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Research Project

Author: Marcos Roberto Estrada de Oliveira

Education for Sustainable Development within the Formal Curriculum in Costa Rica:

The Example of Earth Charter Materials in Primary Schools

A Contribution to the UN DESD, 2005-2014

July 8, 2008

Advisor: Manuel António Carvalho Gomes, Master.

Since education has been recognised as an important tool in developing human capacity, this research looked at implementation of education as a tool for sustainable development. It looked at the case of a material elaborated by the Earth Charter and its partners, which was distributed in some primary schools in Costa Rica. This research evaluated the use of this material in a sample of schools in different areas of the country. This research aimed to evaluate the use of the Earth Charter material, as well to apply in Costa Rican schools the *Quality Criteria for ESD-schools*, developed by Environment and School Initiative (ENSI) a decentralised international network that involves educational authorities in Europe and Asia-Pacific working towards sustainable development.

Moreover, it is a contribution to the United Nations Decade of Education for Sustainable Development (DESD) ranging from 2005 to 2014. Different actors involved in the elaboration and use of the Earth Charter material contributed to this research, mostly teachers which provided valuable information. Also a representative of the Ministry of the Education and the Earth Charter team played a vital role in this research. This paper first presents the conceptual framework of this research. It starts with an overview on the literature around the topic of sustainable development, as well as on education. It also presents the research design and gives the background on the elaboration of the Earth Charter material. The primary data was collected and analysed in two ways, both qualitatively and quantitatively, which led to concluding remarks and recommendations to enhance ESD.

This Research Project is submitted in partial fulfilment of the requirements for the degree of

Master of Arts in Peace Education

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Acknowledgments

Dedication

I dedicate this modest product to my supervisor Manuel Gomes who has been my mentor and friend prior my arrival at UPEACE, in Costa Rica. As well as to the Earth Charter team, all of whom played a vital role in this research, Dominic Stucker played an important role providing a *vis a vis* support; Betty McDermott provided me all kinds materials and support in the innumerable visit I did to the Earth Charter Centre, I took so much o her time that I am surprised she did not start hiding from me.

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Table of acronyms and Abbreviations

DESD	**Decade of Education for Sustainable Development**
EC	**Earth Charter**
EFA	**Education for All**
ENSI	**Environment and School Initiative**
ESD	**Education for Sustainable Development**
EU	**European Union**
EUCS	**European Union Commission Secretariat**
ICTs	**Information and communication technologies**
IIS	**International Implementation Scheme**
IUCN	**International Union for the Conservation of Nature**
MDGs	**Millennium Development Goals**
OECD	**Organisation for Economic Co-operation and Development**
SD	**Sustainable Development**
SEED	**School Development through Environmental Education**
SPSS	**Statistical Package for Social Science**
UN	**United Nations Economic Commission for Europe**
UNCED	**United Nations Conference on Environment and Development**
UNECE	**United Nations Economic Commission for Europe**
UNEP	**United Nations Environment Programme**
UNESCO	**United Nations Educational, Scientific and Cultural Organization**
UNLD	**United Nations Literacy Decade)**
UNWCED	**World Commission on Environment and Development**
UPEACE	**United Nations mandated University for Peace**
WSSD	**World Summit on Sustainable Development**

Introduction

The concept of Sustainable Development (SD) is debatable and there is a need for additional investigation on how to educate for sustainable development. Thus, this research investigated the application of Education for Sustainable Development in the formal curriculum in primary public schools in Costa Rica, looking at the example of an Earth Charter Material.

This research seek to evaluate the degree of success of ESD in a sample of primary schools in Costa Rica that had been using materials produced by the Earth Charter Secretariat. This research looked at the Earth Charter material *Aprendamos un Estilo de Vida sostenible con la Carta de la Tierra* (Learning about sustainable lifestyles using the Earth Charter) distributed in some Costa Rican primary public schools. Along with the evaluation of the Earth Charter Material, it used the questionnaire: 52 Quality Criteria for ESD-Schools. This questionnaire is in Spanish as Appendix II. This questionnaire is based on the 52 quality criteria elaborated by Environment and School Initiative (ENSI), a decentralised network working in the field of ESD.

This research is divided in three parts, I-Conceptual Framework, II-Research Design and the II-Key Study.

First, this research looks at the concepts and precedents of the DESD. This research provides a literature review by looking at the different concepts within this topic. This research looks at the documents *Building Education for Sustainable Development in Latin America and the Caribbean* (2007) and the Costa Rican document *National Commitment to the Decade of Education for Sustainable Development*[1] (2007). Moreover, it looks at parallel initiatives that have been contributing to the implementation of the DESD. This research also looks at *Asia-Pacific Guidelines for the Development of National ESD Indicators* (2007), created by UNESCO Bangkok, and analyse the *Quality criteria for ESD-Schools* (2001), developed Environmental School Initiative (ENSI).

Secondly, before this research presents the key study, it presents the methods of research, quantitative and qualitative approaches; the research ethics; the research instruments, the sampling and selection of schools, the data collection process and how data was analysed in this research. as well the questionnaires regarding to the use of the Earth Charter material and the questionnaire: 52 Quality Criteria for ESD-Schools, which together allowed the collection of qualitative and quantitative data.

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[1] Original name in Spanish: *Compromiso Nacional Sobre La "Década de la Educación Para el Desarrollo Sostenible"*

Thirdly, the key study presents the data collected in the sample of eleven primary schools. It looks at the example of Earth Charter educational materials; it provides information on the creation and distribution process of the material, as well on teacher training. Moreover, it analyses the use of the material and the importance and level of implementation of the ESD in selected schools, basing on the ENSI's *Quality criteria for ESD-Schools*.

This research project was submitted as part of the Master programme in Peace Education done at the United Nations Affiliated University for Peace (UPEACE), in San José, Costa Rica. Although this research was carried out during the academic year 2007-2008, my academic and personal interest on the United Nations Decade of Education for Sustainable Development 2005-2014 (DESD) started prior to this academic year.

As a researcher, I have the interest to investigate how international initiatives, such as the DESD, can contribute to enhance formal education. My experience in the field of education led me to question the impact of formal education in people's life. Moreover, preceding my Master programme in Peace Education, I obtained an undergraduate Degree on International Studies which made me more aware of how education can play a significant role in different societies. As an individual, I personally believe in education as a transformative tool that can be used to produce a positive effect in people's life. The fact that I have received all my formal education from public education institutions, most of it in Brazil and some in the United Kingdom, made me aware of the impact public education can have on people. As a result of my personal and academic interests, I decided to investigate the topic Education for Sustainable Development (ESD) seeking to make a contribution to the improvement of education in the field of Sustainable Development.

I-Conceptual Framework: Concepts, Context and Indicators

People, since the dawn of time, have been seeking to ensure their own survival. It has been seen that changes in customary practices may be required through the time, but it is difficult to make changes in deep-rooted social structures which have been working for many generations; it could disrupt the traditional ways. Although the world population was smaller in the past, humans have not been fully aware of how to use natural resources from our planet, for the sake of all, activities which could have led them to scarcity were always avoided in different parts of the world.

Therefore, the idea of a development that is sustainable is not a new aspiration. It could be traced centuries ago in ancient civilizations, feudal organisations, indigenous groups and also in agricultural societies. However, it only acquired strength in the 20th century. In the last decades, many humans have realised that change in our time is necessary. Patterns of production and consumption need to be adjusted to the Earth's carrying capacity.

It acquired significant force in the 70s, in particular, after the post-Second World War reconstruction period, when environmentalists warned that the environment was being severely damaged as a result of the industrialisation process. As result of this process, the world witnessed a substantial economic growth around the globe, never seen before. At the same time, scientists, social scientists, and other groups, at different levels, recognised that the human environment was at threat. Consequently, the issue was brought to the international agenda in 1972 during the United Nations (UN) *Conference on Human Environment* in Stockholm, Sweden.

Since the concept Sustainable Development (SD) was published in the by the Brundtland Commission report *Our Common Future* (1987), it has become part of the international environmental rhetoric. In fact, the concept SD came into existence years earlier. The concept SD had also been used in 1980 by the *International Union for the Conservation of Nature* (IUCN) in the *World Conservation Strategy* (1980). Ever since, the discussion around the definition of SD and how to measure it have been feeding debates around the globe. Although there is a common goal, to achieve a sustainable way of living, there is not a consensus about the definition of SD.

Moreover, in 1992, the UN held in Rio de Janeiro the *Conference on Environment and Development*, in which representatives from different parts of world came together seeking to understand how the world community could develop while preserving the environment, led to the creation of the Agenda 21.

In 2002, at the *World Summit on Sustainable Development*, held in Johannesburg, South Africa, the UN declared the *Decade of Education for Sustainable Development* (DESD) ranging from 2005 to 2014. For this task, the United Nations Educational, Scientific and Cultural Organization (UNESCO) was declared the leading agency.

Since the concept sustainable development came into usage, the concept has been based on the three pillars: economy, environment and society. Although the concept sustainable development is still debatable, the DESD, to some extent, has helped to consolidate its definition.

This research focuses on ESD as an area of Peace Education. As pointed out by David Hicks (1998), in the 1950s, researchers started researching peace as more than the absence of war. In the 1960s and early 1970s, researchers' attention shifted to structural violence, which is the violence a person suffers as a result of social, political and economic systems. In order to achieve peace, it is vital change people's values towards a more sustainable world in all aspects of life. "Educating to deal with complex issues that threaten planetary sustainability is the challenge of ESD" (UNESCO, 2005, p.3).

1. Problematic of the Concepts: A Review of the Literature

Concepts and definitions are subject to disagreements. Since 1987, the concept sustainable development has been debated around the globe. Although there is a vast amount of literature in this area, scholars and activists still have not agreed on a definition. There is an inevitable debate within and outside the academic world about the definition of the concept sustainable development, also on how to implement and measure it. The further the concept is debated; the more we are able to grasp its complexity.

In 1983, in the pursuit of a sustainable way of living, the United Nations established the *World Commission on Environment and Development* (WCED) led by Gro Harlem Brundtland of Norway. The WCED, widely known as the Brundtland Commission, had a defining moment in history in 1987 when the concept "sustainable" was released in the *Brundtland Report: Our Common Future* (WCED, 1987). This report produced an oft-quote, possibly most popular definition of sustainable development, "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p.43). Although, it is not clearly defined what is meant by "needs of the present generation" and "ability of the future generation", the quote became known around the globe.

The Brundtland Report has been popular among environmentalists and people focused on ecological preservation. As pointed out by Gibson (2005), the report presented a two pillars version; it stressed development with emphasis on protecting the environment. As pointed out by Redclift (1987), the Brundtland Report is a significant advance on addressing the issue because the report focused on causes of environmental problems rather than the effects of environmental degradation.

The Brundtland Report did not establish parameters for ESD, thus words like increase, decrease, high, low, effective or effectiveness broadened the definition and left a gap for debate. The Brundtland Report concluded that three factors, environment, equity, and futurity were essential to sustainable development; it called for a planned growth with minimal use of non-renewable resources and reduction of pollution.

In 2002, the UN held the World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa, 10 years after the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, strengthening its objectives. It is informally called "Rio+10" and is also known as the Earth Summit 2002.

As there is a debate around the concept sustainable development, the literature brings some aspects within the SD debate. There are authors who argue that the world should seek sustainability and not development, others argue that it is realistic to develop in a sustainable way.

1.1 Sustainability *versus* Sustainable Development

There is a debate about whether sustainability is synonymous with sustainable development, different, ambiguous or contradictory. It seems that we are still far from seeing a full agreement among people. For example, Gibson et al. (2005), in their book *Sustainability assessment: Criteria, processes and applications,* used the concepts sustainability as synonymous with sustainable development. Gibson et al. present different features which could be used to define sustainability. In Box 1. The essentials of the concept of Sustainability, it provides an overview of the essentials of the concept sustainability, which can be argued to be incomplete, overlapping or even ambiguous. Although it may not contribute to elucidate the debate around the concepts, it gives a view to further analysis. In their book, they adopted the term sustainability because it is shorter.

Box 1. The essentials of the concept of Sustainability

1. A challenge to conventional thinking and practice;
2. In all its formulations concerned about long as well as short-term well-being;
3. Covers the core issues of decision making;
4. Demands recognition of links and interdependencies;
5. Must be pursued in a world of complexity and surprise, in which precautionary approaches are necessary;
6. Recognizes both inviolable limits and endless opportunities for creative innovation;
7. Open-ended;
8. The means and the ends are necessarily intertwined; and
9. Both universal and context dependent.

Source: Gibson et al. (2005) *Sustainability assessment. Criteria, processes and applications.* Earth. p.62

From another perspective, the researcher Edwards (2006) presents the concept sustainability in two senses. Firstly, as multifaceted revolution on three "Es: ecology/environment; economy/ employment; and equity/equality.... on the other hand, the term will refer to the ever-evolving body of ideas, observations and hypotheses about the myriad challenges to which the revolution is seen as creative response"(p.20).

For instance, looking at the regional level, when the European Union Commission Secretariat (EUCS) carried out a study to identify problems encountered when incorporating sustainability in the European Union (EU), the EUCS considered four approaches to integrating sustainability: "an

analysis of the development of the concept of sustainability; an analysis of the EUs path towards sustainability leading up to the Gothenburg Strategy[2] and considering also major developments until late 2003; an analysis of 14 post-Gothenburg EU policy documents; and an analysis of how sustainability concerns have been incorporated into seven decision-making processes involving different actors and sectors"(EUSG, 2004, p5).

Furthermore, in the same study, while the EU commission sought to identify sustainable and unsustainable trends, they found that the Gothenburg and Lisbon strategies[3] fail to agree. "The Lisbon and the Gothenburg strategies differ substantially from one another in terms of time and scope" (EUSG, 2004, p.6). Below, in Box 2. Evolution of the Sustainability Concept, it is presented the EU Commission overview on the evolution of sustainability.

Box 2. Evolution of the Sustainability Concept

Sustainability was (primarily)	Sustainability is (primarily)
Taking account of environmental protection and development	Balancing and integrating the three dimensions (economic, social and environmental)
Expert led and the responsibility of Government	An opportunity for broad participation
A substantial concept	A procedural concept

Source: European Commission Secretariat General (2004) *Final summary report: Evaluation of Approaches to Integrating Sustainability into Community Policies*. Brussels. European Commission. p.15.

The concept sustainability is still in evolution. When pursuing sustainability, it is important to pursue general objectives which will apply to all sectors and levels of society considering its evolution. Nevertheless, it may become too vague. The world is more inter-connected than ever and different aspects of societies are changing fast. The world is in a constant process of evolution, and responses to problems should be thought in accordance to this evolution. It is important to consider societies as evolving entities, which develop according to internal and external factors.

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[2]At the Gothenburg Summit in June 2001, EU leaders launched the first EU sustainable development strategy based on a proposal from the European Commission. This 2001 strategy was composed of two main parts. The first proposed objectives and policy measures to tackle a number of key unsustainable trends while the second part, arguably more ambitious, called for a new approach to policy-making that ensures the EU's economic, social and environmental policies mutually reinforce each other. Retrieved January 21, 2008 from http://ec.europa.eu/environment/eussd/
[3] At the Lisbon summit in March 2000, European Union leaders set out a new strategy, based on a consensus among Member States, to modernize Europe. This became known as the "Lisbon Strategy". After initially moderate results, the Lisbon Strategy was simplified and relaunched in 2005. Retrieved January 21, 2008 from http://ec.europa.eu/growthandjobs/index_en.htm

Although Gibson et al. (2005) used the concept sustainability as synonymous with sustainable development in their book, they indicate difference between the terms sustainability and sustainable development. Below, Box 3. Sustainable Development Multiple Choices present some views around the sustainable development debate, which can be contrasted with Box 1. The essentials of the concept of Sustainability. Some of the interpretations may seem unclear, unworkable, ambitious and or even contradictory. There is not right or wrong, but a range of aspects and consideration to be taken when thinking about sustainable development.

Box 3. Sustainable Development multiple choices

(a) A redundancy, since unsustainable activities cannot provide true development;
(b) An oxymoron (a self-contradiction) that amounts to believing that you can have your cake and eat it too;
(c) A case of developers getting the noun and environmentalists being left with the adjective;
(d) A dangerous delusion, promoted by those who are willing to recognise that we are already overstraining our planet's capacity to withstand our impositions:
(e) One of the land mark steps in human history, following opposable thumbs, the discovery of fire and the invention of progress;
(f) An exceptionally popular term, invoked favourably by all manner of otherwise incompatible individuals;
(g) A term that everyone can support, largely because no one knows what sustainability means and/or one agrees on what development means;
(h) A term that offers an accommodation of opposing forces-suggesting that responsible stewardship of nature and continuity of gains in human material well-being are compatible

Source: Gibson et al. (2005) *Sustainability assessment. Criteria, processes and applications.* Earth. p.52

It is likely that none of the choices presented in the box will be the worldwide definition of sustainable development. However, it has provided different views surrounding the concept. By acknowledging the multifaceted dimension of the concept and its different interpretations, it is possible to draw an interpretation of the concept.

It is expected that SD will bring economic, social and environmental benefits which will improve the standard of living for this and future generations. However, there is not even a full agreement on what SD is about and path to achieve it.

Redclift (1987) argues that development has been giving the rules to sustainability. When the concept first emerged, according to Redclift, SD was usually though oft in the context of developing countries' sustainability without attention being given to international structures. According to Redclift, initiating SD alternatives are frequently undermined by the pursuit of illusory and detrimental policies, whose origin lies in the North and in the relation that is maintained between North and South.

On the one hand, Edwards (2006) points out that SD can serve to address different issues which will create more just societies at the global level and reorient developing countries to leave the "secondary place" in world economy. On the other hand, Redclift argues that SD is the objective of many perspectives on the environment, but the role of the market in defining various outcomes is considered in few of them. In fact, Redclift perceives SD as an alternative to unsustainable development, which was caused by the countries in the North and is responsible for the current unequal situation of the world.

When development is added to the concept sustainability, economics comes into play. The association of sustainability with development, which would be SD, can be seen as the condition necessary to ensure economic development in the long run. Since development plays an important role in societies and it is a controversial part of the debate, this research will look at some aspects of development.

1.2 Effects of Development and Education

When looking at development, it is seen that there are different definitions of development. Although many times development regards to the improvement of life, development is generally measured as economic growth over a certain period of time.

Development could be seen as an on-going process that is unstoppable and generates economic growth. Economic growth, in turn, is the increase of consumption of goods and services, thus, the term development has been used to mean economic growth, not improvement in peoples life. It can be interpreted in two ways, both as a concept and as a historical implication.

According to Redclift (1987) "development" is an historical process which is connected to the exploitation of resources in less industrialised countries with countries in the North. As a result, he perceives development as a -perhaps necessary- evil. Redclift argues that environmental problems are the result of a historical process linked to economic and political structures which generated the "peripheral capitalist societies."[4] He associates development with the relation between Western and non-Western societies which has led some countries to become dependent on more industrialized countries.

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[4] The term "peripheral capitalist societies" is used to refer to developing countries. The term is mainly used in dependency theory, the school of thought that see the underdevelopment of some countries as results of the development of others, the so-called developing and developed countries, respectively.

The dependency theory school argues that peripheral societies were created through the development of others. Frank (1969) argues that capitalism created "a constellation" where weak cities are satellites of a big metropolis. Frank defines it as "development of underdevelopment" in which to develop the metropolis, the satellite has to be underdeveloped. According to Frank, development has been detrimental to poor countries.

On the other hand, Hulme and Turner (1992) explain how the lack of development can explain the situation in poor countries, and point out that modernisation is the path to be followed in order to be become developed. According to Hulme and Turner, based on the modernisation school thoughts, "the scientific revolution which has permitted Western mastery of the environment must be adopted by the underdeveloped nations" (p.35). Redcliff's perspective clearly diverges from Hulme and Turner's perspective. While Redclift is more concerned with social factors, Hulme and Turner regard economic growth as a measure of development. Redclift sees development as a zero-sum game, while Hulme and Turner do not.

The fact is that development is usually regarded to economic growth. The economist vision is that the more a country industrialises and its production capacity increases, the more developed it becomes. The problem economic growth faces when dealing with the environment is that it cannot measure environmental damage, quality of life or any other social factors; economic growth tends to treat sustainable and unsustainable production alike.

In other words, according to the Organisation for Economic Co-operation and Development (OECD) development is sustainable when it does not put at risk the availability of resources in the long term. OECD (2004) stated that "development is ...sustainable when it can ensure a future level of consumption that is indefinitely maintained, taking into account the shortness of exhaustible resource stocks and that it has to retain natural capital stock within some quantity or quality levels, which are defined according to given thresholds" (p.73).

When analysing the connection between education and development, we bring out the question of the chicken and the egg. Ramirez and Chabbott (2006) point out that the relationship between development and education is problematic in two aspects. First, the effect of development at the collective level is ambiguous and unequal. Second, as a result of this ambiguity, education conferences and declarations at different levels have been increasing around the globe without concrete achievements in the field of education.

In the 1970s, education was recognised as being the major tool to act on world's problems. Whereas education is recognised as a valuable tool for a better future, it is also seen that there is a link

between education and development. After all, one assumption is that schooling increases earnings and productivity by providing cognitive capacities and skills.

