

Belize Audubon Society Annual Report 2022

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Our Vision

Belize Audubon Society (BAS), is a resilient and transformative leader in environmental stewardship.

Our Mission

Belize Audubon Society (BAS), is dedicated to promoting Belize's natural resources through sound environmental governance, ecological monitoring, stakeholder engagement and partnerships for the benefit of people and the environment.

Our History

The Society was formed in 1969 as a foreign chapter of the Florida Audubon Society and in 1973, became a completely independent Belizean organization.

BAS is the longest standing conservation NGO in Belize charged with co-managing seven of Belize's most biologically and topographically diverse protected areas. BAS helped establish Belize's first protected area at Half Moon Caye, and now co-manages seven protected areas in partnership with the Government of Belize.

BAS is a membership organization with an elected Board of Directors. It is a registered NGO under the Non-Governmental Organizations Act of Belize 2000, and is a member of several international organizations and local allies.

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BELIZE AUDUBON SOCIETY

PROUD MEMBER OF:

BirdLife INTERNATIONAL

IUCN

APAMO

BNN BELIZE NETWORK OF NGOs

Message from the President

Dear Member, Supporter, Friend, Visitor,

Take a few moments to absorb the 2022 Annual Report of the Belize Audubon Society; it is an exciting and informative read! "Absorb" the report because it presents the year through photographs, graphic illustrations and words, immersing the reader in the varied and multitude of tasks and activities the staff undertook to create awareness, monitor biodiversity/ecosystems and manage the parks. Descriptions of tasks ranging from routine maintenance of facilities and infrastructure; to the sometimes-hazardous patrols to monitor and control illegal activities, and engaging stakeholders and hours of research and monitoring, the report enables the reader to glimpse the life of staff as they pursued their daily duties. These activities were all intended to showcase our conservation work and by extension ensure a rewarding visitor experience through preserving the features for which the parks were established. The report demonstrates the commitment and motivation of a group of dedicated employees whose efforts ensure a resilient organization.

Like many organizations in Belize, the BAS made sacrifices and adjustments to remain viable and to survive COVID-19 crisis. Although some contingency measures had been introduced a few years earlier, no one could have anticipated the onset and impact of the virus. While many other operations had to close, and employees were laid off, BAS was able to sustain itself by scaling back and adjusting operations to a minimum. Management staff took pay cuts and undertook reduced work hours, and resorted to working from home while park staff worked reduced hours until the major control measures were lifted. 2022 was the year that the management staff returned to full-time duty after several months of constraints/restrictions, and the parks were allowed to open for visitation.

The financial situation of the organization also suffered since revenue generation from some sources depleted. Fees from visitation were reduced to practically none, while international support from partner and donor organizations were suspended or delayed. The fact that BAS is able to rebound to the level it has within two years of the worst period of the pandemic is testimony to the collaboration and commitment of the staff, Board of Directors and donors working together to find solutions. Although the revenue stream did not elevate to pre-COVID-19 numbers, the results presented in this Annual Report declare that 2022 must be considered a successful and rewarding year!

The Staff and Board of Directors is proud to share the 2022 Annual Report to assure you, the members, and supporters of our continued dedication in protecting Belize's natural resources. These parks entrusted to us remain in good hands and we continue our commitment to achieve that balance between people and the environment.

Earl Green

BELIZE AUDUBON SOCIETY

Board of Directors

PRESIDENT
Earl Green

FIRST VICE PRESIDENT
Kevin Geban

SECOND VICE PRESIDENT
Vacant

FIRST SECRETARY
Rasine Gillett

SECOND SECRETARY
Janelle Chanona

TREASURER
Simon Reardon-Smith

DIRECTORS
Randal Taylor
Mariana Ancona
Francis Canto Jr.
Olivia Carballo-Avilez
Shajira Martinez
Ishmael Quiroz
Virginia Burns-Perez

IMMEDIATE PAST PRESIDENT
Ernest Raymond Sr.

Administrative Staff

EXECUTIVE DIRECTOR
Amanda Acosta

FINANCE DIRECTOR
Jose Luis Lopez

FINANCE COORDINATOR
Estellita Wade

HUMAN RESOURCES COORDINATOR
Yael Perera-Bowen

RESERVATIONS & GIFT SHOP COORDINATOR
Delia Noble

OFFICE ASSISTANT
Ryan Chan



#	Protected Area
1	Crooked Tree Wildlife Sanctuary
2	Guanacaste National Park
3	St. Herman's Blue Hole National Park
4	Cockscomb Basin Wildlife Sanctuary
5	Victoria Peak Natural Monument
6	Blue Hole Natural Monument
7	Half Moon Caye Natural Monument

BELIZE AUDUBON SOCIETY co-manages the following **seven** protected areas:

1



CROOKED TREE Wildlife Sanctuary

2



GUANACASTE National Park

3



ST. HERMAN'S BLUE HOLE National Park

4



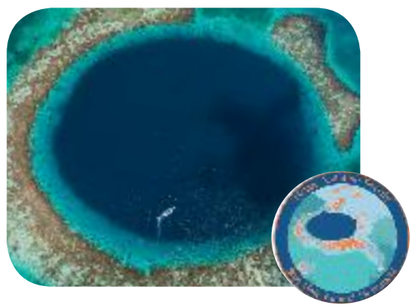
COCKSCOMB BASIN Wildlife Sanctuary

5



VICTORIA PEAK Natural Monument

6



BLUE HOLE Natural Monument

7



HALF MOON CAYE Natural Monument

MEET THE STAFF

PROTECTED AREAS
Shane Young, Protected Areas Director

TERRESTRIAL
Johny Tzib, Protected Areas Manager (Cayo Parks)
Roberto Rivero, Protected Areas Manager (CBWS/VPNM)

Guanacaste National Park:
Steven Coc, Assistant Site Manager
Joshua Richards, Park Ranger

St. Herman's Blue Hole National Park:
Artexeres Sho, Assistant Site Manager
Raphael Choc, Assistant Site Manager
Pedro Bol, Park Ranger
Transito Jimenez, Park Ranger
Edgar Batz, Park Ranger
Alfonso Baptist, Park Ranger
Yanik Moh, Park Ranger

Cockscomb Basin Wildlife Sanctuary:
Nicascio Coc, Site Manager
Deyri Oseguera, Assistant Site Manager
Emmanuel Saqui, Assistant RM Officer/ Park Ranger
Mario Bolon, Park Ranger
Samson Tzub , Park Ranger
Jose Cerritos, Park Ranger
Leonardo Chiac, Park Ranger
Selvin Bol, Park Ranger
Valentino Pineda, Park Ranger
Salustino Peck, Park Ranger
Luis Navarro, Park Ranger
Marta Sho, Housekeeping

MARINE
Marty Alvarez, Protected Areas Manager (HMCNM/BHNM/CTWS)

Half Moon Caye Natural Monument Blue Hole Natural Monuments:
Ramon Aguilar, Site Manager
Mordicayo Mis, Assistant Site Manager
Carlos Perez, Park Ranger/Boat Captain
Marcello Cal, Park Ranger
Michael Sabal, Park Ranger
Brandon Cowo, Park Ranger
Robin Magana, Park Ranger

Crooked Tree Wildlife Sanctuary:
Derick Hendy, Site Manager
Terique Gillett, Park Ranger
Walter Perriott, Park Ranger

Research & Monitoring:
Dominique Lizama, Conservation Programme Director
Tanya Barona, RM Officer, Marine (outgoing)
Gabriela Ugarte, RM Officer, Marine
Reinaldo Caal, Assistant BRM Officer, Marine
Chang-Hong Tsao, RM Officer, Terrestrial

Env. Education & Communications:
Dareece Chuc, Environmental Education & Communications Director
Lucito Ayuso, Community Liaison Manager
Janine Ayuso, Environmental Education Officer (outgoing)
Miguel Sho, Environmental Education Officer
Jose Sanchez, Communications Officer





Protected Areas Management

CO-MANAGEMENT DUTIES



OBJECTIVE: MAINTAIN THE INTEGRITY OF SPECIES, ECOSYSTEMS, AND ECOSYSTEM SERVICES.

I. Conduct effective Surveillance and enforcement.
II. Maintain tourism infrastructure, and visitor safety.
III. Address threats to conservation targets.
IV. Maintain strong partnership with public management. entity, government agencies, and co-managers.
V. Build capacity among community members, enabling them to actively participate in protected areas management.
VI. Provide sound monitoring and research used inform public perceptions and management decisions.

Victoria Peak Challenge 2022



In mid-February when conditions were dry enough, a hired team along with CBWS staff ventured out to clean the 27 km long trail leading to the country's second highest peak. Along with cleaning, staff goes on a routine inspection of safety ropes and bolts, and infrastructure such as the camping sheds and restrooms. After the cleaning and inspection is completed, the season is declared open. There was much anticipation this year, since the expedition was closed for 2 years. Fifty-three hikers including 6-year-old Solange Magandi took on the 3 days expedition and successfully made it to the summit of Victoria Peak. We are happy to report there were no injuries or emergencies.

During the two-year closure, management commenced an exercise to assess the VP expedition and revise the guidelines. A critical part of the assessment was to get feedback from tour guides and tour operators. As a result, a validation session targeting Victoria Peak expedition tour guides and operators was held for the review and endorsement of the revised Victoria Peak Guideline. All tour guides present were in full support of the document. The discussion was focused on safety in terms of having a robust emergency plan, personal equipment each tour guide must have, and BAS' commitment to have rescue equipment available in the event there is an emergency. Other matters discussed were upcoming Rescue, Evacuation and Safety Training and to implement an administration fee for the VP expedition. All tour guides and operators were in full agreement with these recommendations.

HIGHLIGHTS FROM OUR PARKS

Upgrading internet service CBWS and HMC



Satellite dish receiver at HMC

In the second quarter of this year, the internet speed at CBWS and HMC was upgraded. With the upgrade, there is more reliable internet allowing for WIFI to be included as an additional amenity for visitors at a cost of $5 per day. WIFI is now accessible in the accommodation area and for day visitors wishing to show off their adventure. The internet service has been well received by both local and foreign visitors thus far.

Having reliable internet has also improved the use of trending internet based communication tools such as WhatsApp, zoom and google meets for virtual meetings between staff at the Belize City office and on site at CBWS and HMC. A WhatsApp group for tour operators who frequently use CBWS was created as means of "fast" communication as well. Approximately 20 tour operators and guides actively communicate and participate via the WhatsApp group.

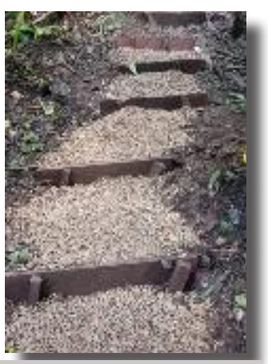
Coming Soon...Campground at SHBHNP



Staff constructing campground shed

SHBHNP continues to be the most visited protected area co-managed by BAS. This year saw the construction commencement of a campground. The location for the campground was cleared in 2021 and staff started the tedious work on infrastructure. Time was spent on carving earth steps, carrying materials for the construction of a shed and restroom as well as cleaning and resurfacing of the camping area. The campground will be a great addition to the already popular activities and attractions at the site.

The opening of the campground is scheduled for November 2023.



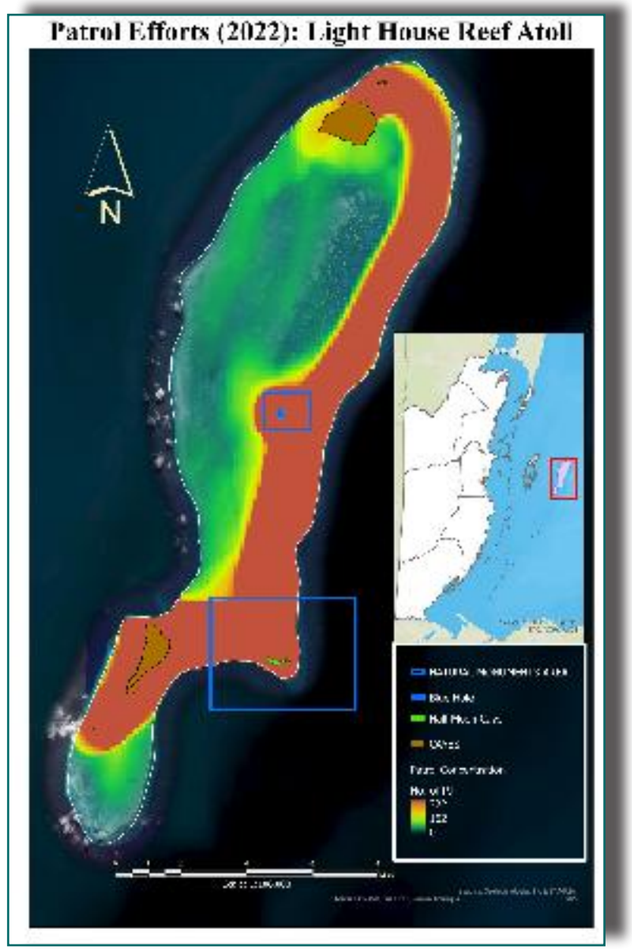
Earth steps on trail to campground

MANAGEMENT: MARINE

MANAGEMENT: MARINE

HALF MOON CAYE & BLUE HOLE NATURAL MONUMENTS (HMCNM/BHNM)

Active surveillance continued this year within the Lighthouse Reef Atoll. Patrol data was collected using the Spatial Monitoring and Tool (SMART). Review of the data Resulting in a total of 376 joint patrols with Belize Coast Guard an increase of 33 patrols compared to 2021. Total kilometers covered was 13,962.89, and fuel usage was approximately 4,173 gallons.



