

SUSTAINABLE MEDITERRANEAN

MEDITERRANEE DURABLE • ΒΙΩΣΙΜΗ ΜΕΣΟΓΕΙΟΣ • MEDITERRANEO SOSTENIBILE

المتوسطة المستدامة

THE STATUS OF ENVIRONMENTAL EDUCATION IN THE MEDITERRANEAN COUNTRIES

Within the formal & non-formal educational systems

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**LE STATUT DE L'EDUCATION
ENVIRONNEMENTALE EN MEDITERRANEE**
Au sein des systemes educatifs formels et non formels

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EDITORIAL

One of the first things one realizes when in contact with educators from the Mediterranean region is that there is a big diversity not only in the degree of application of Environmental Education (EE) and the way that it is practiced, but also in the philosophy and the regulatory and operational framework of the educational systems in general in the various Mediterranean countries. Based on this assumption, it was considered that this special issue of Sustainable Mediterranean on the status of EE in the Mediterranean countries would be a useful insight for educators as well as analysts.

There was a considerable response to MIO-ECSDE's call from educators including university professors, and NGOs interested in this matter, and their valuable contributions are compiled in this issue. In general, EE does not have the same "status" within the educational systems of the Mediterranean countries. Of course part of the reported differences is due to the way an educator/author compares the actual situation with his/her expectations and standards. However, it seems that in few cases EE has been incorporated as an essential component in the national strategy for environment and development and there is adequate cooperation between the relevant Ministries for Environment and Education, which is not the case in most countries.

There are various approaches reported on the implementation of EE at the formal educational systems of countries but also in a non-formal or informal way. Formally, EE is applied either in the interdisciplinary way, as a single subject, or in the multidisciplinary way by being infused in other disciplines. Some countries report also the function of Environment Clubs (e.g. Morocco) or EE Centres operating under the direct supervision and responsibilities of the Ministry of Education (e.g. Greece). At the non-formal level the NGOs play a very important role and this is reflected also by indicative projects that are described herewith (e.g. by MEDASSET, MAREVIVO etc.). EE components may be incorporated in other formations (i.e. in the tourist studies etc). In several cases the role of media is highlighted, as well as the use of internet as an effective tool for delivering EE.

In this context, the application of school networks seems to be quite successful many cases i.e. Cyprus Greece, Portugal and also Croatia with the national branch of the SEMEP programme. Additionally, schools in Italy and Portugal tend to form partnerships with NGOs and local authorities in order to implement their EE projects.

Along the various problems EE is facing in several countries insufficient teacher training seem to be the major obstacle. Furthermore, the heavy workload of students and their oversqueezed programme inhibits them from taking part in EE programmes. The lack of satisfactory evaluation of EE programmes, according to set standards is another challenge. Educators' recommendations include, among others, strengthening of the financial support for EE pro-

ce dont on s'aperçoit avant tout au contact des enseignants de la région méditerranéenne, c'est qu'il y a une grande diversité non seulement quant au degré d'application de l'Education Environnementale (EE) et la façon dont elle est pratiquée mais aussi quant à la philosophie et au cadre opérationnel et réglementaire des systèmes éducatifs dans les différents pays de la Méditerranée. C'est en partant

de ce constat qu'on a pensé que cette édition spéciale de Méditerranée Durable sur le statut de l'EE en Méditerranée serait un aperçu utile aussi bien pour les enseignants que pour les analystes.

La réponse à l'appel de MIO-ECSDE a été massive de la part des enseignants y compris des professeurs d'université, et des ONG intéressées par ce sujet, et leurs contributions ont été rassemblées dans cette édition. En gros, l'EE ne jouit pas du même statut dans les différents pays méditerranéens. Certes, c'est dû en grande partie à la façon dont un enseignant/auteur compare la situation réelle à ses attentes et exigences. Apparemment, cependant, ce n'est que dans peu de cas que l'EE a été incorporée comme composante essentielle à la stratégie nationale pour l'environnement et le développement et qu'il y a une coopération adéquate entre les ministères requis pour l'Environnement et l'Education, ce qui n'est pas le cas dans la plupart des pays.

Plusieurs approches ont été relevées sur la mise en œuvre de l'EE par les systèmes éducatifs formels des pays, mais il y a aussi des applications non formelles et informelles. De façon formelle, l'EE est appliquée soit de façon interdisciplinaire, en tant que matière en soi, ou de façon multidisciplinaire quand elle est intégrée à d'autres disciplines. Quelques pays font également mention de l'existence de Clubs de l'Environnement (ex. le Maroc) ou de Centres pour l'EE fonctionnant sous la supervision directe et sous la responsabilité du Ministère de l'Education (ex. la Grèce). Au niveau non formel, les ONG jouent un rôle important, ce qui est reflété par des projets comme MEDASSET, MAREVIVO, etc. Les composantes de l'EE peuvent être intégrées à d'autres formations (ex.: aux études touristiques etc.). Dans certains cas, le rôle des media est mis en valeur de même que l'usage de l'Internet comme outil efficace pour la dissémination de l'EE.

Dans ce contexte, l'application des réseaux scolaires semble être très efficace dans de nombreux cas comme à Chypre, en Grèce, au Portugal et aussi en Croatie avec la branche nationale du programme SEMEP. De plus, les écoles en Italie et au Portugal ont tendance à former des partenariats avec les ONG et les autorités locales afin de mettre en œuvre leurs projets d'EE. Parmi les problèmes variés rencontrés au niveau de l'EE dans certains pays, la formation insuffisante des enseignants est l'obstacle majeur. En outre, l'énorme quantité de travail des étudiants et leurs programmes surchargés les empêchent de participer à des programmes d'EE. Le manque d'une évaluation satisfaisante des programmes d'EE selon les normes établies est un autre défi. Les enseignants exigent notamment le renforcement du soutien financier pour les projets d'EE et l'assouplissement des procédures administratives qui parfois empêchent étudiants et enseignants de participer en particulier à des travaux

jects and decreasing the bureaucratic procedures that in some cases restrain teachers and students from being engaged—particularly in field or community work. They also put emphasis on the need to enhance EE programmes in schools of the weaker non privileged communities, which are usually the less sensitised and cut off.

As main virtue of EE is its interdisciplinary, cross-curricular character and “openness” that gives space for a multi-teacher approach which is in some cases adopted. Most educators agree also that its voluntary character, which stands for teachers as well as students, is one of its great advantages. Many countries, however, regard (or tend to regard) EE as a compulsory subject, so being in accordance with the EU policies and recommendations.

Several questions are raised as to what can environmental education (EE) or education for sustainable development (ESD) bring in a world full of complex interactions and in crisis due to extreme poverty, environmental degradation, political economic and cultural imbalances, terrorism etc: certainly EE alone cannot provide the answer. However, we believe that education is a very powerful weapon that together with effective institutions, social cohesion & welfare, responsible economy, and advanced technologies may provide the necessary synergy towards approaching the long desired sustainable development of our region.

de terrain et travaux municipaux. Ils soulignent également le besoin de renforcer les Programmes d’EE dans les écoles des communautés les plus défavorisées qui sont en général moins sensibilisées et plus isolées.

La vertu essentielle de l’EE réside dans son caractère interdisciplinaire et pluridisciplinaire, dans son ouverture qui permet l’intervention de plusieurs professeurs comme cela se fait dans certains cas. La plupart des enseignants reconnaissent que le «volontariat» aussi bien de la part des professeurs que des étudiants est l’un de ses grands avantages. De nombreux pays cependant considèrent l’EE comme une matière obligatoire en accord avec la politique de l’UE et ses recommandations.

Plusieurs questions se posent quant au rôle de l’EE ou l’Education pour le Développement Durable, quant à ce qu’elles peuvent apporter dans un monde aux interactions complexes et en crise miné par l’extrême pauvreté, la dégradation environnementale, les déséquilibres culturels, politiques et économiques et frappé par le terrorisme etc. Certes l’EE ne détient pas toutes les clés. Pourtant, on est convaincus que l’éducation est une arme très puissante qui, alliée à des institutions efficaces, à un bien être social et une cohésion sociale, à une économie responsable, et à des technologies avancées, peut fournir la synergie nécessaire à la conquête du développement durable de notre région tant désiré.

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Education for Sustainable Development (ESD) in the light of the UN Decade for ESD: “agreements” and “disagreements” in the international scene

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The developments about Education for Sustainable Development (ESD) since the World Summit on Sustainable Development (Johannesburg, 2002) are taking place in a rapid way at all levels: national, regional and global. Nevertheless, ESD is by nature an evolving and dynamic concept that encompasses a new vision of education seeking to empower people of all ages to assume responsibility for creating a sustainable future. To this end, the UN General Assembly adopted, in December 2002, the resolution establishing a Decade on Education for Sustainable Development (UN DESD) for the period of 2005-2014. The Decade has as basic aim to promote education as the basis for a sustainable human society and to strengthen international cooperation toward the development of innovative policies, programmes and practices of ESD. However, it is evident that the Decade has to cover a very broad range of issues depending on where, who and what is involved in the field of ESD. With the current deeply embedded educational crises a joint vision, action resources and appropriate training seem far away.

SOME GOOD NEWS

However, some of the latest developments at the international level give the first positive signs and results. During the 12th Session of the UN Commission on Sustainable Development (CSD) the community of educators was very active and highly involved in the activities of all the major groups to advance the CSD Plan of Work. In many cases the community of educators played significant role in advising their own governments on critical issues. The CSD Education Caucus stressed and called upon the Commission to identify action-oriented roles for educators to play in the implementation of Agenda 21 and the Johannesburg Plan of Implementation. The educators urged governments to promote dialogue between all relevant ministries and the education community at the national level regarding the development of national sustainable development strategies.

GOOD PRACTICES

The UN Economic Commission for Europe (UNECE) Strategy for ESD is a long-term process of drafting the region's†

Strategy for implementing ESD which was launched 2 years ago (1st Meeting of the Drafting Group: 9 September 2002). In the drafting process not only representatives of the member states but civil society representatives are involved, as well. The document of the Strategy is expected to be finalised by the beginning of 2005. The Strategy is considered as the region's major input to the UN DESD. It addresses all types of education: formal, non-formal and informal and covers all levels of education: primary, secondary, higher, vocational and adult. Apart from analysing the specific principles and objectives, the Strategy develops a comprehensive framework for ESD Implementation providing the critical components for the setting up of National Implementation Plans, including, inter alia: the roles and responsibilities of the governments and other stakeholders, financial issues, evaluation and monitoring, as well as schemes of international cooperation.

In parallel, UNESCO, as the lead agency of the Decade has developed a draft International Implementation Scheme of the Decade in consultation with UN Agencies, International Organisations, Governments, Universities, civil society and the private sector. The draft provides Recommendations for governments on how to promote and improve the integration of ESD in their educational strategies and action plans. The draft was supposed to be finalized by the end of May 2004. UNESCO also facilitates and coordinates several draft Regional Strategies on ESD for Asia and the Pacific; Africa; Europe and North America; the Arab States; Latin America and the Caribbean.

MIO-ECSDE is actively involved in both activities: development of the UNECE Strategy and the International Implementation Scheme of the Decade.

Following the course of action on ESD as outlined in the recent International Meetings and Consultations and within the processes of drafting the UNECE Strategy and the International Implementation Scheme of the UN DESD, one could identify some points of agreement and disagreement of the international community regarding ESD, its various dimensions and the related issues. Highlighting them in a very concise way we come up with the following scheme:



This article was based on the reports and background papers of the following meetings:

- International consultation on ESD “Learning to change our world”, Gothenburg, Sweden, 4-7 May 2004.
- International Conference “Education for Sustainable Development – Preparing the Decade”, Minho University, Braga, Portugal 19-22 May 2004.
- 12th Session of the UN CSD, New York: Side Event: “Education for Sustainable Development”, 28 April 2004 coorganised by the Hellenic Ministry for Environment, Physical Planning and Public Works, UNECE, UNESCO

- and MIO-ECSDE in association with the UN Education Caucus
- 12th Session of the UN CSD, New York: Side Event: “Engaging People in Sustainability: Water Sanitation and Human Settlements”, 27 April 2004, organized by the UN Education Caucus and sponsored by the Government of Canada, Global Youth Action Network, WSSCC, Earth Force, in association with MIO-ECSDE.

