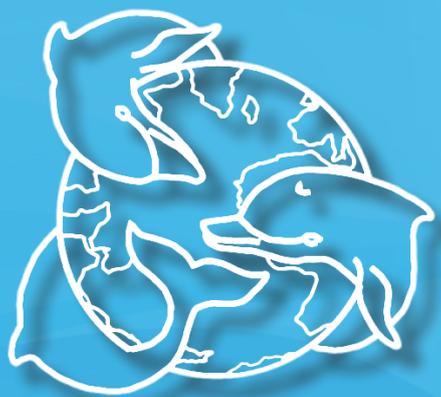
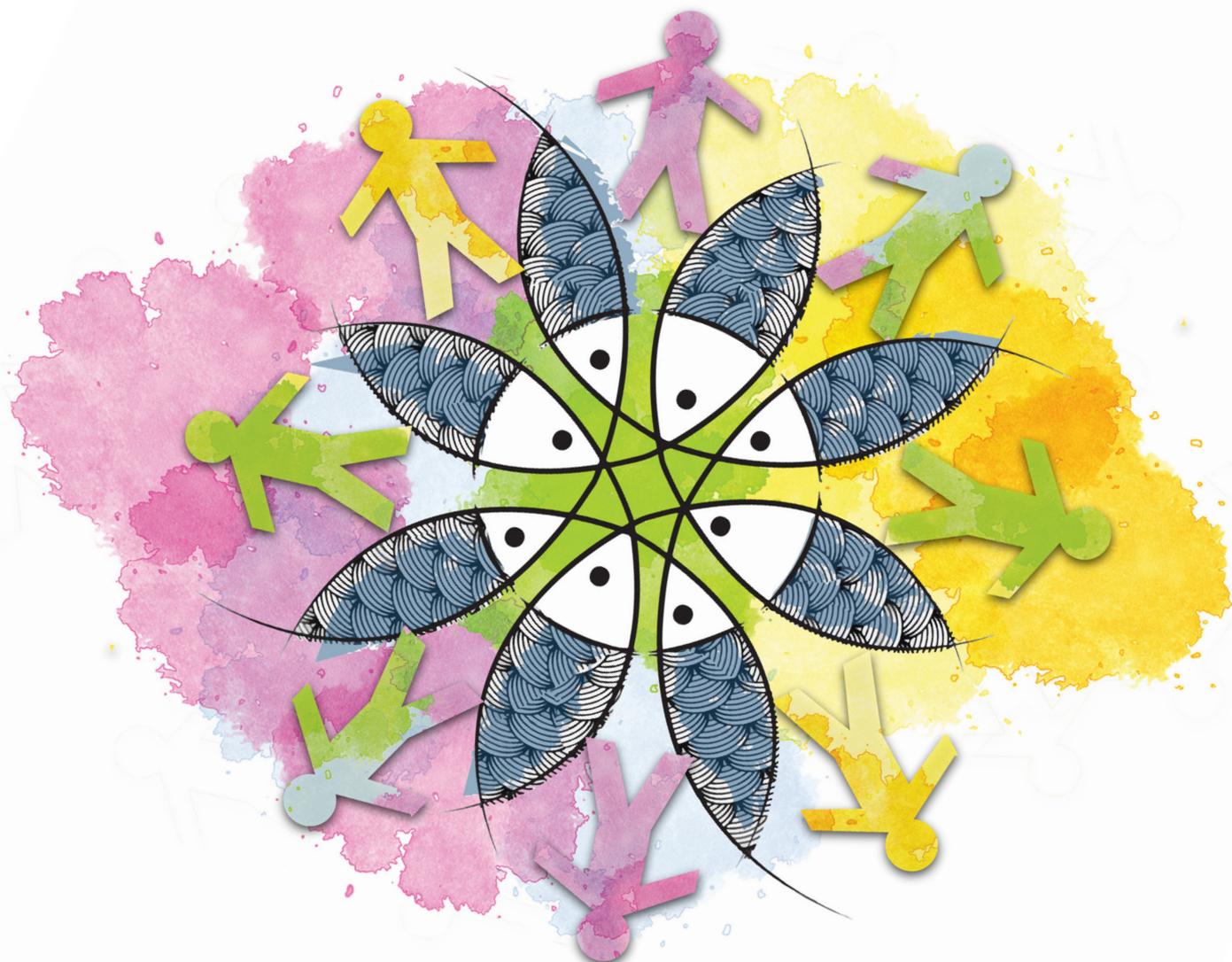


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Water, a strategic resource
in the Mediterranean area





