

## ENVIRONMENTAL EDUCATIONAL PROGRAM FOR TEACHERS AT THE GUATEMALAN CARIBBEAN AS A KEY FOR CONSERVATION IN RURAL AREAS



Guatemala, March 8th, 2017

#### **REPORT I: Introduction of The Environment**

**Introduction.** The environmental educational program for teachers at the Guatemalan Caribbean as a key for conservation in rural areas, is a project sponsored by Rufford Foundation. Its main goal is to create replicators of knowledge in rural schools of Izabal, promoting access of environmental education to children and youth, so that they can change their attitudes and perceptions about the environment.

This document presents the results of the first workshop held in Puerto Barrios and Livingston, Izabal. During these days, virtual presentations, participative activities and handcrafts with recycled plastic bottles were held.

The main results of this workshop were the increase of environmental knowledge of teachers, high satisfaction about the workshops, as well as the results of general perception of teachers about environmental topics.



Figure 1. Teachers discuss about classification of natural resources, Puerto Barrios, Izabal (2017).

### Workshop. Introduction of The Environment.

The first environmental workshop in Puerto Barrios and Livingston was held. The name of the workshop was "Introduction of The Environment, which presented the origin and concept of environment, its components (natural resources: renewables, non-renewables and partially renewables), environmental impact and ecologic footprint.

Three activities were held during the workshop: Natural Resources Classification, Environmental Impact and Ecologic Footprint.



Figure 2. Teachers of Livingston, Izabal (2017).

The activity "Natural Resources Classification" teaches how to classify the resources in: renewables, non-renewables and partially renewables. Through group discussion and presentation of results, teachers could get to appreciate the actual status of some natural resources such as water, soil, animals and minerals.

The activity "Environmental Impact" teaches how to appreciate the actual status of natural resources and how humans use and regulate them. This helps to improve awareness of sustainability and to improve attitudes that guarantee natural resources for future generations.

The activity "Ecologic Footprint" allows participants to evaluate the individual impact that they are having in the world and to value the resources they have in this moment.



Figure 3. Teachers decide about the natural resources classification, Puerto Barrios, Izabal (2017).



Figure 4. Teachers discuss about water as a partially-renewable resoruce, Livingston, Izabal (2017).



Figure 5. Teachers collecting resources in the Environmental Impact Activity, Puerto Barrios, Izabal (2017).



**Figure 6.** Teachers analyze the resources they got in the Environmental Impact Activity, Livingston, Izabal (2017).



**Figure 7.** Teacher taking the Ecologic Footprint evaluation, Livingston, Izabal (2017).

#### **Evaluation and results.**

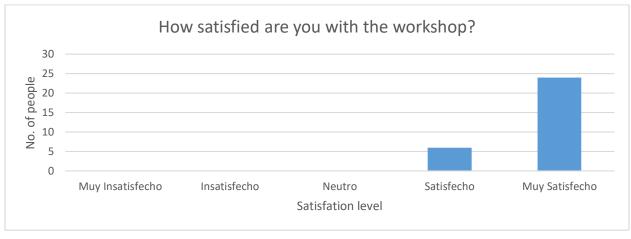
Three evaluations were applied: Perception Questionnaire, Level of Knowledge (pre-post), Satisfaction Level.

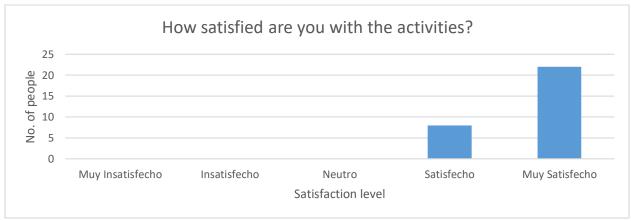
30 participants attended to the workshops. Institutions like the Education Ministry (MINEDUC), the National Council of Protected Area (CONAP), the Natural Resources and Environment Ministry (MARN) and several schools of Puerto Barrios and Livingston participated of these workshops.

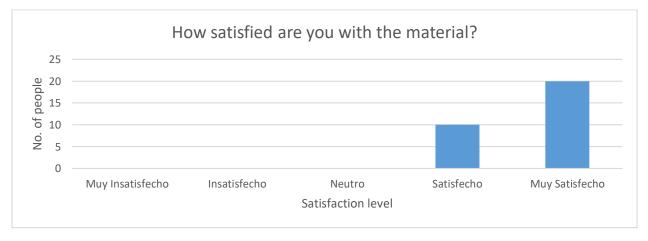
Perception questionnaires reflect 80.73% of perception for Livingston, and 83.63% for Puerto Barrios. This means that participants have good perception about the environment, but this can be improved through workshops.

Evaluation of knowledge (pre-post) reflects an increase of environmental concepts in 73% for Livingston and 63% for Puerto Barrios. This result was based in the number of participants with more than 80 points in their pre and post evaluation.

Satisfaction level was evaluated through a satisfaction questionnaire. Satisfaction results demonstrate that participants were greatly satisfied and satisfied with our workshops, activities and the material that was used during the workshop.







Results for 30 participants in the workshop.

# Project 1. Recycle.

As part of the first workshop, teachers learned how to do different handcrafts with recycled plastic bottles. This handcrafts included: pencil cases, bracelets and hermetic taps for plastic bags.



Figure 8. Participant paints its pencil case made of recycled plastic bottle, Puerto Barrios, Izabal (2017).



Figure 9. Participants making bracelets made of recycled plastic bottles, Puerto Barrios, Izabal (2017).



Figure 10. Participants of Livingston making their handcrafts, Livingston, Izabal (2017).



Figure 11. Pencil case made of recycled plastic bottle, Puerto Barrios, Izabal (2017).