For more information about the meetings please visit: www.medies.net

† UNECE Region covers 55 member states from Europe, USA and the Caucasus area.

VIEWING ESD GLOBALLY...

THE GLOBAL EDUCATIONAL COMMUNITY AGREES THAT...		DISAGREEMENTS - OBSTACLES
Sustainable development is a complex concept	→	The definition of ESD
ESD is strongly linked to culture and attitudes, requiring not only the reorientation of the educational sector but reforming of society and governance in their wholeness, including social institutions and living patterns.	→	The strategies to be developed and implemented are heavily depended on the national, even local level -political, social, economical, cultural, etc.
Developing National Plans for ESD linked to National Sustainable Development Strategies is an essential practical administrative step.	→	Limited number of such national efforts has been undertaken.
COMMON PRACTICAL PROBLEMS IN THE VARIOUS SUB-REGIONS		THE CHALLENGES
Inefficient use of the capacity of higher education and research institutions; Shortage of skilled educators; Lack of adequate educational materials; Lack of interdepartmental and multi-stakeholder cooperation on ESD (or insufficient level of coordination of activities); Lack of financial resources to develop ESD strategies Lack of political will.		Strengthening existing regional & sub-regional alliances and networks on ESD, encouraging twinning projects; Facilitating sharing of good practices and transfer of knowledge, using the facilities provided by the new information and communication technologies; Integrating ESD component in relevant bilateral and multilateral programmes; Involving civil society in the development implementation and monitoring

L'EDUCATION ENVIRONNEMENTALE AU MAROC

Ftouhi Mohamed

Introduction

Le Maroc, pays situé à l'extrême pointe Nord-ouest de l'Afrique sur une superficie de 710850 Km², dispose des ressources naturelles très variées (eau, sol, biodiversité, littoral et ressources halieutiques abondantes, variété d'écosystèmes terrestres et marins). Sous l'effet de la croissance démographique, l'urbanisation accélérée, l'évolution des infrastructures, du transport, d'industrie et du secteur d'énergie, en plus des besoins générés par le développement économique et touristique ainsi que la pauvreté, la dégradation de l'environnement devient une préoccupation majeure aussi bien pour les décideurs que pour la communauté scientifique et la société civile au Maroc.

Le coût de la dégradation de l'environnement a été estimé en 1995 à 8,2 % du PIB. Ce chiffre connaît certainement un accroissement durant la période qui nous sépare de cette date. Les aspects de la dégradation de l'environnement concernent plus particulièrement:

- La pollution de l'air et de l'eau ;
- La détérioration de l'état des sols et des terres arables sous l'effet de l'érosion, l'ensablement, l'avancée du désert et les mauvaises pratiques culturelles ;
- La déforestation et l'érosion de la biodiversité végétale et animales ainsi que la dégradation des écosystèmes qui les abritent tels que les zones humides, le littoral, les montagnes, les oasis

et le désert.

- L'urbanisation accélérée et les problèmes de l'environnement urbain, notamment ceux relatifs à la gestion des déchets solides et liquides, à la pollution de l'air, aux nuisances et bruits, au transport et à la détérioration du patrimoine architectural traditionnel (Ksours, monuments historiques, remparts).

Des efforts considérables en matière de la préservation de l'environnement

Depuis la conférence de Stockholm en 1972, des progrès considérables ont été enregistrés au Maroc en matière de préservation des ressources naturelles et de l'environnement bâti. Ceci témoigne de la prise de conscience des décideurs et du public, de la nécessité de lier le développement du pays à une gestion rationnelle de l'environnement. Parmi les indicateurs de cette prise de conscience, on peut citer les exemples suivants:

- Le renforcement du cadres institutionnel et législatif par le biais de l'institution d'un département ministériel chargé de la question environnementale ainsi que l'élaboration des textes législatifs qui tiennent compte de l'évolution technologique et des engagements souscrits par le Maroc au niveau régional et international, notamment dans les domaines de l'eau, l'étude de l'impact, l'air, la biodiversité, le changement climatique et

la lutte contre la désertification et la sécheresse ;

- L'adoption d'une stratégie, d'une politique et d'un plan d'action en matière d'environnement. La dite stratégie s'articule sur les axes suivants:
 1. l'amélioration de l'état des connaissances sur l'état de l'environnement dans le pays et ce, à travers la mise en place d'un système d'information et des réseaux de surveillance et d'alerte ainsi que la publication systématique d'un rapport périodique sur l'état de l'environnement dans le pays,
 2. Le renforcement et la modernisation de l'arsenal juridique national environnemental;
 3. la mise en place d'un système incitatif pour mobiliser l'engagement positifs de l'entreprise et le secteur privé en faveur de l'intégration de la dimension de la protection de l'environnement dans les activités économiques industrielles,
 4. l'encouragement de la participation élargie en faveur de la protection de l'environnement, notamment le secteur privé, la société civile, les collectivités locales et le grand public;
 5. l'intégration de la question de l'information, de l'éducation et la communication, relative à l'environnement dans le système éducatif national formel, non formel et informel, en coopération avec des partenaires comme le département de l'éducation nationale (projet éducation V) ou les organisations non gouvernementales (Fondation Mohamed VI pour la protection de l'environnement...)

L'éducation relative à l'environnement au Maroc: Une tentative encourageante qui nécessite davantage de renforcement

La sensibilisation et l'éducation du public constituent des piliers majeurs dans toute stratégie visant la protection de l'environnement. Partant de cette conviction, le département de l'environnement au Maroc, en partenariat avec le Ministère de l'éducation nationale, le secteur de l'information et de la communication et les autres acteurs concernés, notamment la société civile tente de promouvoir le rôle du citoyen dans la sauvegarde de l'environnement à travers des campagnes ciblées et soutenues visant le grand public, les différents intervenants en plus de l'introduction de l'éducation environnementale dans les curricula et les manuels scolaires pour les différents cycles de l'institution éducative marocaine.

1. L'éducation environnementale dans le système éducatif formel

Elle est véhiculée à travers un certain nombre des disciplines, selon une approche intégrative, dans les cycles de l'enseignement primaire et secondaire. Parmi ces disciplines il y'a lieu de citer les sciences naturelles, les sciences de la vie et de la terre, la géographie, l'instruction islamique, l'éducation à la citoyenneté, les langues arabe, français et anglais.

La réforme du système éducatif marocain entrepris depuis 2002, conformément à la charte nationale de l'éducation et de la formation était une opportunité très adéquate pour enrichir le contenu des manuels scolaires et les curricula de plusieurs concepts relatifs à la durabilité, à l'environnement, au respect des droits de l'homme et à la citoyenneté responsable.

Les termes de références de l'élaboration des manuels scolaires citent explicitement la nécessité de tenir compte de ces concepts, notamment en ce qui concerne les manuels des langues, des disciplines scientifiques et des disciplines sociales.

L'approche privilégiée pour inclure l'éducation relative à l'environnement

dans la pratique des classes, au niveau de l'enseignement primaire et secondaire est une approche qui consiste à intégrer la dimension environnementale dans les disciplines déjà existantes et ce, à l'occasion de la révision et de la refonte des objectifs et des contenus des différentes disciplines enseignées.

Par ailleurs, l'éducation environnementale devient une activité très attractive et très efficace à travers la création des CLUBS de l'éducation environnementale, répandus un peu partout dans le pays. Ces clubs sont créés dans plus de 500 établissements scolaires dans le milieu urbain et rural, ils offrent l'occasion de réunir, autour des activités visant la promotion de l'éducation environnementale les élèves, les enseignants des différentes spécialités et l'administration. Ces clubs jouent également un autre rôle éducatif très important, il s'agit d'assurer une interaction et un rayonnement de l'école sur son milieu par le biais des activités para – scolaire qui servent les objectifs de la protection de l'environnement (des campagnes de nettoyage et de reboisement, des conférences, des compétitions sur des questions environnementales, dessins, théâtres, des projets concernant l'environnement local...)

Les parents des élèves, la communauté locale, les ONGs et les élus locaux sont parfois, impliqués dans ces activités.

Parmi les thèmes environnementaux prioritaires traités à travers l'institution scolaire formelle, on trouve entre autres: l'eau, la biodiversité, la lutte contre la pollution de l'eau, de l'air et du sol, la propreté des lieux publics et des plages, la gestion des déchets ménagers, la protection de l'environnement local.

Au niveau de l'enseignement supérieur, à l'exception de la Faculté des Sciences de l'éducation, où des activités d'enseignement et de recherche sur la thématique de l'éducation environnementale, l'environnement est enseigné en tant qu'un champ scientifique dans de multiples institutions de l'enseignement supérieur tels que les Facultés des Sciences, les écoles de formation des ingénieurs, les Facultés de droits (Droit de l'environnement) et les Facultés des lettres (Géographie).

2 L'éducation environnementale dans le système éducatif formel et non formel

Parmi les innovations éducatives du système éducatif marocain, il importe de mentionner l'institution très récente d'une entité gouvernementale, chargée de la promotion de l'éducation non formelle. Cette entité vise à élargir les chances d'accéder aux services de l'éducation pour les adultes analphabètes ainsi que les jeunes, du deux sexes, qui n'ont pas pu parachever leur scolarité normale.

A cet effet, des programmes éducatifs ont été élaborés et mis en œuvre ; ils sont destinés aux adultes, notamment les femmes.

Dans le même ordre d'idée, des programmes éducatifs pour les jeunes, ont été élaborés afin de réinsérer cette tranche de la population dans le système éducatif et la préparer au marché du travail, en leur procurant les compétences nécessaires pour pouvoir exercer un métier utile.

Des partenariats entre l'administration compétente et des ONG ont été signés afin que la société civile contribue à la promotion de l'éducation non formelle et les activités éducatives de proximité.

Les programmes et le contenu des manuels éducatifs utilisés par les bénéficiaires de l'éducation non formelle contiennent de multiples questions relatives au milieu vécu de l'apprenant, comme la gestion des ressources naturelles, la protection de l'environnement socioculturelle, la santé, le planning familial et le développement communautaire.

De plus, la sensibilisation environnementale se développe, de plus en plus à travers les canaux de l'éducation informelle, ainsi, la radio, la télévision, la presse écrite, l'Internet consacrent une place privilégiée à informer le public sur des questions se rapportant à l'environnement local, national et international.

Dans le même ordre d'idée, l'action des ONG locales et nationales est très active en matières de la sensibilisation et de l'éducation environnementale. Parmi les ONG les plus actives dans ce domaine, on peut citer la Fondation Mohamed VI pour l'environnement, l'association AFAK, l'association des enseignants de la vie et de la terre (AESVT), la SPANA, le Club Marocain de l'éducation en matière de Population et d'Environnement et beaucoup d'autres organisations oeuvrant à l'échelle locale, y compris les associations de quartiers...

En outre, des départements administratifs tels que l'office national de l'eau potable, les délégations régionales du Ministère de l'agriculture et le développement rural, le secteur des eaux et forêts intègrent l'environnement et la préservation des ressources naturelles parmi ses activités de communications et de sensibilisation. Les instruments les plus utilisés sont les séminaires, les rencontres interpersonnelles, les caravanes itinérantes, les dépliants, les affiches, les spots télévisés, les expositions et les visites de démonstration, l'utilisation des réserves naturelles, des zoos et des jardins botaniques.