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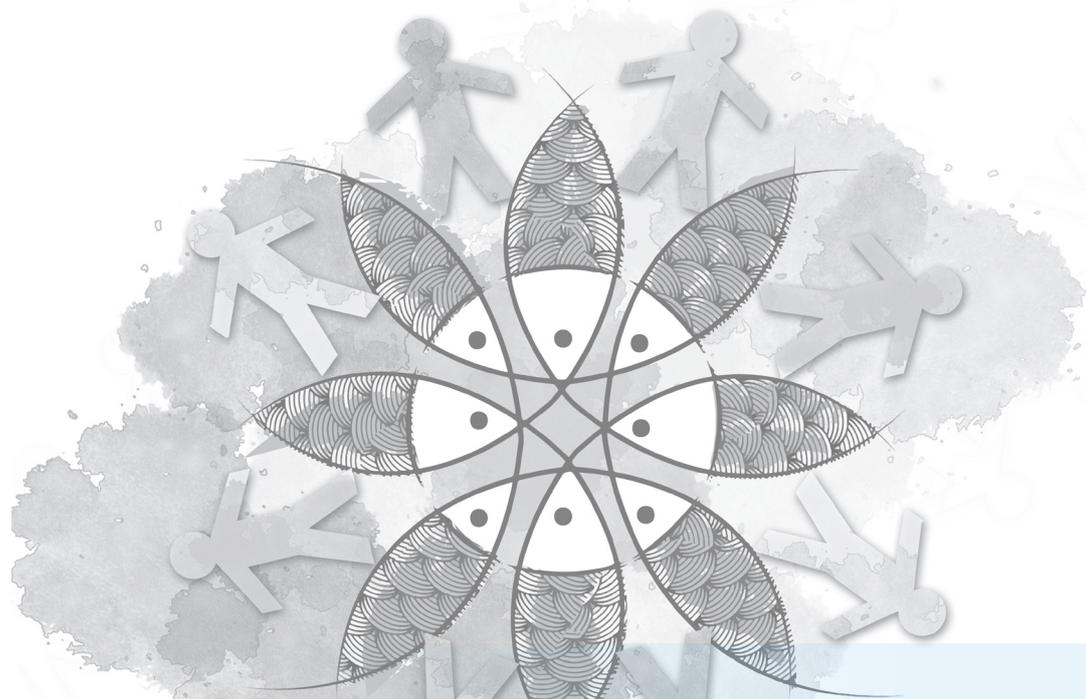
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Water education, toward an international network

After Marrakech and Bergamo, a new opportunity in Göteborg and Barcelona



■ Stefano Moretto presents the workshop (Photo by Massimo Urso)

STEFANO MORETTO E MONICA RISSO

Since 2003 “Il Pianeta azzurro” has been the water thematic area of the not-for-profit environment and education Institute “Scholé Futuro”. It is especially devoted to environmental communication and net-working in the field of hydrobiology and it works with parks, protected areas, sport groups, environmental associations, teachers and students, public administrations, societies and firms, and public and private institutions. Our initiatives and values are spread thanks to the homonymous publication “Il Pianeta azzurro” published 4 times a year as an annex of the monthly magazine “.eco., l’educazione sostenibile” (the Sustainable Education), the first ever Italian Magazine on environmental education, founded in 1989. During the last few years “Il Pianeta azzurro” has presided over competitions, exhibitions, video and educational proposals devoted to water in its various forms by using an environmental education ap-

proach. From our point of view, being devoted to marine environmental education and to water as a resource means in particular promoting information on environment health state, raising the awareness of administrators and citizens, training technicians and developing new professional figures, and of course, educating young adults. Since 2003 a lot of progress has been made, “Il Pianeta azzurro” has grown in terms of the amount of initiatives and projects it has realized and it is still evolving....

The *Seventh World Environmental Education Congress* (Marrakech, June 9 to 14, 2013), welcomed about 105 countries and over 2,400 participants. It marked the birth of the *WaterWeec*, a network of people and associations committed to working together and exchanging information on the resource of “water”. Throughout its 10 years of existence, WEEC has raised many questions, sought answers and constantly tried to create a space to share experiences and

good practices, to train and to be trained, in what we call a “consciousness and knowledge in progress.” This perfect breeding ground has encouraged Pianeta azzurro to set up a regular international meeting just to focus the attention on essential issues having to do with “water”: an ever open round table created for anyone who wants to have a say, share ideas and create new synergies in the familiar and friendly atmosphere of the congresses. But the Congresses were not enough, that is why during the *PanEuropean Days of Environmental Education* in Bergamo (on the 25th and 26th September 2014), we organized another international workshop having as a major topic the “*Networks and experiences on marine and fluvial environmental education in Europe*” and especially addressed to actors committed to marine and river environmental education. The third international meeting has finally taken place in the vibrant city of Gothenburg, Sweden on the 30th of June 2015. The side event has, above all, focused the attention on three main topics: Sustainable Fishing, Think Blue SFTB Marine litter education MLE Marine invasive species MIS. Thanks to the expertise and insightful contributions of the speakers and the proactive attitude of the public/audience the event was a motivating exchange of ideas and views. We are therefore glad to have offered a space of networking and debate where those who are passionate, as we are, about water are warmly welcomed. The last international meeting has been held in Barcelona at the 3rd PanEuropean days of

Environmental Education toward sustainability on the 2nd of October 2015. At this meeting we focused our attention on the theme of Water, as the essential and strategic resource on the Mediterranean area. In particular, we have debated the adaptation of the management of water in response to Global Change, the issues of scarcity and drought, the increasing pollution and development of water intensive activities such as tourism, agriculture and some manufacturing sectors as some of the main issues that Europe and Mediterranean countries have to face for the upcoming years.

A big remark has to be given to the project on marine litter education undertaken by the French organization CPIE Cote Provençale and two Israeli NGOs, The green Network and Eco-Ocean. The marine litter project is an open on-going program, which started with the participation of schools in France and in Israel by establishing a web-based platform for exchange of environmental and educational resources amongst partners in Mediterranean countries. As usual, the workshop has been a privileged occasion to promote networking and the exchange of best practices, in order to develop further collaboration and projects and to share contents and experiences that will enhance the thematic publication “*Il Pianeta azzurro, the Blue planet*”.

