

2022 TIDE ANNUAL REPORT



LETTER FROM THE DIRECTOR



I contemplated retirement for the past 3 years, but this year, I was fully prepared to make way for new leadership after 16 years of intense commitment to the growth of the organization. Succession planning was a priority for our board of directors and with financial support from the Summit Foundation and professional guidance from facilitator, Zoe Walker of Wildtracks, a succession plan was developed and implemented with input from staff and board of directors.

Early in the year, the board of directors and I began planning for my exit. A road-map with specific actions that needed to be taken for recruitment of new director and to ensure he/she had the necessary knowledge of the organization was created and implemented. This included a staff retreat to get input on the leadership and staff team needed to keep the TIDE rising.

I was fortunate to have the assistance of a professional volunteer, Dr. Carolyn Henri who assisted me with another activity in the succession plan - revision of staff job descriptions. It was essential to assure staff that additional expectations, if any, would come with professional training and possible compensation supported by the organization. Though tedious, and time consuming, this exercise helped to clarify staff roles and responsibilities and was successfully implemented.

Providing for the new Executive Director, Asad Magaña to 'shadow' me for two months allowed him to meet each member of staff, understand their roles and responsibilities and to familiarize himself with TIDE By-laws, planning documents, administrative policies and procedures, protected areas, main partners and donors. At the end, I felt we needed a third month to fully complete the transition process, but we did our best with the allocated time.

Along with succession planning, preparing to take on the management of the Sapodilla Cayes Marine Reserve, in a phased approach and working with consultants on a management plan was a huge undertaking.

As you read our annual report, you will note that much time was spent on planning for our marine and terrestrial science programs and for the implementation of financial mechanisms aimed at continued diversification of funding sources.

I thank the board of directors and advisory councils for their ongoing support, the staff for their long hours of dedicated service, and donors for their financial support. Together, we continue to make an impact on the ecosystems and lives of many who depend on these resources.

Celia Mahung
Executive Director

Vision:

Toledo's healthy ecosystems support biodiversity, and communities, whilst contributing to national sustainable development goals

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Mission:

To strengthen natural resource management and community stewardship within the Toledo landscape and seascape



About TIDE

The Toledo Institute for Development and Environment (TIDE) was established in 1997 by concerned community members to combat illegal fishing and illegal harvesting of the West Indian Manatee. TIDE has grown to manage 3 Protected Areas and employs over 32 full time staff and many community stakeholders.

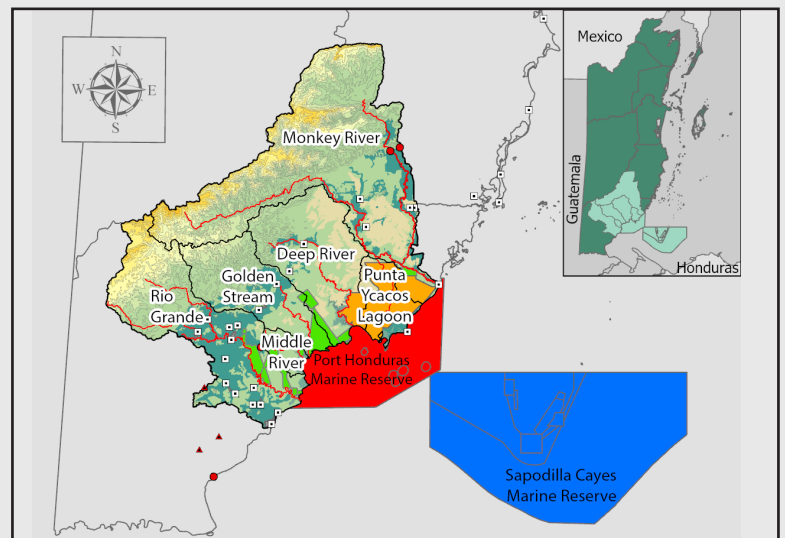
The Toledo Institute for Development and Environment (TIDE) was established in 1997 and has grown from its grass roots as a local, community-based response to manatee poaching and marine degradation, to one of Belize's leading non-government conservation organizations. It is respected nationally and internationally for its landscape/seascape conservation initiatives, its promotion of sustainable resource use and its leadership in fire management.

Based in Punta Gorda (Toledo District), in southern Belize, TIDE has developed an effective, professional operation, with a dedicated board of directors, team of managers and field staff, and has integrated effective and meaningful community partnerships in natural resource management and monitoring activities. TIDE operates with an annual budget of just under Bz\$2 million.

The third strategic plan for the organization, runs for five years, from 2022 to 2026 and builds on TIDE's well-established strategic areas as the organization continues to evolve. It also strengthens the focus on communities and natural resource users as equal partners.

TIDE's Key Strategic Areas for 2022 - 2026 are:

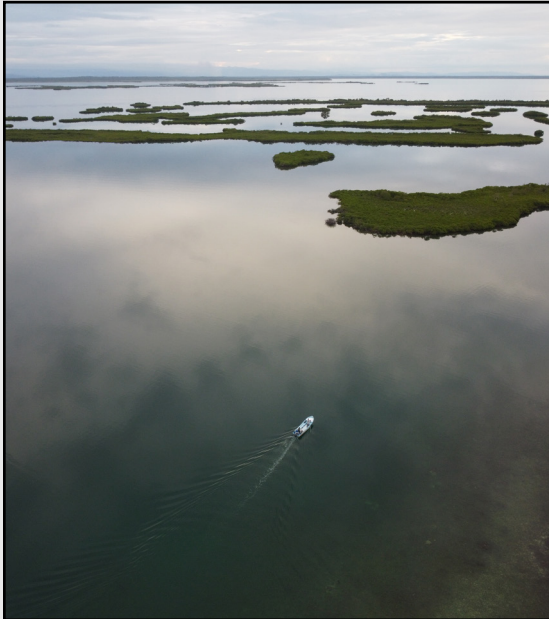
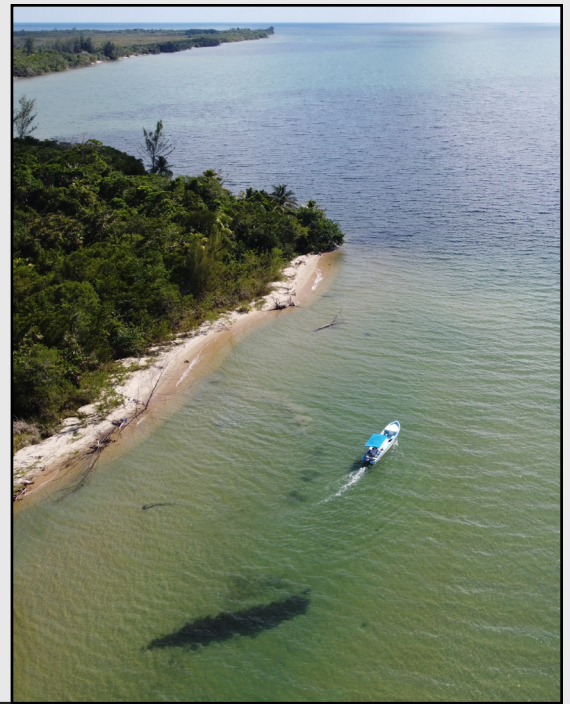
- Natural Resource Management
- Community Stewardship
- Supporting Policy Implementation
- Sharing Successful Models
- Institutional Capacity