Heat maps showing patrol density with the red areas indicating more frequently patrolled areas throughout the year.

376
patrols conducted with Belize Coast Guard



Staff conducting vessel boarding at LHRA



Illegal fishing of Parrot fish and conch at LHRA

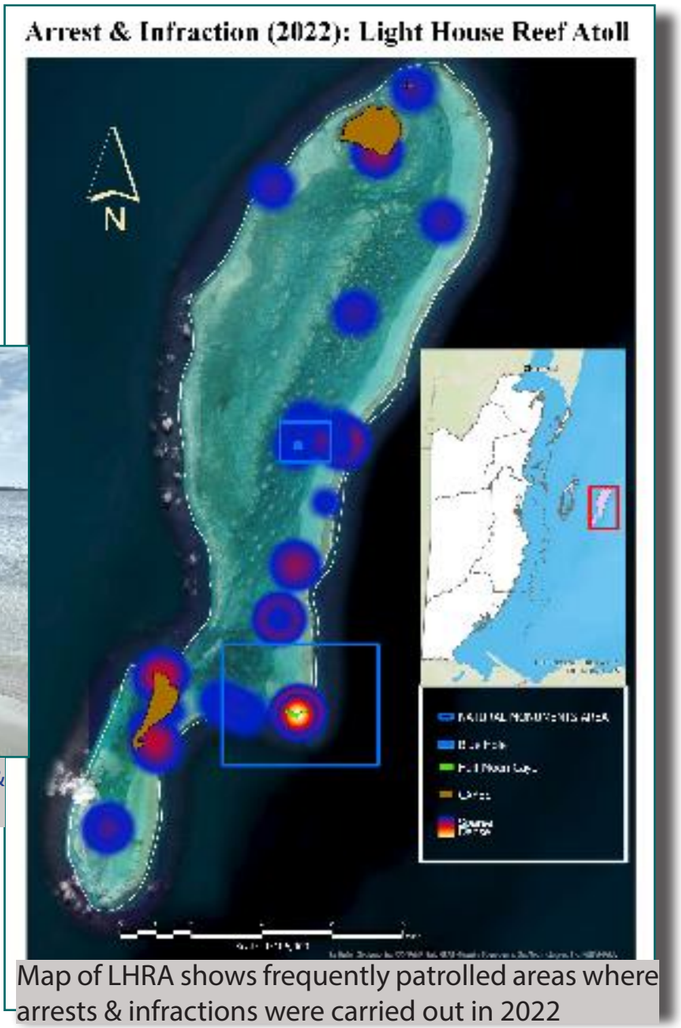
Outcome of surveillance and enforcement patrols

These patrols resulted in 31 arrests and 29 warnings issued for various offences. Fines levied by the court was $241,235.

31
Arrests



Joint patrol with Belize Fisheries Department & Coast Guard at LHRA



Map of LHRA shows frequently patrolled areas where arrests & infractions were carried out in 2022

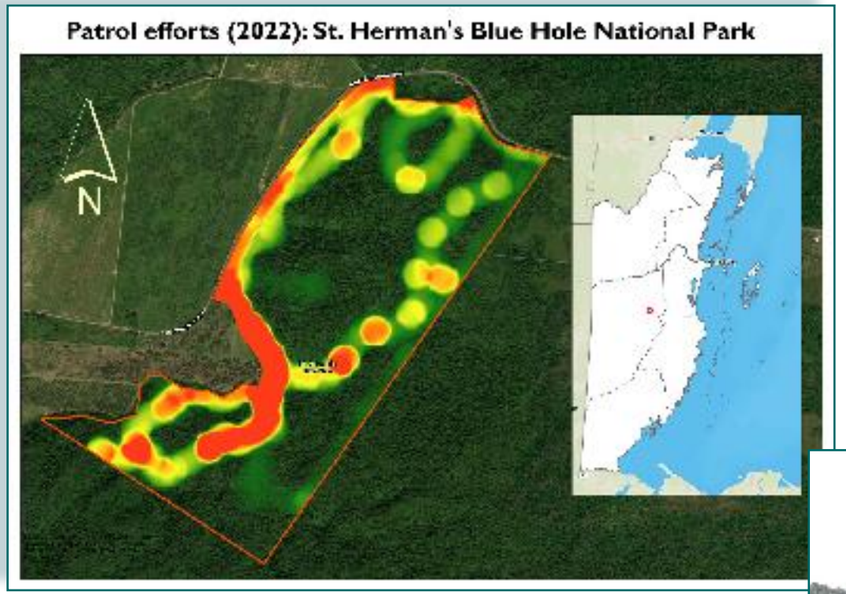
CHALLENGES

HMC was impacted by hurricane Lisa, resulting in closing of the site for 5 days. Damages to infrastructure varied from broken pier to roof damage on two main buildings.
Illegal fishing within protected areas.
Soft substrate at the Blue Hole area continues to be a challenge for securing moorings.
Stony Coral Tissue Loss Disease continues to spread within the Atoll.

MANAGEMENT: TERRESTRIAL

ST. HERMAN'S BLUE HOLE NATIONAL PARK (SHBHNP)

Active patrols continued throughout the year using the Spatial Monitoring and Tool (SMART) to collect data. Image below shows heat map of SHBHNP. Heat maps showing patrol density with the red areas indicating more frequently patrolled areas through out the year. A total of 247 patrols were conducted compared to 54 in 2021. Total kilometers covered was 835 or 518 miles.



247
Patrols conducted

Patrol outcome:

47 Human activity sighting & 1 human encounter. Observations include looting in the cave, signs of hunting & poaching and logging operations on boundary line.

Heat map showing patrol effort by staff and tourism police at SHBHNP

Staff at GNP and SHBHNP continues to play and important role in visitors management, stakeholder enagement, RM & environmental education at their respective sites.





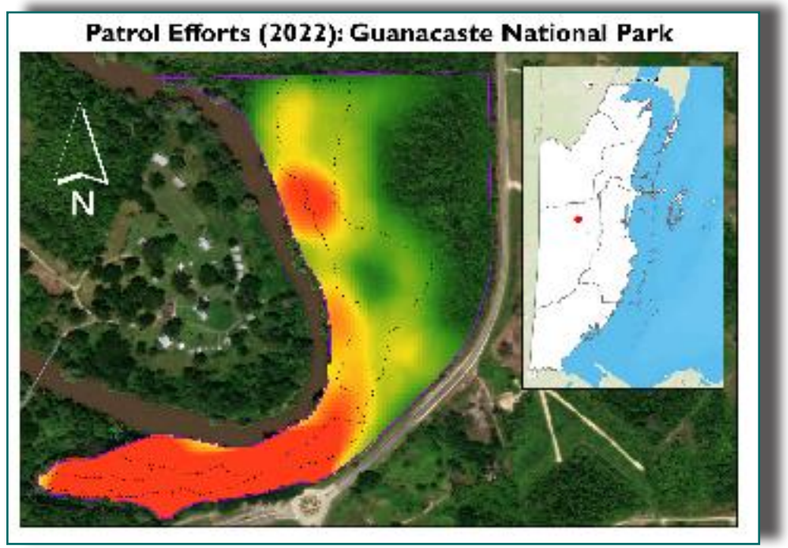


Staff and Police on patrol at SHBHNP

MANAGEMENT: TERRESTRIAL

GUANACASTE NATIONAL PARK (GNP)

A total of 182 patrols were conducted this year compared to 34 last year. Total area covered was 375 km or 233 miles for 2022. In addition to active surveillance, park staff participated in several trainings to build their capacity. Staff turn over at GNP throughout the year had to be balanced with staff training to properly orient and prepare new staff.



Heat map showing patrol effort by staff and tourism police at GNP

182
Patrols conducted

Patrol outcome:
Rangers reported several sighting of illegal activities near and within the boundary. Fishing, looting and illegal entry were some of the observations.



Staff from GNP participating in tree planting with PathLight for Earth Day



Staff and Police on patrol at GNP

CHALLENGES

SHBHNP and GNP were affected by Hurricane Lisa in November. Quick response and team work from staff allowed for the sites to return to normal operation within 2 and 5 days respectively.

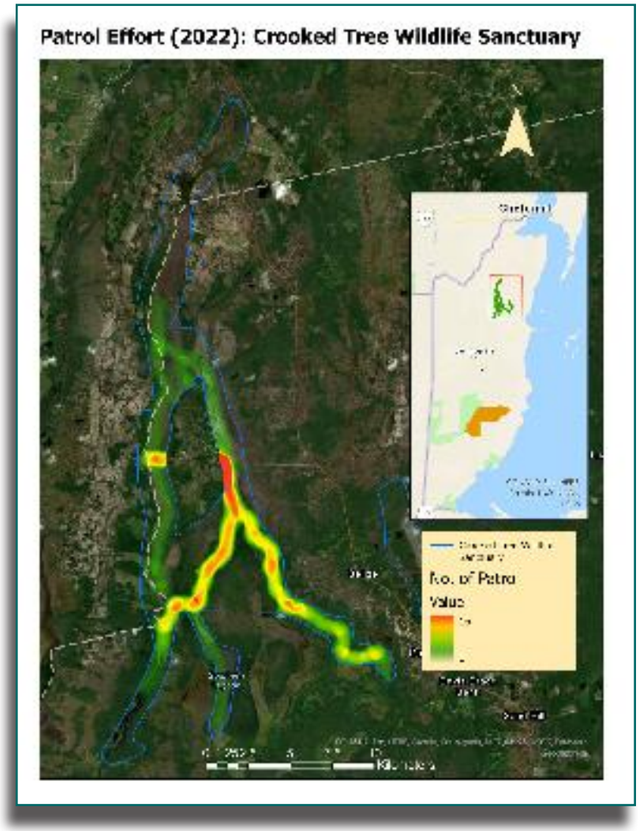
Agriculture development continue to be threat for SHBHNP, as land clearing and land alteration continue to occur on private land adjacent the protected area.

Very wet year, resulting in several days where the park was flooded and had to be closed to the public.

Illegal entry and hunting are ongoing threats to the protected area.

MANAGEMENT: TERRESTRIAL

CROOKED TREE WILDLIFE SANCTUARY (CTWS)



This year staff were able to conduct 60 surveillance patrol by foot, motorcycle and vessel in the Crooked Tree Wildlife Sanctuary. Areas visited throughout the year include Western Causeway, Eastern Causeway, Revenge Lagoon, and Spanish Creek.
In addition to surveillance staff continued to provide visitor information and assist with environmental education and throughout the year they assisted the R&M team in collecting water level readings and bird data.



Staff assisting with school outreach



Flooded trail and boardwalk after Hurricane Lisa

CHALLENGES

Garbage continues to be seen along the lagoon banks.
Hurricane Lisa brought a lot of rain causing flooding & infrastructure damage to the boardwalks and trails
llegal fishing within the lagoon
Cattle roaming
Agriculture clearing in areas buffering the protected area

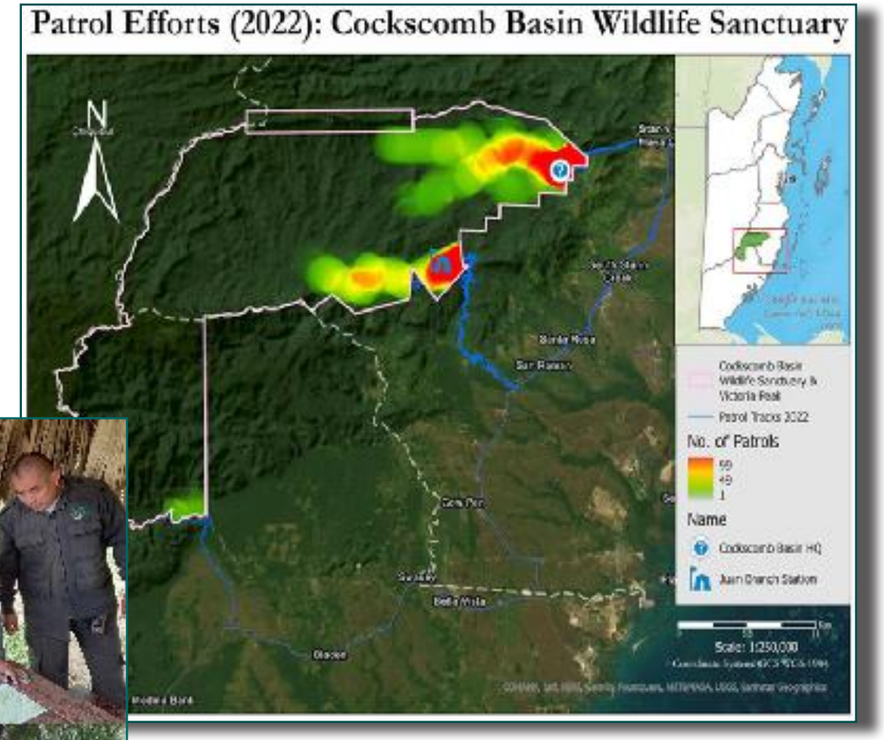
MANAGEMENT: TERRESTRIAL

COCKSCOMB BASIN WILDLIFE SANCTUARY (CBWS)

Patrols took staff to the Sale Si Puede, Cabbage Hall fire Lookout, Mexican Branch, Snook Eddy, Juan Branch and Double Fall areas of the CBWS. Total kilometers covered was 2789 km or1733 miles for this reporting period. Eighteen (18) human activity sighting observed.