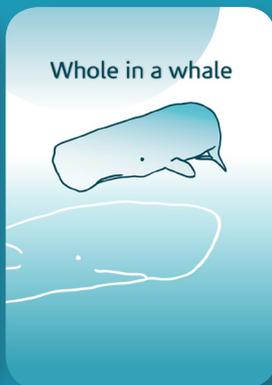
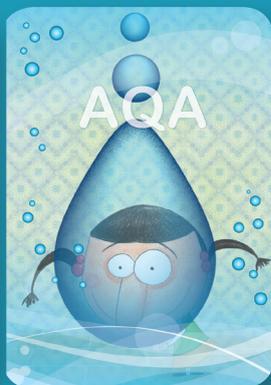
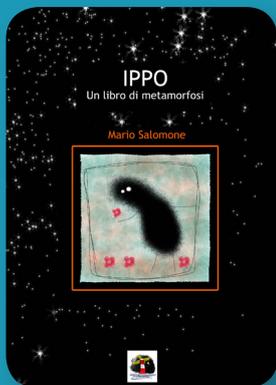
We want for that reason to thank you all for your participation and for the interest with which you follow our initiatives and publications. Every year our community is getting wider and this motivates our work and passion! ♦

■ “il Pianeta azzurro” cover pages. The first five numbers are in free download at www.educazionesostenibile.it



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A program for international sharing of marine litter surveys

A case study of environmental education in the 21st century



Yael Barki-Gateno & Asaf Ariel

Marine litter currently poses a serious threat to the marine and coastal environment throughout the world. Most marine litter consists of material that degrades slowly, if at all, resulting in a gradual build-up. A number of studies, clearly indicating that the situation is worsening, has confirmed this negative trend. This issue is prominent because of the lack of environmental regulation enforcement on a national and international level, as well as little awareness within the public and stakeholders.

Therefore, we see environmental education programs focusing on marine litter as key activities in increasing environmental awareness and responsibility regarding the issue.

The initiative started as a collaboration between The French organization CPIE Côte Provençale and the two Israeli NGOs, EcoOcean and the Green Network. CPIE Côte Provençale established a web-based platform for exchange of environmental and educational resources amongst partners in Mediterranean countries (ECOREM). The platform, designed in web 2.0 technology, allows partners to initiate cooperative projects, which use the ECOREM site as a communication and data exchange platform.

The marine litter project is an ongoing program, which started with the participation of schools in France in Israel. The platform of the marine litter project can be expanded to other surveys on other environmental hazards topics, biodiversity surveys, invading species surveys and more.

Targets

The project goal is to serve as an international, multi-cultural platform, which enables teachers and pupils of schools in different countries to share and discuss results of scientific environmental related research, survey or observation as well as conclusions, insights and actions regarding the environmental problems and their possible solution. The sharing of these can emphasize the 'think global act local' notion, promote environmental responsibility and motivate participants to take action.

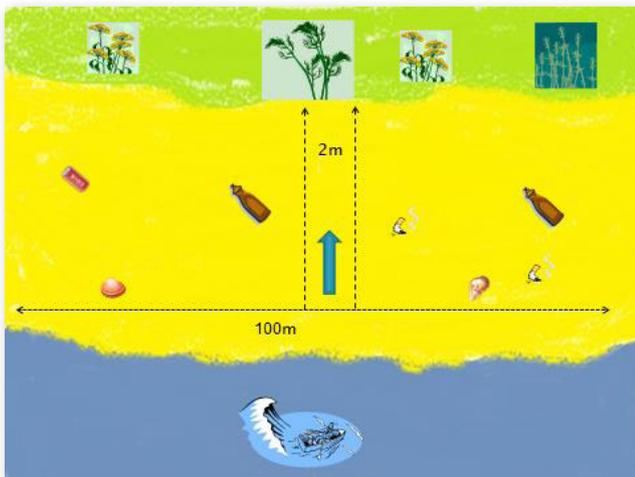
The project is targeted for formal and non-formal education and a wide range of participants and can serve for the creation of a variety of cooperative school-level research projects.

In the Litter Monitoring program, there are specific goals, which include:

- o Participation of citizens in data collection on distribution of coastal litter for decision making and synergizing with regional and international activities on marine litter.
- o Develop skills and provide experience in scientific research.
- o Promote science-based decision-making and environmental responsibility.
- o Discuss conclusions, insights, and actions regarding the marine environmental problems and their possible sustainable solution.

Description of the Marine Litter project

The project includes an introduction and summarizing activities in class and one outdoor activity on the beach.



■ Fig. 1 - Litter survey method



■ Fig. 2 - Litter sorting

Introduction activity

This part can include one or several lessons aimed at:

- a. Introducing the problem of litter on the coast and at sea.
- b. Learn about resources of marine and coastal litter.
- c. Discussion the connection between our consumption patterns and lifestyle and the need for a change in the attitude of man towards its human and physical environment.
- d. Discuss survey methods and prepare for the coastal litter survey.

Monitoring litter on the beach

The participants survey the coast close to their residence or school. Participants count the waste in a zone of 100m along the shoreline, from the water line to the backshore (usually the vegetation line). Only waste bigger than a bottle cap size (about 2 cm), is counted and included in the survey. The students are spread in 2-10 m intervals along the beach depending on the number

of students in the groups. They collect the litter, then count and sort it according to type, material, etc. (Fig. 1). The students use the list developed by the French NGO "MerTerre". This NGO has developed an Aquatic Environment Wastes Observatory on line "Resodema". The observatory is aimed at participating to reach European objectives in terms of marine litter. Lastly, the students fill in the data forms accordingly. During the survey the students can also collect material for their awareness raising activities (i.e. photos, videos, litter of various types). Required equipment: measuring tape, survey sheets and writing board, trash bags, camera/ smart phone (for documentation of findings).