In order to clarify this statement, Ramirez and Chabbott (2006) point out the pioneering study of Shultz (1963), that schooling is an investment for individuals and points out that those individuals with higher level of education obtain greater benefits, i.e. higher incomes. This statement is at the root of a debate over the role of education in society.

Economists are aware of the connection between development (regarding to economic growth) and the human environment. E. F. Schumacher, a respected economist who worked with J.M. Keynes, published in 1973, the book *Small is Beautiful*, which is considered a turning point in the literature regarding economics, environmental protection and education. He presented to the world the connection among those three elements.

In his book, Schumacher (1973) stated, "[a]t present, there can be little doubt that the whole of mankind is in mortal danger, not because we are short of scientific and technological know-how, but because we tend to use it destructively, without wisdom. More education can help us only if it produces more wisdom" (p.51). Schumacher not only warned the world about the environmental situation at the time, but also pointed out the role that education can play in the modern society. He recognises education as our best resource for understanding the world. However, Schumacher argues that if education fails to clarify central convictions, it is mere training or indulgence and will be an agent of destruction in conformity with the principle *corruptio optima pessima*.[5]

What Schumacher defines as "mere training or indulgence" is what Paulo Freire in 1970 had previously called "banking concept" of education. Paulo Freire (1970) argued that education must start with the solution of the student-teacher problem, in which the action of the student is to receive the information given by the teacher. He argued that students should develop their critical consciousness rather than mechanically memorise the narrated content. Teachers must not impose education on students; they should be motivated to learn to develop their own abilities.

1.3 Education for Sustainable Development

The well known concept, ESD, based on three main pillars of SD: environment, society and economic, came into existence in the 1980s. However, the international concern regarding the

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[5] In the context of Schumacher's idea, the Latin phrase *corruptio optima pessima*, in English the "corruption of the best is the worst of all", refers the oppression being caused by the elites that has been perpetuating inequality and expanding the gap between rich and poor.

protection and improvement of the environment acquired force earlier leading to the United Nations Conference on Human Environment in 1972. Therefore, the roots of ESD could be traced in environmental education, which also acquired force in the 1970s.

Later, ESD acquired unforeseen prominence in 1992; the necessity of having education aimed at achieving a sustainable development was recognised. Fien (2003) points out that in the *UN Conference on Environment and Development* (UNCED), held Rio de Janeiro, in 1992, it was internationally agreed that achieving SD is essentially a process of learning.

However, the challenge still rests on how to move efficiently from theory to practice. According to Jickling (1992) the concept has become a vague slogan susceptible to manipulation and remained an interpretation of peoples minds. Moreover, he states he does not want his children to receive ESD because he considers, as the concept has not yet been defined, it cam be detrimental.

According to Corcoran and Wals (2004), although ESD was one of the main priorities in the UNCED, there was not agreement on what is ESD. Furthermore, they argue that there was not enough to understand ESD. Corcoran and Wals argue that although too little was done in the ten years following the UNCED, people perceived the promulgation of the DESD as the major opportunity to strength education to ensure a sustainable future.

Furthermore, despite criticism of the concept of ESD, Corcoran and Wals point out the Earth Charter's four main pillars as an ethical agenda for framing the central principles of sustainable development. They are: Respect and Care for the Community of Life; Ecological Integrity; Social and Economic Justice; and Democracy, Nonviolence and Peace (ECI 2001). The Earth Charter emphasises universal responsibility and highlight interconnectedness as key values central to SD (ECI, 2005). The Earth Charter recognises the importance and relationship of these factors in ESD, which is highly significant to ESD.

There is neither a full agreement on the definition of sustainability, development or education, or on sustainable development or education for sustainable development. Nevertheless, the basic understanding of the debate around ESD provides the essential foundation for any ESD action. Sustainability must incorporate changing factors, not only socio-environmental, but also factors such as education and development (and economic growth). SD does not deny the fact that we are in a constant process of development and a new style of life is needed in order to guarantee the Earth's capacity to sustain life.

Education is recognised as a major tool to change societies, consequently it is necessary to make education into a constructive tool by creating awareness among students. The link between education and development are seen in both directions. Nevertheless, it requires equilibrium to avoid detrimental effects and lead the world to a sustainable path. There is a need to develop a more efficient tool to measure development. Economic growth does not represent improvements of life. It was internationally recognised that SD can be achieved through a process of learning. Therefore, education needs to be enhanced to lead the world to a more sustainable way of living.

The debate around the concept has been contributing to elaborate further SD actions. Moreover, the debate around the path to be followed should be seen more as a constructive tool than as hazard.

2. The United Nations Decade of Education for Sustainable Development 2005-2014: The Current Context

As a result of the WSSD, in December 2002, the UN declared the Decade of Education for Sustainable Development 2005-2014 (DESD). The responsibility to elaborate and develop an International Implementation Scheme (IIS) was given to UNESCO. The IIS seems to have consolidated the most popular and widely accepted tree pillars definition of SD which embraces environment, economy and society. Also, the value of culture is recognised (WSSD, 2002).

The IIS was developed with the participation of different stakeholders and partners, as well as incorporating worldwide outcomes of regional and national strategies. The DESD reaffirms the ideas from UNCED 1992 and is based on four objectives. The DESD integrates the vision of SD in all teaching-learning areas. All international information embedded in IIS could be synthesized in the objectives for the DESD presented in Box 4. Objectives for the Decade.

Box 4. Objectives for the Decade

1. Facilitate networking, linkages, exchange and interaction among stakeholders in ESD;
2. Foster an increased quality of teaching and learning in education for sustainable development;
3. Help countries make progress towards and attain the Millennium Development Goals through ESD efforts;
4. Provide countries with new opportunities to incorporate ESD into education reform efforts.

Source: United Nations Decade of Education for Sustainable Development (2005-2014) Framework for the International Implementation Scheme. p. 2

The ISS points out that by using a holistic approach, ESD activities should take place at every level. Therefore, in order for a country to be able to take national initiatives, a solid and concrete assessment considering different areas must be taken. In order to achieve those objectives seven interlinked strategies were designed. Box 5. Seven interlinked Strategies Proposed for the DESD, presents the different strategies set by UNESCO.

Box 5. Seven interlinked Strategies Proposed for the DESD

1. Vision-building and advocacy;
2. Consultation and ownership;
3. Partnership and networks;
4. Capacity-building and training;
5. Research and innovation;
6. Information and communication technologies (ICTs);
7. Monitoring and evaluation.

Source: United Nations Decade of Education for Sustainable Development (2005-2014) *Framework for the International Implementation Scheme.* p. 11

Like other initiatives, the DESD is susceptible to debate. Michael H. Koch (2006) points out that the DESD legitimates the Brundtland concept of SD. He argues that the idea of achieving sustainability - or development that is sustainable- is noble, but considering the current situation of the world, it may not be completely feasible. Moreover, Koch states that the holistic approach to interconnected aspects may not be fruitful. Koch argues that, at least at the moment, some places of the world are beyond sustainability.

The issues of feasibility regarding the implementation of the DESD can be found where problems such as famine, pandemics or desertification are still a major concern. Furthermore, Koch points out that Information Communications Technology (ICT) refers mainly to computers that have a big ecological footprint. Despite these arguments, Koch agrees that SD has potential and these issues should not be a barrier to improvements in people's lives.

As shown here, the objectives and principles of DESD can be the subject of discussion. Apart from the discussions related to the lack of definition, or the existence of many definitions around the term SD, which are the basis of the DESD, the DESD has influenced many people in different parts of the globe. Nevertheless, its outcomes are still to be seen.

As pointed out by UNESCO (2005) in the ISS, there will be a need for coherence and coordination to bring clarity into broad stakeholder engagement, particularly in the development of national strategies and policy papers (p.35).

2.1. Parallel Education Initiatives

While carrying out this research, links were made to different initiatives which share much in common and are parallel to the DESD. Here is first presented the Earth Charter and the Environment and School Initiative (ENSI), which are an important part of this research. Three other initiatives related to education launched by the UN jointly with its agencies and governments since 2000. These are the United Nations Literacy Decade (UNLD) ranging from 2003 to 2012; Education for All (EFA); and the Millennium Development Goals (MDGs). Also, it is relevant to consider the importance of 2008 as the International Year of Planet Earth and the Medium-Term Strategy 2008-2013 for supporting the DESD.

2.1.1 The Earth Charter Initiative

The Earth Charter is the result of a decade-long consultation which was completed in 2000. The Earth Charter (EC) was written through the most open and participatory worldwide consultation ever seen, and is based on four main pillars. The four pillars of the Earth Charter are presented in the Box 6. The Earth Charter Four Pillars. The Earth Charter is an important tool to work towards sustainability and has been endorsed by thousand of organisations, including UNESCO, the DESD leading agency (ECI 2002). The Earth Charter also works in partnership with UNESCO in implementing the DESD.

Box 6. The Earth Charter Four Pillars

I.	Respect and Care for the Community of Life;
II.	Ecological Integrity;
III.	Social and Economic Justice; and
IV.	Democracy, Nonviolence and Peace

Source: The Earth Charter. Retrieved September 21, 2007 from: http://www.earthcharterinaction.org/assets/pdf/EC.English.pdf

Universal responsibility is stressed as a key value central to SD and interconnectedness as a key theme (ECI 2005). It may be argued that the four main pillars of the Earth Charter are still not enough to fully understand SD. However, Box 7. The Interaction of Different Aspects illustrates the interconnection of the different dimensions and interactions of SD. All different aspects are interconnected and cannot function in isolation from each other.

Box 7. The Interaction of Different Aspects
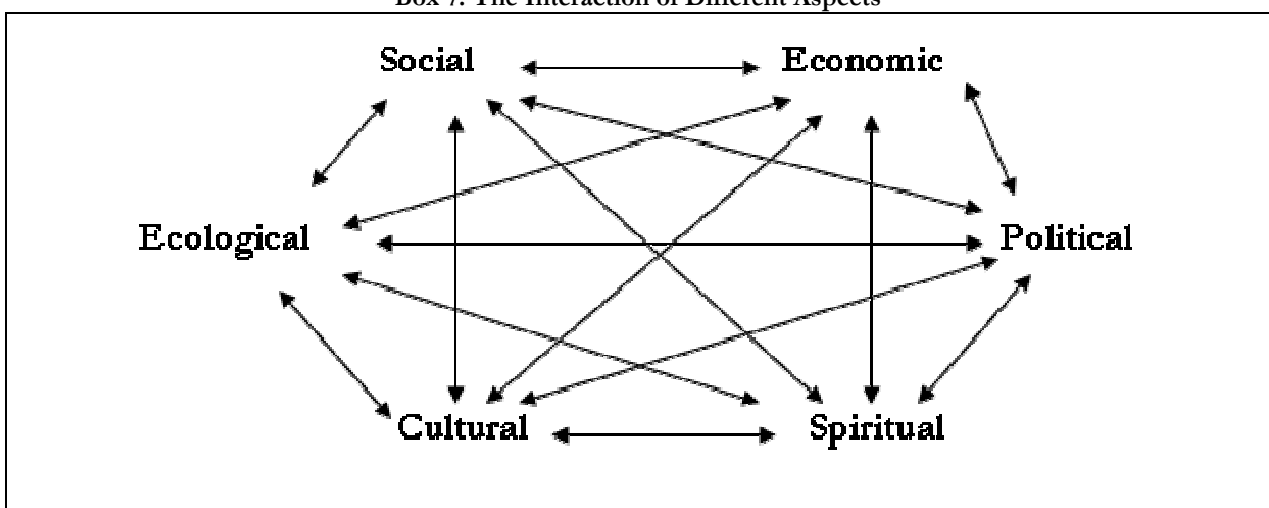
Source: Earth Charter (2005) An *Earth Charter Guidebook for Teachers.* (2005). p.4

Moreover, Box 8. The 16 Earth Charter's principles, presents the 16 general principles including environmental responsibility, peaceful coexistence, respect for life, democracy and justice.

The Earth Charter publication (2007) *Good Practices using the Earth Charter*, published in collaboration with UNESCO, presents twenty-seven experiences of incorporating the Earth Charter into non formal, primary, secondary, and/or higher education practices. The different case demonstrates how the Earth Charter can serve as a guideline in different contexts. (See Appendix I, The Earth Charter).

Box 8. The 16 Earth Charter's principles

1. Respect Earth and life in all its diversity.
2. Care for the community of life with understanding, compassion and love.
3. Build democratic societies that are just, participatory, sustainable and peaceful.
4. Secure Earth's bounty and beauty for present and future generations.
5. Protect and restore the integrity of Earth's ecological systems, with special concern for biological diversity and the natural processes that sustain life.
6. Prevent harm as the best method of environmental protection and, when knowledge is limited, apply a precautionary approach.
7. Adopt patterns of production, consumption and reproduction that safeguard Earth's regenerative capacities, human rights and community well being.
8. Advance the study of ecological sustainability and promote the open exchange and wide application of the knowledge acquired.
9. Eradicate poverty as an ethical, social and environmental imperative.
10. Ensure that economic activities and institutions at all levels promote human development in an equitable and sustainable manner.
11. Affirm gender equality and equity as prerequisites to sustainable development and ensure universal access to education, health care and economic opportunity.
12. Uphold the right of all, without discrimination, to a natural and social environment supportive of human dignity, bodily health and spiritual well-being, with special attention to the rights of indigenous peoples and minorities.
13. Strengthen democratic institutions at all levels, and provide transparency and accountability in governance, inclusive participation in decision-making, and access to justice.
14. Integrate into formal education and lifelong learning the knowledge, values and skills needed for a sustainable way of life.
15. Treat all living beings with respect and consideration.
16. Promote a culture of tolerance, nonviolence and peace

Source: The Earth Charter. Retrieved September 21, 2007 from: http://www.earthcharterinaction.org/assets/pdf/ EC.English.pdf

2.1.2 Environment and Schools Initiative (ENSI)

Another initiative also working actively in the field of ESD, as the Earth Charter, is the Environment and Schools Initiative (ENSI), a decentralised international network that involves educational authorities in Europe and Asia-Pacific working towards SD. ENSI works towards the adoption of an innovative culture of teaching and learning for ESD within its 14 ENSI partner countries and six ENSI member Countries.[6]

ENSI recognises that a meaningful ESD project requires a network which is capable to implement changes at the local level and is willing to engage local people. Projects are not only for students and teachers seeking changes, projects should involve committed people to use their efforts to make changes happen within and outside school.

School Development through Environmental Education (SEED) is an interesting example of ENSI's projects promoting environmental education as a driving force. SEED was a network funded by the European Commission from 2002 to 2005 which produced valuable outcomes. Including the *Quality Criteria for ESD-Schools,* this will be looked into in depth later in this paper. They developed tools for school development through a range of projects in the lifelong learning framework.

2.1.3 The UN Literacy Decade, Education for All and the Millennium Development Goals

While there are differences between the four initiatives, namely the DESD, MDGs, EFA and UNLD all believe that education is a key to development. They have the common concern to improve quality of life; reduce poverty; promote human rights and improve health as ways to enable people to fulfil their potential (UNESCO 2005).

While the MDGs focus on achieving formal primary education, the DESD, EFA and UNLD focus on literacy as essential instrument to enable people to take increasing control over their decision-making and achieving other goals. Moreover, the MDGs present a framework for international development cooperation in different aspects; EFA puts emphasis on extending education to every person, regardless of sex or age. To some extent, the UNLD can be considered within the EFA framework.

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[6] The 14 ENSI member countries are Australia, Austria, Belgium, Croatia, Denmark, Finland, France, Germany, Hungary, Italy, Netherlands, Norway, Slovenia and Switzerland. And the 6 member countries are Canada, Greece, Japan, Korea, Portugal and Spain.

The distinction of DESD among the other United Nations initiatives is that the DESD seeks to address the importance of educating for SD, within and outside the formal system. Due to its dimension, the full implementation of the DESD could overlap with other initiatives. Each initiative has its main goals, which may overlap each other, even having similar goals and objectives. Nevertheless, it is the responsibility of each state to support the different initiatives according to the country's ability, needs and context.

Additionally, in 2006, to join forces with the different initiatives already in place, the UN General Assembly declared 2008 as the International Year of Planet Earth designating UNESCO as the leading agency. The focal point for this declaration is the organisation of activities to be undertaken through 2008. The goal is to encourage all UN Member States to take advantage of the Year of the Planet Earth to enhance existing initiatives.

The proclamation represents an opportunity for different stakeholders to work on topics related to the preservation of the planet. In fact, we are already in 2008 and not much is heard about the issue in Costa Rica. Actually, it is heard less about 2008 as the year of planet Earth than it is heard about the DESD which is not heard much either. After all, schools year started in February and schools have to follow the national curriculum.

In addition to the initiatives already taking place around the globe, UNESCO has its *Medium-Term Strategy Plan* (2007) for every six years which supports those initiatives. The document explains how UNESCO will pursue its objectives in governments, national commissions and other UNESCO partners. In particular, the strategy is structured around five programme-driven objectives: attaining quality education for all; mobilizing scientific knowledge and science policy for sustainable development; addressing emerging ethical challenges; promoting cultural diversity and intercultural dialogue; and building inclusive knowledge societies through information and communication.

Throughout the strategy, priority is given to contribute to enhance the achievement of established international goals, such as the DESD. Notably, by strengthening its presence in the field, UNESCO can be an important institution to encourage the execution of agreed goals set in the global arena and endorsed by UN country members.

Beyond these simultaneous initiatives, there is the Decade for a Culture of Peace (2001–2010) and the World Programme of Education in Human Rights started in 2005 by UN, which is still ongoing. All these initiatives, offer different, yet connected, paths to increase people's quality of life.

2.2 Building ESD in Latin America and the Caribbean

With respect to the implementation of the DESD in the Latin America and Caribbean region, the Earth Charter and UNESCO took the initiative to develop a regional plan for the region and promoted a gathering in San José, Costa Rica. The first draft of the document *Building Education for Sustainable Development in Latin America and the Caribbean* (or *Construyendo una Educación para el Desarrollo Sostenible En América Latina y el Caribe,* in Spanish), was presented on November 2, 2006 at the end of the gathering. In order to allow public participation, it remained open for discussion and recommendations until February 28, 2007.

Indeed, the plan recognises that the region is composed of different contexts. Therefore, each country is expected to elaborate and implement its strategy plan according to its context. In fact, the document states that 'each country should have to define who is responsible for the strategic principles in order to suggest the essential actions that support the [DESD], according to their own characteristics, interests, and possibilities' (ECI, 2007, p.6). The three factors: characteristics, interests, and possibilities can be very questionable.

However, during a visit on 4th of April 2008 to the Ministry of Public Education (MEP), the assistant to the Vice Minister of Education revealed that the document had been not pushed forward[7], confirmed by the director of the Earth Charter.[8]

Based on the latter finding, it is possible to see a lack of effort to elaborate a regional strategy plan. Although Costa Rica holds some responsibility for not moving forward on the elaboration of such plan, other governments share the same level of responsibility in creating and implementing a regional strategy plan. As example of a regional strategy, it can be cited the United Nations Economic Commission for Europe (UNECE), developed strategy for the region of Europe. "The aim of this Strategy is to encourage UNECE member States to develop and incorporate ESD into their formal education systems, in all relevant subjects, and in nonformal and informal education" (UNECE, 2005. p.2)

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[7] The current assistant to the Vice Minister of Education is Diana Borrás.
[8] Mirian Vilela is the Executive Director of the Earth Charter International Secretariat as well of the Center for Education for Sustainable Development at UPEACE. She has been at the forefront of this Initiative since 1996.

2.3 The Costa Rican National Commitment to the DESD

In 2006, the government of Costa Rica adopted the *Compromiso Nacional Sobre La "Década de la Educación Para el Desarrollo Sostenible"* (National Commitment to the Decade of Education for Sustainable Development). In this document, it is recognised that education is indispensable to generate a cultural change towards a SD. The Ministry of Education (2006) states that ESD would be fully approached by using the Earth Charter as a guiding set of principles.

Although the Costa Rican government has committed itself to elaborate coherent strategies to implement ESD, putting emphasis on issues such as poverty eradication, economic dynamism, andquality and relevant education, Costa Rica has not elaborated a strategy plan for the implementation of DESD in the country. Indeed, the Costa Rican government is working in areas related to ESD, but not in the framework of the DESD. According to the assistant to the vice Minister of Education, all efforts are towards the projects called "Ethics, Aesthetics and Citizenship" and "Peace and Environment." In the framework of the DESD, nothing was done.

There is a clear lack of commitment from the government towards the implementation of activities in the framework of the DESD; which reflects in the lack of outcomes. As a matter of fact, there is no working group, body of the government or even person tasked with implementation the DESD in Costa Rica.

The DESD represents a platform for all countries to join forces. While different initiatives are running at the same time, they do not represent a danger to each other, but an opportunity to join forces according to each context. The proclamation of 2008 as the Year of the Planet Earth and the importance given to all initiatives in the UNESCO Medium-Term Strategy represent an opportunity to strength the DESD in a continuous process.

Furthermore, initiatives such as the Earth Charter Initiative and ENSI that have been working towards ESD can offer a long-lasting framework for the implementation of the DESD.

