



<b>Education for Sustainable Development in the Black Sea Romanian Coastal Area</b> (Anca-Maria Gheorghe, Mihaela-Elena Mirea Căndeă, Angelica-Ionela Paiu, Romulus-Marian Paiu)	<b>“Cercetări Marine” Issue no. 46</b>  <b>Pages 156-166</b>	<b>2016</b>
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## **EDUCATION FOR SUSTAINABLE DEVELOPMENT IN THE BLACK SEA ROMANIAN COASTAL AREA**

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### **ABSTRACT**

Education for sustainable development is a relevant and necessary domain in all sectors of socio-economic and the public of all ages, including all the education types: formal, non formal and informal. Education is the most important aspect in the effort to protect the environment. Only by educating individuals, by signalling environmental issues to people and giving examples of environmentally responsible behaviour, we can take care for the environment.

The issue of education for sustainable development is not sufficiently addressed in Romania. Education for Black Sea aims to reduce human impact on the environment through environmental education, promotion and implementation of sustainable development principles.

“Mare Nostrum” NGO contributes to the development of this sector of education through activities, public events and the projects it carries out. In this sense, Mare Nostrum NGO contributed to the development of education for sustainable development through the projects : “Education for Black Sea” - project funded by the EEA Grants 2009-2014 in the NGO Fund in Romania, “MARLISCO (MARine Litter in Europe Seas: Social Awareness and CO-Responsibility)” - a FP7 project funded by the European Commission, involving 15 European Countries, „Nature around us - a joint programme for non-formal environmental education in the districts of Dobrich, Bulgaria and Constanta, Romania” project funded by Romania-Bulgaria Cross Border Cooperation Programme 2007-2013 and Monitoring and Conservation of Black Sea Dolphins Program co financed by private companies.

**Key words:** *Environmental Education, Sustainable Development, Black Sea, Awareness*



## **AIMS AND BACKGROUND**

Education at all levels can shape the world of tomorrow, equipping individuals and societies with the skills, perspectives, knowledge and values to live and work in a sustainable manner. Education for sustainable development (ESD) is a vision of education that seeks to balance human and economic well-being with cultural traditions and respect for the earth's natural resources.(UNESCO, 2005)

Education is an essential tool for achieving sustainability. People around the world recognize that current economic development trends are not sustainable and that public awareness, education, and training are key to moving society toward sustainability. An important distinction is the difference between education *about* sustainable development and education *for* sustainable development. The first is an awareness lesson or theoretical discussion. The second is the use of education as a tool to achieve sustainability. (McKeown, R., Hopkins, A., Rizzi, R., Chrystalbridge, M., 2002.)

Education for sustainable development is the process of equipping students with the knowledge and understanding, skills and attributes needed to work and live in a way that safeguards environmental, social and economic wellbeing, both in the present and for future generations. (Longhurst, J., 2014)

## **ACTIVITIES AND RESULTS**

The project "Education for Black Sea" is a project aimed at reducing human impact on the environment through the promotion and implementation of sustainable development principles through environmental education. This project aims to improve the quality of life of current and future generations through environmental education.

Within the project has been developed a plan of action for education for sustainable development that can be applied to the Black Sea and the coastal belt and was created the guide "Modern Methods of education for sustainable development", which include a lot of non-formal education methods. This guide was used to train teachers and to facilitate their work with students, in order to present their various environmental issues and present them how they can care for the environment, using various methods of non-formal education. The training for teachers was held in the month of April 2015, in two courses of two days each, through which were trained 54 teachers. (Fig. 1)



**Fig. 1. Training for teachers**

The activities for sustainable development developed under the project were miscellaneous, obtaining the following results: 6 visits in the thematic trails in protected areas of Dobrogea; (Fig. 2); 163 terrestrial data collecting for data collection about stranded dolphins or accidental catches and 20 aquatic monitoring, were involved over 1,500 students. (Fig. 3); through 65 information and awareness sessions in the classroom, which had various topics focusing on the protection of the environment in the coastal area have been informed over 2,400 students from the Constanta County; (Fig. 4); 2 environmental debates dedicated to students, which 31 students from 4 schools discussed a very important issue for the community, waste management. The purpose of these debates was to aware the students about the importance of protecting the environment and developing knowledge about biodiversity; (Fig. 5); one contest for the collection of used vegetable oil, dedicated to schools, in which were collected over 344L of the used vegetable oil, involving over 1100 students and teachers, which led directly to the involvement of students parents.



**Fig. 2. Visits in protected areas**



**Fig. 3. Terrestrial & aquatic monitoring**



**Fig. 4. Information and awareness sessions**



**Fig. 5. Environmental debate in the classroom**

The education for sustainable development it is not only addressed to students and teachers, only those people from the education system, is addressed to all, especially to the general public, tourists and citizens, because all factors are responsible for environmental protection.

