



**PORT HONDURAS MARINE RESERVE
ANNUAL REPORT 2007**

**PREPARED BY: TOLEDO INSTITUTE FOR DEVELOPMENT &
ENVIRONMENT (TIDE)**

PRESENTED TO: BELIZE FISHERIES DEPARTMENT

Table of Contents

Words from the manager	3
About TIDE	4
Our Goals	4
Our Approach	4
Where We Work	5
Organizational Structure	6
About PHMR	7
Introduction	7
PHMR Strategic Plan and Goals	8
Zoning Plan and Regulations	8
Legal Body responsible for establishing regulations and procedures	8
Staff	8
PHMR Accomplishments 2007	10
Patrols and Surveillance	10
Partnership	11
In the Community	
Community Support	11
Community Education and Outreach	12
Community Meetings and Training	13
Outreach and awareness	14
Institutional Development	14
Visitors to PHMR	19
Equipment Maintenance	19
Research and monitoring	19
Users of the Reserve for 2007	20
TIDE Board of Directors	21
TIDE Staff	21
PHMR Advisory Committee	22
PHMR Donors	22
Financial Statement	23

Words from the manager

It is with great pleasure that I present to you the Port Honduras Marine Reserve Annual report for 2007. This report summarizes the main activities that occurred throughout the year 2007. Despite losing a few staff this year it was still a good year for the reserve and the district on a whole.

The PHMR has now undergone seven years of management since its inception in January 2000. Patrols and surveillance continued throughout the year, with a total of 750 patrols conducted, of which some 56 patrols were conducted jointly with the BDF, Police Dept personnel, Fisheries PG, Belize Coast Guard and personnel from other protected areas managed by TIDE. As a result of these patrols two persons were arrested, some 8 persons were warned for conducting fishing activities with expired fisher folk license, 32 Gill Nets and 5 long lines were confiscated and one incident discovered of manatee slaughter in the reserve in September which occurred during the threat of Hurricane Felix. The number of arrest was much lower than previous years but the number of gill nets confiscated increased over the previous year (2006). This is a direct result of the continued effort of the PHMR staff and stakeholders, such as tour guides, fishers and Community Rangers taking an active role in protecting the resources of the Reserve. TIDE continues through its education and outreach program with its outreach as students and teachers from within the buffer communities of the reserve take educational tours of PHMR. This awareness building has helped to reduce the number of illegal activities in the reserve.

The Community Ranger Program continues to assist with the day to day management of the reserve as they continue to report illegal activities, assist with research and join rangers on patrols of the reserve. TIDE'S collaboration with other partners such as the Fisheries Department, Police Department, Belize defense Force, TASTE, Friends of Nature, WCS and the Belize Coast Guard continues to be successful. Several community meetings and joint operations were conducted over the course of the year as well, not only in PHMR but also within the waters of southern Belize.

Research and Monitoring continues to play an integral part of management effectiveness of PHMR. This year we continued with the Water Quality Monitoring, Sea grass monitoring, Mangroves, Conch, lobster, coral and fish. Data collected during this year will be analyzed and presented in the PHMR Biological Report 2007, which will be available by May 2007.

We would like to express our sincere gratitude to the Belize fisheries Department, PHMR Advisory Committee, the Belize Defense Force, The Oak Foundation, The Summit Foundation, AVINA, the National Oceanic and Atmospheric Administration (NOAA), the Wallace Foundation, The Nature Conservancy, Seacology, UNDP'S GEF/SGP, FES and MBRS. None of our work would have been possible without the contribution and the dedication you have shown throughout the year.

Special mention must be made of the buffer community members of Monkey River, Punta Negra and Punta Gorda for their commitment and support, and to the staff at TIDE for their help throughout the year.

Sincerely,

Mario Muschamp
Manager
Port Honduras Marine Reserve

About TIDE

The Toledo Institute for Development and Environment (TIDE) is non-profit non-government organization (NGO) founded in September 1997 to meet the growing environmental and development needs of the Toledo District, the southern most district of Belize. TIDE has conceived as a local initiative in response to the negative environmental impacts of activities such as manatee poaching, illegal fishing, illegal logging and destructive farming methods.

TIDE'S Goals

The organization has been hard at work over the past ten years to achieve its goal of improving organizational capacity to enable us to promote the protection, management and sustainable use of Toledo's natural resources while fostering programs that create and promote alternative economic opportunities for resource users who have traditionally depend on resource extraction for their livelihood. The alternative livelihoods developed and implemented by TIDE accomplished two goals: instilling a sense of ownership in our resources, and conserving them for future generations. The TIDE goals from the strategic Plan 2007 - 2012 are as follows:

1. Achieve and maintain a membership retention rate of 95% per year.
2. Increase the US membership by 75 new members per year and international membership by 50 new global members per year.
3. Increase the percentage of members who say they are very satisfied with membership services provided by Sister Cities International.
4. Develop effective, ongoing sister city youth programs in US and international programs.
5. Create a sustainable international, national, and state advocacy program.
6. Diversify the organization's revenue sources.
7. Develop a marketing and branding program that results in greater understanding of Sister Cities International on the part of its members, governments, and the global community.
8. Put in place an organizational structure that contributes to mission, financial growth and stability, awareness, program delivery, and advocacy capacity. Implement changes based on that analysis.
9. Strengthen sister cities' institutional leadership at the international, national, state, local, and regional levels.
10. Identify and collaborate with other organizations that share the Sister Cities International mission and values to dramatically increase the number of people aware of and involved in citizen diplomacy and global citizenship efforts.

Our Approach

TIDE uses various methods to achieve our conservation goals, including the natural and social sciences, which fall under five strategic objectives:

1. Protected Areas Planning and Management - To protect conservation targets by promoting and leading the planning and management of protected areas in the Toledo District.
2. Sustainable Development - To foster integrated conservation and development initiatives that creates economic opportunities for local residents and lead to the sustainable use of the resources and the sustainable development of the Toledo District.
3. Research and Monitoring - To maintain the biodiversity and integrity of the Reserve's ecosystems through continuous research, monitoring and appropriate interventions.