Moreover, the finding that a regional strategy plan for Latin America and Caribbean for the implementation of the DESD is still lacking should not be seen as an embarrassment, but as a call to action. Furthermore, the government of Costa Rica should strengthen its actions to implement the commitment made to the DESD.

3. Education for Sustainable Development Indicators

At the same time as the term ESD gained some consistency, guidelines, plans, strategies and indicators to implement ESD started to be seen around the world. The DESD reinforced the need to create evaluation tools.

As there was not a specific tool to evaluate ESD in schools that used the Earth Charter material, the alternative was to seek among the already existing criteria and select the most relevant tool that could be used for evaluating ESD in primary schools. As the selection of an evaluation tool can be a determinant factor on the results of this investigation, it looked at indicators that had criteria that would allow both qualitative and quantitative analysis and be coherent to the researched material.

3.1 Asia-Pacific Guidelines of National ESD Indicators

UNESCO member states in the Asia-Pacific responded to the DESD in different ways, by launching programmes, as well as by seeking indicators to measure the implementation of the DESD. UNESCO Bangkok (2007) released the *Asia-Pacific Guidelines of National ESD Indicators*, which were considered when seeking an evaluation instrument to analyse ESD in Costa Rica. They presented a set of criteria for schools working on ESD, which could be used to assist schools to develop their own set of criteria.

In the *Asia-Pacific Guidelines of National ESD Indicators,* UNESCO Bangkok presents the *Quality Criteria for ESD-Schools*, published by ENSI, in 2001, as a systematic set of criteria to evaluate ESD in schools. It is part of a three-stage research programme called *School Development through Environmental Education* (SEED).

3.2 Quality Criteria for ESD-Schools

This set of criteria has already been used in Portugal and in the United Kingdom, by Manuel Gomes (2007), for evaluating ESD within the formal curriculum. As this set of criteria fulfilled the need of this investigation and has been tested in Europe, this research adopted the *Quality Criteria for ESD-Schools* to evaluate ESD in the sample of primary schools in Costa Rica which used the Earth Charter material.

The set of criteria can be used as a tool to orient schools to implement ESD. Moreover, ENSI (2005) points out that the set of criteria can be applied in any school, and indicates that it is not the final

answer, but a motivation for schools own visioning and planning. *The Quality Criteria for ESD-Schools* can be applied in schools working on ESD among the ENSI members and non members.

These criteria allow a comprehensive analysis of the teaching learning process using the material and the organisation of the school. Moreover they look at how schools develop and seek co-operation to develop initiatives to implement ESD. The different approach areas allow for a reliable qualitative and quantitative analysis of the data.

Moreover, it is supported by UNESCO Bangkok, which has developed valuable guidelines on how to assess the DESD. Among the relevant SD indicators considered to be used in this research, the *Quality Criteria for ESD-Schools* was the most useful. Since there are not criteria to evaluate ESD in Costa Rica schools, the *Quality Criteria for ESD-Schools* was adopted. The rationale which has led to the selection of the set of criteria as the evaluation tool for this research is that it considers three specific areas: quality criteria regarding the quality of teaching and learning process; quality criteria regarding the school policy and organisation; and quality criteria regarding the school's external relations.

II. Research Design and Approach

This research followed the content guidelines given by the department of Gender and Peace Education at United Nations affiliated University for Peace (UPEACE), in San José, Costa Rica, as part of the degree of Master in Peace Education.

This research looked at the use of the material *Aprendamos un Estilo de Vida sostenible con la Carta de la Tierra* (Learning About Sustainable Lifestyles Using the Earth Charter) distributed by the Earth Charter Centre of Education for Sustainable Development at UPEACE and the importance and levels of implementation of ESD in primary schools in Costa Rica, also as a contribution to the DESD.

4. Type of Research

In the past, traditional methods for measurement have relied on quantitative measures such number of schools or teachers, quantity of books or even number of hours children spent at schools or studying a specific subject. Those measures have provided valuable statistical indicators that allow different schools to be compared and changes tracked over time, but they were insufficient to provide the full extent of the change.

In order to evaluate the use of the Earth Charter material, different stakeholders were consulted. Teachers who have used the material completed a questionnaire regarding to the use of the material, Appendix II. The Earth Charter Questionnaire for Teachers. Furthermore, teachers were asked to complete a questionnaire containing the 52 quality criteria for ESD-Schools, Appendix III. Questionnaire: Quality Criteria for ESD-School. Furthermore, the visits to schools were recorded to collect extra data. Finally, the director of the Earth Charter Centre, was requested to complete a questionnaire with questions regarding the material.

4.1 Qualitative and Quantitative Analysis

This research employed a mixed methodology, both quantitative and qualitative analyses to understand what the documents propose in the context of this investigation. Both qualitative and quantitative data regarding the sample of schools emerged from the questionnaires used in this research.

Firstly, the declarations and the Earth Charter questionnaire for teachers were analysed with qualitative methods. Miller and Crabtree (1999), point out that qualitative methods allow analysing different variations and experiencing perceptions in an integral manner.

Secondly, the questionnaires were analysed with quantitative methods. The objective was to contrast the different areas and also to find out correlations that could provide reliable information. Data from the questionnaires based on the 52 ENSI's *Quality Criteria for ESD-Schools* (Appendix III-Questionnaire: 52 Quality Criteria for ESD-Schools) was analysed by using the Statistical Package for Social Science (SPSS) as well as Microsoft Excel. It allowed a comparative analysis to be done.

4.2 Research Ethics

It is relevant to mention the research ethics which were considered during the research procedure. This research analysed the information contained in documents, which is the responsibility of others. The collection of primary data was carefully done without causing any kind of harm to the participants during the research procedure. Although participants were requested to provide their names to legitimate the data, their names were not presented during the analysis to ensure confidentiality. In the same way, all sources were careful cited, as it is expected that any information from research is also referenced.

4.3 Research Instruments: The Questionnaire: Earth Charter Questionnaire for Teachers and Questionnaires: Quality Criteria for ESD-Schools

In order to collect a reliable and concrete amount of information, two questionnaires were used. Primary data was used to evaluate the Earth Charter material. One was the questionnaire created by the Earth Charter with questions regarding the application of the studied material and the second was a multiple choices questionnaire containing the 52 quality criteria for ESD-schools developed by ENSI.

The Earth Charter questionnaire for teachers contained open questions asking if the teacher had attended the introduction course on the material, the frequency which the teacher used the material in class, how they used it, strengths and weakness and suggestions to improve the material (Appendix II. The Earth Charter Questionnaire for Teachers).

The questionnaire containing the 52 quality criteria for ESD-schools has already been used in Europe. Manuel Gomes, researcher at the University of Lisbon used the criteria in primary schools in Portugal during the school year 2006/07, as well as in higher education institutions, UPEACE in Costa Rica and Kingston University in the United Kingdom. After the conclusion of this research, it is planned to compare the data collect in primary schools in Costa Rica and Portugal.

4.4 Data Collection and Sampling

All data was collected in the schools where the material was used. Appointments were arranged with teachers who used the material. Along with the data found in the questionnaires, the conversations with the teachers allowed for the collection information which teachers did not include in the questionnaire.

A sample of eight different primary schools in different parts of Costa Rica, which used the material, randomly chosen by the director of the Earth Charter Centre was visited. Moreover, two other schools which used the material were added to this research, completing a group of ten schools that used the material. As one of the ten schools did not complete the questionnaire 52 Quality Criteria for ESD-Schools, a school which did not use the material was included in this research; therefore it was possible to evaluate the importance and implementation of ESD in ten schools. Below, in Box 9a Sample of Schools, the eleven schools which participated in this research are presented.

Box 9a. Sample of Visited School

Date of the Visit	Name of the School
11/10/2007	Escuela Unidocente El Rodeo
02/11/2007	Escuela Los Ángeles de San Rafael de Heredia
12/11/2007	Escuela República de Guyana
21/11/2007	Escuela Proyecto Pacuare
22/11/2007	Escuela Lider de BriBri
26/11/2007	Escuela Cindea Tortuguero
28/11/2007	Escuela Rincón Grande de Pavas
29/11/2007	Escuela Juan Rafael Mora Porras
29/11/2007	Escuela Rogelio Fernández Guel
07/04/2008	Centro Educativo Santa María

III-Key Study

Chapter III looks at aspects of the researched material, from its elaboration to its distribution, teacher training and use. After data was collected, it was analysed and led to the concluding remarks and recommendations. The collected data is presented in a concise way to allow clear understanding.

5. Data Analysis

The collection of the literature around the concept SD started in September 2007. During my analysis of the documents, notes were made as well the writing process started. At the same time the Earth Charter and 52 Quality Criteria for ESD-Schools questionnaires (Appendix. II. The Earth Charter. Questionnaire for Teachers and appendix III- Questionnaire: 52 Quality Criteria for ESD-Schools) were ready in October 2008 and started to be completed. Since October 2007, the questionnaires started to be completed and analysed in parallel with the above documents.

In the questionnaire from the Earth Charter, teachers were asked how often and how they used the material, as well as for suggestions to improve the material. They were very concise when providing the data.

In the questionnaire 52 Quality Criteria for ESD-Schools, teachers were asked to rate the importance of the listed 52 criteria as 1.not important; 2.fairly important, 3.very important or not to answer if the teacher was unable to rate. In the second phase, teachers were asked to rate the implementation of these criteria in their schools. Number 0 represents not implemented and number 10 represents fully implemented, having this scale as base, it is possible to understand the presented values ranging from 0 to 10. See Appendix III. Questionnaire: Quality Criteria for ESD-School.

Although it was planned to collect data between February and May 2008, as the questionnaires were ready in October 2007, data started to be collected on November 10, 2007 and completed on May 02, 2008 (Box 9a. Sample of School), when started. The data collection started earlier than scheduled; however, it did not finish earlier. Due to different reasons, teachers had difficulties to schedule an appointment to talk about the material and complete the questionnaires. To start the data collection earlier than planned was a wise decision.

Data collected through the questionnaires was stored. The data in the Earth Charter questionnaire for teachers was entered in a Microsoft word document and later analysed in the process of this

research. The questionnaire containing the 52 quality criteria for ESD-Schools was entered in both SPSS and Excel worksheets.

5.1 Educational Materials for a Sustainable Living

Two workbooks the student book *Learning About Sustainable Lifestyles Using the Earth Charter* (2005) specifically designed for the Costa Rican formal educational curriculum, as well the teacher book *Educating for a more Sustainable lifestyle Using the Earth Charter* (2005**)** and an agenda as supporting material. The student and teachers books were the focus of this evaluation. 108 000 student books, 35 000 teacher books and 15 000 agendas were printed.

The project of elaboration of the educational material for sustainable living was undertaken between 2004 and 2005. The initiative came from the Earth Charter. The Earth Charter and its partners[9] made an in-kind contribution to the elaboration of the content, as well as to the teacher training course. The Japanese Embassy in Costa Rica funded the elaboration and printing. The material received the approval of the Minister of Education at the time, Manuel Antonio Bolaños Salas.

5.1.1 The Student Book: Learning About Sustainable Lifestyles Using the Earth Charter

The student book *Learning about Sustainable Lifestyles Using the Earth Charter*[10] is well structured and contains valuable content. The student book contains 72 pages divided in two chapters. The first chapter presents general concepts. In the following chapter, it is presented four themes: 1) sustainable human development; 2) respect to all forms of life; 3) conservation, protection and recuperation of the environment; and 4) prevention and mitigation of the human impact. There is also a glossary, answers for some of the proposed activities and the Earth Charter declaration. See Appendix IV. The Student Book's Table of Contents.

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[9] The Earth Charter's partners that contributed to the elaboration of this material were Univeridad Nacional, Museo del Niño, Universidad Estatal a Distancia, Ministry of Education, Ministry of Environment and Energy, the Japanese Embassy in Costa Rica and UPEACE.

[10] The student book title in Spanish is *Aprendamos un Estilo de Vida sostenible con la Carta de la Tierra*. It can be download for free from the Earth Charter's website: www.cartadelatierra.org/files/resources/Libro%20Estudiantes1.htm

5.1.2 The Teacher's Book: Educating for a More Sustainable Lifestyle Using the Earth Charter

In addition to the student book, the teacher book *Educating for a more sustainable lifestyle using the Earth Charter*[11] complemented the student book and can even be used on its own. It is structured in a similar way. It also contains a glossary, and the Earth Charter. As well, it contains appendixes and the bibliography which are not presented in the student book. Its content is structured in a way that teachers can work with students in any set without having received the student book.

5.1.3 Agenda

Although the agenda is not the subject of this research, it is important to mention it was created together with the two materials presented above. There are three main reasons why the agenda did not appear in this research. First, the main objective of this research was to look at the use of the student book. Secondly, students who received the agenda took it home becoming difficult to trace how they used it. Also students move to another school after the 6th grade, making it harder to track their activities. Moreover, among the ten schools which used the material, only two reported to have received the agenda.

The quality of both books is visible. The content, the illustrations and organisation are excellent; moreover, it has a high quality printing. The content is relevant and is presented in an easy way in which 4th and 5th grade students should have no difficulties to understand, the illustrations stimulate students, all in a systematic way. As a result, teachers did not face any difficulty when using the material. The question of whether or not the book was successful in educating children for a sustainable living rested in the hands of the teachers.

After examining this material carefully, which showed to be a valuable educational tool, I examined at distribution and teacher training regarding this material.

5.2 Distribution of the Material and Teacher Training

After printing, the material was equally divided among three different institutions: the Earth Charter, the Ministry of Education and Universidad Nacional. Each institution set its target group. Teacher training was also provided.

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[11] The teacher book title in Spanish is *Educar para un Estilo de Vida sostenible con la Carta de la Tierra*. It can be download for free from the Earth Charter's website: http://www.cartadelatierra.org/files/resources/ Libro%20Educar%20para%20un%20Estilo%20de%20Vida%20MAESTRO%20COSTA%20RICA1.htm

It was found that there was no a commonly defined target group. Actually, target groups were set according to the preference of each institution. No priority group was identified, such as schools in need of educational materials, i.e. the poorest or the most isolated schools in the country. It appeared that there is about 20% of the teacher books and about 3% of the student books in stock.

The Earth Charter targeted schools around UPEACE and Ciudad Colón, as well as schools in San José. The Ministry of Education targeted schools in the project Blue Flag, which is a project that works towards cleaner beaches, communities and schools. Universidad Nacional set different schools around the country.

According to information from the Earth Charter, teacher training was not uniform. While the Earth Charter sought to train all teachers in few schools, the Universidad Nacional aimed to train one or two teachers from many schools to increase its reach, with the rationale behind it being that the trained teacher would disseminate the material in their schools. Moreover, according to the documents consulted at the Earth Charter, there are still 5160 teacher books and 3275 student books to be distributed. The material was not proportionally printed and distributed.

5.3 Field Research in Costa Rica

During the field research, the sample of schools was visited between October 2007 and May 2008. Among the ten schools that have used the material, eight on the list were randomly given by the Earth Charter and two were added due to specific reasons. One school was visited in a remote area in the Caribbean Coast to find if the material had reached that region, although the school was not on the Earth Charter's list, they received the material from the Ministry of Education. The other added school was visited because they have not received the material from any of the institutions that was in charge of distributing the material, but used photocopied material from another school in San José. On top of the ten schools which used the Earth Charter material, a school which has not used the material was added to the sample. The reason is because school number 10a did not complete the Questionnaire: 52 Quality Criteria for ESD-schools. The school which did not use the material, 10b, completed the Questionnaire: 52 Quality Criteria for ESD-schools. After all, the schools were randomly codified and presented with a number.

Box 9b. Sample of Visited School Presented as a Number

School Number	Number of Students	Number of Teachers	Geographical Location

1	320	24	Urban Area
2	50	3	Rural Area
3	1860	116	Urban Area
4	80	5	Urban Area
5	285	15	Urban Area
6	1021	52	Urban Area
7	25	1	Rural Area
8	1068	46	Urban Area
9	1011	65	Urban Area
10a	170	6	Urban Area
10b	181	5	Rural Area
Total	**6071**	**338**	

The map of Costa Rica, presented below, shows the approximate location of these schools with narrows.
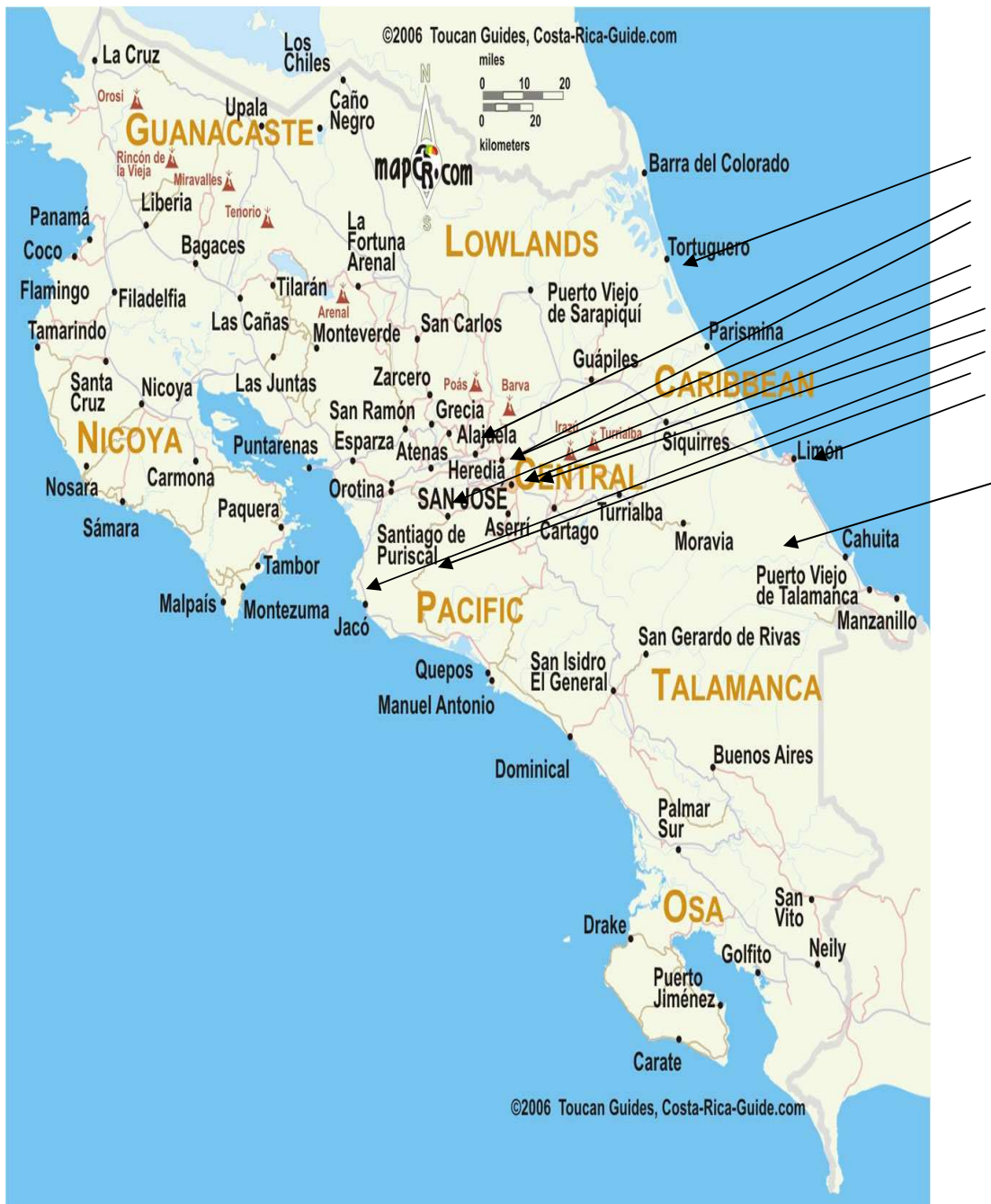
Map of Costa Rica. Retrieved July 01, 2008 from:http://costa-rica-guide.com/Costa-Rica-Map-large.jpg

5.3.1 Qualitative Analysis: The Earth Charter Questionnaire for Teachers

The data collected through the Earth Charter questionnaire for teachers provides an overview of the school, including information about the number of teachers and students, and the geographic location.

School 1

The first school to be analysed is an urban school with 320 students. The school has 24 teachers for the six grades. The first teacher interviewed about the use of Earth Charter material holds a master in "Education management with emphasis in leadership." She received teacher training and is familiar with all three materials. Moreover, she used the material with the same group of student during their 4th and 5th grade years. Actually, she taught this group of students from the 1st to the 6th grade. It probably allowed her to get to know students in much more depth than in all other cases presented here.

Regarding the material, she pointed out she received the teacher book and the student book. She thinks the teacher and the student books are a valuable resource and did not find any difficulty to use them in class. In fact, she points out that teaching experiences using the book should be systematized to improve the use of this material.

Moreover, she pointed out that not all people working in the field of education share values of caring for the human environment. She helps to promote ESD initiatives at school level; nevertheless, she considers that it has not been enough in that school. Indeed, she is very concerned with the quality of teaching and learning processes at school. [12]

When asked about the agendas, she said there were not enough agendas for all students, so she had to select the students which would receive the agenda. As a way to stimulate students to be active in class, she awarded agendas to the most committed students and one as a gift to a student returning to the USA, his country. Although the agenda was used to stimulate all students to participate in class, not all received the material.