The Maya Mountain Marine Corridor is an 830,000 acre ridge-to-reef landscape that connects the Maya Mountains with the coastal waters and coral reefs of the Gulf of Honduras.

TIDE's Role in Toledo

- Effective management of TIDE protected areas, strengthening climate resilience in the Toledo landscape and seascape, and contribute to the development of Belize's National Protected Areas System.
- Adaptive management that is informed by sound environmental monitoring and research, with accurate and credible outputs that inform management and policy.
- Leadership in protected areas and marine resource management, fire management, and community engagement and stewardship, with sharing of successful models.
- Effective engagement of government and non-government partners in relation to protected area management.
- Strengthening and upholding enabling policies and legislation.
- Providing opportunities for community participation in TIDE protected areas towards sustainable natural resource use and management.
- Building capacity of buffer communities for improved stewardship of natural resources and increased climate change resilience.



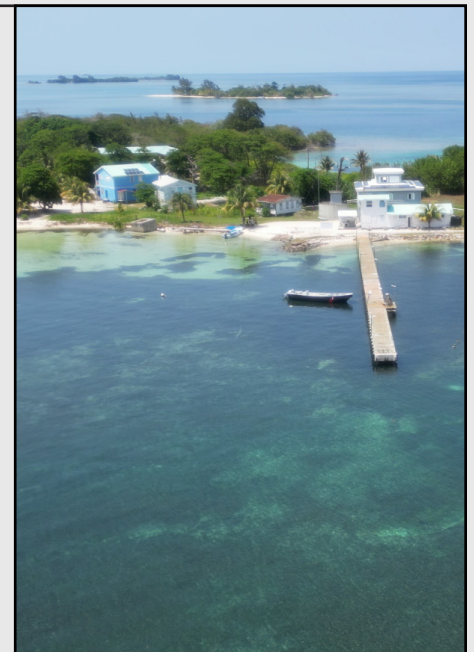
TIDE'S Scope in Belize

The TIDE ridge-to-reef landscape and seascape is defined by the six watersheds that drain into the Port Honduras Marine Reserve, stretching from the upper elevations of the Maya Mountain in the west to the coast and the coral reefs of the Snake Cayes in the east - and beyond that to the Sapodilla Cayes Marine Reserve, (Managed Access Fishery Areas 4 and 5), linking the watersheds with the sea. Together, the TIDE protected areas form some of the most pristine habitat in the Mesoamerican Biological Corridor, protecting important coral reef, coastal / lagoon ecosystems, tropical forest and pine savanna. The organization manages a portfolio of protected areas in this landscape / seascape, both national and private, that contribute to the National Protected Areas System, and partners with communities and other stakeholders, focusing on the promotion of ecosystem-based management as an important and integral part of social and economic development in southern Belize.

TIDE'S Portfolio of Protected Areas

TIDE manages two national protected areas within the southern Belize landscape: Port Honduras Marine Reserve (PHMR) which encompasses approximately 100,000 acres (through a co-management agreement with Fisheries Department) and Payne's Creek National Park (PCNP) covering 37,680 acres (through co-management agreement with the National Biodiversity Office). It also owns and manages 21,911 acres of private lands within the Toledo landscape – fourteen properties that together make up the TIDE Private Protected Lands (TPPL). All three are important components of Belize's southern Biological Corridor and the protected areas landscape and seascape in southern Belize.

Whilst the Sapodilla Cayes Marine Reserve (SCMR) which encompasses 321,623 acres is not yet part of this portfolio, TIDE has received partial co-management through an MOU with the Fisheries Department, and provides research and monitoring support within three FSA sites and in 2023 will commence enforcement activities.



2022 Highlights

81 participants from 15 communities received basic fire management training and eight communities now have access to sets of firefighting equipment for use in agricultural burns and to address wildfires



A Memorandum of Understanding was signed with the Ministry of Blue Economy and Civil Aviation for the co-management of Cayman Crown, Rise and Fall Bank, and Nicholas Caye sites within the Sapidilla Cayes Marine Reserve

