

Eco-Schools: Development of assessment tools

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Abstract

Eco-Schools is an international programme for education for sustainability, which was first developed in the 1990s and implemented in Europe, America and Africa.

It aims to implement Local Agenda 21, applying educational and environmental management concepts and ideas in the daily life of schools in the process. The United Nations Decade of Education for Sustainable Development, which began in 2005, is a unique opportunity to put the issue on the national agenda, and the Eco-Schools Programme is an important tool for this purpose.

The study herein reported aims to facilitate understanding of the successful implementation of this Programme's methodology via the development of an assessment tool that reflects the work done and facilitates further corrections and improvements of future activities.

Based on qualitative and quantitative research, this involved a feedback survey given to about 150 Portuguese Eco-Schools.

The research was undertaken between December 2007 and December 2008, and involved the national coordinators of the Eco-Schools Programme and the Regional Education Authority. The proposed tool monitors and evaluates the programme to be applied in Portuguese Eco-Schools. Its use will enable the school community to improve its implementation of the Eco-Schools Programme and to achieve greater pupil involvement, whilst achieving sustainability.

Introduction

The challenges that environmental issues pose today demand profound changes in our vision and the way society functions. Moving in the direction of a human society in harmony with nature implies changing certain structural issues, both on a conceptual and practical level in order to increase the chances of success. The United Nations Decade of Education for Sustainable Development, which began in 2005, is a unique opportunity to include the issue on the national agenda. The Eco-Schools Programme (ES) is an important tool for this purpose,

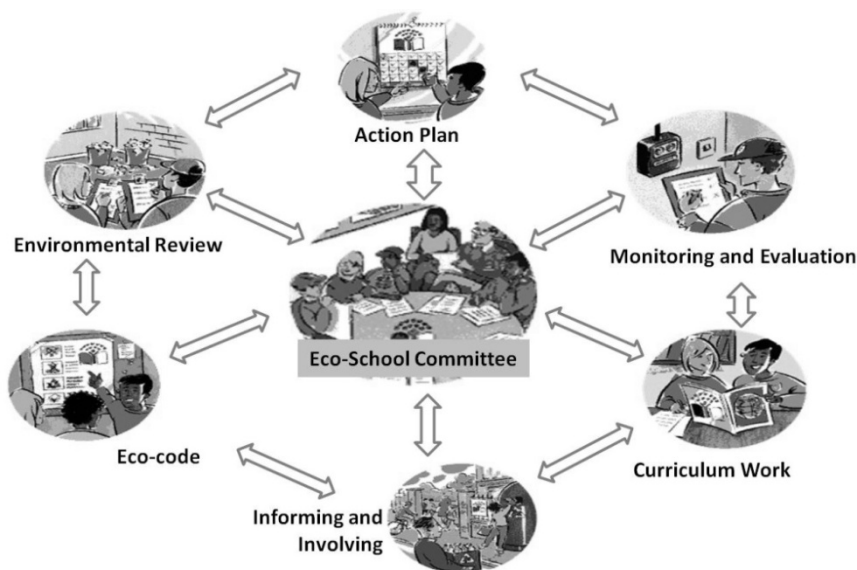
contributing towards the education of children and young people who shape changes in behaviour.

This programme was created in response to the need for developing a School Agenda 21 (SA21). In Portugal, it has been implemented since 1996/97, and 784 schools registered when this study was initiated. It is part of a structure that involves major international involvement and the participation of thousands of schools in 44 countries.

Since 2003, it has been recognized by the UNEP (United Nations Environment Programme) as one of the fundamental tools for making sustainable development and Local Agenda 21 work.

This programme proposes that schools adopt a working methodology that, combining activities that explore different issues, contributes to an overall improvement in the school and the community environment (Gomes 2004a; Mogensen and Mayer 2005; ABAE 2008). This methodology is presented in the form of the “7 steps” (fig. 1).

Fig. 1: The ‘seven steps of an Eco-School’



STEP 1 – Eco-Schools Committee; STEP 2 – Environmental Review; STEP 3 – Action Plan; STEP 4 – Monitoring and Evaluation; STEP 5 – Curriculum Work; STEP 6 – Informing and Involving; STEP 7 – Eco-Code. Adapted from ABAE (2008).

