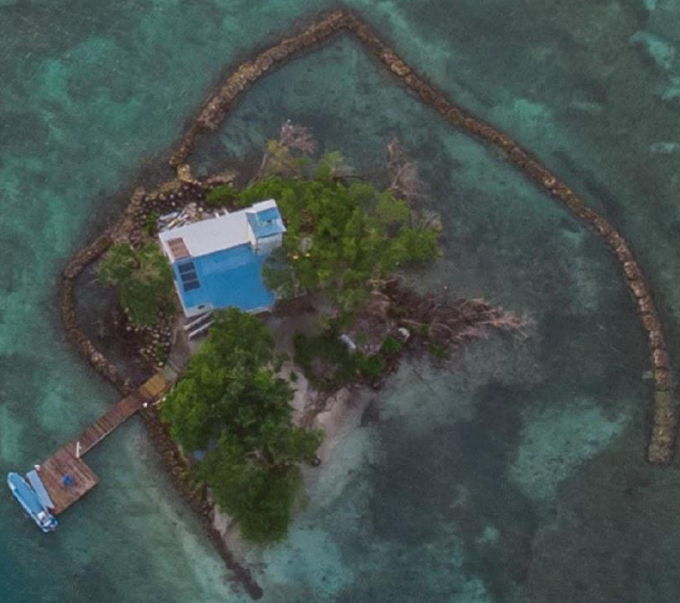




Port Honduras Marine Reserve

ANNUAL REPORT 2020



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Manager's Overview

It is a great pleasure to present the Port Honduras Marine Reserve (PHMR) annual enforcement report for 2020. This report summarizes the main activities that occurred throughout the year January 2020 - December 2020. The reserve enforcement staff were, as the rest of the world was, heavily impacted by COVID-19 but remained steadfast and strong in our determination in ensuring the successful management of the area by meeting conservation targets.

The team conducted a total of 678 patrols within the time period, a very similar output in comparison to the previous year despite the challenges. As a result, 4 verbal warnings were issued and 10 gill nets and 2 Longlines were removed from within the reserve. Over half of the patrols conducted were joint operations with the Belize Coast Guard, and personnel from other protected areas managed by the Toledo Institute for Development and Environment (TIDE). Working relationships with government agencies in 2020 such as the Belize Coast Guard, Belize Fisheries Department, Belize Police Department, Belize Port Authority, and the Belize Forest Department have continued to be improved upon.

We would like to express our sincere gratitude to the Belize Fisheries Department, PHMR Advisory Committee, the Belize Coast Guard, OAK-MARFUND, European Union, Summit Foundation, Overbrook, the Protected Areas Conservation Trust and the Wildlife Conservation Society. The great work towards the sound management and sustainable use of the marine resources would not have been possible without the financial contribution, technical assistance and commitment from these partners throughout the year.

I must make special mention of PHMR's rangers, Edwin Cabrera, Dervi Williams, Rahjeme Coleman and Allen Garcia for their continued dedicated support and hard work to the conservation and protection of PHMR's natural ecosystems and its marine life. Thanks to all of our resource users who have continued to be great stewards of the reserve. A special thank you to the Belize Coast Guard for their tremendous support throughout 2020 in aiding the enforcement of rules and regulations of the reserve and the security they provided for our staff and resource users. It has been a privilege and a great experience to have worked with you all for 2020 and I look forward to 2021 with great expectations.

Sincerely,



Ryan A. Moore

Marine Manager

Toledo Institute for Development and Environment

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0.0 List of Abbreviations

PHMR	-	-	-	-	Port Honduras Marine Reserve
TIDE	-	-	-	-	Toledo Institute for Development and Environment
BFD	-	-	-	-	Belize Fisheries Department
BCG	-	-	-	-	Belize Coast Guard
SMART	-	-	-	-	Spatial Monitoring and Reporting Tool
MPA	-	-	-	-	Marine Protected Area
GIS	-	-	-	-	Geographic Information Systems
MMMC	-	-	-	-	Maya Mountain Marine Corridor
SI	-	-	-	-	Statutory Instrument
RZ	-	-	-	-	Replenishment Zone
MA	-	-	-	-	Managed Access
FWC	-	-	-	-	Fresh Water Cup

1.0 Administration

1.1 Staffing for PHMR

No.	Names	Position
1	Ryan Moore	Marine Manager
2	Edwin Cabrera	Head Ranger
3	Dervi Williams	Senior Ranger
4	Rahjeme Garcia	Ranger
5	Allen Garcia	Ranger

Table 1: Showing PHMR Enforcement Staff

No.	Names	Position
1	Heidi Waters (Resigned in June)	Science Director
2	Anthony Rash	Marine Biologist

Table 2: Showing PHMR Research and Monitoring Staff

Names	Names
Tracey Petillo	Daniel Tush
James Choc	Eulogio Teul
Milton Cohouj	Eeryn Bowden
Mauricio Barboza	Genevieve Ramirez
Stavros Bardalez	Shalini Shal
Gary Zuniga	Alejandro Baki
Willie Caal	

Table 3: Showing Community Researchers who assisted in the management of PHMR

2.0 Background of the Port Honduras Marine Reserve

2.1 Introduction

The PHMR was declared by the Government of Belize on January 25th 2000. It is actively co-managed by TIDE with the governing authority being the Fisheries Department. PHMR is a semi-estuarine system that 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 up to Monkey River Village. PHMR comprises coastal wetlands, seabed, mangroves, lagoons, savannahs of Payne's Creek National Park and national lands within the area known as the Port Honduras. The general boundaries of the reserve are the Rio Grande in the south, Monkey River in the north, the snake cayes in the east and the coastal wetlands in the west. There are two buffer communities that are located adjacent to the reserve which are Monkey River Village and Punta Negra Village with Punta Gorda Town lying just outside.

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 of coral and/or rubble, and soft bottom communities. A large portion of the reserve is covered by seagrass, which also provides essential habitat and food for juvenile fish species, sea turtles and manatees. Also, within the reserve are fringing reefs, coral patches and coral heads which provide a refuge and food for marine animals.

Residents who directly depend on the reserve for their livelihood engage in commercial fishing, tour guiding and as fly-fishing guides. Of the number of fresh produce extracted from the reserve, it is quite common to advertise the product originating from Punta Gorda to as far as Corozal in the north. The most popular species include, groupers, snappers, grunts and the barracuda. A large number of Belizeans from Punta Gorda frequent the reserve with the most popular activities being recreational fishing, snorkeling and swimming. The reserve hosts over 500 vessels in and around the reserve annually engaging in numerous activities. It is also quite frequent for sailing vessels from Guatemala to stop in and enjoy safe harbor in the New Haven Lagoon or the Snake Cayes on their way to and from Placencia.

