José Martín Montoya Durà, fsc

Environmental education plan for sustainable development



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Presentation

This new MEL Bulletin connects us with one of the topics that is of most concern to humankind today and as Lasallians we cannot be disconnected from this world reality, knowing that through education we can do much, if not everything. The concern for environmental sustainability should be one of the axes that energize our educational programs. The 44th General Chapter invites us to develop formation activities that deal with respect for life and the preservation of nature. In addition, the 2006 International Assembly directs us to develop educational programs for justice and peace, where the environment plays a primordial role. As Brother José Martín Montoya affirms, education and continuing formation are fundamental tools for creating a new planetary culture.

UNESCO, through its different world conferences on the topic of the environment, has made very valuable efforts to encourage work that is needed to improve life conditions for all humankind. One of these efforts is the Decade of Education for Sustainable Development 2005-2014 where significant advances have been made in the awareness of the importance of education for sustainable development.

To conclude this introduction, I would like to cite a text from one the recent UNESCO publications on education where reference is made to the importance of education for environmental sustainability:

"Education is important because it helps to ensure environmental sustainability. Education helps people to make decisions that will satisfy the needs of the present without compromising the needs of future generations. Education for sustainable development is fundamental in changing values, attitudes and behavior" (UNESCO 2010).

We hope that this MEL Bulletin will encourage all Lasallians to continue to make significant contributions towards caring for the environment.

Br. Jorge Enrique Fonseca Sánchez

Introduction

The incessant flow of information regarding environmental problems has made society as a whole see them as something undesirable. One consequence has been that the aggressive approach of people to the natural environment has been reported and called into question; and that the need to change ways of thinking and social vales has been highlighted. Another consequence of this need for social change is that education and training are called upon to be the basic instruments to create a new culture of global awareness.

Today, the specific aim facing education and training in tackling the problem of the aggressive behaviour of people towards the social and natural environment, is the socialisation and assimilation of new cultural criteria: solidarity between the nations of the North and South hemispheres, ethical exploitation of resources, good environmental practices in everyday life, the demand for real environmental policies, clean technology, etc. This world-view of sustainable development (meeting the needs of the present generations without compromising the possibility of future generations to respond to their own needs), enables individuals to be more aware, more responsible, and to be, in practical terms, more prepared. This is seen as a way to face the challenge of preserving the quality of the environment and of life.

There are certain educational establishments belonging to the De La Salle Institute which, as a part of their strategy to raise environmental awareness, implement a multi-disciplinary programme to supplement existing legislation regarding environmental education, and in this way bring about real changes in their vicinity. This means that Lasallian educational establishments, involved in measures which respect the environment, promote good environmental practices learned in the classroom and in the area around their schools.

¹ Definition of *sustainable development*, Source: World Commission on Environment and Development (Brundtland Commission); *Our Common Future* (UN).

However, these Lasallian schools draw up their programme of environmental activities on the basis of their own particular situation, and not on decisions based on a common approach. This lack of an environmental policy in the De La Salle Institute also reinforces the lack of an *"environmental connection"*² between schools, which hinders the development of an ethical position based on solidarity between them.

The purpose of this *Bulletin* is to set out the decisions of the last chapter, as well as the conclusions of the doctoral thesis "An environmental-education plan for sustainable development in the schools of the De La Salle Institute". This research-report consists of five chapters. In the last chapter are set out the elements of a common approach which will enable Lasallian educational establishments to promote, by their education and training, the integrity and safeguarding of creation as a Christian value.

This approach to environmental education in the De La Salle Institute will help former pupils, Brothers, teachers, non-teaching staff, etc., to improve their knowledge of the ethical dimension of sustainable human development and, consequently, to counteract environmental factors, by reducing pollution, the deterioration in the quality of the air, water and soil, impoverishment, immigration, conflict over the exploitation of natural resources, etc. All these factors militate against the welfare of people, which is founded on the practice of virtue and the development of the universal values of justice, equality and peace between nations.

² To establish in a coordinated manner environmental educational programmes and projects, and environmental communication based on new information and communication technologies (TIC), environmental research based on the Island of Creativity, etc.

³ MONTOYA DURÀ, José Martín. *Plan de educacion ambiental para el desarollo sostenible de los colegios de la Institucion La Salle*. Doctoral thesis. Department of Educational Theory. Valencia University, Spain, June 2010.

Environmental education plan

Social imbalance and the increase in poverty, the pollution of the soil, air and water, conflict between regions, the loss of expanses of forest, disease, etc., are some of the problems which arise or are increased as a result of the incessant degradation of the environment by human activity. All this makes one realise that there is an urgent need to introduce environmental education into educational establishments at all levels in the De La Salle Institute and, in line with our charism, to focus its approach by means of an Environmental Education Plan.

Before outlining this environmental education plan, we shall first explain how a plan is drawn up and designed; then we shall outline the environmental strategies and plans adopted by other religious institutes; and finally we shall present our plan for the De La Salle Institute.

Drawing up and designing environmental plans

Steering an international institute towards environmental education presupposes the existence of concrete proposals, which can make available, in the area of social action in which one is involved, the knowledge necessary to act responsibly vis-a-vis the environment, and to be aware of being involved in maintaining a natural and global balance. Consequently, to show that a process of qualitative and quantitative change is taking place at the organisational level, it is necessary to rationalise a permanent and sequential process for making decisions which outline the planning of educational action in global terms embracing the whole world; and in this way, serve as a model for development, coexistence and action in the context of the natural environment.

This planning can take three different forms, depending on the type of environment and on what needs to be planned:

• Global planning. This is the main and basic approach of the various different kinds of planning. It focuses on the outcomes

or variables of macro-relations, and on how they become inter-related. The variables involved can be the poverty level, the increase-rate of pollution, the sickness rate, environmental regulations, the percentage receiving education, national revenue, etc. This planning sets out environmental guidelines for the organisation as a whole, and is therefore comprehensive in nature and makes no allowances, generally speaking, for internal differentiation within its organisational structure.

- Planning for specific groups. The area concerned consists of a subset of activities, phenomena or relationships, characterised by variables with a high degree of homogeneity and reciprocal inter-relationships. "Educational networks" would be an example of this, with all the environmental variables created within them, such as environmental programmes, environmental voluntary service, environmental awareness campaigns, environmental management, environmental efficiency, eco-efficiency of schools, etc. This type of planning is more technical in nature, because it focuses more on a combination of resources to attain environmental aims such as listed above.
- Planning for specific areas. This type of planning concentrates on an objective made up of a combination of variables located in the same area of interaction, flux, and interchange in a same place. This combination could be "the pupils of schools in the same town", and relate to the use of resources, water consumption, transport, distribution, recycled material, etc. In this type of planning, what is most important is the overall analysis of the system with regard to the environment, and the notion of an environmental balance.

These three types of planning can be found in an integrated form in a single organisation, combining all the variables which interact at different levels. In the same way, these three types of planning can interrelate with existing legal and geographical structures on a national, district, community or regional level, etc.

As a consequence, we can say that the planning process - global, for specific groups, for specific areas - for the development of environmental education will involve taking into account the environmental variables which interact within the given contexts (e.g. the examples used in the three types of planning: organisation, the educational network and individual schools) in order to

devise lines of action which set in motion and monitor socioenvironmental processes of change within the system and in the vicinity.

These systematised environmental education proposals to achieve sustainability will need to maintain a decision-making process at different stages, both when they are formulated and when they are implemented, in order to arrive at a coherent plan for the development of environmental education. The formulation of the planning process takes place traditionally in two stages: diagnosis-prognosis and objectives-aims. Also, during the planning process, the implementation of the plan by the institutional organisation has to be defined, as has the monitoring and evaluation of the process.

Next, the various stages for drawing up a plan are defined. These are standard for global, specific groups and specific places planning, as well as for planning in other fields. In our case, we shall apply these stages to the environment. We realise that this application of the stages is not the only possible way of proceeding, and that also the sequential order adopted could be different.

Diagnosis and prognosis

In all planning processes, diagnosis becomes necessary in order to set out the variables which condition the planning of the thing concerned. This it does by describing either the existing situation, or the causes which brought about the present state, and the trends of change.