149
Patrols conducted

Staff continues to play and important role in visitors management, stakeholder enagement, RM & environmental education at their respective sites.





Staff planing patrol (above). Staff on patrol in Juan Branch area (above).

Heat maps (left & right) showing patrol density with the red areas indicating more frequently patrolled areas through out the year.

CHALLENGES

2022 was an unusually wet year, causing serveral flood days, resulting in park closures. Rains also delayed construction work at the site.



INFRASTRUCTURE & MAINTENANCE

Key improvements:

1. Plastering and repairing of roof on ranger house (GNP)
2. Power washing and repair to picnic shed.(GNP)
3. Camp ground development commenced (SHBHNP)
4. Cabin renovated for cave tubing tour guide rental (SHBHNP)
5. A platform was constructed at the river tubing exit point for guests to exit the river easily (CBWS)
6. Upgrade to 123 Trail (Curassow, Rubber Tree, River Path) included steps for easy access, 1 bridge, 1 picnic table (CBWS)
7. Construction of the Dr. Rabinowitz Research building continued at (CBWS)
8. Access Road upgraded by the Ministry of Housing and Infrastructure (CBWS)
9. Board walk repairs (CTWS)
10. Roofs on the Osprey building, campground's kitchen and pavilion repaired. (HMC)
11. Ten (10) cement anchors and channel buoys installed on key traffic areas (HMC)
12. Main pier repaired after Hurricane Lisa (HMC)
13. One additional mooring buoy installed at Blue Hole (BHNM)



Repari and cleaning of picnic shed (GNP)



Log cabin renovated (SHBHNP)



Construction of Research Facility at CBWS



Solor system inverter and assesories (CBWS)

INFRASTRUCTURE & MAINTENANCE



Staff repairing ranger quarters (GNP)



Repairing of pier (HMC)



Repair of board walk on Limpkin trail (CTWS)



Upgrading of Access road (CBWS)



New bridge 123 trail (CBWS)



Resurfacing of trail (SHBHNP)

STAFF TRAININGS

1. Effective Communications & Conflict management
2. Green Laws
3. Basic First Aid
4. Intro to GIS
5. Bird Banding
6. eBird Proficiency
7. Bird ID and Monitoring protocols (using PROALAS)
8. Wilderness Search & Rescue
9. Vessel Handling and Navigation
10. Sea turtle nest monitoring
11. Fisheries Regulations
12. Special Constable
13. Data collection using Spatial Monitoring and Reporting Tool (SMART) Device
14. Raptor Identification
15. Fish Identification
16. Open water dive certification
17. Supervisory Training



First Aid Training



Search and Rescue Training



Bird Banding Training at CBWS



HMC park ranger open water dive training



Green Laws traing at CBWS



Search and Rescue emergency response training



Staff participating in Effective Communicatiotion Training

Research & Monitoring

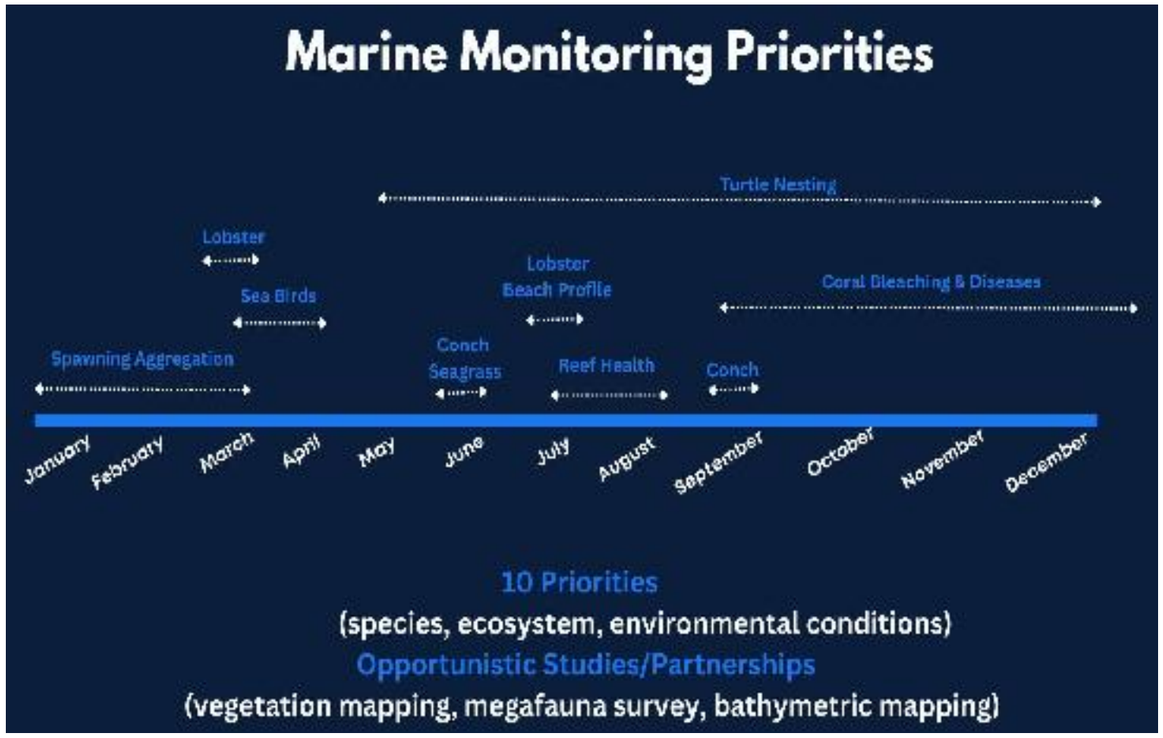


RESEARCH & MONITORING

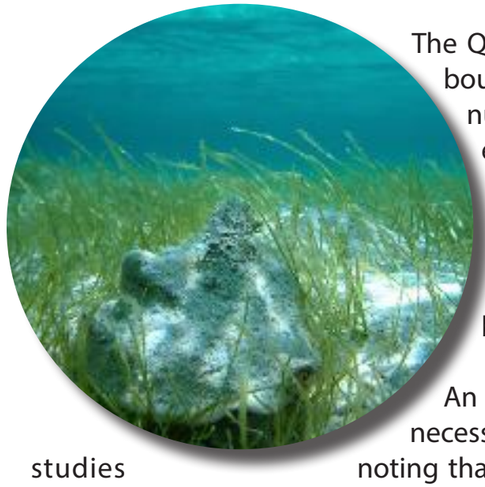
Following the last two year's upheaval of operations, monitoring activities slowly resumed to normal in 2022 across our co-managed sites as well as other national areas of focus outside of our protected areas. Biodiversity and ecosystem monitoring remain as pivotal conservation tools used to inform protected areas management. Some activities were not implemented due to staff turnover, funding limitations or other unforeseen circumstances. Highlighted here are some key activities accomplished this year. Interest in research at the protected areas was regained and total of three scientific proposals were received to commence studies in 2022.

Marine Monitoring Activities

Long-term reef monitoring is as important and can provide critical data to help marine protected areas managers, users and policy makers understand the health of the reef, their dependence on its health and well-being; and the economic and social consequences of reef decline. Marine monitoring is conducted within the Lighthouse Reef Atoll (LHRA).

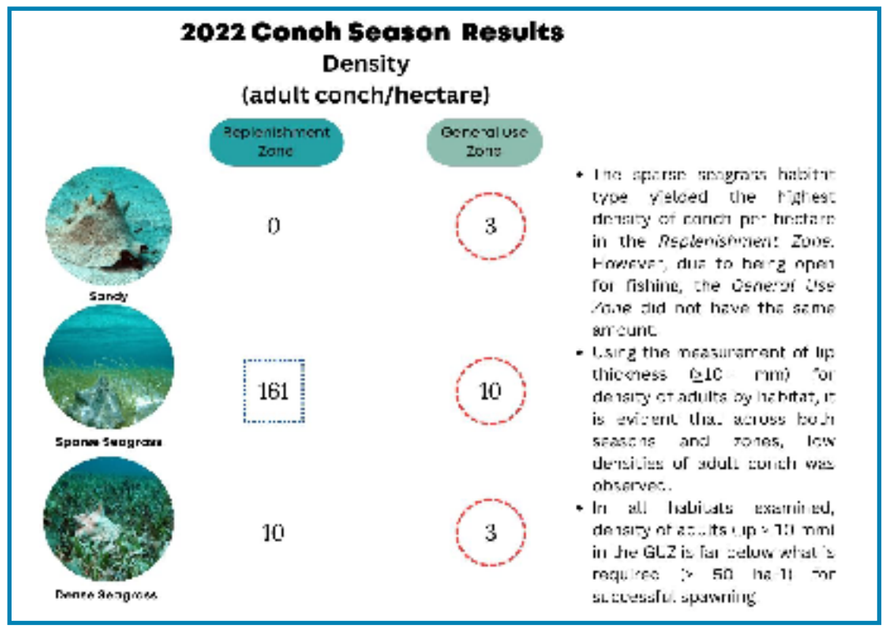


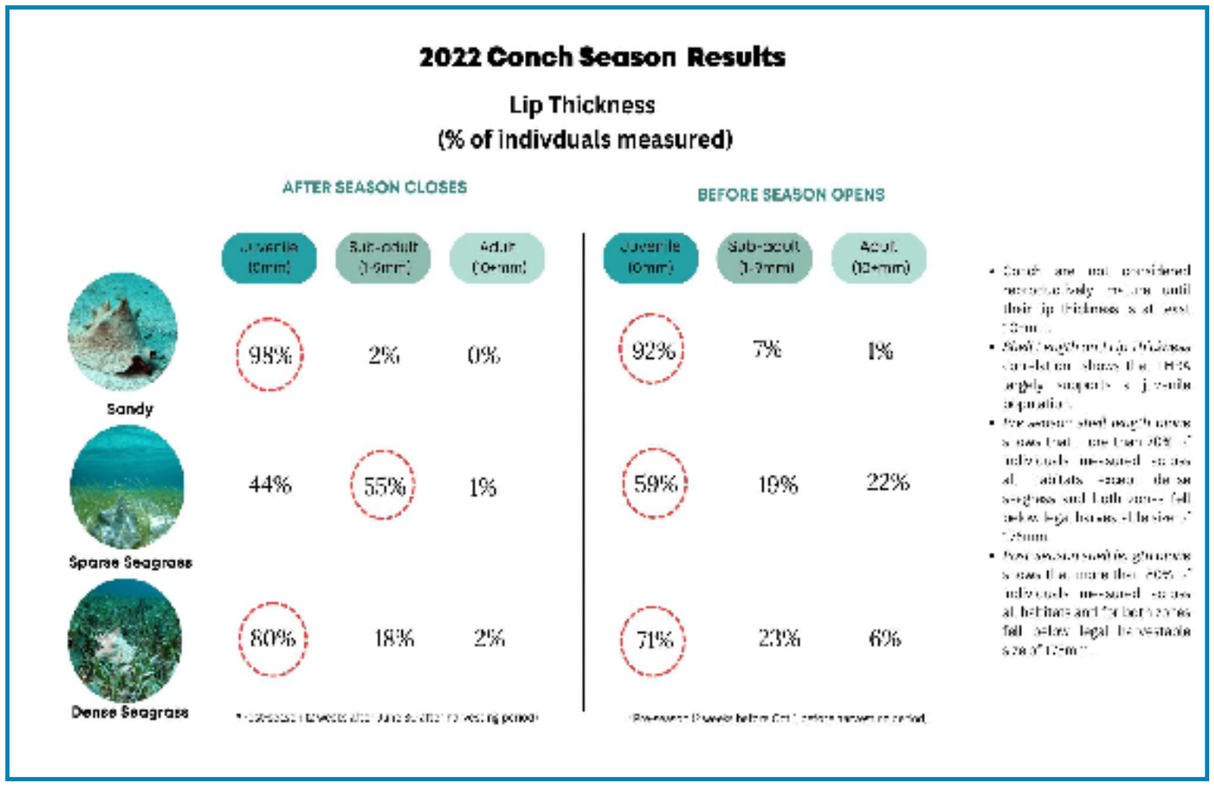
Queen Conch Monitoring



The Queen Conch (*Aliger gigas*) continues to thrive within the boundaries of Lighthouse Reef Atoll (LHRA) which is a prime nursery ground. High demand is still resulting in the illegal extraction of juveniles and the black-market trade which continues to threaten regional populations. 2022 was a normal season with three months' closure. The density is estimated at monitoring sites within the restricted zone (protected zone) and general use zone (open to fishing), before and after the close of the fishing season.