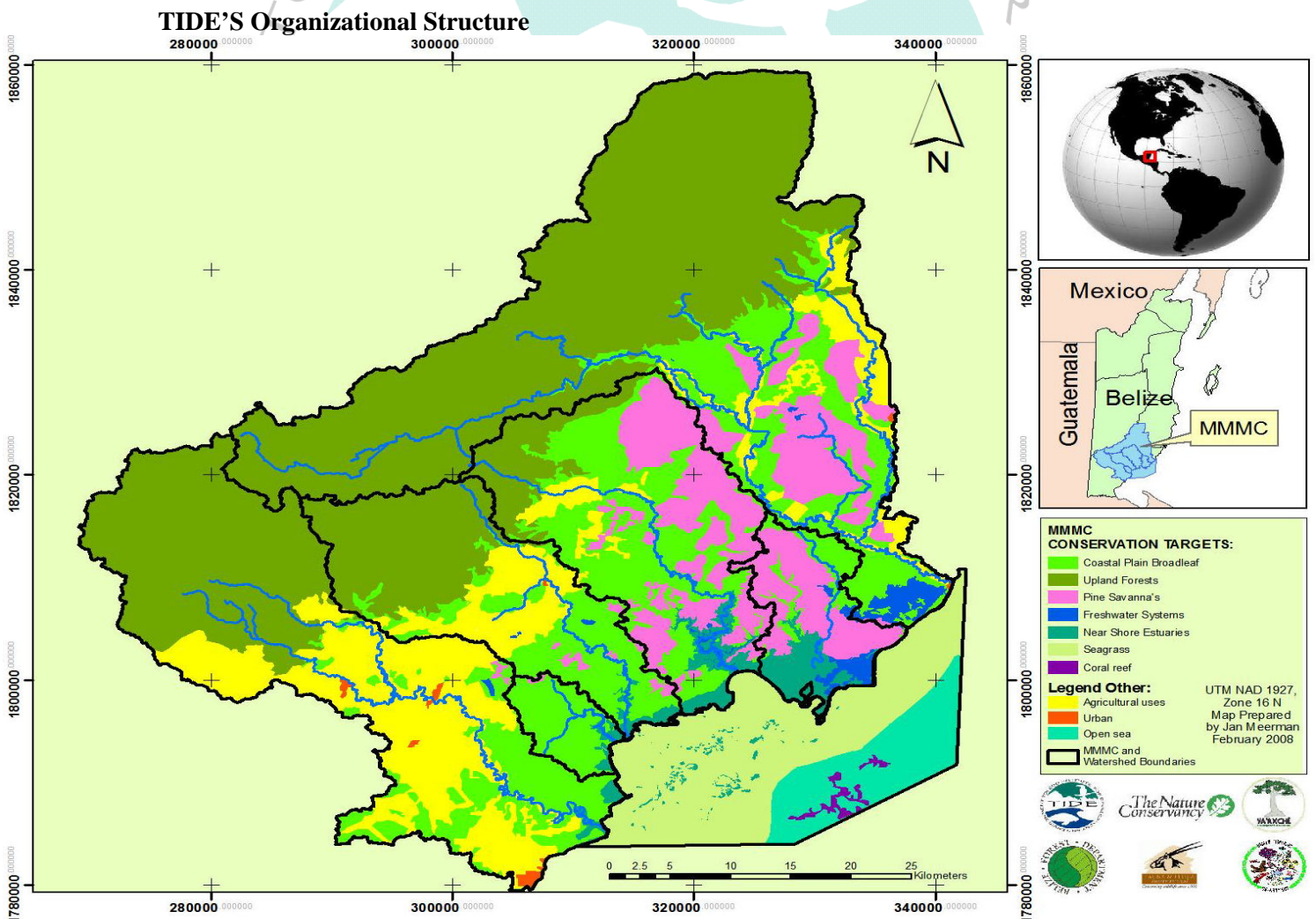
4. Environmental Education and Outreach - To expand and enhance the knowledge base on Toledo's natural resources to promote their protection and sustainable use.

5. Institutional Development - Improve TIDE'S organizational capacity to accomplish its mission.

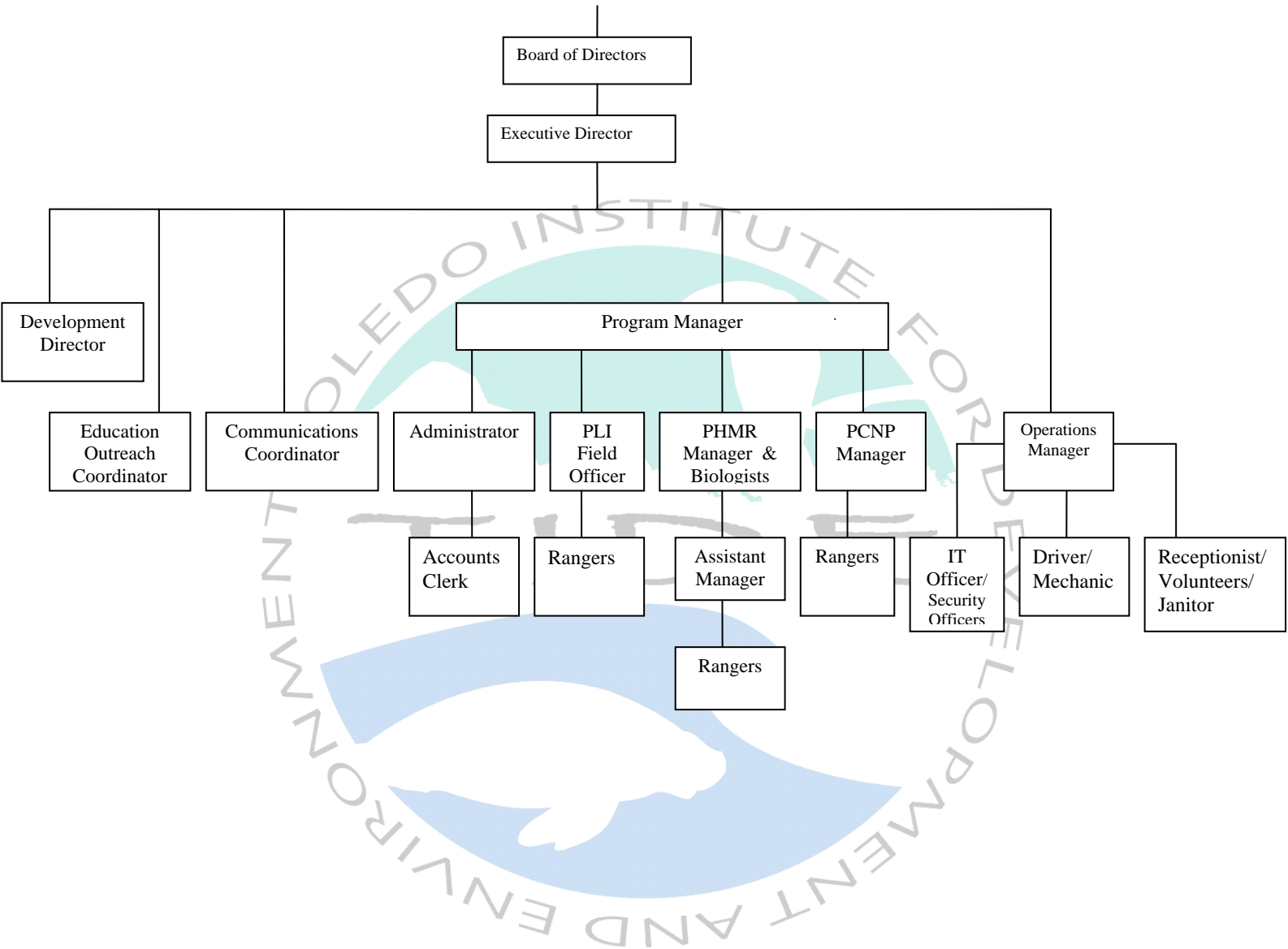
Where We Work

Near its inception, TIDE identified what is now known as the Maya Mountain Marine Corridor (MMMC) as a high priority conservation action site. The MMMC is a spectacular natural area covering approximately one million acres of land and one thousand square miles of sea. The MMMC extends from the crest of the Maya Mountain in southwestern Belize to the southern end of the Belize Barrier Reef System. Within this area, the more significant conservation activities revolve around the management of the Port Honduras Marine Reserve, Payne's Creek National Park and TIDE'S Private Lands Initiative.

