

Summit Report – April to August 2009

Marine Resource Protection

Resource protection

PHMR rangers conducted a total of 367 patrols at daytime as well as nighttime since April 2009. These patrols resulted in the confiscation of 8 gill nets and 4 verbal warnings. All gill nets were confiscated during night patrols, and all warnings were related to illegal harvesting of lobster. In 2008 rangers confiscated 22 gill nets, so there is definitely a decrease in the number of nets found in PHMR in 2009. We believe that there are less illegal activities due to the 24hr presence of rangers and regular joint patrols with the BDF.



Belize Defense Force assist with patrols

In addition to patrols, the Community Stewards Program has been going really great with additional training in GPS reading, Communication Skills, and an exchange visit to Guatemala to see a protected area managed by the local community. The program has proven to be extremely successful and a creative way of engaging community members in resource management. TIDE and other conservation NGO's can now utilize the skills of these individuals in resources protection, education and outreach, research, as park rangers or even on advisory boards.

In respect to rights-based fishery management in PHMR, EDF and TIDE have held several workshops in Belize and exchanges in British Columbia and Sarteneja (Corozal, Belize) focused on catch shares as an option for fisheries management. Most fishers are open to this

idea and have indicated that it was something they wanted for a long time.

Research and Monitoring

Monitoring of sea water temperature and coral bleaching in the past year shows that there is a direct correlation between the two. About 48% of the colonies experience some form of bleaching, either partial or mild, however, as water temperature decreased all coral colonies were able to fully recover.

Marine productivity may be affected by bleaching events, but the full analysis of all monitoring efforts are yet to be done. Other commercial marine resources seem to be stable, but with only one year's data, it may be too early to definitively conclude that that's the case. TIDE will be using the monitoring data to make critical management decisions.

In 2008, TIDE began a fish stock monitoring program in PHMR. To date, over 900 conch, 1000 finfish and 500 lobster have been measured. Under water visual monitoring of Lobster population between the General Use Zone and the No Take Zones over the past 6 years are displayed in **figure 1**.

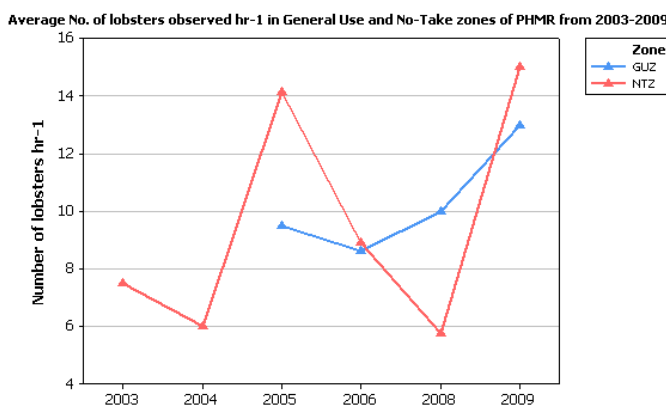


Figure 1 - Lobster population 2003 – 2009

Further analysis of the other commercial fish stock will be done after the 3 year assessment is completed. Due to this effort, many fishers have a better understanding of the importance of such information and are becoming more open to share information, providing that TIDE does the same at the end of the monitoring.

TIDE was very fortunate to have 3 Masters Degree students as interns who started the collection of anthropogenic data regarding the revision of the PHMR management plan. Although the main drafting of the plan will begin in October 2009, much of the preliminary information has been collected and partially analyzed by the students. Major findings to date shows that despite some negative opinions of TIDE, over 70% of the participants want TIDE to continue to co-manage PHMR with the fisheries department. People also highlighted outreach as an area where TIDE could make considerable improvements. The management plan will also propose an increase in the area designated as No-Take-Zones in PHMR, which the Belize Fisheries Department will have to approve. Our research is showing that there is an urgent need to increase the size of the no-take-zones in order for them to have any significant impacts.

Terrestrial and Freshwater resources

Resource Protection

Since April 2009, TIDE terrestrial rangers conducted 119 patrols on land, rivers and lagoons. These patrols resulted in the confiscation of 2 gill nets from within rivers and verbal warning issued to 3 fishers and hunters.

In Payne's Creek National Park (PCNP), additional ways of resource protection were employed through anthropogenic wildfire prevention. Anthropogenic wildfires are used as a way of hunting white-tailed deer in the pine savannahs in Belize, but this hunting method causes serious damage to the pine ecosystems and the wildlife therein, including the



Mario Muschamp (PCNP Manager) runs a fire training workshop ahead of 2009 'dry season'

As a result of both forms of terrestrial resource protection for the first time since its management of PCNP and its private protected lands wildlife species such as jaguars, white-tailed deer, the great curassow and white-lipped peccary are frequently spotted in the rangers compound almost on a daily basis. Every time excitement and a sense of satisfaction that displays nothing short of passion for the work they are doing.



All plants have to be transported manually to the botanical garden

endangered yellow-headed parrot. To prevent fires in PCNP, TIDE terrestrial rangers participated in fire management trainings, special constable training, constructed 13 miles of "Black Lining" (Burning a line 30ft wide) to prevent wildfires from spreading into the park, and did tower surveillance daily during the dry season (March – May annually). At the end of the dry season this year, TIDE was happy to announce that for the first time in 10 years there were no fires in PCNP.

