



ADDRESSING THE IMPACT OF SCTLD ON LIGHTHOUSE REEF ATOLL, BELIZE

-Dominique Lizama, Belize Audubon Society



CORE INTERVENTIONS



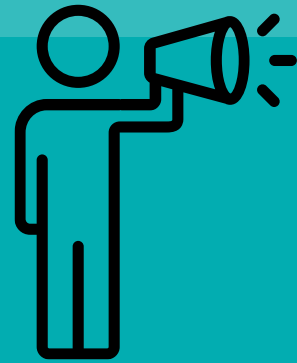
CORAL MONITORING & TREATMENT

Monitor susceptible species

Benthic assessments

Treat SCTLD afflicted corals

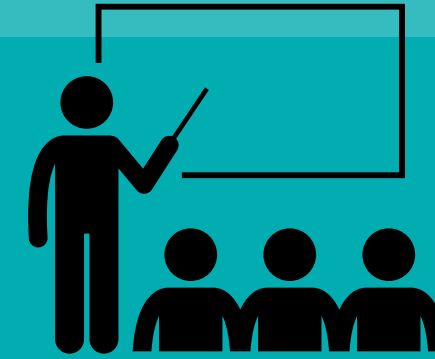
Monitor effectiveness of treatment



ENVIRONMENTAL EDUCATION & AWARENESS

SCTLD educational materials

Community outreach to users of LHRA (fishers, tourism operators, students)



CAPACITY BUILDING

Training for staff on SCTLD ID and treatment

Exposure trips for students

Open water dive certification for staff and students



DATA SHARING

Data shared with national and regional networks

Reef Monitoring

4017

coral colonies assessed at 12 sites in LHRA over 6 months

- **73%** appeared healthy
- **16%** had SCTLD lesions
- **11%** had 100% mortality attributed to SCTLD

Highly susceptible species with greatest disease prevalence were:

Maze coral-*M. meandrites*/MMEA

Smooth flower coral-*E. fastigiata*/EFAS

Pillar coral-*D. cylindrus*/DCYL





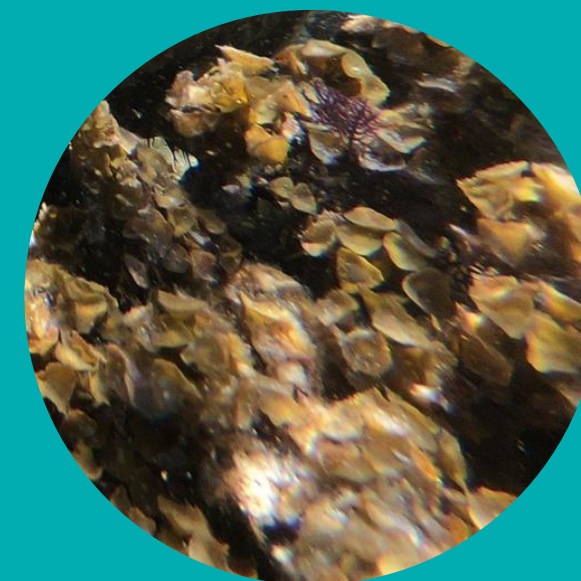
Benthic assessment

22%

live coral cover at LHRA from 16 sites



fish biomass



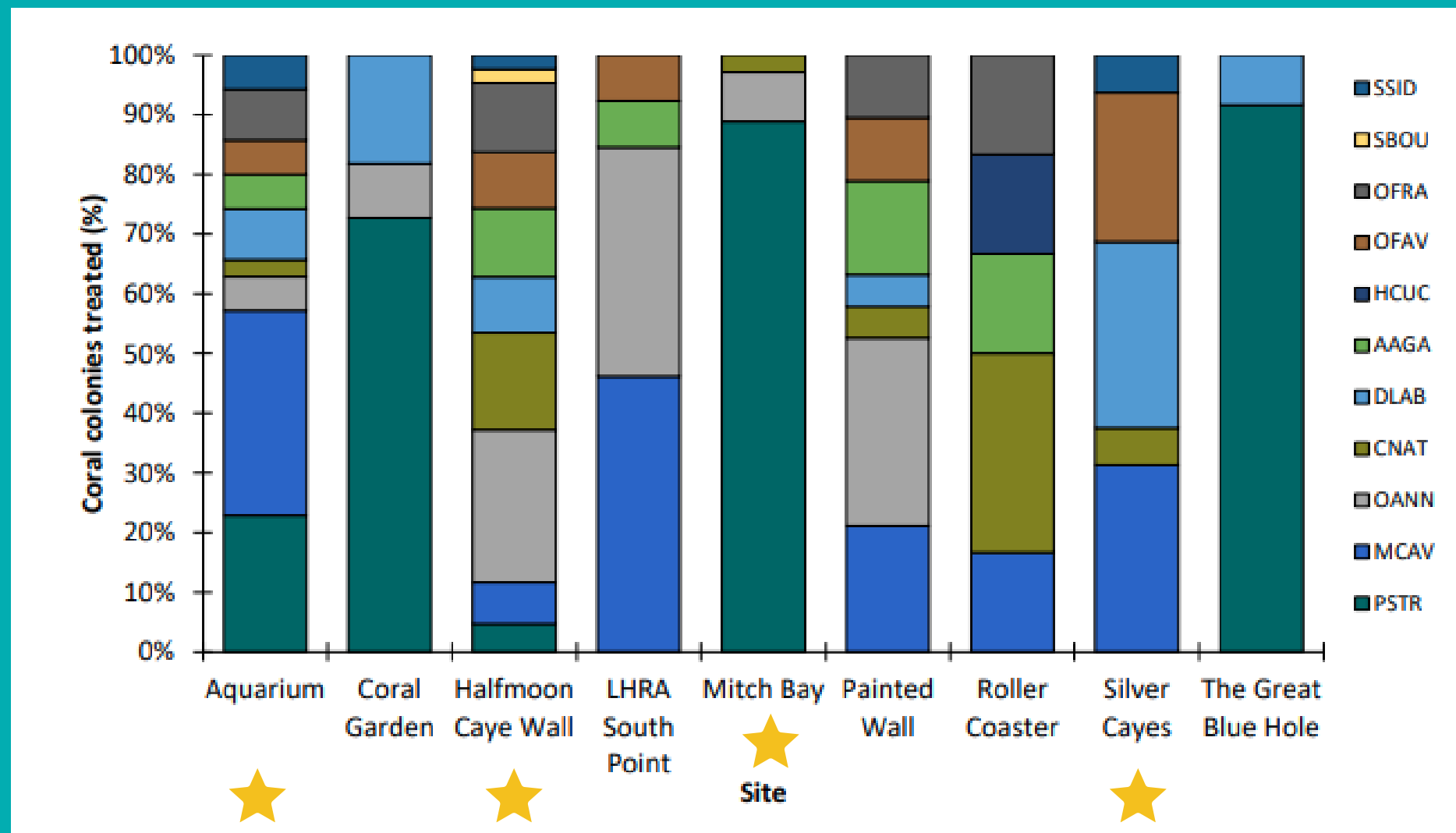
macroalgae

SCTLD Treatment

9 sites monitored and 191 SCTLD afflicted coral colonies treated

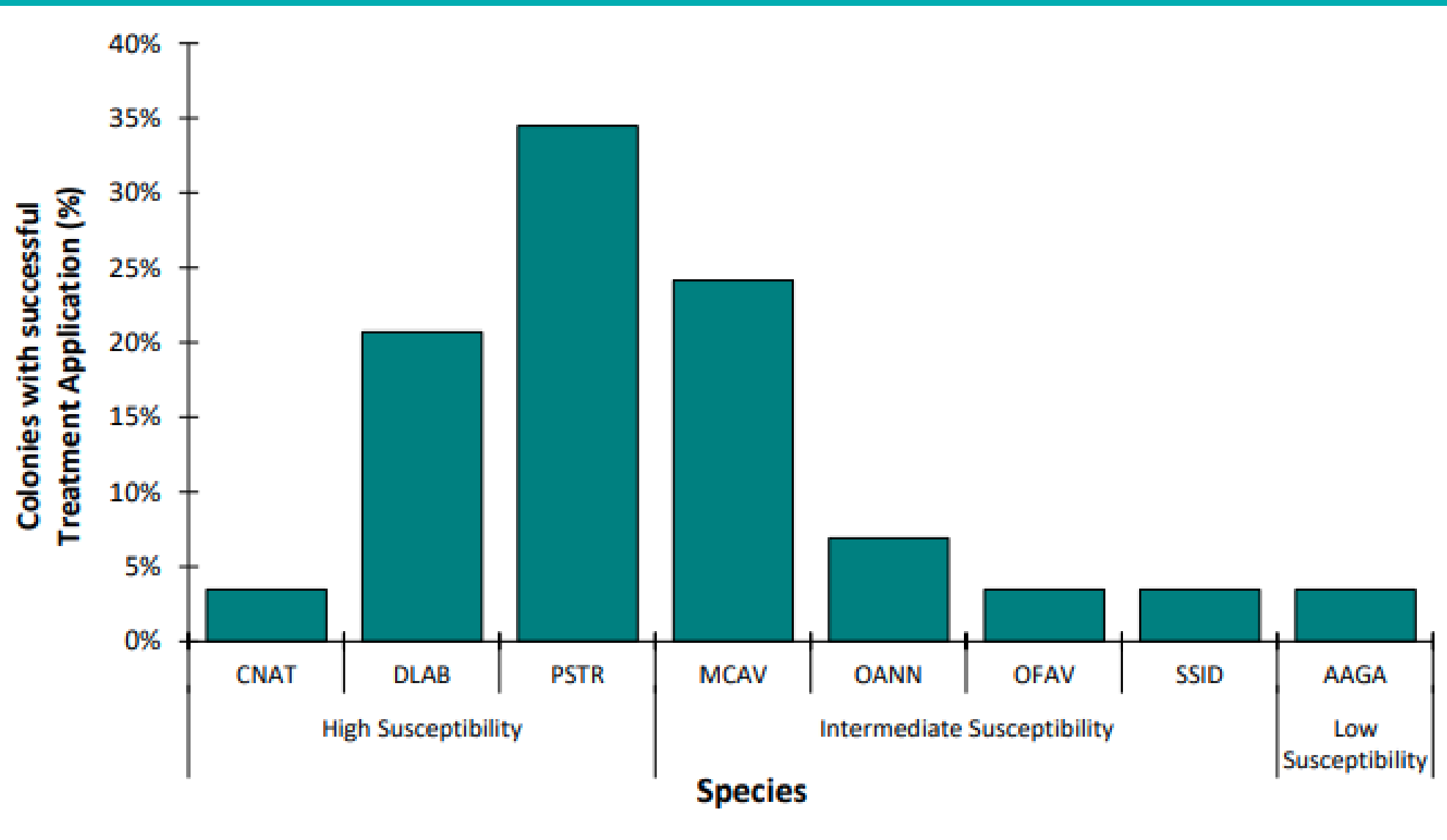
Sites selected- tourism, fishing and greater coral cover

Most abundant coral species treated: *P. strigosa* and *M. cavernosa*



Treatment Effectiveness

No. of treatments varied from 1 to 3 applications



29 colonies were documented to have had successful treatment after 2 visits, the remaining 47 were randomly treated and 22 had 3 applications



SCTLD AWARENESS

900

copies of posters, flyers and booklets printed and distributed to students, parents, tourism stakeholders, conservation partners

STONY CORAL TISSUE LOSS DISEASE

An aggressive disease spreading in the Caribbean and affecting important reef building species.

CHARACTERISTICS:

- Spreads rapidly
- Causes rapid and high mortality of stony corals affecting many species
- It is waterborne and spreads via contact
- Can be confused with other diseases, or bleaching
- Has a large geographic range
- Kills the region's largest, oldest, and most important corals
- Has an extended duration (can go on for multiple years)

TELL-TALE SIGNS OF SCTLD:

- Obvious lesions (white, linear, random)
- Tissue detachment & loss
- Bare skeleton is exposed
- Recent and transitional mortality visible

HIGHLY SUSCEPTIBLE SPECIES:

- Early onset (the species first affected during an outbreak)
- Rapid progression
- Total mortality ranging from 1-2 months for larger colonies
- Complete mortality over 1-2 months for smaller colonies
- Typically, *M. meandrites* and *D. notans* are the first to become affected at a site, followed by *C. notans*, and then the others show disease signs shortly thereafter.