We undertook a study that is intended to help understand the implementation of the programme's methodology from the perspective of the development of an assessment tool, while reflecting upon both the work done and eventual corrections/improvements to future activities. The Eco-Schools programme was chosen because its methodology is based on the LA21, since it urges the effective participation of all the members of the school community, and because it is an important tool for education for sustainable development. Moreover, in Portugal, this Environmental Education (EE) programme is popular and contributes to effective citizenship education.

The study was carried out between December 2007 and January 2009 with the cooperation of the national coordinators of the Eco-Schools Programme.

Methodology

On the basis of the Tuckman (2000) principles, we began by defining the issue to be researched: How to create a tool to assess the Eco-Schools Programme?

We applied a mixed methodology (qualitative and quantitative). We worked with a sample of schools, while teams created from within the National Eco-Schools Committee carried out school visits.

An open-ended questionnaire was used because, as Tuckman (2000) mentions, this type of questionnaire is more appropriate when the aim of the investigation is not only to discover attitudes or attributes of those surveyed, but also to learn something about the context in which they formed their opinions.

When devising the interview format, we worked from a theoretical framework (the Eco-Schools seven steps methodology) which was governed by thematic nuclei and their respective topics, and used these to guide interaction during the interviews, while meeting the objectives of the said interviews.

This research tool was subjected to validation by a group of Eco-Schools Programme experts (members of the National Eco-Schools Committee). It is intended that the data collection tool used in this study can later be applied in all schools involved in the programme in Portugal. In other words, apart from the general acceptance of results sought by typical research projects, the issue of transferability needs to be considered.

In the development of the feedback form and the user manual used in the visits to the Eco-Schools, the research was divided into two parts:

- The auditing process of the Eco-Schools, undertaken by the coordinators of the Eco-Schools Programme, in conjunction with the respective National Committee.

- The work carried out directly by the researcher, which included a bibliographical review, discussion with Eco-Schools Programme “experts” (at the headquarters of the National Eco-Schools Committee), school visits and monitoring the auditing process coordinated by the National Eco-Schools Committee.

Within the National Eco-Schools Committee, a feedback form proposal was presented by the national Eco-Schools coordinator during the first meeting to discuss the school assessment process, which took place on 27th November 2007. Those present had the opportunity to comment on the suitability, content and implementation method of an Eco-Schools assessment process. The researcher was also introduced to the Committee as the person who would participate in the process of developing the Eco-Schools feedback and assessment tool. This first version of the feedback form, which constituted the starting point for the development of an Eco-Schools assessment tool, Figure 2, contained:

- An area for the identification of the school
- An area for collecting data on the implementation of the Eco-Schools Programme in terms of:
 - Methodology: the parameters to delineate/evaluate, in accordance with the proposal presented, were the Eco-Schools Committee; environmental audit; action plan; monitoring and assessment; communication/reporting; eco-code; green flag.
 - Results: the parameters to delineate/evaluate, in accordance with the proposal presented, were the school grounds; indoor area of the school; community intervention; school administration; student involvement.

The scale for this version of the feedback form ranged from 1 to 10.

- An area for ranking the school based on a number of ESD criteria. This field is intended for collecting the opinion of the Eco-Schools coordinator teacher and of the director of the school executive board on six ESD criteria. These criteria were selected from the list presented by Breiting et al. (2005) and translated for the Portuguese context by Gomes (2006). In this part of the feedback form a scale of 1 to 10 was used, as this had already been tested and validated in previous studies done by Gomes (2006).

When the second meeting of the National Committee took place on 14th January 2008, it was possible to collate the ideas and proposals of all of its members, leading to a revision of the first version of the feedback form. On this date, the process of developing the user manual began, as it was considered necessary to define a set of criteria in order to make the assessment and classification of each item included in the Eco-Schools feedback form more objective.

Since that time, the work undertaken by the researcher has occurred in parallel to the tasks of the National Committee. In each administrative region, teams of

observers were formed whose function was to contact schools and pay a preparatory visit for the implementation of the Eco-Schools Programme. The main aim was to collect data on the relevance of the parameters included in the feedback form and on the applicability of the tool.

