

The Heart of the Matter: Infusing Sustainability Values in Education

Experiences of ESD with the Earth Charter



Celebrating the UN Decade of Education for Sustainable Development



United Nations
Educational, Scientific and
Cultural Organization



UNESCO Chair on Education
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and the Earth Charter



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National Programme on Marine Education: Love and Gratitude for the Sea, Costa Rica

Ana Lorena Orozco Alvarado and Marianella Valverde Solís

Introduction

This initiative was started in 2008 by the Environmental Education Department of the Ministry of Public Education (MEP). We were assigned the task of bringing educational material to coastal marine areas that would help move people from words to deeds and actions to protect our marine richness.

We assigned ourselves the task of consulting with educators in coastal marine areas on what was necessary for realizing a programme which would address the feeling, the duties, and the essence of the daily life of students, parents of students, and neighbors of the educational institution, that is, the overall community. As a result of this consultation, it was easy to confirm that there was no material that could concretely reinforce, in the classrooms, the value of nature.

This is how we put the idea into action of creating the National Programme on Marine Education entitled "Love and Gratitude for the Sea". What is this idea based on?

Clearly, Costa Rica is privileged to possess 589,000 km² of sea territory, due to the fact that it borders the Pacific Ocean on the West and the Caribbean Sea on the East, without underestimating the 51,100 km² of firm continental soil. Added up, this makes a total territory of 640,100 km². This allows Costa Rica access to an immense richness economically, socially, and in terms of biodiversity.

Nowadays, it is known that the sea holds solutions to food and natural resources scarcity problems, which are needed for the development of Costa Rica as well as the rest of the world. However, there is little knowledge about the characteristics, possibilities, and importance of marine ecosystems, something that has influenced the impacts human beings have on the sea.

For this reason, it seemed essential to start actions that would allow the spread of knowledge about the sea and its benefits for our country. Consequently, a proposal was made for creating teaching mechanisms, starting within the educational system, which would promote the protection and conservation of this natural environment.

This programme encourages respect and care and the understanding that life deserves to exist in a pristine state within the community of life as it is mentioned in Principle I of the Earth Charter (Respect and care for the community of life). Life, as we know it, is unique to our planet and this is why we must act responsibly towards the environment, with the awareness, kindness, compassion, and engagement, recognizing the interdependence of all forms of life.



Students from Puerto Viejo School in a field trip at Cahuita National Park, 2008

Taking advantage of the Theoretical, Conceptual, and Operative Standard of the Health and Environmental Education Department, which is the leading entity concerning education on these topics, this Department assumes leadership at the national level in everything that concerns the promotion and development of educational activities for influencing the process of curriculum suitability and development, as it is the case for this National Programme on Marine Education.

The Earth Charter is reflected in this programme, especially Principle I (mentioned earlier) and Principle II on Ecological Integrity, and specifically those principles that promote the management of renewable resources such as water, soil, forestry products, and marine life, in a way that will not exceed the possibilities of regeneration and so that the ecosystem's life will be protected.

This National Programme on Marine Education also builds on the 'National Commitment for the Decade on Education for Sustainable Development' that the Costa-Rican Government assumed in 2006¹⁵, and in which it is emphasized that education is a fundamental element for generating a change in culture.

Training process for teachers – From the mountain to the sea

With these foundations of love, solidarity, and respect, among others, we started in 2009 the gratifying experience of sharing this Programme with educators and students in different educational regions in the country (called Regional Offices), which included the coastal zone in the Caribbean (Limón), the South Pacific (Pérez Zeledón), the Central Pacific (Aguirre and Puntarenas), and Central Valley (Valle Central). The latter one is not a coastal zone but it hosts the majority of the country's population (Heredia).

In all these educational regions we felt people's warmth, we listened to their experiences in relation to environmental topics, especially those concerning the resources that the sea provides.

