

# 8. ENVIRONMENTAL POLICY & EDUCATION

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## **8.1 ENVIRONMENTAL POLICY**

### **8.1.1 Introduction**

The following part of the Report will give a brief overview of the policy and legislative structures as related to the environment.

The Maltese environmental legislation stems from obligations set out in the Environmental Protection Act of 1991. The Structure Plan & the Development Planning Act 1992 is another important legislative instrument. Moreover, Malta is party to a number of International Conventions and as such has a number of international commitments.

It has become increasingly clear that the EPA has certain shortcomings; eg. it does not cover air quality aspects and sustainable waste management. Moreover, parts of the EPA have never been brought into effect.

Difficulties have been experienced by the EPD to make certain Government Departments understand, let alone implement, basic environmental policies, including those related to biodiversity conservation.

### **8.1.2 Environmental Standards**

Environmental standards are required in the following areas:

- Discharges into the environment
- Air quality
- Noise levels
- Water quality
- Hazardous substances
- Waste management.

### **8.1.3 Legislation**

The primary legislation with respect to environment protection is the Environment Protection Act of 1991. The following regulations have been issued on the strength of this Act:

LN 37/91 Notice of Coming into Force.

LN 19/92 Trade in Species of Fauna and Flora Regulations

LN 22/92 Fungus Rock Nature Reserve Regulations

LN 76/92 Reptiles (Protection) Regulations

LN 77/92 Marine Mammals Protection Regulations

LN 96/92 Trade Species of Fauna and Flora (Amendments) Regulations

LN 08/93 Environment Protection (Sewer Discharge Control) Regulations

LN 25/93 Selmunett Islands (St Pauls Islands) Nature Reserve Regulations

LN 49/93 Flora and Fauna protection regulations

LN 136/93 The authority of Review (Declaration on Oath) Rules

LN 143/93 Environment Protection Act (Revocation of Laws Order)

LN 144/93, 145/93, 146/93, 150/93 Birds and Wild Rabbit (Declaration of Protected Species and Nature Reserves) (Amendment) Regulations.

LN 1/94 Environment Protection (Preventive and Remedial Measures)

LN 87/94 Authority of Review (Procedure) Rules

LN 183/94 Non Alcoholic Beverages (Control of Containers) Regulations

LN 133/95 Environment Protection (Control of Substances Depleting The Ozone Layer Regulations

LN 44/96 1996 Regulations to amend the Regulations on the protection of Birds and the Wild Rabbit

LN 45/96 1996 Regulations to further amend the Regulations on the Protection of Birds and the Wild Rabbit.

LN 23/97 1997 Regulations to further amend the Regulations on the Protection of Birds and the Wild Rabbit.

LN 24/97 -do- Amendments

LN 128/97 Deposit of Waste and Rubble (Fees) Regulations, 1997

LN 140/97 Regulations of 1997 to amend the Regulations on Trade in Species of Wild Flora and Fauna.

LN 155/97 Marine Mammals (Amendment) Protection Regulations.

LN 160/97 Rubble Walls and Rural Structures, Regulations 1997.

LN 196/97 Motor Vehicles (Offroading) Regulations

LN 214/97 Commencement Notice of coming into force of Section 49 of the EPD.

LN 215/97 Birds and Wild Rabbit Regulations, Amendments (Declaration of Protected Species and Nature Reserves).

LN 216/97 Birds and Wild Rabbit Regulations Amendments

LN 221/97 Birds and Wild Rabbit Regulations, Amendments

These are by no means the only regulations that have a bearing on the environment. In fact, legislation that has a bearing on the protection of the environment may be described as fragmented and insufficient.

#### **8.1.4 International Conventions**

Malta is party to a number of regional and international Conventions related to environmental protection and management, amongst which are the following:

?? Convention on International Trade in Endangered Species of Flora and Fauna (CITES)

?? Convention on the Conservation of European Wildlife and its Habitats (BERN)

- ?? Convention on Biological Diversity (CBD)
- ?? Convention for the protection of the marine environment and coastal areas of the Mediterranean (Barcelona Convention).