To protect the freshwater systems, TIDE started a small program that is heavily based on community involvement to re-establish the riparian zones along all major tributaries of the Rio Grande River. This program currently involves 3 communities who farm along the river annually and involves setting up small nurseries in their communities and eventually transplanting trees in the same areas they used to slash and burn for farming. There are approximately 10,000 saplings growing in 3 nurseries that will be planted in the riparian zone in 2010.

Great strides were also made in enhancing the visitors experience on the

protected lands as well. In addition to the 200ft board walk, the rangers constructed a 45 minute botanical trail on the private lands. The trail highlights many native medicinal trees, shrubs and herbs as well as a camping ground with fireplace. This addition to the private protected lands is a short boat trip up Rio Grande River and will be used to educate students, local and foreign visitors and will eventually be earning some income for TIDE and TIDE Tours.

Research and Monitoring

Our terrestrial scientists and rangers have been collecting information on mammals and birds from several transects on the lands. At this point it is too early to make any scientifically sound conclusions in regards to the monitoring program, but we are establishing trends in birds and mammals populations, as stated wildlife sightings have drastically increased this year.

Our freshwater scientist, who is also our terrestrial scientist, continues to monitor water quality in two of the most heavily impacted rivers in Southern Belize, Monkey River and Rio Grande. One of the major trends noted in the monitoring so far is an increase in turbidity due to more sediments being eroded into the rivers. This is the primary reason for the restoration of the riparian zone on the Rio Grande. We hope to extend the restoration program to the Monkey River very soon.

Education and Outreach

Since April, our Education Coordinator has visited 14 schools, 9 different communities and met with leaders and villagers to make presentations to these groups on our conservation targets. He also met with 25 teachers to inform them of what TIDE is doing and how they can be involved.

In the annual TIDE Freshwater Cup, 9 junior teams participated and completed their environmental projects. A project that stood out from the juniors was the nature park created at Little Flower School (See picture). The senior teams did 8 conservation projects ranging from watershed management to environmental education, garbage disposal and clean up campaigns. Since TIDE won an award for Social Innovation



**Proud winners of Junior environmental project
- Freshwater Cup 2009**



**Mr. Norman Budna (Environmental Education
Co-ordinator) awards certificate at Bella Vista
Variety Show – Summer Camp 2009**

for this program UNICEF produced a video documentary of the program hoping that it could be used in other areas of the world.

This year, during the months of July and August over 120 children participated in TIDE's Annual Summer Camp that focused on Pine Savannah and Mangroves. At the end of the camp the kids got creative in displaying what they have learned at the camp at a talent show that showcased children's skits, poems, arts and craft. Many parents and community members attended the event and were impressed at how much children gained from the two week camp.

TIDE has greatly improved its effort in communication by using the most popular social medias (Facebook, twitter, blogs, etc) to reach out to individuals with internet access especially outside of Belize. We are currently working on reaching out to the local populace through additional national and local radio shows and printed newsletters.

In general, our Education and Outreach Program, though small, is having significant impacts in the communities in which we work. Many young children, youths and even some adults are becoming more environmentally conscious as their knowledge of conservation increases. This is evident in the number of schools and villages that now have environmental clubs, 5 years ago only a few environmental clubs were in existence, today, most if not all schools have an environmental club and they call on TIDE for ongoing support.

Networking and Governance



Joe Villafranco (Program Director) and Celia Mahung (Executive Director) attend BAPPA's 2009 AGM

TIDE's membership in various associations and umbrella organizations is crucial in getting support for national legislative amendments to better govern the way protected areas are managed. Although the funds from the Summit Foundation are not used in these types of advocacy work, TIDE, as one of Belize's leading NGOs has been instrumental in drafting proposed amendments through its membership with the Association of Protected Areas Management Organization (APAMO) and the Belize Association of Private Protected Areas (BAPPA). In September 2009 BAPPA conducted its annual general meeting, TIDE was again voted to sit on the executive body.

TIDE also works on an international level through its membership in Tri-National Alliance for the Gulf of Honduras (TRIGOH). One outcome of our networking is the final draft of the amended National Parks System Act to make provisions for standardizing the co-management framework and agreement and for the inclusion of Private Protected Areas in the National Parks System Act. In addition, the reviving of TRIGOH since some of its original members moved on have been on going with a view to have Guatemala and Honduras adopt Belize's natural resources management laws and legislations and standardize management in the Gulf of Honduras.

TIDE recruited 4 new members on its Board of Directors that replaced 4 members who are no longer available to dedicate the time required to fully participate in the governance of the organization. This new addition brought various expertise as well as new energy to the organization. A formal orientation and training for the new members as well as current members and Advisory committee members is scheduled for October 2009. The new board members were very instrumental in developing a plan of action to address recommendations from the recent Institutional Assessment.

Other accomplishments

In addition to the many accomplishments achieved in the field, we have also improved on our Information Technology resources. We now have a server that is able to back up all computers regularly, as well as providing a space for sharing information with other staff etc. In these economic recession times the office staff got together and implemented several ways of being more green at the office, some of these measures includes:

- Making calls to fixed phones where the call cost is significantly lower than cell phone costs.
- Decrease electricity use by putting in additional light switches so that all the lights are not on in the entire room all the time.
- Using fans as much as possible and along with air conditioning and keeping the temperature above 22 degrees.
- At all ranger field stations we continue to use renewable energy in the form of solar and wind to provide electricity to the stations.