An average density of 50 mature individuals is considered necessary for reproductive success to maintain stocks based on studies noting that there is a decrease in reproductive success when adult numbers fall below 50 adults/hectare. In addition, the other biological aspect to consider is that regarding lip thickness, conch are not considered reproductively mature until their lip thickness is at least 10+mm (as cited in Tewfik, et. al 2021). Overall, the the 2022 seasons resulted in low densities across the habitats and did not meet the maturity threshold of 50 mature adults/hectare when factoring in lip thickness as the indicator of maturity. Currently the Belize Fisheries' regulation only takes into account maturity of conch by shell length of which harvestable conch needs to be > 178mm (7 inches).





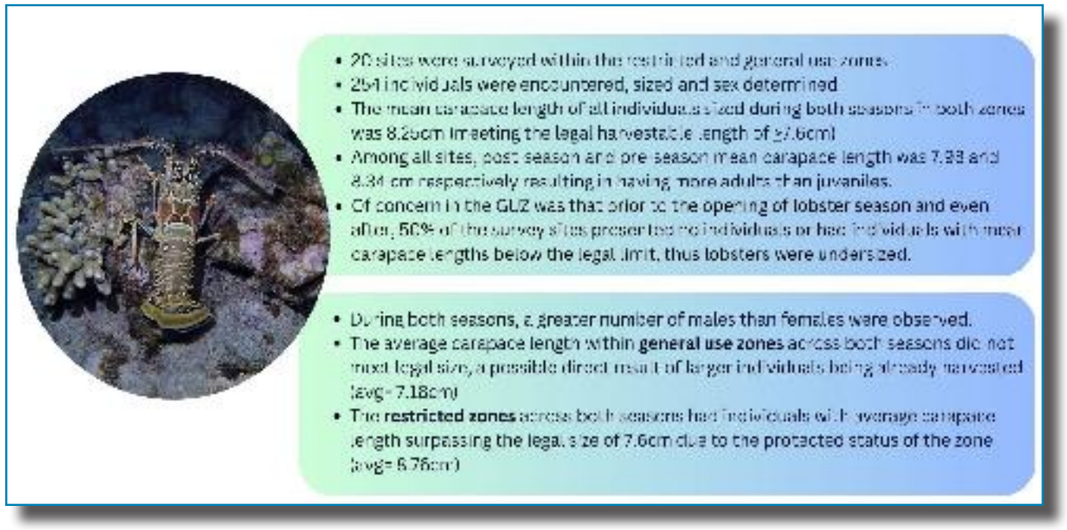
Spawning Aggregation (Nassau Grouper)

Sandbore continues to be an important spawning aggregation site within the Lighthouse Reef Atoll for the critically endangered Nassau Grouper (*Epinephelus striatus*). The site continues to have recordings of higher/promising count numbers.



Caribbean Spiny Lobster

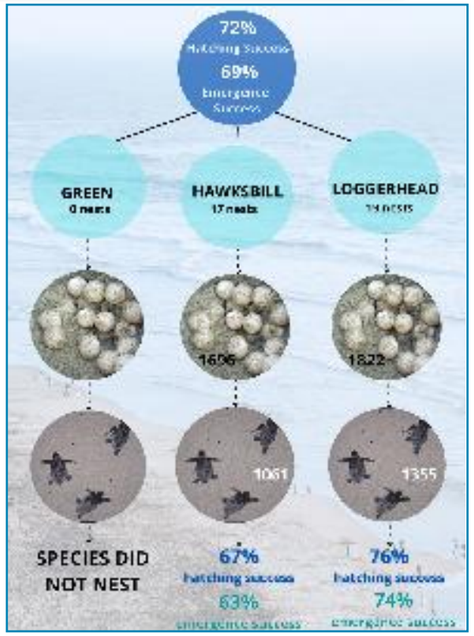
In 2021, the legislation for this commercially important species was amended, whereby the season will now close on February 28 of each year, in accordance with Statutory Instrument No. 128 of 2021. The closed season for Caribbean Spiny Lobster fishery is now from March 1st to June 30th in any year. Belize's closed season is also in accordance with the harmonized regional lobster regulation (OSP-02-09) implemented by the Organization for Central American Fisheries and Aquaculture Sector (OSPESCA). Similar to conch, the density is estimated at monitoring sites within the restricted zone (protected zone) and general use zone (open to fishing), before and after the close of the fishing season.



Sea Turtle Nesting

Turtles continue to nest on the beaches within the Lighthouse Reef Atoll. Of interest no green turtles were recorded nesting this year and the loggerhead had the highest number of eggs laid, as well as highest hatchlings and emergence success.





Coral Diseases

After having confirmed the SCTLD at LHRA in September 2020 at the northern most tip just outside of the atoll, it became widespread throughout the atoll in 2021. In 2022, the team wrapped up the monitoring, treatment and information sharing of corals afflicted by this disease under our MarFund project. For a full view of all affected sites in the region and Belize, visit agrra.org.

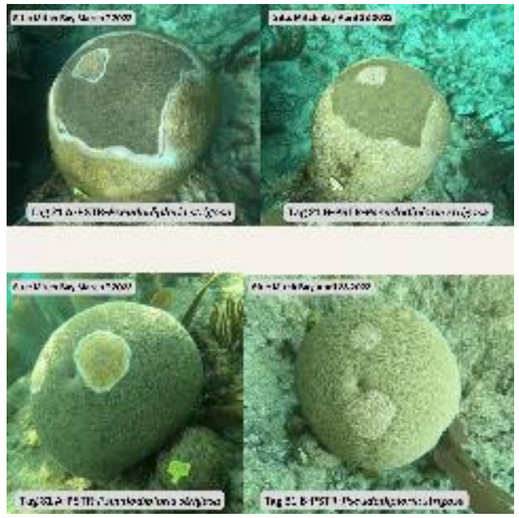


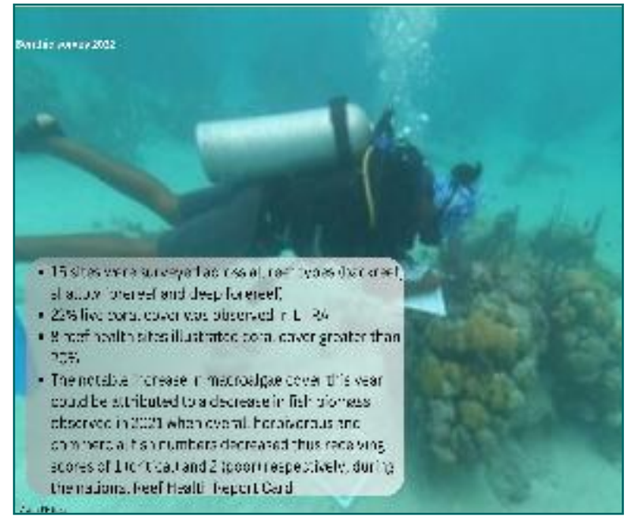
Image (right) showing effectiveness of treatment Tag 21 A vs Tag 21 B and Tag 31 A vs Tag 31 B whereby SCTLD did not spread beyond treatment margins to further infect live coral.



Coral Reef Health

Long-term reef monitoring also includes observations of the benthic composition and the reef fish diversity and abundance. In 2022, using the AGRRA methodology, data was only collected for the benthic zone.

Benthic species data focused on composition (diversity), condition, abundance, size-structure, and distribution of these communities. The mean coverage for each category was noted for each reef type. Of note, crustose coralline algae which is important for coral recruitment saw a decline in abundance.



TERRESTRIAL MONITORING

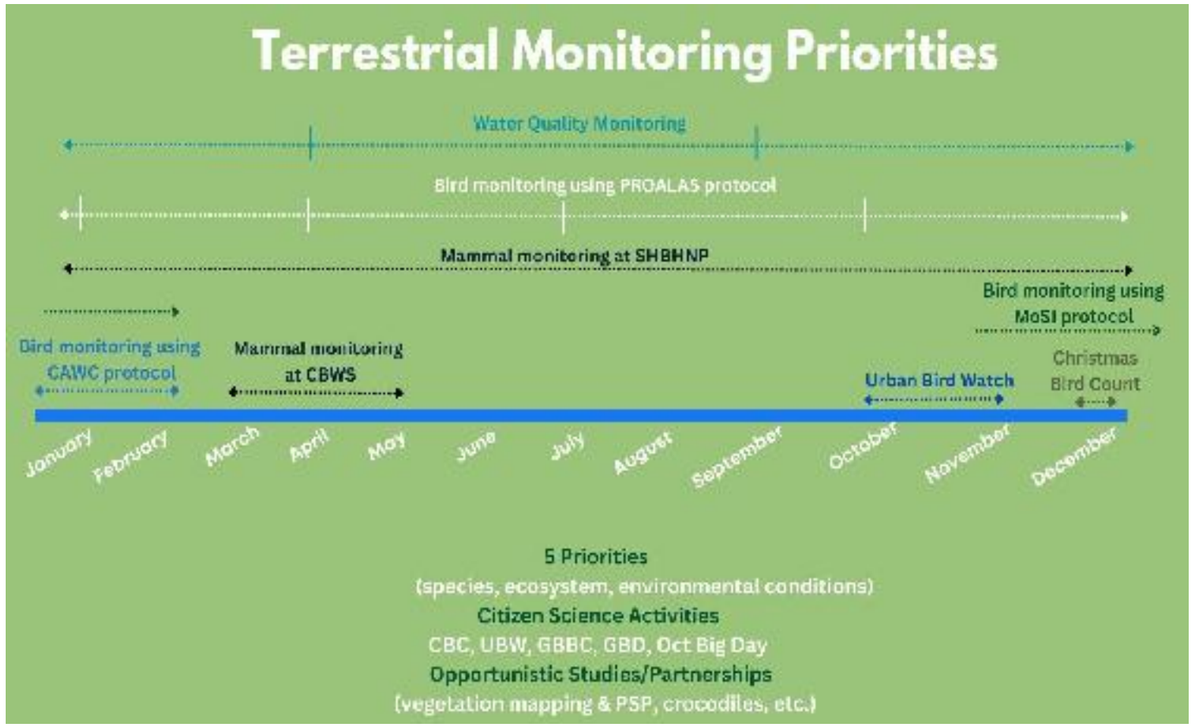
MAR FUND — Addressing Stony Coral Tissue Loss Disease in Lighthouse Aloll

All project activities were successfully completed in the last quarter of 2022. Monitoring subsequent treatment of corals afflicted with the diseased proved that the treatment works to halt the progression of the disease.

The outreach activities to create awareness on SCTLD reached both our fishing, students and tourism stakeholders. Capacity building opportunities were beneficial to staff in learning about application of the treatment and for our youth (Reef Protectors) stakeholders in learning about the disease and being certified as 'Open-water' divers.



The forest and wetland ecosystems provide many services and functions for both wildlife and humans and as such the interdependence must be monitored, particularly those areas that are protected. Monitoring within these ecosystems is conducted within the BAS terrestrial protected areas.



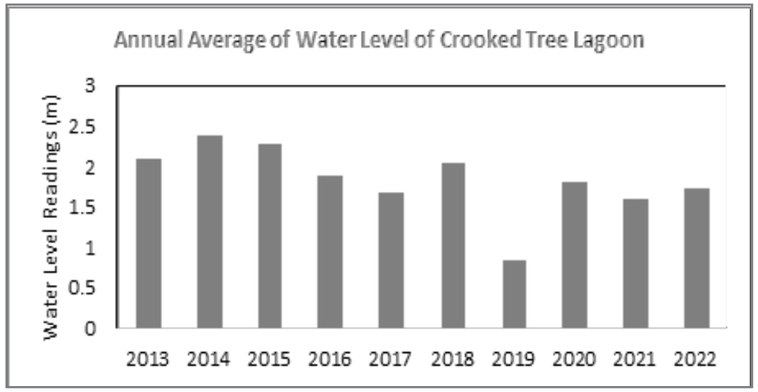
Geographic Information System (GIS) & Spatial Monitoring and Reporting Tool (SMART)

The Geographic Information System and Spatial Monitoring Reporting Tool, remain as tools for monitoring biodiversity. The GIS continues to be used for both marine and terrestrial components of the R&M Programme and to support the Protected Areas and Environmental Education Programmes in producing maps and reports.

