

# TIDE Report Belize Tropical Conservation Agreement

October 1<sup>ST</sup> 2013 to September 30<sup>th</sup> 2014



## INTRODUCTION

Toledo Institute for Development and Environment is an award-winning organization focused on involving communities in ecosystems management for the benefit of the people of Southern Belize. TIDE co-manages the Port Honduras Marine Reserve with the Fisheries Department; the Payne's Creek National Park with the Forest Department and 20,488 acres of private lands under the Tropical Forest Conservation Agreement. TIDE's private lands are located in several segregated parcels along the banks of the Rio Grande and Deep River in Southern Belize.

The purpose of this report is to highlight the activities and outcomes of the management of the TIDE private lands. Under the TFCA section 4.3 (c) (Authorized Purposes) for this reporting period, TIDE used the funds for conservation, maintenance and restoration of the lands in accordance with the following items; (i) the establishment, protection, and maintenance of parks, protected areas, and reserves and (ii) the development and implementation of scientifically sound systems of natural resources management, including land ecosystems management practices; (iii) training programs to increase the scientific, technical and managerial capacities of individuals and organizations involved in conservation efforts and (iv) the restoration, protection, or sustainable use of diverse animal and plant species.

This report focuses on what has been accomplished during the period 1<sup>st</sup> October 2013 to 30<sup>th</sup> September 2014. It is divided into the recommended thematic areas being Resource Management and Protection, Research and Monitoring and Education and Outreach.

## RESOURCE MANAGEMENT AND PROTECTION



TIDE continues to employ an integrated approach to resource protection and management. Rangers were able to clear a total of 3 kilometers on two of the parcels (Murskie and Block 123). In addition, Portion of Murskie Northwest boundary line was cleared it amounted to 2 kilometers of line while working on the transect line in that location. At Block 123 another portion of South west corner was cleared for a distance 1 kilometer this portion was cleared when erecting a informative sign to provide evidence on the protected lands due to an adjacent lands being harvest of Rose wood. In total we had 3 kilometers boundary line cleared.



The TPPL rangers erected signs on new acquired land on the Rio Grande watershed along with Gregg and Leanne Knox. The signs were placed in three separate locations one sign the Rio Grande River and five signs along two inland streams flowing into the Rio Grande River. The signs information is presenting conservation area and no illegal activities to be carried out. There were 6 signs placed at access points to Seven Hills Range used as hunting trails. Signs were placed in different location base on impact map generated by TPPL rangers at their GIS training. Most of the signs were erected in the Rio Grande Area, Santa Maria Creek, San Marcus buffer zone community farm Feeder road to Rio Grande River. The middle reaches of Rio Grande in the Puerto Lagarto area a hot spot on the Rio Grande, and on Black Creek boundary line corner on the Rio Grande. The other two signs were placed at the Big Falls lands.

During the year patrols were conducted on the lands, coastal and inland water ways amounted to 158 patrols of which 37 were night patrols. The dry season patrols revealed that this was the most active time of the year with resources users engaged in activities such as fishing and hunting. Other main activities conducted were monitoring of the closed season for Hicatee, game species and Rose wood extraction. In order for rangers to patrol regularly and effectively, the patrol team was able to established 8 satellite camp site throughout the private lands.

To improve our Law enforcement activities at TPPL a ranger attended the National Ranger Training Academy training course. The course was in two phases with a duration of 21 days, the first phase was ending of July 2014 for 10 days and first week of August 2014 for 11 days. The course teaches patrol techniques, such as intelligence gathering, tracking and arresting techniques. The participating ranger brings back new knowledge for law enforcement. As part of consistency the rangers is heading patrols in the private lands for the ranger team

The use of SMART as a tool to improve law enforcement is in the making at TPPL. There is a minor delay due to the new version of the SMART software. The software keeps changing. This was being address and the new program is ready to use for training for the rangers. At the moment two rangers who had participated in the training will be the rangers in charge to manage the information. The use of this technology is progressing and we are now waiting to conduct a more in-depth training in the use of this new technology.

Complementing the preparation of implementing SMART there are concert achievements done with the rangers, three rangers have participated in GIS training. At the training a map was produced that shows areas of impact that are rated at different scales. These hot spot areas are 8 and now marked with GPS points. The 8 hot spot will be monitored and will have in place infrared cameras which are a requirement of SMART for surveillance and intelligence data collection.

No formal training was done in Boat handling and engine maintenance but some in house activities under the supervision of a mechanic where mechanical problems were experienced was done and the regular servicing of the outboard engine was done by staff. A testament to this we have had minimal problems with maintenance and we provide support to two other protected areas.

Some 8 pairs of leather boots were acquired for the staff to assist with patrols and firefighting at PCNP. Also new sets of uniforms were purchased for the staff to improve their presentation to the public when on patrols and participating in community meetings and on trainings and other activities representing TIDE.

Nursery preparation, the rangers initially made available proper soil medium for the nursery. Soils were transported from fertile soil sources. There were 280 bags bagged for 8 species of trees. The rate of success out of the 8 species was 4 species, Mahogany, Inga, Fig and Chamiadora. The tree species Inga and Fig were used to reforest a section of the Rio Grande by Ridge to Reef expedition. The same trees species were planted on the edge of the Hicatee pond being developed.

