Project Update: November 2010

Objective 1 Inform and train local stakeholders for a long-term monitoring program of the Cana coral reef ecosystem.

One workshop was held to present the project to all three dive shops in the area. Nevertheless, attendance was low since two of the dive shops are settled on another island. Anyhow they manifested their interest in collaborate with the project.

Different and varied personal meetings and interviews had been made with different local stakeholders, principally fishermen and the local municipality. Other stakeholders include some restaurants, hotels and other touristic service providers. The goal of these interviews was to present the project searching for potential partners.

Two meetings were held with the local municipality, specifically with the Mayor, Cleveland Webster, and three were with the coordinator of Municipal Services (Ms. Lily Downs). From these meetings the Mayor favoured cooperation between the local government and our project, and showed a committed interest in the support of our activities. For the moment we agreed upon a letter of commitment between the two parties that will be the beginning of a long- term partnership.

On the other hand, during the meeting with the Municipal Services we agreed on the cooperation to coordinate the beach and road clean up activities. For the moment the activity is planned for the 26th November 2010.

Some telephone conversations were planned with the Dean of the Bluefields University, nevertheless he didn´t attend to our calls. For the moment we only had written communication from them that express their interest in the project, but we have not seen any prove of that interest.

One local person has received training as an advanced open water diver. Julliet Pudines is a young woman born in Corn Island, who had already received training as an open water diver. She is the daughter of a local fisherman. Due to her abilities and interest she proposed her self to help us during the field phase with no different interest than to have the opportunity to dive and gain some experience. Once in the water we saw the advantages of training her as a research assistant. In that sense she undertook the Advanced Open Water Course during October and her certificate is being processed by PADI. We also began the training of one local fisherman as an open water diver; however, we had to stop the training since we realised that he was not going to respond to the commitment with our project.

Also during our meetings with the local municipality we identified some individuals that work with the municipality and are good candidates to participate in the training, one of those is the Mayor's secretary; she is a biologist and was coordinating the environmental activities carried out by the municipality.

Objective 2 Establish the biological base line and implement the monitoring programme for live cover percentage, bleaching and focal species with local stakeholders.

Preliminary surveys for choosing the monitoring sites and establishing a biological base line were done during April 2010. Three sites were chosen in a participatory way. These are: Playa, Chavo and Canales.

Nevertheless, all three sites are around Big Corn Island, no sites are chosen around Little Corn due to logistic and budget issues.

Playa was chosen as a training site, it is close to the beach with easy accessibility, and the coral formations are in good health (no bleaching and big colonies). Chavo was chosen because it is a common diving place around Big Corn Island. Different methodological approaches have been tried over this site, they would be discussed ahead. Canales was chosen because of the actual condition of the coral formations over the place. Nonetheless, no data have been collected from this site (due to unforeseen equipment issues). We proposed to change Canales and use the CARICOMP monitoring site. Anyhow, during preliminary surveys we have not been able to localise the CARICOMP site, at least we are not 100% percent sure that we are on the site.

Since we are establishing a baseline for a participatory monitoring programme we realised that traditional quadrant methodology needed technical assistance during data collection (to be able to identify the live cover on the substratum). For that reason we decided to base our participatory model upon a photo monitoring methodology. So, we prepared a rigid structure that helped us to take pictures of the same quadrant in order to reduce the bias.

The structure is made out of PVC pipes. The first one m^2 quadrant is 1 m above the bottom and is our measuring unit. The second quadrant on top is the camera support quadrant, and is 1 m above the first one. The pipes that are inside this camera support are able to move. Once in spot they were fixed to keep them from moving. The structure works perfectly to take pictures, but once out of the water, when we proceeded to analyse the data we saw a source of error. Our structure covers 1 m^2 quadrant as proposed originally. In order for us to cover that area with the camera we had to divide the quadrant into four smaller squares and for each square we took an image. The organization of the four images would be our 1 m^2 quadrant. Once we did this organisation we realised that corals were being repeated on almost every image, which leads us to overestimate the live percentage cover. We found a solution to this problem by taking just one picture, but that leads us to the reduction of the original 1 m^2 quadrant to a 70 x 50 cm quadrant, since this area is the area that the frame of one picture covers. Our change, methodologically speaking, worked perfectly; we just had to augment the number of repetitions in order to cover the same total area proposed. Furthermore, this new approach had no incidence over our budget or over our sound scientific base line. Instead it really opens the possibilities of this monitoring project to be a participatory experience. We build a new smaller structure and tried the new approach.

The new structure was not just smaller, but it had no moving parts. The lens of the camera is centered in the middle of the rectangle and fixed to the pipe. The whole quadrant is 1 m above the sea bottom, while in the first big structure the camera was 2 m above sea bottom. The image quality results from this new approach were not satisfactory and when compared with the images from the first approach we perceived our source of error. The only difference between the two structures is the distance of the camera to the sea bottom. Our next step was to standardise according to the best result in terms of distance to the bottom.

During the dive to work with the “advanced” new structure our camera housing flooded. We didn’t expect that to happen, since the equipment was new. The bad news is that the camera is not working, and the worst news: the guarantee would not cover that kind of accident because we cannot prove that it wasn’t our fault. For the moment we stopped with the photo monitoring program, fortunately we are expecting to receive some funds from Idea Wild and Project Aware so we can continue.

Objective 3 Increase environmental awareness with local community and schools.

With the support of the local municipality our project is coordinating the November clean up activity at Big Corn Island. This activity is carried out by the municipality at least twice a year. Nevertheless, there is still a lack of consciousness from the inhabitants of the island; garbage is all over the place. Many people manifest that most of the garbage that can be found over the beaches comes from marine debris because of ocean currents. Our statement is that the streets are as dirty as the beaches. For this reason we are focusing our first clean up activity to learn how the municipality works and try to identify the way in which we can really build up consciousness.