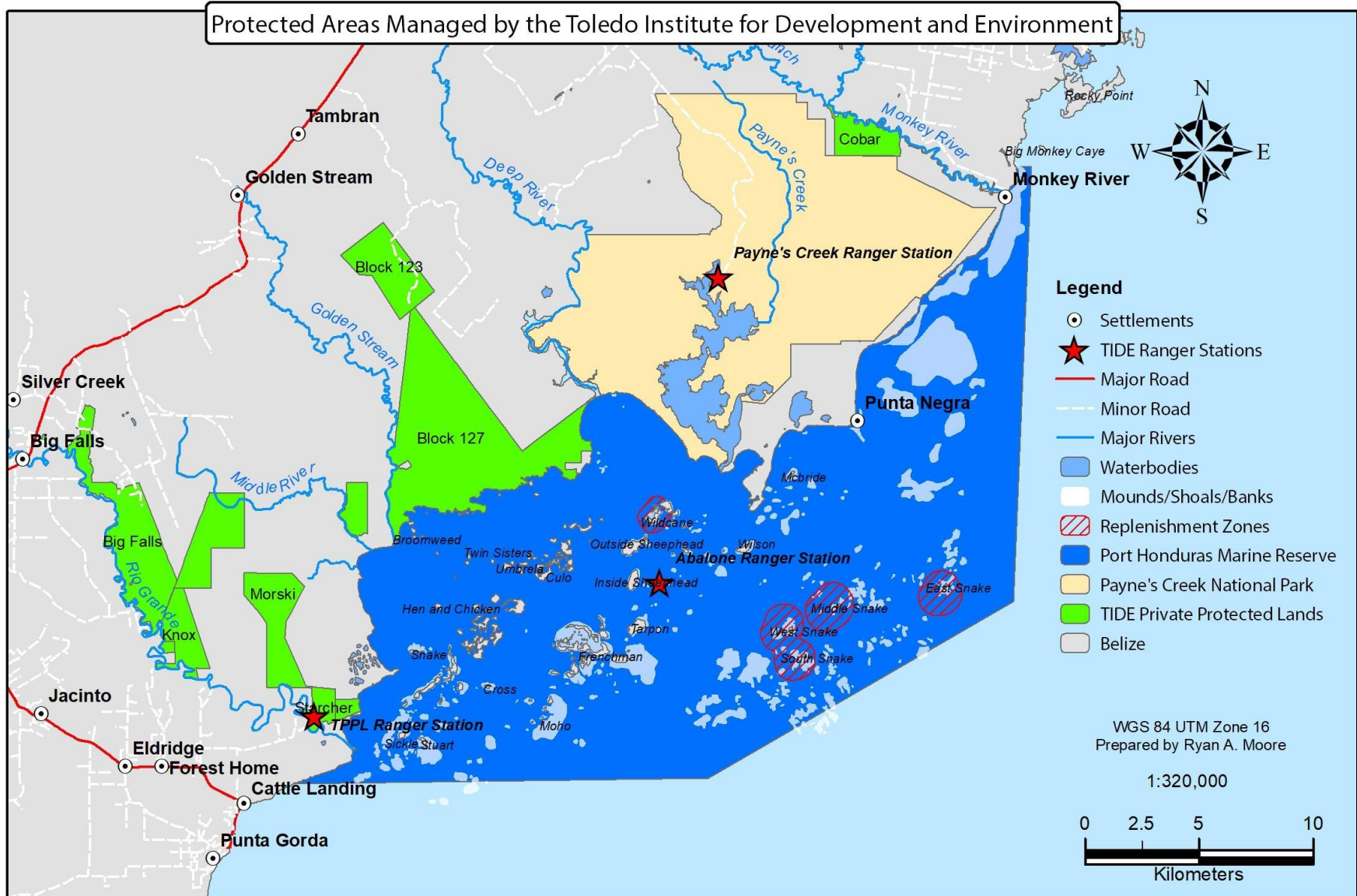


Figure 1: Map of the protected areas managed by the Toledo Instituted for Development and Environment

2.2 PHMR's Strategic Plan and Goals

The PHMR management strategy is based on five major goals:

1. To protect the physical and biological resources of the Port Honduras Marine Reserve
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

2.3 Zoning Plan and Regulations

Three zones were established for the purpose of the regulation and control of the reserve:

1. General Use Zone (95% of the Reserve)

Established to provide opportunities for uses and activities (e.g. fishing for conch, lobster, and finfish) under a stringent monitoring scheme.

2. Conservation Zone (4% of the Reserve)

Established to provide an area free from commercial fishing to prevent overexploitation of fishery stock, provide an undisturbed area for recruitment of species, and enhance the value of the area for recreational and tourism activities. These areas are located 0.805-kilometers (half a mile) radius around Wildcane Caye and 0.805-kilometers (half a mile) radius around East, West, and South Snake Cayes.

3. Preservation Zone (1% of the Reserve)

Established to provide areas within the marine reserve that is preserved in an entirely natural state and to protect areas of particularly fragile habitat or with threatened or rare species. Neither fishing or recreation are permitted in this area. This area is located 0.805-kilometers (half a mile) radius around Middle Snake Caye.

3.0 PHMR Activities Accomplished in 2020

3.1 Patrols and Surveillance

A total of 678 patrols were conducted for the period January 2020 to December 2020 (*Appendix 1: Patrol Routes in 2020*). The rangers travelled a distance of ~17,839km and averaged ~1486km per month, an increase from last year. This totaled ~1524 hrs at sea patrolling with an average of ~127 hrs per month. This was done by consuming ~3550 gallons which was a decrease of over ~1500 gallons in comparison to the previous year. The team acquired a new boat in 2020 which allowed for an increase in efficiency of patrols due to it running on only 1 engine as opposed to 2 with the previous boat.



Figure 2: Showing Head Ranger Edwin Cabrera and rescued Hawksbill Turtle found in a Gill Net

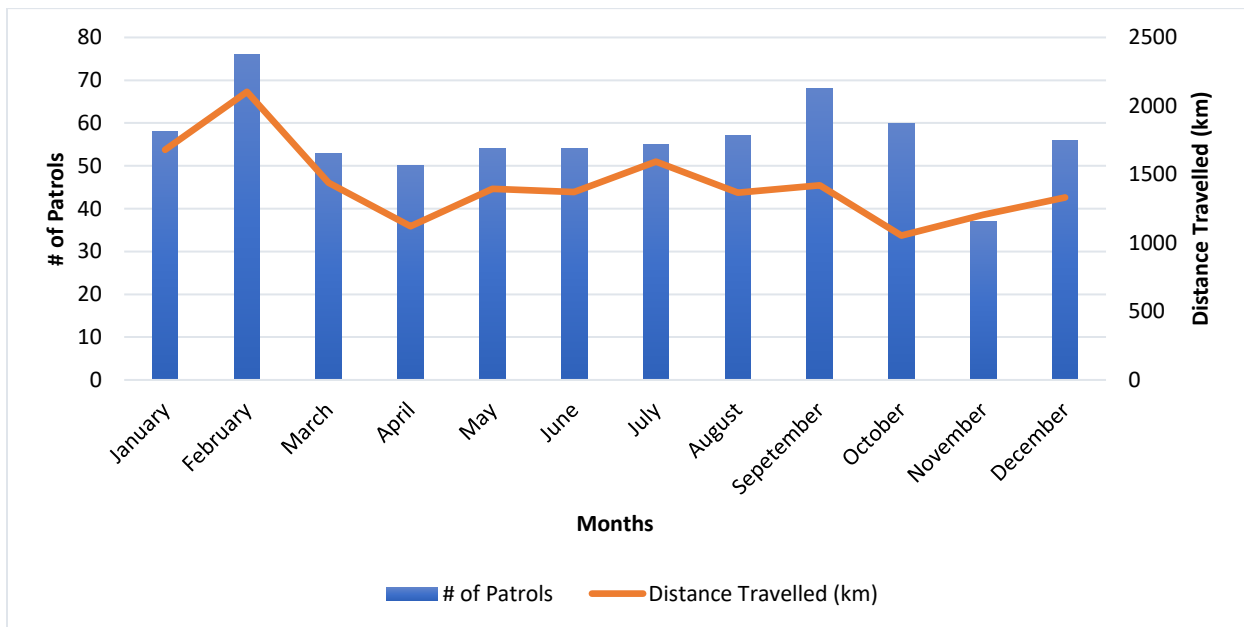


Figure 3: Showing number of patrols and distance travelled (km) by month in 2020

An average of 56 patrols were conducted each month focusing on the conservation and preservation zones around the Snake Cayes and the most eastern islands which are the primary habitats for conch and lobster. This number was maintained in comparison to the previous year. Other priority areas included the coastline leading up to Monkey River Village, the river mouths which empty into PHMR and the conservation zone around Wildcane Caye. A few extra patrols were done around the Sapodilla Cayes Marine Reserve and the village of Barranco to the south of Punta Gorda Town.