<b>Figure 1</b>	<b>Figure 2</b>
<b>Figure 3</b>	<b>Figure 4</b>
<p><b>Figure 1:</b> Team members collecting data from felled Rosewood tree. <b>Figure 2:</b> rosewood stump with regrowth. <b>Figure 3:</b> DNS Ranger collecting data of marked Rosewood. <b>Figure 4:</b> Marked Mahogany within Block 123.</p>	

UPDATE ON LAND DOCUMENTS

**RESEARCH AND MONITORING**

*TIDE is using the scientific data collected to make management decisions as indicated by adaptive management plans.*

Community researchers and students contributed in the monitoring of Hicatee on the Rio Grande for 2014. Their involvement was in capture and data collection in the field and radio telemetry monitoring. A member of the community researchers’ program who is a Lecturer in the Natural Resources Management Program at UB made the relationship more collaborative. There two examples of how the relationship provided the students involvement with Hicatee. The development of the Hicatee mascot was done with 19 UB students for Hicatee

Education and Outreach for 2014. The teacher's acted as an overseer of the mascot in the making; another example is the physical involvement in the pond to release two Hicatee hatchlings at the Private Lands.

Rangers along with volunteers on a monthly bases collect data on the 5 transect line. During the April 2014 data collection for the first time we heard by a Slaty-breasted Tinamou in the Murskie parcel in the Seven Hills Range an area considered a remote parcel of the Private Lands. The data collection is being up scaled in 2014 by a ranger of the Private lands trained in research and monitoring techniques first level by ERI at University of Belize in Belmopan. Since August 2014 Private lands Rangers have been receiving in house training to improve their bird identification skills, revising of field data sheet and development of data base and training in data entry to improve data analysis etc. The data entry is now for target species found on the private lands.

A phenology transect line had been established with 23 tree species to be monitored on the lands at the ranger station on the Starchier parcel. This monitoring adds to weather data collection climate change monitoring on the lower reaches of the Rio Grande River.

In order to look at the research and monitoring on a landscape level during the month of April 2014 the research and monitoring team met with Ya'axche' conservation Trust to better networking for the MMMC biodiversity monitoring. This networking calls to maximize resources, personnel performance and follow research protocols that will contribute to management decisions for the conservation areas.

The rangers at the private lands supported the Hicatee monitoring for 2014 with a total of 30 days inputted for this activity. On two separate times, April 24-25 2014 rangers break the record for Hicatee capture on the Rio Grande using nets. At that time 4 Hicatee was capture and 2 Giant Mexican Musk Turtle. The second success story is May 2014, 3 Hicatee were capture and radio telemetry was attached to one large male to track the movement of the species on the watershed.

At the ranger station on the Rio Grande 5 eggs rescued on an eroding bank of the Rio Grande in December 2013 were incubated for a period of time where 3 of the eggs hatched (June 4, 2014, June 13, 2014 and June 18, 2014.) On a weekly basis since the time of hatching the turtles are being measured in order to monitor their growth.

In July 2014 the construction of a pond for the release of the two small turtles that remained after the release of one of the hatchlings that was done in June was completed replicating the habitat on the Rio Grande. This was done by planting fig and Inga tree species their main food source. This initiative will further help us learn more about the Hicatee in their natural habitat and with the education of the general public on the species.


On June 27, 2014 a Hicatee hatchling from the 3 hatched at the Ranger Station at TPPL was released on the Rio Grande. A national radio station, LOVE FM did a documentary on the release and Hicatee program for TIDE. This documentary was later broadcast both radio and television and complementary remarks came from the general public and interest in the film came from the schools.

A visit was made to three families who are avid hunters in the village of Hicatee and who were hunting in the lands. Information shared was on hunting laws and closed season for animals that are hunted. The other was lands adjacent to the village was for conservation purposes and managed by TIDE. Information was also shared to resources met during patrols in the area especially those encountered on the Rio Grande.

19 students from the University of Belize Toledo Campus did a Hicatee mascot as part of the awareness on the conservation and management of the species. After the completion of the mascot the students were able to visit 7 primary schools to do presentation on Hicatee awareness. Appearances were also done at TIDE's Annual Summer Camp and earth day activities for 2014.

Rangers were given in house training on oral presentation to improve their presentation skills, they were provided with information as a guide to prepare presentations. They are coach in how to prepare, practice public talks, presentation on themes, the body of the presentation and conclusion. Practical demonstration was observed by the rangers in doing actual presentation for schools visiting and tourist at the site.

Two of our Rangers participated in the National Protected Areas training Course facilitated by UB/ERI focusing on the improving presentation to visitors to the protected areas as well as improving presentations given at public meetings and schools.

The maintenance of the trail system at the private lands is ongoing maintaining it from the station to the coast. The trail width has been widen and more visible to followed by visitors. The botanical garden trail remains accessible for visitation. The learning center had undergone a roof replacement. Ridge to Reef provided work on an 8X8 signs depicting the map of the lands. This map is being used to orient visitors to private lands and region of MMC conservation. The map shows communities buffering the private lands and the 5 main water shed following into the Port Honduras Marine Reserve. Work was conducted on displays by revising information at the visitor center. Major repair was conducted on the boardwalk by Ridge to Reef expedition. This board walk connects the Botanical garden with ranger station compound. All this will help to improve visitors satisfaction at TPPL and improve the Education and outreach to visitors to the protected area.

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## FINANCIAL REPORT

All funds budgeted for this reporting period was spent in accordance with the approved budget. Details of the expenditures presented below.



### **Endowment Fund report for period ending September 2013**

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As at September 30, 2014 TIDE's principal endowment was \$ with an interest of 3.75% per annum equivalent to \$ accrued as at September 30. This brings the accumulated endowment to \$ as at September 30, 2014.

#### **October 1, 2013 to September 30, 2014**

<b>Endowment Fund interest rate</b>	<b>Principal Amount as at September 30, 2013</b>	<b>Interest Accrued as at September 30, 2013</b>	<b>Accumulated Total as at September 30, 2013</b>
<b>3.75%</b>	<b>2,854,389.00</b>	<b>81,625.04</b>	<b>2,936,014.04</b>