Fig. 2: First version of the Eco-Schools programme evaluation form, presented to the National Eco-Schools Commission on 27/11/2007

The figure shows two pages of the 'Eco-Schools assessment tool'.
Page 1: 'Ficha de Visita às Eco-Escolas'
 - Header: 'Eco-Schools assessment tool - 1st page'
 - Title: 'Ficha de Visita às Eco-Escolas'
 - Section: 'Dados sobre a Escola' (School Data) with fields for Name, Municipality, District, Telephone, Fax, E-mail, and various coordinators.
 - Section: 'Ds Sete Passos' (Seven Steps) with sub-sections:
 1. Conselho Eco-Escolas (Eco-Schools Council) with sub-points 1.1-1.3.
 2. Auditoria Ambiental (Environmental Audit) with sub-points 2.1-2.3.
 3. Plano de acção e Currículo (Action Plan and Curriculum) with sub-points 3.1-3.4.
 4. Monitorização e Avaliação (Monitoring and Evaluation) with sub-points 4.1-4.2.
 5. Comunicação/ divulgação (Communication/ dissemination) with sub-points 5.1-5.3.
 6. Eco-Código (Eco-Code) with sub-points 6.1-6.2.
 7. Bandeira Verde (Green Flag) with sub-point 7.1.
 - Each sub-section has a grid for recording scores and an 'Observações:' field.
 - A grey box highlights: 'Area reserved for data on school...'
Page 2: 'Resultados'
 - Header: 'Eco-Schools assessment tool - 2nd page'
 - Title: 'Resultados' (Results)
 - Section: '8. Espaço exterior da escola' (School outdoor space) with sub-points 8.1-8.4.
 - Section: '9. Espaço interior do edifício' (School indoor space) with sub-points 9.1-9.4.
 - Section: '10. Intervenção na comunidade' (Community intervention) with sub-points 10.1-10.2.
 - Section: '11. Gestão da escola' (School management) with sub-points 11.1-11.2.
 - Section: '12. Envolvimento dos alunos' (Student involvement) with sub-points 12.1-12.2.
 - Section: 'Insuflrito sobre o posicionamento da escola face a alguns critérios de EDS' (Questionnaire on school positioning regarding ESD criteria) with sub-points 1-4.
 - Each section has a grid for recording scores and an 'Observações:' field.
 - A grey box highlights: 'Area reserved for data on school position regarding ESD criteria.'
 - Bottom section: 'OBSERVAÇÕES' (Observations) with a grid for recording scores and an 'Observações:' field.
 - A grey box highlights: 'Identification of observer and date of visit.'
 - Footer: 'Visita: data: / / Realizada por:'

See in Annex A the assessment form in its final version.

Visits to the Eco-Schools took place between February and June 2008. The researcher visited four schools (table I) and, during the same period, the teams from DRA (acronym for the Azores Regional Education Authority) and SRAM (acronym for the Madeira Regional Education Authority) visited schools in the Azores and Madeira respectively. In mainland Portugal, the observations were carried out by teams from the DRE (acronym for the Regional Education Authority). A total of 142 establishments were visited that had been registered for the programme for at least 3 years (table II). This represented approximately 50% of the total number of Eco-Schools.

Interviews were chosen for data collection because of their various attributes: they expand and verify scientific knowledge; they allow reflection on the part of the interviewee, as an object of study, regarding situations in which, until that moment, they have probably never had the opportunity to organize mentally and/or be aware of; and they also allow the systematic collection of data (Carmo and Ferreira 1998).

The interview questions (open-ended questions) were based on the content of the Eco-Schools feedback form and the criteria put forward for each item. Opting for a relatively unstructured type of questionnaire allowed us to avoid excessively conditioning the interviewees, which would have eliminated potentially important data.

The data collected by the researcher during the visits were object of a content analysis based on Carmo and Ferreira (1998) and Bardin (2004).

Table I: Schools involved in the study according to research topics.