Figure 4: Protected Areas Manager conducting follow up outreach with a fisherfolk from Barranco

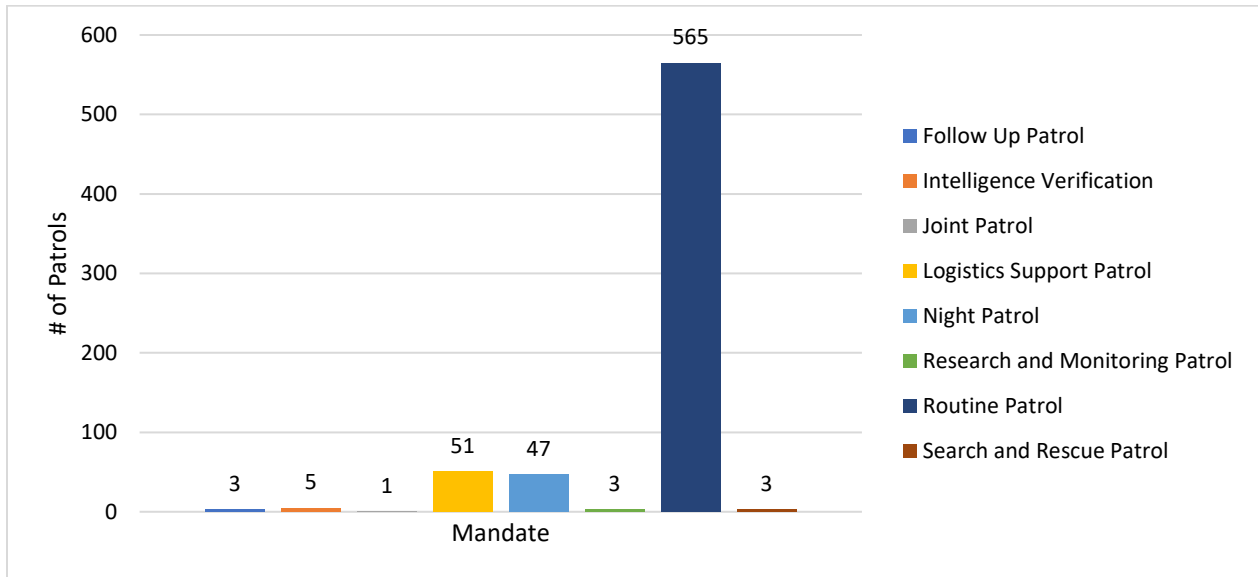


Figure 5: Showing patrols by mandate for 2020

The ranger team will continue to prioritize night time patrols of the PHMR to reduce illegal transboundary infractions by Guatemalans and Hondurans as well as to target local gill net users in and around the reserve. It has been noted last year that with the adjustments made to patrol routes illegal fishing has increased just outside the reserve. Continuing into the coming year the PHMR enforcement team will extend our patrol routes outside of the reserve to ensure that this trend slows as much as possible.

3.2 Patrol Infractions for 2020

The patrols in PHMR yielded 16 infractions observed and the results of which are as follows: 4 verbal warnings were issued, 10 gill nets and 2 longlines were removed from within the reserve. All nets were handed over to the Fisheries Department to be destroyed.



Figure 6: Gill net being processed before handing over to the Belize Fisheries Department

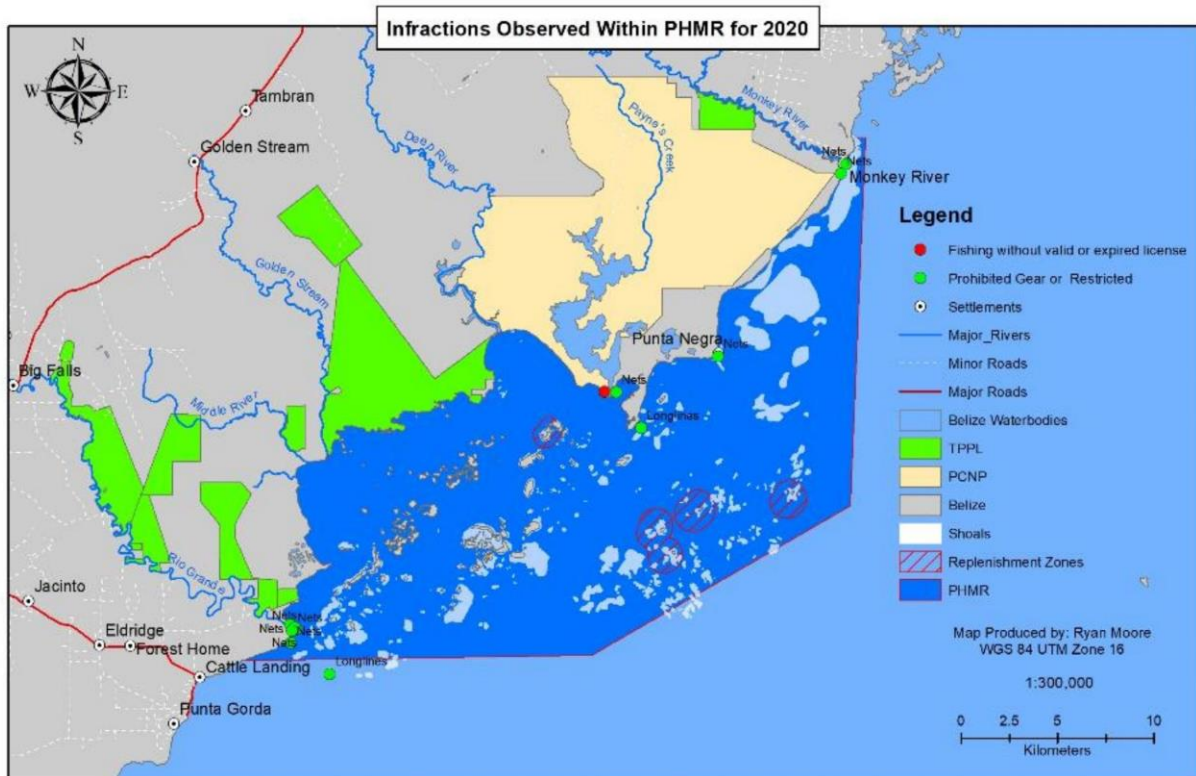


Figure 7: Showing infractions within PHMR for 2020

One of the individuals was a first-time license holder of the reserve and was met in his home village for follow up outreach on the fishing rules and regulations. Overall the enforcement team did a wonderful job and will continue to work with the fisherfolks of the reserve to increase compliance within the reserve.