The diagnostic process involved in environmental planning should not be simply based on comparative, statistical and historical analysis. In addition to a diagnosis which explains and describes the existing state of things, there has to be also prognosis based on the future extrapolation of the situation being considered.

The combination of the diagnosis of the present with prognosis will make possible the projection of trends based on the idea that things do not change, in order to programme the objectives to pursue, and the vigour with which to act. The greater the discrepancy between the existing situation and the situation desired, implies the greater the force of the intervention and consequently, the greater the innovative nature of the intervention.

Objectives and aims

When drawing up a plan it is necessary to have some objectives in mind. The means to identify these objectives can be an expert socio-environmental diagnosis of the situation, an environmental diagnosis, the nature of the institution itself, and the prognosis of the desired future situation in the light of the specific problem.

And so, objectives are the outcome, planned or desired, identified by a preliminary study, targeting a social problem. Given this, the study will have the following characteristics:

- 1. A clear, realistic and relevant statement.
- 2. The purposes of meaning (real, variable and comparable content). Theoretical structure with a philosophical basis.
- 3. A knowledge of the laws inherent in the object of the study.
- 4. A scientific interpretation of the facts.
- 5. Foundation of the principle of causality.
- 6. Sequencing of the "what", the "how" and the "why".
- 7. Presentation of the aims necessary for the attainment of competence, skills and knowledge.
- 8. The conviction that the final purpose of the objectives is perfectible.

Prominent planners, faced with the question "What is an objective?", reply that the concepts "objectives" and "instruments" are not nouns, but adjectives. Different actions or things have different degrees of instrumentality, that is, they serve to a greater or lesser extent to cause certain things to be produced, or certain actions are carried out. An action is an objective discipline, or is an instrument only in the context of a defined field of action and at a specific time.

However, there are also writers who assert that objectives are not actions, but the expected results of actions, since objectives can be numbered (ordinal or cardinal numbers) and are as a consequence finite and capable of being arranged methodically.

Consequently, it can be said that objectives, generally speaking, can be classified under two main headings: general objectives and specific objectives.

- General objectives. These are more general aims, which constitute the point of reference in drawing up the plan, and which can allow for various interpretations without referring to observable actions.
- Specific objectives. These are more concrete aims than general objectives. They define in a precise and clear way the result the execution of the plan is intended to achieve.

There are also planners who specify the need to distinguish between the "statement" and the "definition" of the objectives. The proposal "We shall fight malaria" is a statement. The proposal "We shall reduce malaria by 10% in the course of 2 years in the State of Apure" is a definition of the objective.

All this leads us to the conclusion that the objectives of a plan are the harmonisation and methodical arrangement of the rationalisation of the temporal variables with those confronting the organisation (diagnosis), and the desire to bring about a planned situation at some time in the future (prognosis). The objective will specify for us the situation in which a variable is encountered in the present, and how it is expected to be encountered in the future. Consequently, the actions proposed for modifying the variable will have a temporal aspect.

Going back to the example we gave in connection with malaria, we can say that an objective becomes defined, once the subject of the action (the State of Apure) has been fixed, the objective has been quantified (to reduce by 10%), and the time-frame (2 years) to achieve this has been determined. An objective defined in these terms is an aim.

And so, an aim is a quantified and qualified objective. To formulate an aim is to indicate how much we seek to achieve from each objective, and of what quality. We can also say, therefore, that just like objectives, aims also have to be realistic.

In this way, we can arrange in three steps, in order of importance, the sequence of the analysis of the planning process: a) determine the *general and specific objectives* of the environmental plan and arrange them under thematic headings (raising awareness, education, sustainability, etc.); b) determine the key *aims* as an overall strategy for implementation in the *areas* listed under the above

headings; and c) recommend how the implementation of the *aim* of the action proposed should take place.



Illustration 1. A hierarchical illustration of planning strategy.

And so, environmental planning will focus on an activity intended to promote change in society according to a pre-established plan. For example, establishing a society which is more conscious of environmental problems and their consequences, greater solidarity between nations, greater concern for natural environment of the world, etc., are the major objectives which would need to be included for implementation as pre-established aims.

Nevertheless, various factors need to be borne in mind when planning: the adequacy of the institutional support structure for the aims and objectives to be achieved; cultural changes due to the involvement of different people working for the organisation; continuity of the plan in the long-term, as new variables affecting the project are noted. All these are indispensable conditions if the success of the implementation of the objectives and aims of the plan are to be guaranteed.

Institutional organisation

The success of any planning of the implementation of the plan will depend, among other things, on the energy put into creating the necessary planning organisation of the system, based on the areas of work: headquarters and regions. Also, the various regions may have their own lower levels of organisation - local, district, community, national, etc.; and parallel to these areas, there may exist certain kinds of research organisations which provide feedback on the trends and environmental strategies of the teams responsible for the planning.

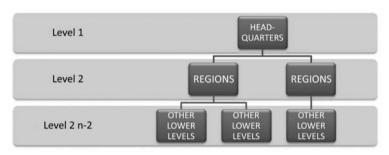
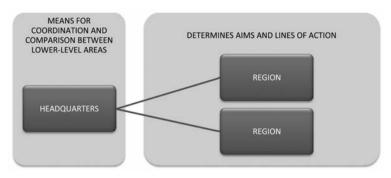


Table 1. Levels of departmental organisation

To determine their respective roles, and above all, the relations between headquarters and the regions is a complex task. There are three possible approaches, each reflecting a different degree of organisational relationship: decentralised, semi-decentralised and centralised.

The implementation of a decentralised approach to the plan gives maximum freedom to regions vis-a-vis headquarters, in the sense that it gives them freedom to formulate their own aims and lines of action in their implementation of the environmental education plan. At the same time, headquarters allows them to work out their own programmes and their institutional internal organisation. Consequently, where there is decentralisation, headquarters restricts itself to coordinating and comparing the soundness of the ratio between aims and resources determined by the various regions.

Table 2. Functions in decentralised organisation

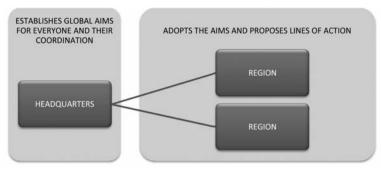


This approach to organisation is simple in character and appears to be easy to run, because of the freedom headquarters gives to the regions. However, the problem that can arise in this kind of decentralised organisation is that the number of regions is too great, and therefore, it will be impossible to guarantee qualified expert teams to serve each of them, and as a consequence, ensure a standard quality of actions, and resources.

Another approach to implementing the plan is **semi-decentralised** organisation, which is proving to be increasingly useful in systems involving multiple organisations. This approach bases its planning on the environmental aims established by headquarters for the implementation of the environmental plan, on the premiss that the central area has detailed information about the environmental situation of the world, research regarding environmental education, and new global guidelines and environmental plans put forward by other organisations, etc.

Semi-decentralised planning presupposes that regions do not have the necessary information about the major environmental objectives as a whole. Nevertheless, this planning reflects the confidence headquarters has in regions, since, once it has explained which major environmental aims should be pursued, it leaves them the freedom to implement projects and measures in order to fulfil the aims of the established global plan. It relies in this way on the experts of the regions who, in the final analysis, are those who know the situation best.

Table 3. Functions in semi-decentralised organisation



This kind of institutional organisation allows also regions to introduce levels of local area organisation in line with their criteria, without the need for headquarters to know in detail of these criteria. Regional organisations have local area concerns and preferred forms of action based on the situation in their field of action. Regions, interacting within their local areas, have simply to improve, by their action and their views regarding environmental change, decisions made by headquarters.

On the other hand, organisation based on **centralisation** removes all possibility of freedom for regions, and it is headquarters which establishes the aims and lines of action for each of them. As a consequence, headquarters, staffed by a great number of qualified persons, has to know precisely the organisation, the characteristics, the resources and the needs of each region.

ESTABLISHES THE AIMS AND
LINES OF ACTION FOR
EVERY LOWER
ORGANISATIONAL LEVEL

HEADQUARTERS

ADOPTS THE AIMS AND LINES OF ACTION ESTABLISHED
BY HEADQUARTERS

REGION

REGION

Table 4. Functions in centralised organisation

This method of organisation sacrifices all possibility of participation, creativity and innovation which could give freedom of action to regions, and seeks only to establish fixed lines of action.