Map of the Maya Mountain Marine Corridor (MMMC)



In its inception TIDE started out with volunteers, and has grown to include an Executive Director who manages X paid staff. The organization also has a policy making body - Board of Directors- comprised of individuals from a wide cross section of the society.



About the Port Honduras Marine Reserve (PHMR)

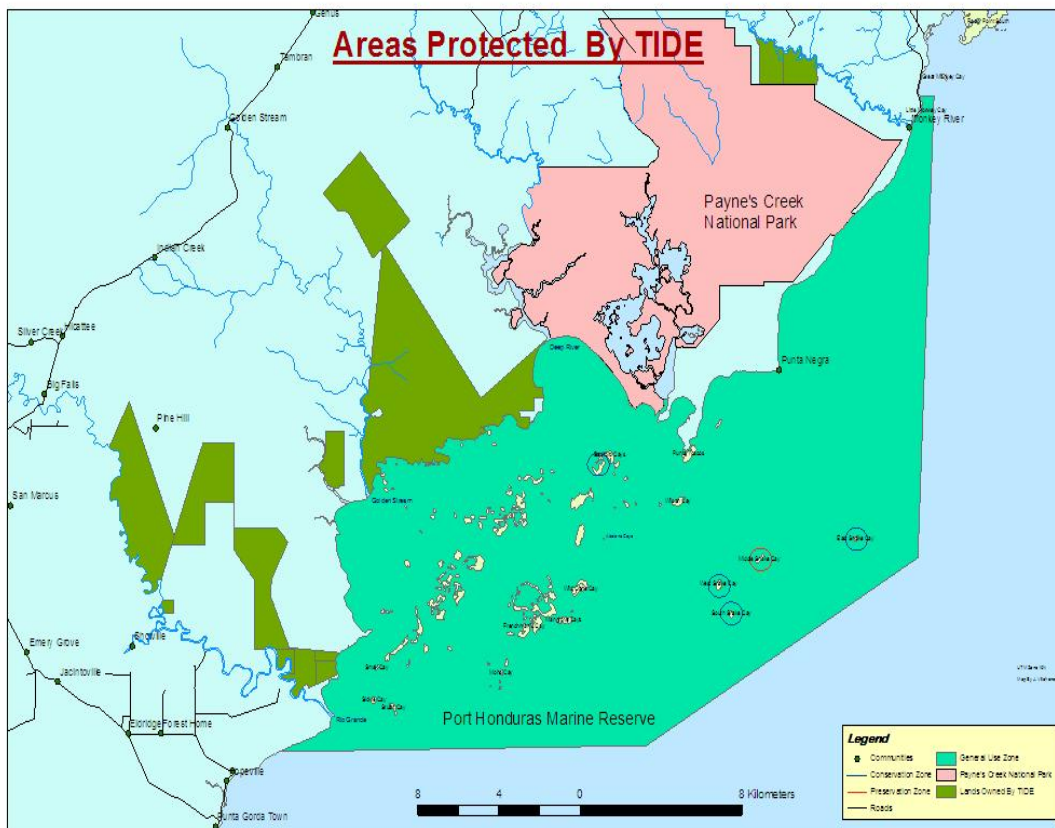
Introduction

Declared by the Government of Belize in January 2000, the PHMR is being actively co-managed by TIDE and the Fisheries Department. PHMR covers approximately 160 square miles and is an integral part of the MMMC in southern Belize. The reserve is located just off the coast of Punta Gorda and extends north to just north of Monkey River Village. PHMR comprises of all the coastal wetlands, sea, seabed, and national lands within the area known as the Port Honduras with general boundaries being the Rio Grande in the south, Monkey River in the north, the snake cayes in the east and the coastal wetlands along the coast in the west.

The Reserve is rich in biodiversity containing approximately 138 small mangrove cayes, which provide essential habitat and nursery for juvenile aquatic species. Other critical habitats include sea grass beds, hard bottom communities, and soft bottom communities. A large portion of the reserve is inhabited by sea grass, which also provides essential habitat and food for juvenile fish species, sea turtles, salt water crocodiles and manatee. Also within the reserve you find fringing reefs and several coral patches and coral heads, which provide habitat for vertebrates and invertebrates.

There are two villages located in the Reserve, Monkey River and Punta Negra Villages. The residents of each village are mostly commercial fishers, tour guides, or fly-fishing guides who depend on the Reserve for their livelihood.

Map of Port Honduras Marine Reserve



Reserve's Strategic Plan and Goals

The PHMR management strategy is based on five major goals:

1. To protect the physical and biological resources of Port Honduras
2. To provide education and research
3. To preserve the value of the area for fisheries and other important genetic resources.
4. To develop recreational and tourism services that will enhance the economic and social benefits of the area without causing environmental damage.
5. To strive for sustainable financing.

Zoning Plan and Regulations

For the purpose of the regulation and control of the Reserve, five zones were established:

1. **General Use Zone** (95% of the Reserve)
To provide opportunities for established uses and activities (e.g. fishing for conch, lobster and finfish) under a stringent monitoring scheme.
2. **Conservation Zone**
To provide an area free from commercial fishing to prevent fishery stock from over exploitation, provide an undisturbed area for recruitment of species, and enhance the value of the area for recreational and tourism activities.
3. **Preservation Zone**
To provide areas within the marine reserve that are preserved in an entirely natural state and to protect areas of particularly fragile habitat or with threatened or rare species.
4. **Special Management Area**
Area reserved for special projects

Legal body responsible for establishing regulations and procedures

Under the Fisheries Amendment Act of 1983, the Belize Fisheries Department is ultimately responsible for the establishment and implementation of marine reserves. However, the Fisheries Department entered into a formal agreement for co-management of the PHMR with TIDE. Management of the reserve is delegated to a management committee that is chaired by TIDE. The role of the PHMR Advisory Committee includes: ensuring regular revision and review of the management plan, commenting on and recommending legislation and regulations, assisting in the development of sustainable financing mechanisms for the Reserve and decisions relating to research to be conducted in the Reserve. Under TIDE'S leadership, the management committee has developed a division in roles and responsibilities, job descriptions and clarity over day-to-day management of the Reserve's resources.