### **8.1.5 Institutions**

In Malta, the Government agency that is specifically designated as being responsible for environment protection is the Environment Protection Department. However, in practice other agencies have an environmental remit. This results first and foremost from the fact that the Environment Protection Act of 1991 gives powers to all Ministers to protect the Environment.

It may be argued that all agencies have some activity that impinges on the environment. However, the Environment Protection Department apart, the following agencies are mostly involved:

- ⚡⚡ The Works Division
- ⚡⚡ The Malta Maritime Authority
- ⚡⚡ The Planning Authority
- ⚡⚡ The Civil Protection Department
- ⚡⚡ Local Councils
- ⚡⚡ Department of Agriculture
- ⚡⚡ Department of Fisheries
- ⚡⚡ The Health Division

An environmental capability is therefore a requirement for most if not all agencies. This makes co-ordination of activities of primary importance. In practice, this co-ordinating agency is the Environment Protection Department. However, it is widely recognised that the unclear legislative mandate and the paucity of resources render this role arduous. The result is considerable overlaps, if not outright conflicts.

It has been agreed that both the Environment Protection Act and the institutional set-up of the Environment Protection Department need to be revised and upgraded. The new Act and set-up should take into account the new challenges linked to development and higher standard of living, as well as international obligations and responsibilities that in the meantime have been entered into as a result of the signing and ratification of Conventions.

### **8.1.6 Enforcement Of Regulations**

Difficulties are consistently encountered by the EPD to enforce regulations. This is mainly due to the lack of adequate inspectorate resources and lack of a dedicated environmental police force.

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## 8.2 Environmental Education in Malta

### 8.2.1 Introduction

The term 'environmental education' generates a myriad of interpretations that do not always reflect its true holistic nature, i.e. a balance between education *about*, *in* and *for* the environment. Therefore, in the following analysis of the state of environmental education in Malta, initiatives that are ultimately monodisciplinary or emphasise the acquisition of knowledge about a narrow aspect of the environment are omitted.

A closer examination of the Maltese situation regarding environmental education reveals an evolutionary process gradually unfolding within the Maltese society. Each new evolutionary step built and improved on the previous one while, at the same time preparing the foundation for the next step. Although there are no clear demarcations, a deeper analysis of environmental education initiatives in the Maltese Islands shows that these evolutionary steps can be classified into three major phases (Pace, 1995):