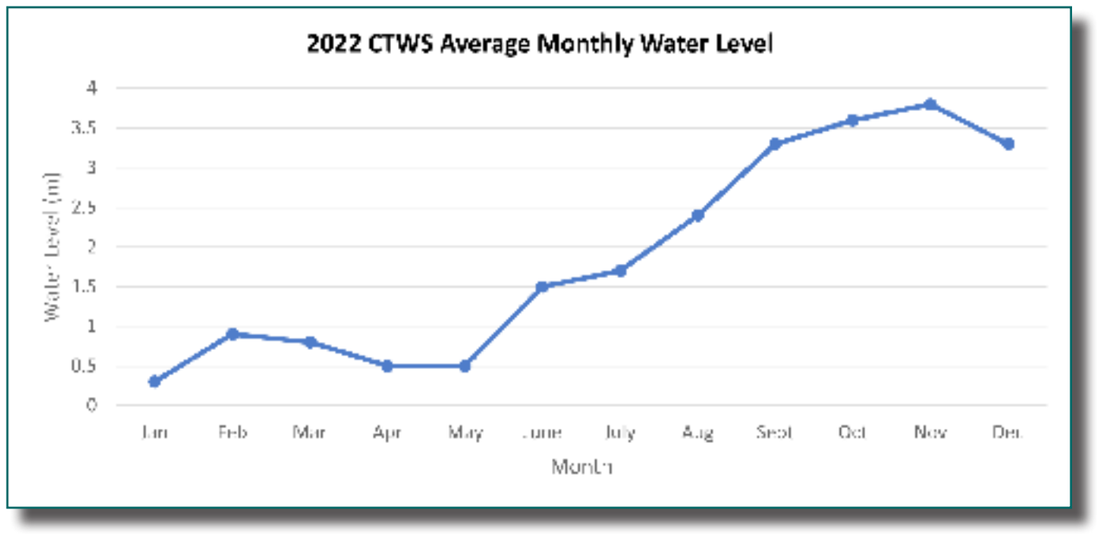
As technology advances with SMART for natural resources management and biodiversity monitoring, we continue to set systems in place to become more proficient in the use of the SMART devices and generating reports. We continue to improve the data model for the terrestrial protected areas and explore using the device to collect biodiversity data. This year focused on the use of additonal apps such as dashboard, story maps and continued training for staff using SMART.

CTWS Water Level Reading

In general, monitoring water levels can have numerous environmental benefits and particularly so for the Crooked Tree Wildlife Sanctuary, which serves as sponge for excess water overflowing from the Belize River during flood events. The Metrology Office and BAS continue to monitor the water levels on a daily basis.



The first graph shows the average water level readings over a ten-year period of which 2022 is similar to years prior to 2019 (a drought year). The past three years have been very wet resulting in flooding and longer durations for the water to recede. November was the wettest month for this year.



Bird Monitoring: Central American Waterbird Census (CAWC)

The Belize Audubon Society remains as the BirdLife partner in Belize and ensures that the Central American Waterbird Census (CAWC) is conducted annually. The four (4) general locations across the country were surveyed and resulted in 60 species and 3638 individual birds being recorded, which is an increase decrease compared to last year. Of the 17 waterbird families observed, the top two bird families recorded were Ardeidae (Bitterns, Herons and Egrets) with 14 spp. and Scolopacidae (Sandpipers) with 10 spp.



Protected Area	Number of Species	Total Number of Individuals
Corozal Bay Wildlife Sanctuary	17	245
Crooked Tree Wildlife Sanctuary	41	1989
Gales Point Wildlife Sanctuary	20	153
Gra Gra Lagoon National Park	29	359
Hopkins Wetlands	26	852
BELIZE	60	3638

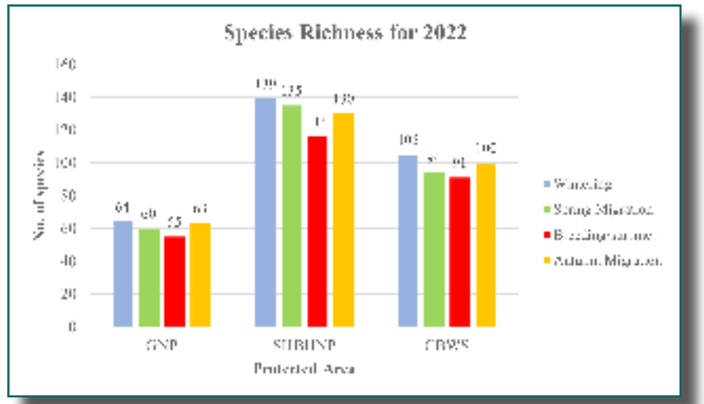
Besides conducting the CAWC, BAS also provides environmental education to the community schools around the wetlands, emphasizing its importance for conservation during the celebration of World Wetlands Day. We disseminated educational packages to Crooked Tree Village Government School (Std II and III) highlighting the importance of wetlands and waterbirds. Belize Audubon Society also posted photos of location map and the participants who participated for the 2022 CAWC on our Facebook page https://www.facebook.com/belizeaudubon.

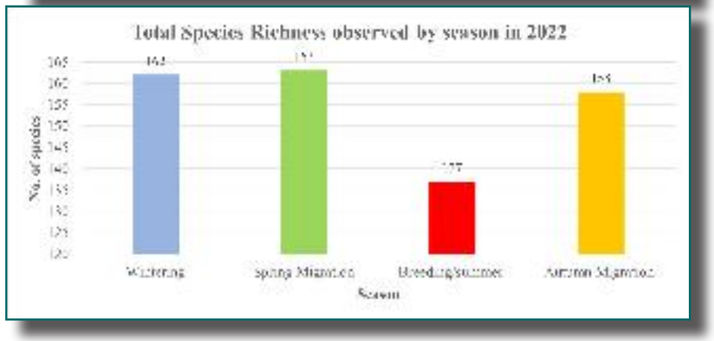
Programa de America Latina para Aves (PROALAS) via point count Point Count Methodology

Birds serve as key indicators of environmental health and for BAS as a protected areas management organization; it's an indication of the health of our protected areas—the forest, wetlands and waterways. Overall, 2022's results were higher than previous years, with over 200 species of birds being recorded, majority of which were migrants.



- Overall, 220 species of birds seen across all seasons and across all sites
- Spring migration had the highest species richness at 183 species.
- Less species was observed during the Breeding Season.
- Highest movement of birds detected during Wintering and Migration seasons.
- SHBHNP had highest species richness across all seasons.
- The transition between Autumn Migration to Wintering Season shows a increase of species richness. However, the diversity decreases after Spring Migration when the migratory birds leave Belize.





Christmas Bird Count 2022

After hurdling the Covid-19 challenges of gathering in groups and funding scarcity, the team was able to resume the Christmas Bird Count, albeit participants were not in great numbers. A possible reduction in participants may have been due to the counts being done on weekdays because the Christmas and New Year holidays fell on the weekends. For the three BAS circles, there were 317 species of birds recorded by 31 participants.

The dominant species across all three circles were the Cattle egret, Turkey Vulture and Black Vulture. The infrequent species are noted in table 2 (right).

Birds

Date	Location	Species	Individuals	Teams	Male	Female	Participants
12/13/2022	Cockscomb Basin	140	2055	5	9	0	9
12/18/2022	Belmopan	213	2837	5	11	1	12
12/29/2022	Belize City	305	1842	5	7	3	10

Cockscomb Basin	Belmopan	Belize City
Black Rail	Barn Owl	Absent in Belize
Black-crowned Night-Heron	Black Hawk-Eagle	Brown-crested Flycatcher
Black-throated Blue Warbler	Common Horned	Buff-bellied Hummingbird
Collared Trogon	Giant Cowbird	Eastern Wood-Pewee
Crested Guan	Golden-winged Warbler	Gull-billed Tern
Greater Yellowlegs	Green Kingfisher	Killdeer
Green-breasted Mango	Nightingale Wren	Lesser Scaup
Magnificent Frigatebird	Olivaceous Woodcreeper	Olive Sparrow
Pileated Flicker	Orange-fronted Parakeet	Ruddy Woodcreeper
Reddish Egret	Prothonotary Warbler	Semipalmated Sandpiper
Red-billed Pigeon	Rufous-tailed Hummingbird	Snipe
Savannah Sparrow	Rufous Mourner	Streak-backed Woodcreeper
	Sepia-capped Flycatcher	
	Silvery-throated Jay	
	Thicket Tinamou	

Table 2. Infrequent Species

Mammal Monitoring

Mammal monitoring was conducted at SHBHNP by the staff and CBWS in collaboration with our partner, Panthera. Undoubtedly, mammals play an important role in ecosystems by providing/maintaining essential services and functions. The monitoring in CBWS is the longest known jaguar monitoring in the Americas and continues to support a relatively high density of jaguars.





Environmental Education Programme

Nature School Returns

Two years after the global COVID-19 pandemic subsided, we are now beginning to see the return of primary school students to our protected areas. The numbers for this year were nowhere close to that of 2019, nonetheless, our park rangers were excited to welcome the students and teachers to the protected areas. Our nature school program provides visiting primary school students with the opportunity to interact with park ranger, learn firsthand about the forest ecosystem and its associated flora and fauna as well as the importance of protected areas for tourism, recreation, and water security.
325 students and teachers visited three of BAS' co-managed protected areas in 2022.



Nature school visitors at SHBHNP

Celebrating Biodiversity

The United Nations declared May 22nd as the International Day of Biodiversity (IDB) to increase understanding and awareness of biodiversity issues. As a signatory to the International Convention on Biodiversity, Belize as a country has made commitments to actively protect and bring about awareness of the value of local biodiversity. This year BAS teamed up with the National Biodiversity Office (NBio) to promote biodiversity protection. This was done through targeted school presentations across the country and tree planting. The BAS staff was tasked with outreach in the Belize City area. Two schools were selected in Belize City and on May 16th a schoolyard biodiversity activity was conducted whereby students were taken out of the classroom and into their school yard to gain a physical sense of biodiversity within their school yard. In creating awareness about biodiversity, a mahogany tree was planted in each school yard.



OUTREACH & ENVIRONMENTAL EDUCATION

Empowering Community Stewards

In continuing with our protected areas awareness campaign targeting buffer communities of CBWS, several activites including a Green Laws workshop, a field trip to CBWS and community house to house chats were carried out this year.

During the field trip participants were involved in hiking, learning about the importance of the forest for water provisioning and other ecosystem services. Information on the long-term Jaguar monitoring at CBWS and its importance in understanding Jaguar ecology was also shared with the group.

The Green Laws workshop had 16 participants from Maya Mopan, May Center and Red Bank Villages. The objective of the one-day workshop was to introduced the NPAS, Forest and Wildlife Acts to participants. It is hoped that the information shared will empower community members to better understand and support conservation of CBWS and it landscape. The workshop was facilitated by staff from the Forest Department and the NBio office.



Community Green Laws workshop



Youths from CBWS buffer communities relaxing on the river deck at CBWS after hiking.

Jaguar Conservation Awareness

The establishment of CBWS was built on scientific research justifying the site as Belize's stronghold for jaguars. Since then, BAS has worked across the landscape to increase awareness and understanding of the CBWS and jaguar conservation. Through a small grant issued by the World Wildlife Fund (WWF), we were able to design a short-term jaguar awareness campaign starting with a knowledge, attitude and perception survey targeting primary school children and five buffer communities (Red Bank, Maya Center, Maya Mopan, Georgetown, Santa Rosa, San Roman). The survey was conducted using the survey 123 app (ArcGIS software) by a team of BAS staff in early December, sampling 150 youths and adults and 100 standard III primary school children. The results will inform a more targeted campaign for the five communities to take place next year.





CLM conducting survey (Top) & drawing of a jaguar by student (bottom)

CHILDREN EXPERIENCING TOURISM



Children from Belize City exploring SHBHNP



The Belize Tourism Board and BAS signed an MOU in July of this year to collaborate on providing tourism exposure through field trips targeting a group of Belize City children who attends the "Jah Love" after school program led by Mr. Timmy Stamp. The field trips and educational talks were conducted in August & October, allowing 54 children to visit SHBHNP and CBWS. For the majority of the children and the adult chaperons, it was their first time experiencing tourism and, their first visit to a cave system. The BAS Education Officer took the group cave exploring and hiking to Ben's Bluff in CBWS. Children learned about the importance of tourism and the important role protected areas play as tourism destinations. It is hoped that this experience will give the children a better understanding of tourism and why it is important to conserve our natural resources.

WORLD WETLANDS DAY- FEBRUARY 2ND

Crooked Tree Wildlife Sanctuary (CTWS) is the country's largest inland freshwater wetland complex. CTWS was designated a wetland of international importance under the RAMSAR convention in 1998. Every year on February 2nd, BAS joins the international community in celebrating World Wetlands Day (WWD).