Research topics	Period	Stage of the study	Schools involved
How to develop a tool to assess the Eco-Schools programme?	February to June 2008	Creation and development of the Eco-Schools assessment tool	<ul style="list-style-type: none"> – D. Carlos I School / Nursery School – Colmeias School – Nossa Senhora do Rosário College – Francisco Arruda School 2,3
	November 2008 to January 2009	Application of the final version of the Eco-Schools assessment tool	<ul style="list-style-type: none"> – Évora Children's Activity Centre – Campo Flores College – Dr. Joaquim de Barros School – D. Manuel Martins Upper-secondary School

In accordance with the data collected during this stage of the research as “field notes”, we continually revised the feedback form and user manual. It is worth highlighting that a scale of 1 to 5 was used, instead of the scale 1 to 10 used in the first versions, as we believed that the latter caused problems of objectivity in ranking schools. We decided to revise the scale used after discussion and analysis with the supervisor. We based this on the Likert scale, considering, both in this case and generally speaking, five response levels: poor, unsatisfactory, satisfactory, good, and very good. We then separated the part of the questionnaire that dealt with the ranking of the schools regarding to a number of ESD criteria from the feedback form. This then became an appendix to the above-mentioned feedback form. Considering the questions in this part are completed individually by the Eco-Schools coordinator and by the director of the executive board, unlike all other entries – which are the responsibility of the observer – we decided that it made no sense for them to be on the same page. As a result, the assessment form fitted on a single page. It included the “seven steps” items and “results” and was

to be completed by an outside observer. Using this tool as a basis, the researcher visited the schools involved in the study.

Table II: Schools registered for the Eco-Schools programme for at least 3 years, and schools visited as part of the auditing process undertaken by the ABAE/National Eco-Schools Committee.

Region	Number of schools		% of representation
	Registered for the Eco-Schools programme for at least 3 years	Schools visited as part of the auditing process undertaken by the ABAE	
Azores	30	29	97%
Alentejo	6	1	17%
Algarve	7	0	0
Centre	71	23	33%
Lisboa and Vale do Tejo	57	14	25%
Madeira	16	16	100%
North	95	59	62%
Total	282	142	50,35%

After finalizing the auditing process within the National Eco-Schools Committee, we cross-referenced the data collected by the researcher and the observations made on the feedback forms by the DRE/DRA/SRAM observer. This data allowed us to arrive at the final version of the feedback form (see Annex) and user manual. To conclude our research, we visited four schools. Our objective was to test the final version of the feedback form and user manual, allowing us to evaluate their coherence, validity and reliability.

Results and Discussion

146 schools were visited (4 by the researcher and 142 by the DRE, DRA and SRAM teams), and it was possible to involve all the types of schools in the Eco-Schools network. The data collected by the researcher through interviews using open-ended questions were the object of a content analysis. The data was then cross-referenced with the notes taken by the DRE, DRA and SRAM teams, which then served as the basis for the final version of the feedback form, as well as the revision of the user manual, taking into account the type of schools and the criteria regarding the quality of work in the schools. On 16th September 2008, at a meeting of the National Eco-Schools Committee, the creation and development stage of the Eco-Schools feedback and assessment form was signed off.

Fig. 3: Eco-Schools programme evaluation form. See in Annex A the assessment form in its final version

Eco-Schools assessment form- 1st page

Eco-Schools assessment form-2nd page

Data on School

School: _____ School address: _____ Municipal council: _____
 Telephone: _____ Fax: _____ e-mail: _____
 Head teacher: _____ Telephone: _____
 Eco-Schools coordinator: _____ Telephone: _____
 Teaching Area/ Subjects: _____ Eco-Schools coordinator email: _____
 Type of school: _____ Age of students: _____
 Number of students: 5-7 _____ 10-12 _____ 13-15 _____
 Number of students directly involved in the Eco-Schools: _____

Identification and brief description of the school

Seven Steps

1. Eco-School Committee

1.1 Representation of the school community

1.2 Student participation

1.3 Operating committee

2. Environmental audit

2.1 Implementation processes

2.2 Setting of colour indicators

3. Action plan and curriculum

3.1 Thematic approach

3.2 Defining objectives and implementation indicators

3.3 Curricular adaptation

4. Monitoring and evaluation

4.1 Analytical tools and measurements

4.2 Evaluation of the activities contained in the plan and feedback

5. Communication/reporting

5.1 Within the school

5.2 In the community

6. Eco-Code

7. Green flag

Part regarding the «Seven Steps»