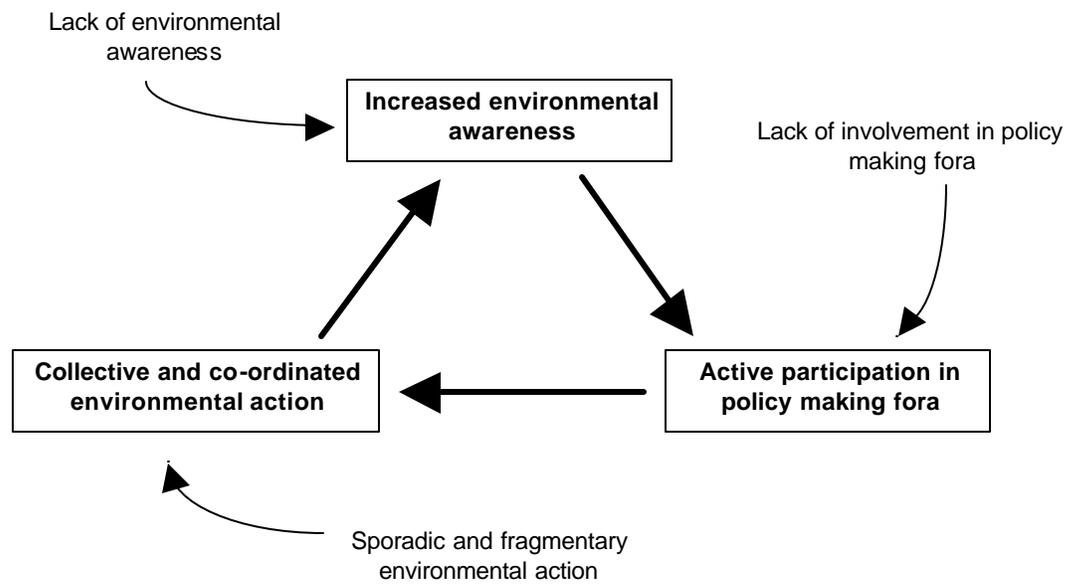
- a) the **Awareness Phase** (1960s - 1970s) - characterised by sporadic activities, mainly organised by NGOs, aimed at raising public awareness on the need to do something to improve the state of the Maltese environment. These activities helped shape public opinion, providing the necessary argumentation that justified the need for a supportive infrastructure for future environmental education initiatives.
- b) the **Fragmentary Phase** (1980s - early 1990s) - characterised by the 'institutionalisation' of environmental education. Various actors assumed responsibility for environmental education, but failed to co-ordinate initiatives creating a lot of difficulties like duplication of work, wastage of human and financial resources, conflicts of territoriality between the parties concerned and little significant progress.
- c) the **Co-ordinated Phase** (mid 1990s) mainly involving the setting up of National Environmental Education Strategy (NEES) and characterised by a nation-wide will to co-ordinate activities and to make the best use of available resources.

Weaved within the evolutionary phases are three main interrelated trends (summarised in Figure 8.1) that can also be recognised in similar accounts on the development of environmental education in other countries. The first involves a move from a lack of environmental awareness to a more informed idea about the environment and the effects of human activities on it. The second is the increased participation of an informed public in decision making matters involving the environment. The third trend that can be identified, involves a shift from a fragmentary approach to problem solving to a collective, more co-ordinated strategy. This shift promotes a wider exposure of the public to environmental issues which in turn generates more awareness – starting the whole cycle again.

Any attempt to maintain the dynamic balance established by these trends needs to consider the creation of a supporting infrastructure. Besides setting up the political framework for the consolidation of environmental education in Malta, NEES needs to ensure the continuation of efforts at the grassroots level to offer support for this framework (UNCED, 1992). Concurrent with the consolidation of initiatives in non-formal education, NEES needs to focus on the formal education sector. Action in this sector will surely require the development and evaluation of new management structures and curricula within

schools, by tapping the invaluable contribution of teachers – that seems to be the major ingredient for success in formal environmental education initiatives.

**Figure 8.1:** *The relationship between the trends identified in the development of environmental education in Malta*



The five major organisations actively involved in environmental education are: the Education Division, the Environment Management Unit of the Planning Authority, the Environment Protection Department, the Faculty of Education and the various categories of NGOs (which have multiplied considerably in recent years).

### **8.2.2 Initiatives In The Formal Education Sector**

The pedagogy suggested for environmental education is not fully compatible with the present situation in schools - characterised by overloaded syllabi, an examination-oriented pedagogy and a tendency to prefer traditional patterns of teaching. Nevertheless, environmentally aware teachers who feel the need to act, still manage to integrate environmental issues in daily teaching.

Realising the crucial role teachers play in curriculum development, certain NGOs focus their attention on teachers. Besides directing most of their environmental campaigns at school children, NGOs supply a variety of teaching resources and promotional material. There was a time when NGOs even organised courses for teachers with the aim of giving them the knowledge and skills required to organise environmental education activities. This teacher-oriented strategy has been relatively successful, considering that practically each school had one or two teachers who acted as a NGOs' contact point with schools.

The Environment Management Unit (EMU) of the Planning Authority also focused its attention on schools. It set up a programme of planned excursions to various sites with the aim of helping school children appreciate the environment - from all its facets. EMU also organised an exhibition of environmental projects conducted by school children. Nevertheless, since schools lack an official environmental education strategy, such NGO and EMU activities are not a regular feature in school programmes and lack a sound integration within the curriculum.

