gayaza High School (girls only)

Gayaza High School medicinal and herbal garden and woodlot projects.

A conservation project involving students and members of the local community in which over three hundred plant species with medicinal values have been planted.

The students obtain the information from people in the community hence utilising indigenous knowledge. They record, document and share the knowledge with other students and people who visit their school.

The school carries out clean-up activities at a trading centre and spring wells within the surrounding communities. The Environmental Education club also investigated the energy consumption especially in the kitchen. The findings have helped the school to install energy saving stoves and to start a woodlot project, which has helped them to reduce the amount of firewood used, and the general overall costs of energy consumption. The students are also practicing “switch off all unnecessary lights” and “close all taps after use” which is a behavioural change.

Kings College Buddo (boys and girls)

In assemblies and school functions, the head teacher highlights different environmental themes, and students read environmen-

tal news. They have routine inspections of classrooms and houses and award prizes to the cleanest house and classroom. The students manage the compound and go on sponsored visits with the teachers to farms. EE is integrated in the course of work by the heads of departments and the estates department takes care of the buildings and planting of trees. The students taught a class of women how to read and write and how to prepare balanced meals. Dustbins have been placed around the school in strategic places.

Students with their teachers have collected and recorded, some indigenous knowledge about planting, seasons, and taboos that promote environment conservation and food security.

Mt. St. Mary’s Namagunga (girls only)

a) “Operation soil conservation” in which:

- Bare areas in the compound are planted with trees
- Water from roof tops is harvested in tanks
- Buried verandas were reclaimed.

b) Hedge rehabilitation and compound maintenance. This stopped trespassing and the lawns are evergreen.

c) Waste management project in which waste is sorted into biodegradable and non-biodegradable at the source and utilised in different ways. This project earned five students and two teachers an opportunity to

attend a 21st century schoolhouse environment summit in Perth, Australia 1999. This project has spilled over to the neighbouring Kigalamizi community through a women’s group.

d) Training. Members of the school on the Environmental Education committee in conjunction with Mabira Forest eco-tourism project organise and train teachers of the primary school in and around Mabira forest. They also organise competitions in environmental conservation and festival activities in these schools. The activities include drama, music, dance, arts and crafts, nature walks, EE material development, good sanitation and compound management.

e) The “AQUATOX” project is a project in which simple water quality – monitoring tests are carried out by students on water samples from the school and community spring wells. The findings are documented and disseminated to communities and authorities.

The students supervise these activities right from senior one to six through the Ministry of self-reliance headed by a minister in senior six. There are representatives in each of the classes. Individual winners are awarded weekly while winning classes are awarded at the end of each term.

In Iganga District in Eastern Uganda

SEEP in Iganga District is spearheaded by the Education





departments and the District inspectors have ownership of the programme. All the primary schools and a few secondary schools participate in an annual environment competition.

In addition to compound management and proper sanitation requirements they have a theme for each year for example in 2001 the theme was, “Indigenous knowledge promotes environment conservation and proper management of the environment.” Pupils had to collect as much information as possible. The schools represented their findings in form of drawings by children, arts and crafts, poems, songs and simulations, drama, stories, and charts especially for medicinal plants and fire resistant plants. They come up with by-laws to enforce conservation of the environment.

The schools are awarded a trophy and a flag. All participating schools received gifts and certificates of participation. The gifts are donated by NEMA.

During the last award ceremony a number of stakeholders were involved and the children managed to establish their leisure park in Iganga town. They planted fruit trees, ornamental and shade trees, flowers and grass. The children are taking care of the park with the help of the municipality.

Kampala District

The environment competition is managed by an NGO – Living

Earth Uganda. Entries are sought from the primary schools and the theme entirely depends on each school. Living Earth Uganda visits the school to assess the existing conditions and then offers technical support where it is required. Entries vary from compound management, proper sanitation, income generating activities, raising nursery beds, mushroom or vegetable growing, establishing woodlots, proper waste management etc. The entire school is encouraged to take part but in some schools they form environmental clubs or operate within the existing clubs like Wild life, Interact, Young Farmers, Boy Scouts and Girl Guides.

The competition is meant to make the youth learn to manage their environment through practical programmes increase the level of environmental awareness, knowledge and change of attitudes and practices of pupils, teachers and communities in the schools and surrounding areas.

Entries of the different schools are evaluated in different phases and criteria for the final phase is:

- Overall improvement on the school environment as a result of participating in the competition.
- Level of participation of the teachers, pupils in the school project.
- Level of beauty and neatness added to the school environment. Since the school got involved in the competition.
- Application of knowledge learnt in the class and put into

practice in the work place.

- Involvement of parents, communities and others.

Green Hill Academy (boys and girls)

This is a model school in EE and has an EE resource centre with numerous materials. They have a good waste management system, a green and clean compound and other environmental activities.

Some of these activities include tree planting, vegetable growing, rabbit keeping, pond and playing field upkeep etc.

The school is located in a former garbage-dump site for Kampala City Council. They have worked with neighbouring communities, the private sector, organisations, small businesses, parents and well-wishers, to construct a road leading to the school on a drainage channel and to clean up the garbage.

They have received a number of environmental awards, put up exhibitions and demonstrations during National functions and hosted many visitors and school groups.

The Eco-School programme is a must for all the countries because it is the only way of reaching the children, which is our hope for sustainable development.

*Immaculate Kijaggulwe works for Living Earth Uganda and she can be contacted at:
E-mail: livingearth@infocom.co.ug*



Environmental education networking at regional level for sustainable development

Jayantee Naugah and Khemraj Sooknah

Introduction

Over 30 participants from various Southern African Development Community states namely Botswana, Lesotho, Malawi, Seychelles, South Africa, Swaziland, Zimbabwe, Mauritius, Tanzania and east African states namely Kenya and Uganda attended this brainstorming focal workshop which is likely to initiate a new vision and culture in the practice of EE.

The Eco-Schools workshop was organized jointly by the United Nations Environment Programme, Foundation for Environmental Education (FEE) and the Wildlife and Environment Society of South Africa (WESSA) in a pleasant hotel, near Howick, South Africa (10th to 15th June 2002). The workshop was opened by Mr. Ramotse from the South African Ministry of Environment and Tourism.

The necessity to bring together professionals concerned with Environmental Education within the Region of Southern and Eastern Africa was highlighted by various speeches made by Dr Jim Taylor, Vladimir Russo, Levis Kavagi from UNEP and supplemented by a message from Dr. Razeena Wagiet, Environmental Adviser to National Minister of Education. Following the country presenta-



Khemraj and Jayantee during the Eco Schools workshop.

tions on EE by Sérgio Santos from Portugal, Heiko Crost from Germany and Dr. Youhua Liu from China gave lectures on the historical development of Eco-Schools in their respective countries.

The Eco-School Project with the collaboration of Foundation for Environmental Education, as stated by Sérgio Santos and Heiko Crost, has been a huge success in 25 European countries where over 7 000 schools have successfully undertaken activities to improve their respective habitats and environment.

The objectives of the workshop were:

- To identify appropriate institutions/organisations to adapt and implement the Eco-Schools initiatives in eastern and southern Africa countries by sharing similar initiatives and successful national and regional programmes.
- To discuss and design appropriate guidelines to support Eco-Schools implementation in eastern and southern Africa sub regions.
- To further develop capacities of participants in the process of managing Eco-Schools and awarding Green flags.
- To discuss the establishment



of an African network to support Eco-Schools initiatives in the region.

The Project

After environmentally concerned deliberations in both plenary and workshop sessions, the following recommendations were made for the short, medium and long-term objectives for the implementation of Eco-Schools.

Recommendations

1. Country level: It was agreed that the Ministry or Department of Education working at national level should be the focal member managing Eco-Schools with support from other partners inclusive of Non-Governmental Organizations and charitable organizations.

2. Flexibility: It was agreed that each country would be flexible as to the institutional framework it would adopt.

Some options are listed below:
Option One: That government should be allowed to join FEE, but they should work with NGO's at a national level.

Option Two: That national NGO's may be concerned.

3. Action: Foundation for Environmental Education National Assembly to be approached to enable Ministries

and NGO's to join.

- o Flexible structures to accommodate country specific realities.
- o Existing structures should be used and supported wherever possible.

Countries Responsibilities

- o Participants to take home guideline document and share with relevant stakeholders so as to agree on a national framework for the implementation of the programme at a national and regional level. A national forum would therefore form to instigate the process.
- o That Eco-Schools should become part of the national, sub-regional, regional and global agenda (E.g.: WSSD, African Ministerial Conference on Environment).
- o That a training programme should be developed having the aim of putting together a Training Manual/guide for the training of trainers for Eco-Schools.

Networking

- o On-line SADC EE newsletter should be used to share ideas and information.
- o That information should be shared using e-mail and any

other appropriate ways and means.

- o Country to country collaboration should be emphasized.
- o Meetings and study tours for the "core" group must be encouraged.