Staff

The Port Honduras Marine Reserve was faced with numerous staff turnover during the course of 2007. First with the resignation of the manager Mr. Dennis Garbutt followed by Ranger Janelle Borland and then the Marine biologist Juan Chub whose service was terminated. During the months after the resignation of Mr. Garbutt, Mr. Chub held the post as interim manager up until the time of the termination of his service at the end of July. Mr. Mario Muschamp the then manager of the Payne's Creek National Park was brought in to serve as interim manager up until the end of the year, December 31, when an evaluation of his performance was done. The Manager

was supported by Head-Ranger Marlon Williams, two full time rangers George Sambula and Dennis Castillo and several temporary rangers.

The ongoing research and monitoring of the reserve's biological resources was headed by the marine biologist Juan Chub up until the termination of his services, after which all research was put on hold until this position could be filled. The Head Ranger and other rangers were stationed at the PHMR ranger station and rotated on a bi-monthly basis. The staff conducted regular patrols to monitor activities within the Reserve and reduce threats such as gillnet use, illegal fishing and over-fishing. The rangers also enhanced TIDE'S public relations by conducting community meetings and played an active role in research activities being conducted within the Reserve. They also oriented visitors to the reserve by reviewing the Reserve's educational display of rules, facilities and zoning.

PHMR Interim Manager: Mario Muschamp

Mr. Muschamp is an experienced protected areas manager who earned the PACT award of Protected Areas Officer of the year 2006/2007. Even as manager for the Payne's Creek National Park he was active in research, monitoring and baseline studies for PHMR. He is a certified PADI open water scuba diver, has experience in fish and coral identification and monitoring, great boat handling skills, assists with the training of all TIDE Rangers in Boat handling and engine maintenance skills and has thorough knowledge of the Reserve. Mr. Muschamp holds Special Constable Status with the Belize Police Department, and is trained in fire management skills and is responsible for training all TIDE'S Rangers working in fire dependent ecosystems in fire management techniques.

PHMR Marine Biologist: Mr. Juan Chub

Juan holds a Bachelor's degree from the University of Belize and has extensive experience in marine monitoring. Since joining TIDE up until his departure, he has participated in a number of training courses to improve his skills and build upon his knowledge of protected areas management. The Marine Biologist is responsible developing, coordinating, and implementing all of the research and monitoring in the PHMR.

PHMR Head Ranger: Mr. Marlon Williams

Mr. Williams is presently the Head Ranger for the Port Honduras Marine Reserve. He joined the Tide Team in 2004 and since has been hard at work to improve the management of PHMR. Marlon has excellent boat handling skills and since being with here he has been involved in all the research and monitoring, responsible for assisting with developing and implementing patrols schedules and has been representing the Organization at workshops and meetings that are focus on marine protected areas and species.

Ranger: George Sambula

Mr. Sambula joined TIDE in August 2003. He is a native of Punta Gorda Town. He is active in the general upkeep of the Ranger Station and the implementation of patrols and surveillance. Mr. Sambula will no longer be with us come 2008 as he tendered his resignation for 31st December 2007.

Ranger: Janelle Borland

Janelle was the first female ranger to work in the PHMR. She was also the first female ranger to hold a valid boat master license and boat handling skills. While with the TIDE Team she received several training that improve her skills in protected areas management. She is also the first female ranger to hold Special Constable Status from the Police Department before leaving us in May 2007.

Ranger: Dennis Castillo

Dennis started working with us in December 2006 as a temporary ranger but due to the quality of work and the commitment he demonstrated he was hired as a permanent ranger in June of 2007. Dennis is a native of Punta Gorda and since being with us has participated in several trainings to improve his skills. He is active in all the patrols and surveillance of the area.

Temporary Rangers, volunteers, interns and community researchers for 2007

Temporary Rangers

Alexander Agustin -Punta Gorda Town
Jimmy Boucher -Punta Gorda Town
Mikhail Daniels -Punta Negra Village
Jonathan Ranguy -Hopeville, PG
George Fuentes -Punta Gorda
Crystal Young -Punta Gorda/Punta Negra

Allan Sambula -Punta Gorda
Fredrick Morter -Punta Gorda
Dion Makin -Punta Gorda
Clyde Palacio -Punta Gorda
Pablo Mendoza -Punta Ycosos
Andrew Williams -Hopeville

Community Rangers

Eloy Cuevas -Monkey River
George Garbutt -Monkey River
Kenworth Martin -Punta Negra
George Ramirez -PHMR Cayes

Oliver Garbutt -Punta Gorda
Alex Leonardo -Punta Gorda
Alexander Garbutt -Monkey River

Other Community Members

Percival Gordon
Alfonso Zuniga
Victor Jacobs Jr.
Thomas Garbutt
John Young
Roberto Echeverria

Ovel Leonardo Jr.
Wallace Young
Roy Ramirez
John Spang
Lionel Delcid

PHMR Accomplishments 2007

Patrols and Surveillance

A total of 750 patrols were conducted for 2007. As a result of these patrols 34 gill nets and 5 long lines were confiscated which is an increase from the previous year with less patrols. Two persons were arrested and brought to court and charged. In February two persons were arrested for fishing with gill nets in the Reserve. In the months of April, May, August, and September several fishermen were warned for their first offence of fishing in the Reserve with expired fisher folk license.

Table 1 summarizes the number of patrols done for 2007 and also includes the number of arrests made, reasons for arrests, warnings for first offence, number of gill nets and long lines confiscated.

Patrol summary for 2007

Month	# patrols	# Arrests	# warnings for first offence	Reasons for arrests and warnings	# gill nets confiscated	# long lines confiscated
Jan	72	0	0		4	
Feb	63	2	0	Gill net fishing in the reserve	0	
Mar	67	0	0		7	
Apr	62	0	1	Fishing with expired license	1	
May	75	0	4	Fishing with expired license	0	
Jun	78	0	0		0	
Jul	73	0	0		7	
Aug	45	0	2	Fishing with expired license	9	1
Sept	47	0	1	Fishing with expired license	1	4
Oct	62	0	0		2	
Nov	50	0	0		0	
Dec	56	0	0		1	
Total	750	2	8		32	5

Partnerships

The PHMR staff continues to work with local and international partner organizations. These partners include SCMR/TASTE, the Fisheries Department, the Police Department, the Belize Defense Force, the Belize Coast Guard, University of Belize, Earthwatch, TNC and other local governmental and non-governmental organizations in the district. During this year some 56 joint patrols were conducted with various other law enforcement agencies in the area, they include the Belize Defense Force, the Belize Police Department, the Belize Coast Guard and the Fisheries Department.

During the early part of 2007, PHMR interim Manager and Marine Biologist along with TIDE'S Executive Director attended a meeting with the Fisheries Department in Belize City to discuss collaborative efforts with the Department. Few times during the course of the year personnel from the Fisheries Department Punta Gorda went out with in the field with the staff to assist with patrols and surveillance. Partnership and collaboration efforts with TASTE were also continued this year. The staff continues to provide assistance to other ongoing research projects such as those headed by WCS (Goliath Grouper, Sharks and Rays). In 2006 TIDE signed an agreement with Earthwatch, under which Earthwatch would assist TIDE by providing volunteers to assist in research and monitoring of seagrass, mangroves, corals along with conch and lobster surveys in the PHMR. A total of four teams of local and international volunteers assisted PHMR in 2007.