In conclusion, she said the material was valuable to enhance the education process. And the material should be distributed continuously in every school year. Thus, it is seen that the books served to

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[12]On the day of the visit to collect data for this research, the student were visiting the local elderly home. She pointed it out as an example of the use of the community as a resource for teaching and learning. This visit is the outcome of school's external relations aiming to use the local community in a meaningful way.

encourage student's participation and experiential learning during the teaching and learning process. Nevertheless, it would be useful to seek ways to engage teachers in ESD to enhance the school policy and organisation in supporting ESD within the school.

School 2

In another example, a small rural school with 50 students and three teachers divided in 6 grades, the material was an important tool to complement the curriculum. The school received all three materials and used them with the 4th and 5th grade as a transversal edge to approach issues regarding the environment, issues such as recycling, contamination, moral values, sustainable development and cultural diversity, among others.

The teacher qualifies this material as a very useful supporting material which is easy for students to understand. She said students enjoyed the readings and highlighted that the illustration is very appealing. She complimented the material, saying that the illustrations are very important to capture the attention of the very young students who are still learning how to read.

Due to its rural geographical location, it is more likely that students feel more connected to the environment than students in urban schools. In a small rural school, the teaching and learning process is very connected to the community and this material served as an incentive to students who are considerably distant from a big city. This material served to illustrate problems in other parts of the country or even other parts of the world. The school has a notable closeness to the community and uses it as a teaching and learning space.

The teacher participated in the teacher training and considers the material easy to use and easy for students to understand. She also made a suggestion to improve the material saying that it should be distributed every year in the beginning of the school year. Moreover, she would like more in depth support to maximise the use of the book and even suggested to support the book with videos to help students to acquire a better understanding.

School 3

In this sample of 10 schools, this is the largest school with 1860 students and 116 teachers in an urban area. The teacher surveyed in this school is only familiar with the teacher and the student books. She also participated in the teacher training.

Regarding the use of the material, she said it is easy to embed the topics within the book in the school curriculum and gradually work with them, maturing student's ideas everyday rather than working it weekly or monthly.

Different from the previous teachers, this teacher used the material in a systematic way. She worked a different part every day, as an isolated material. She developed exercises based on them to be worked on in class. Students also created dramatisations when the topic allowed. As it is possible to see, although different teachers have different ways to use the material, they manage to include it in the curriculum and teach the principles in a smooth way. The teacher stated the material supported the implementation of ESD at school level.

She saw the material as a tool for teaching ESD and used to enhance the national curriculum. As it is large school, the policy and organisation of the school is set in systematic way that allowed the teacher's initiative to work with this material. She recommends the book to all educators and suggested that in order to give sequence to the teaching learning processes, the material should be distributed every year to new students.

School 4

School number 4 is an interesting example of a school taking initiative to implement ESD at the school level. I found this school is using the book when I saw the photocopy of the material in a stationary store. The school requested students to buy the photocopy of this material. This urban school, with 80 students and 5 teachers, started using the material after a teacher took the book to the school and presented it to the head teacher. The teachers became familiar when a colleague in another school was using the book.

 Although it has been used in black and white, the teacher said it has been meaningful in complementing the curriculum. As the school started using the material in the beginning of 2008 and is familiar only with the student book, it becomes difficult to evaluate the use of this material. On the other hand, it presents an interesting case to be examined.

The student book has been used in the values education class, which is part of the national curriculum. Education of values has represented a major challenge to teachers in other schools; in this school the book has been fulfilling this challenge. The teacher pointed out that the Earth Charter was not promoted enough to reach this school. This statement is based on the fact that the school is located in the nearest town to the town where the Earth Charter Secretariat is located.

The teacher expects this material to enhance the teaching learning process in different areas. The policy and organisation of the schools promotes an environment to enhance such process, as well as the relation with the community to develop information relevant to ESD. After the visit, the teacher book was provided to the head teacher of the school.

School 5

In order to look at different contexts, this research visited schools with different contextual conditions, which can be seen in this case. This school is located in region with different ethnic groups. The three major ethnic groups, in approximately same proportion, are European-descendent, Afro-descendent and Indigenous. In total they are 285 students taught by 15 teachers. The teacher participated in the teacher training and showed familiarity with the teacher and the student books.

The teacher, a lady from an indigenous group, emphasized that she used the student book to illustrate that a nation is composed of citizens from different backgrounds. She said that when teachers are prepared to deal with this kind of issue, children living from an early age with people from different ethnic backgrounds are likely to grow up without prejudices. She pointed out that the Earth Charter material contributed to prepare children to a harmonic integration in a globalising world.

Moreover, she asked students to consider local problems basing on student book's exercises. The teacher used the material with 4th and 5th grade students; they were asked to make an analysis of current problems of their community and seek possible solutions taking into consideration the student book. The teaching learning process is taking place considering the values of the different students.

Furthermore, the policy and organisation of the school considers the diverse environment and created an atmosphere for ESD. It is important to consider that this school serves as a model for the schools in the region where it is located. Community cooperation, networking and partnerships are an important factor.

Although she qualified the material as priceless supporting material, she suggests that teachers should be prepared to translate the material to Bribri, the mother tongue of the biggest group of indigenous people in Costa Rica. They compose a big part of the population in the school area.

School 6

School 6 presents 1021 students and 52 teachers. The major group of students in this school is of Afro-descendent. That is the predominant ethnic group in the area. The teacher, as the teacher in school 3, used the book in a systematic way. The teacher used the book in class exercises twice weekly followed by a discussion. The students had to analyse different questions, expose their ideas and views, and seek ways to address the given questions.

She did not find any difficulty to use the material, and pointed out that the illustrations are in accordance with the topics which alert us about the need to become more conscious of the reality of the world. The teacher said the book can be used in all subjects.

As a math teacher, she used it in math exercises. According to her, students do not value what they do not know; it is needed to know something to give value to it and the book's introduction to different issues that children must be aware of is a great start.

She said the book offers a dimension of opportunities which can be used by the students to make investigation outside school because it is a fantastic reference material. She also observed that there is a need to enhance the teacher training.

School 7

Among the schools visited, School number 7 is the smallest school, also. It is a small rural *escuela unidocente* (one teacher school), which is a very interesting example. Although the teacher, who teaches about 25 students, at six different levels, at the same time, did not participate in the teacher training, he used the Earth Charter materials on different occasions in individual and group activities in a very productive way.

He said the material complemented his classes, as well as extracurricular activities. He used this resource as much as possible incorporating it in the curriculum. He mentioned that students are very fond of the drawings; he said the illustrations are excellent. One of his students, who took home the last student book from the school, won a drawing competition. He pointed out the book as the inspiration.

As the school is located less than five minutes from a beach, the protection of the area is an issue which children are very aware of and this was reinforced by the material. This school is located about 100 metres from the beach and 800 metres from the Tarcoles River, the most polluted river in Costa Rica.

The teacher considers ESD as highly important and organises cleaning campaigns to clean the beach. Nevertheless, the pollution from across the country which arrives on the beach through the Tarcoles River. This teacher seeks to innovate teaching practices considering the environment which surrounds the school.

He concluded by saying the material is beautiful and well elaborated. He even requested more material for the new students coming in 2008, which was delivered when the school visited the Earth Charter at UPEACE. The trip was funded by the Earth Charter Youth Initiative. Also, he suggested the creation of specific material to be used with younger students, from 1st to 3rd Grade. He points out it would be beneficial if the size of the letter was bigger than 12 and letter type Century Gothic was used.

School 8

In school 8, two teachers that have used the material were visited; both participated in the teacher training. One of the teachers used the book with 4th grade students, the other teacher adapted the information in the books to the level of the younger students, from the first cycle (1st to 3rd grade), and so all students could benefit from this rich source of information. This is an urban school in the heart of San José that has 46 teachers and 1068 students.

Teacher 1, which used the material with 4th grade students, sees the material as a valuable educational resource, so rich that she used it in curricular and extracurricular activities. She points out that she created cards to be used in class, as well as an exposition based on the topics in the material. It is remarkable how she incorporated the principles within this material into the student's everyday life. An example was energy consumption. More than telling students that they should not waste electricity, she asked students to bring to the classroom the level of consumption of electricity of their home and looked for ways to reduce the levels of consumption by changing habits.

Moreover, teacher 2 said the material was very simple to understand and easy to be used in different activities. This shows that all teachers can use these books as supporting material to address different daily issues at the community levels. She uses the Earth Charter books as supporting material to make students aware, from an early age, that little things can either cause problems or contribute to a better world.

As an example of the activities, she mentioned the one in which information from this material was used to promote a discussion among students about the biological corridors in Costa Rica. Also,

when the drain in the middle of the school was blocked and the rain water could not be drained, causing a flood, she explained that it was due to litter in it, so students started to be conscious of the consequences of their actions.

Both teachers agreed that the material can be integrated in all subjects and they used it as much as possible. They were very grateful for the elaboration of this material. They pointed out the necessity to encourage students to construct their understanding of problems. They consider that the teaching and learning process must show the complexity of the problems, so students can be aware and be prepared for the future. They considered reflection and evaluation of ESD initiatives at the school as level very important and pointed out how sometimes it is difficult to engage teachers in ESD practices.

School 9

As in school 8, it was also possible to talk to two teachers that used the material; in this case both teachers used the material with 4th grade students, the target group. Both teachers used the student and the teacher book. Currently, the school has 1011 students and 65 teachers. The school is located about 1 kilometre from school 4; both schools are in the urban area.

Teacher 1 received teacher training and used the material several times for individual and group reading in Spanish classes, as well as for discussion groups reinforcing the subjects required by the Ministry of Education. She said the book was used as a way to address daily problems facing sustainable development. She said it is possible to use the material in activities which emphasized the everyday social reality of the community. Moreover, she used the book to instigate students to find out how daily life activities of each citizen are part of and can contribute to sustainable development.

Also, she not only said that the book contains important topics, but highlighted how the material creates awareness among students through its readings and examples on how to protect the environment. According to her, the best of the book is the creation of awareness among students, which makes them not only aware of current problems but teaches them how to deal with problems in the future.

Teacher 2, teacher of Spanish and social sciences, has not participated in the teacher training. However, it was not a problem when using the material. When using it in Spanish classes, he used the material for individual and group inferential reading to generate discussion groups, and to develop collage techniques. All exercises were focused on issues related to the social reality of the

community. Moreover, when teaching social studies, in groups, he developed activities related to social values. Each social value presented in the book was studied taking into consideration the current issues surrounding the student's reality which stimulated them to become active citizens in their own community.

According to the teacher, the material is very rich, diverse and very well prepared. The teacher not only requested books for the following school year, but also expressed that he would like to see new teachers to receive the training course and the material to expand the Earth Charter's initiative through the school. He emphasized the book as an uncomplicated material which did not present any difficulty. Although both teachers are satisfied with the material, they would like the Earth Charter to redistribute the book. Teacher 1 also suggested the creation of audio visual material, as pointed out by school 2.

School 10a

School 10a, an urban school with 170 students and 6 teachers is an outstanding example of a school working towards ESD among the schools that used the Earth Charter material. The teacher described how he used the material in the sciences class on a weekly basis. However, he made clear that instead of using the material as a separate material, he integrated the material in all subjects he teaches at the school, Spanish, maths, sciences and social sciences.

This school does not only teach ESD, but also implements sustainable practices around the school. The school has a recycling area, solar panels which are used to warm the students' meal, a vegetable garden and gardens with medicinal and ornamental plants. A large copy of the Earth Charter in the corridor and the three stars Blue Flag awarded by the Ministry of Education show the school's commitment to help students to be more conscious of the path to be followed for achieving a better world.

It can be seen that the material was welcomed and he is planning to use the material again in the 2008 school year. Nevertheless, he has not been using the material since the 2005 school year. His suggestion is the creation of material such as leaflets to complement the material.

Preliminary Conclusion for Qualitative Analysis

In all schools the material served its objective. Since there was not a continuous distribution of the material, however there was not a continuation. Indeed, this is the most frequent suggestion: more

books for the coming students. Teachers used the material according to their teaching plan; it showed the flexibility of the material when integrated in the curriculum. The material was easily adapted to different subjects.

The already existing Earth Charter questionnaire allowed to find out how teachers have used the material, nevertheless an evaluation tool that would allow an evaluation of the content of the book would have allowed a more systematic evaluation. Overall, the material is rich in resources and has been contributing to enhance ESD.

5.3.2 Quantitative Analysis: The Quality Criteria for ESD-Schools in Costa Rica

In order to look at ESD in the sample of primary school in Costa Rica, This research used along with the Earth Charter questionnaire for teachers, the questionnaire with the 52 quality criteria for ESD-schools (Appendix III for the Questionnaire: 52 Quality Criteria for ESD-Schools). By looking at how teachers see ESD, it was possible to see the importance of ESD values and how they interpret the implementation of ESD in their schools.

By looking systematically at the 52 criteria developed by ENSI, it is possible to analyse and compare the sample of schools visited for this research. In the first part of quality criteria questionnaire, teachers provided valuable data on importance of those criteria and, in the second part, they rated the level of implementation of those criteria in their school.

Data is presented on a scale ranging from 0 to 10. Also, it is significant to remember that the data was analysed based on areas and/or groups, not on an individual criterion. The lists of the areas are presented in their group in Box 10.Quality Criteria for ESD-Schools per areas, below.

The 52 quality criteria, developed by ENSI for ESD-schools, divided in 15 areas distributed in 3 different areas; 1) quality criteria regarding the quality of teaching and learning processes; 2) quality criteria regarding school policy and organisation; and 3)quality criteria regarding the school's external relations, were entered in an Excel worksheet. All data collected in each school was summed and divided by the number of criteria (15) to obtain the overall average.

As the scale for measuring the level of importance and implementation ranges from 0 to 10, numbers above 5 present a significant value to the quality criteria; the closer the criterion, area of criteria, or group of criteria is to number 10, the higher is the value of the quality criteria. On the other hand, numbers below 5 represents low levels of importance and/or implementation. The lower is the

number, the less value has the criterion, area of criteria or group of criteria. Number 0 represents "not implemented" and number 10 represents "fully implemented".

Box 10. Quality Criteria for ESD-Schools per areas

Group 1	Group 2	Group 3
Quality criteria regarding the quality of teaching and learning processes	**Quality criteria regarding school policy and organisation**	**Quality criteria regarding the school's external relations**
1. Area of teaching learning Approach **2.** Area of visible outcomes a school and in local community **3.** Area of perspectives for the future **4.** Area of a 'culture of complexity' **5.** Area of critical thinking and the language of possibility **6.** Area of value clarification and development **7.** Area of action-based perspective **8.** Area of participation **9.** Area of subject matter	**10.** Area of school policy and planning **11.** Area of school climate **12.** Area of school management **13.** Area of reflection and evaluation of ESD initiatives at school level	**14.** Area of community cooperation **15.** Area of networking and partnerships

Breiting, S., Mayer, M., Mogensen, F. (2001). Quality Criteria for ESD-Schools: Guidelines to enhance the quality of Education for Sustainable Development. Vienna. ENSI

5.3.2.1 School 1

Overall, the average level of importance of ESD is rated at 6.67 and the level of implementation at 5.94. According to the teacher, the group of criteria 1 plays the most important role in this school. This group was presented as the most important, as well the most implemented group at school.

Box11. Quality Criteria per group: School 1

	Group 1	Group 2	Group 3
	Quality criteria regarding the quality of teaching and learning processes	**Quality criteria regarding school policy and organisation**	**Quality criteria regarding the school's external relations**
Importance of the criteria	7.51	4.58	6.11
Level of Implementation	7.88	2.31	3.67

Source: Own Elaboration Based on Self research

While the most important is group 1, rated at 7.51, the lowest is group 2, rated at 4.58. It is seen that there is clear difference at levels of implementation. The implementation of group 1 was at 7.88, above its importance. At the same time, the implementation of the group 2 regarding to school policy and organization reaches only 2.31 on the scale.

Indeed, the group 2 presented the lowest level of importance and implementation, 2.31 and 4.58, respectively. The main two groups of criteria which are not relevant in group 2 are areas 12 and 13 (Area of school management and Area of reflection and evaluation of ESD initiatives at school level, respectively). Both are presented as low as 3.33, as well as their level of implementation at school, which are 0.33 and not at all, respectively. See Graphic 1. Quality Criteria per group: School.

Graphic 1. Quality Criteria per group: School
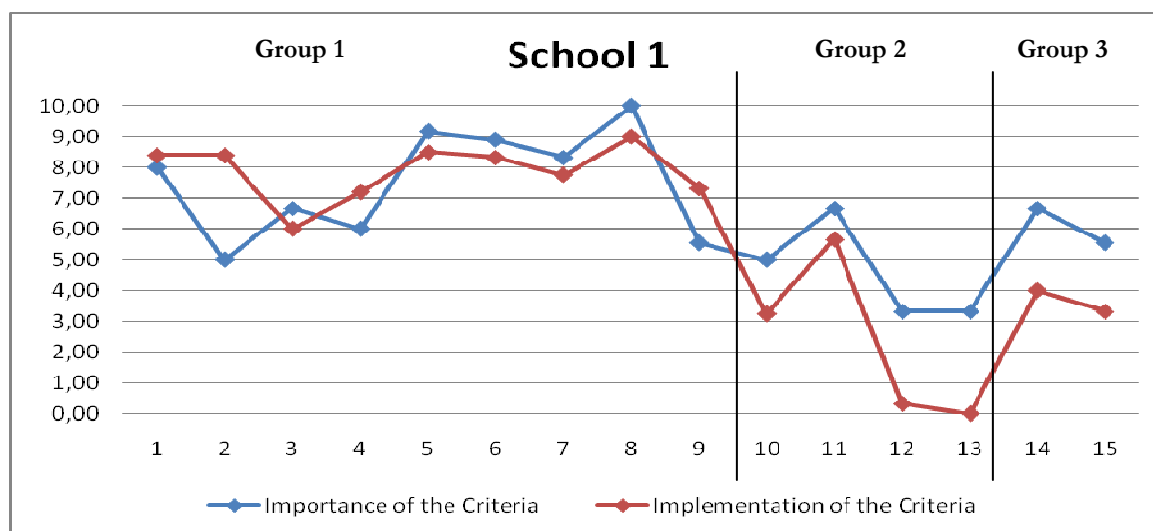
Source: Own Elaboration Based on Self research

5.3.2.2 School 2

When comparing school number 1 and school number 2, it is possible to find a significant difference. As a whole, this school rated the importance of the quality criteria at 8.14 and implementation at 7.05.

Box 12. Quality Criteria per group: School 2

	Group 1	Group 2	Group 3
	Quality criteria regarding the quality of teaching and learning processes	**Quality criteria regarding school policy and organisation**	**Quality criteria regarding the school's external relations**
Importance of the criteria	8.41	7.92	6.67
Level of Implementation	7.81	8.29	6.33

Source: Own Elaboration Based on Self research

Although both school 1 and school 2 gave high importance to the areas 4 (Area of a 'culture of complexity') and area 5 (Area of critical thinking and the language of possibility), there was a considerable difference between the level of importance and implementation. School 2 gave more importance to area 5 than school 1, but it is less implemented than in school 1. It is showing that there are differences–or perhaps perceptions- on the implementation of ESD. Graphic 2. Quality Criteria per group: School 2 presents that areas 12 (Area of school management) and 13 (Area of reflection and evaluation of ESD initiatives at school level) are highly important and are more implemented than in school 1. Even more, the level of implementation of area 13 goes beyond its level of importance. In comparison to school 1, area 13 is one of the most implemented areas.