Sources of funding

An environmental plan must not be drawn up without taking into consideration sources of funding which minimise the cost of projects. On this depends the discretion to carry out projects and provide a service accessible to the whole social environment of the establishment or organisation, independently of the region.

Everyone, whether they are rich or poor, men or women, have a right to education, and a duty to care for the environment and their coexistence with others. This obliges staff both at headquarters as well as at a lower level (regional, community, district, local, etc.) to have plans for reducing costs when they implement their environmental plan.

Here are then, generally speaking, the main ways of funding the implementation of an environmental plan :

- Funding by one's own organisation. When an organisation sets up an environmental planning system in a place, it has to take into account the financial contribution it will have to make in order to make it function, if it wants to bring about the real changes targeted by the aims. This funding is direct, from one's own organisation, depending on the organisational level, and offers different areas the possibility of maintaining staffing levels, input for establishing operational resources, the setting up of sites, technical equipment, etc.
- Funding from public authorities. In the measure that the economy benefits the population through the intermediary of political administrative bodies, such as organisations representing international associations, national and Community governments, regional and local authorities, economic measures and aid from public authorities are usually considered to be extremely important, and are seen as agents of development. Such funding will adapt to the area targeted for action by the plan, and fit in with the desire for collaboration of the public authorities responsible for the area in question. And so, for example, head-

quarters will seek funding from major international organisations; national areas will seek funding from the nation; and so on, to the point where local bodies will ask for help from the public authorities nearest to their field of action.

- Ethical funding sources. This is a source of funding which complements purely financial sources. Projects set up in areas of developing countries are able to benefit from this solidarity-inspired source (NGOs, international cooperation, donations from institutions, etc.) which provides much appreciated help. This type of funding can be used as long as the population has been made aware of the need to contribute financial help to protect the local environment for the benefit of all concerned.
- Funding from investments. Trying to balance revenue and expenditure is one of the ways to establish a solid basis for the independent development of an organisation. This kind of funding would oblige the area in question (region, country, Community, district, etc.) to transform itself into a profit or non-profit organisation which would fund work within itself as well as outside it, in response to the needs of the surrounding area. This source of funding would make it possible for the profit made by the work to be invested in the running of the organisation (staff, materials, research for new resources, etc), and to minimise the cost of projects. Also, the profit can be used to support other areas which have difficulty in finding the necessary funds to implement their environmental plan.

Checking and evaluating

The environmental planning process should not be seen as a linear process, which begins and ends with the successful implementation of projects by means of environmental programmes. Rather, the environmental planning process should be seen as a circular and flexible process, open to change and innovation following a check of the assessments of the plan, and in the light of new developments in environmental research.

Checking the environmental plan requires the use of means of measurement to check the progress made in its implementation. These could be done by obtaining data and information regarding investment in the system, the budgets for projects, and the development of resources as envisaged in the plan adopted. The evaluation of the plan, on the other hand, will require indicators which show objectives which have been achieved.

However, to determine the social change produced by the plan by its implementation in a concrete context, a comparative analysis will be required of the data obtained by checking and evaluating for the long and short term. This task of obtaining data and studying it, needs to be shared by the various regions concerned, using for this, staff appointed specifically for this evaluation.

Environmental plans for religious institutes

Given the plan to lay the foundations of environmental education for the development of sustainability in De La Salle schools, this section sets out the environmental strategies and plans being implemented in other religious institutes.

For an overall view of the strategies adopted by other institutes, we can turn to the *Commission for Justice, Peace and Integrity of Creation* (JPIC)⁴. As a consequence of, and going hand-in-hand with the Decade for Education for Sustainable Development (2005-2015) organised by UNESCO, the JPIC decided to set up a working party to discover what environmental projects men's and women's religious institutes were promoting as part of their mission.

This working party of experts appointed by the JPIC Commission (Integrity of Creation Working Party) was responsible for organising an international survey of environmental projects undertaken by religious institutes. The results of this survey were published in November 2008 in a document entitled "Report on the results of an international survey on the Integrity of Creation, November 2008".

The results of this questionnaire showed that only a few institutes really had a clear commitment to the integrity of creation. Even so, this JPIC Commission report revealed that there were some environmental plans in certain religious institutes, such as "Ecoconnect" promoted by the Sisters of St Martha of Antigonish (Canada); "Sustainable Regional Development - A Plan of Action", promoted by the Jesuits of the Oregon Province (USA); and "Eco-Congregation", promoted by UK and Irish churches. These plans target a variety of situations, and are all very different in their approach to dealing with environmental needs.

An analysis of these three plans reveals that the environmental education proposed is based on sustainable development, com-

⁴ This Council was set up by the USG (Union of Superior Generals of men's congregations) and the UISG (Union of Superior Generals of women's congregations).

bined with spirituality, the mission, and management of infrastructures. It is also clear that the environmental plan of the Jesuits stipulates in a more explicit manner in its projects, the need to support ecological justice for coexistence with the most underprivileged.

By contrast to the negative results of this report, some institutes today have responded to the need of introducing environmental awareness-raising measures in their schools. One of these, that of the Franciscans, has published a document to promote respect for creation. The document has as its title "The Earth Community: Through the Integrity of creation Towards Justice and Peace for All". This document gives an overall view of the state of the world, under headings such as climate change, bio-diversity, oil, water and genetic changes; and then goes on to present theological and biblical arguments, and ethical considerations regarding these subjects, organised according to a timetable, in the style of an annual study-programme. The last part of the document offers a whole series of practical suggestions regarding how to change personal and community ways of acting and working, in order to guarantee sustainability in the world.

Likewise, SEDOS and the JPIC Commission organised a seminar on "Creation at the Heart of the Mission", held in Assisi (Italy) in May 2009. This event invited all the men and women religious all over the world to attend, to consider subjects such as science, theology, world history, Jesus and ecological conversion, the Eucharist and ecology, and the ultimate redemption of creation as a whole. During the seminar, congregations also exchanged information about their environmental plans and practices, such as the "School Agenda 21" of the Colegio La Salle Fe y Alegria No 43 in Peru.

Environmental education plan for the de La Salle Institute

Introduction: the context

The purpose of this Environmental Education Plan is to encourage Lasallian educational establishments to address the urgent need for sustainable development. In order to achieve this in the context of our work in schools, these schools are called upon to open minds to the Christian values of the modern age.

The diagnosis and prognosis regarding the De La Salle Institute included in this Plan consisted in studying documents proper to this institute, as well as international events and projects regarding environmental education and sustainability, such as congresses, conferences, reports, project plans of religious institutes, UN ten-year educational projects, etc.

This plan also relies on the participation of Lasallian districts and regions, and draws inspiration from two sources: on the one hand, the views of teachers were sought by means of an "eco-spiritual" questionnaire; and on the other, environmental projects described in the Bulletins of the Lasallian Educational Mission (MEL) were studied. The use of these representative sources made a valuable contribution to the Plan by proposing to bring about the desired environmental socio-cultural change by basing it on formal education.

This educational planning relies on a semi-decentralised organisational structure which is international. Consequently, it has to be undertaken on all organisational levels in the De La Salle Institute, and in this way, with everyone working together, strive to safeguard future generations by bequeathing in this way a world where justice and peace reign.

And so, this Environmental Education Plan reflects the views of the new socio-cultural ethics which promote safeguarding the human race so as not to endanger the survival of all living beings. For this reason, this Plan becomes a reference point for all other institutes and, as such, it can also serve as a guide when projects regarding environmental education are planned in other religious institutes.

Structure and parameters

This Environmental Education Plan for the De La Salle Institute can be classified as environmental education for sustainable development, closely connected with other educational areas of teaching, such as health education, education in values, peace studies, etc. The intention is that this Plan should be implemented in the second half of the "UN Decade of Education for Sustainable Development 2005 - 2015", promoted by UNESCO. It is also in line with the recommendations of the Bonn Declaration⁵, which speaks of the need "to create institutional mechanisms during the Decade... which can guarantee the continuation of the pursuit of Education for Sustainable Development beyond the Decade".