Community Support

As part of TIDE'S support to buffer communities, throughout the year PHMR staff played a key role assisting with transporting personnel from the Hill side Health Clinic to Monkey River Village on a monthly basis the first Thursday of each month to conduct health services to rural communities. The staff along with the Fisheries Department and Friends of Nature assisted the Monkey River Tour Guide Association with the installation of mooring buoys just offshore the village and at Great Monkey Caye just north of the village. Reserve staff also attended meetings with the Sea Breeze Women's Group of buffer community of Punta Negra to assist with the development of proposal to UNDP for community



project as an alternative livelihood opportunity that is in compliance with Reserve's regulations and will encourage the sustainable use of reserve's resources. TIDE staff which includes staff from the reserve and volunteers from the Belize Defense Force assisted the community with a beach clean up prior to their annual fair the community does to raise funds for community projects. PHMR manager and Executive Director along with volunteers from the BDF assisted Punta Negra community with beach cleanup prior to the community Easter Fest.

This year TIDE, specifically the PHMR manager, Head Ranger and Marine Biologist continued working with the Southern Belize Fishermen Association by attending meetings, provide transportation, logistics and facilities for meetings etc. Reserve staff also assisted during the Garifuna Settlement Day activities with transportation for the re-enactment of their arrival to the shores of Belize and assisted with the search for the seven men that went missing in November which included the father of a TIDE employee.

Community Education and Outreach



This year PHMR staff continued with their community education and outreach. The staff gave tours of the area to several high school and primary school students and scout group. The schools include the Toledo Community College, Julian Cho Technical High School, Punta Negra Primary School, Monkey River Primary School, St. Peter Claver Primary

School, Little Flower Primary School of Forest Home Village and Big Falls Primary School. Students were given presentations on Reserve's rules, regulations and activities occurring within the Reserve, zoning plan, conflicts, management techniques, research and monitoring etc.



Community meetings and training

Community meetings were held in Monkey River and Punta Negra Villages and Punta Gorda Town. These are highlighted below:

On January 11, 2007, PHMR Manager Dennis Garbutt along with PHMR rangers visited the Monkey River Community for a meeting regarding the Monkey River Tour Guide Association lobster shed Project.

During the month of February, PHMR rangers visited buffering communities within PHMR such as Monkey river Village, Punta Negra village and other surrounding Cayes and coastal area within PHMR to build relationship with the community at the same time providing them with some education and outreach.

On Tuesday March 13, 2007 Marine Biologist/Acting PHMR Manager along with TIDE's Executive Director attended a meeting that was held with the Punta Gorda Fisherman Association at the TIDE conference room. The main purpose of this meeting was to build relationship with the Punta Gorda Fishermen and involve them in the management of the reserve.

On April 15, 2007, TIDE's Executive Director, Development Director and Marine Biologist/Acting PHMR Manager met with the Sea Breeze Women's' group in Punta Negra Village. The main purpose of this meeting was to discuss a project for the economic development of Punta Negra Village. As a result of this meeting a concept paper was being developed by TIDE's Development Director and was sent to the COMPACT GEF-Small grants program and the women's group received a grant from UNDP.

On May 15, 2007, Marine Biologist/Acting PHMR Manager, Director of Operations and PHMR Head Ranger attended a meeting with the Southern Belizean Fisherman Association in Independence village. The main purpose of this meeting was to go over the bylaws of the association and also to get updates from the members.

On July 14, 2007, TIDE's Executive Director and Marine Biologist/Acting PHMR Manager attended a meeting at the tour guide association building in Monkey River village. The main purpose of this meeting was to evaluate the Monkey River tour guide association lobster shed project. An update was given by the project leaders on the outcomes of the project. Participant of the meeting include personnel from the COMPACT GEF-small grants program and members of the Monkey River tour guide association.

On December 1, 2007, TIDE's Executive Director, Education and Outreach Coordinator, PHMR Interim Manager and Larry Epstein from an international NGO known as Environmental Defense attended a community meeting in Monkey River Village. The purpose of the meeting was to update the community on TIDE's activities for 2007 and Plans for the coming year and to discuss with the representative from Environmental Defense the issue of sustainable fishing and the idea of the catch share concept practiced in Punta Allen, Mexico to see if it is something fishers believe could work for this area and if they would be interested to use this concept for fishing in the PHMR area.

On December 2, 2007, TIDE's Executive Director, Education and Outreach Coordinator, PHMR Interim Manager and Larry Epstein from an international NGO known as Environmental Defense attended a community meeting in Punta Gorda Town. The purpose of the meeting was to update the community on TIDE's activities for 2007 and Plans for the coming year and to discuss with

the representative from Environmental Defense the issue of sustainable fishing and the idea of the catch shares concept practice in Punta Allen, Mexico to see if it is something fishers believe could work for this area and if they would be interested to use this concept for fishing in the PHMR area.

Outreach and Environment awareness

As part of the responsibilities of the PHMR staff, reaching out to the communities is a major role in the management of the Reserve. Reaching out to the communities is done in various ways, including daily education to community members in the field, newsletter articles, radio shows, brochures, school visits, etc. On a quarterly basis TIDE produces a newsletter in which the main activities of PHMR, such as research and monitoring, training, community involvement, etc., are highlighted. The newsletter is distributed to friends, donors, schools, local NGO's and to buffer communities of the protected areas managed by TIDE. The Reserve staff also provides weekly items for the "Rising TIDE" radio show which airs weekly on Monday nights. On several occasions the Manager, Marine Biologist and Rangers appear as guests to share information with the general public about their experiences in the field.

To reach out to a wider audience on a more national, regional and global level, most of the information about the reserve, activities within the reserve, news and events and research reports are available on the TIDE website at www.tidebelize.org. The website is updated periodically and an entire section is devoted to the PHMR.

The PHMR staff participated in the Independence Day, 21, September 2007, parade activity. They participated in the float competition displaying the Ridge to Reef concept and stress the importance of all to be involved in the conservation, management of the resources of the MMMC for the benefit of present and future generations.

TIDE held its tenth anniversary dubbed TIDE@TEN celebrations which was held from 20th to 25th November 2007. The week long celebrations highlighted all the accomplishments of the organization during its ten years of existence. The highlight of the celebrations were an exhibition of displays by the staff from the protected areas managed by TIDE and the first ever "MISS CONSERVATION COMPETITION" which had the participation of six contestants that represented several conservation NGO's country wide.

Institutional Development

Training, workshops, meetings

On January 30, 2007 and January 31, 2007, All TIDE Rangers participated in a GPS training held by Mr. Alexis Fairweather, Consultant. The main purpose of this training was to provide rangers with a broader knowledge of GPS usage. The training included a general introduction to mapping, navigation skills, marking and locating coordinates and several other functional uses of the GPS.

On January 11, 2007, PHMR Manager Dennis Garbutt along with PHMR rangers visited the Monkey River Community for a meeting regarding the Monkey River Tour Guide Association lobster shed Project.