Conclusion

L'information, l'éducation et la communication relatives à l'environnement est considérée comme des outils essentiels dans la

stratégie nationale pour l'environnement et le développement au Maroc.

L'action de la société civile en la matière connaît un essor accru, les médias, certaines administrations publiques contribuent, de manière très variée, à promouvoir les connaissances, les compétences et les attitudes positives en matière d'environnement chez le public.

Dans le milieu scolaire formel, l'éducation environnementale est véhiculée essentiellement à travers les disciplines scientifiques et sociales existantes et à travers les clubs environnementaux. Cela dit, l'éducation environnementale devrait prendre une place plus importante dans les programmes de la formation initiale et continue des enseignants, ainsi que dans les activités de l'enseignement et de la recherche au niveau de l'enseignement supérieur. Finalement, une réorientation de cette dimension éducative environnementale s'impose, il est temps de passer d'une éducation relative à l'environnement à une éducation pour le développement durable, où l'accent sera mis sur la lutte contre la pauvreté, le respect des droits de l'homme, la justice sociale, la préservation de l'environnement et la citoyenneté responsable.

Les canaux de l'éducation formelle, non formelle et informelle sont appelés à saisir l'opportunité offerte par la réforme éducative en cours afin de faire de l'éducation pour le développement durable une pratique éducative réelle.

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ADPE
ASSOCIATION DE DEVELOPPEMENT
ET DE PROTECTION DE L'ENVIRONNEMENT
DE LA MARSA



ENVIRONMENTAL EDUCATION IN TUNISIA

Boubaker SMATI - Treasurer

In the last few years, great efforts have been made in Tunisia to increase awareness among civilian society so that better care is taken of the environment. The different ministries (Ministries of Agriculture, Education, Youth and Sports, Interior, the media, NGOs, all are contributing in this vast program. There is a huge transformation in the Tunisian landscape brought about not only by continuing construction works, but also by the trees and flowers that are planted everywhere to embellish the environment. Behind this is probably the belief that a beautifully-kept landscape will eventually encourage the civilian society to give a hand and at least keep the environment as it is, which means avoid polluting it. The government and environmental NGOs are aware that more needs be done. Increasing demography, overpopulation, poverty and extensive use of the world's resources are the main threats to the world's environment.

Environmental education is thus necessary if one wants to ensure the future. To do that, the future generations have to be informed about the state of our planet earth and of the dangers that are looming ahead if the citizens of the world do not realize their responsibility in the deterioration of our environment. As a result, the environment is taught as a subject in the different educational in-

stitutions in Tunisia, but also in environmental clubs to be found in primary and secondary schools.

Here are the answers to the questions sent to us:

1. One of the transversal themes dealt with in the programmes of basic education is called: The Environment.

The goal targeted is the desire to make the students discover the environment in which they live and play a role in the protection of that environment.

This teaching/training is integrated in the different oral and written activities of all subjects (Arabic, French and scientific awakening...)

2. The problem is not presented in these terms: voluntary or compulsory participation. What we can say is that the subject is particularly enjoyed and appreciated by primary school students.
3. "Environment" as a subject is taught in all of the different schools in Tunisia. It is part of the official curriculum.
4. Primary schools have clubs that allow students to be involved in activities that are essentially based on biodiversity, the protection of the environment, on the role human beings can play to contribute either to its protection or to its deterioration.

5. Environmental education is a compulsory theme in primary and high schools.
6. The teachers in charge of activities connected with environmental education are not specialists. Some are trained, the majority use methodological guides which, among other things, suggest problem-situations on the theme of the environment such as:
 - How to protect nature;
 - Cleanliness of the immediate environment (home, street, school, neighbourhood) and also of public places (parks, beaches, forests...)
 - Maintenance of institutions, of green spaces (gardening: students are sometimes invited to take part in tree-planting days. As a matter of fact, there is a Tree-Planting Day on November 11, each year and lots of trees are planted throughout the country on that very specific day.)
7. The teachers in charge of environmental education are not necessarily formed in that, but they are generally sensible to the subject and enjoy teaching it. They can find documents at the different national agencies concerned with the environ-

ment, in particular at the service in charge of the environment at the Ministry of Agriculture, at ANPE (or National Agency for the Protection of the Environment) but also at NGOs who are always glad to find opportunities to discuss with the younger generations.

8. NGOs' role can be very important provided they have the means to reach the younger and older generations. To this effect, more means to NGOs would undoubtedly strengthen them, allowing them to reach the populations more effectively.

NB: It should be added that the government, and in particular the Ministry of Agriculture now in charge of the environment, with different agencies like ANPE (or National Agency for the Protection of the Environment), etc. are present in the different parts of the country. Besides, Tunisian radios and television channels have special programs that are specific to the environment. Newspapers are also showing more concern for this issue. Both are ready to respond to environmental NGOs when their cooperation is needed.

ENVIRONMENTAL EDUCATION IN TURKEY

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EE at formal level (EE in primary and secondary schools' curricula)

Environmental education -with a modern comprehension, i.e. as a problematic area -became a part of the curricula in 1980's in Turkey.

EE programmes are more frequently implemented in primary school education (i.e. 1st-8th grades). At this level, EE is not a separate course in the school curricula. Instead, several aspects of environmental problems are given in the various courses mainly in science (ex. see encl.1). At each level in primary school curricula a science unit is dedicated to environmental issues related to pollution, scarcity of natural resources, renewable energy sources or the threats on a healthy environment in our days. Although environmental issues to be learned are given as a list under each unit's subject in the Ministry of Education program by law, the quality of implementation depends highly on the environmental consciousness and individual interest of teachers.

At secondary school level, a separate course "Environment and Human beings" is an optional course to be taken only for once during the whole period of secondary school education. Its main subjects are: Basic ecology, the environment we live in, environment and health, disasters, population movements and social aspects of environmental issues. Two school hours per week are devoted to this course. In general, this it is given by the geography, biology or chemistry teachers. The teachers in charge get extra payments for implementing the EE subject.

The four major problems on the quality of EE at both primary and secondary levels are:

- Lack of effective "in service" training programmes for the schools' faculty staff: EE training programs at formal level, started in 1993. A very limited number of primary and secondary

school teachers has been reached by Ministry of Education since then. EE trainings organised in the big cities, by NGOs for the school teachers, reached around 20% of the teachers. On the other hand, most of the trainings given are based on theoretical information and the faculty staff who gets these trainings are left without an effective guidance on implementation methods.

- The central examination system in the whole country, at the end of both levels (i.e. secondary school entrance central examination at the end of 8th grade of primary school and university examination at the end of secondary education). Due to the central examination system, learning mathematics and Turkish language subjects are given utmost importance both by teachers and students. EE seems to be a minor subject to effect the future of students. At the same time, "hands on" EE activities (voluntary based activities mentioned in by-laws -like planting trees, etc.) are usually to be cancelled due to the intense burden of other subjects.
- Establishment of "School Activity Clubs" on environment are not compulsory in the Curricula: Although some school club activities are given as compulsory in the bylaws, environment club is mentioned as a voluntary activity in the schools. Most of the non-governmental organisations put efforts lobbying activities at the level of the Ministry of Education, for the environment club to become a compulsory activity in the schools. However there has been no such achievement until the school year 2003-04.
- Lack of necessary resources for an effective EE in the schools: The children books, posters, guide books for teachers, audio-visual equipments, CDs on environmental issues are still very limited (see list encl.2).

EE at primary and secondary levels – Role of NGOs:

NGOs working for environment, started environmental education activities in the last 10 years. Actually, SEMEP (with 40 schools), GLOBE (with 75 schools), Eco-schools (104 schools) are some of the international environmental education programs active in Turkey. At secondary level “The Young Reporters for the Environment” (with 15 schools) is one of the few international programs ongoing. A world-wide “Children- Environment General Assembly” was organised in 1995 in Ankara.

At national level, in several main cities, each year the Municipalities organise a few competitions between the schools with the aim to understand the environmental issues. Environmental projects’ fair for schools have begun to take place, organised by local groups.

One of the important EE projects for primary and secondary schools in Istanbul was initiated in 2000 by the City Directorate for En-

vironment and by the support of Governor of Istanbul city. The project has been implemented since then by the partnership of the Ministry of Education, the Directorate of City Forestry, the Municipality of Istanbul and Volunteer NGOs. The project covers all primary schools and secondary schools in the city (approx. 1600 schools). The project aims to motivate schools to implement EE activities in several ways (workshops for teachers, seminars, organisation of free summer camps, where children learn “forest protection”, competitions between participant schools, guide books to implement environmental activities are some examples of the activities of the project).

NGOs’ activities for raising the environmental consciousness at primary and secondary school level are mainly trainings for teachers, supporting activities of schools’ environmental clubs, organisation of seminars in schools, campaigns and demonstrations with the students during the Environment week in June.

Encl.: 1: An example of EE in the primary school curricula: “Water & Sustainability” subject in Turkish Primary School Curricula:

CLASS	LESSON	UNIT NO. + TITLE	SUBTITLES CONCERNING “WATER”
1st grade	LIFE STUDIES	7 Growing up Healthy 9 Living Things Around Us	“The Dangers of Dirty Water” “Plants Need Water for Growth”
2nd grade	LIFE STUDIES	4 Growing up Healthy 9 Living Things Around Us	“Illnesses with Environmental causes” “Rain & Too Much Rain” “Using Pesticides Without Endangering Plants and Animals”
3rd grade	LIFE STUDIES	3 Using Resources Sensibly 4 Where We Live 6 Growing up Healthy 7 Living Things Around Us 11 Force and Motion	“The Importance of Using Electricity, Water, Fuel & Gas Sensibly” “Protecting Places of Natural Beauty” “Children in Dirty and Muddy Water” “Understanding Animals as Living Things and Looking at Their Need for Air, Water and Food” “The Relationship Between Movement & Energy- Energy from Water”
4th grade	SCIENCE	1 Understanding our Surroundings 2 Nature of Substances and Energy	“How people effect the environment: Acid rain and How Water is Affected by Pollution” “Producing Energy from Water”
5th grade	SCIENCE	Interaction of Living things with the Natural Surroundings	“The Affect of Pollution on Health”
6th grade	SCIENCE	1 A Journey Through the Internal Structure of Living Things	“Plants and their Surroundings” “Plants Living in Different Conditions”
7th grade	SCIENCE	4 The Home that We Share With All Living Creatures: Lets Understand and Protect Our Planet	“Eco Systems, Why Beautiful Natural Places Are Being Spoilt” “How Shall We Protect Water and Water Resources” “Sustainable Development”
8th grade	SCIENCE	2 Substances and Energy for Living Things	“The Link between Living Things and Energy”
1st to 8th grade	SOCIAL SCIENCES	Our School, Our Neighbourhood, Our District, Our City, Our Region, Turkey, Other Countries, and Continents	“The Natural Environment”, Water Usage “Environmental Problems and Disasters” “What to do?...Methods of Prevention and Protection”

Encl.: 2: Available Resources to support EE

TITLE IN TURKISH	ENG. TRANSLATION	PUBLISHER
Ekoloji	Ecology	Tübitak
Ya_adθ_θmθz Gezege	The Earth We Live	»
²ocuklar ve Gündem 21	Agenda 21 and Children	»
Gezegeimizi Kurtarmak	Saving our Planet	»
Toprak Erozyonu	Erosion	»
Ne Kadarθ Yeterli?	How much is enough?	»
Yarθnθ Dü_ünmek	Thinking about Future	»
Son Vaha Su *****	The Last Oasis-Water	»
²evreye Bakθ_	Examining the Environment	_ule
Erozyon	Erosion	TEMA
Yok Etti_imiz Ormanlar	The Forests We Destroyed	»
Biyöçe_itlilik Önemi ve Korunmasθ	The Importance of Biological Diversity and Protecting It	»
Topra_θn 7000 Yθllθk Öyküsü	7000 years of Land History	»
Orman ve Biz	Forest and Us	»
A_açlandθrmalar_çin Tür	Which tree to plant Where	»
Yeryüzü Gezegeini (+ CD)	The Planet Earth	»
Tatile Gidiyoruz	We're on Vacation	»
Dikkat Su*****	Attention! Water...	Behiç Ak
Dikkat Dünya	Attention! The World...	Behiç Ak
Do_adaki Ayak_çizlerimiz	Our Foot Prints on Earth	WWF-TR
Gezegeimizin Dostlarθ	Friends of the Planet	»
Caretta caretta	Caretta Caretta(turtles)	»
Karikatürlü_²evre Rehberi	A Cartoon Guide for Envir.	GSEL
E_lenceli_²evre E_itimi	Amazing Envir. Activities	GSEL
²ocuklar 50 Basit Yöntemle.	50 Simple Ways to save the ...	²ekul
²evre ve_²ocuk	Environment and Child	_SO
²ocuk -Su*****	Child-Water	Mun. Ist
Denizler Ya_amalθ*****	The Seas Must Live	Turmepa
Su (ilkö_retim 4-8)***	Water in Mediterranean	GSEL, MIO-ECSDE
Poster	Water Package Poster	GSEL, MIO-ECSDE
Poster, cd, vcd... etc	Few: Posters, cds, vcds...etc.	