Analysis of results

The pupils then summarize the results in graphs, tables and charts. On <http://www.resodema.org/EN/index.php> the results and photos are then uploaded to the ECOREM site (<http://ecorem.fr/marine-litter/wakka.php?wiki=HomePage>; Fig. 3) and the RESODEM site (<http://www.resodema.org/EN/index.php>).

Sharing results and open discussion

A lot can be learnt from comparing abundance and composition of the litter (Fig. 4), which opens the channel for discussion within the class and between the participants in different countries. The discussion is done by using the 'white board' (Fig. 5) and the 'Tweets corner' on the ECOREM website, and can further be expanded to a video conference between the two classes, with narration by the teacher, raising certain question and topics for discussion.

Summary and Further application of the project's platform

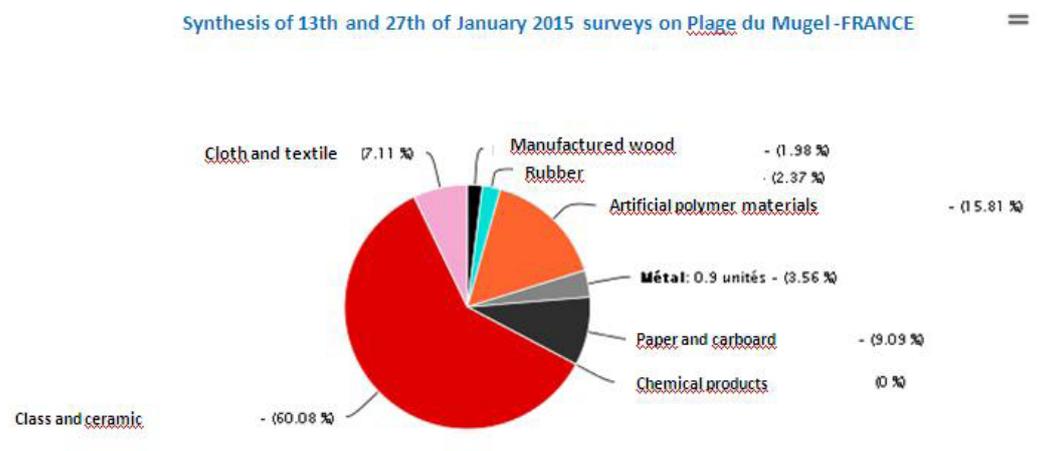
The educational project presented here exemplify the use of modern online tools for communication and sharing of results and creating open discussion amongst pupils from different countries and cultures on common, global environmental issues. This enable the creation of mutual goals and cooperative action, in the 'global village' we live in, cross boundaries and grasp the similarity between the challenges we are facing. The platform created for the project can be used to share and discuss results of a variety of research projects executed by the pupils, such as ongoing monitoring of oceanographic data, plants and animal's surveys and more. ♦

The project is planned to expand and looking for partners:

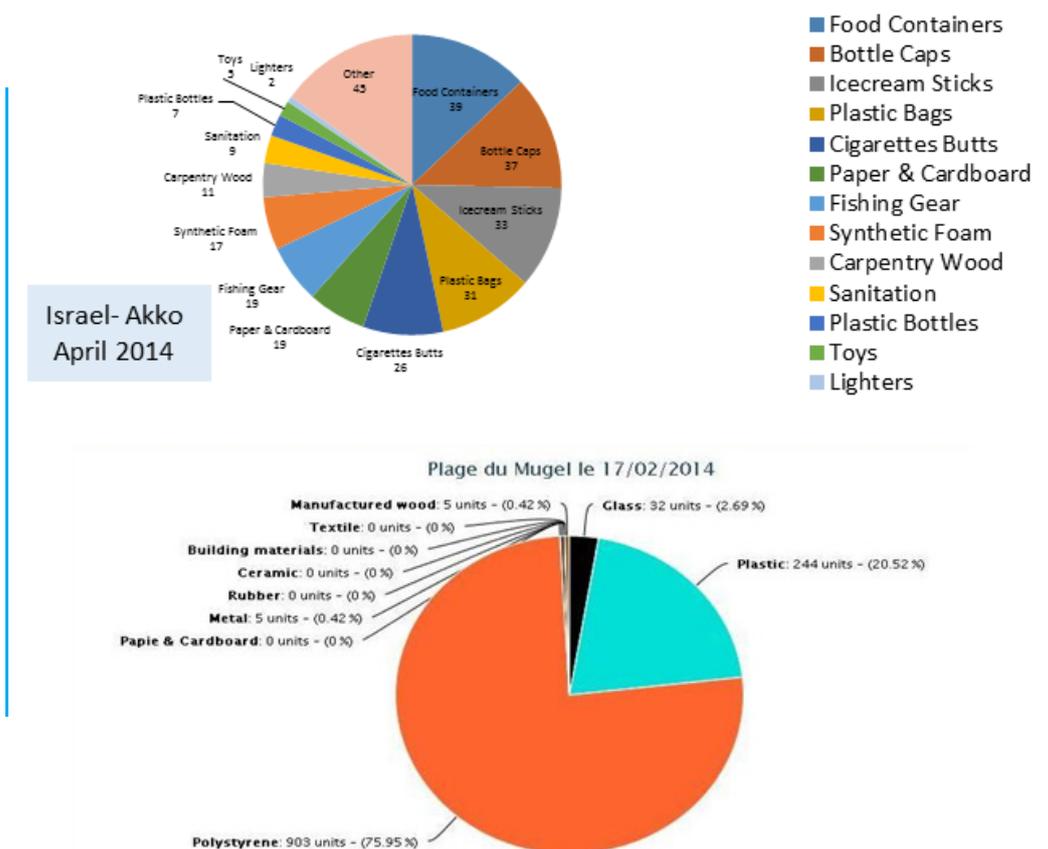
Contact information: Mediteredu@gmail.com