Graphic 2. Quality Criteria per group: School 2

Source: Own Elaboration Based on Self research

44
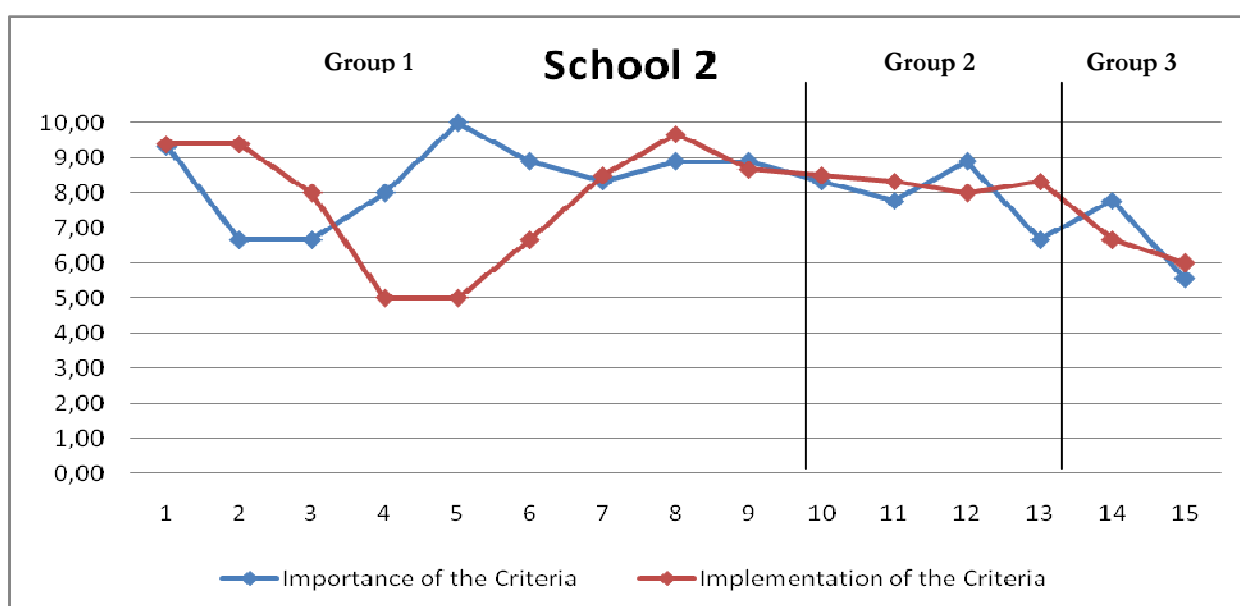
5.3.2.3 School 3

In school 3, different from the previous cases, according to the data, the level of implementation is far higher than the level of importance. The average level of importance is 7.05. However, the school scores on average 9.84 in terms of implementation. In this case, Box: 13 Quality Criteria per group. School 3 shows that the level of implementation of ESD goes above the importance of the ESD criteria. Moreover, this is the school with the highest level of implementation

Box 13 Quality Criteria per group. School 3

	Group 1	Group 2	Group 3
	Quality criteria regarding the quality of teaching and learning processes	Quality criteria regarding school policy and organisation	Quality criteria regarding the school's external relations
Importance of the criteria	7.16	6.67	8.33
Level of Implementation	9.88	9.75	10.00

Source: Own Elaboration Based on Self research

The only area which was ranked as 10, highly important was the area 2(Area of visible outcomes in school and in local community). See Graphic 3. Quality Criteria per group: School 3. Moreover, if we look at areas 14 and 15 (Area of community cooperation and area of networking and partnerships, respectively), which are regards to the school's external relations, it is possible to see that the school works closely with the community. The level of implementation of criteria regarding to the school's external relations is at 10, which seems to be the strength of the school when considering the quality criteria for ESD-schools.

Graphic 3. Quality Criteria per group: School 3

Source: Own Elaboration Based on Self research

45
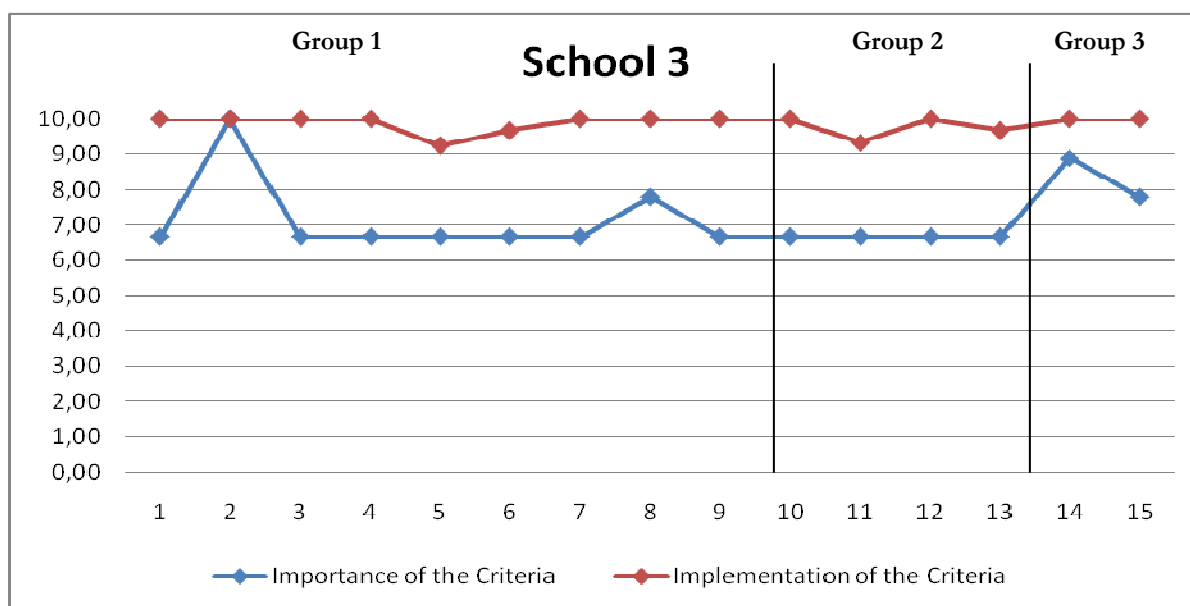
5.3.2.4 School 4

School 4 presents a clear strength on the implementation of two groups of criteria, groups 2 and 3. Paradoxically, the data presents figures showing that as overall, the level of implementation is higher than the level of importance. This finding is in Box 14. Quality Criteria per group: School 4.

Box 14. Quality Criteria per group: School 4

	Group 1	Group 2	Group 3
	Quality criteria regarding the quality of teaching and learning processes	Quality criteria regarding school policy and organisation	Quality criteria regarding the school's external relations
Importance of the criteria	6.60	9.72	8.33
Level of Implementation	8.59	9.83	9.17

Source: Own Elaboration Based on Self research

Indeed, by looking at the groups of criteria, we find that group 1 presents a substantial gap between importance and level of implementation. The gap is at 1.99 on the scale out of 10. In group 2 and group 3 the differences, respectively, are of only 0.11 and 0.84. The larger discrepancy lays in the figure in group 1, in which the teacher did not value the importance, but recognises its implementation. Graphic4. Quality Criteria per group: School 4 presents group 2 and group 3 as the most importance and implemented.

Graphic 4. Quality Criteria per group: School 4
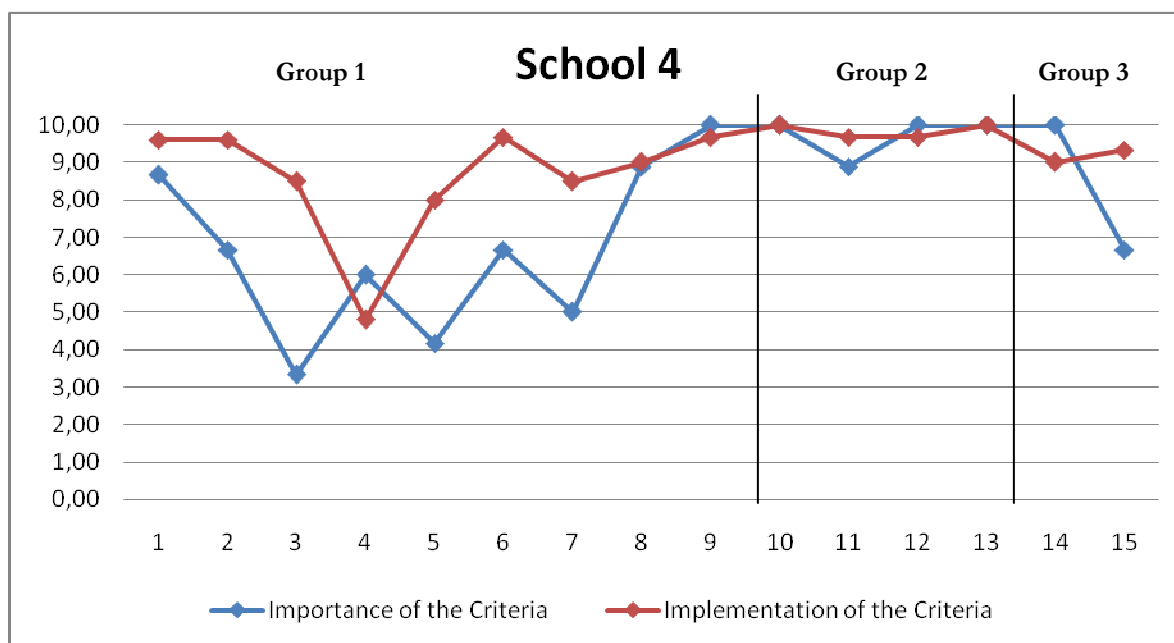
Source: Own Elaboration Based on Self research

5.3.2.5 School 5

Box 15. Quality Criteria per group. School 5 presents another case in which the implementation is higher than their importance. Among all schools, for group 3, this was the only that rated full importation and rated as full implemented. Indeed, school 5 presented to have the best external relations; it is rated at 10 out of 10 in both importance and level of implementation.

Box 15. Quality Criteria per group: School 5

	Group 1	Group 2	Group 3
	Quality criteria regarding the quality of teaching and learning processes	Quality criteria regarding school policy and organisation	Quality criteria regarding the school's external relations
Importance of the criteria	8.19	8.96	10.00
Level of Implementation	9.49	9.08	10.00

Source: Own Elaboration Based on Self research

Its lowest level of implementation is 9.08 on group 2; however, it goes above its level of importance in the school. This school is the school leader in the area; therefore, these results are not surprising.

Nevertheless, it is still interesting to see how teachers see the implementation of ESD criteria higher than their importance. It may seem paradoxical; however, it is seen that such schools are working towards ESD without labelling it as such. On other hand, Graphic 5. Quality Criteria per group: School 5 shows that the teacher did not give much importance to areas 6 (area of value clarification and development), 7 (area of action-based perspective) and 13 (area of reflection and evaluation of ESD initiatives at school level). It shows more importance or priority to different areas.

Graphic 5. Quality Criteria per group: School 5
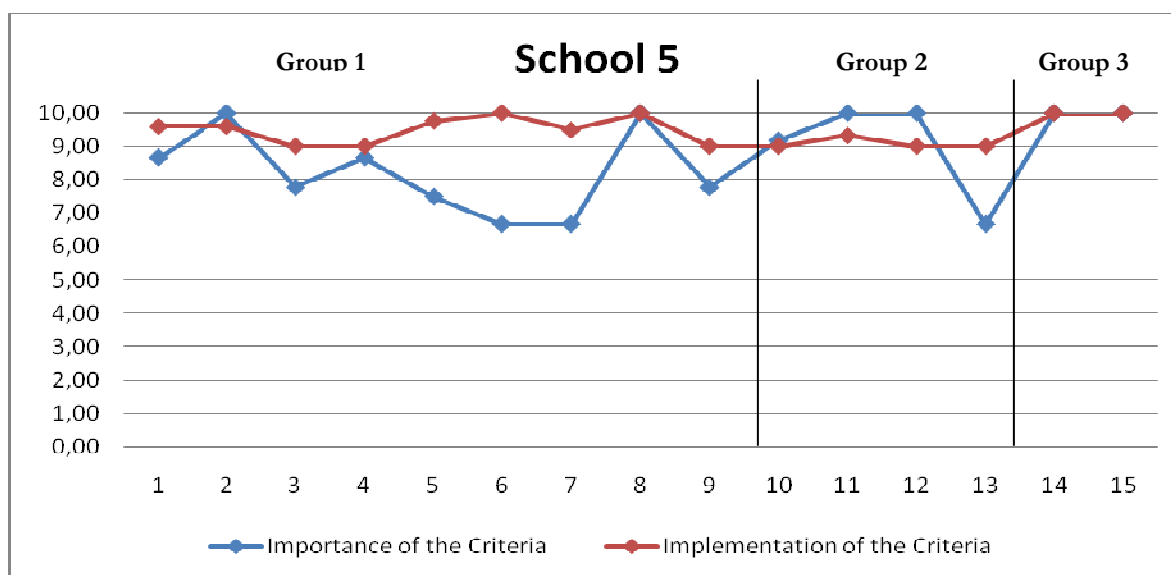
Source: Own Elaboration Based on Self research

5.3.2.6 School 6

Furthermore, Box 16. Quality Criteria per group. School 6 presents consistent and interesting levels of importance of criteria on group 2 and 3. The group 2 reaches 9.44 on importance and its level of implementation 8.83. Moreover, group 3 was seen as highly important, rated at 10 with its level of implementation at 9.17. In group 1 the level of implementation is nearly identical to its importance.

Box 16. Quality Criteria per group: School 6

	Group 1	Group 2	Group 3
	Quality criteria regarding the quality of teaching and learning processes	Quality criteria regarding school policy and organisation	Quality criteria regarding the school's external relations
Importance of the criteria	7.62	9.44	10.00
Level of Implementation	7.64	8.83	9.17

Source: Own Elaboration Based on Self research

When looking at the Graphic 6. Quality Criteria per group: School 6, it is possible to see that the data oscillates in group 1, area of criteria from 1 to 9. Although the level of implementation fluctuates in the 9 areas, the overall level of implementation is highly significant, it reaches its importance.

Furthermore, it becomes more unwavering in the group 2 of criteria, areas 10 to 12 (area of school policy and planning, area of school climate and area of school management respectively). Nevertheless, they are very close to their level of importance. Although the level of importance of group quality criteria 3 is rated at 10, the level of implementation does not reach the level of importance given by the teacher, as in group 1. On average they rate the level of implementation at 9.17, which is impressive compared to other schools.

Graphic 6. Quality Criteria per group: School 6
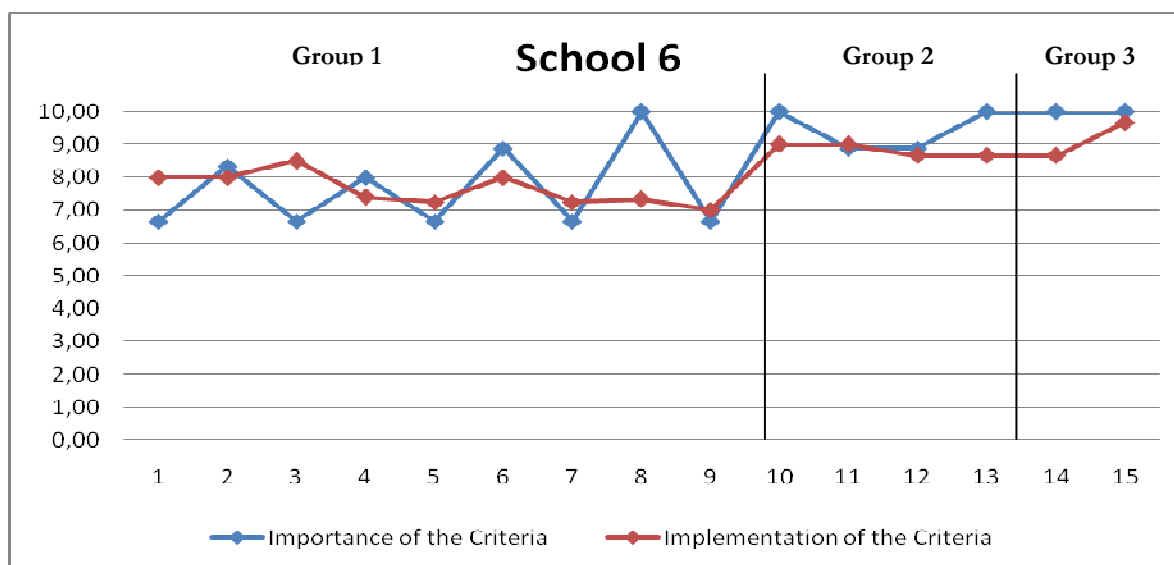
Source: Own Elaboration Based on Self research

5.3.2.7 School 7

When calculating the average of all quality criteria areas, school 7 gave 9.55 for the importance and rate their implementation at 8.29. In fact, Box. 17 Quality Criteria per group. School 7 shows that group 1 had the lowest level of importance; rated at 9.19, which is excellent as seen in school 6. Indeed, the teacher recognises that the levels of importance of those quality criteria as high. As overall, all the quality criteria regarding to ESD are seen as important.

Box 17. Quality Criteria per group: School 7

	Group 1	Group 2	Group 3
	Quality criteria regarding the quality of teaching and learning processes	Quality criteria regarding school policy and organisation	Quality criteria regarding the school's external relations
Importance of the criteria	9.19	10.00	10.00
Level of Implementation	8.85	7.29	7.83

Source: Own Elaboration Based on Self research

Among the sample of visited schools, school 7 has made clear that all areas are seen as very important, with exception of area 2 and area 3 (area of visible outcomes a school and in local community, and area of perspectives for the future), in group 1. See Graphic 7. Quality Criteria per group: School 7. Although this school does not reach the level of importance given to the areas, they have been implemented to a great extent. In areas 2 and 3, their level of implementation is higher than its level of importance.

Graphic7. Quality Criteria per group: School 7

Source: Own Elaboration Based on Self research

49
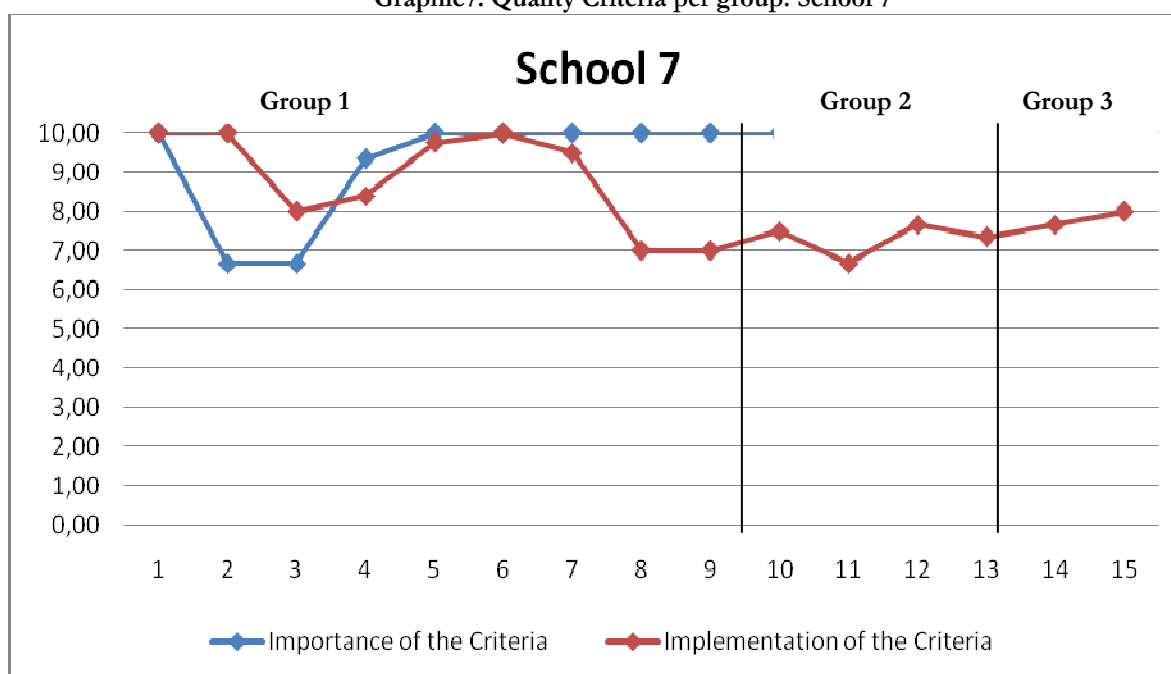
5.3.2.8 School 8

It is important to consider that here it is being dealt with the average of the data collected from the two teachers in the same school. The two questionnaires were combined. In contrast with the school presented above, school 8 places group 3 as the least important group of quality criteria, as well; its level of implementation is lower. Indeed, the levels of implementation of all groups of quality criteria present are much lower than their importance. See Box 18. Quality Criteria per group: School 8.

Box 18. Quality Criteria per group: School 8

	Group 1	Group 2	Group 3
	Quality criteria regarding the quality of teaching and learning processes	Quality criteria regarding school policy and organisation	Quality criteria regarding the school's external relations
Importance of the criteria	8.29	9.27	7.78
Level of Implementation	7.46	6.56	5.58

Source: Own Elaboration Based on Self research

When it is looked at Graphic 8. Quality Criteria per group: School 8, it is found that only area 3 (area of perspectives for the future), reaches the level of importance given by the teachers. Another area which goes along with the importance given by the teachers is area 5 (area of critical thinking and the language of possibility). In general, group 1 nearly matched implementation with importance. The importance of Area 5 was rated at 7.38 and its level of implementation at 7.50, a narrow gap. As a whole, if we look at the average of all rates, the implementation at this schools is 6.95 out of importance rated at 8.43.