The Status of Environmental Education in Cyprus Today

Elena Perikleous, (elena_perikleous@yahoo.com), Teacher, MSc in Environmental and Development Education - June 2004

"To invest in the future is to invest in education, in individual awareness, and to create new patterns of behaviour in which tolerance, solidarity, the sense of justice and love, are decisive" (Jose de Almeida Fernandes)

We are living the time that the contemporary ideals have resulted in major crises, both at the human level (wars, famine, unemployment), and at the environmental level (environmental distraction, polluted water, air and soils, extinction of species).

At the same time, we are living the age of globality: global interactions, global economy, global environmental problems. What happens in one part of the world has significant consequences in other parts as well.

Environmental Education seems to bear the chance of giving an answer to the crisis and therefore, should be placed high up at the

educational agenda. Environmental Education may bring about wider social and educational change. It may help in empowering future citizens to take control over their lives and give prosperity to their future. To implement Environmental Education in a way that is efficient one needs to take into account the specific local context. Each problem in order to be clearly understood and well placed, needs to take into account both the specific locality and the specific educational system.

In spite of the disruptive shock from the Turkish invasion, the people of Cyprus managed to transform their island from an "underdeveloped" colonial territory into a modern state, with everything that this brings along. The economy, which depended entirely on the export of minerals and of raw agricultural products, expanded and diversified to include a dynamic manufacturing sector and a growing service sector where the tourist industry is of major importance. The impacts of economic development on the environ-

ment are outlined as follows by the National Report of Cyprus for the Rio Earth Summit:

Air quality, although affected, is considered satisfactory... pollution from industry and mining is localised... water is a scarce resource and, therefore, subjected to over-exploitation... sewage and industrial effluents are beginning to affect some island aquifers... fertilisers and agrochemical are potential pollutants for streams, dams, reservoirs and grounds water. The soils are exposed to degradation both by physical forces and human actions. The coastal ecosystems of Cyprus have been subjected to excessive pressure from tourism..." (1992:7-8)

The complex environmental problems that have been outlined need to be addressed through an attitude change in order to ensure the quality of life for future generations. A change in attitudes should be attempted mainly through education, hence special reference to the educational system of Cyprus should be made at this point.

The educational system in Cyprus is centralised, with hierarchical forms of curriculum control and management that set both the teachers and the students at the margin of decision-making. The schools are structured around traditional subjects and are reluctant to any idea of radical change, as the practicality ethic among the teaching profession is quite strong. There is an overloaded timetable in which there seems to be no place for EE There are hardly any teachers with special training in EE and there is a sim-

ple reference to environmental issues within the science context setting, while activities of environmental flavour take place only occasionally. In other words, schools in Cyprus to date, have either not considered EE as a high priority, or are adopting externally supported and resourced short-term projects.

More particularly in Cyprus today there are three EE programmes running officially: "Eco-schools", "Sporaki" and "Xrisoprasino fillo". "Eco-schools" and "Xrisoprasino fillo" are running both at primary and secondary schools, whereas "Sporaki" only at primary schools. But apart from these programmes that cover only a small number of schools, what is actually in process in our schools today is more "environmental studies" rather than "environmental education" as such. It has more to do with knowledge "about" the environment and activities "in" the environment rather than with action "for" the environment. Moreover we should consider the assumption that market forces have entered in the classroom and started shaping children's development (Gaag, 1993). Green capitalism (Huckle 1992) is believed by many to be a classroom fact, and unless measures are taken against it, it will overtake environmental education.

I undertook a survey back in 1999-2000, in the area of Nicosia, that aimed partly at investigating what is going on in terms of EE in Cyprus. 436 teachers, both from town and village schools answered then an anonymous questionnaire. Interesting information is shown in the 4 tables that follow, but what is even more interesting is that not many things have changed since then.

The way teachers implement EE

WAY OF WORK	INTER DISCIPLINARY	UNITS	EVENTS	SCIENCE	OCCASIONALLY
Strongly disagree	1.5%	8.7%	18.8%	7.4%	6.7%
Disagree	12.8%	39%	39.6%	11.7%	20.1%
Agree	70.4%	42.4%	33.3%	56.9%	60.3%
Strongly agree	15.3%	9.9%	8.3%	23.9%	12.9%

The structure of E.E. according to the teachers

STRUCTURE	ITS OWN	CROSS-CURRICULAR
Strongly disagree	1.5%	8.7%
Disagree	12.8%	39%
Agree	70.4%	42.4%
Strongly agree	15.3%	9.9%

Aspects of the educational setting that have a negative effect on EE

ASPECTS	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
Disciplinary	3.5%	15.3%	71.2%	10%
Bureaucracy	3.4%	24%	62.6%	10.1%
Lack of time	3.2%	16.3%	61.1%	19.5%
Hierarchy	18.1%	38.1%	36.8%	7.1%
Lack of participation	4.9%	22.7%	55.1%	17.3%
Curriculum	3.8%	17.8%	63.2%	15.2%
Lack of knowledge	6.5%	28.3%	51.1%	14.1%

Teachers' recommendations

RECOMMENDATIONS	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
Coordinator	5.4%	3.8%	68.1%	22.7%
in-service training	1%	2.4%	63.4%	33.2%
Developing written content	1%	1.4%	49%	48.6%
Collaboration with colleagues	0.5%	5.6%	64.6%	29.2%
Engagement of the whole school	0.5%	1.4%	54.1%	44%
Developing a whole school policy	0.5%	1%	55.7%	42.9%
Management support	1.4%	0.9%	50.7%	46.9%
Financial support	-----	3.4%	47.3%	49.3%
Conformation of the school	0.5%	1.9%	48.1%	49.5%
Links with the community	0.5%	4.2%	58.1%	37.1%
Acceptance of work outside	1.1%	10.4%	55.2%	33.3%
Research on the issue	0.5%	6.7%	61.7%	31.1%

Based on what teachers believe and the suggestions they make, recommendations are made about aspects of the educational setting that should be changed and measures that should be taken.

Disciplinary, lack of time, curriculum, bureaucracy, lack of participation, lack of knowledge and hierarchy should be prioritised when restructuring the educational system since, according to the teachers, they affect the implementation of EE.

Emphasis should be also given by the ministry of education and the University of Cyprus that share the responsibility of educating the future teachers, for the preparation of an EE training programme.

What should really be taken into account though, are the teachers recommendations for measures to be taken, measures that

would help towards the more efficient implementation of EE: developing of a whole school policy, the engagement of the whole school in the effort, the development of a written content, management support and the conformation of the school environment, in-service teachers training and financial support, the development of links with the community, collaboration with colleagues, undertaking research on the issue, creation of a co-ordinator position, acceptance of the necessity of work outside the school area.

Research will throw more light in an educational area that is now being born in Cyprus. Making the right steps from the beginning will save as both time and effort. The battle can be won as long as the educational and the political will exist.

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The Status of EE in Greece based on statistics & the views of the practitioners

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The role education has to play within environment policy of the European Union was made explicit in the Resolution adopted by the Council of Ministers in 1988, which clearly states what actions should be taken by both the Member States and the EC to make the public more aware of the environmental problems. More specifically, according to this text the objective of environmental education (EE) is:

to increase the public awareness of the problems in this field, as well as possible solutions, and to lay the foundations for a fully informed and active participation of the individual in the protection of the environment and the prudent and rational use of natural resources. (Council of Europe, 1988)

This resolution resulted to the enactment of EE in our country by a law passed in 1990 recognising EE as part of the primary and secondary school curriculum. Prior to that date EE programmes were basically implemented in the framework of "Cultural Activities" of high schools (Papadimitriou, 1998). The law of 1990 called for the appointment of individuals ("accountable employees") to the EE department in each prefecture and also for the development of Environmental Education Centres (EECs) intended to raise the consciousness and train pupils, students, teachers and the public.

Although EE has made great strides during the last 10-15 years on the part of the government and the educators as well, there are certain thorny issues in its implementation, as we shall examine below. In this article we will try to present in brief the status of EE today at primary and secondary education level and give an overview of their views on the subject.

EE is taught as a discrete subject area both at primary and secondary schools, on a voluntary basis. The co-ordination of these programmes is done by the appointed EE officials at each of the 58 national prefectures. In many cases these programmes are supported by one of the EECs of the country, or other institutions. According to the Ministry of Education there are aprox. 2.000 voluntary EE school projects applied every year. The most recent available data indicate that during the academic year 2000-01 there were 2.100 EE programmes with the participation of 4.500 teachers and 54.000 students.

The 18 currently existing EECs, apart from supporting EE programmes of students provide for a series of other facilities such as the organisation of teachers' training seminars, the preparation of educational materials, the organisation of "thematic networks", the participation in relevant local and international programmes, etc (webpage of Ministry of Education).

The “thematic networks” is another way of formation of EE programmes in Greece. These are actually school networks that are implementing similar programmes around a central issue (i.e. sea, forest, sustainable cities etc). They are usually coordinated by the EECs or other institutions and NGOs (webpage of Ministry of Education). In general, the role of Greek NGOs in supporting EE programmes is recognised (Ministry of Education).

Some indicative data on the implementation of EE programmes currently in Greece are presented in the following table (Spyropoulou, 2001):

Average percentage of Greek students engaged with EE programmes (2000-01)

PRIMARY LEVEL	SECONDARY LEVEL	
		66% at Gymnasium (12-15 yrs)
14%	6.5%	13% at General Education Lyceum (15-18 yrs)
		12% at Technical Lyceum (15-18 yrs)

These low numbers of participating students are getting even smaller by the end of the academic year, as many students give up the EE programme, mainly because of their heavy work load. According to Spyropoulou (2001), the low levels of participation of students and teachers are attributed to two main factors: Firstly, their focus on the compulsory subjects of the overloaded curriculum, but most importantly to their inability to realise their “new” roles in an EE programme. Teachers and students are mistakenly considered to hold their “traditional” roles in education -transmitters and passive receivers accordingly.