This Plan, based on the findings of bibliographical research and the work of Lasallian teachers, seeks to involve the governing body of the Institute on an international level so that it can transmit the Plan to regions, districts and educational establishments. This planning can be classified as global, on an international level; and then, by its incorporation in districts and regions, it takes on a regional character; and finally, at the educational network and college level, it can be classified as a local level structure.

The timescale proposed for the implementation of this Plan is between 5 and 15 years, in the short and medium term, since it has to be seen as an Institute strategy for the immediate future, to set up environmental education at an international level, as a matter of educational urgency.

This Plan must be a document which sets out guidelines, which responds to the needs of the Lasallian Family in its commitment to promote in its area of competence and by its role as an energising agent, environmental education, as well as other educational schemes to promote sustainable development, already established in its educational establishments. This is the reason why, in order to achieve this overall objective, the Plan will have the following specific objectives:

⁵ World Conference on Education for Sustainable Development (2009). Germany, UNESCO.

- To establish a point of reference for the development of competence in environmental education, based on the principles and criteria drawn from various international documents, and on the views expressed regarding this matter.
- To establish an organisational strategy to attain the objectives to an adequate extent.
- To introduce the three levels of eco-spirituality based on awareness-raising in such a way that a cultural model of development is created and leads to the participation of the population.
- To choose projects to promote improved co-existence among human beings and their relations with the natural environment.

What we have said explains why the Environmental Education Plan should now be understood as an integral document addressing projects of an environmental, social, economic and religious nature. Its structure will be based on areas, specific aims and projects, as is explained by the following diagram:

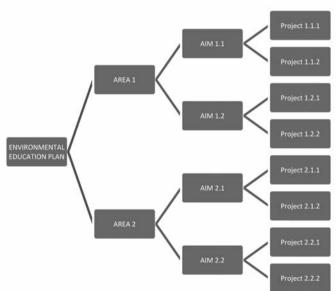
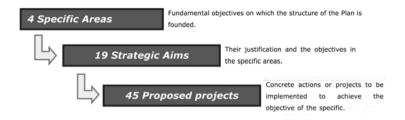


Diagram 1. Overall structure of the proposed Environmental Education Plan.

Diagram 2. Structure of the Environmental Education Plan for the De La Salle Institute.



Given the size and diversity of the De La Salle Institute, it was thought that the best form of organisation for the implementation of the Environmental Education Plan would be that of semi-decentralised planning. This approach presupposes an organisation at international level with qualified staff, which communicates to lower organisational levels in the De La Salle Institute (regions, districts) environmental aims based on an exhaustive knowledge of the environmental situation of the world, on research by international organisations into environmental education, on papers presented at congresses and international environmental forums, on studies of new world trends, on the analysis of other environmental plans and on the evaluation of the results of these plans, etc.

This semi-decentralised planning, while demonstrating its confidence in all the members of the Institute, also gives them the freedom to implement projects and measures indicated by the international body responsible for environmental education in the De La Salle Institute. In this way it relies on local experts in district areas, and on Lasallian educational networks which have a better knowledge of the concrete situation in each area.

In this Plan, projects or courses of action to implement specific aims are indicated by way of example and, given the multiple anthropological variables which characterise the Institute, they are presented without any mention of their objectives, methodology, criteria for evaluation, staffing, financial costs, monitoring or evaluation records, etc., so that each region, district, school or college network can address the main focus of its action according to its needs, resources and specific situation. This approach encourages a diversity of strategies in the implementation of each project proposed by the Plan.

This Plan does not impose a definite time-frame for the implementation of each aim, encouraging, in this way, lower organisational levels to make their own decisions *in situ*, enabling them to decide in this way which objectives to pursue depending on the situation in their area of action, and also, to undertake forms of action they consider opportune but which do not figure in this Plan. If this Plan is to be implemented, it will have to rely on feedback regarding the Plan, through the participation of the different organisational levels of the Institute (regions, districts, school networks, schools, pastoral teams, etc.) and in this way, increase the prospect of the evolution of environmental education in the Institute.

We should not forget that the implementation of this Plan must take into account, at the various organisational levels, the sources of funding. On these is based the freedom needed to implement these various projects and access to the social context in which the De La Salle Institute operates.

This will enable all the Lasallian environmental organisations to be more effective regarding environmental education; to devise strategies to reduce costs, such as help from their own organisation, from local authorities, from solidarity funds and other investments. At the present time, we have to take into account that the environment is an economic opportunity, and that this facilitates access to resources for the support and promotion of the work of the Lasallian Educational Mission.

Finally, we need to stress the importance of coordination and internal communication in order to reinforce the Environmental Education Plan of the De La Salle Institute, and to make it work. All the people involved need to know the "focus" of the Plan, and in this way facilitate its practical implementation.

AREA	OVERALL OBJECTIVE	
1. Internal Organisation and Funding	To establish organisational structures to improve environmental initiatives at all levels coordinated by the Institute, and to obtain financial resources to promote environmental education.	
STRATEGIC AIM	PROPOSED ACTIONS	
1.1 To set up a channel for the communication	1.1.1. Create an international organisation or department for Lasallian Environmental Education which would assume the following functions:	
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to the De La Salle Institute of the environmental measures proposed at the global level by Vatican Justice & Peace, JPIC, UN, PNUMA, Summits, etc.

- to the De La Salle Institute of the Christian Schools regarding its perception of environmental measures promeasures proMission.

 Advise the General Council of the Brothers of the Christian Schools regarding its perception of environmental concerns as part of the Lasallian Educational Mission.
 - Coordinate Environmental Education in the De La Salle Institute
 - Set up environmental relations and communication between regions and international institutions.
 - Support the application of this Environmental Education Plan or other environmental plans, establishing general outlines but leaving room for local factors and needs.
 - Keep in touch with changes in the world regarding Justice and Peace, taking into account the correct relationship between people and the natural environment.
 - 1.1.2. To involve experts and qualified staff.
 - 1.1.3. To have office space from which to run the International Lasallian Department of the Environment.
- 1.2 To set up a channel for the communication of the measures proposed by the Lasallian International Department for the Environment to Lasallian districts.
- 1.2.1. To use the existing Lasallian regional structures to transmit the views of the International Department to the districts
- 1.2.2. To create the post of environmental coordinator using a member of the existing regional coordinating team. 1.2.3. Look for environmental education projects funded by associations of states or communities so that they can be implemented in Lasallian schools in different districts or countries.
- 1.3 Communicate environmental instructions to Lasallian educational establishments.
- 1.3.1. Set up an existing or new organisational structure to work on environmental education at a district or subregional level, with responsibility for :

Functions:

- Provide leadership and guidance for the school network regarding environmental education.
- Set up a committee to regulate and induce schools to take an active part in promoting the natural environment.
- Provide schools with information and resources related to environmental education.

Legal options:

- A district department for the environment funded by the Institute. It limits itself to communicating Lasallian schools directives regarding environmental education.
- A district department for the environment financed by the Institute and educational establishments. It communicates directives regarding environmental education to be worked on; it supports them by providing resources; it helps them to obtain grants for joint projects organised by the schools of the district (it provides information and helps educational establishments to ask for grants so that

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	they acquire clean technology, workshops, light bulbs, solar panels, etc). Set up a district environmental NGO, or use another already existing NGO, which can support environmental education projects in schools belonging to the district and in other schools in the most disadvantaged areas. Funding resulting from a search for State funding and donations. Set up a non-profit company in the district, or use those already existing, to establish a window of opportunity and financial profit through environmental education in Lasallian schools, or in other educational establishments not belonging to the Institute. 1.3.2. Set up a district environmental education project based on international/regional directives, leaving each
	school the freedom to adapt the project to its own situation. 1.3.3. Using the profits of environmental fund-raising activities, support other Lasallian Educational Mission projects/actions in Lasallian schools, or in other schools which engage in sustainable development education (peace, justice, tolerance, etc).
1.4 School organisations	1.4.1. Set up environmental committees in all Lasallian schools to deal with the directives regarding environmental education coming from the district, sub-regions, school networks or from the schools themselves. 1.4.2. Set up a planning committee in educational establishments to study environmental education projects.