Results

8. School grounds

8.1 Transport management parking

8.2 Lighting, construction and open space reserves

9. Inside the school

9.1 Cleaning and sanitation

9.2 Waste recycling in classrooms

9.3 Energy conservation measures

9.4 Water conservation measures

10. Intervention in the community

11. School management

11.1 Is the programme implemented?

11.2 Are sustainable management measures implemented?

12. Student involvement

12.1 Do the students know about the programme?

12.2 Do the students participate?

Part regarding the «Results»

Remarks:

As a result of this process, we present our proposal for an Eco-Schools assessment tool. This consists of a feedback form (fig. 3 and annex A) and a user manual to help complete it. The feedback form is divided into two parts: “the seven steps” and the “results”, which are divided into items and sub-items, as described in Table III. These are assessed and classified according to a scale of 1 (minimum) to 5 (maximum). The grade given to a school should be based on the feedback form user manual. In view of the way it was developed, we believe that this manual adheres to the principles of the Eco-Schools Programme via the seven steps, it is suitable for the Portuguese context and is well adapted to the type of schools in the Eco-Schools network.

Table III: Content of the assessment form.

Part	Item	Sub-item
«Seven steps»	1. Eco-Schools Committee	– Representation of the school community – Student participation – Operating method
	2. Environmental audit	– Implementation processes – Survey of school students
	3. Action plan and curriculum	– Thematic approach – Planning, objectives and implementation indicators – Curricular integration
	4. Monitoring and evaluation	– Analytical tools and measurements – Evaluation of the activities contained in the plan and feedback
	5. Communication/reporting	– Within the school – In the community
	6. Eco-Code	(no sub-item defined)
	7. Green flag	(no sub-item defined)
«Results»	8. School grounds	– Transport management/parking – Cleaning, conservation and open space reserves
	9. Inside the school	– Cleaning and condition – Waste: recycling in classrooms – Energy: rationalization measures – Water: rationalization measures
	10. Intervention in the community	(no sub-item defined)
	11. School management	– Is the programme undertaken? – Are sustainable management measures implemented?
	12. Student involvement	– Do the students know about the programme? – Do the students participate?

The Eco-Schools Assessment Tool in Excel

We recognize that implementing an assessment tool, such as the one presented in this study, can be time-consuming. As such, we have adapted it to an Excel spreadsheet, which we believe facilitates task completion and enables easier handling of data.

The spreadsheet includes formulas that allow the performance of the school to be quantified in each item. This value corresponds to the fraction between the points attributed to the school in each item and the maximum score in that field.

Table IV: Results of the assessment tool, in relation to the «seven steps» (graded from 1 to 5). The shaded boxes correspond to grades considered unsatisfactory.

Described/assessed items	Schools		EBI Dr. Joaquim Barros		Évora Children's Activity Centre		Campo Flores College		D. Manuel Martins Upper-secondary school	
	Grade	School performance	Grade	School performance	Grade	School performance	Grade	School performance	Grade	School performance
1. ES Committee	1.1 Representation of the school community	3			5		4		5	
	1.2 Student participation	3	66.7%	93.3%	5	80.0%	4	80.0%	5	87%
	1.3 Operating method	4			4		4		3	
2. Environmental Audit	2.1 Implementation processes	4		90.0%	4		4		5	100%
	2.2 Survey of school students	3	70.0%		5	70.0%	3	70.0%	5	
3. Action plan and curriculum	3.1 Thematic approach	3			5		5		4	
	3.2 Planning, objectives and implementation indicators	3	73.3%	86.7%	3	93.3%	4	93.3%	4	73%
	3.3 Integration into the curriculum	5			5		5		3	
4. Monitoring and evaluation	4.1 Analytical tools and measurements	1			3		2		5	90%
	4.2 Evaluation of the initiatives contained in the plan and feedback	2	30.0%	70.0%	4	60.0%	4	60.0%	4	
5. Communication/dissemination	5.1 Within the school	3			4		4		4	80%
	5.2 In the community	3	60.0%	70.0%	3	90.0%	5	90.0%	4	
6. Eco-Code	6. Eco-Code	3	60.0%	60.0%	3		2		5	100%
7. Green Flag	7. Green Flag	a)	–	60.0%	2	40.0%	4	40.0%	5	

The seven steps

Table IV: Results of the assessment tool, in relation to the «seven steps» (graded from 1 to 5). The shaded boxes correspond to grades considered unsatisfactory.