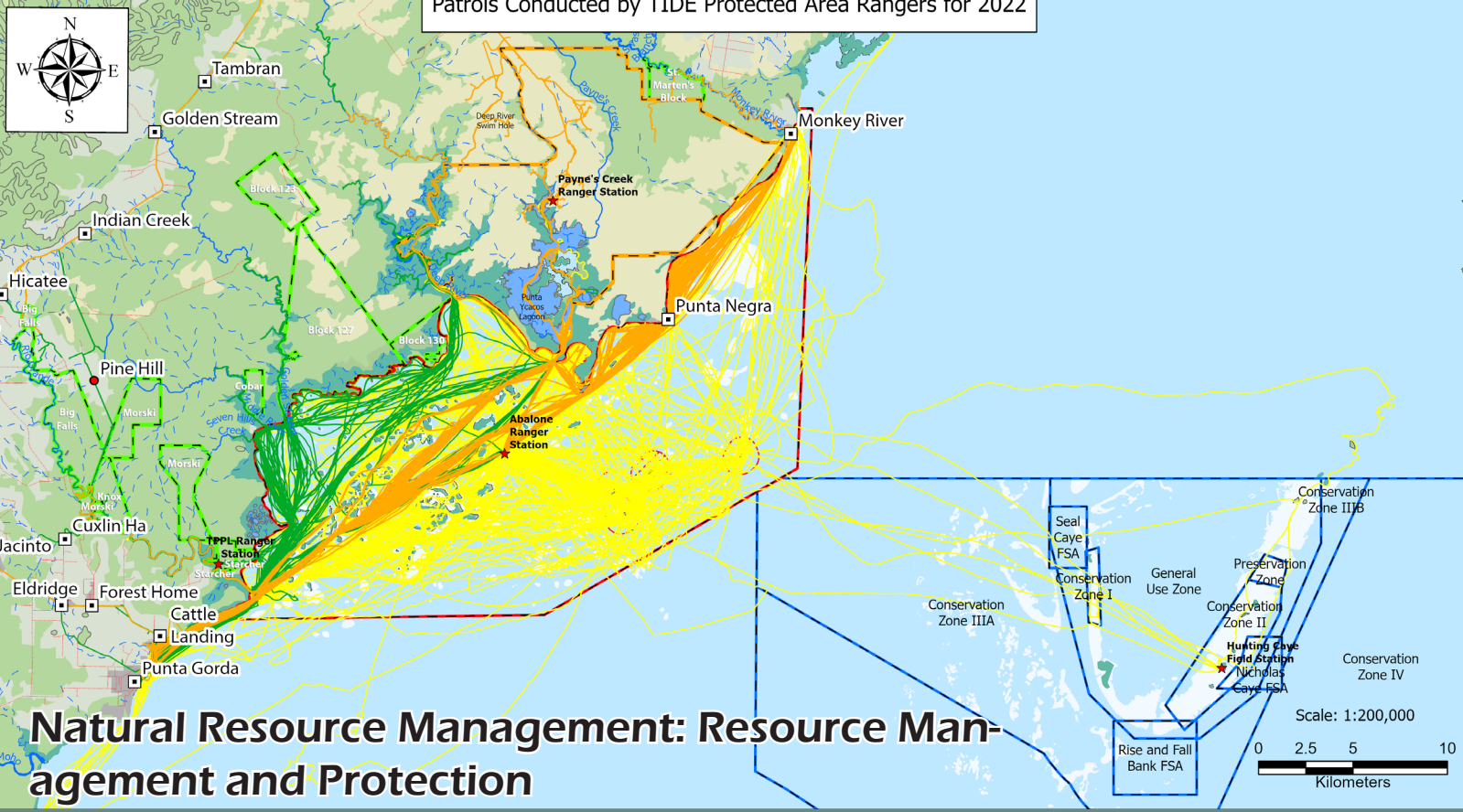
A total of \$90,000 was invested in strengthening 11 cultural tour enterprises and local market vendors in Punta Gorda through infrastructure improvements, capacity building, and provision of equipment and materials, to enhance the town's visitor experience and local entrepreneurial growth.



TIDE Tours rebounded from Covid-19 in 2022, recording net profit figures higher than pre-pandemic years, and having a positive environmental impact with the planting of 1862 trees.

Aside from conducting their daily patrols, the TIDE ranger team aided search and rescue operations on numerous occasions for grounded sailboats, lead operations to retrieve stolen stakeholder vessels, assisted with hurricane relief in Turneffe Atoll and assisted with erosion control in Punta Gorda Town.





Natural Resource Management: Resource Management and Protection

The Natural Resource Management Program focuses on the TIDE protected areas, and on the TIDE ridge-to-reef landscape and seascape, with strategies for holistic conservation of the ecosystems and biodiversity. Whilst previous strategic plans were guided by the Maya Mountain Marine Corridor, this strategic plan places the focus more squarely on the TIDE areas of influence – the protected areas under its mandate in both the terrestrial and marine environments, and the landscape and seascape in which they lie.

Port Honduras Marine Reserve

In 2022, the rangers carried out a total of 568 patrols within PHMR. The patrols in PHMR yielded 9 verbal warnings, 6 gill nets and 1 out of season Lobster Trap was removed from within the reserve. Other activities undertaken included aiding 2 grounded sail boats, retrieval of a stolen vessel for Copal Tree Lodge, assisted with erosion control at 1 mile in Punta Gorda Town, assisted with Garifuna Settlement Day celebrations. The Protected Area Manager also assisted the University of Belize by successfully providing introductory GIS training to 3 students. The head ranger Edwin Cabrera and James Choc ranger for TPPL also assisted the Turneffe Atoll Sustainability Association in hurricane recovery efforts.

Number of Patrols by PA

- PCNP: 483 Patrols
- PHMR: 636 Patrols
- TPPL: 601 Patrols

For 2022, the rangers carried out 349 patrols within the PCNP and the Deep River Forest Reserve. While on patrol they observed 2 tracks entering the park, signs of logging and cut lines from the new concession near the park, an illegal camp on Tree Top Hill within DRFR, 1 poached yellow headed parrot nest, several fires which were potentially ignited by hunters. The PCNP team also deployed remote surveillance cameras which yielded additional information of illegal entry within the park. These cameras observed 1 tractor, 6 vehicles, 4 motorcycles, and 2 bicycles and potentially ~ 25 individuals entering the park illegally.

Payne's Creek National Park



TIDE Private Protected Lands

In 2022, park rangers carried out 463 patrols, both on land (45) and waterways (423). During these patrols, they encountered 11 people and came across evidence of 6 others. There were a few individuals who fished within the Rio Grande River and creeks from off TPPL lands who were warned. Evidence of hunting was also found along the banks of the river such as camps, coconut shells as bait, and one instance of a gunshot was heard while patrolling on the river.