Visits

The visit to Share-Net at SADC Regional Environmental Education Centre, the Durban Aquarium and Education Centre aroused a great deal of interest among the participants.

A final note

This workshop was a landmark in the history of Environmental Education as it has created the right platform for EE professionals to network towards the common goal to promote EE processes through Eco-Schools as a protective measure to secure our future within the southern and eastern African region.

Jayantee Naugah is Associate Professor at the School for Science & Mathematics, Mauritius Institute of Education, Reduit, Mauritius. E-mail: osmie@intnet.mu

Khemraj Sooknah is an Ecologist. He works as Principal Project Coordinator with the Mauritian Wildlife Club, Mauritius. E-mail: trochetia97@intnet.mu



With the resurgence of cholera outbreaks in the Eastern Cape and KwaZulu-Natal, together with the ongoing problem of the mismanagement of rural toilets, there has been an urgent need to address rural hygiene and sanitation issues in South Africa by means, other than simply through 'knee-jerk' responses.

Typically health and hygiene issues are addressed through once off campaigns, the effectiveness of which have been to some degree, successful, but generally they only offer temporary solutions. Campaigning tends to address the solution without gaining enough attention to understanding the causes and reasons behind the problems. This has meant looking deeper into the cause of these complex problems which are in most cases linked to poor hygiene habits and ignorance. Thus the need for education programmes addressing hygiene and sanitation is evident and has fueled the development of the 'Sanitation Works' series - a set of learning support materials which can be used to promote resource-based learning relevant to health and sanitation in rural schools.

Initiated and funded by a collaboration of partners - the Department of Water Affairs and

Sanitation works?

Bridget Ringdahl



Bridget, Joyce and Zanele during their visits to schools.

Forestry, Ethekwini Municipality (Durban Metro) and the Department of Education, the resources closely follow and demonstrate an example of the application of the National Environmental Education Programme (NEEP), which aims to entrench environmental learning in all subjects.

The resources which have been designed and piloted are based on the well known and researched 'Active Learning Framework' and cover all aspects of active learning: information seeking, enquiry, reporting and action. Activities in the packs have also been developed in such a way that they do not need to follow any specific sequence and can also be incorporated into a number of learning areas. The two main

focus areas of the activity packs are about why we should keep our hands clean through simple experiments such as the E-coli test kit, the making of a simple hand washer and exploring the rate at which bacteria replicate, along with a number of other related explorative activities.

The second series of activities addresses the maintenance of pit latrines. Using a range of simple experiments, the biology behind latrines can be explored and questions as to why wastes, other than organic wastes should not be disposed in pit latrines can be demonstrated. A water and toilet audit are included in the pack as well as a number of other activities and games which explore the working and hygiene of pit latrines.





All activities cover a number of learning areas: Natural Sciences, Human and Social Sciences, Life Orientation, Technology and Language but have been designed in such a way that the activities can be used in more than one learning area.

The activities in the 2 packs are closely linked; activities complement one another and can be interchanged. Similarly the 'Sanitation Works' series has been designed by taking the School Environmental Policy pack into account which will assist schools in completing the Health section of a School Environmental Policy Plan.

The implementation of the first series of the 'Sanitation Works' activities was completed in March 2002. Teachers from five schools were introduced to the materials through a series of workshops in the greater Ladysmith area in KwaZulu-Natal in February and March 2002. Once the teachers had been taken through the activities they introduced them to the learners over a period of about 2–3 weeks.

A very important component of this pilot project has been the reporting back and follow-up visits to the school. The teachers were required to fill in evaluation forms supplied by the NEEP – GET (National Environmental Education Programme and General Education Training).



School girls engaged in hands-on activities.

Collecting samples of the learners work was also important for the overall assessment as well as the follow-up school visits during which photographs of the learners engaged in the activities were taken. Through this process materials could be further refined and improved to ensure they are relevant to resource-based learning in the curriculum. This process has also helped with the implementation of a second pilot project on another five schools in the Inanda area outside Durban.

Lessons learned from the first project could then be applied in the second phase. The final product will be a compilation of all the activities into a manual or pack which will hopefully be introduced to all teachers nationally through the National Environmental Education Programme.

While it is recognised that it is very difficult to evaluate and assess the success of the 'Sanitation Works' series apart from viewing exercises, tasks and projects that were completed by the learners, some valuable lessons have emerged through this implementation and design process for learning-support materials. These are listed below.

Recommendations for EE Resource-based Learning Units:

- Learning materials should be kept clear, simple and focused without having too many instructions and information for the teacher. All additional materials in the pack e.g. posters, kits, should also be provided.
- Activities which make the 'learning pack' should be linked to one another so that teachers are able to simply use one activity, a combination of the activities or the entire unit in their teaching.
- While working with Higher Primary schools is far more rewarding and generally more successful than working with High schools, work with High schools should continue. However the learning support materials should then have direct relevance to the curriculum on which they will be examined.



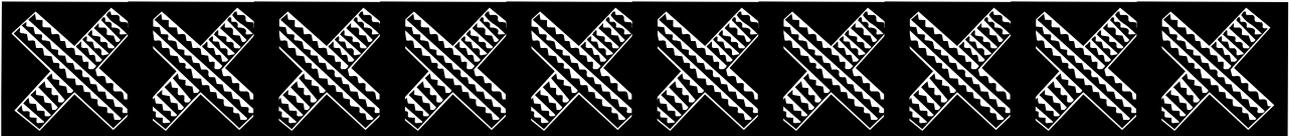
- Follow-up with the implementation of such learning programmes in schools is critical. Teachers often need encouragement and further support, it also enables the teachers and learners to feel as if they are part of something much greater (which they are and they need to know this) and also contributes to the responsive professional development of the teacher.
- Evaluation of the resource by the teachers is necessary as they are the ones who will be using such resources and therefore will learn what works and what doesn't thereby assisting with the improvement and develop-

ment of resource-based learning materials in the future. Mediated 'form filling' should be conducted (time permitting) to ensure that an accurate evaluation and assessment of the materials is recorded.

- Environmental Education Learning Support packs should be tried and tested in the schools as this assists with the implementation of the National Environmental Education Programme and also allows for a critical evaluation of the materials. Although 'piloting' resources is time consuming, there is no value in producing resources without actually using and trying them out.

In conclusion this project hopes to raise the awareness of the importance of hygiene and good sanitation practices in rural areas and in so doing, help to alleviate and prevent outbreaks of diarrhoeal diseases as well as improving the way in which rural sanitation systems are managed. Ultimately the project seeks also, to assist in achieving the principles of sustainable development through health and sanitation education programmes that are designed to address issues that are relevant in the rural context.

*Bridget Ringdahl can be contacted at:
E-mail: blondeonbike@yahoo.com*



**FIRST
WORLD ENVIRONMENTAL EDUCATION
CONGRESS**

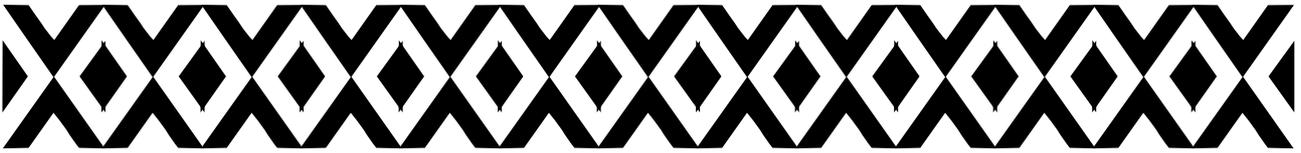


20 - 24 May 2003, Espinho, Portugal

FWEEC will gather researchers and environmental education professionals from all around the world and aims to provide an international forum for discussions on the latest and future trends related to environmental education. The official languages of the meeting will be English, Portuguese and Spanish.

Deadline for the submission of abstracts: November 29, 2002. Deadline for the submission of manuscripts: February 28, 2003.

For more details visit the FWEEC website at:
<http://www.1weec.net>
or contact the registration desk at
Tel:+351-22-731 9115; Fax: +351-22-731 9129
E-mail: info@weec.net



JEA vence prêmio do PNUA Global 500

Alberto Mendes

A Juventude Ecológica Angolana (JEA) foi recentemente distinguida pelo Programa das Nações para o Ambiente à categoria Júnior do Prémio GLOBAL 500. A cerimónia de premiação, enquadrada nas celebrações do Dia Mundial do Ambiente 2002, ocorreu no dia 4 de Junho, na cidade de Shenzhen, China, tendo sido acompanhada pelo Director Executivo do PNUA, Prof. Klaus Toepfer, pela Presidente do Fórum GLOBAL 500, Sra. Marilyn Mosley e pelo Ministro Chinês para Protecção do Ambiente, Dr. Xie Zhenhua, assim como pelos restantes Representantes do Governo e do Parlamento Chinês.

Em representação da JEA, estiveram os membros, Alberto Rodrigo Mendes e Abias Huongo.

PO GLOBAL 500 é um prémio promovido pelo PNUA, em alusão ao 5 de Junho, Dia Mundial do Ambiente, com o objectivo de criar uma “*elite mundial*” de defesa do ambiente e de promoção do desenvolvimento sustentável global.

