

# DISCURSOS

Língua, Cultura e Sociedade

número especial

## **Têndencias Actuais em Educação Ambiental** *Global Trends on Environmental Education*



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**FIRST WORLD ENVIRONMENTAL EDUCATION CONGRESS**  
**Espinho, Portugal - May 2003**  
**CONCLUSIONS**

General conclusions

The First World Environmental Education Congress - 1WEEC -, held in Espinho, Portugal, from the 21<sup>st</sup> to the 24<sup>th</sup> of May 2003, gathered 300 participants from 40 countries<sup>1</sup>, offering an international platform for educators, scientists, researchers, scholars, politicians, technicians, activists, media and teachers to present and debate world wide key issues in Environmental Education (EE).

During the four days of congress 273 presentations were made, between oral communications (109) and posters (164)<sup>1</sup>, dealing with EE issues in relation to several fields of expertise or concern. These presentations were organized under nine main themes and corresponding communication sessions<sup>2</sup>, each of them opened by invited keynote speakers which provided some deeper insight and reflection, on:

- Environmental policies and education;
- EE, media and communication;
- Environmental activism and citizenship;
- EE and local activities;
- EE and sustainable agriculture and tourism;
- EE and economics and sustainability;
- EE and communication;
- EE actions: evaluation and techniques;
- Teachers training.

In addition, five workshops<sup>3</sup> were held parallel to the oral presentations and poster sessions, involving a total of 150 participants. The workshops, based on case studies, were led by experts with different backgrounds from several countries, under the following themes:

- Environmental education and waste management;
- The role of learning support materials in enhancing environmental learning;
- Environmental education and health;
- Evaluation of environmental education programs;
- Implementing effective environmental educational and information programs: how can we improve our chances for success.

The development of EE world wide can be described as having had an organic growth, with diverse growing branches and continuous new inputs of different agents and stakeholders, ranging from individuals to groups and

<sup>1</sup> List of participating countries at the end of conclusions (see Figure 1).

<sup>2</sup> Thematic conclusions for the several sessions in the next chapter of this document.

<sup>3</sup> Workshops conclusions in the last chapter of this document.

institutions – NGOs, schools, universities, local and central government authorities, politicians and decision makers, media, businesses, industrial companies, international organizations and institutions, and others.

The 1WEEC was designed to have an open profile that would help to promote contact between the several stakeholders that emerged in the past decades in EE and correlated fields, contributing to a better understanding and communication between them. A technical-scientific forum of presentation and exchange of complementary visions and experiences was the centerpiece for providing an overview of the diversity of approaches, a deeper knowledge of the state of the art of EE and its integration at different socio-institutional levels, at this beginning of the century.

This accounts, on one hand, for the diversity of backgrounds and fields of interest of the participants – scientists from natural and human sciences, educators and teachers from basic to university levels, public relations from businesses, NGOs, public and private institutions and public authorities.

On the other hand, it accounts for the diversity and richness of presentations, ranging from academic to empirical approaches; from theoretical to applied scientific research; from raising philosophical, epistemological, socio-psychological, political and ethical questions, to more pragmatic, technical and material ones; from top down to bottom up approaches; from digital to hands-on approaches; with numerous case studies and field work from different countries being presented and discussed.

One taxonomy of EE was offered as generational. A first generation EE could be identified (from the 70's and 80's, depending on the countries/continents), initially being more activist and informal, as a result of diffuse, non-systematic initiatives due to the vision and will of a few, mainly educators, NGOs and some public institutions. Later on, can be identified a second generation EE (early 90's through beginning of 2000's), more scientifically-based, institutionalized, professional and formal; gradually integrated, regulated and nationally and internationally concerted, engaged with sustainable development; now involving governments, local communities, schools, universities, NGOs, public institutions and private companies, at national and international level.

The need for a new EE paradigm, supposedly more multi and interdisciplinary, capable of dealing with the complexity and uncertainty of a world not only natural but also cultural and human, emerged at this 1WEEC. It became clear that there exists a transition from a certain dominance and leading role of natural and environmental sciences in EE, towards a growing influence and contribution of the human and social sciences, desirable and vital to the field – philosophy, sociology, psychology, human ethology, anthropology, law, economic and political sciences, educational sciences, communication sciences. Such a transition underscores the relevance and need for multidisciplinary team work approaches in the environmental fields.