The first systematic step toward an environmental education strategy in the formal education sector was the "National Training Workshop on Environmental Education in Malta" (6-10 April 1987) organised by the Ministry responsible for education and the environment (IDEA, 1987). The workshop's aims were in tune with the strategy to develop prototype curricula and teaching materials promoting environmental education, proposed about four months later by the Moscow Congress (UNESCO-UNEP, 1987). Environmental and curriculum specialists from the university, Education Division officials and practising teachers from all levels of formal education participated in the event. Workshop sessions proposed several recommendations for the implementation of environmental education at all levels of formal education. However, lacking an official body responsible for their implementation, these recommendations were soon shelved and forgotten.

Environmental education was one of the areas addressed in the National Minimum Curriculum (NMC) for the primary (Legal Notice 73, 1989), secondary (Legal Notice 103, 1990) and post-secondary schools (Legal Notice 56, 1991) published by the Ministry of Education as a direct result of the Education Act of 1988. Being overly optimistic, one can consider the publication of the NMC as an important milestone

for environmental education in Malta, providing the legal backing to justify curriculum development initiatives in environmental education (Ventura, 1994). However, a closer look at the language used in these documents betrays an uncertainty – on the part of local policy makers – of what environmental education really involves. While being quite familiar with the affective objectives of environmental education, local policy makers, like many of their international counterparts, are still unclear about how to achieve them. Moreover they tend to traditionally equate environmental education with the acquisition of scientific knowledge (Pace, 1992). A closer examination of what the implementation of the NMC really implies, clearly elucidates its impotence since the present educational system is not flexible enough to accommodate the innovations proposed. Moreover the vaguely stated and ambiguous demands made by the NMC lack the necessary punch to get things going (Mifsud, 1994). Viewed in this way, the NMC, at best only provides moral support – a legal trump card that can be used by advocates of environmental education in policy making discussions.

Although rigid syllabi and looming Junior Lyceum Examinations still exert pressures on primary school teachers, the primary school is a relatively fertile scene for the inclusion of environmental education – when compared with the other educational sectors. This may explain why the three major attempts at introducing environmental education in formal education focused on the primary level.

The first attempt was a UNESCO funded project run by the Faculty of Education. The project, called the Environmental Education Programme (EEP), aimed at producing a teacher's manual with practical suggestions on how to infuse environmental education into the primary school subjects as a cross-curricular theme (University of Malta, 1991). It identified attainment targets and presented teachers with the opportunity to plan environmental education activities within their normal classroom activities. Teachers were consulted from the start of the project and were actively involved in the drawing up of sample activities. The Teacher's Manual produced was even evaluated in a national seminar that involved the participation of teachers, head teachers, education authorities and teacher educators (Faculty of Education, 1991). Although the project's implementation in schools was effectively obstructed before it had the time to be sufficiently tested and improved, EEP was successful in generating a new approach to environmental education in schools based on interdisciplinarity (Pace, 1992).

A year later, the Science Centre of the Education Division inaugurated the second initiative by publishing its own teacher's manual on the implementation of environmental education in the curriculum (White, 1993). The publication followed a series of in-service courses, on science and environmental education in the primary school, which were attended by all state primary school teachers and some teachers from the private sector. The manual, also promoting a cross-curricular theme approach, was distributed to all teachers with the hope that they would implement its suggestions in their schemes of work. Whether teachers complied with the suggestions or not, is still unknown since no monitoring and evaluation of the implementation were initiated.