Graphic 8. Quality Criteria per group: School 8

Source: Own Elaboration Based on Self research

50
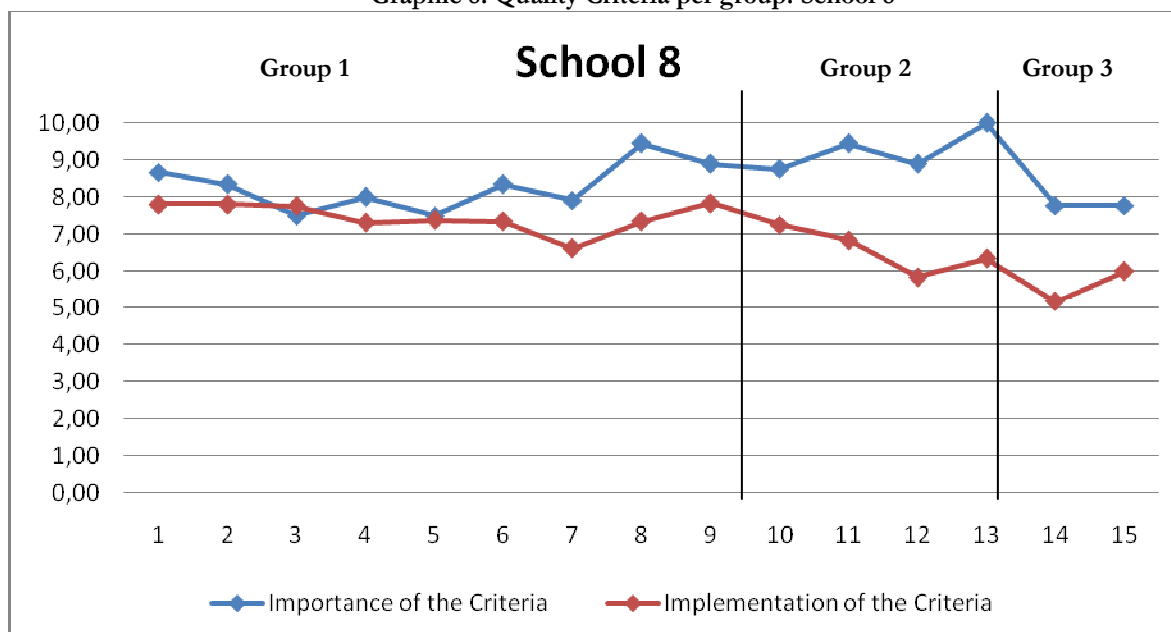
5.3.2.9 School 9

School 9, as in school 8, is also the combination of questionnaires from two teachers in the same school. In Box 19. Quality Criteria per Group. School 9, it is seen that group of criteria 2 and 3 reaches their level of importance; in the case of group 3 it is more surprising the given level of importance, than the fact that it reaches it level of implementation. In this school, there is not a large gap between importance and implementation. The other school which did not rate group 3 as very important was school 1.

Box 19. Quality Criteria per Group: School 9

|	Group 1	Group 2	Group 3
	Quality criteria regarding the quality of teaching and learning processes	**Quality criteria regarding school policy and organisation**	**Quality criteria regarding the school's external relations**
Importance of the criteria	7.57	6.98	5.83
Level of Implementation	7.31	7.09	6.17

Source: Own Elaboration Based on Self research

In Graphic 9. Quality Criteria per group: School 9 the biggest gap is 1.04, seen on area 10 (area of school policy and planning) which had its importance rated at 7.92 and has its level of implementation at 6.88. Contrasting, the school's average level of importance and implementation are much lower than most of the schools. On average, the level of importance was rated at 7.24 while the level of implementation was rated at 7.08.

Graphic 9. Quality Criteria per Group: School 9
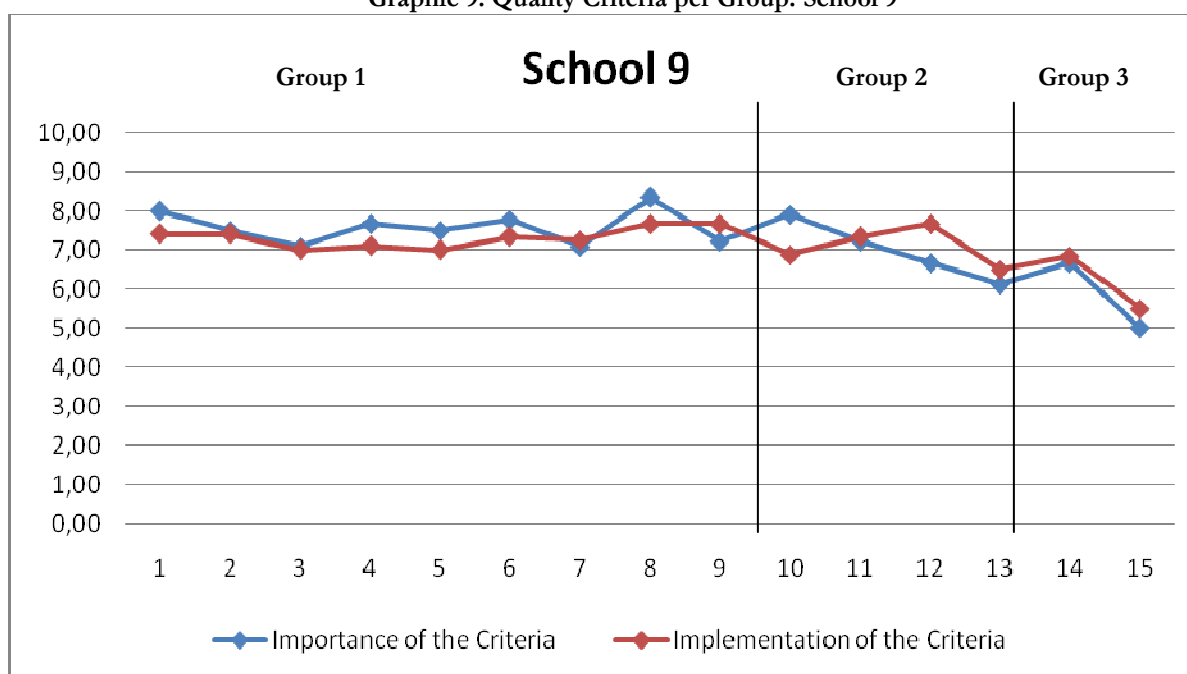
Source: Own Elaboration Based on Self research

5.3.2.10 School 10b

It is important to consider that school 10b did not use the Earth Charter material. Although the school did not receive the material, school 10b completed the questionnaire containing the 52 Quality Criteria for ESD-Schools. As school 10a did not complete nor showed any interest to complete this questionnaire, school 10b was added to this research. It allowed this research to evaluate the levels of importance and implementation of ESD in 10 Costa Rican schools. In Box. 20 Quality Criteria per Group. School 10b group 3, presented the level of implementation significantly higher than its level of importance. This school is in very small tourist town in a very isolated community. In order to reach this community from the capital San José, I took about 8 hours to reach the place (6 hours on land then approximately 2 hours by boat).

Box 20. Quality Criteria per Group: School 10b

	Group 1	Group 2	Group 3
	Quality criteria regarding the quality of teaching and learning processes	Quality criteria regarding school policy and organisation	Quality criteria regarding the school's external relations
Importance of the criteria	7.00	6.39	5.00
Level of Implementation	6.86	6.83	6.17

Source: Own Elaboration Based on Self research

Moreover, the data showed that the level of implementation of the groups 2 and 3 are above their importance. And the level of implementation of the group of criteria 1 is almost the same as its importance, with a gap 0.14. Graphic10. Quality Criteria per group: School 10b shows a constant level for both importance and implementation, the teacher give the same importance to all or was not prepared to answer the questionnaire.

Graphic 10. Quality Criteria per Group: School 10b
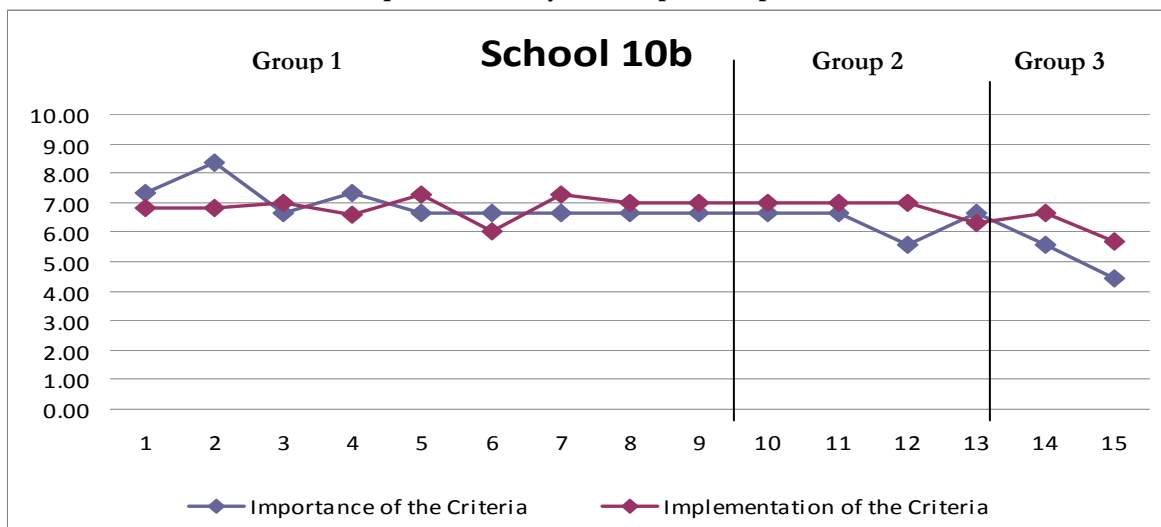
Source: Own Elaboration Based on Self research

5.3.2.11 Correlation

The correlation[13] between importance and implementation per area is presented in Box 21. Correlation of the Quality Criteria for ESD Schools per Area. It is possible to see a strong correlation between the levels of importance and implementation, as seen in areas 12, 14 and 15 (area of school management; area of community cooperation and area of networking and partnerships, respectively). Moreover, area 14 related to community cooperation and areas 1, 2 and 3, areas of teaching learning approach, of visible outcomes in school and in local community and of perspectives for the future, respectively. When importance is given to community cooperation, areas 1, 2 and 3 are also implemented; data shows that they correlated in over 72% of the cases. It demonstrates the link among these criteria and the influence in the teaching learning processes.

Although there may be no strong correlation between importance and implementation in the same area, they contribute to enhance or decrease other areas. The graphics showed that the levels of importance and implementation oscillate considerably. This does not mean that areas where there is not correlation there are not implementation. Below, below is the correlation between the importance and level of implementation of the quality criteria for ESD-schools per area. In this box, it is only presented the significant correlation amongst areas. Non-significant correlations were not presented in this box.

Box 21. Correlation of the Quality Criteria for ESD Schools per Area

		Correlation of the Quality Criteria for ESD Schools per Area					
		Importance					
	Areas	2	7	10	12	14	15
Implementation	1					72.80%	
	2					72.80%	
	3	71.90%				72.30%	
	6						67.30%
	10				71.80%	65.40%	
	11		68.80%			64.00%	
	12	63.80%		63.30%	68.90%		
	13			68.50%	76.20%		
	14	67.40%				70.90%	
	15	65.00%			67.20%		71.80%

Source: Own Elaboration Based on Self research

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[13] Correlation indicates the strength and direction of a linear relationship between variables measuring the degree of correlation.

5.3.2.12 Preliminary conclusion

First, although the fact that questionnaire Quality Criteria for ESD-Schools is relatively long with 52 criteria, only one school did not show any interest in completing this questionnaire.

The collected data oscillated vastly among different schools. In a few cases the level of implementation was higher than its level of importance. In many cases, teachers were working towards ESD without labelling it as such.

By visiting different schools, it was possible to experience the school's environment. By looking at the example of school 3, it is possible to see that the ambiguity between the teachers perspective on the *Quality Criteria for ESD-Schools* and its application at school. School 3 presented an outstanding level of implementation of the *Quality Criteria for ESD-Schools,* higher than their importance, and reported having made good use of the Earth Charter material. Nevertheless, when I arrived in the classroom, the teacher ordered all students to stay in a resting position; all students put their heads on their desks and stayed in silence during the 40 minutes I was there. It seems inappropriate to rate the level of quality of teaching and learning processes at 9.88 considering this authoritarian act.

For instance, schools 3, 7 and 10 presented very constant data. This could be just a coincidence that the level of importance and implementation followed a pattern, or they dir not completed the questionnaire 52 quality criteria for ESD-schools in serious away. The fact is, however, that they read all the questions, one by one.

As presented in Box 22, the average of the quality criteria of all data divided per group, the level of importance and implementation for quality criteria is quite high. It is seen that the schools which used the Earth Charter material highly value and implement ESD.

Box 22. Average of the Quality Criteria data from all schools per group

Average of the Quality Criteria data from all schools per group			
	Group 1	Group 2	Group 3
	Quality criteria regarding the quality of teaching and learning processes	Quality criteria regarding school policy and organisation	Quality criteria regarding the school's external relations
Importance of the criteria	7.78	8.37	7.99
Level of Implementation	8.21	8.17	7.82

Source: Own Elaboration Based on Self research

The average of the importance and level of implementation of the *Quality Criteria for ESD-Schools* criteria per area of all schools presents a narrow gap between importance and implementation. The biggest gap is on area 14, area of community cooperation, which has its importance rated at 5.86 and its level of implementation 7.27. It is considerably low when comparing to data from individual schools.

Graphic 11. Average of the 10 Schools per Area
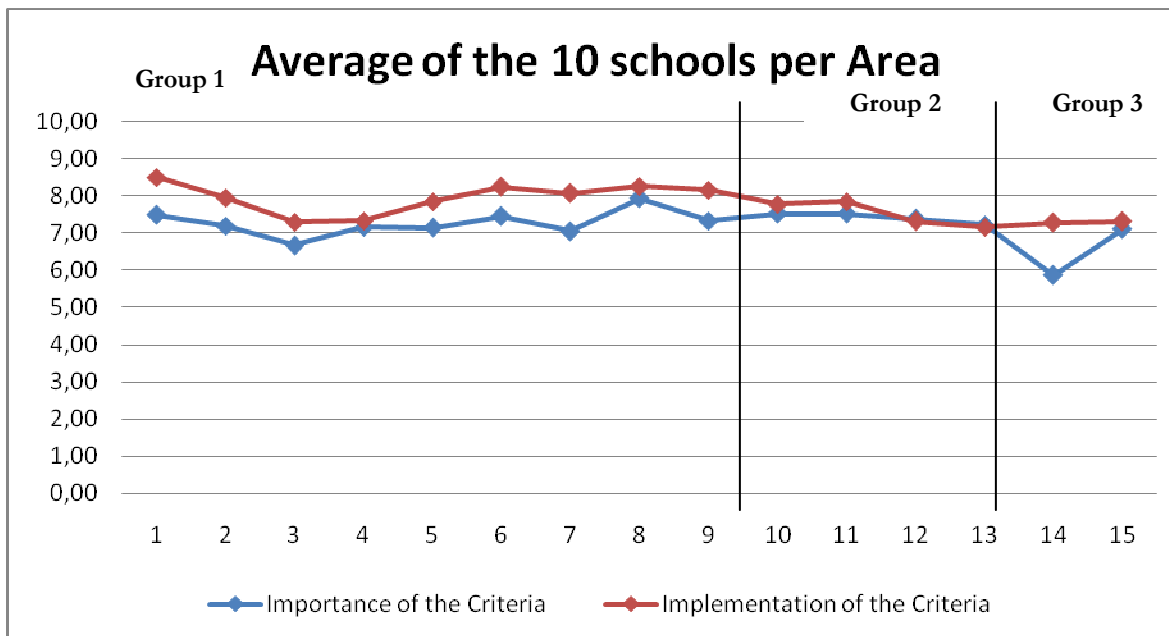
Source: Own Elaboration Based on Self research

SPSS has showed to be a useful tool when analyzing these questionnaires. The correlation between different *Quality Criteria for ESD-Schools* areas showed which areas are more interrelated in this research. The correlation reaffirmed the connection amongst different areas. In can be analysed deeper if each criteria are correlated rather than areas, which was not the aim of this research. The objective was to explore the areas of implementation. As example, there is a strong correlation between the importance of area 14 and the implementation of areas 1, 2, 3, which were above 72%, (area 1 of teaching learning Approach, area 2 of visible outcomes a school and in local community and area 3 of perspectives for the future).

6. Concluding Remarks

There are different observations that can be made to conclude this research. First, the concept sustainable development is still being debated around the globe. Despite the debate around it, efforts have been made to achieve a development which is sustainable since the 1970s. By looking at the progress since 1972, from the Conference on Human Environment until now, it is seen that the process to find a more appropriate path to develop is in constant evolution. Moreover, education was recognised as a tool for such achievement.

The declaration of the DESD in 2002 has served to strengthen the concept of sustainable development based on three pillars: environment, economy, and society. It also presented an opportunity for nations to come together and enhance ESD in all areas within and outside their borders. However, actions will depend on the will of different actors in the public, private and civil society sectors at different levels.

Although the Earth Charter made efforts to create a strategy plan for the Latin America and Caribbean region, the document *Building Education for Sustainable Development in Latin America and the Caribbean* was not pushed forward. As said earlier, action depends on the will of different actors, not only on the will of the Earth Charter.

Already existing initiatives such as the Earth Charter and ENSI can contribute immensely to the implementation of ESD, in addition to UNESCO Bangkok which has been working actively to promote the DESD. The guidelines and ESD indicators, published by UNESCO Bangkok, are a valuable tool to guide actors interested in working on ESD. The Quality Criteria for ESD schools used in this research was among the ESD indicators, which proved to be a valuable tool.

When the Costa Rican Ministry of Education was visited, it was found that there are no activities being carried out in the framework of the DESD. All activities related to ESD have been carried out according to pre-existing Costa Rican plans. It demonstrated that the document National Commitment to the Decade of Education for Sustainable Development has not accomplishing its aim, which is to work within the frame work of the DESD. Once more, the Quality Criteria for ESD schools showed to be an important tool. The MEP is considering using these criteria as guidelines for the schools seeking Blue Flag certification.

The Earth Charter Secretariat has been working actively to promote ESD with its partners. The material distributed in primary schools in Costa Rica is an example of its work. Nevertheless, the material was not distributed systematically to a specific target group. The distribution of the material

and teacher training was given in different ways. The Earth Charter focused on all teachers in fewer schools while the Universidad Nacional focused on few teachers in many schools.

According to the number of books in stock, it was seen that, although the teacher book can be used separately from the student book, they were not all distributed. According to data from February 2008, there are 5160 teacher books and 3275 student books in stock.

The Earth Charter material was described by teachers as a valuable tool. Teachers did not find any difficulty in incorporating the material in the national educational curriculum. Indeed, it complemented the requirements of the Ministry of Education. Suggestions from surveyed teachers such as creation of visual material, continuous teacher training and continuous distribution of the material, appeared repeatedly in this research.

The questionnaire based on the 52 quality criteria developed by ENSI[14] illustrated how teachers interpret ESD by pointing out the importance given to that set criteria, as well their perception on how they have been implemented at their schools. The perceptions fluctuate and differ from school to school. It was found a relation between using the community as a learning space and teaching learning process. Data showed there is a strong relation between the importance of area 14 and the implementation of other six areas 1, 2, 3, 10, 11 and 14. See Box 21. Correlation of the Quality Criteria for ESD Schools per Area in page 52.

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[14] The visited primary schools showed an openness to work with ESD. Among the ten schools which used the material, only school number 10 did not complete the questionnaire based on the *Quality Criteria for ESD-School*. It was stated that nobody was available to complete the questionnaire during the visit and they would forward it to the Earth Charter. Despite many attempts to collect this questionnaire during 3 weeks, I was always informed the questionnaire had not been completed and I should have to wait a bit more. Until June 2008, the day of the conclusion of the data analysis there was no response from the school.

7. Recommendations

As a way to improve ESD within the formal curriculum in Costa Rica, I recommend that the Ministry of Education create a hub to develop a strategy plan along with partners to work within the DESD's framework, as it has already committed itself. It would lead not only to a strategy plan at the national level, but also to the development of tools and methods considering the national context. It would reinforce ESD and highlight Costa Rican initiatives related to ESD. UNESCO is evaluating periodically the development of the implementation of ESD within the DESD framework. Since Costa Rica has not yet worked within the DESD framework, it would be of valuable importance.

Regarding the Earth Charter material, as this material proved to be of high quality, I recommend to reprint the material according to financial capacity, whether with fund from the Earth Charter or any of its partners. The number of books, if reprinted, should be proportionally printed considering the rate of students per teacher. Priority should be given to printing students books, which allows students to have direct contact with the material rather than teacher books. I also recommend the Earth Charter, in accordance with its partners, identify specify a group and ensure that all in this group receive the material and the teacher training. As many schools in Costa Rica lack financial resources, I recommend the Earth Charter to target schools in need, in particular schools in isolated areas. It would also be interesting to trace the distribution of material and report it the Japanese Embassy which funded the elaboration and printing of the material.

A recommendation which came from teachers is the redistribution of the material every year to allow new students to use it. There are books in stock there are students not using the material. This distribution should be well managed in a way they can be traced to allow the Earth Charter and its partners to know where was distributed, it was not meticulously done with the material already distributed. I recommend that an evaluation tool that allows for qualitative and quantitative data be created and distributed with the material.

Along with the distribution of material, it would also be interesting to have a teacher's guide with suggestions on how teachers could incorporate the material in class; it would be relevant to use local education books used in the national curriculum to demonstrate to teachers that the Earth Charter material is a supporting material rather than extra work. Furthermore, I recommend the creation of an audio-visual material which was pointed out as an asset by a number of teachers. Finally, I recommend the translation and adaptation of this material to students in other countries thought partnerships. I even recommend expanding this research carrying out additional researches. i.e. what factor(s) contribute to a school highly valuing and implementing ESD?

8. Afterword

Each school which contributed to this research received a letter, in Spanish, notifying this research has been concluded and that they could receive the digital copy of this research at any time.

As I have a personal interest to research ESD in depth and to use the ENSI's Quality Criteria for ESD-Schools, I am happy to share to any other research related to ESD, especially researches related to the Earth Charter material and the Quality Criteria for ESD-Schools.