The recognized importance and growing attention given to communication issues among the EE stakeholders was central in this

1WEEC and trespassed all fields of work. The communication strategies and relations of stakeholders with different publics and media; the production, communication and appropriation of scientific knowledge; the role of communication within the decision making processes; the ever growing influence of the mass media; the influence and potential of the new information technologies; the need to consider individual and collective socio-psychological aspects and the growing relevance of the contribution of communication sciences, were among the main topics debated.

An interesting consideration is the notorious shifting from problem-centered communication strategies to solution oriented approaches, that can offer alternatives and motivate people in a more positive way.

The diversity of backgrounds, perceptions, interests and languages of the myriad of actors within the EE Tower of Babel can be seen as one of its strengths for the richness and multiplicity of responses that it allows. But this diversity can also be seen as one of the field's weaknesses, when leading to misunderstandings, shallow appropriation of concepts, easy use of information and, hence, development of questionable practices, sometimes even radical attitudes, creating noise in communication.

EE can be seen as an umbrella concept under which many related concepts, activities and processes take cover – environmental education, training, communication, awareness, environmental ethics and values, behavior change, environmental activism and citizenship, environmental information and data, resources, and others. Many times these terms are used as an undifferentiated whole or assumed to be universally clear. During the 1WEEC there was some evidence of the need to discuss, clarify, update and reach a broader base of consensus on some of these key concepts and practices, in order to bring some accuracy and improve the quality of the work and communication in this field.

One of these key concepts central to EE is obviously sustainable development. Education for sustainable development (EfSD), or education for sustainability (EfS), is the current trend. But the concept of sustainability and associated practices are still developing and are neither universally understood nor applied. So the need exists to discuss, clarify and create a common base of work around this new driving force that leads contemporary environmental action, many times as a misused magic label.

EE resources were another relevant issue presented and discussed at the 1WEEC, also reflecting the diversity of approaches, and the considerable investments that have been made in this field. These range: from natural to virtual resources; from on-site to distance learning and e-learning; from natural ecosystems and protected areas to urban parks and facilities; from documentation centers to data bases; from internet to thematic networks; from existing disciplines to the development of new subjects and learning materials; along with economic resources and instruments, and building of partnerships. Not forgetting creativity as one of the most crucial, universal and renewable resources that can be used.

The 1WEEC provided undoubtedly a good demonstration of the range of topics and stakeholders in the field of EE/EfSD, with a diversity and

richness of approaches and questions that inevitably reflect the human nature and the world and age we live in.

The thematic frame set for organization, analysis and discussion at this 1WEEC, should not hinder the necessary systemic and integrated vision and understanding of EE. Most of the issues are horizontal and common to the different fields of action and research, or are inevitably interconnected and complementary, and so concern all agents. Subjects like public participation and local communities involvement; attention to local/community diversity, needs and priorities; production of and access to information; communication between stakeholders; the need for an integrated environmental policy and regulation; the need for a national EE policy and curricular updating from basic to higher education, adult education and professional training; the need for political culture and institutional change; deontological and ethical questions; the importance of evaluation and research, all appeared as relevant issues to most thematic sessions during the congress (see thematic sessions conclusions).

A special reference should be made in particular, to the need for environmental awareness and training of politicians and other decision makers.

Many current concerns and priorities in EE remain the same as set years ago. This confirms the need to understand and accept how complex and gradual a process is this desired transition to a new, supposedly, sustainable paradigm.

Despite being déjà vu, some of these concerns and key issues were here-by highlighted once again, as they obviously still need to be addressed and dealt with.

One of these top priorities is the consensual need for national environmental policies and regulations at all levels of activity, supporting and adding social, economic and political coherence to EE initiatives in the path to sustainable development and environmentally aware cultures. EE plans and policies have been gradually set and implemented in many countries in the last decade, but much remains to be done, namely, in what concerns governance and institutional change and modernization towards integrated policies and management.

This inevitable balance of the EE achievements in the past, allows the recognition that although there has been a positive evolution in many fields in most countries, many expectations and priorities set before are still to be fulfilled, whether from national or international orientations (resulting from conferences like for example Belgrad 1975, Tbilisi 1977, Moscow 1987, Rio de Janeiro 1992, Johannesburg 2002, Gent 2002).

This gap between theory and practice enhances the need to better understand the underlying reasons, to learn from past experiences in order to improve EE in the future, opening the way for research, evaluation and debate in the field.