A sua instituição data de 1972, aquando da Conferência da ONU sobre Ambiente Humano, mas só a partir de 1985 é que iniciou com premiações, nas categorias Sénior e Júnior. Até ao momento mais de 700 organizações e individualidades



Alberto Rodrigues with members of other awarded organisations.

já foram galardoadas. E este ano, mais oito (organizações e individualidades) juntam-se a esse número bastante ínfimo se considerarmos o número actual da população mundial – como disse Marilyn Mosley, Presidente do Fórum GLOBAL 500, instituição que congrega todos os laureados.

Para este ano, o Fórum GLOBAL 500 propôs à Juventude Ecológica Angolana, como única representante de África na edição 2002, à criação de uma Rede Africana GLOBAL 500, que venha a integrar todos os laureados Africanos, assim como outros ambientalistas do continente, associados à diferentes organizações e instituições ambientais.

*Alberto Rodrigues is a member of the Ecological Youth of Angola and he can be contacted at:
E-mail: jea@netangola.com*

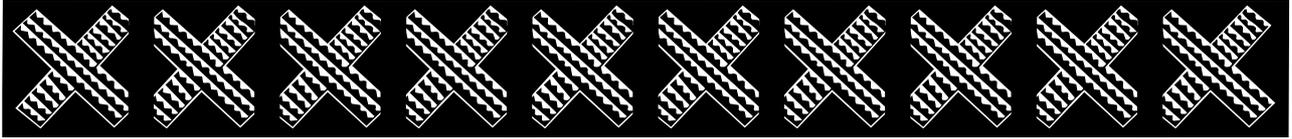
Summary in English Ecological Youth of Angola receive award from UNEP

The United Nations Environment Programme (UNEP) awarded the Ecological Youth of Angola (JEA) with the prestigious UNEP Global 500 Award. This award is a recognition of JEA's work in the field of EE since 1991.

The award was received by two members of JEA during the celebrations of the World Environment Day that took place in Shenzhen, China.

JEA has become a leading force in promoting environmental education and awareness in Angola through its regular media programmes and school-based projects.





The state of mind: The Past, today and the future

Sanele Cele

It is generally accepted that a child will not challenge what he or she grows up seeing practiced and enjoyed by his or her parents unless it has obvious consequences. The same goes with our religious culture, traditional culture and other cultures at our social disposal. It is more likely that a child from the Muslim family will become a Muslim adult, a child from the Christian family will become a Christian adult and further divisional influences can be witnessed among Christians who follow their parents' congregations (Anglican, Roman, Zion, Catholic, etc). This happens, I believe, because of the instinctive behaviour of humans to learn from the parents (elders) which leaves the youngsters with very little choice, at least until they are old enough to differentiate between forms and situations. This behaviour can be contagious depending on the culture that is being passed on.

With time, we have been made to believe (and we believe) that solutions to our problems come from elsewhere, whether problems are local and indigenous or not.

We import solution methods and ideas that have been tried and tested somewhere else. Furthermore experts are hired to carefully carry out the mentoring processes. Because of our keen-



Sanele Cele

ness and optimism we very often foresee the ideal situation through the eyes of our mentors. Sometimes these solutions become solutions but sometimes they fail dismally, becoming problems themselves. When they fail, the blame is put on those who are expected to respond and/or make others respond in a particular way, usually as those in expert's place of origin. Without losing sight of the reality, our perceptions have created the climate for the current trend and pattern in the thinking and execution.

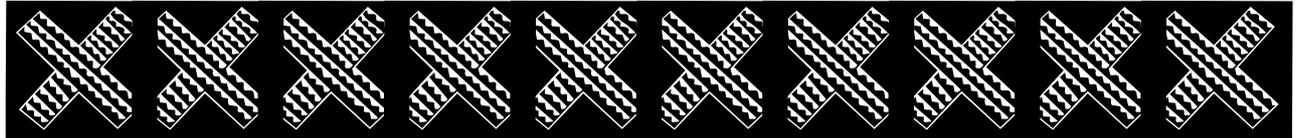
It is extremely important to acknowledge that we are now living in a world where the importance of information and its movement cannot be compared with anything. These days are characterised by information highways. I want to call these information 'free-ways' with the traffic flowing towards one direction. We grew up knowing that the best comes from another place, and when anything better emerges from near us, we don't believe it. The emergence of proverbs like '*Induku enhle*

*igawulwa ezizweni*¹' in IsiZulu might have had an influence in making people have more respect for what is brought in from outside even if it was imposed onto them.

I don't want to blame every wrong of today to the past, but the legacy lives on. Think about how the missionaries made the Nguni people of my KwaZulu leave the traditions that made them who they were. Because wearing animal skins didn't make sense to those who came from the west it was considered barbaric and those Africans who decided to repent began to wear trousers, skirts and shoes.

This might have been a better move, but I am not sure if enough choices were there. Slaughtering an animal to remember or honour your ancestors soon became a punishable offence in church leading suspension of church membership. This, in many people's minds, was synonymous to heavenly/ Godly judgement and meant that you were blacklisted in God's and his angels' books.

For many years people and/as nature had been living together, sharing the environment which was given to them by *uMvelinqangi*². We are told that people knew how important it was to remember that there was always tomorrow and that



resources were going to be needed even then. Appreciation and conservation were as important as survival itself. It seems that the misunderstanding emerged when the colonial regime and locals lacked ways of communicating. The struggle was between the strengths of the two knowledge sources/systems. Matowanyika (2000) puts it this way:

If knowledge were depicted as a landscape, the highest mountain, dominating all others, would be the scientific symbolic capital of Europe and a globalising grand narrative of modernity. If, however, one stands back from the shadow of this towering colossus, it is possible to see knowledge as a range of hills merging within a wider picture of diverse cultural perspectives emanating from and sustaining peoples in environments all over the world.

From this it is necessary to look at some of the factors that could have led to this imposition or not. The non-aggressive nature of the African people and their welcoming attitude towards strangers and willingness to listen to outside ideas made them more susceptible to some form of intellectual manipulation. This can be true when one looks at how the assertive nature of the people of European origin in Af-

rica leads to their domination in all life circles.

Today an understanding has been created that for every project to succeed in our society there has to be at least one white face. In South Africa this can be linked to the colonial and apartheid ideas which made people of colour lose faith in themselves and each other. I guess this is one of the greatest success to be achieved by the engineers of the regime.

Going back to the issue of people and/as nature it is noticeable that many of the conservation efforts introduced in the 20th century in South Africa had been triggered by the decline in specific species of animals in particular. These animals were in danger of becoming extinct after having been hunted to death for sport using guns. The west did this with their ears closed, as they were not willing to hear about hunting seasons that were controlled by *amakhosi nezinduna*³. Africans were like the book which nobody wanted to read (or which nobody was able to read) as many suppressed the thought that some solution could be possibly available from the indigenous peoples. Everybody wanted to teach them a lesson or two.

I sometimes wonder how a man can teach a woman who has had the experience of giving birth and

raising two children how to breast-feed. The displacement of people and establishment of nature reserves has widened the gap and increased tension between the ordinary people and authorities.

Nature reserves and national parks (so called protected areas) tended to value and benefit tourists (foreigners) more than locals. Access to these areas is usually at an exorbitant price, which can obviously not be afforded by the majority of the people along the fences of these protected areas. This creates an attitude negative enough to cause considerable damage to the already poor relationship. A lot can and should be said about African people's tolerance and ability to stand watching 'four-by-four' vehicles gushing in and out of these protected areas carrying mostly foreign visitors with cameras. Occasionally these locals will be called in to come and dance (the traditional) for these so called tourists.

The amount that is paid for performances is usually determined by park officials, but in most cases there is no fee and it all rests on what the tourists themselves can/want to throw on the floor, which is usually the remainder of their important spending. In exchange for the resources that have been enjoyed for centuries, locals suddenly have to line up near the





park gates to sell curios for which buying is at the mercy of the tourists. The livelihood of these now poor people after having been pushed to rock cliffs and deserts is dependent on what the outside world is willing to offer.

The arguably artificial impoverishment has been regarded as God given in many of our societies and is linked to the very vivid societal stratification. As a person, when one puts together the experiences both as a poor little rural KwaZulu boy and as a professional Nature Conservator and Environmental Educator, the mind cannot stop telling that the original conservation and environmental education efforts had a lot to contribute to vertically stratified society that we have today.

Nature reserves were established as one way of isolating locals from the wildlife which eventually became the sole property of individuals (in the case of game farms) and sometimes the state which served the perceived superior group. What about people who knew no other life, who had to adapt to a new form of living?

These tensions have been sensed but some feel that transparent processes and fairness will lead to enlightenment and consequently rebellion. Military approach to prevent rebellion is indicated by the utilisation of armed field/game rangers who patrol these park fences time in and time out. This, in South Africa, was the

language better spoken by apartheid authorities and understood by the masses.