As far as the training of EE educators, this is mainly done through the Regional Training Centres (RTCs). Furthermore, certain governmental and non-governmental institutions have contacted training seminars, conferences and meetings, addressed to interested educators. There are no statistical data on the content and scope of these meetings. However, the qualitative analysis of these seminars presented by Spyropoulou (2001) indicates the following

- There is a general overview of environmental issues and methodological approach is usually one “on paper”.
- There is emphasis in knowledge of specialised issues, such as pollution, energy issues, natural disasters, that is not coupled with methodology approaches.
- There is very low engagement with didactics of EE, new technologies, and link to school curricula.
- The main focus is around natural environment, and there is little interest in the anthropogenic one.

During the past decade certain researches have been carried out in Greece aiming to investigate the experiences and views of EE Educators. The results of these studies are considered particularly important since educators themselves are a critical component of EE programmes. Furthermore, their suggestions should be taken into account in order to further promote EE at national level. That is why these results are presented in brief.

Papadimitriou (1995) conducted a research in 32 well experienced secondary EE Educators in the area of Thessaloniki to discover their motives for engaging with EE programmes. Their recorded main motives were:

- Their clear perception of what is EE.
- Their conviction that EE and education in general contribute to the conservation and improvement of the environment.
- Their personal interest on environmental issues, and their questioning towards the “anachronistic”, as they consider it, educational system.

- Their regard that EE may contribute to the promotion of changes in the educational system, overall.

Another research addressed to primary and secondary school educators (Papanaoum, 1997) examined the environmental issues and the role of education in addressing these. The main outcomes of this study, conducted to 250 educators in the region of Thessaloniki are the following:

- Although half of the sample is aware of the environmental issues, only 20% is engaged with them.
- Their primary source of information is media while scientific articles and books are ranked at a considerably lower level.
- Factors preventing them from implementing EE programmes are the inelastic school curricula, the double shift schools, and the lack of training.

Giannakaki (2000) carried out a survey in 96 primary EE educators aiming to trace their perceptions on the deficiencies in the formal school system that make the implementation of EE programmes difficult. According to this research although administrative decentralisation (in the 58 prefectures of Greece) is an efficient strategy to support EE, there is a need for better cooperation of all relevant institutions. The existing institutional framework is considered inefficient while the voluntary character of EE programmes is considered positive.

Spyropoulou (2001b) has conducted a survey on the view and suggestions of 146 primary and secondary school educators coming from the region of Attica and Evro. According to her findings the main reasons for engaging in EE programmes are their personal sensitization on environmental issues (prim: 65%, second: 50%); cultivating awareness to the students which have already a genuine interest in environmental issues (prim: 17%, second: 14%); the interdisciplinary character of EE (prim: 5%, second: 15%); and the training and provided support of educators (prim: 5%, second: 15%).

On the contrary, the main factor preventing educators from engaging in EE programmes is the fact that it is implemented outside the school programme (prim: 42%, second: 56%). Other factors recorded are the inefficient training (prim: 31%, second: 18%); the disdain on part of administration and the lack of motives (prim: 9%, second: 12%); the lack of cooperation among them (prim: 18%, second: 2%); and finally the lack of available time of students (second: 12%).

Based on the above, we may conclude that in general there is an interest of a part of Greek educators towards environmental and EE issues. However, factors like the lack of training, the current institutional framework and the existing school curricula usually restrain them from being more closely engaged in the implementation of EE projects.

Of course, all these findings should be seen in the context of the current EU policies for EE, which call for a move from its voluntary character towards incorporation into the official curricula. This way, EE is aimed to be addressed to all students, respecting, however, the uniqueness and traditions of each EU Member State (Papadimitriou, 1998; Spyropoulou 2001). Finally, we consider that these parameters should be taken into account especially in the framework of the current shift from Environmental Education (EE) to Education for Sustainable Development (ESD) and in light of the emerging UN decade devoted to ESD (2005-2014). For more information on these please refer to the special contribution of Ms Vicky Malotidi, in the current issue.

Environmental Education in Greece & Strategies in Late Stages of Secondary Education (Lyceum)

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In Greece Environmental Education (EE) programs are not included in the school program. Students who participate in that kind of projects are volunteers and in general they are not sensitive regarding environmental problems. Their participation is done with guidance (or sometimes pressure) from their teachers. At this point I would like to emphasize on the fact, that if we continuously provided the children with information relevant to the environmental problems (not necessarily information that has to do with some particular educational program) students would be able to act on their own.

On average, participation in EE programs in Greece is 10% for the teachers and 30% for the total number of students of the school. The issues that are being examined are mainly of a local scale and interest (depending on the area that the school is located). Also, 80% of the total EE programs of secondary education are being run in Gymnasium (12-15 yrs old), while the rest is run by Lyceum students (16-18 yrs old). Usually there are two teachers who are in charge of the EE program but their scientific background is irrelevant.

Environmental education is extremely difficult in Greece due to a number of factors: For example, the money that are been given from the government are limited, also educators need permission from the school for taking initiatives inside the program, and finally there is very little information about the ways (methods) students should be approaching the environmental problems.

Another factor that makes programs even more difficult is the fact that in Greece at the last two grades of Lyceum students take exams in order to enter the university. As a result, students from

these grades find it very difficult to participate so the majority of the students that take part in EE the programs come mainly from the 1st grade of Lyceum.

Obviously non governmental organizations (NGOs), the well organized centres of environmental education centres (EECs) and other international organisations are extremely helpful concerning information about environmental problems.

It is my personal belief that because students are mature and show great interest on environmental problems, environmental education should be more closely connected with their main courses (ancient Greek, chemistry, physics, maths etc).

It would be much more effective if there was a period when the teachers were informed about the new existing methods of environmental education (from European and non-European countries), and they were supplied with material that refers to international symposiums, protocols (i.e. Kyoto protocol, the Johannesburg summit, Montreal, etc) and the effects of the international treaties (whether they finally had results or not).

Concluding, its my personal belief that students would participate more in EE programs if there were two types of guidance (approaches): Firstly, announcements - information for the world's major environmental problems, the international treaties and their effects. With reference to the second guidance, students could combine their own knowledge from school, the information through the internet, and methods that we, the teachers, will have provide them with. All the above will help students realize the main issues of environment and discover ways to live better in a viable environment.

Evaluation of EE Portuguese School Projects Between 1996/98 – Some tendencies and problems

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A deep analysis of the status of EE school projects in Portugal will require a long lasting research process and an extended report. So, we will only focus on some of the results of an evaluation research study about EE Portuguese school projects, supported by the IPAMB, from 1996 to 1998.

The research corpus was constituted by 605 EE school projects from which an aleatory sample of 10% (62) was selected, including projects coordinated/promoted by schools of different levels — kindergartens (15%), primary (first grade) schools (37%), second and third grade schools (19%), secondary schools (21%), professional schools (8%) — and from different regions. The data was collected from the analysis of project proposals and final reports, and the answers to a questionnaire that was administered to projects' coordinators. Among the main conclusions, we can point out the following aspects.

1) The majority (56%) of the projects occurred in school networks; 84% were implemented in public schools. The total amount of participants in the sample considered was 11 903 (842

teachers and 11 071 pupils) and so, we can think about 120 000 participants in the 605 EE projects, during three years (something like 40 000 participants/year). The number of participants per project varies from a minimum of 17 (1 teacher; 14 pupils) to the maximum of 1 362 (70 teachers; 1 292 pupils).

- 2) The majority (84%) involve curricular integration — 57% in a transversal curricular area (named “school area”) — and 50% explicitly preview the articulation with syllabuses and contents. Only 37% seem to integrate an extra-curricular dimension.
- 3) A large percentage (82%) clearly point out the motivations, interests and needs that guide the project — 73% give great importance to the motivations and interests of the coordinators and only 30% to 35% refer to motivations and interests of all the participants (teachers and pupils) and/or schools (namely the promoting school) and/or partnerships. Motivations centred on promoting changes are present in 81%: in a sustainable

development perspective (61%); in the domain of environmental behaviours (60%); aiming at the collective discussion of the problems (47%); trying to promote a transversal approach to the complexity of environmental problems (36%) or interdisciplinary approaches (27%). By the analysis of the final reports, we can conclude that in terms of final reflections about the effects of the projects, the percentages are lower: changing perspectives about the concept of development (48%); promoting collective discussion of problems (27%), transversal approaches to complex problems (27%) or interdisciplinary approaches (24%).

- 4) The most general type of objectives formulated (93%) are process objectives. Content objectives are present in 42% and product objectives in only 21% of the projects (namely, projects held by one school only and at secondary level). Almost half of the projects (48%) establish an explicit relationship between their objectives and general objectives of EE, namely in terms of global environmental problems, in a perspective of sustainable development. However, only 50% of the final reports make any kind of analysis of objectives attainment: in terms of awareness raising by the participants (49%); in terms of both competencies developed and mobilization for action attained (9%).
- 5) In what relates to methodologies, 82% of the projects include investigative methodologies and 34% illustrative methodologies. Only 24% of the final reports reflect about the adequacy of the methodologies used. In what activities are concerned, the field visits are dominant (68%). The coordinators refer to practical/conceptual activities (68%) and

practical/”hands on” activities (46%). Only 17% refer to synthesis activities and 14% to reflexive activities.

- 6) Almost all the projects (92%) refer to partnerships, but only 44% of the final reports reflect about the effects of those partnerships. The more frequent institutional relationships are with local authorities, namely *câmaras municipais* (85%) or *juntas de freguesia* (63%). Among other less representative partners are NGO (36%) — namely in projects coordinated/promoted by kindergartens —, enterprises (19%) and the Institute of Nature Conservation (18%).
- 7) Only 21% of the projects refer to the intention of doing evaluations and 16% point out specific evaluation methods and techniques. However, 94% of the coordinators talk about some kind of evaluation, in an informal way with some kind of pupils’ participation (71%) or only teachers’ participation (37%); only 31% mention some kind of more formal evaluation. Globalization and dissemination activities were more of a passive type.

In summary, we can talk about a rich experience of EE projects promoted in Portugal during the years of 1996-98 and we can also identify some weaknesses, such as deficiencies in promoting the participation of pupils or communities in the conceptualization of the projects, in implementing project work methodology and in doing evaluation; problems in optimizing partnerships; some difficulties in using active methodologies of globalization and dissemination; etc. The extinction of IPAMB in 2000 may have caused a decrease of this movement and reduced the difficulty of doing new evaluations of what has been happening in schools.

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 3. Portuguese Institute of Environmental Promotion that was extinguished in 2000.
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The Implementation of Environmental Education in Italian System of Education

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Italian System of Education doesn’t enlist Environmental Education (EE) among school subjects although “ecology” is taught in few secondary courses as a discipline showing and studying the connections among different living beings and their impact and reaction on environment. At elementary level EE is part of education for citizenship as well as of scientific observations. Similarly in secondary education it may be implemented in natural or human sciences but it depends on teachers’ sensibility and skill as the borders of disciplines are strictly defined. Actually many test books have recently adopted an EE approach in dealing with Earth and Life Sciences. Anyway any choice must be taken inside the annual syllabus by the teachers’ council of the class.

The question is that school, as a formal system of Education, is based on the authority of disciplines, whereas EE is interdisciplinary. As it has been recently noted (WEEC Espinho 2003) a new idea of EE is going on, able to overcome the predominance of natural sciences towards a growing influence of human and social sciences. The fact that in Italy the scientific disciplines are traditionally

taught on a systemic approach while the human ones on an historical perspective doesn’t help building syllabuses including EE.

EE is a teaching inside the so called “educazioni” both at elementary level and in the first level of secondary school. In the new curricula and syllabus of first level of secondary school it is envisaged as part of “Convivenza Civile” Citizenship among the following educations:

- to development
- road safety awareness
- environment
- health
- food and affectivity

Enlisted as such EE seems to miss its complexity: it is detached from development and comes after road safety awareness.