The 1WEEC was intended to be the first step of a civil society initiative allowing for a continuous future survey of EE at world level, helping prepare for and monitoring of the coming International Decade of Education

for Sustainable Development – 2005 - 2014 (an UNESCO initiative) – in the face of scientific, socio-cultural, political, economical and technological evolutions.

This intention seems to be well driven, judging from the proposals for organizing and hosting the next five WEECs in the coming years, being decided and announced in Espinho, during this 1WEEC. First the continuity will be insured on a yearly basis and then every two years, with the following schedule:

- 2004 – 2<sup>nd</sup> WEEC in Rio de Janeiro - Brasil;
- 2005 – 3<sup>rd</sup> WEEC in Turin - Italy;
- 2007 – 4<sup>th</sup> WEEC in Africa;
- 2009 – 5<sup>th</sup> WEEC in Canada.

This allows the creation of a platform that could be at the genesis of a future World Society of Environmental Education, a forum of development and concert of strategies, methodologies and guidelines at world level, with special emphasis on the implementation of Local Agenda 21. The accomplishment of these goals depends on the building of a network of scientists, educators, decision makers, politicians, technicians and NGOs, which will gather information and promote training and education.

To end, a special word about Portugal as the host country of the 1WEEC, where the long expected National Strategy of Environmental Education for Sustainability is due. During the last years, some organizations and institutions in Portugal have slowly and persistently carried out some important EE work on different fronts. But much remains to be done in order to create a true national purpose towards sustainable development and a national EE/EfSD policy. One that congregates public and private sectors to develop an environmentally aware culture, allowing Portugal to “keep up” with the leadership of other countries in this field of EE/EfSD, of which this First World Environmental Education Congress was a good demonstration.

## Thematic conclusions

### Environmental policies and education

In this section, different points of view were presented, from first line education e.g. in centers (e.g. Cyprus) to policy planning and strategies on regional (Belgium), national (Brazil) and global levels (UNEP).

In the field of policy planning, stress was placed on (i) the need for a European “umbrella” network organization on a voluntary and horizontal basis; (ii) the complexity and lack of guidelines for the local implementation of Agenda 21; (iii) the fact that education has been narrowed too much to “a service” (instrumental approach too dominant); and (iv) the ways to cope with public participation and citizenship versus the huge risk of indifference.

In the field of research, attention was called to the need for (i) being more critical towards knowledge production as well as the methods and

methodologies employed; (ii) the requirement for a closer link of EE research to social transformation and change (e.g. the context of poverty); and (iii) a common understanding across different research fields.

Finally, in the field of first line education, the implementation of new insights remains problematic (conservative opposition towards change) as a large gap remains between research results and concrete implementation of EE in both formal and informal settings. As for non-traditional educational interventions, these appear to be less effective on attitude modification and behavioral change.

#### Media and communication

The media dimension has been always present in the process of public awareness of environmental issues. This has however undergone changes from a more activist ("chaining to trees") to a more informative approach (scientifically-based) over time. Even though bad news still "sells" better, the role of EE should also be to give people hope (e.g. by presenting together both the problem and its solution).

Although the media dimension is essential to communicating EE to the public, other institutions should also take a part in these processes (e.g. schools and NGOs). The participation of various partners in the EE process could lead to a decrease in environmental misinformation in the publics and to excessive media dependency, which exists in some countries.

While there is a growing distance between scientific debate and public opinion, there is also a need to make science available to non-scientists. The need to empower people, by increasing their environmental awareness and information, can be supported by a strong connection between the various stakeholders – media, science, industry and environmental NGOs.

#### Environmental activism and citizenship

To acquire knowledge and to change attitudes is not enough to promote the necessary transformation of behavior towards environment. A big part of human action is not truly conscience nor rational. This is why EE should examine the global formation of the being and integrate physical, psychological, social and spiritual aspects.

If on the one hand knowledge and reflection are important ways move toward personal responsibility towards environment, it is necessary to go beyond the instrumental rationality, which justified the state of environmental degradation of the past that is ramified in the present, and to create situations in which we honor real feelings. It is necessary to take into account a conscienceness of the ethical values implicit in daily life language and scientific means, and to assume a critical attitude about them. These are just some of the many aspects which matter in the integration of EE. The fundamental premise is not to loose sight of how direct experience is necessary to develop a sense of reality. We should also remember that the

aim of environmental formation is not to acquire skills – understood as specific and rigid ways of solving problems – but to develop competencies, which able the individual to develop their own answers in creative and flexible ways. Central between these competences is knowing how to act in society. The participation of community in decision-making is essential in order to ensure that plans do not exist only on paper but also become reality. These plans cannot be ready made solutions that are created outside the community. They should arise from the mobilization of peoples' potential the people who live where there are situations needing to be solved.