Other ways of getting public support (manipulatively and genuinely) in a more gentle way, have included the formation of forums in which public structures are represented. But, these are funded by parks and in most cases forum members are remunerated which make them more susceptible to many forms of indoctrination.



Many education programmes have been established to steer the thinking of the public towards a particular direction. It is undeniable that our brothers and sisters find themselves seeking employment in institutions where they are required to use many means to win the people's understanding and hearts in unjust ways. This is seen as the only way to go as it puts food on the table.

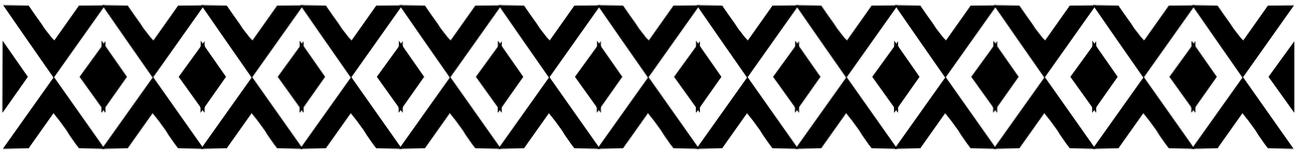
My main concern is with the well accepted resistance to change. It is very sad to see that among those resisting change are those preaching the gospel of good environmental management through environmental education

processes. What is evident in my country today is the silent nationalists' tri-cameral approach and the blanket grading of people which is detrimental to race relations. Preference is cautious, and still, it moves along those historical tracks deliberately traced to service the desires of the cocooned real self. Many are conditioned to living a lie, and many more are not realising it because it is regarded as God given.

The post-apartheid South Africa creates many opportunities for cooperation and easing of the tension that very few can claim responsibility for. Although we are not responsible for what happens to us, we are responsible for how we react to it. That all of us (some to a greater extent) are/were victims of the undesirable apartheid regime cannot be denied and it would not be of any help to keep on pointing fingers at each other, but the importance of our attempts to redress this cannot be overemphasised.

The skewed multiracial education institutions and cultural institutionalisation: the question of dominance and conservation thereof.

Another of our challenges of transformation is how a multi-national state like South Africa can maintain solidarity and patriotism at people's level. Schools are all becoming multiracial in this once divided state, but the biggest question lies in the composition of these new



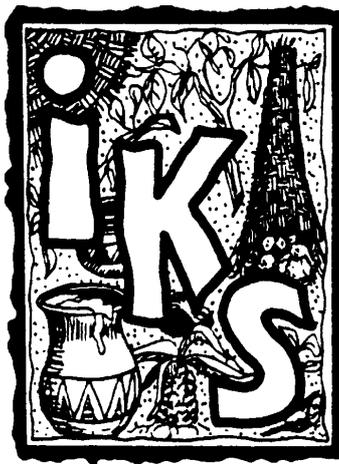
structures. The former white schools which were/are much more resourced are attracting learners from the other South African racial groups, now that the doors are open. These learners are flocking into these schools with better facilities, better educators and better environment with the hope of acquiring the best education available in this country. This movement is undoubtedly also influenced by the successful over-grading of anything associated with whites. Learners are now black and white but teachers remain all white (with very few exceptions).

The dominant culture and the medium of instruction remain the same. African languages have not made their way into these schools (with a few exceptions), forcing these young African learners to learn only in English and Afrikaans. This being a challenge becomes even more of a challenge when these learners have to be socialised in a totally different home environment and be educated in another.

The language that they speak at home which carries culture and tradition is at risk of slowly losing value to these youngsters. They become more familiar with the schools' languages of instruction and become acquainted with the cultures embraced therein.

The opposite is not happening in the former black schools, instead, they are too becoming multiracial, differently. Motivated

by different environmental factors, this form of multiracialism involves educators. More and more white teachers are joining these schools, invited by principals and governing bodies with the assumption that because of their background they will bring good education. Still, there are no white learners but teachers are black and white. Teachers are more dominant in the education process than learners, and they are able to instil a culture of their choice. My concern here has to do with what is being won and lost in the system. The already dominant universal European hill is becoming more dominant. I would have not worried if all schools were compelled to teach a compulsory African language to all learners, black or white. If attempts were made to multiracialise all levels of a school, not just those areas that suit others more than the others.



In the middle you have the former coloured and Indian schools with their own cultures and resources. African children are also moving to these schools

in numbers. I am yet to see an Indian or coloured child in the African township or village school. South Africans will know the reasons for all this.

This grading of people based on the colour of their skin, the straightness of their hair or the shape of their nose continues to the workplace until today. For many of us South Africans, it goes without saying that the floors are swept by African employees while top management positions are held by whites. Supervisors are in most cases Indian or coloured.

Indigenous knowledge systems (IKS) and education process

There is an exponential growth of the mention of IKS in education processes today. Whether it is driven by the pressures for political correctness, availability of foreign funding or genuine need felt for the value of this knowledge system in education in general, it is difficult to tell. The potential dangers in these processes include the assumption that any information from the past is good. An important point to remember when dealing with IKS is that people's actions were triggered by situations to which they had to respond. Some of the actions became a way of life, while others kept on emerging in context to solve or prevent problems. What is important in understanding these systems is the fact that they contain

information which helps us trace our track to where we are today. Most of these were built into cultures and traditions and were not as explicit as people of today want them to be. Having said that these were part of culture, they were not immune to change in circumstances. The concern that I would like to raise here is with the belief that although the way of living is different, people still/should know these knowledge systems.

It is for the above reasons that great care should be taken when choosing something from the past. People should also differentiate between indigenous knowledge and history and understand the role that each one these can play in our lives today and into the future. Indigenous knowledge continues to evolve as we encounter new and different challenges.

Today in South Africa, indigenous knowledge is only associated with indigenous peoples. It is now taught/

discussed/shared with the emphasis to the indigenous peoples. In essence IKS is perceived as synonymous to the peoples of poorer groups in many societies. This wealth of knowledge which contains numerous cases in real life situations is therefore detached to/from other groups of our society just because they happened to be Africans of other origins. This has given IKS a very low status in the society as it is associated with the undermined indigenous groups. Apartheid was not negotiated, but it was implemented to affect all and is now forcing all people to ignore all the richness that comes with diversity. I would like to see all South Africans extracting what is good from IKS and learn from the processes and experiences embedded in each and every situation. South Africa can be seen as a multinational state as opposed to nation states due to its diversity of nations which all have origins. We should not only know ourselves and our heritage, but knowing and showing interest in our neighbours' way of life will make

us respect and care for each other with good understanding.

Footnotes

¹ This means that a good fighting stick is always collected miles away. This statement was used to indicate that it is more advantageous to marry someone who comes far away because you will not be familiar with their childhood or teenage bad behaviour.

² uMvelinqangi is a descriptive Zulu expression referring to God as the one who appeared before everything else and that everything was created by him.

³ These are traditional leaders. Amakhosi are tribal leaders and they are accountable to the King of that nation and izinduna are ward leaders within the tribes and are accountable to the amakhosi.

Sanele Cele is the Coordinator of the Attachment Programme at the SADC Regional EE Centre in Howick, South Africa and he can be contacted at:

Tel: +27-33-330 3931

Fax: +27-33-330 4576

E-mail: sanele@futurenet.co.za





Environmental Education Association of Southern Africa

2003 Conference, Windhoek, Namibia

22 - 26 June 2003



Making 21 years of EEASA: EE's past, present and future

The 21st Annual Conference of the Environmental Education Association of Southern Africa is going to be organised by the Namibina Environmental Education Network and will have a focus on the diversity and development of EE over the past 21 years and looking at the future of diversity and development of EE. The objectives are to share, critically reflect and build upon our EE experiences; and to expose EE practitioners to others in the field of EE and environmental work throughout the SADC region.

For further information contact:
Graeme Wilson, E-mail: neen@rf.org.na
Tel: +264-61-211 721; Fax: +264-61-211 668

Hopes for Botswana's NETCAB School Environmental Policy Project

Doreen McColaugh

The world has not done enough, or as promised at the Rio Earth Conference in the ten years following it, says Kofi Annan in the build-up to the World Summit on Sustainable Development (WSSD) soon to be held in Johannesburg, South Africa.

As we look towards WSSD when the promised environmental efforts will be reviewed, we ask "Why?" - Why is it not possible to acknowledge what we are really doing to the environment (and our future) and why people remain so uninterested? What can we do that will get people interested and willing to take action?

In the development of environmental education (EE) in Botswana we have, after some starts, stops and "slow driving", actually come quite a way. It was only in late 1990 that the National Conservation Strategy (NCS) was adopted and then followed in 1991 with the National Planning Conference on Environmental Education, that EE was formalised in the country.

The National Conservation Strategy focused on environmental issues and risks that the country needed to promptly address. They are identified below as:



Doreen during a SEP workshop in Botswana.