Table 1. Number of Schools and Educators participating in the training for each Regional Office

	Schools	Educators
Limón's Regional Office	21	27
Pérez Zeledón's Regional Office	4	13
Aguirre. Manuel Antonio's Regional Office	14	31
Aguirre's Regional Office (Herradura, circuit 05)	11	20
Coto's Regional Office	12	25
Grande de Térraba's Regional Office	13	18
Santa Cruz y Liberia's Regional Office	9	21
Desamparados' Regional Office	16	20
Heredia's Regional Office	23	27
TOTAL	102	175

This National Programme undertakes a marine and coastal education campaign through the development of educational modules and their implementation in workshops taught by the Ministry of Education's staff. Educators apply it in their lessons according to the context in which the students are evolving and the level they are in.

Sustainable development is promoted through the implementation of these modules, thus contributing to the conservation of marine and coastal species, flora as well as fauna. Actions in coordination with other organizations that also realize activities related to environmental education are fostered. The programme provides environmental educational alternatives on marine and coastal resources that are related to the study programmes, which correspond to the different courses and educational levels. It bolsters an environmental institutional culture that extends an invitation to knowing about life's vulnerability in these coastal areas.

15 National Commitment for the Decade on Education for Sustainable Development
<http://www.earthcharterinaction.org/invent/images/uploads/Costa%20Rican%20National%20Commitment%20DESD.pdf>

These training modules promote the integration of values inherent to sustainable development in all aspects of teaching, in order to encourage behavioral changes that will facilitate the attainment of a more sustainable and fairer society for all. The aim is for students to get to know and understand that the solution to community problems does not depend exclusively on governmental action, but that as citizens, we have the responsibility and the right to influence decisions that are taken.

The workshops allowed working with educators from different fields of specialization, in order to develop basic knowledge, understanding, abilities, values, critical judgment, and attitudes that would favor an active participation, ethical and efficient, in the treatment, mitigation, or solution of situations related to the marine and coastal environment, in favor of sustainable development of the country.

Educators had to carry out, following study programmes, mediation activities that would stimulate citizen, social, and engaged attitudes directed at the protection and conservation of marine ecosystems, and implement them with their students.

Implementation

The following activities are among the ones that were developed by educators in Pre-School, Primary and Secondary school who participated in the Marine Education Programme's training sessions, and are presented here as an example of the practical implementation of this Programme.

Experience in Pre-School

Educator Ana Saborío Sáenz started work in 2007 on a plan for Marine education at the pre-school level in the Escuela de Puerto Viejo. Her school is located in a Caribbean coastal area, making her approach very pertinent since it relates to her students' daily life. According to what she expressed in the plan she presented to the Ministry of Public Education, educators must instill among boys and girls the importance of appreciating the environment and fighting against the predominant culture in the zone, which has become materialist and promotes the destruction of flora and fauna for developing lucrative projects.

Among the activities she developed with her students are:

- Parading with costumes of marine animals, as a form of conservation and respect for the sea world
- Organize a talk on the importance of maintaining clean beaches and collecting trash
- Excursion to the National Park of Cahuita, which is a protected area in the Caribbean, managed by the government and the community.
- Participation in a project on the raising and then liberation of marine turtles.
- Compilation of tales, poems, songs and riddles on the topic of the sea. Utilization of the book HOPE.
- Making of puppets and illustrations on marine topics.

According to Mrs. Saborío, the project managed to motivate parents, boys and girls, and the community, to continue with the purpose of taking care of the marine flora and fauna. Children displayed a positive attitude that could be observed during the activities, and showed interest, love, and respect for the marine world. The project as a whole enables children to share different graphic techniques, crafts, and walks, among others.

Also in the Escuela Puerto Viejo, an educator developed an activity called 'Memory on endangered animals'. To be carried out, an album or memory with attractive images and pictures of endangered marine species such as manatees, hammerhead sharks or other species, humpback whales, mangrove cockles, cambutes, jaribus, Leatherback sea turtles, among others, is made. These illustrations are used to introduce the concept of 'endangered species', which is discussed with the students.