The pedagogical process requires establishing an equitable horizontal relationship of cooperation and reciprocity, instead of the traditional vertical relationship of authority and dependence. This challenges both the technicians who work with those communities, as well as the politicians because it demands a new culture, truly democratic, where the intrinsic value of people is recognized.

Currently, politicians seem to not yet understand the usefulness of public participation in addressing and managing environmental problems or issues. They see it principally as a factor that reduces their freedom in decision-making. They prefer not to invest in EE because if the population has the abilities of discernment, critical sense and understanding the notions of sustainability, it is harder to manipulate the public.

To promote environmental citizenship we need to invest in training the population in order to make information accessible to all and to allow a democratic participation in public management. Only then can the common good prevail over the interests that lead to a non-sustainable relationship with the Planet.

#### Local activities

Various and diversified EE practical projects were presented in which the educative process was centered in the participants. This approach abandons the classical attitude of old line university structures, of a hierarchical authoritative relationship with the population, and instead invests in a cooperative and mutually beneficial approach to work, framed by a systemic and integrative view.

These projects seek to create conditions where populations call up their own potential, become social stakeholders instead of passive subjects, take control over making decisions, and control in a sustainable way the activities affecting their lives. Emotions have a relevant role here because the processes of changing starts by honoring what people feel.

Several methodological techniques, which can be integrated in EE projects, were also presented.

#### Sustainable agriculture and tourism

Environmental Education appears to be in a period of transition driving towards Education for Sustainable Development. It is interesting how

the word environment disappears when the focus is placed on Sustainable Development. But people have raised questions about it, are not clear about this issue, and have some skepticism about this trend. Also some people's groups have identified problems with the "sustainability Agenda" and are resisting this globalized trend. Therefore it is important to provide an analytical tool to explore and evaluate people's own ideas about the relationship between education and Sustainable Development. There are also different sustainability definitions and visions that should be clarified along with the need to ask more philosophical and political questions about this issue.

Some case studies on eco-tourism and agro-tourism were presented and the importance of EE in this field discussed in this session. Tourism as a key industry of the current economic development trends of many countries raised questions about the trilogy – economic activities, planning and environment – with EE assuming a new central role in this field.

Some trends were pointed out, one being eco-tourism in spite of the paradox of eco-tourism's environmental impacts as a threat to the natural treasures it is promoting. And so, the proposal remains of tourism in sensitive ecosystems as the problem and, at the same time, a potential solution for integrated EE local projects. This is clearly the result of an approach where tourism is viewed as an activity with a strong educative component to be explored.

Environmental certification, auditing and management systems, and EE programs are being implemented in the field, but technical training for professionals is needed, along with strong connection and involvement of local communities.

Focus was placed on the strong link between tourism and agriculture and EE and some case studies and guidelines about their proximity were presented. It was discussed that EE should be introduced in the curricula both of short courses and higher education degrees related to tourism and agriculture issues – which is already happening in some countries.

### Economics and sustainability

Contrary to the more catastrophic and pessimist vision of environmental issues considered to be dominant in EE, an optimist and pragmatic vision supported by a strong belief in scientific innovation and technology was presented by business representatives. Business is often viewed in terms of natural resources exploitation or the environmental pollution that results from industrialized economic activities.

If for some people economic development means always some environmental degradation, a general consensus is being created around the need to improve the environment without negatively affecting business. It seems clear that it is possible to harmonize economic development with environmental protection, but only in a gradual transition. This shift is already happening towards preventive approaches and integrated management – the business search for eco-efficiency, meaning production efficiency hand in

hand with environmental efficiency – towards sustainable production and consumption.

The social responsibility of organizations, ethical issues and the central role of industrial and business associations both at national and international level, were highlighted. Some companies have been taking a strong initiative, and it is possible to find positive signs in the market of what can be called a new corporate citizenship.

Business opportunities in the environmental field could not be omitted from this debate at several levels: research, consultancy, new technologies and associated services, specialized training, and education. Business representatives reinforced the need to guarantee an EE component at all levels of professional training in companies, in a voluntary or compulsory manner (through regulation as is already the case in some countries).