3.3 Advisory Committee Meetings

For 2020 the Advisory Council meetings were very successful and saw discussions held in regards to the upcoming board member selection. There were two members selected, one from the PHMR Advisory Council and one from the PCNP Advisory Council. This was done virtually due to COVID-19 and it also allowed us to get full contribution from our members. Mr. Leonardo Castro was selected from the PCNP Advisory Council and Mr. Victor Jacobs was selected from the PHMR Advisory Council.

3.4 Maintenance of Patrol Equipment

The upkeep of the patrol equipment such as the regular cleaning of patrol vessel, regular servicing of the outboard engine (engine oil, oil filter change, gear oil change, freshwater wash and re-greasing) were done by rangers; major repairs and any technical problems were done by a mechanic in Punta Gorda Town. The new boat came into service in January and did not incur significant repairs. There was only one instance whereby the engine needed cleaning of the carburetor due to the burning of excess fuel and one control cable was swapped out as this engine was bought in 2017 under the EU Project.

3.5 Infrastructure Maintenance

The upkeep of the ranger station was done by the rangers and personnel from the Belize Coast Guard (BCG) stationed at PHMR. After the reinstallation of the solar panels due to hurricane Eta, the rangers reported insufficient charge by system which identified a deteriorated fuse box, switches and wiring which resulted in an overhaul. The addition of a plug to enable charging of the batteries by the generator was also added in result of this.

3.6 Trainings Accomplished by PHMR Enforcement Staff



Figure 8: Protected Areas Manager Ryan Moore and Senior Ranger Dervi Williams presenting

Staff members were given the opportunity to participate in a number of trainings through the year. The team benefited from a Conflict Resolution Training held in the early part of the year before COVID-19 and a virtual Fisheries Regulations training by the Fisheries Department. This was funded through the European Union Project, “Restoring Fisheries in the Mesoamerican Barrier Reef System.”

#	Training or Workshop	Facilitator
1	Conflict Resolution Training	Chamberlain Consulting
2	Conflict Resolution Training – Trainer of Trainers	Chamberlain Consulting
3	Fisheries Regulations Training	Belize Fisheries Department
4	Remote Sensing and Drone Mapping	Forest Department
6	Land-use/Land-cover assessment Training	Forest Department

Table 4: Showing trainings and workshops by PHMR Enforcement Team



Figure 9: Conflict Resolution Training – Trainer of Trainers Participants



Figure 10: Fisheries Regulations Training

3.7 Training needs for PHMR enforcement staff

1.	Advance Boat and Engine Maintenance Training
2.	Fisheries Regulations Training (continuous)
3.	Vessel Boarding Procedures
4.	Arrest Techniques Training (practical)
5.	Case File Preparation Training Advanced
6.	Special Constable Training

Table 5: Showing training needs for PHMR Management Staff

3.8 Partnerships

The PHMR staff continue to work with local and partner organizations, these partners include the Fisheries Department, the Belize Coast Guard, the Police Department, the Belize Defense Force, the Belize Audubon Society, Southern Environmental Association, the University of Belize and the Tour Guide and Fishermen Associations from the buffer communities of the reserve.

4.0 Communications

TIDE has developed and implemented a communications strategy in 2019 which continues to be carried out involving different members of staff. This year the Marine Manager and the Education and Outreach Coordinator attended a 30-minute radio broadcast highlighting the PHMR, this was also streamed live on Facebook virtually. Both members also participated in several Facebook Live sessions highlighting different elements of the Port Honduras Marine Reserve. Throughout the year posts highlighting work done in the PHMR were also highlighted on the Facebook page and TIDE participated in 2 virtual national radio shows to highlight all of TIDE's work. TIDE expects to utilize similar methods in 2021 to continue to keep stakeholders aware of the work TIDE is doing on their behalf and activities relating to the PHMR.

5.0 Erosion of Abalone Caye



Figure 11: Erosion control done around Abalone Caye

Due to a shift in focus due to COVID-19 the rangers started to use their extra time to landfill heavily affected areas by erosion. Several trips were made back from town with tires acquired from the different businesses. These tires were placed in front of the caye and along the eastern edge with rocks placed in between. Debris was moved from the back dump and placed as well closer to the dock with intentions to fill with sand.

6.0 Community Education and Outreach

6.1 TIDE Freshwater Cup 2020



Figure 12: Showing COVID-19 cleaning supplies delivered to schools

TIDE had planned to promote primary and secondary schools in the holistic development of children ages 8 -17 from 19 institutions. Additionally, with funds from UNICEF, TIDE had reengaged the adult sector of society to participate in our TIDE Freshwater Cup Event. A total of 16 teams submitted their letter of interest which included 12 male and 4 female teams to address Family Violence in their communities. All 19 school teams submitted their letter of interest and were involved in addressing environmental issues in their communities from removing litter, installing bins to making environmental signs in their respective communities. Tournament schedules were issued to each team and the events were set for March to May, 2020 for youth and adults. Covid-19 changed the scheduled games and notice was sent to coaches and principals on the cancellation of the tournament for 2020. Nevertheless, all 19 schools were provided with COVID-19 cleaning supplies to continue fight the virus before it affected households. These packages were used at the schools when parents visit to collect learning packages for their children.



Figure 13: Showing Reef Week 2020 logo and national activity schedule

Another engagement for the 19 institutions was the annual Reef Week Events. Schools were sensitized on the importance of the reef and a poster and book competition was held where all schools participated. The posters and books illustrated their knowledge of the reef and highlighted major importance to biodiversity and livelihood. Top posters were from St. Peter Claver RC, St. Benedict RC and Indian Creek RC. School. Toledo Community College and Julian Cho Technical High School submitted well put together books with illustration on the significance of the reef. Students from the said schools were awarded with boxes of stationaries which were shared among the participants. The signature Reef Week Fair was scheduled in Placencia Village but due to the number of cases within the area, TIDE did not have representation.



Figure 14: Showing Poster submitted by St. Benedict RC/ St. Peter Claver RC and 1st Place Book entry by Julian Cho Technical High School



Figure 15: Showing Host and Co-host of The Rising TIDE Talk Show 2020

With Covid-19 in our midst, TIDE's outreach activities were shifted to our Social Media Live event called the Rising TIDE Talk-show and regular posts on TIDE's Facebook page. There was a total of 103 post made on TIDE's page which focused on environmental messages, invitations to activities and live shows for continuous communication with stakeholders. From this, there were a total of 10 Live events highlighting Reef Week, Fire Management, Watersheds, Freshwater Cup and others. The live events had key messages on COVID-19 and addressed environmental issues in the stakeholder communities.

6.2 Summer Camp

Due to Covid-19, there was no camp activities in any of the Communities buffering our Protected Areas.

6.3 Community Development

As a part of our commitment to the stakeholders of PHMR, TIDE facilitated the development of, and participated in the implementation of, five-year community development plans for the stakeholder communities of Monkey River, Punta Negra, and Punta Gorda, between 2014 – 2019. At the end of 2019, TIDE facilitated stakeholder consultations to review the progress made through the plans, and to update of them for the 2020 – 2024 period. These new plans were completed in the first quarter of 2020. Due to COVID-19, the sharing of the plans with communities was delayed, but by August the new plans were shared with members of the three communities. Whilst the pandemic has affected almost every sector of society, the impacts were strongly felt in Monkey River and Punta Negra who rely heavily on tourism, so during consultations in 2020 the communities identified new development priorities that have since been added to the plans. Both villages identified livelihood development and diversification as urgent strategies. With funding from the Protected Areas Conservation Trust (PACT), TIDE has allocated some funds to implement activities within each of the three plans, and was finalizing these plans towards the end of 2020. The activities will be implemented early in 2021.