AREA	OVERALL OBJECTIVE
2. Formation	The objective is that everyone belonging to the De La Salle Institute should become aware of environmental issues and ethics, so that their decisions and attitudes can have an impact on the education of their pupils; and that raising of awareness regarding environmental issues can be promoted by both the school curriculum as well as by instruction in Catholic doctrine.
STRATEGIC AIM	PROPOSED ACTIONS
2.1. Promote	2.1.1. Make environmental issues and ethics a part of the
environmental education among all the members of the De La Salle Institute.	De La Salle Institute initial and continuing education of men and women religious and committed partners, considering this matter to be a <i>sine qua non</i> of coexistence. 2.1.2. Develop basic and specific courses in environmental studies for the General Council of the De La Salle Institute

- and for the provincials and visitors of Lasallian districts. 2.1.3. Run basic and specific courses in environmental
- studies for headmasters and heads of departments of schools, for the staff of all departments in the school (science, pastoral care, social studies, etc.), school catechists, or catechists working in parishes attended by school pupils, and all the teachers in the school.
- 2.1.4. Run environmental study courses for administrative and support staff of educational establishments.
- 2.1.5. Promote in parent and former pupil associations awareness of environmental education through courses, talks, conferences, etc.
- 2.1.6. Set up courses on new information and communication technologies for all Lasallians so that they are able to gain access by themselves to information and courses on environmental education.
- 2.1.7. Promote online courses on environmental education for all Lasallian teachers.
- 2.2. Promote awareness and environmental involvement of pupils through the curriculum.
- 2.2.1. Create a Lasallian curriculum (where the law allows this) and include environmental studies as a specific element in all subjects in the curriculum.
- 2.2.2. Whether a Lasallian curriculum exists or not, environmental education must be inter-disciplinary.
- 2.2.3. Stress the values, principles and practices necessary for responding effectively to present-day and future environmental challenges.
- 2.2.4. Tackle challenges posed by environmental sustainability which are urgent and cannot be shelved.
- 2.2.5. Promote, in all the areas covered by environmental education, equality between men and women, social solidarity, the banishment of poverty; and give priority to concern, integrity, decency and the relationship between people and nature and their Creator.
- 2.2.6. Highlight the interdependence of the environment, the economy, society and cultural diversity, based on both the local and global environment, and take into account the past, the present and the future.
- 2.2.7. Tell the pupils that studies related to the environmental sciences can offer opportunities for employment for the poorest people, or for young people who have abandoned their studies, or find themselves without a trade or work.
- **2.3.** Environmental education as a part of the pastoral ministry and of evangelisation
- 2.3.1. When teaching Religion, stress in relation to creation, the importance of man made in the image of God and, consequently, the virtues he needs to practise to care for the ecology. It is important to create a relationship between people and the natural environment, which is the work of

in the De La Salle Institute God, given that the right to a "healthy environment" is not respected when it comes to the poorest people. 2.3.2. Recommend sacramental symbols connected to nature (bread, wine, water, wheat, etc.). 2.3.3. Look for outdoor natural settings for celebrating Mass. Nature offers an opportunity for an encounter with God. 2.3.4. Introduce into homilies the idea that environmental concern is a way of showing respect and gratitude. Communicate a clear message that a filial relationship with the Creator is necessary in order to combat the destruction of the environment, and promote environmental education without reducing everybody's freedom. 2.3.5. In talks with prayer groups, confirmation and first communion classes, stress environmental education when dealing with social and apostolic aspects, by referring to: • Christian education in caring for the environment, based on the local culture. • The importance of educating in democracy and human rights based on a global vision (people, environment, God). • Concern for the preservation of the natural environment as a commitment to transcendence. • The relationship between poverty and the environment, the degradation of the natural environment being one of the consequences of poverty. • The promotion of justice by sensitive concern for the environment. 2.3.6. Recognise that the essential assets and services of the world (food, clothing, medicines, accommodation and spiritual sustenance) depend on the variety and abundance of life, and that this bio-diversity of raw materials can be found as much in wild country-sides as much as in farmed land.	▼	▼
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AREA	OVERALL OBJECTIVE	
3. Transparency and good prac- tices	Promote in Lasallian schools environmental education lines of action and projects, taking into account good environmental practices, democracy based on virtues, equality of the sexes respecting their basic differences, respectful tolerance of other cultures, etc., maintaining in this way Christian social attitudes which help to safeguard creation, and offering them as present-day cultural models of sustainable development.	
STRATEGIC AIM	PROPOSED ACTIONS	
3.1 All environ-	3.1.1. School environmental education lines of actions	

mental education lines of action and programmes must support democracy based on virtues and the welfare and well-being of human beings.

- and/or programmes must have been agreed upon and chosen by all the pupils and staff, among other people involved, in a democratic fashion.
- 3.1.2. Make the most of the practices and knowledge present in the local culture as well as of the contribution of new ideas and technologies.
- 3.1.3. Foster the cultural and environmental values of each community and region.
- 3.1.4. Emphasise by a creative and critical approach long-term reflection, innovation and independence in tackling uncertainty and to solve complex problems.
- 3.2. Transparency in school environmental management
- 3.2.1. Introduce the School Agenda 21 so that all Lasallian schools have their environmental action plans.
- 3.2.2. Create an international De La Salle environmental logo which schools can earn by environmental management that is adequate. Set up minimum environmental management requirements in order to earn this logo.
- 3.2.3. All the environmental education lines of action and/or programmes implemented in schools will have to be made public annually by some accessible form of communication (magazine, television, radio, etc).
- 3.3. Make De La Salle schools living examples of environmental education by making their facilities and neighbourhood compatible with sustainable development.
- 3.3.1. Schools should invest or seek grants to obtain sustainable resources.
- 3.3.2. Promote minimum standards all schools must respect so that educational work does not endanger the safeguard of the natural environment. These minimum standards should be applied to the use of water, energy and waste products (the 3 R's: recycle, re-use, reduce), landscaping, mobility and carbon emission.
- 3.3.3. Use the natural environment to resolve conflicts between pupils (coexistence, democracy, equality of the sexes in the choice and implementation of projects; increase self-esteem by means of environmental workshops; ensuring participation of pupils who find it difficult to mix; being able to correct and forgive, etc.)
- 3.3.4. Make use of cultural differences to carry out environmental activities and/or projects at school.
- 3.3.5. Construct school buildings based on the criteria of civil sustainability.
- 3.3.6. Maintain outside spaces intended for the holistic development of all the boys and girls as equals.
- 3.3.7. Encourage all schools to have a "Green Corner".
- 3.3.8. Encourage De La Salle school libraries to extend their environmental section.
- 3.3.9. Encourage healthy eating and habits "Mens sana in corpore sano". Increase the production, sale and consumption of Fair Trade ecological products in De La Salle schools.

	3.3.10. Have suppliers who are concerned for the protection of the natural environment (cleaning firms, food and catering firms, firms collecting used toners and disposable objects). 3.3.11. Ensure that the parents and guardians of pupils are involved in all the activities and/or projects so that they also can implement them in their homes and promote environmental education.
3.4. Reduce agricultural pollutants and increase green spaces at schools to increase oxygen in the atmosphere and so not contribute to the greenhouse effect.	3.4.1. Create in schools the role of "protected nature reserves". 3.4.2. Increase the percentage of green spaces in schools. 3.4.3. Ensure added protection is given to neglected or ignored green spaces. 3.4.4. Run campaigns involving all members of the school community, which represent nature as our home and mother, and speak of the need to respect it. 3.4.5. Set up in all schools a group of pupils to act as "ecological inspectors" to help to protect the natural environment of schools. 3.4.6. Promote organic, biological and ecological agriculture in the farm-land belonging to schools. Organise and teach the local farmers.
3.5. Establish a common approach (activities and attitudes) which can communicate the guiding principles of Faith, Fraternity and Service in the De La Salle Institute.	3.5.1. Promote the Lasallian Environmental Day. 3.5.2. Establish a De La Salle Environmental Week and organise celebrations during it. 3.5.3. Adopt a common approach to explaining and speaking about creation at school ceremonies. 3.5.4. Run campaigns which show and consider the relationship between creation and respect for the natural environment. 3.5.5. Use the morning reflections in school before starting the school day as a Christian means of promoting education in environmental values. 3.5.6. Use the school programme to introduce texts, animated cartoons, etc. which can raise environmental awareness among pupils. 3.5.7. Hold an annual blessing of animals, stressing biodiversity, the treatment of animals and respect for all of them, and responsibility for those which are free. 3.5.8. Promote sustainable lifestyles in religious houses and in those of committed lay teachers employed by Lasallian schools. 3.5.9. Give thought to the protection and restoration of the environment, conserve natural resources and use them in a sustainable way, implement guidelines regarding unsustainable consumption and production, and create a just and peaceful society.