Natural Resource Management: Research and Monitoring

In 2022 TIDE engaged 2 consultants to develop Research and Monitoring Plans for TIDE’s PHMR and Terrestrial Programs. The purpose of these plans is to ensure that information for effective management is available which will assist in the assessment of the effectiveness of protected areas in achieving their identified objectives.

Yellow-Headed Parrot Monitoring

YHP Monitoring Summary Eggs and Chicks

Total Nest Monitored	32
Total number of eggs	72
Total number of hatched chicks	45
Total number of fledged chicks	28
Total number of extracted chicks	6
Nests	
Total number of fledged nests	17
Total number of predated nests	6
Total number of abandoned nests	1
Total number of extracted nests	4
Total number of pached nests	3
Total number of nests where no eggs hatched	1

The 2022 monitoring season for the yellow-headed parrot (YHP) in Payne’s Creek National Park and the Deep River Forest Reserve (DRFR) included the restoration or replacement of deteriorated nests, initial checks to nests, monitoring of active nests when identified, patrols to deter poaching, extraction of chicks and re-release of the previous year’s chicks.

In total, 32 nests were active for 2022 yielding 72 eggs. 45 chicks successfully hatched with 28 chicks who fledged without intervention and 6 chicks were extracted and sent to the Belize Bird Rescue (BBR) for captive rearing and will return in 2022. Additionally, 12 parrots were re-introduced into the wild population. These were chicks that were extracted during the 2021 breeding season and captively reared at the BBR. These parrots were brought to PCNP and housed in a soft release enclosure over a few weeks. TIDE staff fed the returned parrots daily and after a few days, the soft release enclosure was opened to allow the first group to exit and slowly integrate into the wild population in PCNP. Unfortunately, 3 nests were predated, 3 nests were poached and 1 nest was abandoned but overall, this concluded a successful YHP nesting season for both the PCNP and DRFR.



Bird Banding - MOSI

Two rangers attended an additional training session in April 2022, and in October 2022 the TPPL Head Ranger became certified as an Assistant Bander, a great accomplishment. During this monitoring season, the team captured and banded 13 migrant species and 35 resident species, with 140 birds banded in total. Of the four MoSI stations operating in Belize during this period, the TPPL station saw the highest number of target species compared to other stations.

Fire Effects on Pine Woodland Monitoring

In 2022 TIDE contracted Dr. Percival Cho to produce two reports, 1 being on TIDE's fire effects monitoring program. This report highlights data collected since 2017 – 2021 which started because of a Darwin Initiative Project entitled 'Conserving pine woodland biodiversity in Belize through community fire management.' This report highlights well established knowledge of the negative impact of fires on pine seedlings recruitment. Preliminary results indicate that TIDE's fire management program which includes prescribed burning may have been negatively impacting pine seedling recruitment. Fortunately, TIDE's Terrestrial Manager Mario Muschamp had observed this issue prior to the research being complete and had started to conduct prescribed burning during the months of November and December which produces a cooler fire as opposed to the traditional periods of February and March. These cooler fires are believed to lead to higher survival amongst pine seedlings following a fire. Through more long-term data collection, the effects of this change will begin to show the benefits and success of TIDE's fire management program to restore pine stocks naturally within the PCNP.

Sea Turtle Monitoring in PHMR

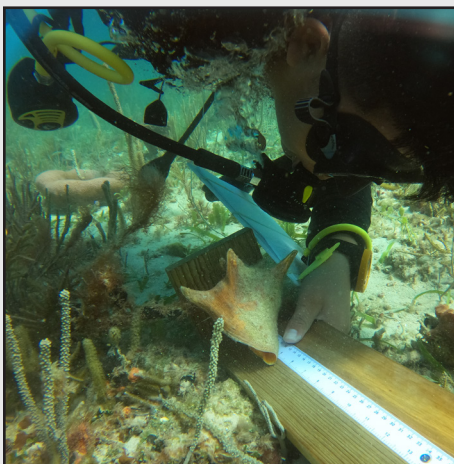
Sea Turtle Monitoring Summary

Total number of nests	58
Total number of eggs	8,357
Total number of hatchlings	5,737
Total number of predated eggs	880
Total number of infertile eggs	1,311

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 Y'cacos coastline up to Monkey River where they made frequent checks during routine patrols. For the 2022 turtle nesting season, there were ~8,357 eggs laid at 58 nesting sites. Of those ~5,737 hatchlings emerged successfully, or 68.6% of the total. The team determined that ~1,311 eggs were infertile and ~99 eggs were damaged by roots. Six nest sites were partially inundated with partial success. Six nest sites were completely predated or ~880 eggs. Five of the nests were predated by grey foxes and one site by racoons. There were several nests which did not hatch before the end of December, so the season is ongoing.



Conch Monitoring in PHMR



Data was collected in 2022 at the start and end of the closed season and compared to previous years' data. Overall, conch density decreased in 2022 compared to the 2021 data, however that was still some positive news. Across the General Use Zone (GUZ), Replenishment Zone (RZ), and in sites outside of the reserve, there was an increase in conch density at the end of the closed season, showing that the closed season is serving its purpose of allowing the population to generate during the closed season. Furthermore, the data suggests that replenishment zones are effective in conch population management. In both the GUZ and outside the reserve there were more juvenile conchs found than adults, whereas in the RZ the proportion of adult conch was higher than juvenile. This indicates that the RZ is providing protection to the adult conchs, and that harvest in the GUZ and outside the reserve is of adult conch and not of undersized juvenile conch. This suggests that enforcement and outreach programs are contributing to the management goals for this species.

In collaboration with The University of Belize (UB), TIDE contributed scientific monitoring data to the Healthy Reefs for Healthy People Initiative, 2022 Mesoamerican Reef Report Card.

The report card highlighted that the Healthy Reef Indicator (HRI) for the entire Mesoamerican Barrier Reef was a 'Poor' score (2.3) in 2022, first recorded in 2006 and 2009. Between 2011 and 2018 the region had shown some improvement. However, within the Southern Barrier subregion which encompasses TIDEs monitoring areas, the HRI was categorized as 'Critical' (1.8). This is a downward trend from 'Good' (3.8) in 2020 and 'Fair' (3.3) in 2021. This region recorded the most drastic decline since the last report card was published, however overall Belize also showed the greatest decrease in the wider region.