I would like to express that I am planning to compare the qualitative data I have collect with the data collected in primary schools, in Portugal, through the same questionnaire. If another researcher would like to work with this questionnaire in a different country, more data would be compared. It would be interesting. I can be contacted by email marcosresearch@yahoo.co.uk

Marcos Roberto Estrada de Oliveira
San José, 08th of July 2008

9. Reference

Breiting, S., Mayer, M., Mogensen, F. (2001). *Quality Criteria for ESD-Schools: Guidelines to enhance the quality of Education for Sustainable Development*. Vienna. ENSI.

Chabbott, C. and Ramirez, F. (2006) *Development and Education: Handbooks of Sociology and Social Research*: New York: Kluwer Academic/Plenum.

Chomsky, N. (2003). *The function of Schools: Subtler and Cruder Methods of Control* in Saltman, K. & Gabbard, D. (Eds.), (2003) *Education as Enforcement: The Militarization and Corporation of Schools* (pp.24-25). New York. Routledge Falmer.

Corcoran, B. P. & Wals, A. (2004) *Higher Education and the Challenge of Sustainability Problematics, Promise, and Practice*. Dordrecht, Kluwer Academic Press.

Crabtree, B. and Miller, W. (1999) *Doing Qualitative Research*. London. Sage.

Earth Charter (2007) *Building Education for Sustainable Development in Latin America and the Caribbean*. Retrieved October 27, 2007, http://www.oei.es/decada/portadas/Estrategia.pdf

Earth Charter (2005) *Aprendamos un Estilo de Vida sostenible con la Carta de la Tierra*. San José Costa, Rica. Editorama.

Earth Charter (2005) *Educar para un Estilo de Vida sostenible con la Carta de la Tierra*. San José Costa, Rica. Editorama.

Earth Charter (2007) *Building Education for Sustainable Development in Latin America and the Caribbean*. Costa Rica, Earth Charter.

Earth Charter Initiative International Secretariat (2005) *Charting the way forward: Selected Cases of the Earth Charter in Motion*. San José. Earth Charter Initiative.

Earth Charter Initiative International Secretariat (2005) *Earth Charter Guidebook for Teachers: Bringing Sustainability into the Classroom*, San José. Earth Charter Initiative.

Earth Charter International. (2007) *EC-Assess: Earth Charter Ethics-Based Assessment Framework an Open-Source Application for Evaluating Initiatives, Projects, and Organizations*. Stockholm. Earth Charter International.

Edwards, R. A. (2006) *The Sustainability Revolution: Canada.*. New Society Publishers.

EU Commission (2008) What is the Lisbon Strategy for Growth and Jobs? Brussels. EU Commission. Retrieved January 21, 2008 from http://ec.europa.eu/growthandjobs/index_en.htm

EU Commission (2008) Sustainable Development. Brussels. EU Commission Environment DG. Retrieved January 21, 2008 from http://ec.europa.eu/growthandjobs/index_en.htm

European Commission Secretariat General (2004) *Final summary report: Evaluation of Approaches to Integrating Sustainability into Community Policies.* Brussels. European Commission.

Fien, J. (2003) *Education for Sustainability: Lessons Learnt From a Decade of Commitment from Rio to Johannesburg.* Paris: UNESCO.

Frank, G. (1969). *Capitalism and underdevelopment in Latin America. .* New York: Monthly Review Press.

Freire, P. (2000). *Pedagogy of the Oppressed.* New York: Continuum.

Gibson, R. B., Hassan, S., Holtz, S., Tansey, J., & Whitlaw, G. (2005). *Sustainability Assessment. Criteria, Processes and Applications.* London. Earthscan.

Gomes, M. (2007) *Report of a research in Education for Sustainable Development.C-SCAIPE and the Decade. From local to global.* Unpublished Informal Secondment, Kingston University, Kingston, Surrey.

Hicks, D. (1988) Education for Peace: issues, principles, and practice in the classroom. London and New York. Routledge.

Hulme, D. and Turner, M (1992). *Sociology and Development.* New York. Harvester.

IUCN, UNEP and WWF (1980): *World Conservation Strategy: Living Resource Conservation for Sustainable Development.* International Union for Conservation of Nature and Natural Resources, Gland.

Jickling, B. (1992), Why I Don't Want my Children to be Educated for Sustainable Development, *Journal of Environmental Education*, 23(4), 5-8.

John McCormick, The Global Environmental Movement (London: John Wiley, 1995) London. Sphere.

Ministerio de Educación Publica de Costa Rica (2007) *Compromiso Nacional Sobre La "Década de la Educación Para el Desarrollo Sostenible."*Costa Rica. Ministerio de Educación Publica de Costa Rica

OECD (2004). *Measuring Sustainable Development: Integrated Economic, Environmental and Social Frameworks.* Canada. OECD.

Redclift, M. (1987) *Sustainable Development: Exploring the Contradictions.* London. Routledge.

Schumacher, E. (1973) Small *is Beautiful: A Study of Economics as if People Mattered.* New York. Harper & Row.

The World Commission on Environment and Development (1987). *Our Common Future Report.* Oxford. Oxford University Press.

UN. (1972). *Declaration of the United Nations Conference on the Human Environment.* Stockholm: UN.

UNECO & UNEP (1977). *Intergovernmental Conference on Environmental Education.* USSR: UNESCO and UNEP.

UNESCO & EPD (1997) *Draft Thessaloniki Declaration. International Conference: Education and public Awareness for sustainability.* Thessaloniki. UNESCO and EPD.

UNESCO (2007) *Medium Term Strategy Draft for 2008 2013 (34 C/4).* Paris. UNESCO.

UNESCO Bangkok. (2007). *Asia-Pacific Guidelines for the Development of National ESD Indicators.* Bangkok. UNESCO Bangkok.

 UNESCO. (2005) *Draft International Implementation Scheme for The United Nations Decade of Education for Sustainable Development.* Paris. UNESCO.

United Nations. (1987). *Report of the World Commission on Environment and Development.* Retrieved October 27, 2007, from http://www.un.org/documents/ga/res/42/ares42-187.htm

Unite Nations (1992) *Environment and Development: Report of the United Nations Conference on Environment and Development: Rio Declaration on Environment and Development.* Rio de Janeiro. United Nations.

United Nations (2005) *International Implementation Scheme for the United Nations Decade of Education for Sustainable development.* Retrieved October 27, 2007 from http://www.senternovem.nl/mmfiles/Implementation%20Scheme%20DESD_tcm24-121648.pdf

United Nations (1992) *Report of The United Nations Conference On Environment And Development: Non-Legally Binding Authoritative Statement Of Principles For a Global Consensus On The Management, Conservation And Sustainable Development of All Types of Forests.* Rio De Janeiro. United Nations.

United Nations (2006) *Resolution adopted by the General Assembly: International Year of Planet Earth, 2008.* New York. United Nations.

United Nations. (2002). *Report of the World Summit on Sustainable Development.* Johannesburg. United Nations.

United Nations (1975) The *Belgrade Charter A Global Framework for Environmental Education.* Belgrade. United Nations.

UNECE (2005) *UNECE Strategy for Education for Sustainable Development .* Vilnius. United Nations.

UNESCO & UNEP (1987) *International Congress on Environmental Education and Training: International Strategy for Action.* UNESCO and UNEP. Moscow.

Yin, R. (2002) *Case Study Research: Design and Methods.* Thousand Oaks. Sage.

10. Appendixes

Appendix I. The Earth Charter

PREAMBLE

We stand at a critical moment in Earth's history, a time when humanity must choose its future. As the world becomes increasingly interdependent and fragile, the future at once holds great peril and great promise. To move forward we must recognize that in the midst of a magnificent diversity of cultures and life forms we are one human family and one Earth community with a common destiny. We must join together to bring forth a sustainable global society founded on respect for nature, universal human rights, economic justice, and a culture of peace. Towards this end, it is imperative that we, the peoples of Earth, declare our responsibility to one another, to the greater community of life, and to future generations.

Earth, Our Home

Humanity is part of a vast evolving universe. Earth, our home, is alive with a unique community of life. The forces of nature make existence a demanding and uncertain adventure, but Earth has provided the conditions essential to life's evolution. The resilience of the community of life and the well-being of humanity depend upon preserving a healthy biosphere with all its ecological systems, a rich variety of plants and animals, fertile soils, pure waters, and clean air. The global environment with its finite resources is a common concern of all peoples. The protection of Earth's vitality, diversity, and beauty is a sacred trust.

The Global Situation

The dominant patterns of production and consumption are causing environmental devastation, the depletion of resources, and a massive extinction of species. Communities are being undermined. The benefits of development are not shared equitably and the gap between rich and poor is widening. Injustice, poverty, ignorance, and violent conflict are widespread and the cause of great suffering. An unprecedented rise in human population has overburdened ecological and social systems. The foundations of global security are threatened. These trends are perilous—but not inevitable.

The Challenges Ahead

The choice is ours: form a global partnership to care for Earth and one another or risk the destruction of ourselves and the diversity of life. Fundamental changes are needed in our values, institutions, and ways of living. We must realize that when basic needs have been met, human

development is primarily about being more, not having more. We have the knowledge and technology to provide for all and to reduce our impacts on the environment. The emergence of a global civil society is creating new opportunities to build a democratic and humane world. Our environmental, economic, political, social, and spiritual challenges are interconnected, and together we can forge inclusive solutions.

Universal Responsibility

To realize these aspirations, we must decide to live with a sense of universal responsibility, identifying ourselves with the whole Earth community as well as our local communities. We are at once citizens of different nations and of one world in which the local and global are linked. Everyone shares responsibility for the present and future well-being of the human family and the larger living world. The spirit of human solidarity and kinship with all life is strengthened when we live with reverence for the mystery of being, gratitude for the gift of life, and humility regarding the human place in nature.

We urgently need a shared vision of basic values to provide an ethical foundation for the emerging world community. Therefore, together in hope we affirm the following interdependent principles for a sustainable way of life as a common standard by which the conduct of all individuals, organizations, businesses, governments, and transnational institutions is to be guided and assessed.

PRINCIPLES

I. RESPECT AND CARE FOR THE COMMUNITY OF LIFE

1. Respect Earth and life in all its diversity.

a. Recognize that all beings are interdependent and every form of life has value regardless of its worth to human beings.

b. Affirm faith in the inherent dignity of all human beings and in the intellectual, artistic, ethical, and spiritual potential of humanity.

2. Care for the community of life with understanding, compassion, and love.

a. Accept that with the right to own, manage, and use natural resources comes the duty to prevent environmental harm and to protect the rights of people.

b. Affirm that with increased freedom, knowledge, and power comes increased responsibility to promote the common good.

3. Build democratic societies that are just, participatory, sustainable, and peaceful.

a. Ensure that communities at all levels guarantee human rights and fundamental freedoms and provide everyone an opportunity to realize his or her full potential.

b. Promote social and economic justice, enabling all to achieve a secure and meaningful livelihood that is ecologically responsible.

4. Secure Earth's bounty and beauty for present and future generations.

a. Recognize that the freedom of action of each generation is qualified by the needs of future generations.

b. Transmit to future generations values, traditions, and institutions that support the long-term flourishing of Earth's human and ecological communities.

In order to fulfill these four broad commitments, it is necessary to:

II. ECOLOGICAL INTEGRITY

5. Protect and restore the integrity of Earth's ecological systems, with special concern for biological diversity and the natural processes that sustain life.

a. Adopt at all levels sustainable development plans and regulations that make environmental conservation and rehabilitation integral to all development initiatives.

b. Establish and safeguard viable nature and biosphere reserves, including wild lands and marine areas, to protect Earth's life support systems, maintain biodiversity, and preserve our natural heritage.

c. Promote the recovery of endangered species and ecosystems.

d. Control and eradicate non-native or genetically modified organisms harmful to native species and the environment, and prevent introduction of such harmful organisms.

e. Manage the use of renewable resources such as water, soil, forest products, and marine life in ways that do not exceed rates of regeneration and that protect the health of ecosystems.

f. Manage the extraction and use of non-renewable resources such as minerals and fossil fuels in ways that minimize depletion and cause no serious environmental damage.

6. Prevent harm as the best method of environmental protection and, when knowledge is limited, apply a precautionary approach.

a. Take action to avoid the possibility of serious or irreversible environmental harm even when scientific knowledge is incomplete or inconclusive.

b. Place the burden of proof on those who argue that a proposed activity will not cause significant harm, and make the responsible parties liable for environmental harm.

c. Ensure that decision making addresses the cumulative, long-term, indirect, long distance, and global consequences of human activities.

d. Prevent pollution of any part of the environment and allow no build-up of radioactive, toxic, or other hazardous substances.

e. Avoid military activities damaging to the environment.

7. Adopt patterns of production, consumption, and reproduction that safeguard Earth's regenerative capacities, human rights, and community well-being.

a. Reduce, reuse, and recycle the materials used in production and consumption systems, and ensure that residual waste can be assimilated by ecological systems.

b. Act with restraint and efficiency when using energy, and rely increasingly on renewable energy sources such as solar and wind.

c. Promote the development, adoption, and equitable transfer of environmentally sound technologies.

d. Internalize the full environmental and social costs of goods and services in the selling price, and enable consumers to identify products that meet the highest social and environmental standards.

e. Ensure universal access to health care that fosters reproductive health and responsible reproduction.

f. Adopt lifestyles that emphasize the quality of life and material sufficiency in a finite world.

8. Advance the study of ecological sustainability and promote the open exchange and wide application of the knowledge acquired.

a. Support international scientific and technical cooperation on sustainability, with special attention to the needs of developing nations.

b. Recognize and preserve the traditional knowledge and spiritual wisdom in all cultures that contribute to environmental protection and human well-being.

c. Ensure that information of vital importance to human health and environmental protection, including genetic information, remains available in the public domain.

III. SOCIAL AND ECONOMIC JUSTICE

9. Eradicate poverty as an ethical, social, and environmental imperative.

a. Guarantee the right to potable water, clean air, food security, uncontaminated soil, shelter, and safe sanitation, allocating the national and international resources required.

b. Empower every human being with the education and resources to secure a sustainable livelihood, and provide social security and safety nets for those who are unable to support themselves.

c. Recognize the ignored, protect the vulnerable, serve those who suffer, and enable them to develop their capacities and to pursue their aspirations.

10. Ensure that economic activities and institutions at all levels promote human development in an equitable and sustainable manner.

a. Promote the equitable distribution of wealth within nations and among nations.

b. Enhance the intellectual, financial, technical, and social resources of developing nations, and relieve them of onerous international debt.

c. Ensure that all trade supports sustainable resource use, environmental protection, and progressive labor standards.

d. Require multinational corporations and international financial organizations to act transparently in the public good, and hold them accountable for the consequences of their activities.

11. Affirm gender equality and equity as prerequisites to sustainable development and ensure universal access to education, health care, and economic opportunity.

a. Secure the human rights of women and girls and end all violence against them.

b. Promote the active participation of women in all aspects of economic, political, civil, social, and cultural life as full and equal partners, decision makers, leaders, and beneficiaries.

c. Strengthen families and ensure the safety and loving nurture of all family members.

12. Uphold the right of all, without discrimination, to a natural and social environment supportive of human dignity, bodily health, and spiritual well-being, with special attention to the rights of indigenous peoples and minorities.

a. Eliminate discrimination in all its forms, such as that based on race, color, sex, sexual orientation, religion, language, and national, ethnic or social origin.

b. Affirm the right of indigenous peoples to their spirituality, knowledge, lands and resources and to their related practice of sustainable livelihoods.

c. Honor and support the young people of our communities, enabling them to fulfill their essential role in creating sustainable societies.

d. Protect and restore outstanding places of cultural and spiritual significance.

IV. DEMOCRACY, NONVIOLENCE, AND PEACE

13. Strengthen democratic institutions at all levels, and provide transparency and accountability in governance, inclusive participation in decision making, and access to justice.

a. Uphold the right of everyone to receive clear and timely information on environmental matters and all development plans and activities which are likely to affect them or in which they have an interest.

b. Support local, regional and global civil society, and promote the meaningful participation of all interested individuals and organizations in decision making.

c. Protect the rights to freedom of opinion, expression, peaceful assembly, association, and dissent.

d. Institute effective and efficient access to administrative and independent judicial procedures, including remedies and redress for environmental harm and the threat of such harm.

e. Eliminate corruption in all public and private institutions.

f. Strengthen local communities, enabling them to care for their environments, and assign environmental responsibilities to the levels of government where they can be carried out most effectively.

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14. Integrate into formal education and life-long learning the knowledge, values, and skills needed for a sustainable way of life.

a. Provide all, especially children and youth, with educational opportunities that empower them to contribute actively to sustainable development.

b. Promote the contribution of the arts and humanities as well as the sciences in sustainability education.

c. Enhance the role of the mass media in raising awareness of ecological and social challenges.

d. Recognize the importance of moral and spiritual education for sustainable living.

15. Treat all living beings with respect and consideration.

a. Prevent cruelty to animals kept in human societies and protect them from suffering.

b. Protect wild animals from methods of hunting, trapping, and fishing that cause extreme, prolonged, or avoidable suffering.

c. Avoid or eliminate to the full extent possible the taking or destruction of non-targeted species.

16. Promote a culture of tolerance, nonviolence, and peace.

a. Encourage and support mutual understanding, solidarity, and cooperation among all peoples and within and among nations.

b. Implement comprehensive strategies to prevent violent conflict and use collaborative problem solving to manage and resolve environmental conflicts and other disputes.

c. Demilitarize national security systems to the level of a non-provocative defense posture, and convert military resources to peaceful purposes, including ecological restoration.

d. Eliminate nuclear, biological, and toxic weapons and other weapons of mass destruction.

e. Ensure that the use of orbital and outer space supports environmental protection and peace.

f. Recognize that peace is the wholeness created by right relationships with oneself, other persons, other cultures, other life, Earth, and the larger whole of which all are a part.

THE WAY FORWARD

As never before in history, common destiny beckons us to seek a new beginning. Such renewal is the promise of these Earth Charter principles. To fulfill this promise, we must commit ourselves to adopt and promote the values and objectives of the Charter.

This requires a change of mind and heart. It requires a new sense of global interdependence and universal responsibility. We must imaginatively develop and apply the vision of a sustainable way of life locally, nationally, regionally, and globally. Our cultural diversity is a precious heritage and

different cultures will find their own distinctive ways to realize the vision. We must deepen and expand the global dialogue that generated the Earth Charter, for we have much to learn from the ongoing collaborative search for truth and wisdom.

Life often involves tensions between important values. This can mean difficult choices. However, we must find ways to harmonize diversity with unity, the exercise of freedom with the common good, short-term objectives with long-term goals. Every individual, family, organization, and community has a vital role to play. The arts, sciences, religions, educational institutions, media, businesses, nongovernmental organizations, and governments are all called to offer creative leadership. The partnership of government, civil society, and business is essential for effective governance.

In order to build a sustainable global community, the nations of the world must renew their commitment to the United Nations, fulfill their obligations under existing international agreements, and support the implementation of Earth Charter principles with an international legally binding instrument on environment and development.

Let ours be a time remembered for the awakening of a new reverence for life, the firm resolve to achieve sustainability, the quickening of the struggle for justice and peace, and the joyful celebration of life.

ORIGIN OF THE EARTH CHARTER

The creation of the Earth Charter was directed by the independent Earth Charter Commission, convened as a follow-up to the 1992 Earth Summit in order to produce a global consensus statement of values and principles for a sustainable future. The document was developed over nearly a decade through an extensive process of international consultation, to which over five thousand people contributed. The Charter has been formally endorsed by thousands of organizations, including UNESCO and the World Conservation Union (IUCN). For more information, please visit www.EarthCharter.org*.*

Appendix II. The Earth Charter. Questionnaire for Teachers

CUESTIONARIO PARA MAESTROS (AS):
Educación para un Estilo de Vida Sostenible con la Carta de la Tierra

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Introducción: Este cuestionario es para obtener su valiosa retroalimentación acerca del material educativo de la Carta de la Tierra distribuido en su escuela. De antemano, muchas gracias por tomar 10 minutos de su valioso tiempo para responder a estas preguntas!

Nombre:

Escuela (y título):

Materia y grado que enseña:

A) Por favor marque las casillas correspondientes al material con el cual usted está familiarizado(a):
 ^ Guía para el (la) Maestro(a) ^ Libro de Trabajo del Estudiante ^ Agenda

B) Participó en una sesión de entrenamiento para la utilización del material?:
^ Sí ^ No

C) Qué tan frecuentemente utilizó los materiales para sus actividades en clase? :
 ^ No tuve tiempo ^ 1-3 veces ^ 3-5 veces ^ 6-10 veces ^ Más de 10 veces

D) Si utilizó los materiales, por favor díganos más acerca de cómo los utilizó.

....
....
....
....
....

E) Cuál fue la mejor parte? Encontró algunas dificultades?

....
....
....
....
....
....

F) Apreciaríamos cualquier sugerencia que nos brinde acerca de cómo mejorar los materiales o el proceso de distribución y entrenamiento.

....
....
....
....
....

Muchas gracias por tomarse el tiempo para llenar este formulario! Su opinión es muy importante.

Appendix III. Questionnaire: Quality Criteria for ESD-School.