So, EE, from basic to university levels, was recognized and presented as a key instrument in the process of economic development and generating a business paradigm shift. The discussion highlighted the importance of EE reinforcement in educational systems, and also the importance of the effort to make EE more objective and scientifically based, preventing dogmatic, subjective, and manipulative approaches. The role of schools is fundamental for EE, but it was cautioned that no "fundamentalist" EE should be offered at schools. The need to educate for cooperation and educate to listen the other parts arguments with no dogmas, were clearly stated. The importance of cooperation between NGOs, companies and governments, was well underlined.

As a priority from a target group's perspective, the representatives of the business sector themselves pointed out the importance and need for EE covering: consumer education; business education, introducing environmental defense and education in business thought; as well as politicians' education.

### Communication

EE is assuming a dissatisfactory impact in society and should therefore consider a re-orientation and modernization. These changing processes should consider sustainability issues, outline packages of measurement, evolve society and economics, safeguard and enhance efforts towards quality, and increase the overall effectiveness of communication. The complexity of the environmental object was shown to be distinguished in four constitution levels (scientific, social, political and educational).

During the whole session, several paths to promote EE supported by communication/information transfer were discussed. Active- rather than passive-learning approaches were suggested (e.g., use of cartoons, fieldwork developed in schools and by NGO to enhance the contact with reality) in order to contribute to a more effective educational valuing of the environment and to empower people for surrounding problems. In spite of this, there are certain difficulties related to EE resources, which severely constrains the applicability of new and diverse learning methods.

The culture (i.e., practices that focus the meaning about the world and ourselves) has been shown to affect the ideas or thoughts one might have about nature and the individual's relationship with the environment. Following a similar idea, the interdisciplinary and transversalization of EE through literature and a cultural approach was also explained.

The importance of EE in higher education and the possibility of being an independent subject or an integrated issue were also discussed.

In an effort to enhance information access by different citizens and communities, documentation centers were created as a way to improve educational and institutional quality.

### Evaluation and techniques

This session, very rich in the diversity of contributions, can be summarized in two essential axes: the evaluation concerns within EE, and some technical approaches to EE.

The presentations around the first axis, dealing with evaluation, a complex issue in it self, showed how the subject has been growing in importance in EE over the years, but much still needs to be done. A lack of evaluation culture within EE was pointed out as one of the reasons as well as the lack of published evaluation studies which makes it difficult to further the research in this field.

Attention was called to the little evidence of the effectiveness of EE programs, and how to measure/evaluate it. Principles, criteria and methods of evaluation on EE were presented and discussed – from the setting of objectives, selection of criteria and indicators, to participatory evaluation methods involving the stakeholders; from behavior change to environmental change evaluation. It was made clear that there is no single preferred method.

More than answers, some interesting questions were presented during the session: How to change, individually, such complex processes as social practices? Should we educate to expand peoples' freedoms and competences? What competences should be developed when implementing an EE program?

The complexity of EE, the importance and need of time and the non-linear, cause/effect relationship existing between the variables at stake in EE programs and the resultant actions make EE evaluation a considerable challenge. Further research is needed in the field which should be set as a priority to improve EE.

The fact that people from very different backgrounds work in EE was presented as a valuable contribution to the field, but also as being a cause for gaps in communication, as all have different fields of expertise, disciplines, methods and ways of thinking and evaluating.

The multidisciplinary approaches necessary in EE should not hinder the recognition of the importance of disciplinary based work. Some authors stated the need to go back to disciplinary areas and value them.

Around the second axis of this session, the one on EE techniques, a diversity of content and approaches can be summarized: i) the evaluation of facilities and resources for EE and the need to set quality criteria for these evaluations; ii) the development of pedagogical materials applied to communitarian EE programs or to curricular development at schools; iii) the development of EE projects based on curricular transversalization; iv) socio-cultural representations; v) computational tools; and vi) field work. All these techniques aim to support the acquisition of scientific knowledge and competences to help understand the environment.

### Teachers' Training

Teacher training in EE should ideally be as holistic as possible (e.g. including social, economic and other areas of knowledge) which is still not provided by the majority of the existing graduate and post-graduate courses.

The number of schools involved in EE projects and programs has, however, progressively increased over the last few decades. In the lack of specific training, many EE projects / activities are being developed through the joint efforts of teachers, researchers, and the general community based on existent academic and cultural knowledge. The different roles that each of these groups play are very important in supporting EE processes (e.g. the use of narratives as a tool in EE processes, and the hands-on and outdoor activities approach).