She called the other activity 'Similarities and Differences'. Children are asked to bring to class clippings, transparent sheets, pictures or other representations of animals that:

- | | |
|---------------------------|----------------------|
| 1. Have fins | 6. Have tentacles |
| 2. Have a carapace | 7. Live in the water |
| 3. Swim and have feathers | 8. Eat fish |
| 4. Have scales | 9. Eat algae |
| 5. Have a shell | 10. Have spines |

In class, discussion on these animals is encouraged, their characteristics, their differences, their behavior, movement, nutrition, habitat, and others.

In the Education Center Río Banano, in the Limón province (Caribbean area), educator Griselda Lorena Sequeira Aguilar, who teaches the second grade, designed activities for identifying the causes and effects of contamination with trash and sewage caused by human groups in the social and natural environment, to understand the consequences of their behavior in the environment.

This educator proposed the following activities:

- Conversation, based on previous knowledge, related to the concept of 'Pollution'
- Presentation of a dolphin made in plastic in a bottle with clean water, and another plastic fish in a glass bottle with a bit of coffee coloring, confetti, and toothpicks.
- Discussion on Who breathes better? The dolphin or the fish. Why?
- Excursion to the community river banks. Make notes on everything that was observed.
- In groups, exchange ideas and draw what was observed.
- Make a presentation on the effects of environmental pollution.

With these activities, the educator aimed at promoting values of 'Sensitivity and respect for a clean and healthy environment'.

Experience in secondary school:

With secondary school educators, the Marine Education National Programme implemented the methodology 'Citizen Project and Public Policies' that encourages the development of skills favoring learning spaces for solidarity, responsibility, and opportunities for students to impact the local and global community in a positive way.

The objective was to develop a series of professional skills to enable the educators to be able to use the Citizen Project and Marine Education programme, starting from the analysis and implementation of different methodological strategies for encouraging students to acquire eco-citizen competencies.

This initiative wanted the students to get to know and understand that the solution to community problems does not depend exclusively on governmental action, but that citizens themselves have the responsibility and the right to influence the decisions that are taken to build sustainably developed societies.



Ocean's World Day celebration in Río Banano Education

There were competitions organized such as:

- 'Let's draw for our seas'

Through this competition the students, aged from 10 to 16 years old, will be able to learn how to conserve nature through artistic expression, since they will have to display their talent and originality in the creation of a poster related to the conservation of the marine and coastal environment.

Thanks to different materials, brush strokes, colors, and shapes, they can give life to marine landscapes that they can design as they please.

At the national level, two winners will be selected, one aged between 10 and 13 and the other one between 13 and 17 years old. Their two works will represent Costa Rica at the international competition in Miami.

The top three winners will also receive monetary prizes.

This initiative is being carried out in collaboration with the Costa-Rican Tourism Institute (ICT) and is supported by Florida – Caribbean Cruise Association.

- Painting the importance of Cadiz's wetlands

This activity was realized jointly with the INBioparque (thematic environmental park in the Central Valley in Costa Rica) and with Cadiz's city hall in Spain.

The students had to make a drawing related to environmental conservation and sustainable development and explain it to the jury. The award was a visit to the city of Cadiz, Spain.

Lessons learned

From these experiences and stories it is clear that the Costa-Rican student population deserves the right to an integral education, in which boys and girls can enjoy a healthy and ecologically balanced environment, and where the different education spaces encourage nurturing knowledge aimed at obtaining sustainable models of life.

Education centers are magical places, in which students live their everyday reality and their life experiences, and this is why it is necessary that these institutions promote a vision of management and conservation centered on the respect and care for the community of life, ecological integrity, universal human rights, respect for diversity, economic justice, democracy, and a culture of peace, in order to build sustainable ways of life.

These ethical values disseminated by the Earth Charter represent the basis for teaching in the different educational contexts, with the objective of preparing students, children or adults, to live sustainably in these different ways.

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