Because of the difficulties of teachers to face an interdisciplinary teaching, EE finds wider room in informal education, but it should be avoided to confine EE in voluntary activities of students, as it often happens. It is a good practice instead to implement EE in courses that are not compulsory, as well as in projects in accordance

with formal curriculum and, where possible, included in the annual syllabus.

The Ministry of Environment supports and finances a system of cooperation between the Central Administration and Local Authorities (Region & Province) by INFEA (Information EE), even if lately it hasn't been refinanced. Local Authorities, on their part, supply Laboratories (LEA), LABNET (in protected areas) and Centres of EE (CEA) offering human and training resources, new technology and other instruments addressed to other institutions and organizations working on well defined territories.

Although the budgets are limited, schools could take profit from this entire offer in the field of EE, due to their autonomy that allows them to project their curricula and syllabuses in accordance to the needs and the requirements of the areas where they are situated. Moreover, there are protocols and agreement between Ministry of Education and Ministry of Environment, with other Institutions and with NGOs to promote EE among young people.

At school or outside, in and out of curriculum, courses and projects are generally supported by local authorities and/or NGOs so that different subjects are involved with the participation of a certain number of schools of different level and kind. In this way a network is built among schools, institutions and NGOs.

A procedure of the kind has been being used for the implementation

of Agenda 21.

Official plans and campaigns are led by a certain number of school institutions, supported by local authorities and NGOs to afford single questions such as recycling waste or sparing water and energy with the participation of students, parents, teachers and others. In this case importance and symbolic relevance of the action is ensured by the effort and the involvement of the Institutions and Associations and the interest aroused in the population of the area. It is similar to the way in which "thematic networks" are launched.

In any case Methodological approaches vary according to the choices of educators and teachers, the chances offered to the schools. Unfortunately, figures about schools adopting EE in their educative plan are not available. The engagement of schools in the field of EE depends on their geographical areas and on the level of education, as EE is certainly implemented to a greater extent in elementary rather than in secondary school.

To work in depth in teenagers' environmental consciousness and awareness is not easy, as messages sent by consumption of goods are overwhelming. Educators are still experimenting how to help students to appreciate the attractiveness of EE to modify their own style of life.

Environmental Education performed by the association Marevivo

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During the 90s many schools organized specific projects of environment education (EE) involving the entire institute or single classes. The educational projects were led by a single teacher, or several teachers, or experts from external organizations (generally environment NGOs). The regional competent bodies also organized training courses in order to build up a new class of qualified teachers in environmental matters. The available quantitative data on the educational projects performed in Italy during the last ten-year period are not yet reliable owing to a school organization extremely spread out on the Italian territory, and to the institutes' self-government capacity. Nevertheless, the available data allow us to estimate that about 30-35% of the Italian institutes for primary training have been involved in EE projects. Marevivo, as well as many other Italian NGO environmental associations, have acted in this framework, either with direct initiatives conducted in their own venues, or by assisting schools in running their EE projects.

Concerning direct actions, the Environmental Association Marevivo has been carrying out educational activities for 10 years. Environmental education, upon agreements with the respective school directors, has been addressed towards young students both because of their learning capacity and their ability to spread the information in their families. Moreover, the peculiar location of Marevivo headquarters, in the heart of Rome along the Tiber River, enables them to show the importance of keeping the river clean to protect the fluvial ecosystem and then the marine environment.

This opportunity has encouraged Marevivo to create an "Observatory on the Tiber" with the aim of stimulating curiosity and interest young students on flora and fauna existing in the water and by the river side.

During this period Marevivo has realized several of its own educational projects such as: "Open sky operation" to make students aware of the potential benefits and enjoyment of nature and its resources; "Beach-umbrella operation" for carrying out short courses on environmental education at some bathing establishments, with the intention of exciting interest, by means of data collection, observations and experiments, towards marine environment and biological resources management; "Blue-weeks" for involving young people, with a full immersion approach, on how to be interact with the environment, how to discover it and what can be done to safeguard it, also, by illustrating the mistakes made in the past whose damage are not always restored; "Blue-days" for engaging students in primary school with the aim of raising awareness about their local coastal (sea-land) environment: sea and tide observation, shell picking, waste collecting and interviewing fishermen on fishing boat typology, fishing-nets used and catch composition have proved to be helpful in this; "Blue mission", in cooperation with bathing establishment operators, have involved young people vacationing at the seaside. The aim has been to stimulate interest in discovering marine ecosystems, by starting from the beach, and through the observation of the more representative local species which are collected in a so called

“magic box”. The classes ended with the donation of a school subsidiary which will see students for the entire school year: it is a “Blue-Mission Diary”, containing pictures, sheets for deeper knowledge on coastal environment, and games for a better knowledge of the marine flora and fauna.

Some of the above mentioned projects have been replicated in various sites of the Italian territory and in subsequent years.

The experience gained during the last 10-15 year period have contributed towards the new school regulation that comprehends

EE as a compulsory subject for primary school training. It will be implemented next school year (2004-05). The environmental syllabus includes, among other things, information, observation, analysis and studying of: ecosystems and natural resources, different forms of pollution, specific environmental problems of the territory where the school is located, responsibilities competences of existing bodies at the local, national and international level for environmental protection, practical exercises. The courses will have a multi-teacher approach, generally with the assistance of specialized operators belonging to environmental associations/NGOs.

Croatian SEMEP in Environmental Education for Sustainable Adriatic

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The Croatian branch of the UNESCO-SEMEP (South Eastern Mediterranean Environmental Education Project) has been active in the official school system as facultative Environmental Education (EE) Project in highschools and some elementary schools along the eastern coastline and island archipelago of the Adriatic Sea. The SEMEP Project was proposed to UNESCO by Greek Government and Greek Organization for Vocational Education in 1994, the worksheets entitled «The Sea and Us» were designed by Dr. Jack Holbrook in 1996, and the major success was experienced at the First International SEMEP Summer School in Thessaloniki in 1997. SEMEP was the second younger sister project of UNESCO dedicated to the EE related to marine issues and problems, after the Baltic Sea Project (BSP).

SEMEP is internationally managed today in Section of Science, Technology and Environmental Education, within the Education Sector of UNESCO and run in Albania, Bulgaria, Croatia, Cyprus, Egypt, Greece, Israel, Italy, Jordan, Malta, Romania, Slovenia, and Turkey. The Adriatic Sea is therefore surrounded by four riparian countries: Albania, Croatia, Italy and Slovenia, which have constantly cherished SEMEP since 1994, mostly supported from their Ministries of Education.

In Croatia we have been honoured by enthusiastic interest and support from many principals and teachers of secondary schools from Adriatic coastal and island cities (starting from the south northwards): Dubrovnik, Blato, Vis, Bol, Split, Sinj, Trogir, _ibenik, Biograd, Zadar, Obrovac, Senj, Crikvenica, Krk, Mali Lo_inj, Bakar, Rijeka, Labin, Pazin, Pula and Rovinj, as well as the continental Zagreb. The «The Sea and Us» Worksheets for students, with additional information and instructions for teachers and coordinators enabled a holistic and interdisciplinary educational effort through the project based learning. Thematic issues were changed subsequently and addressed acute Mediterranean and Adriatic challenges: «Water in Our Lives» and «Water in Our Ecosystems». After these centrally designed worksheets dispatched from UNESCO headquarters to participating countries, the new series of educational teaching/learning materials were prepared locally in different countries and some of them were practiced in the Adriatic Schools: «Beach Aesthetics», «Marine Biodiversity», «Mediterranean Nutrition», «Environmental Education: Water as the Essence of Life», «Solid Waste Management» ...

Constantly during the run of SEMEP project, there were Teacher

Training Seminars organized for SEMEP Teachers and SEMEP School Coordinators in different coastal cities. There were five national SEMEP Summer Schools organized so far for teachers and students on the Island of Vis from 1999 till 2003, and they soon became the central SEMEP event at the end of each school year. The cruise to the nearby Island of Bi_ovo typically includes the visit to the famous Blue Cave. Visit to the fishermen village of Komi_a offers unique opportunity for bird watchers to view the rare sight of hawk Falco eleonore.

There is another attempt to start the «Croatian SEMEP Days» at an early term in the next school year, as a sort of festival for participating schools. The first SEMEP Days were organized in Bakar in 2003, by the old Maritime School in Bakar addressing the acute environmental and developmental issues in «KVARNER» and the Bay of Bakar. This meeting in Bakar offered students and teachers another opportunity to step out of the school straight onto the sea on board of their Maritime Training Ship «Vila Velebita II». We have had the chance for site visits and close-up view of industrial development in the Bay of Bakar and the Bay of Rijeka, as well as to pay visits to the two largest of Adriatic Islands: Krk and Cres. Krk offered the view of Omi_alj Oil Terminal but at the end of the cruise we were welcomed in the old Franciscan Monastery «Glavotok». Island of Cres offered in ancient Beli the visit to Eco-Center «Caput Insulae» which promotes studies and conservation of the remaining local population of Griffon Vulture (*Gyps fulvus*).

On the occasion of the Earth Day 2004 we have organized jointly with the Elementary School «Mario Martinoli_» from Mali Lo_inj the SEMEP Teacher Training Seminar on «Natural and Cultural Heritage of Islands Cres and Lo_inj» in the old maritime city of Veli Lo_inj. We have been welcomed there in Lo_inj Marine Education Center and the The Blue World Institute of Marine Research and Conservation to get the first hand information on population ecology of bottlenose dolphins (*Tursiops truncatus*) in Cres-Lo_inj Aquatorium.

We have all enjoyed to learn of sacral and cultural values of the Islands, as well as of local historical and maritime heritage. We were lucky for good weather and calm sea which enabled the cruise to the nearby sand Island of Susak, being unique in the whole of our Adriatic Archipelago comprising 1185 islands, islets and rocks.

Sheikh Hussien Community: An Example of Success in the Northern Ghors- Jordan

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For most of the local communities in Jordan, working in organised associations, NGOs or active groups is not a common practice to advance Sustainable Development Process. Besides, the process faces challenges, such as the lack of resources, political will and most important the existence of an organized institutional approach. Friends of the Earth Middle East (FoEME) introduced while working in the community of Sheikh Hussein community an example of active and progressive public participation.

Being in the far North Western point in the Kingdom; 120 Km from the Capital, and depending mostly on agriculture, the community, as well as the rest of the Jordan Valley and all of the rural areas lack appropriate infrastructure and central government attention. Water, sanitation and health, among other sectors need urgent move. An example on this would be the poor water and sanitation conditions. The schools receive potable water twice a week, the rest of the weekdays the students bring water with them to the school. Not looking at the extra weigh the children need to carry, the school administration closes the toilets since there is no water to be flushed in them. This is one image of the sad picture. The picture is much darker when knowing that in order to change or improve the situation the Ministry of Education has to be consulted to give its approval on any plan in endless bureaucratic procedures. Not to mention the Ministry of Water and Irrigation, the Jordan Valley Authority, etc. And until the approval is given, those students still have to carry in their backpacks bottles of water.

The community, through FoEME has been empowered by the necessary knowledge on community rights, legal and institutional information, technical water and environmental information and with financial assistance from the Major Donors. The Sheikh

Hussein community has become an example of positive reaction to an extensive environmental education campaign. Besides raising the awareness of the general public and the decision makers to the various environmental concerns the community suffers from, activists in the community are now creating a working strategy to advance their diverse issues.

The work conducted by FoEME could not achieve its objectives unless the community embraced the idea to change the dreadful reality. In this context, the key success factors are summarized in the creation of a group of people committed to change this situation by identifying their problems and working hand in hand in order to bring forward a new healthy committed community. This group of activists is called "Water Trustees". The Water Trustees developed an educational strategy that would not contradict with the values and traditions of the local community. It deepened the links of man and nature.