Fish Spawning and Aggregation Monitoring

In 2022, TIDE continued fish spawning and aggregation (FSA) characterization and monitoring efforts at Cayman Crown, within the Sapodilla Cayes Marine Reserve (SCMR). In July 2022, TIDE contracted an external consultant to analyze the FSA data collected at Cayman Crown between February 2020 to May 2022. Ten sites were monitored during this period, with 38 commercial fish species reported and two confirmed as multispecies spawning sites: The Jewel Wall and West Bezel Fisher Marker. These sites were



comprised of mostly jacks and snappers, and some groupers. Two other sites, Grouper Ship Lane and West Bezel, both located at the Cayman Crown reef, have the potential of being FSA sites; however, further comprehensive studies are required to confirm their status. Moreover, further research and monitoring is required at Cayman Crown to better inform decision-makers about the proper protection and management of the site. This activity was funded by French Facility for Global Environment (FFEM).



Community Stewardship: Education and Outreach

TIDE's Community Stewardship program has two main components. The first seeks to inform and engage communities through environmental education activities that foster stewardship of natural resources. The second is to actively engage communities and individuals in community development activities that improve natural resource management in the Toledo landscape.

Outreach to Fisherfolks



Port Honduras Marine Reserve stakeholders were reached via two organized boat-to-boat sessions and house visits with 38 commercial fisherfolk who traditionally use the reserve for their livelihood. The house visits enabled one on one discussions with the fisherfolk and their families and focused on sharing regulations of the area and ways to improve the relationship with PHMR staff. Fisherfolks agreed that PHMR staff continue to be respectful and are glad to see rangers patrolling within the area. They also expressed that they would prefer an increase in the number of patrols in the reserve but understand that resources are limited.

In 2022, the Belize Fisheries Department (BFD) approved the 2021 – 2026 Sapodilla Cayes Marine Reserve Management Plan, and in September the plan was disseminated to stakeholder communities. Representatives from both TIDE and the BFD organized and delivered two sensitization sessions held in Punta Gorda and Monkey River, with fishers from Punta Negra also in attendance. A total of 37 individuals attended these sessions.

Youth clubs continue to be TIDE's focus on the ground for TIDE's outreach in communities tackling family violence and environmental themes. A total of three hundred eighty-one youth from 19 clubs in buffer communities participated in clean-ups, Reef Week, TIDE Summer Camp, club games, environmental and family violence awareness sessions in 2022. A total of 120 face-to-face and online meetings were held throughout the year with all active environmental clubs. Collaboration with the Department of Youth Services, Ya'axche Conservation Trust, OCEANA, and Humana People to People Belize, made further engagement possible for youth in these communities.

Toledo Environmental Clubs



Environmental Clean-ups

Number of Clean-ups	75
Number of Communities Engaged	19
Number of Trash Bags Collected	852

There were 75 organized clean-ups within 19 communities in 2022. This resulted in a total of 852 bags of trash being removed and disposed of properly at the local landfills, whilst a few clubs repurposed some waste in their communities. Most of the waste was removed by the Rio Grande River Keepers, followed by Laguna Birding and Environmental Club.

Reef Week



Twelve environmental clubs and eight coastal teams of 10 players were engaged in Reef Week 2022, which focused on the theme "Exemplary Reef Health benefits our Nation's Wealth" through community clean-ups, a banner competition, and two sporting tournaments. A total of 72 females and 72 males participated in a mixed gender volleyball tournament which included 22 stage games and four finalists, namely Mafredi, Eldridge, Laguna, and Golden Stream. A further 70 males and 10 females participated in a Seven-a-side football tournament organized by the Toledo Sports Committee. Reef Week activities and outreach engaged the youth for three months through these sporting and banner competitions. Participants expressed their appreciation of coral reefs and pledged to continue the initiatives.

Summer Camp

Number of Children Engaged	156
Number of Facilitators	24
Number of Trash Bags Collected	26

TIDE's Annual Summer Camp adopted the 2022 theme of the International Union for Conservation of Nature: "A Challenge to Reimagine Conservation". Seven Summer Camps took place in TIDE's buffer communities, with participation from 156 schoolchildren aged 10 – 13. Each camp took place over a period of one week, and Toledo Environmental Club leaders facilitated the camps in their respective communities. A total of 24 facilitators, guided by TIDE's Education and Outreach Coordinator, ensured that all the camps were a great success. In addition to the educational and recreational activities organized, all campsites also participated in community clean-ups, during which a total of 26 bags of trash were removed from the environment, up-cycled or disposed of in their community landfill. TIDE's 2022 Summer Camp was made possible thanks to support from Mass Audubon.



Primary, secondary, tertiary institutions, and youth groups buffering TIDE's Protected Areas were invited to participate in TIDE's 25th Anniversary display competition, which focused on the theme, "A Challenge to Re-imagine Conservation". The competition took place during TIDE's anniversary celebrations in October, and participating classes and groups created informative and interactive displays that showcased the theme. Ya'axche Conservation Trust was also present sharing their work in the Maya Golden Landscape. During the event, an estimated 450 students and adults visited the booths, which included many students from Toledo Community College, where the competition took place.

25th Anniversary Display Competition



Community Stewardship: Community Development

Community Fire Management Training



Through a GEF-SPG funded project, TIDE provided training to 81 individuals in fire management best practices. This project was developed in response to a rising number of dangerous fires in Toledo in 2020, which largely resulted from out-of-control agricultural burns. Participants from 15 communities took part in a series of two-day training opportunities, which included practical exercises in the use of fire management equipment and completing a prescribed burn. Following the training, sets of fire management equipment were provided to communities, to enable them to both respond to wildfires in their areas, and for use during agricultural burns. Participants were grateful for the opportunity to attend the training and have access to equipment that will improve their practices and help protect against wildfires.

