

## Let's meet the ocean

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### Introduction

In the eastern coast of Venezuela we have the Upwelling Ecoregion, where around 7 fisherman villages are located. The main seafood services for the country come from this region. The fisherman villages have a big gap in environmental education and with this project for the first time the region had a program focused on the youth's preparation for ocean care and therefore start to establish citizen scientist. The present outreach experience had focused on new habits to the youth for ocean care, expecting to build sense of belonging for future generations in the fishermen communities, and therefore the environment health and the coastal services for local and national society will be enhanced.

### Activities

We choose 2 of villages (Guayacán and Chacopata) located in the east coast of Venezuela (63°49'50" W; 10° 38'55"N) to develop environmental education practices with the children. The educational activities were developed in the Ecological Investigation Center located in Guayacán village, from 26 to 30 of October 2015. We received 114 participants grouped according to their ages and made 4 age-groups. Each day was dedicated to one age-group and the activities were as following: 1) Guided visit to the Marine Museum of the Ecological Investigation Center (CIEG), where the participants had the chance to check out the marine biodiversity of their location and at the same time the Project Leader and advanced students from Simón Bolívar University interacted with the group to provide information about the biology and the ecology of the edible animals shown in the display (see pictures below). Subjects like Climate Change and Ocean Services were highlighted. 2) Power point media tools, with pictures and videos were used as tools to explain few processes like: upwelling phenomena, climate change, the importance of plastic debris and fisheries in order to place in the community the importance of the ecosystem services and therefore guide the way to guarantee the ecosystem health (see pictures below), 3) Field work where the participants got familiar with some simple sampling methods and learned basic skills for marine organism classification (see pictures below). Little of biology of some of the commercial invertebrate species was mentioned (reproduction, food webs, etc.). The last day (day 5) we prepare recreational games with themes regarding to what participants were learning during the outreach experience (see pictures below).

## Results

Most of the participants were able to understand the main concepts related to marine biology and oceanography, putting them in the context of their daily life. Many children were not used to have “foreigner” people as a mentor or teacher and they were very surprised with our visit.

Participants were able to identify (by common and scientific names) the main edible organisms that are part of the artisanal fisheries established in their village and also were able to identify their basic biology characteristics like reproduction and feeding behavior.

The participants were able to recreate a sampling in the field, using the sampling tools that commonly are used by the scientist. They had the experience of extracting cores and using the sieve and observe few invertebrates that were collected and identified.

During the recreational games the participants were able to respond according to what they had been seeing during the outreach experience and as results we gave them few preset-prizes (T-shirts, magazines and posters related to the ocean) for the one who won the recreational games.

## Conclusions

In general the experience was positive and all participants were asking when we will make another outreach project! However there were few difficulties related with the group management: some children were extremely excited with the experience and were difficult to handle: they were talking and asking a lot and not letting the teachers do their presentation. And during the sampling experience the children were “fighting” because all wanted to carry the core or the sieve and all wanted to repeat the procedure 100 times!

We are dealing with the Dean of University Outreach to develop a second part of this experience, looking forward to build an Ocean Care Team and Citizen Scientist as well. This could not be done as we planned because we find out that the participants still need more information to really start to get involved with their ocean problems. Still they don't have that Sense of Belonging they need to really care of their environment. We think that is necessary to repeat few outreach experiences to enhance the knowledge and wakeup their sense of belonging.

**Pictures about the activities.**

Guided visit to the Marine Museum of the Ecological Investigation Center (CIEG).





Power point media tools: professional presentations.





Field work





Recreational games.





Note: photos by María Gabriela Nieves and Carolina Peralta.