- pressure on water resources
- degradation of rangeland pasture
- depletion of wood resources
- exploitation of veld products
- pollution
- resource pressures due to growth in human population
- depletion and conservation of wildlife resources
- improvement of environmental awareness

These are mainly encompassed in what the United Nations has identified as the five key areas that must be addressed in order for all human beings to be offered a chance of achieving prosperity.

The famous five areas are water (and sanitation), energy, health, agricultural productivity (also

reversing land degradation) and biodiversity and ecosystem management.

Among other ministries addressing NCS issues, the Ministry of Education is infusing environmental education across the curriculum; syllabi are being reviewed and changed, EE materials are being produced, in-servicing of teachers in EE is on-going and the University of Botswana provides a mandatory course in EE for all pre-service Education majors. As we look back over the ten years since the Rio Earth Summit we can say we have made progress. But have we really made a change in the hearts and minds of people? Yes, more drink tins are being recycled, glass and paper too, but still so much is tossed wherever - and left where it falls. Plastic bags are everywhere - on the ground, in the trees and flying through the air, to mention just one issue of the NCS.

A few of the teachers that have had in-service EE training sparkle and shine with their students and projects in their schools - seemingly against all odds. Botswana's First Lady personally leads anti-litter campaigns by publicly picking litter. So why have we not seen more change in people's attitudes? What is wrong?, we have asked. At what level must

environmental problems and issues be addressed?

As one of five countries selected to participate in IUCN's Networking and Capacity Building Programme (NETCAB), Botswana chose to adapt the South African developed School Environmental Policy (SEP) pack as its project. The SEP will be used as a means to get people interested and involved in working towards solving environmental problems at their local levels. The SEP provides a guiding outline for schools to identify environmental problems and concerns in their schools and collectively (administration, teachers, students, ancillary staff and community members) work toward formulating individual environmental policies for their schools and using them to address environmental problems

specific to them. This will also give support to, and make use of the EE training that teachers have received. In addition EE resource materials that have been produced will more likely be better utilised.

SEP packs are being distributed to every school in Botswana. It is hoped that at this grassroots level people will really begin to understand environmental issues affecting their schools and communities and pro-actively work toward resolving them. If this can be accomplished people will gain a better understanding that we must rehabilitate our one and only planet by taking the first steps in our local environments.

Through the process of introducing the SEP to all schools in Botswana it is hoped that the training teachers have



Participants during a SEP workshop.

received in EE, the EE materials produced and the changes made to the national curriculum will be supported and that they then will assist in building a meaningful and lasting environmental ethic.

Doreen McColaugh is an environmental consultant in Botswana and she can be contacted at:

Tel: +267-7160 7540

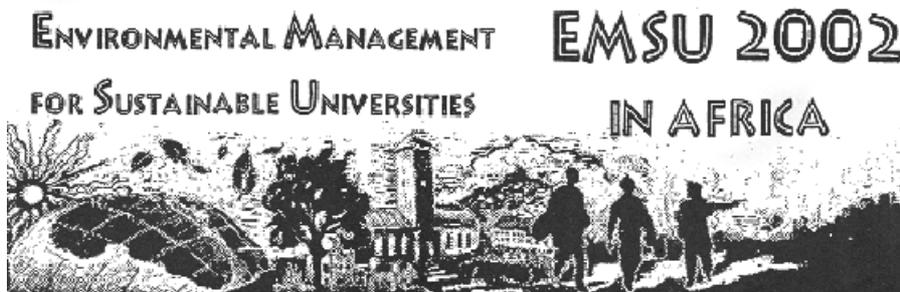
E-mail: mccolaug@noka.ub.bw



SUSTAINABILITY AND TRANSFORMATION IN HIGHER EDUCATION

INTERNATIONAL CONFERENCE

11 - 13 September 2002, Rhodes University, Grahamstown, South Africa



For more details visit the EMSU website at:

<http://www.ru.ac.za/environment/emsu.html>

or contact Karin Prigge: Tel & Fax: +27-46-622 6242,

E-mail: BigTree@intekom.co.za



Zoo School USA

Judy Mann-Lang

Every February, since 1975, people from around the United States of America gather for what is probably the largest training programme for staff in the zoo and aquarium business in the world. *Zoo school*, as it is known, is organised by the American Zoo and Aquarium Association (AZA), as part of their ongoing professional development programme.

Twelve topics including Population Management, Institutional Record Keeping, Elephant Management, Managing for Success, Creating Successful Exhibits and Conservation Education, provide most staff with at least one course to interest them. The week-long courses are run concurrently at the Oglebay Lodge in Wheeling, West Virginia and attract an average of about 300 professionals each year.

This year I was privileged to receive the AZA International Scholarship, which enabled me to attend a Conservation Education course.

The course was organised and presented by seven experienced zoo and aquarium educators from around the USA and was attended by 30 educators ranging in experience from 3 months to 25 years. The goals of the course were to provide zoo and aquarium educators with a comprehensive overview of how to design, develop, imple-

ment and evaluate education programmes and exhibit interpretative elements; to prepare educators for leadership roles through interdisciplinary collaboration and an enhanced appreciation of their important role in their institutions, and to inspire educators to become actively engaged in conservation action.

The course was divided into three focal areas – instructional design methodology (ADDIE), management tools and techniques, and conservation. These three areas were integrated throughout the course and provided the participants with a variety of intellectual challenges and practical activities.



Instructional Design

ADDIE is an instructional design model that stands for Analysis, Design, Development, Implementation and Evaluation. This simple model helps to focus thought about new projects before enthusiastically charging into action.

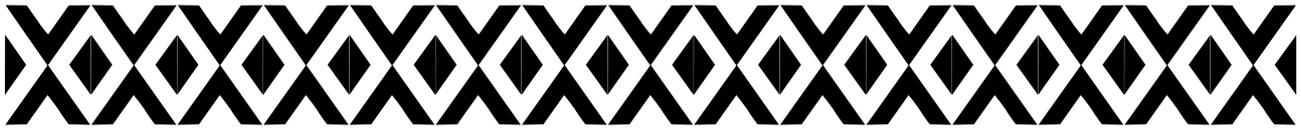
Analysis – during this stage the problem or issue is identified. Questions to be asked include: Why do you want to undertake the program, project or activity? What are the financial resources available? Is there a real need or is it a nice idea? Who are the learners and do they want the project? The needs of different audiences were examined here, as were a number of front-end evaluation techniques.

Design – during this stage the objectives, goals and most appropriate techniques for the project are selected.

Development – this is the active stage during which the project is fully developed. Questions to be asked during this phase include: Who will do it? How will it be done? How will the advertising be undertaken and what are the cost implications?

Implementation – This is a crucial phase as we put our plans into action. Professionalism in our approach and accuracy in our content are important here. If our planning has been rushed or sloppy, it will show in the implementation.

Evaluation – this is probably most educators weakest area. How often do we evaluate our work? Questions asked here include: Did we achieve our goals? What did we achieve? Did we achieve something besides our stated goals? In



conservation education this is a very difficult topic, however, techniques for evaluation are available and, with a little help, I feel that we could all be evaluating our work a little more, in order to improve the effectiveness of our activities. After all, if we are not actually achieving our goals, why continue along the same path? A number of practical examples of evaluation techniques were explained and case studies were used to demonstrate their implementation.

Conservation

During the conservation sessions we had the opportunity to discuss biodiversity, global conservation challenges, *in situ* conservation and some of the theory surrounding conservation education.

The question “What are we trying to do?” was particularly relevant as it challenged us to really think about what we are achieving. It often appears that we are so busy doing our jobs that we seldom take the time to check if what we are doing is really effective or achieving our objectives.

A session entitled ‘What is our message?’ was also very relevant. What exactly are we trying to teach our visitors / learners? Do we know what we want them to leave us with? As the Marine and Coastal Educators Network, would our effectiveness as a group not be enhanced if we all gave our visitors the same key messages?

I found it interesting to note that the key messages developed through a long running inclusive process by the AZA are very similar to some of the messages that we have developed intuitively for use at Sea World. Despite the vast differences between the educational needs of the two countries – the messages of conservation are similar.



We were also challenged to “walk the talk”. It is all very well to preach a conservation message but if our own facilities blatantly disregard basic conservation principles – how effective is our message? We were introduced to a number of case studies, which demonstrated how different organisations have adjusted their practices to make them more environmentally friendly. It was strongly suggested that we return home and take a good look at our own organisations in order to see where we can positively impact on the conservation impact of our facilities.

Management Tools and Techniques

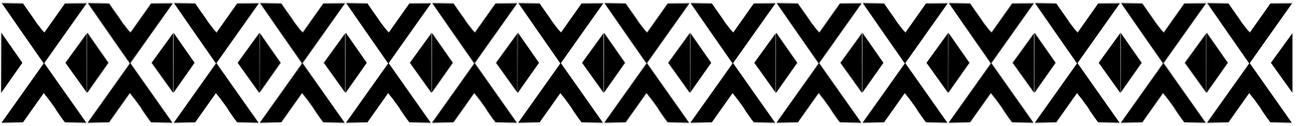
The management stream covered topics such as budgeting, project proposal writing (how to get money!), effective teams, the importance of networking, goal setting and detailed strategic planning. All topics were aimed at improving the management capacity and confidence of the participants and the uniquely practical approach to most topics was most useful.