PADI SCUBA Training



In collaboration with Access to Opportunity, 12 youths from Punta Gorda received PADI Open Water SCUBA training, and four TIDE Community Researchers also received PADI Advanced Open Water certification. For the youths, this was an opportunity to learn a new skill that they would not otherwise have had access to and can lead to an exciting new career in the marine field. In 2023, the 12 new trainees will be invited to apply for additional methods training and become members of the TIDE Community Researcher team. Over the years, these researchers have gone on to progress in careers in marine biology, tour guiding, and even becoming SCUBA instructors themselves, proving that this training opportunity is a steppingstone for youths into future careers that they may not otherwise have access to.

TIDE Scholarship Program

2022 Summary

Number of Students Supported	37
Number of Females	22

TIDE Student Scholarship Report 2001 - 2022

Number of Communities	22
Number of Students	300
Number of volunteer hours by scholarship students	17,000



TIDE's Scholarship Program continued in 2022, supporting 37 students with book scholarships for the year 2022-2023, which included 15 males and 22 females. TIDE is thankful for Mass Audubon's continued contribution to this program which aids families and youth throughout the Toledo District.

Thanks to volunteer Dr. Carolyn J. Henri, a comprehensive report titled 'Evaluating the Past, Envisioning the Future: TIDE Student Scholarship Program 2001-2022' was produced this year. In producing this report, a survey of students from the earliest graduates to the current students in the program was conducted to explore how the program has impacted them and the 22 communities in which they live. The survey found that most of the almost 300 students supported since 2001 were girls, and that most parents/guardians' livelihoods depended on natural resources, namely fishing and farming. Amongst the findings, the report highlighted that a strong majority of TIDE Scholarship program students went on to study in higher education institutions and the older group is employed in mostly non-natural resource fields. Scholars have provided over 17,000 hours of volunteer service to their communities over the 21 years, a more enduring aspect of the program, creating valuable work and learning experiences for students while helping them feel the satisfaction and value of supporting their communities.

BTB Matching Grants Program

TIDE and the Belize Tourism Board (BTB) made major investments to enhance cultural tourism in Punta Gorda Town in 2022. The TIDE & BTB Matching Grant Program lasted for a period of 6 months and culminated with a Handing Over Ceremony. The BTB program was geared towards small and medium sized Tourism Enterprises, and TIDE chose to develop a community-based project entitled 'Strengthening Punta Gorda's culinary and cultural visitor experience while empowering local entrepreneurial growth among local ethnic groups.'. The project empowered a total of 11 Punta Gorda entrepreneurs with business training modules focused on cultural tourism.

After identifying the potential benefits that this program would bring to tourism development in Toledo, TIDE did not request any direct benefits from this Grant, rather TIDE donated \$36,000 (BZD) from TIDE Tours as the matching aspect in cash and in-kind contribution to help make the project a success. The Belize Tourism Board and Inter-American Development Bank funded \$54,000 (BZD) which amounted to a grand total of \$90,000 (BZD) Belize dollars invested in the district.

The project beneficiaries included representatives from the five major cultural groups in Toledo, the Garifuna, East Indian, Creole, Maya and Mestizo. Market vendors in Punta Gorda also benefited from the grant program. Overall, the program's investment translated to the development of five cultural restaurants, five cultural presentation groups and one cultural museum as well as capacity building and food handler's certification for 12 market vendors.

The project had a ripple effect on the local economy by employing contractors, electricians, marketing professionals, business consultants, culinary arts trainers, and store owners. All participants are now fully equipped with the resources, knowledge and technical skills to be successful in their unique business ventures. This grant will impact a wide array of people and service providers in Punta Gorda Town and promote sustainable livelihoods through the tourism-based entrepreneurship ventures that were enhanced and developed.

TIDE is grateful for the support of the BTB Matching Grants Program for the investment made in Toledo's tourism industry.



Key accomplishments:

- Three construction renovations completed at two restaurants and a cultural museum
- Procurement of 18 Garifuna drums and additional shakas
- Provision of industrial kitchen appliances to five cultural restaurants, including stoves, refrigerators, deep freezers and gas tanks.
- Cultural clothing was provided to each of the five cultural presentation groups
- Chairs, tables and a PA system were supplied
- One-week Culinary Arts Training Program & Food Handlers Certification for 12 market vendors
- Two-day Small Business and Marketing Training Program for 11 cultural tourism entrepreneurs
- A total of 11 web pages were developed highlighting each of the participating cultural businesses to enable local and international marketing





Supporting Policy Implementation

Since 2014, and the development of the previous strategic plan, the legislative framework has been significantly strengthened, with the passing of the Fisheries Resource Act, the National Protected Areas System Act and the PACT Act. The focus has therefore shifted in TIDE's new strategic plan to ensuring that these Acts and Policies are implemented.

Cayman Crown MOU with Ministry of Blue Economy

In July, TIDE met with Chief Executive Officer (CEO) Kennedy Carrillo of the Ministry of Blue Economy and Civil Aviation, and representatives from the Belize Fisheries Department (BFD), to discuss the NGOs co-management proposal for SCMR. During the meeting, the entities agreed in the development of a memorandum of understanding (MOU) that would serve as an interim co-management agreement – allowing TIDE to oversee the management of Cayman Crown and established FSA sites with SCMR, Rise and Fall Bank, and Nicholas Caye. The MOU was signed in October 2022.

Marine Protected Areas Network

TIDE continued to play a key leadership role in supporting the Belize Marine Protected Areas Network that includes BAS, SACD, SEA, TASA and TIDE. In 2022, the network members developed a draft 5 year work plan that is aligned to Belize's Blue Bond commitments and a draft Memorandum of Understanding as the team saw the importance of collaboration to achieve common national goals.

The network members also worked on and submitted a concept for a grant to the Blue Action Fund and a proposal for gap funding from the newly established Belize Fund for Sustainable Future (BFSF). The BFSF funds were disbursed by the end of the year and helped to bridge funding gaps that organizations had, especially after Covid.

There are intentions to formalize and register the network in 2023.