On January 12, 2007 and January 19, 2007, the Port Honduras Marine Reserve staff participated in a Strategic Plan workshop/meeting held at the Payne's Creek National Park and TIDE

Conference room respectively. As a result of this workshop/meeting, the TIDE strategic plan was reviewed. Discussions and recommendations were made to develop a new TIDE mission statement and vision statement.

On February 26, 2007 to March 2, 2007, four TIDE rangers attended a special constable training held in Belmopan. Two of the rangers, Ms. Janelle Borland and Mr. Jimmy Boucher were PHMR rangers. As a result of this training two new PHMR staff are now certified special constable volunteers. TIDE sees it necessary to build the capacity of the staff in order to perform better on their ranger duties.

Head Ranger Marlon Williams attended a Seagrass Net training workshop at Sarteneja village on February 14, 2007 to February 18, 2007. This was an intensive training on the Seagrass net methodology for monitoring Seagrass. Practical sessions as well as in class sessions were provided to participants in order to fully understand the methodology and to be able to conduct this research at their specific sites.



On February 8, 2007, a PHMR Advisory Board meeting was held at the TIDE conference room. The main purpose of this meeting was to give an update on the activities occurring within PHMR and also to discuss issues that arise from the previous meeting such as the lease for Cayes at PHMR and the conservation zones being exclusively no-take areas with no catch and release. As a result of this meeting the board agreed to have a special meeting to discuss the issue about leases of Cayes within PHMR. The board also agrees that the conservation zone for PHMR be kept as is.

On February 20, 2007, Marine Biologist attended a special Spawning Aggregation meeting held at the Coastal Zone Management Authority and Institute (CZMAI) conference room in Belize City. The main purpose of this special meeting was to develop recommendations on the measures to be introduced to protect the Nassau grouper in light of the recent declines observed at the spawning sites. The Fisheries Administrator had requested the Group's recommendations, which will then be submitted to the Minister. In the meeting all members agreed that a moratorium on fishing of Nassau grouper be introduced as soon as possible. All members agreed with the moratorium for a specific period, and that it would then be reviewed. All also agreed that consultations with fishermen will need to be carried out. Members of the group were willing to help with these.

It was agreed that an approach be taken, with first the moratorium on fishing of Nassau grouper introduced, followed closely with measures to limit fishing access. A second phase would be a nation-wide ban on spear fishing, which would follow the ban on use of spear guns in marine reserves.

Marine Biologist Juan Chub along with a PHMR Ranger Janelle Borland and a PCNP Ranger Wilfred Muschamp attended a Marine Mammal Response training workshop held on March 2, 2007 to March 23, 2007 at the Wildlife trust field station in Gales Point. The training was intensive covering anatomy and physiology of manatees and cetaceans, data collection and specimen methodologies, human interaction identification and manatee necropsy methodology.

Marine Biologist Juan Chub attended a Principal investigator Earthwatch annual conference held at Cambridge Massachusetts, on March 1, 2007 to March 3, 2007. Juan Chub was the principal investigator for all TIDE volunteer teams which are being recruited by the Earthwatch Institute.

The main purpose of this conference was to provide all Earthwatch Principal Investigators insights on how to successfully manage Earthwatch projects.

On Tuesday March 13, 2007 Marine Biologist/Acting PHMR Manager along with TIDE's Executive Director attended a meeting that was held with the Punta Gorda Fisherman Association at the TIDE conference room. The main purpose of this meeting was to build relationship with the Punta Gorda Fishermen and involve them in the management of the reserve.

On March 13, 2007 another meeting was held with YCT, and the Punta Gorda Fisheries Department to discuss joint operations within PHMR and the Golden stream watershed. As a result of this meeting, TIDE, YCT and Fisheries agreed to conduct regular joint patrols in the area. A patrolling schedule and reporting format was to be jointly done by PHMR Manager and YCT.

On April 11 to April 13, 2007, a total of 9 TIDE Rangers from the different protected areas managed by TIDE - Port Honduras Marine Reserve, Payne's Creek National Park and Private Lands Initiative - went on an educational tour to the different Marine Protected Areas within Belize. The main purpose of this trip was to educate rangers on the management of the different marine protected areas. TIDE rangers were given presentations on the activities occurring within the MPA, from the managers of the different protected areas.



On April 10, 2007, TIDE's Executive Director along with Marine Biologist/Acting PHMR manager attended a meeting at Belize City with the Belize Fisheries Department. The main purpose of this meeting was to strengthen working relationship with the Fisheries Department and to co-manage the Port Honduras Marine Reserve more effectively. A PHMR advisory board meeting was held later in the month on Thursday 26, April, 2007.

On May 15, 2007, Marine Biologist/Acting PHMR Manager, Director of Operations and PHMR Head Ranger attended a meeting with the Southern Belizean Fisherman Association in Independence village. The main purpose of this meeting was to go over the bylaws of the association and also to get updates from the members.

On May 29, 2007, Marine Biologist/Acting PHMR Manager attended a training workshop and meeting at the Coastal Zone Management Institute and Authority building in Belize City. The main purpose of the training workshop was to familiarize the participants of the Spawning Aggregations (SPAG's) on the newly developed database.

On May 30, 2007 to June 1, 2007, PHMR Head ranger Marlon Williams along with PCNP Manager Mario Muschamp and PCNP Head ranger Leonard Williams attended an advanced supervisory training at the Belize Institute for Management (BIM). This training is part of TIDE's capacity building program for the staff to improve performance in their area of work.

On June 27, 2007, Marine Biologist attended an Atlantic and Gulf Rapid Reef Assessment (AGRRA) data sharing workshop at the CZMAI training room in Belize City. The main purpose of this workshop was to present the results of the AGRRA data that was collected and have discussions on the findings. Last year several organizations within Belize (TIDE, TASTE, FON, WWF, BAS, BFD, Earthwatch Institute, Smithsonian, Green Reef, and WCS) teamed up to

conduct a comprehensive assessment of Belize's reefs. Through the participation these various partners, a total of 140 reef sites throughout the Belize Barrier Reef Complex were assessed. Marine Biologist presented the results for the southern region (Sapodilla Cayes and Port Honduras) of Belize. Presentations were very informative and the discussions were lengthy. However, clearly the data shows that our reefs are not in the best conditions. Despite the fact that there are few reef areas that are more resilient than others, the comprehensive data shows that in general our barrier reef is slowly deteriorating. Some main factors contributing to this is climate change, over-fishing, pollution, and sedimentation.



On July 20, 2007, a boat and engine maintenance training facilitated by TIDE's outboard engine mechanic Ernest Caliz and PNCP Manager Mario Muschamp was held at the Port Honduras Marine Reserve ranger station for all TIDE full time and temporary rangers. The main purpose of this training was to familiarize rangers from all the protected areas on the basic maintenance of the outboard engines.