The most recent development was *Dinja Wahda* (One World) - an award scheme initiated by BirdLife Malta, one of the local NGOs (MOS, 1994). The scheme aimed at co-ordinating the NGO's campaigns in primary schools to avoid “*lacunae of environmental efforts in schools between the various campaigns*” and create “*an educational campaign that would last throughout the entire scholastic year*” (Grima, 1996). The initiative presented schools with 14 activities promoting pro-environmental behaviour that varied from simple tasks (e.g. drawing a poster) to more demanding ones (e.g. organising a clean-up campaign). *Dinja Wahda* did not attempt to provide guidelines to teachers on how the activities could be infused into the syllabus, but still some teachers took the initiative to integrate them into their normal teaching. Results from the evaluation questionnaire, distributed to all the schools, showed that *Dinja Wahda* was a success. In fact 74 primary schools – more than 50% of all the primary schools –

participated in the award scheme. Following this success, BirdLife Malta plans to extend the scheme to secondary schools and other sectors of the community (Grima, 1996).

Rigid compartmentalisation of subject areas, lack of teacher preparation, inflexible time-tabling and management structures, render the infusion of environmental education across the secondary school curriculum very difficult. Under these conditions, Dunlop (1992) suggests the organisation of environmental education as a multidisciplinary subject hence avoiding most of the problems an interdisciplinary approach would meet. This is exactly what the MATSEC Board did when it proposed the subject Environmental Studies. The syllabus combines elements of biology, geography, social studies and history under three main themes: the Natural Environment, the Human Environment and the Built Environment. In its introduction, the syllabus stresses the need for an integrated approach and the use of teaching methodologies that promote active learner participation particularly in the study and the care of the environment (MATSEC, 1993). However, the subject's implementation in schools is finding various obstacles which result from three major deficiencies: a lack of pre- and in-service training to prepare teachers for the new demands the subject poses; a lack of adequate teaching resources; and the absence of a scheduled time slot which allows teachers to co-ordinate their teaching. The motivation to improve the situation is also lacking since the concept of multidisciplinary is not congruent with the Education Division's monodisciplinary organisation (Mifsud and Zammit, 1995).

Another attempt at providing an environmental education resource pack for the secondary school curriculum came from ECO, another local NGO. The pack is a translated adaptation of the 'One World' project of the North-South Centre (European Centre for Global Interdependence and Solidarity). It presents a holistic view of the environment, focusing not just on the natural but also on the cultural and social dimensions (Hamilton, 1996). Teachers are presented with a series of guidelines, student worksheets and posters focusing on seven different but related environmental issues. However, teachers were not consulted during the pack's design and the initiative failed to acknowledge the limitations of the secondary school sector, hence automatically restricting its dissemination in schools.

Since its inception, in 1989, Systems of Knowledge (SoK) provided students with an opportunity to review contemporary environmental issues from a variety of perspectives. In an effort to improve this course, the co-ordinators opted to stress interdisciplinarity by: (a) reorganising the content matter into integrative themes; (b) replacing lectures by subject specialists with seminar-based sessions led by an interdisciplinary team of teachers; (c) publishing a new student workbook that, besides presenting the relative theme, guides the student to make the necessary links with the other areas of knowledge; and (d) restructuring the examination questions to assess higher order cognitive skills rather than simple recall of factual knowledge (Giordmaina, 1995). The second phase of this restructured course, launched during the 1996-97 academic year, contains the theme "Values and the Environment". The theme attempts to (a) familiarise students with the various ways humans related with their environment throughout the ages, (b) help them to critically analyse their present way of life, and (c) develop pro-environmental values and attitudes for the future (Giordmaina & Scerri, 1996).

The syllabus for Environmental Science, devised by MATSEC in 1994, provided another possibility for the introduction of environmental education principles at the intermediate matriculation level. While acknowledging that a study of the environment necessitates a holistic approach, the syllabus falls short of its recommendation. It disregards socio-cultural perspectives of the environmental problems studied and adopts a purely scientific treatment to help learners understand the problems and to propose adequate solutions (MATSEC, 1994).