FoEME's results exceeded those anticipated at the beginning of the campaign. FoEME aimed to improve the water situation of the Sheikh Hussein Community, raise awareness on water conservation, etc. However, it was not anticipated that the community will get enough momentum to contact the different institutions at all levels and call and work to create an environment of cooperation between the different institutions in a harmony that reflects the community needs. This in itself is a great achievement to the better of the community.

Recently, the community asked the central government to build a park in Sheikh Hussein. Sheikh Hussein Community was offered 100 dunums from the Jordan Valley Authority to build their park and the Sheikh Hussein Community is now ready to take off.

Environmental Education in the Israeli School System

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In recent years, education towards environmental protection receives increased attention in one way or another in most schools in Israel. The range of environmental issues covered has grown significantly, and includes water protection and conservation, air pollution, waste and nature protection. These topics are usually dealt within the framework of geography, biology or environmental studies, while the emphasis on the environmental component varies significantly according to the educational priorities of the different schools.

In their environmental curriculum, many schools are assisted by a variety of NGOs that specialise in environmental education. The cooperation between schools and NGOs has brought about fruitful involvement of children in their community and sowed the seeds for future social change. Friends of the Earth Middle East (FoEME) is one of the NGOs actively involved with schools in a variety of communities. As a regional environmental organization, FoEME carries out environmental education activities in Israeli, Palestinian and Jordanian schools.

During the past two and a half years, FoEME has run a project titled "Good Water Neighbors", focusing on 11 communities across the political divides. The project aims to educate children about the 'water reality' of their neighbors in the water scarce Middle East. Understanding the situation of communities across the divide necessarily leads to the realization that water uses in one community bear great influence on the water situation of the other. This way, the children are educated to social as well as environmental responsibility that is reflected in their environmental practices.

In the framework of the "Good Water Neighbors" project, FoEME is active in five Israeli communities. The organisation has established an educational program for each community, in association with schools, youth centres and local authorities. Under these programs, groups of Water Trustees were established in each of the communities, comprised of volunteer school children under the supervision of a paid field researcher. Their activities include weekly (or more frequent) classes and workshops in schools, circulation of petitions on water related issues, tours to important

water sites and importantly, conversion of school buildings into 'water saving models', through which the entire community can learn on water saving practices.

One of the lessons learned through this project was that the ability of children and communities to concentrate on water saving and

other environmental issues is greatly influenced by their socio-economic situation. Therefore, there is a need to place special emphasis on weaker communities, where environmental awareness is still underdeveloped to a great extent.

Environmental Education in the West Bank

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The level of environmental awareness in the Palestinian areas is quite low. Programs for awareness were very limited during the last period. The programs were mostly implemented by the NGOs on a limited scale depending on the financial resources available.

In terms of environmental education at school level, the Jordanian curriculum has been the official curriculum applied for the last period. Environmental education is not an important issue at the curriculum. Currently, the Palestinian Authority is developing a Palestinian curriculum which includes environmental education as a specific subject. The new curriculum added a subject of health and environment to the lessons taught.

On the other hand, limited educational programs have been implemented at school level by the NGOs. Most of the environmental education programs focus on the water and sewage issues as these are very important subjects in Palestine. Other educational programs focus on the solid waste issue. Water shortage, pollution, sewage and solid waste are very important topics that should be given more attention in the Palestinian Territories as the environment suffers from different problems. Therefore, there is a need for more educational programs for the different sectors of the community.

FOEME is one of the regional NGOs working in Palestine, Israel and Jordan. The Good Water Neighbors project is initiated by FOEME to raise public awareness among Palestinian, Jordanian and Israeli communities and seeks to foster dialog and cooperation on the protection of water resources, and the equitable and sustainable use of water in the region.

The strategy of the project is to work at the community level as an effective arena to advance better water management. The project is implemented in 11 communities (5 Palestinians, 5 Israelis and one Jordanian) located at the border. In each community a field researcher has been hired to undertake the awareness activities. The methodology has been to create a group of "water trustees" mostly youth. They meet once or twice a week to undertake water awareness activities. Emphasis is to raise awareness about water issues in their communities and in neighboring communities. The water trustees have served as messengers of the water issue to their community as a whole. The project proves to be very effective on the school and community levels. Several communities, which were informed about the educational activities asked to be involved in the project. This is an indicator of the needs of more effective environmental education programs in the area.

The impact of "small garbage" on the marine environment: A pilot programme of education and environmental awareness

Introduction

- Worldwide over a million birds and 100,000 sea mammals and sea turtles die every year from swallowing or being trapped in rubbish, especially plastic. (MCS, 2003).
- Of 54 *Caretta caretta* sea turtles recently seized by the Spanish authorities, 42 (that is 77.8%) were found to have large quantities of rubbish in their digestive tract. (Tomas et al., 2000).
- On the coast of Florida, USA, fledgling sea birds were found choked by pieces of fishing line their parents had used to build their nest. (Weisskop, 1998).

"Small garbage", all the small and large objects that we discard on beaches or directly into the sea, with those that end up on the beaches and the coast after being dumped elsewhere, have devastating effects on the marine environment.

Research has shown that marine species choose their food according to its colour, shape and size. Marine animals are deceived by the

various sizes, shapes and colours of plastic, and eat it.

In an effort to make people aware of and sensitive to the problem, seven years ago MEDASSET started a programme of environmental education entitled "Small Garbage, a Deadly Illusion", which continues with great success to date.

Aims and Brief Description

The programme aims to inform and educate both children and adults and to sensitise them to the effects of garbage pollution on the marine environment of the Mediterranean.

With talks and slide presentations, we distribute educational material and carry out awareness and clean-up activities on the beaches. Special emphasis is given to the effects of "small garbage" on marine animals.

Implementation of the Programme

The programme has been carried out many times as part of the

school curriculum over the past seven years, and in 2003 was sponsored by the Greek Ministry of Environment. Because it is presented to students in a simple, vivid and precise manner it has been a great success. It embodies:

- ◆ The latest scientific developments on the term “garbage pollution”.
- ◆ The procedures of natural and biological re-colonisation.
- ◆ The meaning of bioaccumulation.
- ◆ The ecological facts about how “small garbage” negatively affects the populations of certain marine species and the marine environment.

- ◆ The importance of the proper handling of garbage on land and at sea, highlighting individual responsibility.

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For more information, please visit MEDASSET’s website: www.medasset.org

EuroTurtle: using the internet for environmental education



EuroTurtle, Europe’s first interactive, educational and scientific website for the conservation and biology of sea turtles (www.euroturtle.org), is a joint venture between MEDASSET, Exeter University and King’s College (Taunton) which has received thousands of visitors and several awards and distinctions. In 2003 EuroTurtle welcomed more than 134,000 visitors and had over 1,370,000 hits on the website.

The primary aim of EuroTurtle is to provide scientific information for projects and educational groups at all levels and increase awareness of the plight of Mediterranean sea turtles.

The site contains overviews of all sea turtle species, a section on the threats to turtles in the Mediterranean (e.g. tourism, fisheries), identification keys, species outlines and an adventure game involving a loggerhead turtle on a Greek island. The ‘Virtual Field Station’ allows students to become Sea Turtle Conservation Volunteers on the virtual Mediterranean island of Fouramos. It is packed with high-quality graphics, photographs, work sheets, diagrams and data. It also provides a home for several Mediterranean sea turtle conservation groups and a forum where

their opinions and scientific data can be fully available. The site was redesigned in 2001 and is regularly updated with photos, illustrations, texts etc.

EuroTurtle has been tested and evaluated in a number of schools and Universities and approved as a valuable tool for environmental education and awareness. Numerous e-mails, awards and its wide use in education by students and teachers all attest to its value.

Regularly up-graded, EuroTurtle has evolved into an effective and interesting way to teach via the internet and could act as a model for other environmental groups who wish to use the internet for their awareness programmes.

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For more information, please visit MEDASSET’s website: www.medasset.org

Educative itineraries between globalisation and local identity

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What does it mean to deliver environmental education (EE) in the third millennium, a time when the links have been made clear between environmental imbalance and increased poverty, between the lack of rights and the loss of environmental quality, between global development growth and the growth of local impacts of development?

What is the best way to deal with the matter of “identities” and “belongings” in the era of globalisation without seeking refuge in “localisms” and nationalisms that, when not dangerous, they are still sterile towards environmental challenges?

To answer these questions it is necessary to open a debate on

the meaning of EE in the context of globalisation. The main issue is to conciliate the need to tackle the environmental problems of the world in a global perspective, with the need to stay firmly rooted in the local dimension of sustainable development, of the conservation of resources, and of the protection of cultural diversities. The contribution of Legambiente, the largest Italian environmental NGO, to this debate consists of concrete proposal for work articulated on the conceptual axis “globalisation-local identities”.

Therefore, Legambiente’s cultural proposal is made of educational itineraries and teaching programmes focused on two

main issues that symbolise the local and global aspects of our way of living. On one hand, the campaign “Treasures of Italy – the school adopts a town” deals, with an educational approach, with issues about cultural, natural and historical resources of our local territories, the ones where we live our daily life and that contribute to our own identity. On the other hand, with the campaign “Climate and Poverty – interpretations of globalisation”, we deal with the global issues that influence our lives and are related to the destinies of individuals and of the entire human race, especially in the case of water and energy resources management.

The above are two educational projects that were already proposed last year, when more than a thousand classes joined, and that Legambiente offers again this year, further enriching them. In particular, Treasures of Italy is the educational project sustaining the valorisation of the numerous and diffuse “treasures” of which Italy is rich and that makes it a unique country in the world. They are natural, cultural, artistic, landscape, agro-food and crafts treasures, full of history, traditions, flavours, scents, which give identity to our Belpaese, whose safeguard forms the basis for a quality development and a necessary social cohesion. It is a project that strengthens and enriches Legambiente’s national campaigns that have a great cultural and popular impact like: Small-great-Italy, that valorises

the small municipalities; Save-the-art, the campaign that turns the light on the “minor” cultural heritage, contributing factually to the recovery of many historic-artistic-architectural goods. Furthermore, Treasures of Italy well integrates itself with another project of Legambiente, “The school adopts a municipality”. The latter pursues the aim to facilitate the interaction between students from urban schools and students from small municipalities, an immense heritage to be preserved and valorised. The synergy between the two projects offers the opportunity to the classes joining Treasures of Italy, to establish twinning programmes, putting into communication schools in cities with schools in small municipalities.

Climate and Poverty offers didactical materials to tackle social and environmental issues that today are an important part of the phenomenon better known as globalisation. Specific in depth studies are dedicated to the issues of water and energy, and therefore pollution. Furthermore, the project gives the opportunity to activate international twinning programmes with the schools of Cuba, Ecuador, and Swaziland. It envisages an “international solidarity week” during which the schools will be able to organise various cultural events to advance the culture of peace and of solidarity among peoples, gain a context of exchange and reciprocity.

Education à l'Environnement dans les établissements de formation touristique au Maroc

Mimoun Hillali • ISIT, Tanger - Maroc

La formation touristique et hôtelière a vu le jour au Maroc, peu de temps avant la mise en place de la politique du tourisme inaugurée officiellement par le gouvernement en 1965. A partir de cette date, un effort de formation en tourisme a été fourni pour accompagner la nouvelle politique basée sur la planification à court ou à moyen terme (plans triennaux ou quinquennaux).

Séduit par le boom touristique des années 60, en Méditerranée, le gouvernement marocain a fini par opter pour le tourisme en donnant une grande importance aux aspects matériels du secteur (investissement dans l'hébergement, création d'emplois, recettes en devises...). Et pour cause, il a cherché à faire du tourisme le moteur de son développement socioéconomique. De ce fait la formation, de par son essence, a rempli une fonction sociale essentielle doublée d'une mission économique.