Sharing Successful Models

Through this key strategic area, TIDE will focus on sharing those programs which have program to be effective with national and regional partners for the betterment of natural resource management.

Spatial Monitoring and Reporting Tool: Information Exchanges

In 2022 TIDE was contacted by researchers James Stinson and Lee McLoughlin in order to examine TIDE's use of SMART (Spatial Monitoring and Reporting Tool) in conservation in southern Belize. Both researchers visited TIDE's protected areas and had a first hand experience on TIDE'S use of SMART in research and monitoring and education and outreach. Through this research and other opportunities TIDE hopes to continue to share experiences in the use of SMART which can be used to further enhance the program throughout Belize.



GCFI Conference Presentation

In November, the BIOPAMA AC Project Manager attended the 75th Gulf and Caribbean Fisheries Institute Conference in Fort Walton Beach, FL. During the conference, she gave a presentation titled 'Building knowledge of fish spawning aggregations at Cayman Crown, Belize through monitoring and protection', sharing findings of fish spawning aggregation collected since 2020 and confirmed FSA sites at the Cayman Crown reef in the SCMR. This activity was mostly funded by BIOPAMA AC with supporting funds from Oceans 5.



Institutional Strengthening

Through this key strategic area, TIDE will ensure that there is a guiding framework for effective management and that the administration, human resources and capacity are adequate for effective implementation of the Strategic Plan. TIDE will also strengthen the governance framework through ongoing capacity building of the board of directors and advisory councils in leadership of the organization. Finally TIDE will improve on the adaptive management, monitoring and evaluation of projects and program implementation for improved measurement of the impact of TIDE.

Aligning competences and responsibilities with IUCN'S Guidelines

In 2022, lead by Dr. Carolyn Henri, TIDE undertook a full review of all staff positions within the organization, aligning competencies and responsibilities with IUCN's guidelines for protected area staff. This was a highly participatory process, with each member of the team having input in their terms of reference, and through this process, capacity needs were identified for each member of staff. In 2023, TIDE will commence investing in identified capacity building requirements throughout the organization to ensure that the team is adequately skilled to achieve TIDE's mission and implement the strategic plan.

On an annual basis, TIDE conducts a Management Effectiveness Evaluation (MEE) for PCNP and PHMR using a national evaluation tool developed by NPAS. The tool assesses overall protected area management under five categories; Context, Planning, Inputs, Processes and Outputs, and Outcomes. In 2022, the assessment for PHMR was conducted with assistance from IUCN in a participatory process, with stakeholders invited to attend the assessment workshop and contribute to the evaluation scores. Through this process, TIDE has become more accountable for the evaluation scores attributed to PHMR, and stakeholders were able to brainstorm on ideas for overall management to improve in future years. This was a highly valuable exercise that TIDE plans to continue annually and expand to the other protected areas we manage. As a result of this process, funding has been secured to invest in priority areas through an IUCN funded project that will lead to increased management effectiveness in PHMR by 2025.

Management Effectiveness Evaluations



Financial Sustainability Strategy

In order to achieve our mission, it is critical that TIDE is able to maintain a reliable source of funding for ongoing strategies and actions. With funding from PACT and GCFI, in 2022 a Financial Sustainability Strategy was developed for TIDE that identified financing strategies that will both diversify revenue streams and increase revenue generation for the organization. This is a pertinent strategy to work towards, particularly in the wake of the 2020 pandemic that left many organizations and businesses extremely vulnerable to external threats.



Financial Sustainability

TIDE's subsidiary TIDE TOURS, the tour operator company, performed exceptionally well for the 2022 period. With the hiring of a new Financial Sustainability Manager, Mr. Oliver Garay, the company was able to rebound from the economic effects of Covid-19 and made numerous strides in its business operations which resulted in successfully recording higher pre-covid net profit figures at the end of the year.

Business Operations



The Ridge to Reef Expeditions Program saw a record number of completed educational programs with international student groups. In January, TIDE Tours hosted Drake University for an eighteen-day tour program. Following this in May and June, two University of Alabama tour programs lasted for a duration of eight days.

In 2022, a new educational day tour program was introduced that combines terrestrial, marine and cultural immersion components over a two-day period, which garnered exceptional reviews. The program was designed for EF Education First, an international education company that offers travel experiences to middle and high school students from North America. TIDE Tours successfully completed sixteen of these tailor-made two-day programs which translated to thirty-two days of tours. Following its success in 2022, the program is expected to expand in 2023, which is welcome news for both the organization and the tour guides trained and hired through the program.

Since its inception, the educational day tour program has received additional interest from additional tour operators, which highlights the potential for marketing this and similar short programs alongside the existing extended programs to international companies.

Finally, TIDE Tours provided several tailor-made tour packages for local and international clients that focused on more traditional adventure and cultural excursions within the Toledo District. Whilst TIDE Tours is streamlining programs to specialize in niche programs that complement TIDE's conservation presence in Toledo, it is committed to ensuring all guests to the district receive top class experiences lead by experienced guides.

TIDE Tours continues work with the Xucaneb community group in the village of San Pedro Columbia. The group has been reforesting riverbanks in the village since Hurricane Iris caused major damage in 2001. In 2022, TIDE Tours planted a staggering 1,862 trees, reflecting contributions from all the educational programs' reforestation activities. This activity has proven to be an excellent mechanism for participants to work alongside community members for a meaningful cultural exchange, whilst leaving a lasting impact on the local environment.

Environmental Impact



TIDE Tours successfully certified nine "Hybrid" Tour Guides in 2022. Through an intense two-day training course, the tour guides were educated in areas of TIDE history and programs, seagrass exploration, fish identification, manatee observation and monitoring, and riparian reforestation. Following this, all guides were hired to execute the Ridge to Reef Educational Programs.

Capacity Building

TIDE Tours facilitated three University of Belize Internship Students who each went on to complete an associate degree in Tourism Studies. Over the duration of three weeks, each intern gained a holistic and hands-on experience in the effective and efficient management of a tour operator company, whilst also being exposed to several areas of business operations including logistics, finance, human resources, storeroom management, and technical support.