Initiatives at tertiary level have traditionally focused on the running of courses aimed at the training of specialists in environmental science, environmental management, environmental law and environmental economics. In 1994, as a follow-up of the EEP, the Faculty of Education offered a course unit in

environmental education as one of the compulsory EMY (Early and Middle Years) course units in the B.Ed. programme. Besides introducing student-teachers to the goals and principles of environmental education, the course had a very strong practical component that provided an opportunity to work in interdisciplinary groups and plan learning experiences that infuse environmental education objectives into the primary school curriculum. A similar course is presently being offered as an option in the PGCE course.

The Faculty of Education has also initiated an environmental education research programme based on three main lines of research: (a) studies about the local environment – providing new knowledge about various aspects of the natural environment; (b) surveys – about environmental awareness, attitudes towards the environment, the incidence of environmental issues in the press, the role of NGOs in local environmental education; and (c) the development and evaluation of curriculum materials.

Initially, dissertations and projects in the latter category were characteristically focused on the development of curriculum materials that utilised the science curricula and promoted teaching *through* the environment. However, after the publication of the EEP, the research diversified reflecting a wider notion of environmental education. The work mainly focuses on the infusion of environmental education through specific subjects like Maltese in the primary schools, Italian and Integrated Science in the secondary schools and religious education. Other work approached the infusion of environmental education through cross curricular themes in the primary, the secondary and the intermediate level curricula. More innovative research addressed specific methodologies, such as gaming and simulation, and educational walks as part of a non-formal environmental education programme. Work has also been done on the promotion of environmental education through music, multimedia software packages and the Internet.

### **8.2.3 Initiatives In The Non-Formal Education Sector**

As a response to a growing concern about the degree of environmental degradation, the Maltese Parliament approved the “Act to protect the environment”. Although the Act assumes that every Maltese citizen will actively participate in the protection of the Maltese environment (Act No. V, 1991), research shows that the majority of the Maltese are unable to take on this responsibility.

In a nation-wide strategy to protect the environment from further degradation, legislation may be effective – but only as a temporary measure. There is the need to devise strategies that develop attitudes and values that induce pro-environmental behaviour naturally rather than forcefully. The then Parliamentary Secretary for the Environment, Dr Stanley Zammit, explicitly acknowledged this need: "*As a direct consequence of our own action (i.e., the enactment of the Act to protect the environment), we are appreciating better the full significance of 'environmental education'. It is very evident to us how strategically important it would be to have a population which is intrinsically receptive and sympathetic to new legislation for the protection of the environment,*" (Foundation for International Studies, 1991).

Thus, it is no wonder that the Structure Plan, Malta's strategy to achieve the best balance between development and the environment by the year 2010, dedicates four policy statements to environmental education and research. The policies envisage:

- (a) the organisation of educational programmes to promote pro-environmental behaviour;
- (b) the establishment of an environmental education resource centre which will:

- ?? inform the public about environmental matters,
  - ?? increase the awareness for environmental protection and the wise use of resources, and
  - ?? provide the mass media with good quality environmental education programmes;
- (c) the setting up of Field Centres and interpretative Visitor Centres associated with Conservation Areas; and
- (d) the promotion and dissemination of research on the environment and environmental problems (Planning Services Division, 1990).

The mechanisms for the implementation of these policies (except for the setting up of the environmental education resource centre) have been set in motion by the various agencies involved in environmental education. However, these efforts have largely been sporadic and certainly not co-ordinated. One of the agencies striving to implement these policies through a co-ordinated effort was the Environment Secretariat, set up in 1990. Through its support, NGOs received the required assistance to carry out research on sensitive habitats, to propose environmental protection strategies and campaigns as well as to develop and manage nature reserves and environmental interpretation centres. The Secretariat also launched its own campaigns aimed at developing pro-environmental behaviour through prime-time educational spots on Television Malta, clean-up campaigns, and various stickers, posters and booklets featuring “*Xummiemu*”- a hedgehog adopted as the Secretariat's mascot. Although these initiatives addressed the general public, the focus of the Secretariat's efforts was school children. The launching of *Xummiemu*'s Fan Club strengthened this interface with school children facilitating future environmental education campaigns (Azzopardi, 1996). Following the 1996 change in government, the functions of the Environment Secretariat have been absorbed within the Environment Protection Department.