Criterios de calidad para Escuelas-EDS

Nombre:_____ Fecha: _____

Escuela y dirección: _____

Número de estudiantes _____ Número de educadores _____

Evaluación del grado de adaptación de los Criterios de Calidad para Escuelas de Educación para el Desarrollo Sostenible.

Señale el grado de interés para cada uno de los criterios de calidad teniendo en cuenta su adaptación a la realidad de las escuelas de Costa Rica, conforme a la siguiente escala de valores:

I. Criterios de calidad relacionados con la calidad los procesos de enseñanza y aprendizaje
1 – Sin interés; 2 – Con interés; 3 – Con mucho interés

Área	Criterios de calidad	1	2	3
1. Criterios de calidad relacionados con la calidad de los procesos de enseñanza y aprendizaje	1. Los profesores escuchan y valoran las preocupaciones, experiencias y deseos de los estudiantes, y sus planes son flexibles y abiertos al cambio.			
	2. Los profesores fomentan el aprendizaje cooperativo y el aprendizaje experimental.			
	3. La enseñanza tiene en cuenta el valor de las actividades prácticas, relacionándolas con el desarrollo conceptual y la construcción teórica de los alumnos.			
	4. Los profesores facilitan la participación de los estudiantes y proveen a los estudiantes de contextos para el desarrollo de su propio aprendizaje, ideas y perspectivas.			
	5. Los profesores buscan maneras de evaluar y ayudar a los estudiantes para lograr los criterios mencionados anteriormente.			
2. Criterios de calidad en el área de los resultados visibles en la escuela y en la comunidad local	6. Los cambios físicos /técnicos en la escuela y en la comunidad local, relevantes para la EDS, se ven como una oportunidad para la enseñanza y el aprendizaje y se utilizan como medios de participación y de toma de decisiones.			
	7. Los cambios obtenidos y los resultados logrados en la escuela y en la comunidad local se alimentan y se mantienen.			
3. Criterios de calidad en el área de las perspectivas para el futuro	8. Los estudiantes trabajan con visiones y escenarios, buscando caminos alternativos al desarrollo y cambios para el futuro y creándose criterios de decisión.			
	9. Los estudiantes se involucran comparando efectos a corto y largo plazo de las decisiones y de las alternativas.			
	10. Los estudiantes buscan relaciones con el pasado, el presente y el futuro, de manera que logran una comprensión histórica del tema tratado.			
	11. Los estudiantes trabajan en la planificación como una manera de reducir riesgos en el futuro y de aceptar la incertidumbre.			

4. Criterios de calidad en el área de una "cultura de la complejidad"	12. Los estudiantes trabajan en construir su comprensión del problema, buscando los diferentes intereses y puntos de vista, antes de encontrar la solución.			
	13. La enseñanza en todas las asignaturas está basada en la búsqueda de las relaciones, influencias múltiples e interacciones.			
	14. Los estudiantes tienen la oportunidad de apreciar y enfrentarse con la diversidad - biológica, social, cultural - y tratarla como oportunidades para ampliar sus opciones de cambio.			
	15. Se incentivan a los estudiantes a escuchar sus propias emociones y a usarlas como manera de alcanzar un conocimiento más profundo de los problemas y situaciones.			
	16. Los estudiantes y profesores aceptan la incertidumbre como parte de la vida diaria y se preparan para "recibir lo inesperado y poder afrontarlo", siendo conscientes de la importancia del principio de cautela.			
5. Criterios de calidad en el área del pensamiento crítico y el lenguaje de la posibilidad	17. Los estudiantes trabajan con relaciones poderosas y conflictos de intereses, por ejemplo, en la situación local, entre países, entre las generaciones pasadas y futuras.			
	18. Los estudiantes son incentivados a mirar las cosas desde diferentes puntos de vista y a desarrollar la certeza identificándose con otros.			
	19. Se incentiva a los estudiantes a dar argumentos para las diferentes posiciones.			
	20. Se incentiva a los estudiantes a buscar ejemplos de lo que es (o era) útil y exitoso en otras situaciones, de manera que pueden imaginar nuevas posibilidades y acciones alternativas.			
6. Criterios de calidad en el área de la clarificación del valor y el desarrollo	21. Los estudiantes trabajan con la diferencia entre el conocimiento facultativo y las opiniones basadas en valores, e investigan los valores e intereses detrás de ellos.			
	22. Los profesores se centran en la clarificación de los estudiantes y en la discusión de sus propios valores, reforzando la reflexión, el respeto mutuo y la comprensión de otros valores.			
	23. Los profesores aceptan el reto de no imponer sus propios valores y opiniones, permitiendo a los estudiantes mantener su posición.			
7. Criterios de calidad en el área de la perspectiva basada en la acción	24. El trabajo de los estudiantes en temas y acciones se ve como un valor educativo y no únicamente como una manera de resolver problemas reales.			
	25. Los estudiantes participan en decisiones con la finalidad de influenciar sobre el problema y aprenden de la reflexión sobre sus experiencias.			
	26. La enseñanza se centra en estrategias auténticas de acción, en posibilidades de acción y en la experiencia de acciones reales.			

Área	Criterios de calidad	1	2	3
	27. La implicación de los estudiantes en la acción se acompaña de reflexiones sobre los efectos locales y globales, de comparaciones de riesgos y de posibles alternativas de decisión.			
8. Criterios de calidad en el área de la participación	28. Los profesores se centran en las capacidades de los alumnos para llevar a cabo participaciones y cooperaciones significativas (por ejemplo, escuchando, expresando su punto de vista, tomando responsabilidad y mostrando solidaridad).			
	29. Los profesores permiten a los estudiantes tomar parte del proceso de decisión, apropiado a la edad de los estudiantes y a sus habilidades.			
	30. Los estudiantes adquieren experiencia en los procesos democráticos de participación.			
9. Criterios de calidad en el área de la materia del tema	31. Los profesores en la EDS se centran en problemas y temas. La asignatura debe ser funcional y relevante para la comprensión de la complejidad del tema, por parte de los alumnos.			
	32. Las teorías y los conceptos de las disciplinas académicas se utilizan para racionalizar los conocimientos experimentales, a menudo, ingenuos y sin crítica.			
	33. Los profesores buscan ideas y perspectivas en la EDS para reactivar e innovar la enseñanza y el aprendizaje en las asignaturas tradicionales.			

II - Criterios de calidad relacionados con la política y la organización de la escuela.
1 – Sin interés; 2 – Con interés; 3 – Con mucho interés

Área	Criterios de calidad	1	2	3
10. Criterios de calidad en el área de la política y la planificación de la escuela	34. La escuela se centra en la EDS, en sus estatutos y en su plan anual de acción.			
	35. Los responsables escolares fomentan el uso de perspectivas futuras para planificar su trabajo de EDS a largo plazo.			
	36. La escuela permite a los estudiantes trabajar sobre el DS durante el horario escolar y hacer reflexiones y clarificaciones sobre el DS en la escuela por parte de los profesores.			
	37. La escuela establece un procedimiento para responder a las necesidades de los profesores para que puedan trabajar con temas de EDS.			
11. Criterios de calidad en el área del clima escolar	38. La atmósfera escolar debe ser aquella donde cada uno/una sienta que puede contribuir con ideas y propuestas sin miedo. La directiva escolar tiene un papel específico para facilitar dicho proceso.			
	39. La escuela se ve como una "arena" donde todos los grupos de interés practican la democracia y la participación y se involucran a diferentes niveles en los procesos de toma de decisiones.			
	40. Toda la comunidad escolar, especialmente los padres, está informada de la relevancia de la EDS para el aprendizaje general de los estudiantes y está involucrada en el desarrollo de la escuela.			

12. Criterios de calidad en el área de la gestión escolar	41. La escuela hace una auditoria regularmente en relación con las necesidades de la escuela en dirección a la sostenibilidad involucrando a profesores, alumnos y personal.			
	42. La escuela decide cada año cuáles son los nuevos retos y acciones a emprender para una mejora continua de su gestión.			
	43. La escuela predica ser un ejemplo de gestión con respecto a los recursos y evidencia el resultado obtenido en la comunidad interna y externa.			
13. Criterios de calidad en el área de evaluación de las iniciativas de EDS a nivel escolar	44. La escuela otorga tiempo suficiente a los profesores para que reflexionen e investiguen sobre temas de EDS.			
	45. La escuela clarifica y desarrolla criterios de calidad para la EDS de acuerdo con su visión de la EDS, y los utiliza para sus evaluaciones internas.			
	46. La escuela establece procedimientos para beneficiarse de sus retos y logros en EDS y, al mismo tiempo, de sus obstáculos, dando resultados para toda la escuela, incluso para los profesores no involucrados en iniciativas de EDS.			

III - Criterios de calidad relacionados con las relaciones externas de la escuela.
1 – Sin interés; 2 – Con interés; 3 – Con mucho interés

Área	Criterios de calidad	1	2	3
14. Criterios de calidad en el área de la cooperación en la comunidad	47. La escuela involucra a la comunidad como un recurso de enseñanza/ aprendizaje de manera significativa.			
	48. La escuela usa a la comunidad como una arena de acción genuina.			
	49. La escuela permite a la comunidad local dirigir sus preocupaciones a la escuela y servir como un "centro de la comunidad".			
15. Criterios de calidad en el área de trabajo en redes y asociados	50. La escuela coopera con otras escuelas para desarrollar, intercambiar y comparar ideas e información relevante para la EDS.			
	51. La escuela es parte de las redes locales, nacionales o internacionales relevantes para la EDS donde se fomenta que los estudiantes tomen iniciativas.			
	52. La escuela busca la cooperación con instituciones activas en el desarrollo educativo en el campo de la EDS.			

Evaluación del grado de adaptación de los Criterios de Calidad para Escuelas de Educación para el Desarrollo Sostenible

Para cada uno de los criterios de calidad identifique en una escala de **0 (nada)** a **10 (totalmente)** cuál es el posicionamiento de esa escuela en cuanto a grado de adaptación de los Criterios de Calidad para Escuelas de Educación para el Desarrollo Sostenible.

1. Criterios de calidad relacionados con la calidad de los procesos de enseñanza y aprendizaje

1. Los profesores escuchan y valoran las preocupaciones, experiencias y deseos de los estudiantes, y sus planes son flexibles y abiertos al cambio.

0	1	2	3	4	5	6	7	8	9	10

2. Los profesores fomentan el aprendizaje cooperativo y el aprendizaje experimental.

0	1	2	3	4	5	6	7	8	9	10

3. La enseñanza tiene en cuenta el valor de las actividades prácticas, relacionándolas con el desarrollo conceptual y la construcción teórica de los alumnos.

0	1	2	3	4	5	6	7	8	9	10

4. Los profesores facilitan la participación de los estudiantes y proveen a los estudiantes de contextos para el desarrollo de su propio aprendizaje, ideas y perspectivas.

0	1	2	3	4	5	6	7	8	9	10

5. Los profesores buscan maneras de evaluar y ayudar a los estudiantes para lograr los criterios mencionados anteriormente.

0	1	2	3	4	5	6	7	8	9	10

2. Criterios de calidad en el área de los resultados visibles en la escuela y en la comunidad local

6. Los cambios físicos /técnicos en la escuela y en la comunidad local, relevantes para la EDS, se ven como una oportunidad para la enseñanza y el aprendizaje y se utilizan como medios de participación y de toma de decisiones.

0	1	2	3	4	5	6	7	8	9	10

7. Los cambios obtenidos y los resultados logrados en la escuela y en la comunidad local se alimentan y se mantienen.

0	1	2	3	4	5	6	7	8	9	10

3. Criterios de calidad en el área de las perspectivas para el futuro

8. Los estudiantes trabajan con visiones y escenarios, buscando caminos alternativos al desarrollo y cambios para el futuro y creándose criterios de decisión.

0	1	2	3	4	5	6	7	8	9	10

9. Los estudiantes se involucran comparando efectos a corto y largo plazo de las decisiones y de las alternativas.

0	1	2	3	4	5	6	7	8	9	10

10. Los estudiantes buscan relaciones con el pasado, el presente y el futuro, de manera que logran una comprensión histórica del tema tratado.

0	1	2	3	4	5	6	7	8	9	10

11. Los estudiantes trabajan en la planificación como una manera de reducir riesgos en el futuro y de aceptar la incertidumbre.

0	1	2	3	4	5	6	7	8	9	10

4. Criterios de calidad en el área de una "cultura de la complejidad"

12. Los estudiantes trabajan en construir su comprensión del problema, buscando los diferentes intereses y puntos de vista, antes de encontrar la solución.

0	1	2	3	4	5	6	7	8	9	10

13. La enseñanza en todas las asignaturas está basada en la búsqueda de las relaciones, influencias múltiples e interacciones.

0	1	2	3	4	5	6	7	8	9	10

14. Los estudiantes tienen la oportunidad de apreciar y enfrentarse con la diversidad - biológica, social, cultural - y tratarla como oportunidades para ampliar sus opciones de cambio.

0	1	2	3	4	5	6	7	8	9	10

15. Se incentiva a los estudiantes a escuchar sus propias emociones y a usarlas como manera de alcanzar un conocimiento más profundo de los problemas y situaciones.

0	1	2	3	4	5	6	7	8	9	10

16. Los estudiantes y profesores aceptan la incertidumbre como parte de la vida diaria y se preparan para "recibir lo inesperado y poder afrontarlo", siendo conscientes de la importancia del principio de cautela.

0	1	2	3	4	5	6	7	8	9	10

5. Criterios de calidad en el área del pensamiento crítico y el lenguaje de la posibilidad

17. Los estudiantes trabajan con relaciones poderosas y conflictos de intereses, por ejemplo, en la situación local, entre países, entre las generaciones pasadas y futuras.

0	1	2	3	4	5	6	7	8	9	10

18. Los estudiantes son incentivados a mirar las cosas desde diferentes puntos de vista y a desarrollar la certeza identificándose con otros.

0	1	2	3	4	5	6	7	8	9	10

19. Se incentiva a los estudiantes a dar argumentos para las diferentes posiciones.

0	1	2	3	4	5	6	7	8	9	10

20. Se incentiva a los estudiantes a buscar ejemplos de lo que es (o era) útil y exitoso en otras situaciones, de manera que pueden imaginar nuevas posibilidades y acciones alternativas.

0	1	2	3	4	5	6	7	8	9	10

6. Criterios de calidad en el área de la clarificación del valor y el desarrollo

21. Los estudiantes trabajan con la diferencia entre el conocimiento facultativo y las opiniones basadas en valores, e investigan los valores e intereses detrás de ellos.										
0	1	2	3	4	5	6	7	8	9	10

22. Los profesores se centran en la clarificación de los estudiantes y en la discusión de sus propios valores, reforzando la reflexión, el respeto mutuo y la comprensión de otros valores.										
0	1	2	3	4	5	6	7	8	9	10

23. Los profesores aceptan el reto de no imponer sus propios valores y opiniones, permitiendo a los estudiantes mantener su posición.										
0	1	2	3	4	5	6	7	8	9	10

7. Criterios de calidad en el área de la perspectiva basada en la acción

24. El trabajo de los estudiantes en temas y acciones se ve como un valor educativo y no únicamente como una manera de resolver problemas reales.										
0	1	2	3	4	5	6	7	8	9	10

25. Los estudiantes participan en decisiones con la finalidad de influenciar sobre el problema y aprenden de la reflexión sobre sus experiencias.										
0	1	2	3	4	5	6	7	8	9	10

26. La enseñanza se centra en estrategias auténticas de acción, en posibilidades de acción y en la experiencia de acciones reales.										
0	1	2	3	4	5	6	7	8	9	10

27. La implicación de los estudiantes en la acción se acompaña de reflexiones sobre los efectos locales y globales, de comparaciones de riesgos y de posibles alternativas de decisión.										
0	1	2	3	4	5	6	7	8	9	10

8. Criterios de calidad en el área de la participación

28. Los profesores se centran en las capacidades de los alumnos para llevar a cabo participaciones y cooperaciones significativas (por ejemplo, escuchando, expresando su punto de vista, tomando responsabilidad y mostrando solidaridad).										
0	1	2	3	4	5	6	7	8	9	10

29. Los profesores permiten a los estudiantes tomar parte del proceso de decisión, apropiado a la edad de los estudiantes y a sus habilidades.										
0	1	2	3	4	5	6	7	8	9	10

30. Los estudiantes adquieren experiencia en los procesos democráticos de participación.										
0	1	2	3	4	5	6	7	8	9	10

9. Criterios de calidad en el área de la materia del tema

31. Los profesores en la EDS se centran en problemas y temas. La asignatura debe ser funcional y relevante para la comprensión de la complejidad del tema, por parte de los alumnos.										
0	1	2	3	4	5	6	7	8	9	10

32. Las teorías y los conceptos de las disciplinas académicas se utilizan para racionalizar los conocimientos experimentales, a menudo, ingenuos y sin crítica.										
0	1	2	3	4	5	6	7	8	9	10

33. Los profesores buscan ideas y perspectivas en la EDS para reactivar e innovar la enseñanza y el aprendizaje en las asignaturas tradicionales.										
0	1	2	3	4	5	6	7	8	9	10

II-Criterios de calidad relacionados con la política y la organización de la escuela

10. Criterios de calidad en el área de la política y la planificación de la escuela

34. La escuela se centra en la EDS, en sus estatutos y en su plan anual de acción.										
0	1	2	3	4	5	6	7	8	9	10

35. Los responsables escolares fomentan el uso de perspectivas futuras para planificar su trabajo de EDS a largo plazo.										
0	1	2	3	4	5	6	7	8	9	10

36. La escuela permite a los estudiantes trabajar sobre el DS durante el horario escolar y hacer reflexiones y clarificaciones sobre el DS en la escuela por parte de los profesores.										
0	1	2	3	4	5	6	7	8	9	10

37. La escuela establece un procedimiento para responder a las necesidades de los profesores para que puedan trabajar con temas de EDS										
0	1	2	3	4	5	6	7	8	9	10

11. Criterios de calidad en el área del clima escolar

38. La atmósfera escolar debe ser aquella donde cada uno/una sienta que puede contribuir con ideas y propuestas sin miedo. La directiva escolar tiene un papel específico para facilitar dicho proceso.										
0	1	2	3	4	5	6	7	8	9	10

39. La escuela se ve como una "arena" donde todos los grupos de interés practican la democracia y la participación y se involucran a diferentes niveles en los procesos de toma de decisiones.										
0	1	2	3	4	5	6	7	8	9	10

40. Toda la comunidad escolar, especialmente los padres, está informada de la relevancia de la EDS para el aprendizaje general de los estudiantes y está involucrada en el desarrollo de la escuela.										
0	1	2	3	4	5	6	7	8	9	10

12. Criterios de calidad en el área de la gestión escolar

41. La escuela hace una auditoria regularmente en relación con las necesidades de la escuela en dirección a la sostenibilidad, involucrando a profesores, alumnos y personal.										
0	1	2	3	4	5	6	7	8	9	10

42. La escuela decide cada año cuáles son los nuevos retos y acciones a emprender para una mejora continua de su gestión.										
0	1	2	3	4	5	6	7	8	9	10

43. La escuela predica ser un ejemplo de gestión con respecto a los recursos y evidencia el resultado obtenido en la comunidad interna y externa.										
0	1	2	3	4	5	6	7	8	9	10

13. Criterios de calidad en el área de evaluación de las iniciativas de EDS a nivel escolar

44. La escuela otorga tiempo suficiente a los profesores para que reflexionen e investiguen sobre temas de EDS.										
0	1	2	3	4	5	6	7	8	9	10

45. La escuela clarifica y desarrolla criterios de calidad para la EDS de acuerdo con su visión de la EDS, y los utiliza para sus evaluaciones internas.										
0	1	2	3	4	5	6	7	8	9	10

46. La escuela establece procedimientos para beneficiarse de sus retos y logros en EDS y, al mismo tiempo, de sus obstáculos, dando resultados para toda la escuela, incluso para los profesores no involucrados en iniciativas de EDS.										
0	1	2	3	4	5	6	7	8	9	10

III - Criterios de calidad relacionados con las relaciones externas de la escuela.

14. Criterios de calidad en el área de la cooperación en la comunidad

47. La escuela involucra a la comunidad como un recurso de enseñanza/ aprendizaje de manera significativa.										
0	1	2	3	4	5	6	7	8	9	10

48. La escuela usa a la comunidad como una arena de acción genuina.										
0	1	2	3	4	5	6	7	8	9	10

49. La escuela permite a la comunidad local dirigir sus preocupaciones a la escuela y servir como un "centro de la comunidad".										
0	1	2	3	4	5	6	7	8	9	10

15. Criterios de calidad en el área de trabajo en redes y asociados

50. La escuela coopera con otras escuelas para desarrollar, intercambiar y comparar ideas e información relevante para la EDS.										
0	1	2	3	4	5	6	7	8	9	10

51. La escuela es parte de las redes locales, nacionales o internacionales relevantes para la EDS donde se fomenta que los estudiantes tomen iniciativas.										
0	1	2	3	4	5	6	7	8	9	10

52. La escuela busca la cooperación con instituciones activas en el desarrollo educativo en el campo de la EDS.										
0	1	2	3	4	5	6	7	8	9	1

Appendix IV. The Student Book's Table of Contents