Described/assessed items	Schools		EBI Dr. Joaquim Barros		Évora Children's Activity Centre		Campo Flores College		D. Manuel Martins Upper-secondary school	
	Grade	School performance	Grade	School performance	Grade	School performance	Grade	School performance	Grade	School performance
1. ES Committee	1.1 Representation of the school community	3			5		4		5	
	1.2 Student participation	3	66.7%		5	93.3%	4	80.0%	5	87%
	1.3 Operating method	4			4		4		3	
2. Environmental Audit	2.1 Implementation processes	4			4	90.0%	4	70.0%	5	100%
	2.2 Survey of school students	3	70.0%		5		3		5	
3. Action plan and curriculum	3.1 Thematic approach	3			5		5		4	
	3.2 Planning, objectives and implementation indicators	3	73.3%		3	86.7%	4	93.3%	4	73%
	3.3 Integration into the curriculum	5			5		5		3	
4. Monitoring and evaluation	4.1 Analytical tools and measurements	1			3	70.0%	2	60.0%	5	90%
	4.2 Evaluation of the initiatives contained in the plan and feedback	2	30.0%		4		4		4	
5. Communication/dissemination	5.1 Within the school	3			4	70.0%	4	90.0%	4	80%
	5.2 In the community	3	60.0%		3		5		4	
6. Eco-Code	6. Eco-Code	3	60.0%		3	60.0%	2	40.0%	5	100%
7. Green Flag	7. Green Flag	a)	–		2		4		5	

» (graded from 1 to 5). The shaded boxes corres-

Implementation of the Final Version of the Eco-Schools Assessment Tool

To validate our research, we visited four schools between November 2008 and January 2009 to pilot the assessment tool. For data collection purposes, the Eco-Schools coordinator was interviewed and then, at a later date, we visited the school in their company in order to verify its performance. The results are presented in Tables IV and V.

At this stage of the research, there were no problems applying the assessment tool in the four schools visited. We also considered that the criteria defined in the manual was helpful in objectively classifying the school's performance for each of the items. The analysis of these results leads us to highlight the following aspects:

- As a tool for SA21, the participation of all sectors of the school community was significant in improving the quality of the physical and social environment of the schools visited. However, there are indicators of very irregular involvement of non-teaching staff and parents in some of the schools visited, not allowing a shared experience among all school stakeholders and which is essential for creating collective responsibility (Bonito et al. 2007).

With regard to the procedures adopted by the ES Committee in the schools involved, rarely do they involve the participation of the various members of the community. In addition to this, activities such as exhibitions, open days etc. are important ways of promoting the project to the community, but are characterized by the relative unimportance of the participatory processes involving the community. Within this context, advantage should be taken of the fact that the National Commission of UNESCO has defined this area as one for mobilization/participation. For this reason, it is necessary to identify and mobilize all important institutions, target groups and agents to ensure the success of the initiatives undertaken as part of the ES programme, taking into account the considerable lack of awareness, information, training and education for sustainable development in the country (CNU 2006; IA 2006).

- When questioned about the action plan and themes that the school focuses on, references are very often made to participation in other projects, some of which are undertaken in close coordination with the Eco-Schools Programme. Some examples of this include the «Young reporters for the environment¹», «The Environment and Innovation Project²» and «Escola solar Rock

1 <http://www.youngreporters.org/>.

2 <http://www.eco-schools.org/innovation2008/index.php>.

in Rio'08³», among others. In many schools, we see that the ES programme functions as a core and unifying factor in the work done in the school in EE, encouraging participation in many projects. Consequently, this makes it possible to introduce other concepts, activity areas and processes related to EE such as education, training, communication and environmental awareness, environmental values and ethics, changes in behaviour, environmental activism and citizenship, resources, and environmental information and data (Giordan 1996; Gaudiano 2006; Leal 2008).