AREA	OVERALL OBJECTIVE
4. Internal and external participation.	Be the motive force behind the expansion of environmental education, combining responsible collaboration and the social demands of Lasallian schools, as a response to the environmental problems which hinder peace and justice among nations.
STRATEGIC AIM	PROPOSED ACTIONS
4.1. Working as a network.	4.1.1. Create environmental education networks in the De La Salle Institute, taking into account the specific characteristics of each school, such as, for example, whether they are located in a town or in the countryside, the bio-climate of the area (desert, tropical), the environmental problems of the location of the school (desertification, floods, air pollution, etc.), the financial status of the school (private, stateaided, etc.), etc. 4.1.2. Create a De La Salle ecological network. 4.1.3. Set up environmental activities in conjunction with national and international networks, which will make possible simultaneous campaigns to raise environmental awareness by a variety of means.
4.2. Communication between, and mutual recogni- tion by Lasallian schools.	 4.2.1. Organise exchange of information and experiences regarding environmental education between De La Salle schools by means of forums and congresses. 4.2.2. Publicise action taken regarding environmental education and development by Lasallian means of communication such as websites, magazines, etc. 4.2.3. Organise an annual prize (international, regional, district) for educational mission projects which are most innovative in promoting environmental development based on education.
4.3. Promote the use of the internet as a means of communication between Lasallian schools and environmental departments, to encourage the dissemination of information about environmental educa-	4.3.1. Each environmental department in a De La Salle schools must create its own Lasallian environmental website, in order to share information regarding the environment, resources, pictures, ideas, etc., with links with the environmental websites of regions, districts, schools, and of environmental bodies belonging to other congregations. 4.3.2. Introduce into the website pages of Lasallian schools a section devoted to the environmental education of the school, with links with Lasallian environmental departments. 4.3.3. Support schools who have no access to information and communication technologies, providing them with computers, software, training for teachers, etc.
tional experi- ences, resources, environmental	4.3.4. Publish an online magazine listing examples of environmental activities in the De La Salle Institute.
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news, etc.
news, etc.
Establish links
with firms with
good environ-
mental practices
and with non-
profit and envi-
ronmental soli-
darity bodies.

- 4.3.5. Organise virtual forums online on environmental education, serving schools, districts and regions.
- 4.3.6. Draw up a directory of web links with firms with acceptable levels of environmental management in their organisation (ISO or EMAS) which, by the services they offer, might be interested in covering the needs of schools.
- 4.3.7. Draw up a directory of web links with non-profit bodies and Lasallian NGOs supporting environmental education activities and projects.
- 4.3.8. Publicise these directories in other religious institutes, NGOs, official bodies, firms and communication media.
- 4.4. Through the participation of Lasallian schools and communication between them, promote environmental awareness at higher educational levels or in educational establishments belonging to the De La Salle Institute (universities, youth reception centres. retreat centres. non-formal education centres. etc.).
- 4.4.1. Support research in all branches of environmental education.
- 4.4.2. Urge Lasallian higher education centres to promote "research, follow-up and evaluation" in their search for new pedagogical practices appropriate for Lasallian schools.
- 4.4.3. Promote exemplary environmental practices implemented in Lasallian schools and in other non-formal education centres in the Institute.
- 4.4.4. Collaborate with schools, universities, other higher education and research centres, teaching establishments and educational networks, that can serve as centres of competence and innovation, which will generate and share information, and create resources to promote environmental education as well as other ways of teaching sustainable development.
- 4.4.5. Inform and encourage all formal and informal Lasallian educational establishments to visit environmental education installations (museums, farm schools, sports centres, nature reserves, etc.) set up in De La Salle schools.
- 4.4.6. Encourage pupils and ex-pupils studying subjects connected with the environment (environmental education, clean technologies, agriculture, etc.) to carry out their end-of-studies practical course and project work in De La Salle schools.
- 4.4.7. Promote information to raise environmental awareness in Lasallian organisations and bodies (foundations, publishers, retirement homes, etc.).
- 4.4.8. Study the construction methods of ancestral cultures in order to introduce these construction techniques in new Lasallian schools.
- 4.5. Organise environmental petitions addressed to the local authorities
- 4.5.1. Petition the local authorities to protect the natural environment around the school.
- 4.5.2. Petition the local authorities and the government to protect and manage the natural environment, and in this way, avoid conflicts between two cultures over the use of

and governments in order to raise awareness in pupils of Christian social ethics and of the responsibility of people regarding the destruction of the natural environment. the land, over the struggle to extract resources, and the fight to exploit people, etc.

- 4.5.3. Promote protest and rights groups.
- 4.5.4. Promote the collaboration regarding environmental education between schools and political organisations.
- 4.5.5. Make governments understand that the more environmental awareness there is, the fewer the social laws, and the less money spent on preventing or repairing damage to the environment.
- 4.5.6. Promote collaboration between Lasallian schools and town councils to set up environmental education projects, and projects for raising environmental awareness.
- 4.5.7. Educate pupils so that they not only acquire information, but that they also apply it to the surrounding area so that they can observe the changes in their living conditions, as being themselves factors of change in society.
- 4.5.8. Petition governments not to let their activities be prejudicial to the environmental situation of people, especially regarding the rights of the poor. Ask that all state organisations be managed in an environmentally-friendly fashion.
- 4.5.9. Put pressure on politicians to help the victims in areas affected by natural catastrophes caused by climate change and other factors.
- 4.6. Involve civil society through our schools in these educational aspects of the Lasallian mission.
- 4.6.1. Participate as speakers or audience in congresses on environmental education in schools. These are opportunities to discover new environmental ideas and to introduce them into schools.
- 4.6.2. Ask parishes, neighbouring schools, etc., to continue to show respect for the environment.
- 4.6.3. Ask commercial organisations and enterprises located near the school to respect the environment.
- 4.6.4. Assess and apply traditional, native and local knowledge to the environmental work of the schools.
- 4.6.5. Undertake environmental activities and projects to raise the awareness of the whole local population in the vicinity of the school. This activity should be tailored to the needs of the persons involved, and should rely especially on the participation of the pupils to raise awareness and carry out the activities.
- 4.6.6. Actively promote equality between men and women in all social petitions organised by schools, as well as in activities and projects focused on civic responsibility.
- 4.6.7. Include contributions from other religions and cultures in environmental activities.
- 4.6.8. Promote the search for and implementation of environmental projects in conjunction with other schools belonging to other religions, as a sign that the degradation

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	of the natural environment affects all human beings in the world, and as a sign of living in union with others. 4.6.9. Promote and encourage all Catholic Institutes to introduce their religious and faithful to environmental education, as well as to good environmental practices for the sustainability of the process of evangelisation.
4.7. Strengthen existing mechanisms and types of international, regional and national cooperation, depending on the environmental projects concerned.	4.7.1. Consider the spirituality and the help given to developing countries with respect for the ecology. 4.7.2. Encourage an environmental pastoral ministry. 4.7.3. Set up environmental cooperation projects involving schools and other Institute organisations. 4.7.4. Promote the sale of waste material to raise money to help some Lasallian mission project which lacks resources. 4.7.5. Create educational networks for environmental coordination and support.

Valuation and measurement

Any plan which seeks to be rigorous has to have some way of assessing itself, and so the purpose of this chapter is to mention the basic guidelines to follow in a process of evaluation. Consequently, the evaluation we are now going to propose is based on the research-action model, given that evaluation is based on research into results by persons involved in the implementation of the proposed actions, and relies on the participation of the members of society who are targeted by these actions.

The reliability and validity of the means of measurement or indices used in "individual evaluation" are important, and the kind of information which one wishes to compile will need to be taken into account. And so, those responsible for proposing actions determined by the Plan will have to devise a record file for each action, which will include the following information:

Illustration 2. An example of a record file for compiling information regarding each action.