Project website: <http://ecorem.fr/marine-litter/wakka.php?wiki=HomePage>

■ Fig. 3 -Chart of coastal litter composition on the ECOREM website



■ Fig. 4 -Comparison of coastal litter composition in France and Israel



The sea at school: AULACRAM the new educational programme for Marine Conservation

The AULACRAM educational programme for schools is undertaken within the framework of the Foundation for Conservation and Recovery of Marine Animals (CRAM). This project began in 2013-2014 academic year, with the aim to bring marine life closer to schools and change the relationship between the society and the sea. This project has been strengthened year after year. In the present article we explain how this project has been conceptualized.



■ Dolphin rescue activity

BLANCA BASSAS, ELENA BOADAS, MARTA COCA AND MO FRANCH

In order to understand the AULACRAM educational programme, it is important to be introduced to the CRAM Foundation, the place where the AULACRAM project is developed. The Foundation for the Conservation and Recovery of Marine Animals (CRAM), located in Catalonia (Spain) is a non-profit private foundation dedicated to the protection of the marine environment and the endangered species that inhabit it. Its mission is "The protection of marine biodiversity against global threats through local actions". The origins of CRAM Foundation go back to 1991 when a *Morbilivirus* epidemic caused the deaths of many cetaceans, which arrived to the Catalan beaches. The uncertainty surrounding how to deal with this situation motivated a group of veterinarians to create, in 1994, the Centre for Conservation and Recuperation of Marine Animals, in Premià de Mar (Catalonia – Spain). In 1996 the Foundation for Conservation and Recuperation of Marine Animals (CRAM) was offi-

cially established. In 2010 the Foundation moved to Prat de Llobregat (Catalonia, Spain), where new and modern facilities are available to the recovery of endangered marine animals.

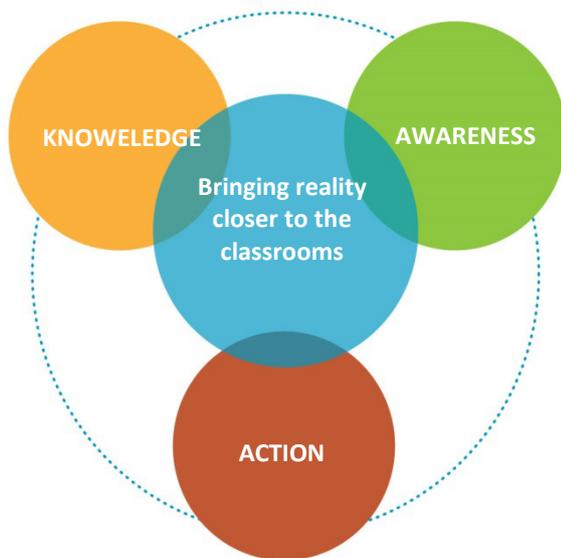
Main lines of action:

- **CLINIC AND RESCUE:** CRAM is an European remarkable reference in the field of endangered marine animals recuperation. CRAM facilities are unique, groundbreaking in the medical treatments of sea turtles, cetaceans and marine birds that have been beached, fished or by-caught along the Catalan coasts. CRAM participates in the rescue and clinical assistance of the animals and with their return to the sea once they are recovered.
- **INVESTIGATION AND PRESERVATION:** CRAM, along with other scientific entities and Universities, develops research and conservation projects in order to expand the knowledge on the marine environment.
- **EDUCATION AND TRAINING:** AULACRAM is the educational programme conceived to increase commitment towards the preservation of the marine environment, among all citizens. AULACRAM, with its educational and training activities programme, contributes to exposing the threats against worldwide marine species and to make known the conservation efforts undertaken by the CRAM Foundation.

AULACRAM educational programme

The AULACRAM educational programme was launched in 2013-2014 course, offering a working framework for schools and the general public. In this article we will focus on the school public even though the reference framework is common to all the educational proposals.

This educational project is mainly focused on the promotion of **knowledge, sensitivity and action**, in an interrelated approach, transforming marine reality into learning situations.



• *Knowledge:* the main threats faced by marine animals come from anthropogenic sources (contamination, habitat loss, climate change, unsustainable fishing). These difficulties are the point of departure for AULACRAM activities.

• *Increase awareness:* The CRAM Foundation was born as a conservation and recuperation centre of marine animals. Consequently, we work with the aim not only to educate, but also to increase awareness towards conservation among citizens. The exchange of opinions between students during the activities encourages them to become fully aware of their responsibility towards the marine environment conservation.

• *Action:* individual and teamwork towards conservation are promoted, both from Primary and Secondary school children.