The transversal nature and complexity of environmental and sustainability issues mean that there is no «one way» to achieve these goals and, most likely, one of the forms of achieving it is via the involvement of schools in various projects.

- In terms of the Action Plan, we found that social and economic aspects were largely ignored in terms of diagnosis and the action plan. We believe that this flaw should be analyzed and discussed at various levels, from schools to national/international coordination. Although the ES programme is an SA21 implementation tool, it is not possible to work towards sustainability with a foundation that is almost always sustained on only one of its pillars; in this case, the environmental component. This imbalance can prevent schools from being real centres of information production and dissemination regarding education for sustainable development (Gomes et al. 2007; Mogensen and Mayer 2005).
- In some items, there seems to be poorer performance from schools, with grades as low as level 1 and/or 2. In particular, we identified that:
 - Formal and regular monitoring processes are rare. Of all the schools visited, only D. Manuel Martins Upper Secondary School collects periodic data regarding the consumption of particular resources, such as electricity, water, gas, batteries, etc. ABAE needs to make an effort so that schools improve their performance in this area.
 - The strategies on how the eco-code is implemented need to be improved. In the majority of schools studied, an illustrated poster is designed with a number of sentences that encourage certain types of behaviour. However, there is little in the way of reflection, discussion and communication of these behaviours before making the said posters.
 - In relation to “results”, waste is the issue with most obvious impact in daily school life. For example, what is noticeable in the majority of schools is the number of separate waste bins in classrooms and playgrounds, as well as posters raising awareness about this issue. On the other hand, «transport

3 <http://rockinrio-lisboa.sapo.pt/>.

management/parking» and «energy rationalization measures» are issues where results are less evident. Regarding the former, schools often justified this by pointing out that they had no authority to deal with problems associated with this issue; in relation to the latter, the reason most often cited was a lack of funds to install certain equipment.

Generally, the data presented in this study are similar to those of the study undertaken by Nave and Guerra (2006), who attempted to describe what was actually done in ES on a national level. In an analysis that involved around 2,300 schools, these authors identified waste as the second most popular choice (the first being conservation), corresponding to 42% of all work done, while the issue of transport/sustainable mobility was not mentioned by any entity.

It is also worth mentioning that in relation to energy (point 9.3) the results obtained do not correspond, in practice, to the recognition of the ES programme in promoting measures to reduce/save energy expressed by the school community.

- Intervention in the community should be a subject for reflection. As the ES programme is an integral part of LA21, schools must be an example in their communities, and coordination between the various members of the educational community should be consolidated. By doing so, there is a greater sense of integration. The data presented herein could imply that work done on the ES programme is very much focussed on the school community. In other words, the school takes an introspective view. We agree with Fidélis' ideas (2006) when she highlights the role of schools as a community that influences not only itself, when teaching, but also the community it is associated with.
- The item «Programme undertaken?» also leads us to reflect upon the importance of the programme in the day-to-day operations of the school. The ES programme is seen by the school executives as important for the efficient management of resources, as well as for the development of citizenship education. However, the time needed to organize the various initiatives and activities throughout the academic year is not made available, and the money required to develop the project is limited. It is also rare to see the «Eco-Schools» logo used on school documents/correspondence. Despite the recognition of the importance of the ES programme, it seems that there is little match between what is espoused and practical application.

According to the data collected, we can say in general that the ES programme is seen as a good tool for promoting citizenship education (Gomes 2004a, 2004b; Santos 1997). On this issue, Mogensen and Mayer (2005) highlight a strong link between integration in the curriculum and the practice of citizenship education,

which leads us to believe that the ES methodology contains aspects that encourage education for sustainable development.

The Assessment Tool as a Mechanism for the Self-Assessment of Work in Schools

Assessment is considered to be one of the most important stages in any EE project. It forms part of a process of innovation and training, providing more complete feedback on practice (Benavente 1993; Giordan 1996; Giordan and Souchon 1997).