	AREA OF IMPLEMENTATION OF ACTION
No	
	STRATEGIC AIM
No	
	ACTION
Nº .	
OBJECTIVE/S	
DESCRIPTION	
DESIRED OUTCOME	
START DATE	COMPLETION DATE
PERSONS INVOLVED	
PERSONS TARGETED	
ESTIMATED COST	
SOURCES OF FUNDING	

On the basis of this file will be determined a series of assessment indices which will measure the level of efficacy and completion of the activities envisaged by the proposed action. In this file there will be data which can be assessed quantitively, and data which will have to be assessed qualitatively.

The quantitive indices for each action will have to be measurable (situation, economic factors, number of participants, outcomes achieved, etc.), unlike the qualitative indices, which make use of oral sources - remarks, open and in-depth interviews, group discussions, etc. - which make it possible to extend and examine at greater depth certain dimensions of the socio-cultural situation, which, given their nature, cannot be quantitively assessed.

The Plan evaluation process will have to include a biannual "monitoring evaluation" of the plan. For this purpose, once the "individual evaluation" of action taken has been carried out by school authorities, an "overall evaluation" will take place on all levels, that is, each department in the school will evaluate individually all the environmental education work it has done, and will send this information to the relevant body in the school. This

body will evaluate all the results of the environmental education work undertaken by the school as a whole. Next, all the schools will send the evaluation results to the educational network environmental office; and where there are several educational networks in a district, all the educational networks will send their information to the district environmental office. Once the district has completed its evaluation of the monitoring of the results of the Plan, it will send its results to the region to which it belongs. And then, once all the evaluations of the districts in the region have been combined, all these results will be sent as a whole to the International Environmental Department of the De La Salle Institute.

This kind of evaluation begins at the grass-root level and continues upwards through the various environmental bodies of the Institute. In this way, all the "micro-evaluations" of work undertaken will constitute the "macro-evaluation" of the proposed Environmental Education Plan. By this strategic approach to evaluation, it is hoped that the efficacy, effectiveness and efficiency that has been generated in the Institute will be revealed. We should add, that this "macro-evaluation" should monitor its social impact in terms of visibility, appraisal, pro-active requests and proposals from other religious institutes, NGOs, international organisations, tolerant governments, etc.

Finally, we should say that these guidelines for evaluation and measurement are beyond the scope of this thesis, and consequently some time in the future a more detailed scheme should be devised, involving all the people involved in these environmental activities, such as the pupils, teachers, parents, etc. Also, given the great extent and spread of the Institute, we would recommend that, as far as possible, measuring instruments based on computer programmes should be created, which will encourage common formats and greater access to evaluation tools.

Conclusions

• Generally speaking, one could say that environmental education has made progress from being merely a stance connected with the natural sciences, to becoming involved with the ethics of human development. At the present time, this aspect of pedagogy needs to be made a part of education, to concentrate on the economic and social processes of sustainable development, given that the existing model for development we have, does not solve great social problems such as poverty, inequality, injustice, war, etc.

This explains the need for introducing environmental education strategies into the field of social networks (organisations, institutions, educational networks, governments, local authorities, etc.), guided by the instructions of summit meetings and congresses on sustainable development. Nowadays, it is clear that the UN and UNESCO have an important role to play promoting care and protection of the environment in these networks, together with other kinds of education (health education, environmental education, education in values, inter-cultural education, education for peace, etc.) based on the "United Nations' Decade of Education for Sustainable Development" (2005-2014).

The promotion of environmental awareness-raising for sustainable and equitable development is necessary for the survival of the human race now and for always. This was stated unequivocally at the 5th World Congress for Environmental Education held in Canada (2009), where the importance of environmental education was clearly shown, for the development of individuals and of society as a whole. Also, citizenship, with all its cultural diversity, must embrace the notion of the environment, and of responsibility for its care, including going much further, as the proposals of the Bonn Declaration (2009) suggest. All this encourages social networks to create institutional mechanisms which will guarantee continuity in the application of education for sustainable development well beyond the end of the decade.

• Regarding the data obtained by research, one can say that the De La Salle Institute, as an organisation for education and evan-

gelisation, can and must be a powerful promoter of awarenessraising, of showing active respect for the natural environment, including by the scope of its social network (internationally):

- It caters for about a million pupils
- It numbers more than seventy thousand teachers
- It runs a multiplicity of formal education establishments in more than 80 countries in the world
- Its approach demonstrates awareness and sensitivity in dealing with urgent educational needs, and in its education in social and equitable values.
- It is a solid institutional organisation (educational network, districts, regions, etc.)
- It relies on great support from parent and former pupil associations.

Although in our research we noted environmental initiatives at both regional and district level, we concluded that the environmental aspect was not based on an Institute-wide policy. We see, for example, that among the basic guidelines and priority areas of the 2006 International Assembly "Associated for the Lasallian Educational Mission" there is no explicit reference to promoting environmental education.

This means that environmental education depends on the personal awareness of those who implement it. This is the case, for example, in the Valencia-Palma sector of the ARLEP District, where environmental education is limited to local awareness, and to the implementation of specific projects undertaken in its schools; or there is the case of the Lasallian Latin-American Region, where we find the environmental traditions of the District of Venezuela in its "Fundacion La Salle de Ciencias Naturales", in which the environmental directives of this region have resulted in the District of Peru adopting as a matter of urgency environmental education for sustainable development (Multi-discipline environmental education throughout the whole Lasallian curriculum and Island of Creation).

We noted also how in some Lasallian schools there are problems regarding promoting other areas of sustainable development, such as the equality of the sexes, inter-cultural activities, etc. For this reason it is also difficult to implement environmental education in schools run by the De La Salle Institute.

These opportunities and contradictions affecting the introduction of environmental education in the De La Salle Institute, led us to consider, in the course of our research, the various persons belonging to the Lasallian Family involved in this analysis, so as to demonstrate finally the need for establishing some common guidelines to promote environmental education for sustainable development in the De La Salle Institute.

• It is on the basis of this overall view of the situation that we decided to go much further than simply providing a bibliographical analysis of the present state of affairs in the De La Salle Institute regarding environmental education. Instead, we wished to offer the De La Salle Institute an environmental education plan that was coordinated and international, as a response to the educational challenges made by international organisations such as the UN, the Commission for Justice and Peace and the Integrity of Creation, etc.

However, before planning and drawing up common guidelines for the De La Salle Institute to follow in order to introduce environmental education into its formal education networks, and into other projected areas of education, we felt it necessary to study these kinds of environmental undertakings and plans implemented in other religious institutes.

It is true to say that we found no environmental education plans on the international level in any of the educational networks of other Catholic organisations, although we did find three environmental plans focusing above all on environmental management, such as ECO-CONNECT (Sisters of St Martha of Antigonish, Canada), a Plan of Action for Sustainable Regional Development (Society of Jesus, Province of Oregon, USA), and ECO-CONGREGATION (Environmental Tools for Churches in the United Kingdom and Ireland).

In this way, the Environmental Education Plan for the De La Salle Institute becomes a point of reference for other religious institutes, and through it, it is hoped it will increase environmental awareness, and serve as a cultural model of development and of the lay participation of educational establishments of society. This

Environmental Education Plan has 4 specific objectives, 19 strategic aims, and 49 concrete actions, inspired by the charism of the Institute, and provides in this way the pupils and other persons working with them (Brothers, Sisters, associates, teachers, non-teaching staff, etc) with the necessary understanding of the environmental value of peace and justice in the world.

Should this Environmental Education Plan be implemented in the Institute, a good system of evaluation of proposed actions would have to be devised. Also, we suggest that all the educational networks interested in adopting this Environmental Education Plan should send to their schools the questionnaire proposed for researching educational establishments, analysed in this doctoral thesis (Appendix 1). The results of the questionnaire will provide sufficient information in order to prioritise specific objectives, aims and actions in the educational establishment.