The **main goals** of the new educational programme for schools are:

- To make known the main threats to the marine environment conservation.
- To raise awareness among all students of this responsibility toward the environment and encourage them to actively take action.
- To provide useful tools to the teachers as the agents of change.

The **methodological approach** it is key to highlight the importance of basing the activities on real challenges such as the ones CRAM Foundation has faced or the ones that are shown by the scientific investigations (dolphin beached, sea turtles by-catches, changes in marine biodiversity, changes in percentages of male and female turtles, finning impact...). In these activities, in a participative way, the student has to solve or take sides in the situation. Dynamic and lively methodologies are greatly encouraged, allowing the student to be the main character of the activity. Some of the elements that allow this methodology are: "the question" in order to raise a cognitive doubt or externalise a thought, teamwork, debate, reflexion, critical thinking against social position, role plays and research. The best methodology is applied taking into account the age group and the resources available at any moment. The didactic sequences not only help to strengthen the knowledge, but to increase awareness with the ultimate aim to invite children to act for the conservation, through the shared reflection.

It is worth considering the connection between the educational proposals and the curriculum contents, in order to provide links with formal learning and become helpful for the teaching task.

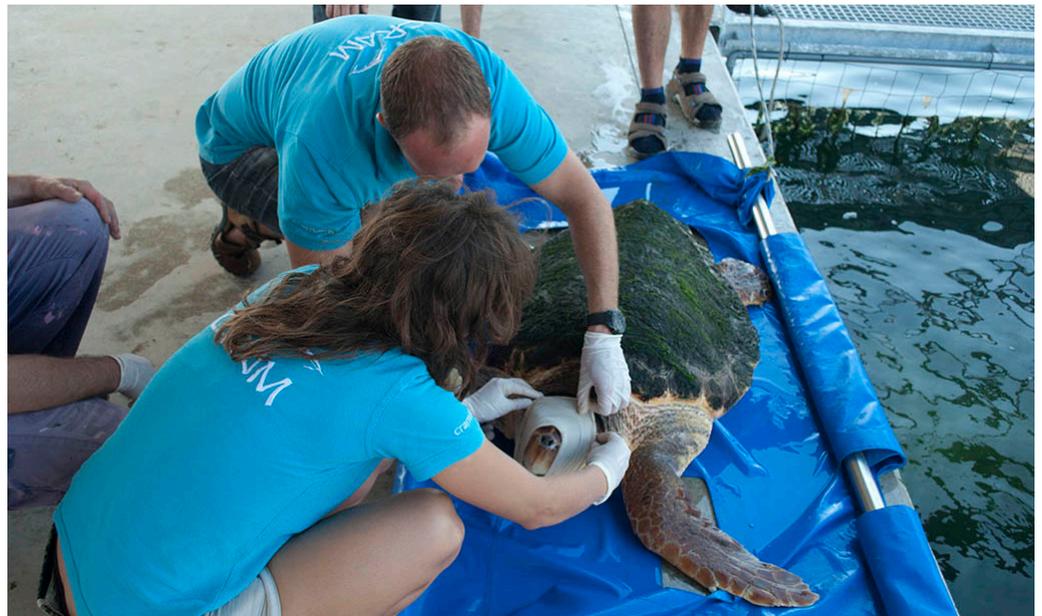
Attention to student's diversity is another great value to the AULACRAM project. The project intends to ensure that all students enjoy the activities, but recognising the special needs of each child.

Finally, to base the activities on the three main elements: knowledge, awareness and action, has offered the students a unique experience to see reality from a wider perspective, to become aware and to start making decisions to act smartly. Surveys carried out amongst teachers, not only have provided insight into the activity, but also, gain knowledge about the aim of the teacher's visit. During this three scholar courses the number of school visits has increased. This fact confirms the AULACRAM presence in schools and how values such as the marine environment conservation are starting to guide schools visits. It also reflects teacher's willingness to instill environmental values to their pupils.

The activities have allowed specific response to some schools such as: sea turtle adoption or the attachment of the school project to the conservation and have strengthened the change in the teacher's point of view towards the work done in recuperation centers.

Finally, we dare to say that the Aulacram project is bringing schools closer to the sea and it is transforming the way we think marine conservation. ♦

■ Dolphin and turtle rescue activity at CRAM



Waiting COP22: what is next?

From 30 November to 11 December 2015, governments gathered in Paris for the 21st Conference of the Parties (COP21) to concur on a new global climate change agreement.



MONICA RISSO E STEFANO MORETTO

Within the Conference, the 2nd of December was chosen to be the “Resilience Day” of the official COP21 program, during which water was discussed with high-level government officials through the presentation of four dedicated commitments by river basin organizations, cities, youth, and the business community on water and climate change as part of the Lima to Paris Action Agenda.

Benedito Braga, President of The World Water Council, reminded government representatives that failing to address the relationship between water and climate puts our future in jeopardy. *“All the energy producing systems depend on water. And we are taking it for granted that water is going to be there when it’s necessary and at the price that you pay today... water needs to be truly considered in these discussions.”*

In parallel, in the green zone (the civil society space) the [#ClimatelsWater](#), a collective initiative which emerged from the determination of various members of the international water community to join forces in order to elevate the visibility for water during CoP21, organized an unofficial “Water Day” coordinated by the Alliance for Global Water Adaptation (AGWA) on “Solutions for the future.”