We have devised an assessment tool for the ES programme and believe this should be primarily geared towards schools as a mechanism for self-assessment, providing data that contribute to continuous improvement of the work undertaken. Secondly, there is the possibility of external assessment.

We believe that the tool proposed in the study reported herein should be made available for all ES via direct download on the ABAE webpage. In this way, whenever the school deems fit, it can use the form and user's manual as a way of identifying possible errors, regulate certain processes and/or foresee certain operations. Generally speaking, the main aims of implementing a process of self-assessment are: to improve schools' self-awareness and the awareness of the activities that take place within them; to improve decision-making processes; to produce systematized information; to promote a culture of dialogue and develop competences in the area of assessment.

Each school should create their own internal assessment mechanisms. However, we believe that they should be transparent, clear, continuous and participative, involving various members of the school community, thus stimulating a reflective culture that strives for permanent improvements.

Final Considerations

Following the study reported herein, it was possible to create an assessment tool that we believe, due to the methodology applied, can contribute to improving the work done in schools. It is important to create a culture of reflection and self-assessment in relation to the work undertaken in schools. Quantifying the level of performance of schools in various areas, such as results, is a necessary process that aims to assess the relevance of certain measures and their efficiency in particular. This assessment can be particularly useful for the bodies that provide funding for the implementation of certain work, such as schools, local authori-

ties, and companies. As a result, the quality of the work improves and conditions are created so that all members of the community feel involved in the project.

Furthermore, the creation of a decision-making process that involves all stakeholders is enhanced, which generates collaborative solutions that are more effective and efficient for the environmental management and sustainability planning of schools (Vasconcelos 2001). In terms of the national Eco-Schools network, the implementation of such a process helps the national operator detect failures and/or successes, which should then be corrected/improved or communicated, as a way of encouraging better school performance. At the same time, this encourages higher standards in the work done by schools, as well as providing information that makes the green flag award process more objective and fairer, allowing the work of each school to be more effectively differentiated.

Within the context of a new relationship with the environment and, consequently, the development of environmental citizenship, schools should be able to encourage an attitude of critical vigilance within schools and the community regarding policies and practices that go against ecological values. Through the ES programme, we believe that schools can become a paradigmatic example to the institutional and legal powers involved in the decision-making process.

Ensuring long-term sustainability requires the involvement of everyone sharing an attitude of active intervention and responsible behaviour. We believe that the ES programme is more than a contribution to Agenda 21 and part of effective education for sustainable development.


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Annex A: Assessment form



Eco-Schools: Sheet Visit



Data on School

School: _____
 School address: _____ District council: _____
 Telephone: _____ Fax: _____ email: _____
 Head teacher: _____ Telephone: _____
 Eco-Schools coordinator: _____ Telephone: _____ email: _____
 Teaching Area/ Subjects: _____ Eco-Schools coordinator since: _____
 Type of school: _____ Age of students: _____
 Number of students: 3-5 _____ 5-9 _____ 10-12 _____ 13-15 _____ 16-18 _____ Total: _____
 Number of students directly involved in the Eco-Schools: _____

Eco-School	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10
Eco-School	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10
Award/Green flag														

Seven steps

- 1. Eco-Schools Committee**
 - 1.1. Representation of the school community
 1 2 3 4 5
 - 1.2. Student participation
 1 2 3 4 5
 - 1.3. Operating method
 1 2 3 4 5
- 2. Environmental audit**
 - 2.1. Implementation processes
 1 2 3 4 5
 - 2.2. Survey of school students
 1 2 3 4 5
- 3. Action plan and curriculum**
 - 3.1. Thematic approach
 1 2 3 4 5
 - 3.2. Planning, objectives and implementation indicators
 1 2 3 4 5
 - 3.3. Curricular integration
 1 2 3 4 5
- 4. Monitoring and evaluation**
 - 4.1. Analytical tools and measurements
 1 2 3 4 5
 - 4.2. Evaluation of the activities contained in the plan and feedback
 1 2 3 4 5
- 5. Communication/reporting**
 - 5.1. Within the school
 1 2 3 4 5
 - 5.2. In the community
 1 2 3 4 5
- 6. Eco-Code**
 1 2 3 4 5
- 7. Green flag**
 1 2 3 4 5