There is a wide recognition that environmental education and environmental care are crucial instruments in the development of economically and ecologically sustainable societies, and political and economical support has been given for the development of EE programmes. Subsequently, teachers from different countries have demonstrated some experience acquired in the development of those programmes in their schools. However, a great problem still persists with respect to teacher's level of knowledge of EE upon graduation. It is expected that they have an increasing knowledge in all the different scientific areas, however, this is not provided by their specialised higher graduate courses.

A possible strategy to improve teacher's foundation in EE consists in the development of teacher training courses, which should be related to social and economic issues of society, in order to help the future teachers improve their knowledge and skills concerning this issue. Some examples of in-service courses were reported.

One of the main aspects of formal environmental education programs is students' active participation. Positive results in EE programs are more likely attained when students are allowed to participate in the different steps of the program (project planning, development and results communication).

Some educational research and evaluation projects are often implemented in EE projects, but they often do not seem to consider how the results of such research/projects are used to inform, improve or change future projects;

It appears to be evident that there is an excessive use of statistical methods, diagrammatic reporting (e.g. graphs, charts) and scientific tools as methods for promoting EE at school level, leading to a lack of consideration of social processes. Between good environmental attitudes and the development of new behaviours towards the environment, several constraints commonly occur. These constraints could derive from social dilemmas, personal convictions and old behaviour patterns. It is possible to use cost-benefit analysis to see the structural and institutional or socio-economic and democratic constraints. Therefore, in order to assess EE programs with respect to their ability to change behaviours, the potential constraints must be assessed for the different social contexts.

### Workshops

#### Environmental Education and waste management

In the first part of this workshop different case studies of environmental education related to waste management were presented and discussed, including guidelines for the implementation of environmental education projects on waste and evaluation of environmental awareness actions. Also presented were the preliminary results of pathways of one decade of environmental education within the education system of Portugal. In the second part, the workshop participants were invited to discuss questions related to the development of and plan/strategy of EE for waste. From this working section of group discussion, the following conclusions were drawn:

- there is a need for the delineation of a strategic plan for environmental education on waste, integrated in a national plan of environmental education.
- due to increasing waste production, the priority areas of that plan, stressed by the participants, should be related to the consumption behavior patterns and improvement of the reduction, reuse and recycling practices.
- the participants also concluded that this plan should be developed taking into account the responsibilities at the different levels and should involve the participation of many different stakeholders. An Independent commission of experts should evaluate the plan development.

#### The role of learning support materials in enhancing environmental learning

The workshop centered around sharing the experience of the development, adaptation and use of learning support materials that can enhance environmental learning in different contexts. This was done through the presentation and discussion of different regional (southern Africa) case stories and providing a number of reading materials. The following reflections were discussed: the state of the art of EE materials development practices (e.g., content, multi-disciplinary, participation, production options, focus, different formats, cultural materials); importance of participation in the

development of materials; the advantage of different views of knowledge and experiences (e.g., in Portugal, Italy) in learning support materials development; and the advantages and disadvantages of using adaptive learning support materials in context.

#### Environmental educational and health<sup>1</sup>

The workshop was conducted in two parts; the first part consisted of practical activities performed with working groups and the second one consisted of theoretical reflections. In the first part the working groups were divided according to interdisciplinarity interactions between the participants. Different scientific materials were discussed (e.g. effects of water pollution on human health) aimed toward the adaptation of materials for teaching and communications purposes. In the second part, the results of practical work were summarized and discussed. Finally, the workshop presented the project that supported the workshop, which was developed by the Osvaldo Cruz Foundation.

#### Evaluation of Environmental Education Programs

Evaluation of Environmental Education Programs provides a point of convergence of various field and disciplines. The field of evaluation is principally focused on how we think about our programs and obtaining appropriate data to answer questions to improve our programs. This workshop explored the structures by which we think about evaluation and provided an alternative framework for understanding how we approach program design for improvement.

#### Implementing Effective environmental Educational and information programs: How can we improve our chances for success

The aim of this workshop was to give environmental educators tools and guidelines for developing and delivering Environmental Education programs. The focus -was to look not only at the context of material but also the process of developing and delivering environmental education materials. The guidelines were delineated and questions about it were discussed.

A voluntary team of people drew these 1WEEC conclusions, as follows.

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