By the end of 2022, 90% of the process for Payne's Creek Retreat to be registered as accommodation with the Belize Tourism Board was completed. This included the complete submission of the BTB Accommodation application with all supporting documents which included a No Objection Letter (Central Building Authority), Site Plan, Environmental Clearance Letter (Department of Environment), No Objection Report (Fire Department), Public Health Standards Inspection, Official Site Photos, Emergency Plan and Hurricane Plan. We are now just awaiting the final site inspection from the Belize Tourism Board Compliance Controller to complete this process which should take place in early 2023.

Business Development



Governance

The TIDE Board is composed of directors drawn from the Belizean Community, elected by the membership based on their merit, local and / or professional skills and experience in the following areas: business management, natural resource management, education, community development, public relations, and finance. The Board also has strong community representation through inclusion of a representative from each of the protected area advisory councils, bringing communities and natural resource users to the table as partners in the decision-making process.

Responsibility of TIDE's Board

The Board of Directors has ultimate responsibility for policy formulation and provides overall direction for the organization. This includes:

1. Safeguarding the vision, integrity, objectives, and policies of TIDE.
2. Ensuring high standards of planning, operation, administration, evaluation and reporting in TIDE.
3. Ensuring that statutory obligations are met.
4. Ensuring that adequate resources are available to TIDE for all aspects of its work and administration.
5. Ensuring that resources provided to TIDE are used for their intended purpose and are properly accounted for.

It was a busy year for the board of directors as aside from regular business meetings, the board was involved in succession planning that included the retirement of the executive director. They planned a team building retreat with the staff and obtained feedback on steps that needed to be taken to ensure a smooth transition of the executive director. The board was impressed by the expectations of the staff to ensure continued growth of the organization.

The board of directors also reviewed and approved a proposed co-management agreement with the Ministry of Blue Economy for the Cayman Crown and spawning aggregation sites at the Sapodilla Cayes Marine Reserve. They also participated in the development of a management plan for the Sapodilla Cayes Marine Reserve, a new area of interest for the coming year.

Both Leonardo Castro and Victor Jacobs had served their terms on the board, with newcomers Eloydia Cuevas and Alex Leonardo replacing them from the Advisory Councils.

Activities Accomplished by the Board of Directors

Overview of TIDE's Advisory Councils

TIDE has two protected area Advisory Councils, linked to their respective protected areas:

1. Port Honduras Marine Reserve Advisory Council (representing stakeholders of PHMR)
2. Payne's Creek National Park Advisory Council (representing stakeholders of PCNP)

Both are composed of representatives from key stakeholder communities and resource user groups and have been established to ensure that stakeholders have meaningful participation in management decisions and that their interests are represented at all levels of management of the protected area. Both Advisory Councils have representation on TIDE's Board of Directors. TIDE also sits on the PHMR Managed Access Committee, comprised of commercial fisherfolk representative organizations and key agencies responsible for the implementation of fisheries management in PHMR.

Activities Accomplished by the Advisory Councils

For 2022 there was one Advisory Council Meeting held which was successful and fruitful in the discussions held. On August 25, 2022, the meeting was held with attendance of some members virtually. The primary objective of the meeting was to elect two new board members. For the Port Honduras Marine Reserve Mr. Alex Leonardo was selected and for the Payne's Creek National Park Ms. Eloydia Cuevas was selected. Caroline Oliver gave brief updates on the community development work and Anthony Rash, TIDE's Biologist, gave a presentation on the Stony Coral Tissue Loss Disease response plan being implemented by TIDE for this region.



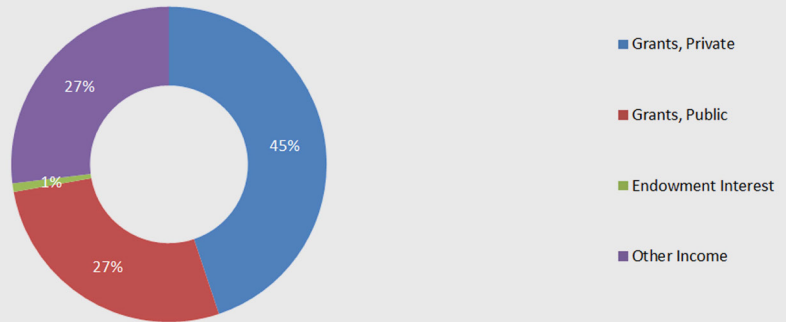


Finances

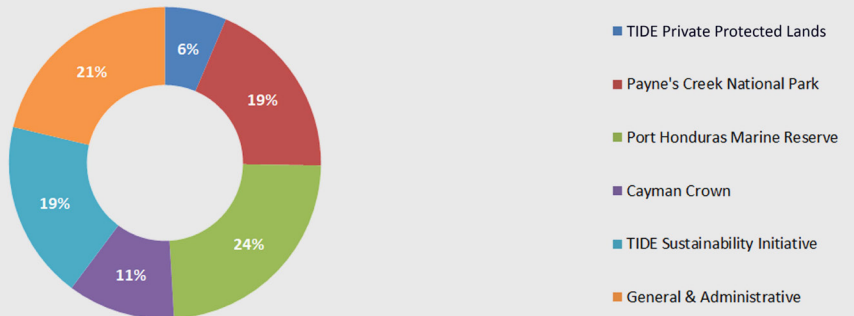
The total 2022 income was USD \$1,039,463 from various sources. From private grants (45%), public grants (27%), endowment interest (1%), and other income (27%). We are extremely grateful for the support of all our 2021 main funders.

2022 Expenses were USD \$951,150 comprised of Port Honduras Marine Reserve (24%), Payne's Creek National Park (19%), TIDE Private Protected Lands (6%), Cayman Crown (11%), TIDE Sustainability Initiative (19%) and General & Administrative (21%).

2022
Income
(USD)



2022
Expense
(USD)



TIDE

ANNUAL REPORT 2022



Toledo Institute for Development and Environment
1 Mile San Antonio Road
Punta Gorda
Toledo District
Belize, Central America
Tel: 501-722-2274/2431
Email: info@tidebelize.org
<http://www.tidebelize.org>