7.0 Managed Access in PHMR

7.1 Overview of the Managed Access Program for 2020

Through the European Union project, “Restoring Fisheries in the Mesoamerican Barrier Reef System,” and TIDE’s Conservation Investment Agreement with PACT, TIDE has continued with Managed Access activities as well as laying the groundwork for a bright future in Managed Access nationally. Another National fishing forum was held in the village of Hopkins. This was attended by fishers from Managed Access Area 7, Area 5, Area 4 and Area 3 fishers.



Figure 16: National Fishing Forum held in Hopkins

7.2 Fishing Forums

Due to COVID-19 no fishing forums were held.

7.3 Committee Meetings

Due to COVID-19 no Managed Access Committee Meeting was held.

7.4 Outreach Activities

The primary strategy for PHMR continues to be ‘one on one’ house visits however, frequent stops are still being made to the fish market where the dialogue remains vibrant and energetic. For 2020 no community group

meetings were held due to COVID-19 however, a new strategy involving phone calls was introduced. The Managed Access Coordinator and Education and Outreach Coordinator kept in contact with fishers to understand how the fishing industry was affected by COVID-19. Feedback was brought back to TIDE on how it also affected their day to day lives.



Figure 17: Managed Access fisher Joel Casimiro with 2 freshly caught live lobsters

Continued in 2020 was also the boat to boat sessions which was done twice out at sea. The Protected Areas Manager along with the Education and Outreach Manager met with fishers at the start of the Lobster Season. The fishers had explained that overall the lobsters were abundant but the prices at the Cooperatives were extremely low. Fortunately, prices rebounded as the season progressed. Another session was done over 2 days closer to the end of the year whereby more numbers were received for follow up phone call conversations. During this time, a new regulation was passed which introduced a total ban on gill nets and some fishers were in disapproval of this as they felt it was done without sufficient consultations. They indicated that they would organize and seek legal counsel to the legality of the law as they felt that the regulation was passed in an underhanded way.



Figure 18: Left, vessel from Punta Negra; right, at Head Caye with Ramirez brothers

8.0 Research and Monitoring

Research and monitoring continues to be an integral part in the management effectiveness of the Port Honduras Marine Reserve (PHMR). Monitoring for the year 2020 included lobster surveys, conch surveys, sea cucumber surveys, coral health surveys, reef fish surveys, reef benthic habitat surveys and coral bleaching surveys. A detailed analysis of these surveys can be found in PHMR's Biological Report(s) for 2020.

Reintroduced in 2020 was the monitoring of Turtle Nests. This was led in the field by Mario Muschamp and rangers from the PCNP and TPPL teams. They monitored along the Punta Ycacos coastline up to Monkey River where they made frequent checks during routine patrols. The rangers at PHMR monitored West Snake Caye which seemed to be the only active sight for turtle nests at the Snake Cayes.



Figure 19: Turtle tracks observed during monitoring

There were 35 active nests monitored providing 2,694 hatchlings of ~4,493 eggs. Tracks of Hawksbill turtles were observed at all nest sites.

9.0 Commercial Fishing, Recreational Fishing and Tourism in PHMR

9.1 Vessels in PHMR

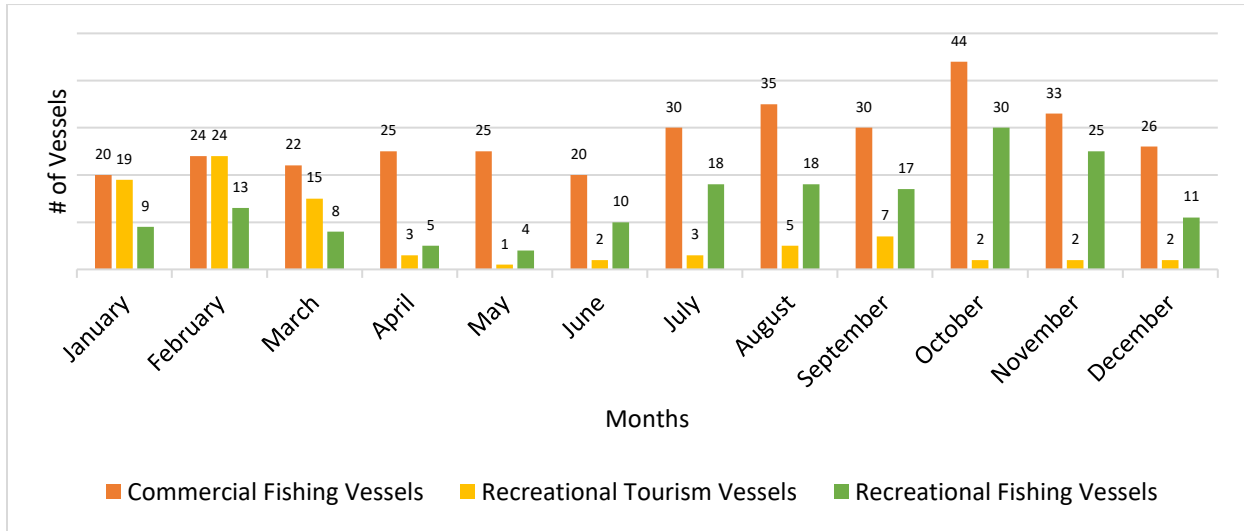


Figure 20: Showing vessels sighted in PHMR for 2020

In 2020 the rangers through the Spatial Monitoring and Reporting Tool (SMART) logged over 587 vessels in the reserve. Of these vessels 334 were commercial fishing vessels, 85 were recreational tourism vessels and 168 were recreational fishing vessels either transiting the area or conducting other activities.

9.2 Commercial, Recreational and Tourism Users in PHMR

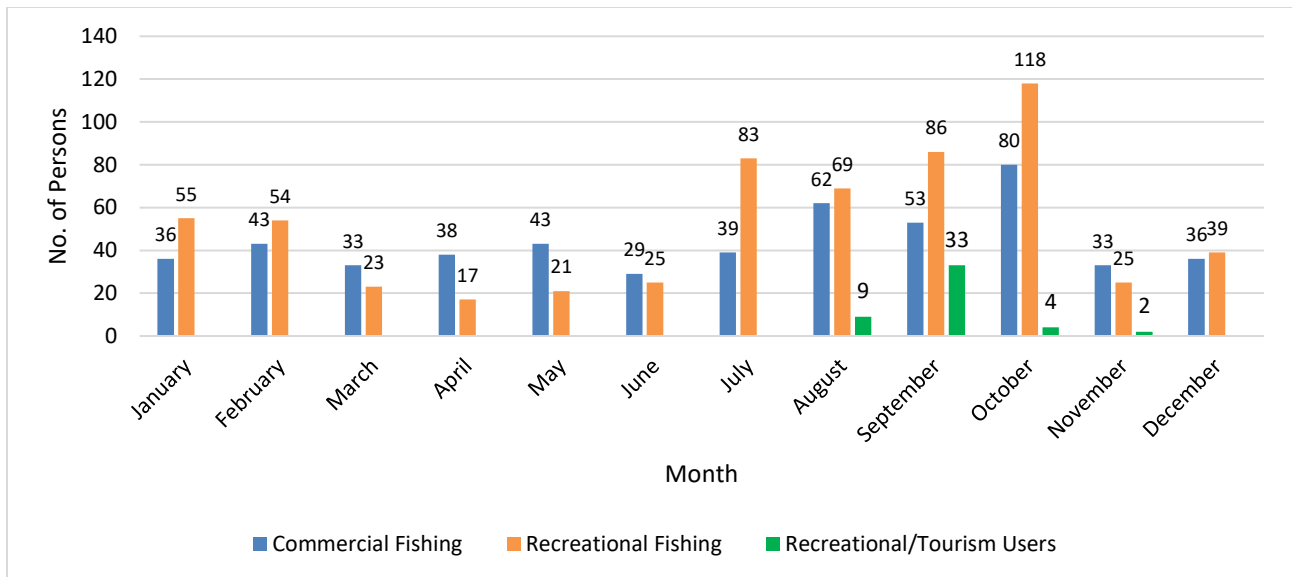


Figure 21: Showing the commercial fishers, recreational fishers and the recreational/tourism users by month for 2020

In 2020 TIDE Port Honduras Marine Reserve enforcement team, through SMART, logged 525 commercial fishers and 615 recreational fishers and 48 tourism/recreational users in the reserve.