It attacks stony corals NOT soft corals or branching species

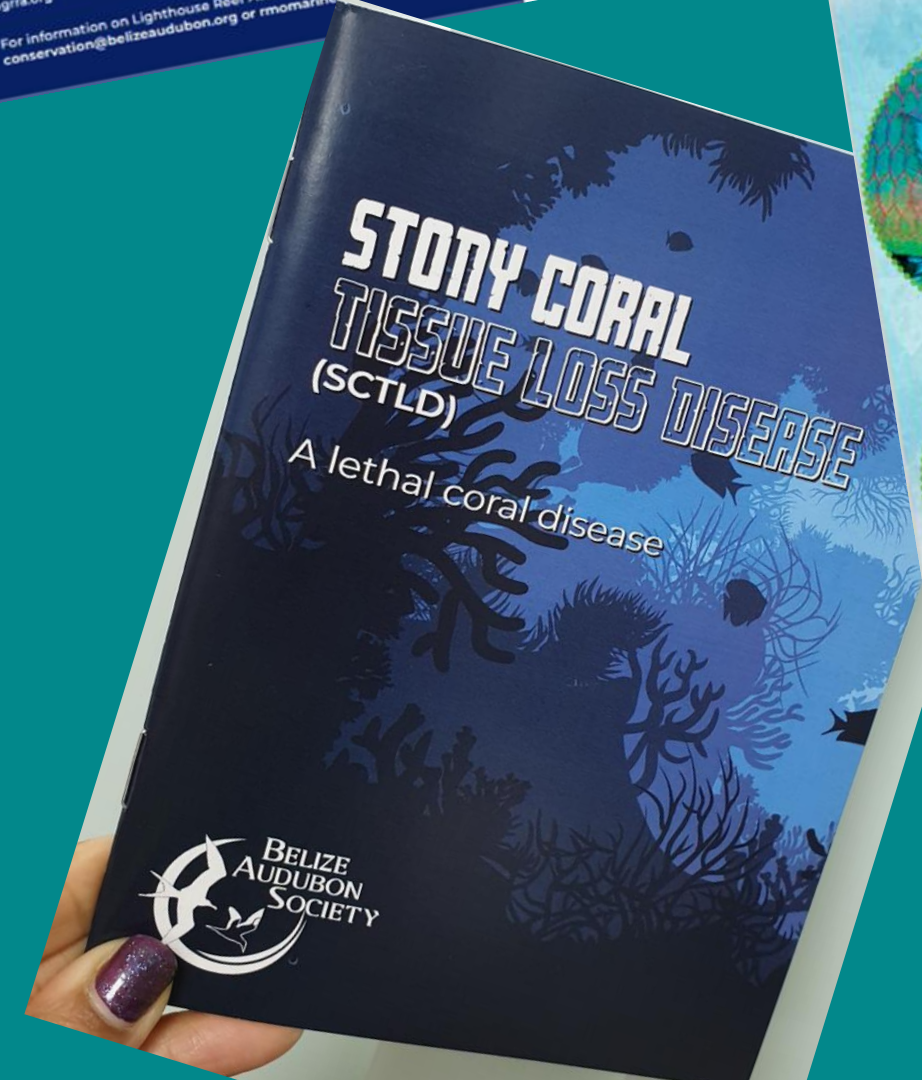
Help us monitor SCTLD
Scientists studying the disease are not yet able to pinpoint the direct cause, but it is suspected to be caused by bacterial pathogens. SCTLD is a threat to the Belize Barrier Reef Reserve System which supports the fishing and tourism industries. For more information see: <http://www.igrra.org>

For information on Lighthouse Reef Atoll contact: conservation@belizeaudubon.org or rmomarine@belizeaudubon.org



STONY CORAL TISSUE LOSS DISEASE (SCTLD)

A lethal coral disease



BELIZE AUDUBON SOCIETY

Reefs need GRAZERS!

Grazers are protected under the Fisheries Resources Act (2020) of Belize, which states "no person shall fish or have in possession any fish prescribed in the schedule of this Act". This listed grazers are:

- Parrotfish (all species)
- Surgeonfish (all species)
- Angelfish (all species)
- Triggerfish (all species)

These grazers are found within the Lighthouse Reef Atoll (including Half Moon Caye Natural Monument and Blue Hole Natural Monument) and are important to the Belize Barrier Reef Reserve System.



Photo sources:
1 Stoplight Parrotfish - Linda Pitkin
2 Queen Triggerfish - Seafishpool.com
3 Gray Angelfish - Florent Charpin
4 Ocean Surgeonfish - Lamar University

FOSTERING RESPONSIBLE STEWARDS

496

people engaged
(fishers, students and
tourism stakeholders)
during community
outreach activities



CAPACITY BUILDING



20

people received training
and their knowledge
enhanced in marine
conservation

CONTACT US



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