In order to inform the public about important environmental issues are organized three exhibitions consisting of panels located in Constanta parks. These panels are interactive and tell a story. The story has been performed using the method of interpretation. Each exhibition includes a total of 10 panels that treats themes like: “Black Sea in pictures” (Fig. 6), “Forest comes to town” and “Wastes from A to Z”.



**Fig. 6. Exhibition “Black Sea in pictures”**

Tourists have been informed through 2 exhibitions of 10 panels containing 10 inspirational messages, about need for maintaining the cleanliness on the beach, the panels have been stairway during the summer season on the beach Paradise Beach, one beach located in the southern coastline, being informed over 13.000 tourists. (Fig. 7) Also, for tourist was launched a campaign of information and awareness about the cigarette butts on the beach. In this campaign were informed 10,000 people through leaflets. (Fig. 8)

Within the project **“Education for Black Sea”** was created the web portal “Education and sustainable development” - [www.educatiepentrudezvoltaredurabila.ro](http://www.educatiepentrudezvoltaredurabila.ro). The portal is created to help people to understand, learn and begin to practice the ESD principles. This web portal, with focus on Education for the Black Sea (but not only), is part of the bigger concept of Education for Sustainable Development. We gathered here useful information for people that first hear of this subject, for those who already have some experience but also for the experts.





**Fig. 7. Exhibition on the beach**



**Fig. 8. Campaign of information and awareness about cigarette butts on the beach**

Another project that through “Mare Nostrum“ NGO contributed to the development of education for sustainable development principles in the Romanian coastal area is the program “Monitoring and conservation of dolphins in the Black Sea“, program what is a response to a major problem affecting the numbers of cetaceans in the Black Sea. This program aims to inform and involve teachers and students in activities to protect the marine environment and coastal areas in particular dolphins and promoting issues facing cetaceans among the local population, fishermen and tourists at the Romanian seaside of Black Sea.

This program provides annually the collection of data on the occurrence of dolphins in the Romanian coastal waters, catches and strandings in the Romanian seaside area. Stranded cetacean monitoring activity involved conducting systematic observations on the Romanian seaside. Volunteers participating in this monitoring have previously followed a training course on the issue of dolphin course that allowed them to strengthen knowledge in the field. (Fig. 9).

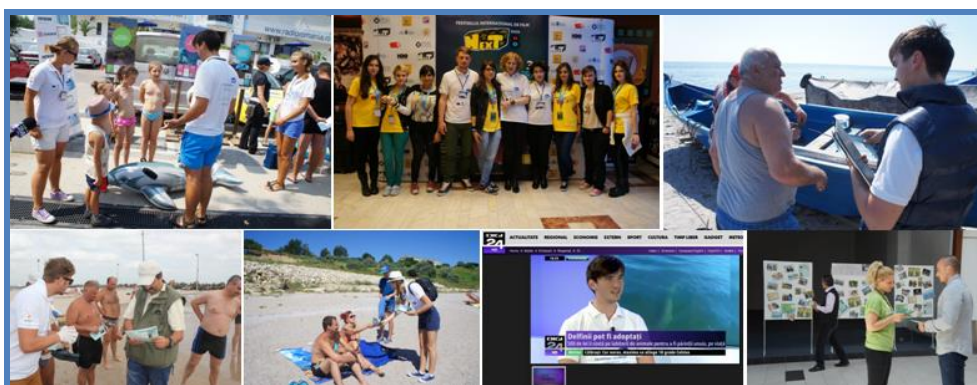
To inform the local community and tourists, about the problems faced by dolphins, “Mare Nostrum“ NGO organized an information and awareness campaign during the summer season (Fig. 10).

Activities and information campaigns organized by “Mare Nostrum“ NGO are aimed at protecting biodiversity in the coastal area.

The biodiversity in the cross-border region is a key strength, but at the same time it is threatened by the economic development. Nature’s resources are one of the most valuable assets of the region. One of the reasons for the lack of knowledge of the people in the region for its reach biodiversity is the inadequate training that they receive.



**Fig. 9. Monitoring network “Volunteers save the dolphins”**



**Fig. 10. Information and awareness campaign**

Considering these aspects, “Mare Nostrum” NGO, under the project “Nature around us”, organized 3 trainings for 56 teachers, because not only schoolchildren need to broaden their knowledge of the biodiversity in the area. It is also teachers who need to improve their teaching techniques, material base and knowledge on this field. Trained teachers will organize a training on biodiversity and environmental protection for the students.