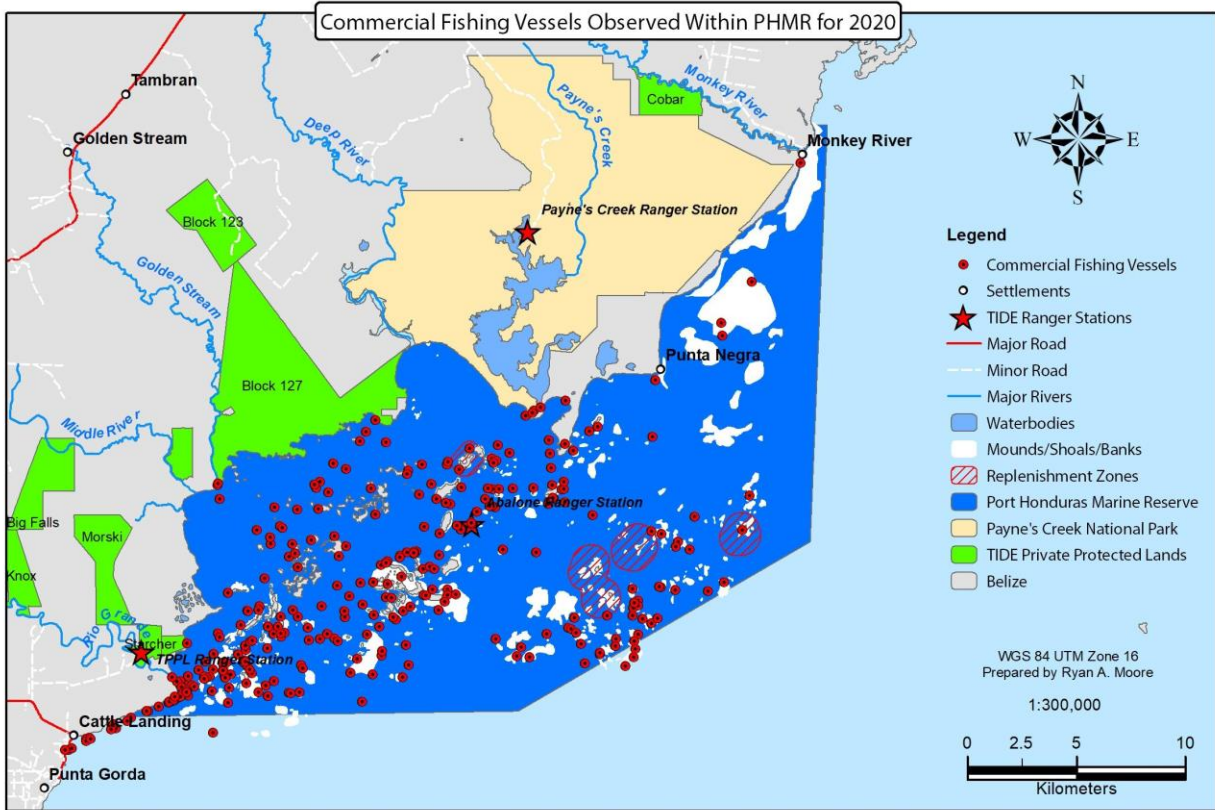


Figure 22: Showing Commercial fishing vessels in PHMR for 2020

The map above shows the approximate location for commercial fishers within PHMR (*The GPS coordinates are taken at the location of the patrol vessel unless the rangers are directly interacting with the commercial fishers*).

Adolfo Aleman	Earl Bowden jr.	Kenneth Abraham Braddick
Adrian Norales	Earl Bowden Sr.	Kenworth Martin
Akeem Alex Williams	Elder Aleman	Leonardo Cus
Alan Bochub	Evan Cuevas	Leonel Delcid
Alonzo Reymundo	Francis lino	Leslie Carlton Colon
Alonzo Reymundo	George Garbutt	Leslie Williams
Angel Aleman	George Ramirez	Manny
Angel Paiz	Gerson Coleman	Marcos Zuniga
Apolonio Westby	Gevani Paul Edwards	Mario Canelo
Apolonio Westby	Harrison Young	Mario Muschamp
Byron Paiz	Jamie Myvett	Marvin Westby
Carlos Bardalez	Jason Garbutt	Mike Jacobs
Carlos Ramirez	Joel Casimiro	Minor Perez
Curtis Rian Molina	Jonas Pau	Mynor Melgar
Daniel Castellanos	Jonathan Alford	Narciso
Dennis usher	Joseph Romero	Norman Gutierrez
	Joshua Ramclam	Oliver Rojas

Omar Westby
Paula Jacobs
Ramon Carillo
Ray Jacobs
Rodney Selgado
Romulo Aleman

Roy Ramirez
Suzzet Williams
Winston Coleman
Winston Thompson
Yonardo Cus

Table 6: Showing commercial fishers sighted in PHMR for 2020

10.0 Recreational Tourist Visitation to Abalone Caye

Overall, the Port Honduras Marine Reserve saw ~640 foreign visitors in 2020, this number was derived through ticket sales. This was during the period January – March 2020 whereby COVID – 19 regulations and lockdown started. Of these individuals 84 signed in at Abalone and gave some details on where they originated from with a majority being from the United States of America.

The TIDE management team came to the decision to not reopen Abalone Station to visitors for the remainder of 2020. Throughout the remainder of the year, visitation has been sporadic with some individuals still taking out tours to the reserve when possible. A majority of tour operators and captains have reverted back to commercial fishing.