General

I found the sessions on the interpretation of zoos and aquariums particularly relevant. How do we make sure that our visitors enjoy their visit to our facility while simultaneously debunking myths and enhancing understanding and conservation awareness? A number of techniques for interpretation including annotations and computer touch screens, audio tours and live commentaries were discussed. The importance of including interpretation at the START of the design of a new exhibit was stressed.

Interpretation should be seen as a crucial element of the overall exhibit design, not as a tag-on at the end. Only in this way will the interpretation on the exhibit be seen as part of the exhibit and therefore a way to enhance the overall visitor experience.

The course was an effective balance of theory and practical activities. At the start of the course we were divided into groups and each group was



tasked with designing a hypothetical education programme. On the last day we were required to present our programme to an imaginary group of potential donors who assessed each project. This was an excellent way to get the students to actively use the new knowledge while drawing on past experience.

The course was well designed and implemented with military precision – something uncommon in the education business, BUT it meant that each session was completed in time, without compromising other

sessions. Zoo school was an extraordinary opportunity for me to meet some wonderful people and to learn from truly professional conservation educators. Their positive attitude to their work and their enthusiasm were infectious and I left the course with renewed energy and a firm resolve to think more about our work, and to share what I have had the privilege to learn with other educators in South Africa.

I would like to thank the AZA for awarding me the International Scholarship and for giving me the opportunity to attend the conservation education course. Deb

Fassnacht (Shedd Aquarium) and Joyce Basel (Fun Safaris) are thanked for their important roles. Professor de Freitas (SAAMBR) is thanked for introducing me to the AZA and for giving me the time to attend the course. Deb Fassnacht is specially thanked for her ongoing friendship and support.

*Judy Mann-Lang is the Manager of the Sea World Education Centre in Durban, South Africa and she can be contacted at:
Tel: +27-31-467 7084
E-mail: sworld4@dbn.stormnet.co.za*

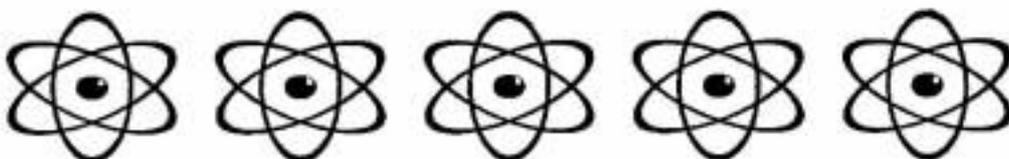


GASAT 11

International Conference on Gender and Science and Technology (GASAT), Mauritius
6-11 July 2003

The GASAT Association is an international association of people concerned with issues arising from interactions between gender and science and technology. Conferences are held every two-three years and are central in establishing strong and influential networks of individuals and organisations that are engaged in research and grassroots activities with a view to promoting gender equity in science and technology.

For further details contact:
Mrs Jayantee Naugah at the Mauritius Institute of Education,
Reduit, Mauritius
Tel: +230-466 1940, Fax: +230-467 4378,
E-mail: osimie@intnet.mu



Wildlife Atlas Underlines Vital Role of Ecosystems in Reducing Poverty and Delivering Prosperity ahead of World Summit on Sustainable Development

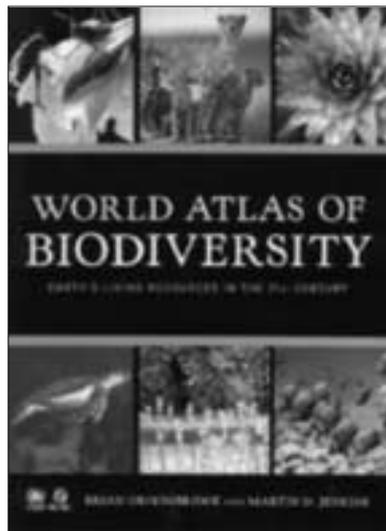
Experts estimate that, at current extinction rates of plants and animals, the Earth is losing one major drug every two years. It is estimated that less than 1 percent of the world's 250,000 tropical plants has been screened for potential pharmaceutical applications.

The first "World Atlas of Biodiversity: Earth's Living Resources for the 21st Century", launched recently by the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC), shows how humankind is dependent on healthy ecosystems for all its needs.

Eighty percent of people in developing countries rely on medicines based largely on plants and animals. In the United States alone, 56 percent of the top 150 prescribed drugs, with an economic value of \$80 billion, is linked with discoveries made in the wild.

The Atlas is the first comprehensive map-based view of global biodiversity. It provides a wealth of facts and figures on the importance of forests, wetlands, marine and coastal environments and other key ecosystems. It is the best current synthesis of the latest research and analysis by UNEP-WCMC and the conservation community world

wide — providing a comprehensive and accessible view of key global issues in biodiversity. It also highlights humankind's impact on the natural world. During the past 150 years, humans have directly impacted and altered close to 47 percent of the global land area, it is reported in the Atlas.



Under one bleak scenario, biodiversity will be threatened on almost 72 per cent of the land area by 2032. The Atlas reveals losses of biodiversity are likely to be particularly severe in South-East Asia, the Congo basin and parts of the Amazon. As much as 48 percent of these areas will become converted to agricultural land, plantations and urban areas, compared with 22 per cent today, suggesting wide depletions of biodiversity.

Klaus Toepfer, UNEP's Executive Director, said wise use of the Earth's natural resources was at the heart of sustainable development and a key issue for world leader's attending the crucial World Summit on Sustainable Development (WSSD), which opens in Johannesburg, South Africa, on 26 August.

"Humankind now diverts about 40 percent of the Earth's productivity to its own ends, much of this is being carried out in a destructive and unsustainable way. It is vital that we reverse these unsustainable practices while at the same time taking advantage of the opportunities presented by the planet's natural capital, its natural wealth", he said. Mr. Toepfer said the value of wild resources to the pharmaceutical industry alone highlighted the pressing need for new and more imaginative ways of exploiting plants and animals so that the benefits were shared by all.

"We must address the issue of genetic resource sharing by giving developing countries, where the majority of biodiversity remains, an economic incentive to protect wildlife by paying them properly for the plants and animals whose genes get used in new drugs or crops", he added.

Mr. Toepfer said the proper and



responsible use of the Earth's natural treasures could play a key role in reducing poverty and thus should be seen by world leaders at WSSD as a key area to address. Biodiversity is, along with water, energy, health and agriculture, one of the five priority areas for the United Nations as outlined by Secretary-General Kofi Annan.

"Biodiversity should be one of the key issues underpinning all decisions taken at the Johannesburg Summit", said Mr. Toepfer. "You cannot tackle water, energy, health, agriculture, and ultimately poverty without the conservation, wise use and proper distribution of the many benefits arising from the living world." The new Atlas outlines some of the broad ecological relationships between humans and the rest of the material world and summarizes information on the health of the planet. More specifically it shows how "wilderness areas" are on the retreat as roads and urban centres spread into places like the Amazon basin, the Arctic and desert zones.

"There is little true wilderness left to support the expansion of the human population on this planet", says Brian Groombridge, co-author of the Atlas. "Over the last decade, food supply has increased to meet the growing population through higher productivity (about 69 per cent) and exploitation of wilderness (31 per cent). But, with little wilderness area left, where will the additional capacity come

from?"

"Globalisation and the pace of technological development are out-stripping our understanding of the impacts we are having on ecosystems – putting many basic services at risk, particularly for the poor", says Mr. Groombridge. "At the same time, there is now enough evidence to show that we should take the precautionary approach and not interfere with the global processes that maintain our fishing, forestry, agriculture, health and climate."

The Atlas goes beyond doom and gloom scenarios and asks how irreversible current problems are. Pulling together the latest thinking on the subject it shows, through a scientific assessment of the entire range of living plants and animals, just how robust, resilient and accommodating biodiversity can be — within limits.

By using maps to show the location of biodiversity UNEP-WCMC draws together the work of researchers across the world that have identified particularly rich or vulnerable areas, including "hot spots" and "eco-regions". These are regions where it is particularly important to identify development paths that can serve humankind without reducing nature's capital.

Mark Collins, UNEP-WCMC Director, stressed the vital role of ecosystems and how they interact to provide vital

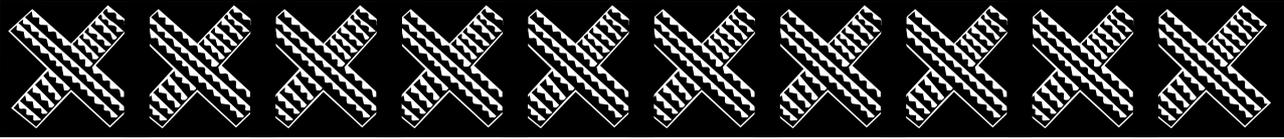
resources. As an example he cited the essential role of mountain regions as providers of freshwater. "If water sources are jeopardised then this impacts human activity downstream — people will not have clean water to drink or enough to water their crops", said Mr. Collins. "Fish supplies diminish or become extinct affecting the food supply chain and trading opportunities", he said. "Further down in the cities, power from hydroelectricity would be reduced, as would supplies of water for industrial washing, cooling and the production of products. The net result is business failure, job losses and economic disaster." "We know enough about the distribution of species and ecosystems to ensure that the world's biodiversity is managed effectively", said Mr. Collins. "Give nature half a chance and it will take care of itself", he said.