We conclude, therefore, by saying that this Environmental Education Plan is in line with the views of the new socio-cultural ethics, and that it can be implemented only if the De La Salle Institute makes the environment a subject which ought to be taught, and becomes conscious of its personal, institutional and social responsibilities. This Environmental Education Plan would also provide support for educational establishments which find it difficult to improve other sustainable development courses (health studies, education in values, inter-cultural studies, peace studies, etc.), and also continue the work of UNESCO long after the end of the UN Decade of Education for Sustainable Development).

Appendix I

Questionnaire⁶⁻⁷: Research into environmental education for sustainable development in Lasallian educational establishments.

ENVIRONMENTAL ORGANISATION

- 1. Does the school adapt the values of the distinguishing character of Lasallian schools to an environmental outlook?
- 2. Indicate if the school has the following additional organisations: 1) Environmental department; 2) a science/ecology club; 3) An environmental commission; 4) An environmental management body; 5) Other groups.
- 3. Has the school set up a system of environmental management?
- 4. If it has, indicate who takes part in it: 1) The administrative body (the government, the town council, etc.; 2) Firms or organisations (NGOs, foundations, etc.); 3) Pupils' parents.
- 5. Does the school take into account the idea of sustainability (satisfying the needs of the present generation without compromising the possibility of future generations satisfying their own needs) when they sign contacts for services or other work (cleaners, caterers, extra-curricular activities, deals with bus companies, etc.)?

PARTICIPATION AND COMMUNICATION

- 1. Does the school have a website?
- 2. Does the site include a space for environmental education?

⁶ Once the questionnaire has been completed, determine which sections of your school need most attention. This will enable you to prioritise certain activities and programmes in the proposed Plan. This will ensure your environmental education action will suit the educational context, and that it is in line with the charism of the Institute.

⁷ If you wish to see the original format of the questionnaire sent to schools, you can obtain it by accessing the online version of the doctoral thesis at: https://www.educacion.gob.es/teseo/imprimirFicheroTesis.do?fichero=17923).

- 3. Specify the participation of the school in programmes for the encouragement of environmental education with other schools or organisations: 1) De La Salle schools; 2) schools not belonging to the Lasallian educational network; 3) NGOs linked to the De La Salle Institute; 4) NGOs not linked with the Institute; 5) town councils/local authorities; 6) Lasallian international work networks; 7) International work networks not connected with the Institute; 8) Others.
- 4. Has the school attended: 1) environmental education fairs; 2) environmental education conferences; 3) Has it contributed to congresses on environmental education in a school context; 4) Has the school represented the De La Salle Institute by taking decisions or creating programmes or plans for environmental education in other organisations; 5) Has it organised means of protest against the violation of the human right to have "a healthy environment"; 6) Has it participated in mass social protests to protest about the violation of the human right to have "a healthy environment; 7) Others.

ENERGY AND WATER

- 1. Does the school have infrastructures for saving energy (solar panels, light-bulbs, light sensors, etc.)?
- 2. Does the school have infrastructures for saving water (push-button taps, collection of rain-water for irrigation, flushing water-volume control in lavatories, etc.)?
- 3. Are there environmental education activities or programmes which use the infrastructures for saving water and energy, mentioned in previous questions, as educational resources?
- 4. Apart from the school, who else contributes to these environmental education activities and programmes: 1) Administrative bodies (government, local authorities, etc.? 2) Firms or organisations (NGOs, foundations, etc)? 3) Parents of pupils?

WASTE

- 1. Has the school set up a system of waste management?
- 2. If the school has set up a system of waste management, specify what it is for solid urban waste products, such as glass, paper, plastic, batteries, household furniture and fittings: 1) Transfer sta-

- tion; 2) Dump for green waste; 3) Compost plant; 4) Recycling plant; 5) Cleaning point; 6) Others.
- 3. Is there a waste management system at the school? What specific kinds of waste (paper and cardboard, glass, organic matter, small tins, used batteries, domestic furniture and fittings, unwanted medicines, used oil, textile products, waste from minor building work, agricultural and livestock waste, etc.) are collected selectively at the school? 1) In the various school departments? 2) In green areas? 3) In the school leisure activity areas?
- 4. Are there programmes or activities for the promotion of recycling?
- 5. Who participates in these activities or programmes promoting environmental education regarding recycling by pupils both in and out of school? 1) An administrative body (government, local authorities, etc.? 2) Firms or organisations (NGOs, foundations, etc.?); 3) Parents of pupils?
- 6. Are there environmental education programmes or activities promoting the reduction of production of waste?
- 7. Who participates in these environmental education activities or programmes promoting the reduction of the production of waste?

 1) An administrative body (government, local authorities, etc.? 2) Firms or organisations (NGOs, foundations, etc.?); 3) Parents of pupils?

LANDSCAPE GARDENING

- 1. Are there any green or landscaped areas or zones at the school?
- 2. If there are, indicate the percentage of the school campus allocated to each of the following green or landscaped areas or zones:
 1) gardens/green spaces? 2) park, hills/hillsides? 3) area for fauna?
 4) lakes, ponds? 5) cultivated fields? 6) others?
- 3. Are there landscaped areas or zones at the school with particular problems due to deterioration, erosion, isolation, etc.?
- 4. Are there any activities or programmes available to undertake the regeneration, creation and conservation of the natural environment of the school?
- 5. Who participates in these activities or programmes to safeguard

the natural environment of the school? 1) An administrative body (government, local authorities, etc.? 2) Firms or organisations (NGOs, foundations, etc.?); 3) Parents of pupils?

MOBILITY

- 1. What means of transport exists in the neighbourhood of the school as an alternative to private cars? Train, town bus service, school buses, bicycle lanes, underground, etc.? Assess their accessibility: 1) good; 2) middling; 3) bad.
- 2. Does the school have places to leave bikes?
- 3. Has the school set up activities or programmes to promote the use of means of transport as an alternative to private cars? 1) Yes, by pupils using the school; 2) Yes, by the pupils belonging to the school; 3) Yes, by all the users of the school (pupils, teachers, non-teaching staff, etc.; 4) by other users?

AIR POLLUTION

- 1. What are the sources of air pollution at the school at the present moment? 1) emissions from domestic sources (heating, smoke from kitchens, etc.); 2) car exhaust (traffic); 3) emission from agricultural sources (burning, compost, etc.); 4) maintenance work; 5) Others.
- 2. Are there any environmental activities or programme aimed at reducing air pollution created by the school?
- 3. Apart from the school itself, who else collaborates in reducing the air pollution caused by the school? 1) An administrative body (government, local authorities, etc.? 2) Firms or organisations (NGOs, foundations, etc.?); 3) Parents of pupils?

CO-EXISTENCE

- 1. At the school, the level of conflict between pupils is, on a 1- to 5 scale, very low (1), or very high (5).
- 2. Have environmental education activities or programmes been introduced, which provide the teaching of values and attitudes as a means of resolving conflicts?
- 3. Do the environmental education activities or programmes implemented at the school respect the equality of the sexes?

- 4. Are inter-cultural differences respected at the school? On a 1-to 5 scale, very little (1), or very much (5)?
- 5. In facing up to the concerns of the school environment and to the needs of the world regarding its attitude towards human beings, society, culture and religion, do the inter-cultural differences found in the school feature in the environmental education activities and programmes?

RAISING OF ENVIRONMENTAL AWARENESS

- 1. Does the school organise activities related to the environment?
 1) Yes, by means of the Environment Day; 2) Yes, by means of the Environment Week; 3) Yes, by means of the Environment Month;
 4) Yes, by means of a course on the environment; 5) No, the school does not envisage organising any activity in this connection: 6) Others.
- 2. In the school, respect for Creation is promoted by means such as the morning reflection, the school agenda, communion, catechism or confirmation groups, exhibitions, chats with prayer groups, etc.
- 3. Are there any common lines of action regarding the promotion of respect for Creation in the school, in the local parishes or in the De La Salle Institute?

PERCEPTION DURING THE PROCESS

- 1. Does the school serve as an example of sustainability at the present time? (On a scale of 1-to-5).
- 2. Would it be advisable to be able to continue increasing environmental education at the school?
- 3. When environmental activities and programmes are established in the school, are they based on sources of information?
- 4. Should the school make increasing use, in its environmental education activities or programmes, of collaboration of other people (fathers of families, teaching and non-teaching staff, the local authorities, NGOs, foundations, etc.)?

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