This initiative aimed to bring attention to water as it did not figure in the official agenda in an adequate way despite the fact that all impacts of climate variability and change are verified. In this occasion, many international organizations, representing thousands of stakeholders, have come together to generate recognition for water at the political level during COP21 and in subsequent editions by communicating with a single voice: Climate Is Water!

The day concluded with a press conference that focused on the need to place water issues at the heart of climate discussions, from one COP to the next. **Ségolène Royal**, Minister of Ecology, Sustainable Development and Energy of France confirmed that *"It is through water that we can measure both the severity and the acceleration of global warming, however we can also see that, through water, solutions can be found."* This was reinforced by **Charafat Afaïal**, Minister Delegate in Charge of Water of the Minister of Energy, Mining, Water and Environment of Morocco, who indicated that water must become one of the main priorities of the climate negotiations during CoP22.

Furthermore, there are many reasons why has been fundamental to elevate the visibility of water within the climate discussions during COP21.

First of all, the effects of climate change on natural systems will be huge: from accelerated glacier melt, altered precipitation, runoff, and groundwater recharge patterns, to extreme droughts and floods, water quality changes, saltwater intrusion in coastal aquifers and changes in water use.

In addition of that, human, social, economic and environmental impacts of climate change occur primarily through changes in water, dramatically impacting its quality, quantity and causing irreversible disasters.

From a geopolitical point of view the situation is even more urgent. Poor countries, that have always faced hydrologic variability, should face the effects of the climate change that will make water security even more difficult and costly to achieve. Climate change may also reintroduce water security challenges in countries that are not used to tackle them anymore. Much of the developing world will have to cope with droughts and/or the growing risk of flooding. By now, 1.6 billion people live in countries and regions with absolute water scarcity and the number is expected to increase to 2.8 billion people by 2025.

The key messages that has been addressed by the initiative [#ClimatelsWater](#) to meet the climate challenge are:

- The importance of strengthen multi-stakeholder collaboration across all sectors. Water connects policy areas, economic sectors, and societies and is therefore a tool for cooperation and building trust.
- Water flows within basins regardless of borders and needs to be managed in an integrated manner.
- Resilience to climate change requires adaptive water management and robust water infrastructure. People most at risk need strengthened resilience to help with stand the impacts of climate change.

-Integration of the water and climate agendas would improve cost effectiveness and therefore support financial commitments to create resilient societies and secure ecosystems.

In conclusion, the World Water Council will continue to build on the momentum of the [#ClimatelsWater](#) initiative, with a particular emphasis on strengthening the position of water in COP22 in Marrakech through the organization of a preparatory meeting with the Governments of France and Morocco mid-year.

We can just agree with Anna Lindstedt, Climate Ambassador of Sweden pointing out *"the key role of water in addressing climate change, hoping that the Lima-Paris Action Agenda will become the Lima-Paris-Marrakech Action Agenda."*

Pianeta Azzurro will keep to support this international initiatives as deeply convinced that Climate is Water! ◆