The best way to understand and protect the nature is to discover always new beautiful places in nature. In order to present nature to the schoolchildren, “Mare Nostrum” NGO organized 3 nature visits for 30 participants in Bulgaria (Fig. 11)



**Fig. 11. Nature visits in Bulgaria**

Another problem faced by nature, which should be known by students, is deforestation. This is a serious problem for the area. In order to present this problem to students, we organized 2 forestry planting initiatives in the Constanta area. More than 600 trees were planted with the help of over 150 students (Fig. 12).



**Fig. 12. Forestry planting activity**

The implementation of the project contributes to the awareness-raising on biodiversity in the cross-border region among youngsters and teachers from the district of Dobrich, Bulgaria and the county of Constanta, Romania.

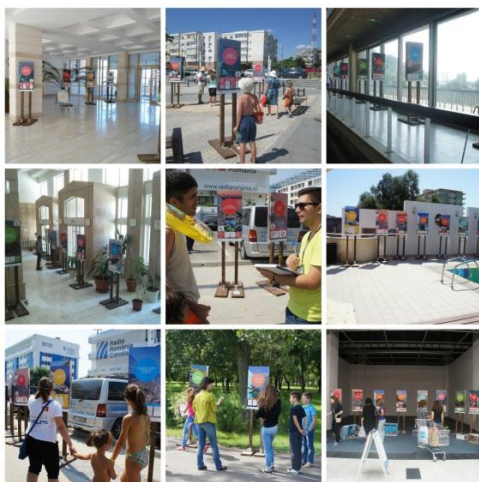
Another problem that threatens the biodiversity in the coastal area is represented by marine litter. Educating the population in order to prevent the occurrence of marine litter in the coastal area is a key aspect for improving aspects of education for sustainable development.





In order to raising public awareness on this problem, “Mare Nostrum“ NGO developed the project MARLISCO (MARine Litter in Europe Seas: Social AwarenessS and CO-Responsibility). The main objectives of the MARLISCO project were to increase the awareness of the consequences of societal behavior in relation to waste production and management on marine socio-ecological systems, to promote co-responsibility among the different actors. “Mare Nostrum“ NGO was responsible for conducting project activities in Romania and it also takes the lead of the Black Sea Node.

Within the MARLISCO project, “Mare Nostrum“ NGO launched an exhibition consisting of 12 interactive panels which describe the wide range of waste encountered in the marine environment, their origin, the problems they can cause, and how they affect the environment and people. The main objective of the exhibition was to inform both the tourist and the locals and to raise their awareness related to this problem (Fig. 13).



**Fig. 13. Exhibition**



**Fig. 14. National awareness activities**

The problem of marine litter has been presented to students through various activities, competitions and events designed to teach them how to be responsibly towards the environment. (Fig. 14).

A wide contest through students had the opportunity to express their views about marine litter, thus becoming agents of change the society, was the European MARLISCO video contest. In the video contest, in Romania were submitted 19 videos, created by 66 students and at European level 379 videos were submitted involving more than 2,000 students. In May 2014, the video contest winners met in Bremen, Germany, at the 7<sup>th</sup> European Maritime Days Ceremony (EMDC). Romania



was represented by students the from "Ovidius" High School of Constanta, the winners from Romania for the video "Little things make a big difference" (Fig. 15).



**Fig. 15. Meeting in Bremen**

Other opportunities for students and teachers to know and see the problems caused by marine litter are the educational material "Know Feel Act! To Stop Marine Litter" prepared under the MARLISCO project to inform, sensitize and enable European teachers and students to take action to tackle the problem of litter in our seas and coasts, and the Coastwatch activity.

Coastwatch is a European project initiated in Ireland in the year 1987 so that they evaluate with the help of young volunteers the problems with which the European coasts are confronted. ONG Mare Nostrum, with the help of volunteers and educational institutions, identifies and catalogue the types of wastes present on the beach. The activity started in the year 1995 and takes place annually close to the International Black Sea Day (Fig. 16).



**Fig. 16. Coastwatch activity**

Mainly, human impact is analyzed, emphasizing the numerical inventory of waste present on the beach. There are inventoried objects made of plastic, paper and cardboard, metal, glass, wood, textiles, medical waste etc. After this activity, there is compiled a database of the objects inventoried in each category to keep track of waste found on the beach.

## **CONCLUSION**

The activities undertaken have helped to develop a plan of education for sustainable development and at the development and promotion of non-formal education program targeting all educational institutions and the development of packages of activities based on the principle of sustainable development

Education is part of our daily life. We always can learn new things and our simple gestures make a difference. Never is too late to learn to be civilized and respect the nature. More educated we can protect the environment!

Thanks to all volunteers, teachers and students, financiers and sponsors, partners, and to all those are involved in environmental protection activities, because only together we can contribute to sustainable development.

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