Dès le départ, cette formation a suscité des passions et même des distensions. Il faut bien dire que, contrairement à l'instruction technique ou à l'apprentissage professionnel dans les secteurs de l'agriculture, de l'industrie ou de la technologie, la formation touristique a la dure et noble tâche à la fois de préparer des femmes et des hommes à «être au service des autres, sans être leurs serviteurs». Car «plus que dans n'importe quel autre enseignement, celui du tourisme exige d'un apprenant, en plus du savoir-faire et du savoir tout court, d'accéder au savoir-être (...).» Cela touche évidemment à l'essence du comportement au sens culturel du terme. Avec l'avènement de l'écologie et de la recherche d'identité locale, «il n'est pas rare

d'ailleurs de voir dans les hôtels de renommée le personnel exhiber le costume traditionnel. Pour les uns c'est un signe d'intégration à la culture locale. Pour d'autres, c'est plutôt une touche exotique du marketing touristique». Dans tous les cas, c'est le début d'une prise de conscience de la nécessité de l'authenticité et du respect du milieu d'accueil.

A. E.E. DANS LES ETABLISSEMENTS DE FORMATION TOURISTIQUE

A la fin des années 80, la montée de la conscience écologique a fait apparaître une nouvelle catégorie de touristes. Cette nouvelle clientèle exige, non seulement, la qualité au sens commun du terme, mais elle est très attentive à la valeur de l'environnement. «La diminution de l'importance accordée à l'aspect quantitatif des choses: recherche de la qualité, de la sécurité, de l'originalité et la curiosité accrue pour des valeurs immatérielles: environnement, nature, savoir, culture...». La formation touristique, par conscience ou pour des besoins de marketing, a fini par s'ouvrir lentement aux nouvelles idées qui prônent la protection de l'environnement, le plus souvent au détriment des rentabilités classiques.

De plus l'admission de l'Institut supérieur international du tourisme de Tanger, en 1986, au sein des établissements de formation de l'OMT (Organisation mondiale du tourisme) a poussé la direction et les responsables du tourisme, appuyés par

un groupe d'enseignants conscients de l'utilité de l'éducation à l'environnement à introduire des enseignements et des cours qui traitent des relations, souvent floues, entre le tourisme et l'environnement (années 1980) et de l'importance grandissante de l'écotourisme (années 1990). Ces enseignements sont venus appuyer des cours d'histoire de l'art, de sociologie du tourisme et de géographie, déjà existants, et qui prônaient la sauvegarde de l'environnement.

Dans les autres établissements de formation du ministère du

tourisme (ISTHT et CQHT), les planificateurs ont depuis la fin du siècle dernier (années 80 et 90) introduit dans les programmes de sciences sociales l'enseignement de matières qui traitent, directement ou indirectement, de l'environnement et de son importance dans les nouvelles stratégies de développement durable. Le tableau suivant reprend, de façon très succincte, les points communs aux différents enseignements, en relation avec l'E.E., dispensés dans les écoles et instituts du tourisme.

Élément de l'E.E. dans la formation touristique au Maroc

ETABLISSEMENTS	EDUCATION A L'ENVIRONNEMENT
ISIT	<ul style="list-style-type: none"> ➤ Etude du patrimoine (monuments, vestiges), de la culture (artisanat, folklore, art culinaire). ➤ Tourisme et environnement. Ce cours traite des relations complexes du développement du tourisme face à la nature et à la culture des pays d'accueil, surtout dans les pays en développement ➤ Ecotourisme. Cet enseignement a pour but de sensibiliser les étudiants aux nouvelles pratiques des géotouristes ou écotouristes. Il montre aussi les limites de l'écotourisme dans les milieux fragiles.
AUTRES ISTHT et CQHT	<ul style="list-style-type: none"> ➤ Introduction au tourisme: comprenant la réflexion sur l'impact du tourisme sur l'environnement ➤ Evaluation du potentiel touristique intégrant les dimensions suivantes: <ul style="list-style-type: none"> ● Cadre naturel et valeurs culturelles des pays d'accueil ● Contexte social et économique résultant du brassage des populations d'horizons divers et de cultures différentes ● Impact du tourisme sur le milieu (environnement naturel et humain) au Maroc et ailleurs.

Source: synthèse faite à partir des programmes de l'ISIT et des autres établissements

B. E.E. DANS LE CADRE DE LA FORMATION CONTINUE OU DE L'EDUCATION NON-FORMELLE

Il faut dire que le besoin pour l'individu de s'affranchir des normes et des contraintes sociales, en réclamant plus de liberté (et malheureusement d'individualité aussi) pousse au respect des droits de l'homme et de l'environnement. Ce qui revient, pour la population d'accueil à considérer le touriste comme un hôte mais pas forcément comme un modèle.

Conscient de ces nouvelles attentes, le gouvernement marocain a lancé une première opération du tourisme rural en 1983 dans le Haut Atlas Central (HAC) en créant la première école pour la formation de guides de montagne à Tabant (province d'Azilal), dont la mission est de faire prendre conscience, et si possible soin aussi, des exigences de l'environnement aux accompagnateurs de montagnes.

Mais c'est au début du 21ème siècle que le ministre de tutelle a décidé de généraliser la formation et la sensibilisation à l'environnement aux acteurs locaux dans le cadre de ce qui est connu au Maroc sous le nom des PAT: «Pays d'accueil touristique».

Le but de ces formations qui se déroulent dans la région concernée, est de soutenir toute formule de tourisme porteuse de connaissances plus authentiques et respectueuses des identités locales, sans toutefois perturber le processus de relations équitables entre accueillants et accueillis.

Ces formations ont avant tout pour rôle de faire comprendre aux populations locales directement concernées par le tourisme rural (guides, gîteurs, aubergistes, voyagistes, muletiers...) que le patrimoine touristique (naturel, culturel et humain) est un héritage qui se transmet de génération en génération et que leurs actions doivent se limiter à:

- la valorisation de l'ensemble du territoire du PAT en harmonisant les pratiques et les activités par le respect de la réglementation, de la classification et de la planification destinées à chaque PAT. Ce qui revient à privilégier la mise en valeur et non l'exploitation aveugle.
- l'intégration du tourisme dans le tissu économique social local et régional en le reliant à d'autres activités économiques connexes du terroir préalablement défini pour mieux diffuser les bénéfices de son effet multiplicateur.
- Eviter tout ce qui est susceptible de briser l'harmonie des équilibres des milieux et espaces, des activités et cultures,

1. José SEYDOUX: «Accueil aujourd'hui et demain». Edition Delta et Spes. Suisse 1983.

2. Mimoun Hillali «Le tourisme international vu du Sud» (essai sur la problématique du tourisme dans les pays en développement). Presses de l'Université du Québec, Sainte Foy, 2003. 228 pages.

3. Mimoun Hillali «Le tourisme international vu du Sud» op. cit.

4. Institut spécialisés de technologie hôtelière et touristique et Centres de qualification hôtelière et touristique.

surtout lorsque l'appât du gain fait croire à des pratiques qui rapportent énormément et immédiatement.

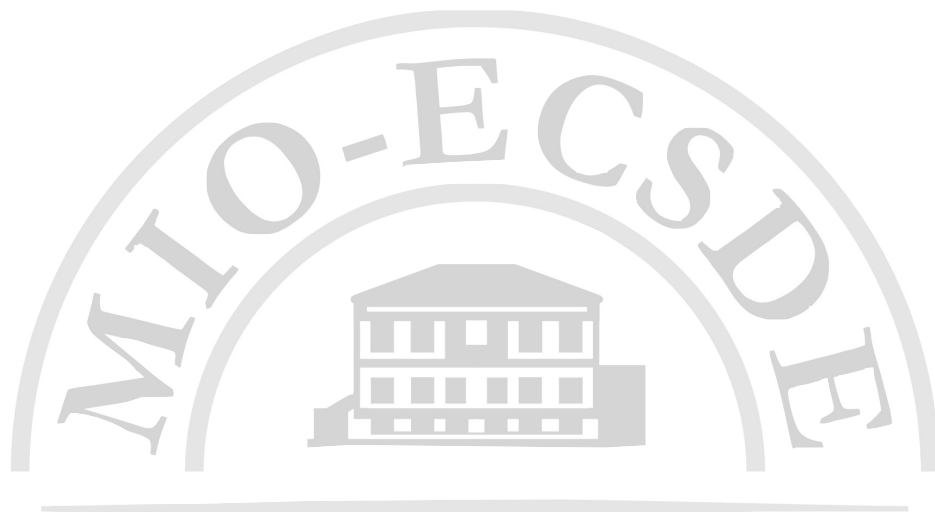
La sensibilisation par le biais de la formation vise à impliquer la population dans le processus de développement touristique local et régional par la mise en valeur de son patrimoine culturel et l'art de le promouvoir sans le détruire.

«Partant de ces considérations, la formation en tourisme est loin d'être un simple fait de maîtrise d'une technique, d'une langue ou d'une accumulation de connaissances. Il ne fait pas

de doute que c'est un domaine où l'aptitude morale, la capacité d'adaptation, l'esprit de créativité, le mobile de motivation et le sens des relations humaines, jouent un rôle primordial» .

En conclusion, le gouvernement marocain, le ministère du tourisme et leurs partenaires souhaitent faire des personnes, organismes, institutions et associations touristiques impliquées dans ces formations des vecteurs de sensibilisation à la qualité de l'environnement et à sa protection.





MIO-ECSDE Profile

The Mediterranean Information Office for Environment, Culture and Sustainable Development, is a Federation of Mediterranean Non-Governmental Organizations (NGOs) for the Environment and Development. MIO-ECSDE acts as a technical and political platform for the intervention of NGOs in the Mediterranean scene. In cooperation with Governments, International Organizations and other socio-economic partners, MIO-ECSDE plays an active role for the protection of the environment and the sustainable development of the Mediterranean Region.

Background

MIO-ECSDE became a federation of Mediterranean NGOs in March 1996. Its roots go back to the early 80s, when the expanding Mediterranean membership of the European Community encouraged the European Environmental Bureau (EEB) to form its Mediterranean Committee supported by Elliniki Etairia (The Hellenic Society for the Protection of the Environment and the Cultural Heritage). The Mediterranean Information Office (MIO) was established in 1990 as a network of NGOs, under a joint project of EEB and Elliniki Etairia and in close collaboration with the Arab Network of Environment and Development (RAED). The continuous expansion of MIO-ECSDE's Mediterranean NGO network and the increasing request for their representation in Mediterranean and International Fora, led to the transformation of MIO-ECSDE to its current NGO Federation status. Today it has a membership of 98 NGOs from 22 Mediterranean countries.

Our Mission

Our mission is to protect the Natural Environment (flora and fauna, biotopes, forests, coasts, natural resources, climate) and the Cultural Heritage (archaeological monuments, and traditional settlements, cities, etc.) of the Mediterranean Region. The ultimate goal of MIO-ECSDE is to promote Sustainable Development in a peaceful Mediterranean.

Major tools and methods

Major tools and methods used by MIO-ECSDE in order to achieve its objectives are the following:

- Promotion of the understanding and collaboration among the people of the Mediterranean, especially through their NGOs, between NGOs and Governments, Parliaments, Local Authorities, International Organizations and socio-economic actors of the Mediterranean Region.
- Assistance for the establishment, strengthening, co-operation and co-ordination of Mediterranean NGOs and facilitation of their efforts by ensuring the flow of information among relevant bodies.
- Promotion of education, research and study on Mediterranean issues, by facilitating collaboration between NGOs and Scientific and Academic Institutions.
- Raising of public awareness on crucial Mediterranean environmental issues, through campaigns, publications, exhibitions, public presentations, etc.

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