CTWS site manager presenting teacher with WWD educational packagel

This year as we began to get back in the classroom and to community outreach, staff took the opportunity to visit three buffer communities of CTWS delivering WWD education packages to the schools (with lesson plans) for teachers to use for a wetland awareness lesson. CTWS rangers participated in the awareness by recording a short video message which was shared on social media to create awareness of WWD and the importance of wetlands.

BIRD CONSERVATION & AWARENESS

BIRDS & PEOPLE

Our staff actively promoted bird citizen science and awareness through three events this year.

Great Backyard Bird Count (GBBC)-February
World Migratory bird day (WMBD)- October
Urban Birdwatch - October



Through classroom presentations and birdwatching activities, **220** participants ranging from 8 years old to adults learnt how to use binoculars to conduct basic bird identification and observation, and how to become bird citizen scientists using the eBird app.

It was all fun and excitement as the birders in training spotted resident birds like the Great Kiskidee, Magnificent Frigatebird and Cinnamon Hummingbird; as well as the treat of observing visiting migratory birds like the Scissors-tailed Flycatcher, American Redstart and the vibrant red colored Summer Tanager.

Urban Bird watch allowed staff to travel to four locations this year (Orange Walk, Belize City, Belmopan and Independence village) to interact with **70** people to love birds and nature. This citizen science and bird awareness event is held annually to inspire new birders. Together we observed 119 species of birds.





Classroom presenation for WMBD



Urban Bird Watch participants Independence village (Top) & Belize City (bottom)

"Earth Day- Greening Across Belize"



Our free tree giveaway and tree planting campaign for Earth Day 2022 was a big success once again. Another 500 trees were distributed to the public via two distribution points, our office in Belize City and Guanacaste National Park. The Education Unit organized several tree planting activities in celebration of Earth Day with community youths from Armenia, Red Bank and Maya Center. It was fun to watch these excited participants beautify their communities with mahogany, polewood, red tamarind and other shade trees. A total of 500 trees were distributed and 80 trees planted with communities and other partners during the week leading up to Earth Day 2022. In addition to tree planting, a community clean-up along the river and creek in Red Bank was done in partnership with the Scarlet Youth Empowerment Organization from Red Bank Village.

The free tree giveaway was promoted on social media & Love FM morning show recieving over 10k views.

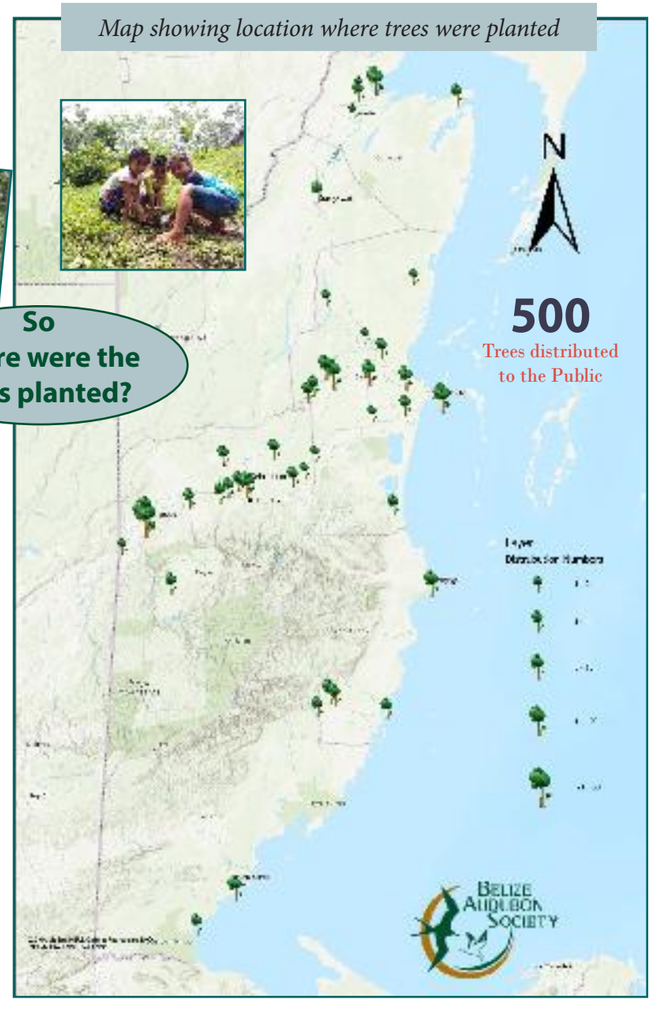






So where were the trees planted?

Map showing location where trees were planted



REEF PROTECTORS

Program Goal: Raising awareness on marine protected areas through the implementation of a conservation-based, out-of-school educational program for youths.

Donor: Belize Marine Fund (of the MARFund)

Fifteen high school students from the fishing communities of Copper Bank Chunox and Sarteneja continued to be mentored to become marine stewards and BAS' Reef Protectors. This out of school field-based program uses mixed methods to engage and provide meaningful experiences for the participants through an 18 months program.

Through monthly in person and virtual meetings and workshops, participants were exposed to a wide array of current issues in marine conservation and capacity building. The primary areas of focus included awareness on the importance of marine ecosystems and marine Protected Areas. Team building, stewardship and communication skills and capacity building in basic marine research and monitoring methodologies.

Learning was enhanced through four educational field trips to marine protected areas and to meet experts in the field of conservation and Padi-Open water dive certification for 6 of the 15 participants.



Vielka Manzania- getting ready to do her first confined dive during the Open water dive certification training at HMC in August

Highlights

- 2 days field trip/workshop at HMC - learning about Littoral forests, conch and lobster monitoring, sea turtle monitoring and coral reef health, sea grass monitoring.
- 4 Field trips: Bacalar Chico National Park and Marine Reserve (BCNPMR), Corozal Bay Wildlife Sanctuary, HMC/BHNM, Calabash Caye Marine Reserve
- Snorkeling: the BHNM and HMCNM reefs to practice coral and fish identification.
- Presentations from Fisheries Dept. officers on the history and importance of BCNPMR.
- Presentation/field trip on water quality monitoring, in mangrove ecosystem and mangrove monitoring using drones by the education & research staff from the Sarteneja Alliance for Conservation and Development.
- Open water Dive Certification and internship at HMC.



Reef protectors in dive training & learning about lobster monitoring

LEARNING THROUGH EXPLORING



Community Outreach & Development

COMMUNITY OUTREACH & DEVELOPMENT

The promotion of sustainable income diversification opportunities and implementation of community engagement strategies strengthened support for BAS conservation work through its community program in 2023. Furthermore, through various levels of capacity building, promotion of marketing strategies and establishment of functional local advisory committee's buffer community stakeholder beneficiary groups benefitted from improved livelihoods and enhanced governance structures that promoted community resiliency and stewardship for protected areas.



PROJECT

Project: Improved management of Belize's highest priority protected areas.

Donor: Biodiversity and Protected Areas Management Program - BIOPAMA

Imapct Areas: ***Improving communcation and governance with stakeholders of LHRA.***

Improving awareness with CBWS stakeholders and buffer communities.

Project Beneficiaries: BHNM/ HMCNM & CBWS/VP stakeholders *Chunox and Copper Bank, Red Bank and Maya Center.*

253
Fisherfolk Engaged

20
households Engaged



Education Officer conducting H2H outreach

SUMMARY OF RESULTS



CLM conducting Boat to Boat outreach at LHRA

The boat to boat outreach continued in 2022. Two sessions at LHRA reached 253 fisherfolks during the opening of the lobster and conch seasons. Fisherfolks were enaged in discussions to raise awareness of SCTLD and treatment efforts and fishing regulations specific to fish grazers to reef health. The Boat to boat continues to be an effective approach to engage fisherfolk at LHRA.

Similar to the boat-to-boat approach, this year a round of outreach activities kicked off with house-to-house chats in the buffer communities of Maya Center and Red bank where twenty (20) households and 122 individuals raised awareness on water resource protection, the importance of conserving the natural resources in their communities and learned about the benefits CBWS offers-employment opportunities, tourism, and ecosystem services.

PROJECT

Project: Improved management of Belize's highest priority protected areas.

Donor: Biodiversity and Protected Areas Management Program - BIOPAMA

Impact Area: Improving communication and awareness with targeted stakeholder groups of CBWS.

Beneficiaries: CBWS stakeholders -- Maya Center, Maya Mopan, Santa Rosa, San Roman, Santa Cruz. **HMC&BHNM** Stakeholders-- Copper Bank, Chunox, Sarteneja

SUMMARY OF RESULTS



LAC meeting in progress

This year was another successful year in relation to improving communication and participation of stakeholders in the management of BAS' co-managed protected areas. Both the CBWS and HMC&BHNM now have functional Advisory Committees that meet once per quarter. The committee serves as a platform for information sharing, strengthening stakeholder relationships, discussing management improvements and gather feedback/recommendations from members towards the sustainable management of **HMC&BHNH** seascape and **CBWS/VPNM** landscape.

Impact Area:
Supporting local communities to enhance livelihoods whilst effectively contributing to protected and conserved areas management.

Through collaboration with strategic partners such as BELTRAIDE, the Maya Center Women's group (MCWG) received support to enhanced the income generating capacity of their small business. The group's business plan, marketing products and revised by-laws were completed through a round of consultations and training. In addition, group members participated in various levels of capacity building to strengthen their entrepreneurial and product development abilities, as well as skills in various disciplines including marketing, customer service, conflict management, leadership, computer literacy and sewing skills.





PROJECT

Project: Improving management of BAS co-managed protected areas.

Donor: Protected Areas Conservation Trust (PACT)

Impact Area:
Community engagement and livelihoods enhancement is one of the pillars of the PACT Project hence one of the key activities was to promote awareness and appreciation for SHBHNP, CBWS/VPNM.

Beneficiaries: Maya Mopan and Armenia

Key Results:
- 45 beneficiaries
- 4 small businesses with improved income generation capacities

SUMMARY OF RESULTS

With an investment of over $20,000 four groups & 45 beneficiaries (1 in CBWS and 3 in SHBHNP buffer communities) Red Rose Garden, Armenia Greenhouse Organics, Armenia Eco-Agriculture Transition Project, and Maya Mountain Honey enhanced their livelihoods through development and implementation of business models and funds to procure equipment and supplies. Members of the four beneficiary groups improved their capacities in entrepreneurial development, marketing strategies, product development, climate smart agriculture best practices taking their small business models to the next level. In addition, they participated in an exchange visit to a local farm where they were exposed to agro-processing, value addition, horticulture, and bee-keeping management.







Working together for the sustainable management of the Crooked Tree Wildlife Sanctuary

In the latter part of this year, BAS' protected areas unit and National Biodiversity Office led a successful introductory meeting with members of the newly established Crooked Tree Village Council. This meeting was long overdue, however, valued by both BAS and the new village council members as vital to chart the way forward for the continued sustainable management of the Crooked Tree Wildlife Sanctuary (CTWS). Areas of collaboration tabled during the meeting were, 1.) Steps needed for the re-designation of the CTWS to a Wildlife Sanctuary II, which allows for subsistence use of resources within the jurisdiction of a sustainable use plan, 2.) the establishment of the Crooked Tree Wildlife Sanctuary Advisory Committee to ensure full participation of the community in all future initiatives.

2022 James A. Waight Awardee



Jose " Elito" Arceo

36th Annual James A. Waight Conservation Award

Another outstanding Belizean was awarded with the James A. Waight conservation Award on February 16th. The 36th James A. Waight Award show was presented virtually with pre-recorded interviews of the awardee and his friends who spoke on behalf of his dedication towards marine conservation. The virtual ceremony was shared via a live stream on Facebook and YouTube. The ceremony was streamed at 6pm on Wednesday 16th February. On Facebook with 158 followers viewing the virtual ceremony. This award is presented annually in honor of one of BAS' founding member, James A. Waight, to individuals or organizations in recognition of significant contribution, nationally or locally, to the conservation and enhancement of Belize's environment.



Meet Mr. Jose "Elito" Arceo



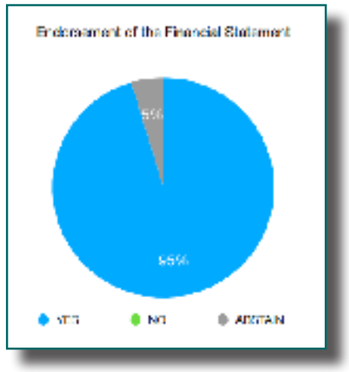
Elito was born on San Pedro, Ambergris Caye in a traditional fishing family. From his father, he learned that the sea, a valuable food source, also needed to be protected. As a businessman in the island's thriving, tourism-driven economy, Elito has worked towards creating a balance between development and conservation.