On July 14, 2007, TIDE's Executive Director and Marine Biologist/Acting PHMR Manager attended a meeting at the tour guide association building in Monkey River village. The main purpose of this meeting was to evaluate the Monkey River tour guide association lobster shed project. An update was given by the project leaders on the outcomes of the project. Participant of the meeting include personnel from the COMPACT GEF-small grants program and members of the Monkey River tour guide association.

On July 24, 2007, acting PHMR Manager/Marine Biologist along with other community members, fishers, tour guides, members of the Belize Fisheries Department, and TASTE attended a meeting at the Sea front inn to discuss the Sapodilla Cayes Marine Reserve zoning plan. The Belize Fisheries Department presented the proposed zoning plan. Members of the community were not in agreement with the proposed plan and as a result a letter was to be developed to political officials to change the zoning plan.

On July 27, 2007, the Marine Biologist attended a meeting with two consultants from Louisiana State University. The main purpose of this meeting was to discuss fish stock assessment. TNC is assisting TIDE to develop a proposal and obtain funding to perform fish stock assessment on 5 commercial species within the Port Honduras Marine Reserve.

On 15th August 2007 the PHMR manager attended a workshop held at the Belmopan Hotel to finalize a National water policy for Belize. The workshop was abandoned as those present were not satisfied with the work done by the consultant as we believed what was being presented was not a draft policy but recommendations that could be used to develop the policy.

TIDE also implemented its inter-organization Ranger Exchange program where rangers get a chance to work at all protected areas managed by TIDE. The purpose of this exchange is to increase rangers' knowledge of both terrestrial and marine ecosystems, increase their knowledge of the laws regarding the various protected areas so that can better communicate or work to visitors to the protected areas.

In September 2007 PHMR manager attended the second workshop as part of the Conservation Action Planning (CAPS) process held at Nazareth Convent in Forest Home Toledo to finalize the selection of the Conservation Targets, their threats and sources of threat and started ranking the

threats and their sources to see which are the highest contributor to the integrity of the conservation targets selected for the MMMC of which the PHMR is a part.

PHMR Head Ranger Marlon Williams attended the SPAG working group meeting held at the Coastal Zone Institute conference room in Belize City held on 18th September 2007. Topics discussed included reviewing of minutes of last meeting, update on Data Base, Dive Safety, Website, Legislative Amendment, Satellite Drifter, Posters and Newsletter, Submission of Recommendations to the Fisheries Administrator, Work plan, and other matters. Date set for the next meeting is October 23rd 2007.

PHMR Interim manager participated in a workshop organized and facilitated by Earthwatch Institute held at the Sea Front Inn in Punta Gorda on 26th and 27th September 2007. The workshop titled “Integrating Social Components into Sustainability Work” focused on integrating the social aspects into natural resource management. Goals of the workshop were to develop a deeper understanding of the role of social science in environmental management, and to develop skills to engage in the construction and implementation of a social-environmental agenda.

On 5th October 2007 the PHMR Advisory Committee held its third meeting for the year 2007 at the TIDE conference room in Punta Gorda Town. Topics on the agenda included a review of minutes of the last meeting, matters arising, update from the manager, and plans for the coming year which include a fish stock assessment and the revision of the reserve’s management plan through the Golden Stream Watershed Initiative Project, and collaborative work with Environmental Defense on sustainable fishing.

On 11th October 2007 PHMR manager and Head Ranger attended a half day seminar on GIS mapping of species and ecosystems in natural resource management in protected areas in Belize. The seminar was funded by PACT and facilitated by Peter Esselman a PhD student at Michigan State University and had conducted research on all Rivers in the Country focusing on fish community as an indicator to river health.

PHMR Manager participated in the TIDE Management Team meetings to develop the budget and work plan for 2008. The 2008 budget is an activity based budget and is based around addressing the threats and their sources identified impacting the conservation targets identified in the CAP’S process.

On 16th October 2007 the PPMR manager met with Ansel Dubon, manager of the Golden Stream Watershed Project, to look at work plans for 2008 to include activities related to this project into our work plan for 2008. On the 18th and 25th we also attended meetings with consultants Adele Catzim and Dianne Haylock doing evaluation on management effectiveness in the management of the marine reserve at the organization level and stakeholders involvement in the management of the protected area as part of the GSW project which include the Port Honduras Marine Reserve.

On 17th October 2007 PHMR manager attended meeting with TNC Belize Program in Belmopan to discuss the three year work plan in which TNC and TIDE will work closely in the Maya Mountain Marine Corridor. In the work plan one of the activities is the PHMR fish stock assessment which will be funded by TNC. An agreement with the Louisiana State University has been signed to carry out the assessment.

On the 13th, 14th, 27th and 28th November 2007 PHMR manager and Head Ranger attended the two workshops as part of the Conservation Action Planning (CAPS) process for the Maya Mountain Marine Corridor (MMMC) held at Machaca Outreach Center in Emery Grove Toledo to look at finalizing conservation targets, select cultural targets, identify threats and sources of threats to the targets, and ranked them on a scale of Very High, High, Medium, or Low to see which would stand out as major threats to the conservation targets. Also objectives for threat abatement and develop strategic actions to meet the objectives to abate the threats to the conservation targets were done.



PHMR Head Ranger Marlon Williams and Ranger Dennis Castillo participated in joint research methodology training in monitoring of marine ecosystems and species. The training was done in conjunction with TASTE and Friends of Nature, and held at the Sapodilla Cayes Marine Reserve - a World Heritage Site on the southern tip of the Belize Barrier Reef.

Visitors to PHMR

A total of 755 visitors signed the PHMR guest book for the year 2007..

Visitors to PHMR ranger station at Abalone Caye according to nationality for 2007.

Nationality	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
Belizean	9	23	37	90	48	28		40	13	7	29		324
American	37	65	110	39	25	21		11	4	15	10		337
Scottish	2					1							3
German	3					1							4
Austrian	3												3
British	1	4	1	5	3	3		6	4	2			29
Canadian	1	8	3	6		2							20
Australian		3		1									4
Spanish		1							1				2
Guatemalan			4	4		1							9
Taiwan			4										4
Panama				1									1
Honduras				1									1
Chilean				1									1
French				1									1
Swedish					1								1
Dutch					2								2
Costa Rican				1		2				1			4
Cuban										4			4
Japanese									1				1
Total	56	10	159	150	79	59		57	23	29	39		755

RESEARCH AND MONITORING

Research and monitoring continues to play an important role in the management effectiveness of PHMR. Monitoring for the year 2007 included lobster surveys, conch surveys, seagrass,

mangrove, reef fish and reef benthic surveys and, water quality monitoring. The research was done with Earthwatch Institute Fellowship program that provides volunteers to assist with the research. We are unable to report the findings from these activities as the data has not yet been analyzed due to Marine Biologist's departure from the organization.