#### **8.2.4 The National Environmental Education Strategy**

In an effort to establish co-operation between all the interested parties, in October 1994, a proposal was made to the Environment Secretariat, the Faculty of Education and the Ministry of Education to set up a steering committee which would co-ordinate the organisation of a second National Training Workshop on Environmental Education in Malta with the theme: “*In Today's Education ... Tomorrow's Environment*”. The goal of the event was that of getting all those involved in environmental education together to (a) become aware of the state of environmental education in Malta, (b) identify the problems, needs and support required for the successful implementation of environmental education initiatives, and (c) discuss the possibility of co-ordinating these initiatives to improve their effectiveness.

The Training Workshop, held in Valletta on 26 and 27 May 1995, was attended by 150 participants coming from various sectors: teachers from all formal education sectors of both private and state schools, university staff and education officials, NGO members and other interested persons from other governmental and private enterprises. Participants identified the problems caused by a predominantly fragmentary approach to environmental education and the need to mobilise efforts to maximise local human resources in the development of a National Environmental Education Strategy (NEES). The various working groups came up with recommendations that were conceived as the working agenda for an Action Group entrusted with the development of NEES. The recommendations proposed that NEES would strive to utilise available resources and develop new ones to initiate a serious concerted effort at implementing environmental education initiatives at the formal and non-formal levels directed towards all sectors of the population.

Although, to date, NEES is still in its initial consultative phase, it seems that the time for its implementation is ripe. During the training workshop, participants clearly expressed their commitment for action. This grassroots interest and participation in policy making bodies is an essential requirement for the success of NEES and for the success of the implementation of the recommendations of Agenda 21 (UNCED, 1992). Moreover, an analysis of the 1996 electoral manifestos of the major political parties shows a change in the political attitude toward environmental education. Both parties recognised the importance of environmental education and proposed plans to improve the situation in the formal education sector (Malta Labour Party, 1996; Partit Nazzjonalista, 1996). This commitment has been translated into action by (a) the continuation of the school curriculum review which aims at making the curriculum more holistic, learner centred and community-oriented – attributes that are synonymous with environmental education, and (b) the Minister of Foreign Affairs and the Environment and the Minister of Education and National Culture endorsed the plan outlined by NEES and agreed that it should be officially supported by the Ministry responsible for the environment.

### **8.2.5 Conclusion**

Environmental education in Malta has made great advances, but is currently at the cross-roads. Continued progress can only be ensured through the successful structuring and implementation of NEES. However, there are some major issues that still need to be addressed:

- ?? for most people the term ‘environment’ is synonymous with the natural environment. In so doing they are perpetuating a very narrow view of the environment which might prevent learners from identifying with their surrounding environment.
- ?? for quite some time environmental education has been equated with the acquisition of information (preferably of a scientific nature) about the environment. This was the result of a widely held belief that learners automatically develop pro-environmental values and attitudes if they are provided with the required knowledge base. This mistake is particularly common in ‘educational packs’ produced by individuals who are not professional educators. Research has shown that the only way by which values and attitudes can be developed is through a pedagogy that is oriented towards the development and clarification of these particular set of personal beliefs.
- ?? although NEES has been officially recognised by the relevant authorities, the task of co-ordinating the different actors, catering for their different needs and setting up administrative structures, is particularly difficult to go by. Most of the actors have been working in isolation from other individuals/associations for quite some time and are bound to view ‘co-operation’ and ‘co-ordination’ initiatives with suspicion.
- ?? most of the environmental education initiatives have traditionally addressed children or youths, because they are seen as being a hope for the future. On the other hand, adults seem to be dismissed because ‘they are already set in their ways’. Besides adopting a defeatist attitude, this approach disregards the basic fact that most of the environmental degradation occurs through the action of adults, and if they are not addressed through environmental education there might not be any environment left to safeguard in the future.

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