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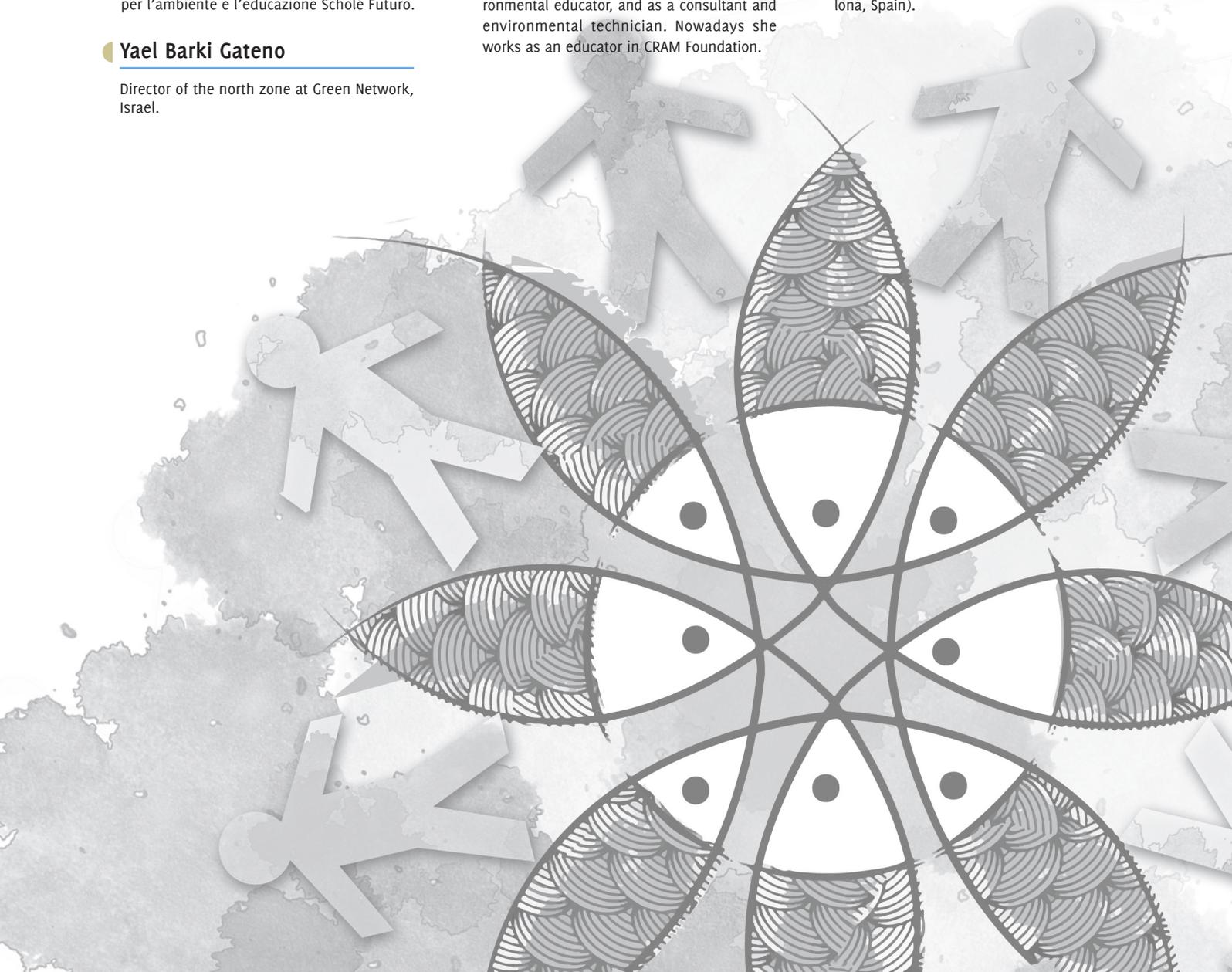
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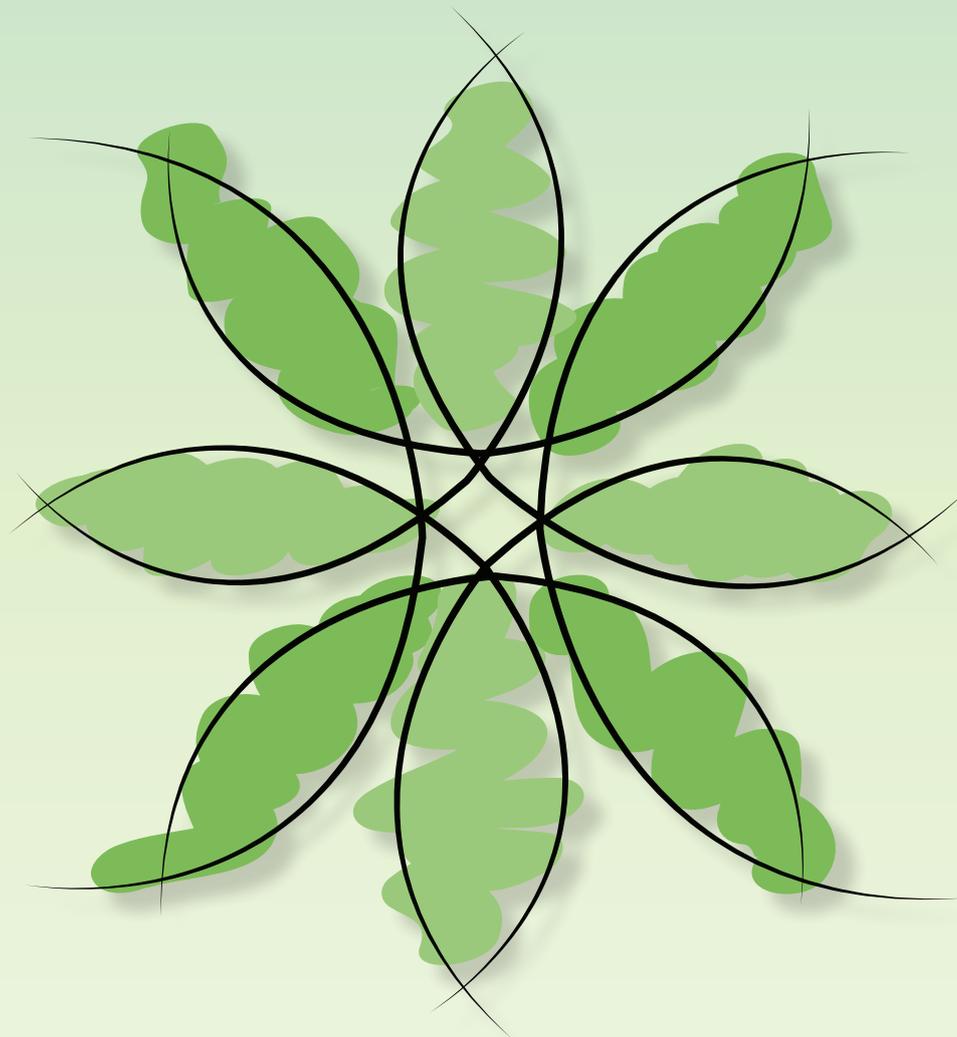
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9th WEEC

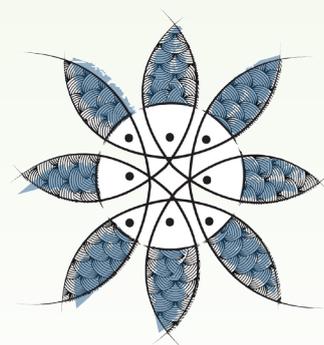
World Environmental Education Congress

VANCOUVER 2017

For more information about the 9th WEEC please contact the Permanent Secretariat at secretariat@environmental-education.org or visit the following websites:
www.environmental-education.org or www.weec2017.org



“il Pianeta azzurro”, is pleased to invite you all to the meeting on marine education that will be held at Vancouver, Canada on **2017** within the framework of 9th WEEC World Environmental Education Congress





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