For more information, you may contact: Nick Nuttall, UNEP Head of Media, Nairobi, on Tel: +254-2-623084 E-mail: nick.nuttall@unep.org

Or

Contact the following websites for further information: <http://www.ucpress.edu/books/pages/9941.html>. (The Atlas - ISBN 0-520-23668-8, is published by University of California Press), and www.earthprint.com (UNEP online publications)





Course Developers' Network Up and Running

Helen Springall Bach and Justin Luyele

A Network of course developers under the SADC Regional Environmental Education Support (REES) of Sub-project 1 (Course Development) convened at Rhodes University in a workshop between 30th July and 1st August 2002. Participants gathered from six countries including South Africa, Namibia, Botswana, Lesotho, Swaziland and Mauritius. They shared ideas and experiences to produce a wealth of individual Course Development Concept Proposals.

This REES Sub-project Course Development is an active course developer's network of universities, polytechnics and other educational organisations sharing skills, experience and materials in order to develop effective environmental education processes in the SADC region.

The network places emphasis on institutionalisation of environmental education through the partner institutions represented by individuals who will be members of the network in the next two and half years. This is seen as a way of strengthening capabilities of the individual members and the capacity of the institutions.

The course development process will involve nine networking institutions, with room for expansion depending



Course Developers meet at Rhodes University

on the availability of funds, to meet at course development workshops twice a year over approximately thirty months. When each of the network partners' course development proposal is approved, the process of developing each course framework, structure, materials and accreditation commences. This will be done through each of the partners undertaking 'work-away' tasks to further their courses.

The courses will be developed in a variety of institutional contexts and for different course participants. The Course Developers' Network will meet over the next two years to support the development of:

1. A pre-service EE course for trainee teachers and in-service courses for practising teachers in

Lesotho through the National University of Lesotho: Contact person: Dr. Tsepo Mokuku.

2. In-service courses for practising teachers in Botswana through the University of Botswana: Contact person: Mr. Mphemelang J. Kethoilwe.
3. Environmental Education through community-based natural resource management under Botswana's Chobe Wildlife Trust: Contact person: Mr. Machana Shamukuni.
4. Environmental Education modules in courses for vocational training instructors in the Polytechnic of Namibia: Contact person: Mr. Steve van Staden.
5. In-service teacher education module for environmental education at the



- Namibia Institute of Educational Development: Contact person: Mr. David Sampson.
6. Research Design Decisions Course at Rhodes University, South Africa: Contact persons: Prof. Rob O'Donoghue and Prof. Heila Lotz-Sisitka.
 7. Environmental education modules for Advanced Certificate in Education at University of South Africa (UNISA): Contact person: Prof Cheryl Le Roux:
 8. Training of Trainers Course in Environmental Education, Mauritian Wildlife Trust: Contact person: Mr. Khemraj Sooknah.
 9. A module in environmental education for students in environmental science

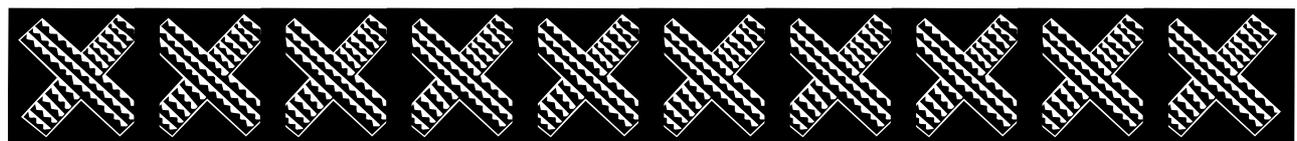
- and management, as well as for industry courses, University of Swaziland: Contact person: Mr. Mandla Mlipa
10. A module in biodiversity education for conservation aimed at rural communities, Swaziland Environmental Authority: Contact person: Mr. Sivumelwano Nyembe.

For the programme to develop with suitable structure and coherence, all participants will contribute to the development of the course developer's toolkit. This resource will be managed by the SADC REES Course Development Coordinator and will enable the developing work of the network to unfold as a coherent capacity – building programme. It is envisaged that the capacity building will

continue throughout the lifetime of the project with course developers working together in workshops and separately on 'work-away' tasks.

Justin Lupele is the Course Developer for the SADC-REES Project based at Rhodes University, Grahamstown. He may be contacted at J.lupele@ru.ac.za

Helen Springhall Bach is the Chief Technical Advisor for the SADC-REES project, based at Umgeni Valley, Howick. Helen may be contacted at rees@futurenet.co.za



International Training Programme

The Swedish International Development Cooperation Agency, Sida, supports International Training Programmes through various institutions. The following are some of the courses offered with respective website address to find out more:

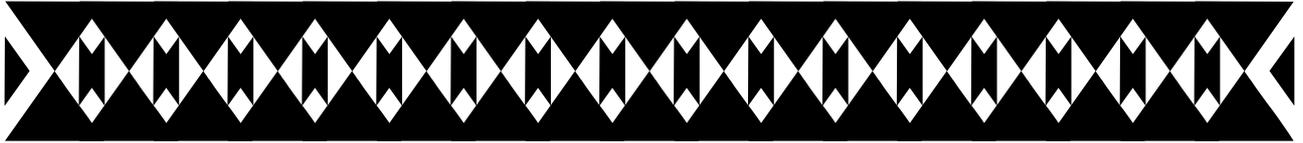
Watershed Management - www.natura.scc.se

Environmental Education Processes in Formal Education - www.natura.scc.se

Environmental Journalism - www.fo.hik.se

Environmental Management and Development - www.sisforum.se





City of Cape Town hosts a Youth Environmental School (YES) Programme

All over the world during the first week of June every year, World Environment Week is celebrated. To mark this Week the City of Cape Town hosted a 6-day Youth Environmental School (YES) programme. The YES programme ran from the Monday – Friday with a teacher’s workshop on the Saturday, at the Chrysalis Academy in Tokai.

The Vision of YES is that through Environmental Education we will form partnerships towards conserving, protecting, nurturing and caring for our environment and will invoke in the youth community a sense of environmental pride and responsibility that promotes environmentally sustainable lifestyles, behaviour and actions.

The Youth Environmental School (YES) programme has developed into a major event on the EE calendar. It is the largest programme of EE-related activities, workshops and presentations in the City of Cape Town and is heavily attended by schools from every corner of this area.

YES 2002 catered for up to 10 000 children (2000 children a day, over 5 days) on close to 70 different activities presented by about 60 presenters including NGO’s, CBO’s, Private and Business sector, Local, Provincial and National Government Departments.



The YES programme is a perfect example of the City of Cape Town’s efforts to think globally while acting locally to make a tangible, constructive difference to people’s attitudes and actions towards the environment. The YES programme also underlines the Vision for the City of Cape Town. i.e.:

- *Mindful of that which gives our city its unique character, we commit ourselves to nurturing Cape Town’s spectacular natural beauty, to preserving its rich heritage and to enriching its exciting mix of dynamic cultures.*
- *...a safe city that is clean, attractive to investors, welcoming to visitors and underpinned by a vibrant, growing economy.*
- *...an open, tolerant city in which every resident feels at home.*
- *...a city filled with concerned citizens, in which every person takes responsibility for the good order, high standards and upkeep of the city and its environment.*

The YES programme can play an important role in building environmental capacity among the citizens of the City thus promoting this vision.

*For queries about YES contact
Lindi Buirski at:
Tel: +27-21-4872839
Fax: +27-21-4872255
E-mail:
lindi.buirski@capetown.gov.za*



THE ENVIRONMENT = Natural, Built & Socio-Economic Environments



Developing a critical eye

Vlady Russo

Over the past ten years, especially after the Rio Conference in 1992, approaches to environmental reporting have been developed by the mainstream media and a number of community-based initiatives have shown some elements of a reporting approach based on reporting about local issues, mobilising communities' prior knowledge and more action-oriented approach.

Most of these approaches are still lacking a number of aspects of an action-oriented approach to environmental reporting with a view to addressing environmental issues and risks. In most cases part of the environmental news disseminated by the media has a limited focus based on the narrow understanding of the 'environment', which is often limited to ecological and biophysical stories (e.g. oil spills, ecological disasters). This superficial type of reporting does not lead to a deeper interpretation and dissemination of environmental issues and has little educational potential. There is a need for the journalist to broaden their understanding of environmental issues, in a way that include interactions between different dimensions: social, biophysical, economic and political.