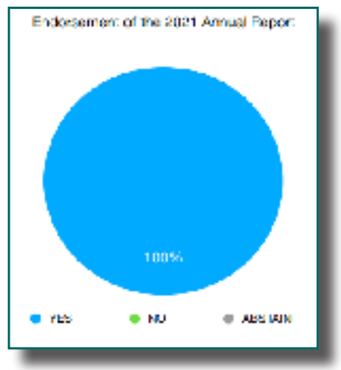
Mr. Arceo was nominated by Greg Smith, the "Turtle Man" of San Pedro, who is also the 1992 winner of the James A. Waight Conservation Award. Mr. Arceo has organized beach clean ups, fostered protection of mangroves and involved students in the island wide activities for many years including the Ambergris Caye, Eco Challenge. His involvement has encouraged and promoted community awareness of issues including offshore drilling. Fellow conservationist Miguel Alamilla points out that Arceo was a key stakeholder on the island for the expansion of the Hol Chan Marine Reserve. He has also been at the forefront of protecting both bird and turtle nesting sites. The community beach clean ups are even more significant to health and economy today as the tide brings both sargassum and garbage to the island. Arceo surmised that "We are a young nation. So, while we welcome development, we have to ensure that development is sustainable, so that people who come to our shores, come to enjoy the very same thing that we are actually promoting. So, we don't want to be looked at, as destroying the very same thing that makes us Belize."

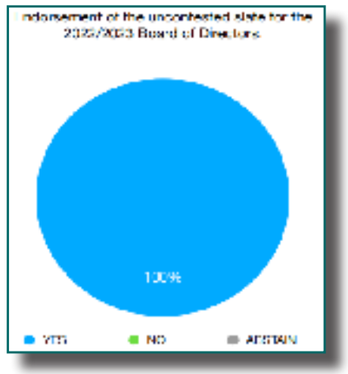
Membership

53rd ANNUAL GENERAL MEETING

This year an attempt was made to have an in-person AGM at CBWS, however due to consistent bad weather the AGM was postponed twice (May 28th and June 18th, 2022 respectively). It was then decided that the in person AGM would be canceled. On May 5th members were communicated with via email and social media to provide them with all the necessary AGM documentation and the nomination form for the vacancies on the Board of Directors. Members were then allowed until June 5th to endorse the 2021 Annual Report and Audited Financials, and cast their votes.







With 43 members participating in the elections, the Society was able to exceed its quorum of 30. The 2021 Annual Report was approved by 43 votes with 0 members abstaining and the 2021 Audited Financials were approved by 41 votes with 2 members abstaining. All votes were in favor of endorsing the 2022-2023 Board of Directors slate.

There was a total of seven (7) vacancies on the BAS Board of Directors. The open positions were for the 1st and 2nd Vice President, 2nd Secretary, Treasurer and 3 Directors. All persons listed below were renominated and uncontested. They have previously served on the board of Directors and remain committed and willing to serve once more.

Kevin Geban, 1st Vice President
Simon Reardon Smith, Treasurer
Janelle Chanona, 2nd Secretary
Shajira Martinez, Director
Olivia Carbillo-Avilez, Director
Dr. Mariana Ancona, Director

The AGM business concluded with an email to members to confirm the results with a breakdown of the votes, and a press release announcing the results via BAS' social media accounts and sent to local media outlets.

Recognizing longstanding BOD members & Mrs. Sarita Legacy Grant



On Saturday, September 3rd, a ceremony was held at Cockscomb Basin Wildlife Sanctuary (CBWS) to honor two former board members, Lascelle Tillett and Mike Heusner. Tillett and Heusner are pioneers in the ecotourism industry in Belize as well as being stalwart advocates of conservation of Belize's natural resources.

The occasion was also used to showcase the work of the Mrs. Sarita Tillett legacy grant at CBWS which was donated by family friends Marcia and Andy Rebmann. Mrs. Sarita sadly passed away at the height of the pandemic, however, family members including Lascelle Tillett were on-site for the ribbon cutting for the upgrades to the Curassow, Rubber Tree, and River path trails, better known as the "One Two Three Trail". The upgrades included a memorial bench, 6 rest benches, and stairs designed for senior citizens and families who prefer to take a less strenuous tour of one of Cockscomb's nature trails.

After almost 2 years the BAS team was able to host an in- person event with its members and board. The event brough together approximately 50 persons including staff, board members, members, and family of Mr. and Mrs. Sarita and Lascelle.



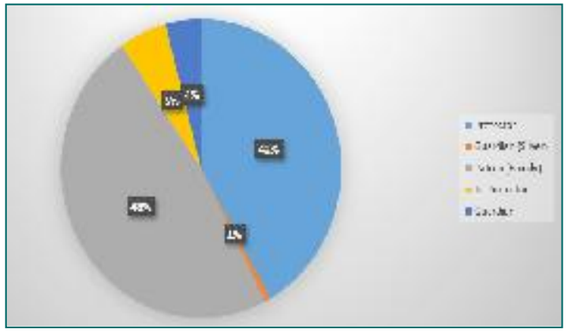
Left to right- Lascell Tillet, Amanda Acosta, Mike Husener, Earl Green





Membership stats

At the start of 2022, BAS had 118 active members (in good standing). The active membership as of December 1st 2022 stood at 157. Fifty-one new members joined in 2022, while 90 members lapsed. Of the 90 lapsed members, 61 renewed their membership reflecting a 67% renewal rate for 2022.





PUBLICITY

Several media appearances this year helped to bring much visibility to the work we do. Some events picked up by local media and through planned appearances included the James Waight Award promotion & BAS' 53rd Anniversay social media competition, Greening Across Belize and Urban Bird Watch to name few.



Summer visitors to HMC enjoy snorkeling & a day at the beach

Given the current social media trend, other local media featured BAS on their respective social media pages throughout the year.

Press releases and media alerts were used to share information on events throughout the year.





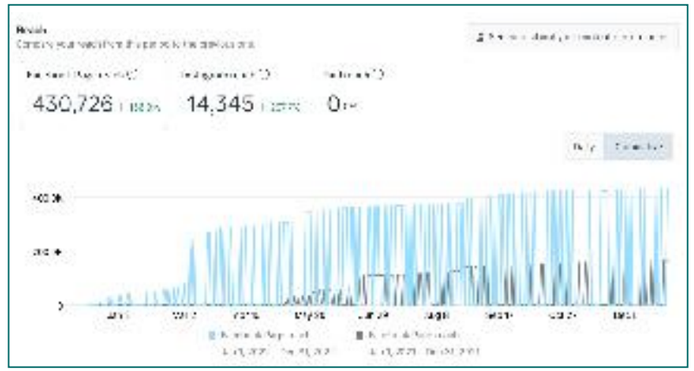
After a year break due to pandemic restrictions, we were able to host our annual summer day trip to Half Moon Caye and Blue Hole Natural Monuments in July. A total of 164 people took the opportunity to visit these two sites.

PUBLICITY

E-Communication



Social media was used throughout the course of the year (Facebook, Instagram, YouTube, LinkedIn) and mass email (using Campaign Monitor) to inform, engage and provide updates to our members, stakeholders and general public. Here are a few stasts on our social media performance. Top followers by country is Belize, follwed by the USA. There were 2988 new Facebook Page followers. There were 222 new Instagram Followers. The Reach shows in blue 2022 over 2021 (graph below- 2021-2022 reach). The 156 and the 297 percent increases in Facebook and instagram represents a reach of 430,000 and 14,000 in the two main social media apps. The spike in March for the daily chart is not for a specific post, but a series of posts regarding the Audubon Green Guardians. Male & female followers are approximately 60 percent female & 40 percent male in both apps with the largest groups in the 25-34 and 35-44 age ranges.



Through sponsorship of a team for the popular La Ruta Maya Belize River Challenge canoe race BAS was able to demonstrate its commitment to water conservation. The Sho family competing in the race as the Audubon Green Guardians. The team was comprised of Rudolph Sho and sons Rhuan and Roel. Overall, the team got good publicity from Love FM media house including a pre-race story. The BAS brand was recognized throughout the 4-day race with commentators prompted by the BAS name to encourage environmental messages and highlighting the role of BAS and co-sponsor Association of Protected Areas Management Organizations (APAMO) for conservation and protected areas. The Audubon Green Guardians were promoted for the 4 days of the event via BAS and APAMO' social media channels and they were successful in winning the "People's Choice Award" a prize offered by the UNDP Belize Country office.



Rudolph center, Rhuan and Roel (left & right)

BELIZE AUDUBON SOCIETY

BIOPAMA

With the financial support of the European Union and the Organisation of African, Caribbean and Pacific States through the BIOPAMA Programme

Project Title: Improved Management Models at Four of Belize's Highest Priority Areas

Donor: Biodiversity and Protected Areas Management Program (BIOPAMA)

Timeframe: July 2020 – July 2023

Project investment: $975, 872 BZD

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Key accomplishments for Year 2

1. Marine & Terrestrial biodiversity & ecosystem monitoring
2. Strategic surveillance and enforcement activities within targeted protected areas
3. Marketing to tourism stakeholders of Cockscomb Basin
4. Recreational infrastructure upgraded at Cockscomb Basin
5. Strengthening partnerships through stakeholder engagement & capacity building
6. Mentorship for small Protected Areas Management organizations
7. Capacity building for staff





Mentorship for small Protected Areas Management organizations:

Enforcement: "Learning through active participation" was the theme for a series of workshops hosted by Belize Audubon Society. BAS shared its lessons learnt with five protected areas management organizations managing either seascape or landscape protected areas on:

- Practical application of Spatial Monitoring and Reporting Tool (SMART) with its integration of Geographical Information Systems (GIS),
- Enforcement of the National Protected Areas System Act, and
- Planning tools used to develop strategic enforcement plans for protected areas.

Science: Continuing from year 1's training for staff of Southern Environmental Association (SEA) on key marine monitoring activities, training was facilitated for staff of Sartaneja Alliance for Conservation and Development (SACD) in bird identification and the Central American Waterbird Census protocol to be able to lead monitoring in Gionzal Bay Wildlife Sanctuary




Landscape and Seascape Enforcement: Belize's Court levied $163,500 BZD fine and penalty on an individual found in possession of protected fish (reef grazers) within LHRA. Reef grazers, particularly parrotfishes, serve an integral role in maintaining healthy coral reefs (eg. by controlling the abundance of macroalgae). The outcome of this successful intervention aligns with BAS's Strategic Enforcement Plan 2022-2027 which aims to strengthen collaborative surveillance and enforcement guided by sound intelligence and supported by stakeholder education and engagement, thus increasing compliance at LHRA to maintain sustainable fisheries, tourism livelihoods, biodiversity.

Capacity building of targeted stakeholder groups toward income diversification: basic bird ID and guiding training for fisherfolk continued for 9 participants. During the training, key information on designing tour packages and selecting destinations for bird tours were identified and highlighted. 5 of 9 participants was awarded gift packages including a binoculars and field guides to help them continue in their bird guiding ventures and to further improve their bird ID skills. It is hoped that the new skills in bird guiding will help the participants diversify their income and offer quality bird tours in North eastern Belize.





Marketing for Cockscomb Basin and the Maya Center Women's Group: Marketing materials for the Maya Center Women's Group (MCWG) and Cockscomb Basin were designed and distributed. These materials were identified as important for scaling up of marketing and visibility of the site and group. The items handed over to MCWG included 2 standing banners (one with the MCWG logo and another for marketing CBWS), 100 brochures, 100 business cards, 100 stickers, 2 printed copies of their business plan.

Sustainable tourism management is key to maintaining the integrity of conservation targets within protected areas. Recreational infrastructure upgrades at Cockscomb Basin included the construction of 15 wooden bridges on the trails and 2 platforms for river tubing activities; installation of a solar system to power visitor facilities; and the development of marketing materials (banner/flyer) which were distributed to tourism stakeholders who use the site to enhance their marketing of their tours.






Advisory Committees (AC): Local advisory committee meetings for Lighthouse Reef Atoll (LHRA) seascape and Cockscomb Basin Wildlife Sanctuary landscape continued. Strategies used to increase community and stakeholder reach included engagements via Boat to Boat, house to house meets within the buffer communities, and tour operators' establishments.

Biodiversity & Ecosystem Monitoring: Terrestrial monitoring included completing year 2 of bird monitoring/banding, water quality testing, and vegetation mapping at Cockscomb.





This project will build BAS's capacities, provide landscape and seascape models for effective management and serve as a learning center for other protected areas management organizations in Belize and the region.

BELIZE AUDUBON SOCIETY

PACT

Protected Areas Conservation Trust

Project Title: Improving the management of BAS co-managed protected areas.
Timeframe: March 2019 - September 2022
Donor: Protected Areas Conservation Trust (PACT)
Partners: Forest Department & National Biodiversity Office (NBIO)
Project investment: $1,160,000 BZD

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Key activities for Year 3:

1. Awareness on the value of Protected Areas & R&M program with buffer communities and tree planting
2. Skills training for community stakeholders and staff
3. Completion of income diversification projects with community stakeholders buffering SHBHNP and CBWS focused on honey production, plant nursery and small-scale farming
4. Signs printed and installed at CBWS and additional signs for SHBHNP
5. Construction of kitchen/dining facility equipped with solar power at CBWS & restroom expansion at SHBHNP completed
6. Tourism Officer completed development of Marketing Plan, Cave Visitor Impact Assessment for SHBHNP and Comparative Case Study Analysis for SHBHNP and CBWS; as well as marketing outreach to tourism operators who recurrently take guests to SHBHNP and CBWS
7. Terrestrial & Marine educational booklets focused on jaguars and birds developed and printed
8. Salaries to support rangers at the sites ensured protected areas were managed effectively via surveillance and patrols; biodiversity monitoring; and education and outreach activities.