Users of the Reserve and vessel names for 2007

John Young <i>Permit</i>	Lionel Delcid	Teddy	Carlos Parham <i>Alfa</i>
Serjio Parham <i>Alfa</i>	<i>Gilda</i> Silverio Coc Anna Ramirez	Joel Casimiro <i>Irie</i>	Walton Parham
Carlos Parham Conrado Perez <i>Mirrza</i>	Jamie Borland <i>Marlin</i> Alexander Villiar	Daniel Castellanos <i>Martha</i>	Alex Leonardo Giovanni Leonardo <i>Splash</i>
Leslie Williams <i>Silent</i>	Kenworth Martin <i>Tight Lines</i>	Carlos Alvarado <i>Club Soda</i> Lorena	Jason Garbutt <i>Queen of hearts</i> Derwin Garbutt
George Ramirez <i>Ocean Queen</i>	Lionel Martin Edward Brown <i>Jessica B</i>	Victor Cuevas Sr. <i>Melonie</i>	Leroy Ramclam <i>Mangrove Seed</i> Damien Castro
Jack Alford Rodney Salgado <i>Kelly</i>	Michael Cayetano <i>Josh</i>	Victor Cuevas Jr. Ian Cuevas	Colin Ramirez <i>Tesa</i> George Ramirez Roy Ramirez
Roy Ramirez <i>Lupita</i>	Ricky Castro Giovanni Pate	George Alford <i>Josseline</i> Godfrey Alford	Edgar Wagner <i>Jalmar</i>
Frank Jacobs <i>Janet</i>	Freddy Perez <i>Mullet</i> David Tillet	Percival Gordon Raymond Gordon	Hilbert Cuevas <i>Cephas</i>
Edwardo Buchub Candida Romero	Martin Reyes <i>Charity</i>	George Gordon <i>Columbus</i>	
Tyris Jacobs			

Sport Fishing/Tour Guides and their vessel names

Thomas Garbut	<i>Unity</i>	George Garbutt	<i>Mystic</i>
Oliver Garbutt	<i>Sea Life</i>	Ian Cuevas	<i>Opportunity</i>
Roberto Echeverria	<i>Wild Thing</i>	Daniel Castellanos	<i>Xavi</i>
Eworth Garbutt	<i>Destiny</i>	Bobby Polonio	<i>Princess</i>
Victor Jacobs	<i>Victory</i>	Bruce Leslie	<i>Sundowner</i>
John Young	<i>Permit</i>	Daniel Cabral	
Alex Leonardo	<i>Splash</i>	Ovel Leonardo	<i>Tracer</i>
George Coleman	<i>Baby Eisha</i>	Wayne Castellanos	<i>Extreme</i>
Eloy Cuevas	<i>Trouble</i>		

TIDE Board of Directors

Alistair King - *Local Businessman (Texaco & Fabrigas)*
Robert Polonio - *Local Fisherman and Tour Guide in Punta Gorda*
Eloy Cuevas Sr - *Local Fisherman and Tour Guide in Monkey River*
Sebastian Choco - *Milpa Farmer*
Kamela Palma - *Retired*

Thomas Garbutt - *Tour Guide/Fisherman*
Elizabeth Enriquez - *Deputy Health Manager, Corozal District*
Gabriel Roches - *Department of Environment*
Celia Mahung - *Executive Director, TIDE*

TIDE Staff

TIDE has increased its staff from 28 to 30 over this past year as it went through changes in leadership and other senior staff took on other responsibilities when some key staff positions were vacated, such as, PHMR manager, Director of Operations, Science and Stewardship Director and Marine Biologist.

Management Staff

Executive Director: Celia Mahung
Operations Director: Wilfredo Galvez
Development Director: Jonathan Labozetta,
Education and Outreach Coordinator:
Norman Budna
Communications Coordinator: George Emmanuel

Payne's Creek National Park

Manager: Mario Muschamp
Head Ranger: Leonard Williams
Ranger: Wilfred Muschamp
Ranger: Suzette Jacobs

Private Lands Initiative

Manager: Joe Villafranco
Forest Management Specialist: Eugenio Ah
Ranger: Carlos Bardalez
Ranger: Antonio Baki
Ranger: Skipworth Coleman
Ranger: Luis Ishim

Administrative staff

Office Manager: Stephene Supaul
Administrative Assistant: Angelica Williams
Receptionist: Patsy Rodriguez
IT Officer: Serjio Bricenio
Driver/Mechanic: Ernesto Caliz
Scholarship Program: Delonie Foreman

Freshwater initiative

Freshwater coordinator: Joseph Villafranco

Programmatic Staff

Port Honduras Marine Reserve

Manager: Mario Muschamp
Marine Biologist: Juan Chub, Bsc
Head Ranger: Marlon Williams
Ranger: George Sambula
Ranger: Janel Borland
Ranger: Dennis Castillo

Part Time Staff

Development Director Assistant: Lumen Cayetano

Security/Janitor

Watchman: Mario Lemus
Cleaner: Estella Williams

PHMR Advisory Committee

Celia Mahung, Chairperson, TIDE
Lyndon Rodney, Fisheries Department
Ray Jacobs, Punta Negra Village
Thomas Garbutt, Fisherman/Tour Guide
Association PG
Roberto Echeverria, PG Tour Guide
Association

George Ramirez, Rio Grande Fishermen
Coop
Michael Espat, Toledo East Area
Representative
Daniel Castellanos Sr, Monkey River
Village
Carlos Galvez, Punta Gorda Town Council
Leonora Requena, BTIA

PHMR Donors

The OAK Foundation
AVINA
National Oceanic and Atmospheric Administration (NOAA)
National Fish and Wildlife Foundation
Earthwatch Institute
The Nature Conservancy
The Wallace Foundation
The Summit Foundation
Foundation for Environmental Solutions

TIDE/PHMR CONTACT INFORMATION

Toledo Institute for Development &
Environment (TIDE)
Attn. Port Honduras Marine Reserve
1 mile San Antonio Road/PO Box 150
Punta Gorda Town
Toledo District

Belize, Central America
Telephone: (501) 722-2274/2431
Fax: (501) 722-2655
E-mail: info@tidebelize.org
Web: <http://www.tidebelize.org>

Income and Expenditure Statement January - December 2007

Income

4001 · Grants	308,702.96
4004 · Other Income	2,822.10
4005 · Donation	<u>20.00</u>
Total Income	311,545.06

Expense

3001 · Equipment	5,850.29
5001 · Salaries & Wages	122,581.51
5002 · Travel & Transportation	5,282.80
5006 · Insurance	2,777.60
5008 · Professional Fees	47,886.40
5009 · Public Awareness & Env. Ed.	2.50
5010 · Repairs and Maintenance	11,202.40
5011 · Supplies	9,107.94
5012 · Training	1,450.00
5014 · Board/Advisory Board Expense	463.46
5016 · Telephone, Comm. & Internet	1,575.91
5017 · Bank Charges	530.55
5020 · Net Working	613.29
5025 · Institutional Strengthening &	500.00
5026 · Research & Monitoring	11,887.50
5027 · Recruitment	165.00
5028 · Licenses & Permits	2,723.00
5035 · Surveillance & Patrols	<u>33,588.77</u>
Total Expense	<u>258,188.92</u>
Surplus of Income over Expenditure	<u><u>53,356.14</u></u>