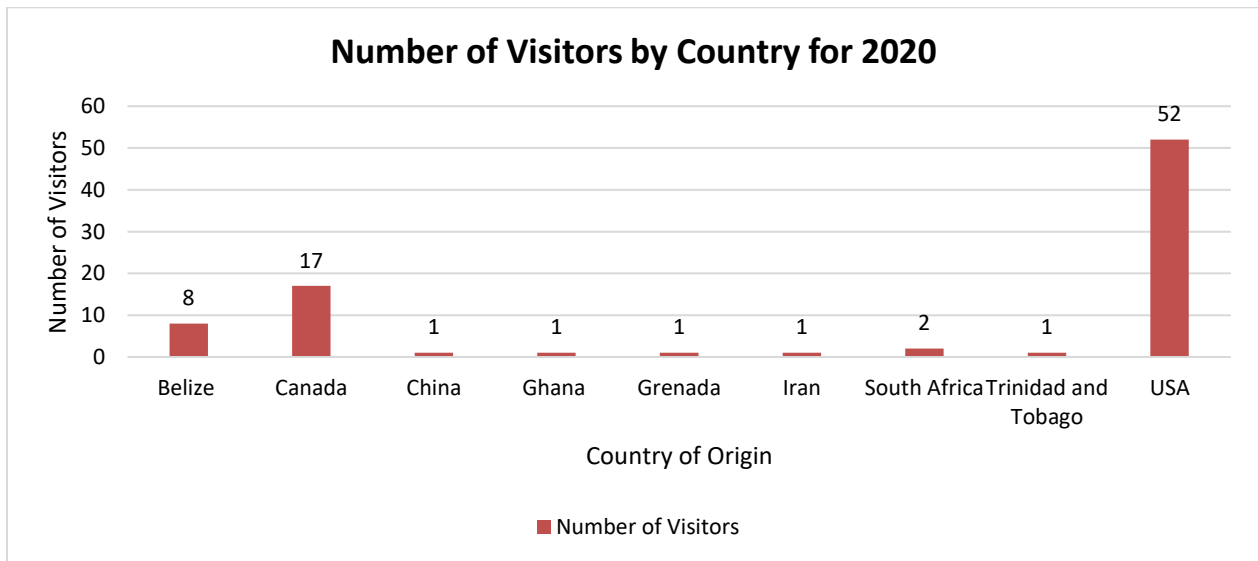


Figure 23: Showing number of visitors by country who signed in at Abalone Caye before Covid-19

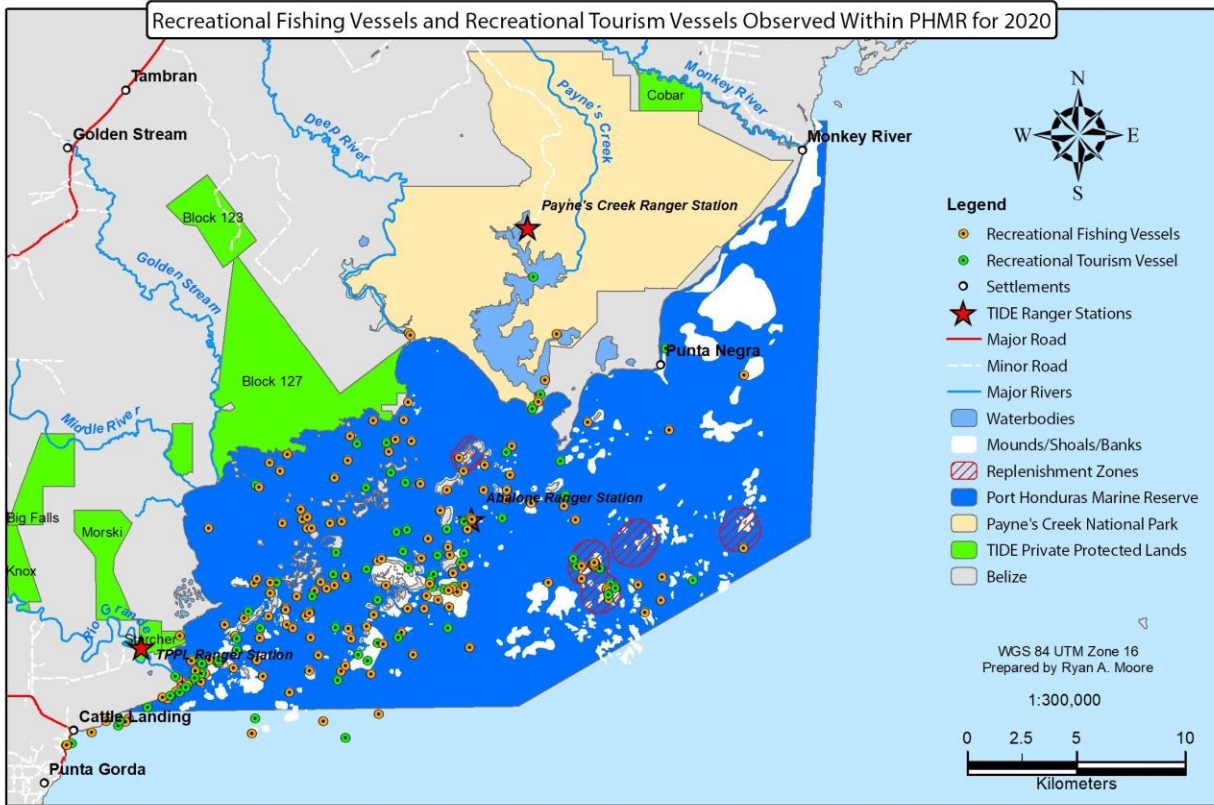


Figure 24: Showing Recreational and Tourism vessels sighted in the reserve by Rangers and logged using SMART

The map above shows that a majority of the reserve is being used for both recreational fishing and tourism related activities. Areas north of the reserve shows little to no activity for these types of vessels. *(Note: some vessels were marked improperly due to inexperience using the SMART program by rangers.)*

From the map it can be shown that multiple recreational fishing vessels can be seen around the snake cayes in the conservation zone although no fishing is allowed. It must be noted that although these vessels are primarily conducting recreational fishing, it is customary for the individuals to also stop by at the cayes to either have lunch, snorkel and/or swim as a part of their daily visit.

11.0 The TIDE Team

11.1 Board of Directors

Albert Roches (Director)	Retired Public Officer (Public Health)
Jeremy Enriquez (Director)	Program Manager, Ecology Project International
Alexander Garbutt (Director)	Local Fisherman and Tour Guide in Monkey River
Marie Aleman (Vice-Chair)	Entrepreneur/Community Representative
Leonardo Castro (Director)	PCNP Advisory Council Representative
Victor Jacobs (Director)	PHMR Advisory Council Representative
William Tate (Treasurer)	Entrepreneur/Tourism Community Representative
Celia Mahung	Executive Director (Ex-Officio)

11.2 TIDE Office Staff

11.2.1 Management Staff

Celia Mahung	Executive Director
Joe Villafranco	Development Director
Stephene Supaul	Operations Manager
Caroline Oliver	Project Assistant
Ryan Moore	Marine Manager
Mario Muschamp	Terrestrial Manager
Federico Caal	Environmental Education Officer/ Community Development Officer
Jasmine Tzul - Faber	European Union - Project Manager
Paul Etienne	Information Technology Officer

11.2.2 Administrative Staff

Darius Avila	Accountant
Kimberly Lawrence	Financial Administrator
Alaine Noralez	Accounts Clerk
Ishiamae Gomez	Front Desk

11.3 PHMR Advisory Committee

Victor Jacobs	PG Tour Guide Association
Mr. Armando Ramirez	Rio Grande Fisherman Cooperative

Mr. Daniel Castellanos	Monkey River Village Council/ Fishers Assoc.
Hon. Michael Espat	Area Representative
Mrs. Paula Jacobs	Chairperson Punta Negra Village Council
Mr. Roy Polonio	University of Belize-Toledo Campus
Mr. Lyndon Rodney/Victor Vasquez	Fisheries Department-PG
Mr. Ashton Mckenzie/Winston Chun	PG Town Council
Mr. Leonardo Castro	Monkey River Village Council
Mrs. Celia Mahung	Executive Director
Mr. Mario Muschamp	Terrestrial Manager
Mr. Ryan Moore	Marine Manager

11.4 TIDE Private Protected Lands Staff

Mario Xi	Head Ranger
Reymundo Chen	Ranger
Junnalio Ical	Ranger
Pedro Shol	Ranger

11.5 Payne's Creek National Park Staff

Mario Muschamp	Terrestrial Manager
Augustin Sho	Ranger
Leonard Williams	Ranger
Liberato Pop	Ranger
Norman A. Williams	Field Officer

12.0 Conclusion and Recommendations:

2020 was a successful year for PHMR however with the advent of COVID-19 we had prolonged periods where the team was not as effective with the absence of the coast guard. Overall the team was able to accomplish 113% (600) of planned patrols with 78 additional patrols. We maintained our high numbers from the previous year despite the challenges faced by the team.