Tourism Management improvements:
46+ directional, visitation and interpretive signs for CBWS printed and installed at CBWS and additional signs for SHBHNP's restroom and the highway Signs in an effort to improve visitor experience at both sites. The documents developed by the Tourism Officer will serve as a guide for the protected areas management team and the newly built kitchen/facility is expected to be appreciated and used by visitors.

Skills training for community stakeholders:
Training benefitting 47 community stakeholders buffering SHBHNP and CBWS and staff focused on record keeping, marketing and product development (small business management), and meeting management for the members of the Local Advisory Committee and first aid, Green Laws and climate smart agriculture. Additionally, 31 staff participated in training on effective communication and conflict management.







Community income diversification projects:
Projects with community stakeholders buffering SHBHNP and CBWS focused on honey production, plant nursery and small-scale farming. Three of the four groups have already reported an increase in production and sales over the course of the year.

Blue Hole Natural Monument BTB Site of the Year 2022

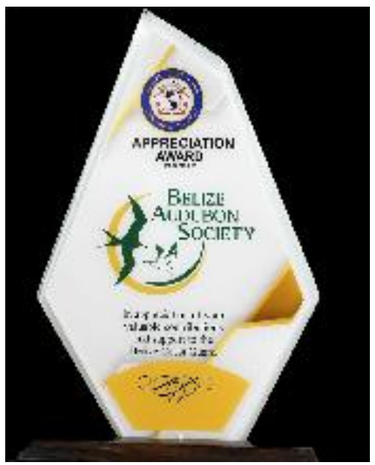




Left to right- Marty Alvarez (PA manager), Amanda Acosta (Executive Director), Shane Young (PA Directors)

This year two sites co-managed by the Belize Audubon Society were nominated for BTB's Site of the Year Award. The Cockscomb Basin Wildlife Sanctuary and the Blue Hole Natural Monument both received well deserved accolades with their nominations. The Blue Hole Natural Monument was the winner of the 2022 Site of the Year award. Our team at Half Moon Caye work rigorous hours for the safety of visitors and the conservation and research done in the area. Special thanks to all our stakeholders and the tour operators for their dedication and passion which brings them daily to work in the area.

BAS recognized by Belize Coast Guard



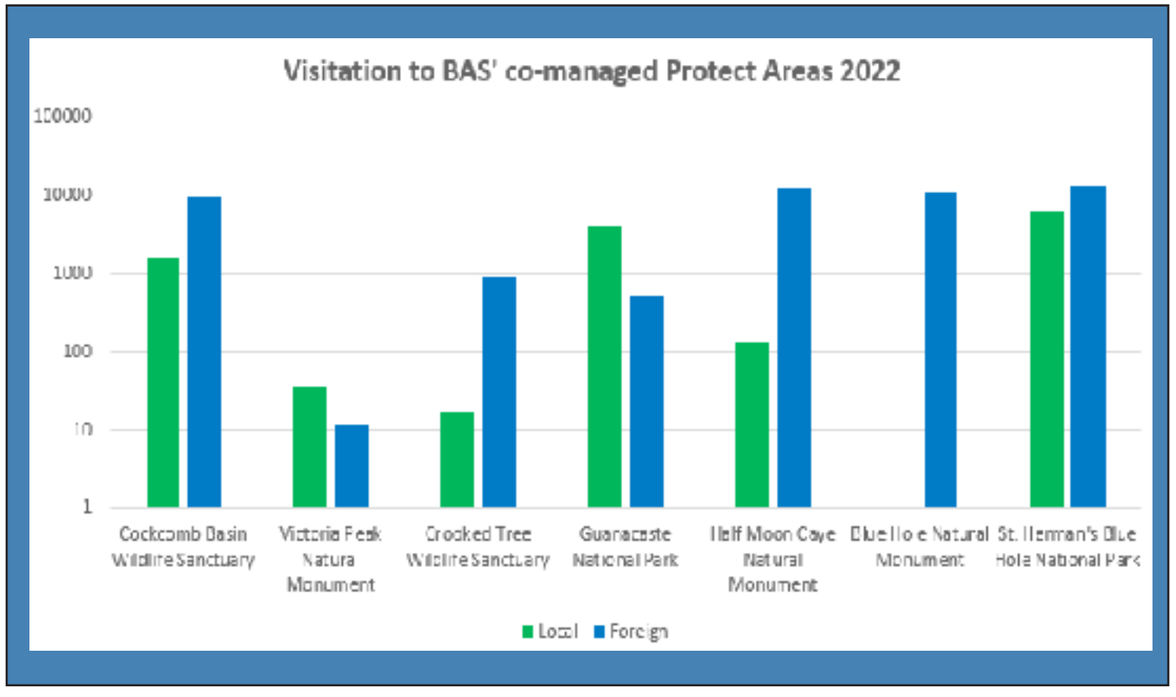
The Belize Audubon Society (BAS) was recognized at the Belize Coast Guard (BCG) 17th Anniversary celebration ceremony in November. The Belize Coast Guard has been a valuable partner to BAS and has worked along with us to protect both Half Moon Caye and Blue Hole Natural Monuments. The friendship between our organization and the BCG goes back to 2005 and we've weathered storms, worked to protect the environment and conduct patrols with our friends over the years. We appreciate Belize Coast Guard and look forward to continuing our partnership at LHRA.

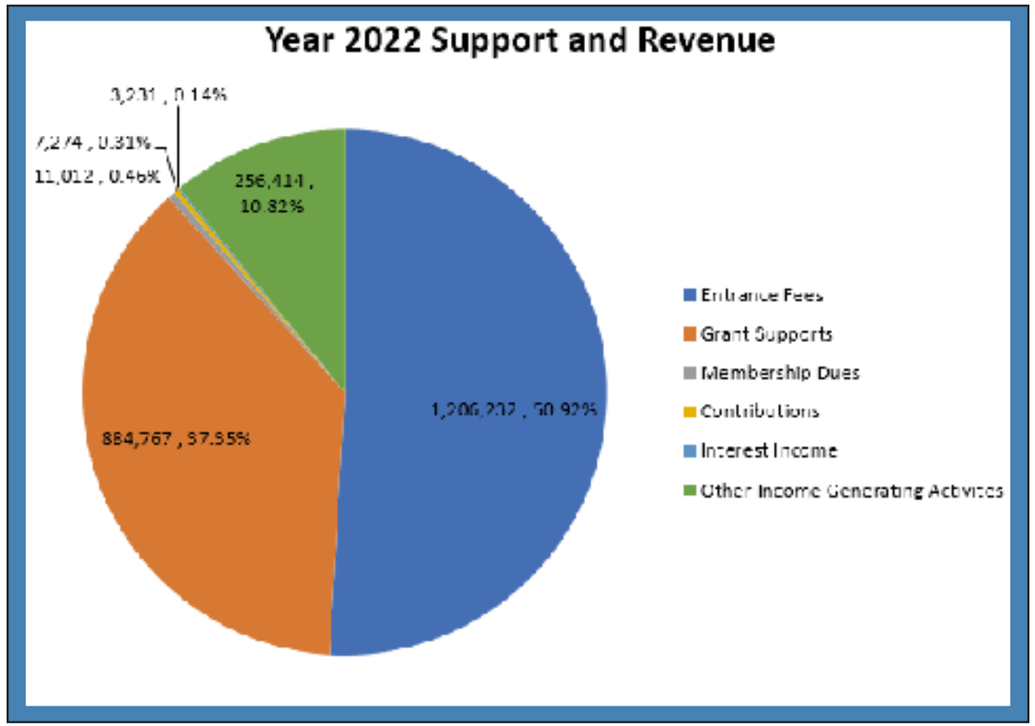
Financials

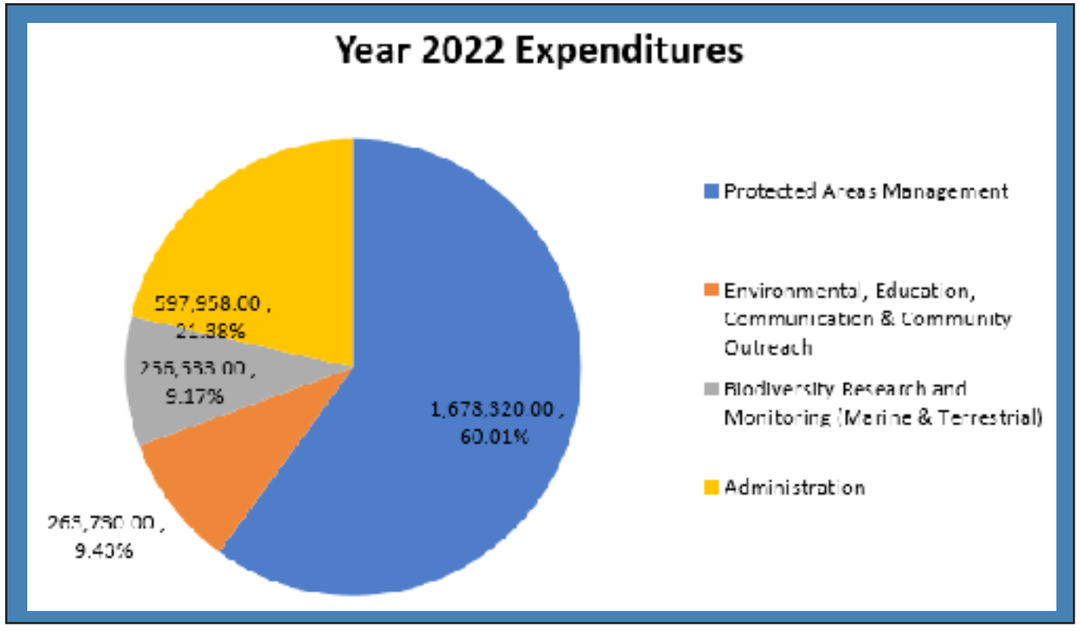


Financials

The auditing firm PKF Belize has given their unqualified opinion stating no major issues were flagged within the auditing process for the year 2022. Thus indicating that we were financially stable as of December 31st, 2022. The charts presented below are a summary of protected areas visitation statistics; and income and expenditures. Visitation numbers are reflected because entrance fees are traditionally the largest income source for the Belize Audubon Society.









Networking Entities

Association of Protected Areas Management Organizations (APAMO)
Belize World Heritage Advisory Committee
Belize Sea Turtle Conservation Network
Belize Coalition to Save our Natural Heritage
Belize Network of NGOs (BNN)
Debt for Nature Swap Oversight Committee
National Coral Reef Monitoring Network
Spawning Aggregation Working Group

Our Partners

Belize Bird Rescue
Belize Defense Force (BDF)
Belize Fisheries Department
Belize Forest Department
Belize National Coast Guard
Belize National Fire Service
Belize Port Authority
Belize Tourism Board (BTB)
Belize Tourism Industry Association (BTIA)
Belize Police Department (Special Patrol and Tourism Police Units)
BirdLife International
Buffer Communities of BAS co-protected areas
Chunox Fishermen Association
Copper Bank Fishermen Association
Corozal Sustainable Future Initiative (CSFI)
Coastal Zone Management Authority and Institute (CZMAI)
Department of Environment (DOE)
MarAlliance
National Biodiversity Office (NBIO)
Panthera (Belize)
BirdLife International
Scouts Association of Belize
Sarteneja Alliance for Conservation and Development (SACD)
Toledo Institute for Development and Environment (TIDE)
University of Belize, Facaulty of Science and Technology
University of Belize--Environmental Research Institute (UB-ERI)
Ya'axche Conservation Trust

Our Donors

Belize Marine Fund
Debt for Nature Swap (Tropical Forest Conservation Agreement)
Gulf and Caribbean Fisheries Institute (GCFI--NOAA)
Manomet
Mesoamerican Reef Fund-Belize (MARFund)
National Audubon Society – Audubon Americas Program
Protected Areas Conservation Trust (PACT)
Panthera
Rhode Island Zoological Society (RIZS) and Association of Aquarium and Zoos (AZA)
Summit Foundation
World Wildlife Fund (WWF)
European Union and the Organisation of African, Caribbean and Pacific States through the Biodiversity and Protected Areas Management (BIOPAMA) Programme

Photography

All other photos not captioned, ©Belize Audubon Society
Front Cover: Brandon Cowo & Mordicayo Mis (staff) preparing for open water dive practical
Back Cover: Red-Footed Booby Bird, Half Moon Caye Natural Monument

Belize Audubon Society

2022 Annual Report