Although the role of media in creating public awareness and enabling the development of critical thinking and problem-

solving skills have been widely recognised, the practical application of these ideas has not yet been achieved. Documents such as the Agenda 21 and the NGO Principles emphasised the important role of the media in encouraging public participation in decision-making processes, as well as the transformation of the mass media in one of the main channels of education. For this to be achieved there is a need for journalists to be more actively engaged in the interpretation of the day-to-day environmental discourses and by critically interpreting facts, events and social interventions in the environmental field.

Educational processes should be considered as cross cutting issues as well as the development of an approach oriented to the dissemination of good environmental practices and sharing of success stories of sustainable development initiatives, indigenous knowledge practices or environmental education programmes.

It is important that journalists covering the World Summit on Sustainable Development develop a critical eye to be able to critically analyse the news, information and opinions that they will be faced with at the Summit. It is important to recognise that both governmental participants and civil society representatives will have their own agenda and interest and will try to use the

media to call for attention and be 'heard'. On the other hand, the politics of the media in such events also have its own interest and this should also be taken into consideration when 'generating' information to be interpreted by the audience.

A critical reflection on the environmental information that will be 'made' available during the summit will enable journalists to interpret information which apparently has good intentions but in a way is a painted image of environmentalism and environmental protection. Examples of this are the idea of 'greening the summit' which might mean distributing green bags or green caps to the participants; cycling from Europe to Johannesburg to minimise the impact on the Earth while the spare parts for the bikes are sent by plane and the support team uses an enormous amount of fossil fuels; spending loads of money to import environmentally friendly projects when similar local initiatives need to be showcased.

These are just a few examples of the need of a more investigative and critical journalism that will open up debate amongst the civil society and encourage people to reflect on, and draw their own conclusions and make their own judgements.

Vlady Russo can be contacted on 
E-mail: vlady@futurenet.co.za



EE Events in the SADC region

Attachment Programme in Portuguese for Mozambicans

A Special Attachment Programme for people involved in the development of EE policies in Mozambique will be organised by the Ministry for Coordination of Environmental Affairs and the SADC Centre. The objective of this programme is to develop further and discuss the draft National Environmental Education Strategy for Mozambique. This will also be an opportunity for environmental NGOs and staff from the government to draw guidelines for the establishment of environmental clubs.

Where: SADC Regional EE Centre in Howick

When: 7-15 September 2002

Contact: Vlady Russo
vlady@futurenet.co.za



Special Attachment Programme in Botswana

Environmental Educators have been given two options to choose from the Special Attachment Programme that directly responds to their needs. The two centres in Botswana

offering this programme are the **Mokolodi EE Centre** in Gaborone and the **Chobe Wildlife Trust** in Kasane. Both programmes will be divided into two sections which are briefly described below:

Section 1 (12-16 August 2002)

Both programmes will include practical activities and EE methods and techniques, designed to enable educators with necessary skills to be able to conduct field practicals. The programme at Mokolodi will be at a more general level touching on a variety of local issues experienced in southern Africa. The Chobe programme will have some focus on community-based natural resource management and transboundary cooperation in issues that concern more than one country.

Section 2 (18-22 August 2002)

Both groups will be participating in the EEASA conference in Gaborone from 18-22 August. All participants will be expected to effectively contribute to the proceedings by being part of different workshops. The conference participants will be divided into smaller groups that will discuss specific issues within the main conference theme.



Rhodes University / SADC International Certificate in Environmental Education

This eight week course commences at Rhodes University, Grahamstown and finishes at the SADC Regional EE Centre in Howick, South Africa.

It is a participatory course that requires much involvement from all participants. There are four themes covered by the course curriculum:

- The Environmental Crisis: Issues and Risks
- Emerging Responses to the Environmental Crisis
- Environmental Education Methods and Processes
- Curriculum, Project and Resource Development

During the eight weeks of the course, participants work with the course coordinators, guest presenters and each other to develop a better understanding of their work and environmental education. Participants design a curriculum project to be implemented in their own work context. This project is to be completed within six months of finishing the course.

When: 10 Sep - 31 Oct 2002





EE Events in the SADC region cont...



World Summit on Sustainable Development (WSSD)

The WSSD is just around the corner, beginning on 26 August and running through to 4 September 2002.

The conference is to be held at various venue in Johannesburg.

To find out more contact the Johannesburg World Summit Company on:

Tel: +27 11 303 8200

Fax: +27 11 303 8236

www.joburgsummit2002.com



Gold Fields Course Leading to the Rhodes Certificate in Environmental Education

This introductory course provides participants with opportunities to interact and network with practising environmental educators, to develop teaching, communication and resource development skills and to reflect critically on their own practice through an exploration of environmental education theory.

This part-distance, year-long course held its first National Workshop at Umgeni Valley, Howick on the weekend of 19-21 July 2002.



Eco-Schools Partnerships for Africa Workshop in South Africa a success

The Workshop, entitled "Eco-Schools Partnerships in Africa: Plan of Action for the African Region", was held from 11-14 June in South Africa. It brought together participants from 14 countries to elaborate a Plan of Action and set of guidelines for the introduction of Eco-Schools in Africa through a wider Foundation for Environmental Education (FEE) network.

Delegates discussed the existing frameworks, policies and initiatives in place in the different eastern and southern African countries, and issues relevant to capacitation for local, national and regional coordination of Eco-Schools and elements of an active participation in an international network.

Eco-Schools can be seen as an effective, practical and participatory way of implementing policies towards environment, sustainable development, community development and global education, among others, at national and regional levels and also at school level.



Environmental Education Processes in Formal Education

This Swedish/South Africa course is held partly in Sweden and partly in South Africa with a home-based assignment in between. This year, it was run during the months of April, May and June and attracted participants from all over southern Africa as well as China.

The first part of the course, based in Sweden, enables participant to use the expertise and varied learning opportunities available in Sweden.

As the course has an open-process orientation, participants are encouraged to engage critically with different dimensions of the following three themes: Environmental Risks, EE as a Response and Curriculum and, Programme and Materials Development.

During the home-based assignments, participants are able to discuss their plans with colleagues and carry out relevant research in their home county.

Following this participants spend two weeks at the SADC-REEC where they have the opportunity to develop their resource.



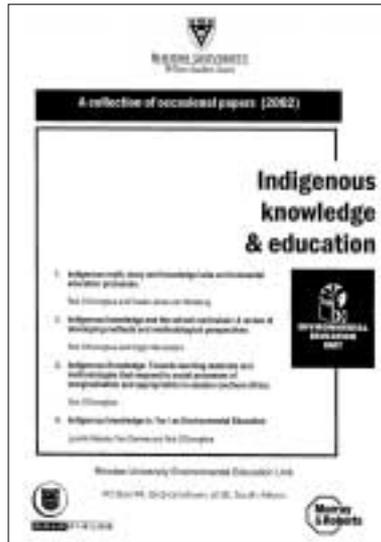
Resources

Indigenous Knowledge and Education

Four studies are presented in this resource. A proposed series of occasional papers, in this form, is due to be developed for use in the Rhodes University Environmental Education Unit. *Indigenous knowledge & education* being the first.

These papers stem from researchers contributing to the National Research Foundation (NRF) programme on indigenous knowledge and are consolidated in this form to assist the research team and provide a basis for professional interactions with colleagues.

Indigenous myth, story and knowledge, is the first paper and was developed by Eureka Janse van Rensburg and Rob O'Donoghue. It is the review of work on indigenous knowledge processes during an environmental education resource development project in southern Africa. Indigenous Knowledge opens up questions for critical review and these are examined in this paper. The research findings, themes and emerging issues are documented to enable the continuation of work on social processes of environmental education.



In the second paper, *Indigenous knowledge and the school curriculum: A review of developing methods and methodological perspectives*, by Rob O'Donoghue and Edgar Neluvhalani 'explores the developing methods and methodological perspectives for mobilising indigenous knowledge within environmental learning activities in the school curriculum.'

The study of the third paper, by Rob O'Donoghue, *Indigenous Knowledge: Towards learning materials and methodologies that respond to social processes of marginalisation and appropriation in eastern southern Africa*, was

undertaken to provide clarity on the design of learning support materials. It was felt that developing methodological perspectives also required review and clarity and this was also carried out in the study and reported on in this paper.

The socio-ecological 'know how' of the Nguni people is also examined in more depth as the information was distorted somewhat with the increasing colonial landscape of eastern and southern Africa.

The fourth paper, *Indigenous knowledge in/for/as Environmental Education*, by Lynette Masuku Van Damme and Rob O'Donoghue, looks at incorporating indigenous knowledge within, for and as environmental education in Southern African contexts.

Professor Rob O'Donoghue may be contacted at

Tel: +27-33-3303931

Fax: +27-33-3304576

E-mail: greenbike@futurenet.co.za and

Professor Heila Lotz-Sisitka may be contacted at Rhodes University,

Tel: +27-46-6038390

Fax: +27-46-6361495

E-mail: H.Lotz@ru.ac.za