That being said, the team was able to increase their efficiency by reducing their fuel consumption by ~1800 gallons. This was mostly due to the new boat purchased in late 2019 however for 2021 we expect this trend to continue with the introduction of drone patrols.

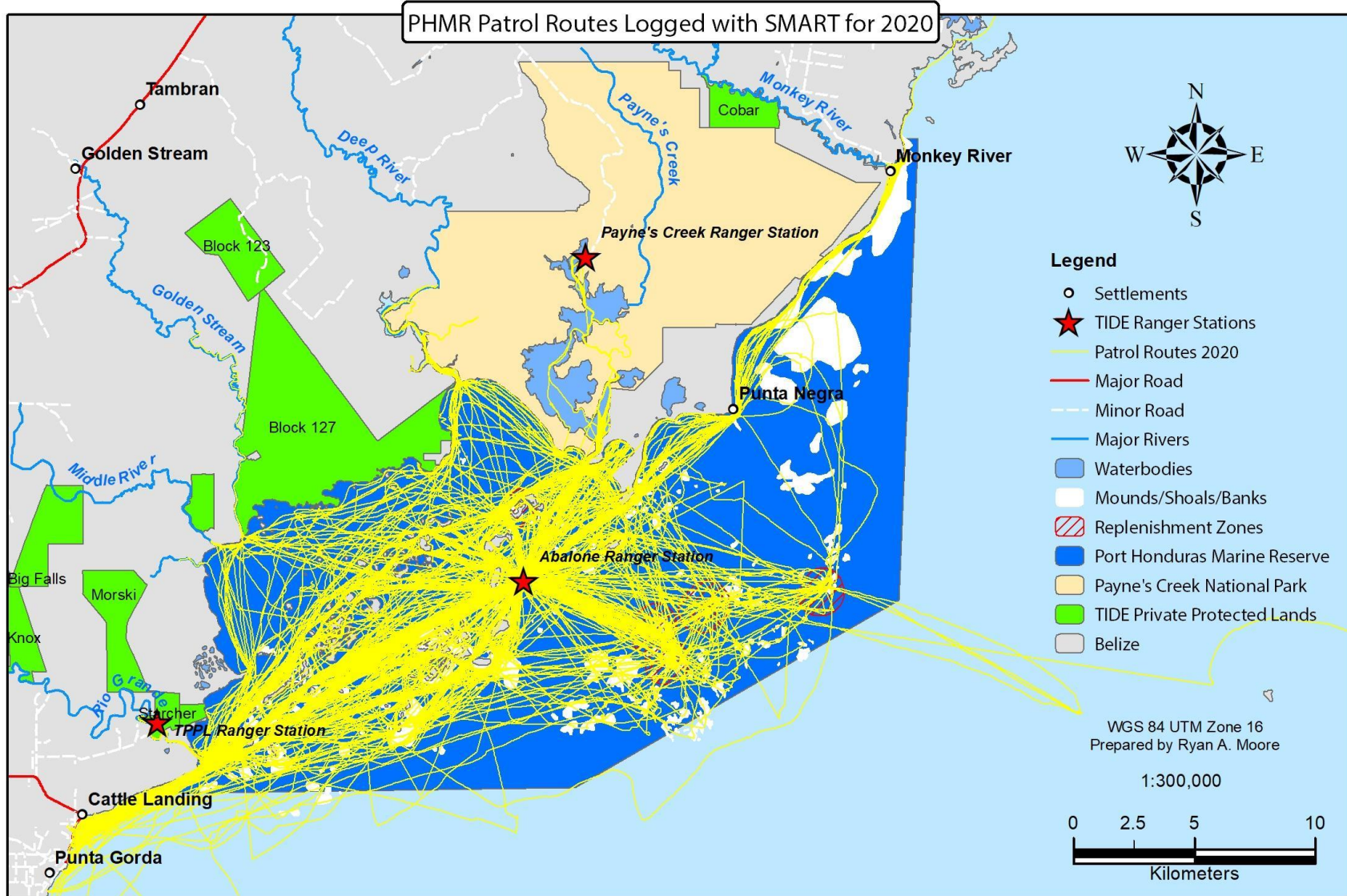
Recommendations

- Develop a means by which outreach activities are tied to Managed Access fishers struggling to abide by fishing regulations to increase compliance.
- Update the SMART to include equality-based measures including, age, gender, and race when making observations in the reserve.
- Increase efficiency and effectiveness guided by the SMART tool through increase documentation of patrol activities and resource user activities.
- Incorporate research and monitoring activities where possible to increase the capacity of rangers.
- Continue to build staff capacity and improve in technology to be more cost effective in the management of the protected areas.
- Continue to monitor for new developments in and around the reserve that can pose serious threat to the integrity of the protected area and ensure the Environmental Impact Assessment process is followed for the development and implementation of those projects.

The challenges brought on by COVID-19 have continued to highlight the importance of being more cost-effective with the limited resources afforded too us. We have certainly learnt this lesson with the loss of several employees who have contributed significantly to the management of the reserve, a stark decrease in our limited revenues from ticket sales and a significant cut in planned projects. TIDE and the team at Port Honduras Marine Reserve remain committed in ensuring that the ecosystems and the services provided to the numerous stakeholders are maintained for years to come. We would like to express our deepest gratitude to all those who have made the management of PHMR a success in 2020.

13.0 Appendix

Appendix 1: Patrol Routes in 2020



Appendix 2: Financials

Toledo Institute for Development and Environment Port Honduras Marine Reserve Income & Expense Report January through December 2020

Ordinary Income/Expense	
Income	
4001 · Grants	775,000.00
Total Income	775,000.00
Expense	
3001 · Equipment	73,155.61
5001 · Salaries/Wages & Benefits	300,144.69
5002 · Travel & Transportation	1,618.33
5003 · Cleaning & Sanitation	1,093.00
5004 · Donations	500.00
5005 · Dues & Subscriptions	100.00
5006 · Insurance, Licensing & Permits	5,934.26
5007 · Postage & Delivery	570.12
5008 · Professional Fees	122,404.19
5009 · Public Awareness & Env. Ed.	18,954.06
5010 · Repairs and Maintenance	35,031.25
5011 · Supplies	17,693.28
5012 · Training	16,825.25
5014 · Board/Advisory Board Expense	1,519.79
5015 · Utilities	4,482.40
5016 · Telephone, Comm. & Internet	7,372.17
5017 · Bank Charges	1,954.17
5020 · Net Working	5,194.44
5025 · Institutional Strengthening &	3,133.53
5026 · Research & Monitoring	50,717.43
5027 · Recruitment	871.89
5035 · Surveillance, Patrol & Enforce	48,908.79
5036 · Disaster Preparedness & Management	3,790.58
5037 · Community Development	46,943.67
Total Expense	768,912.90
Net Ordinary Income	6,087.10
Net Suplus(Excess)	6,087.10