How to analyze monitoring data

A partnership between:

Why monitor?

Analyzing the monitoring data you collect while monitoring for stony coral tissue loss disease will allow you to determine:

- the prevalence of stony coral tissue loss disease on your reefs; and
- when to re-visit monitoring sites

Compile the data

When compiling the data, you should:

- Enter the data collected in an Excel or open source spreadsheet (Figure 1).
- Ensure there was no overlap between surveyors' monitoring sites.
- Ensure that corals were not double-counted.
- Keep a record of who collected the data

Percentage of affected corals within species / group

- Add up the number of corals within species listed as either diseased or recently dead.
- Divide the number of diseased or recently dead corals within species by the total number of corals tallied within that species
- Multiply by 100 (Figure 2)

Coral SCTLD Datasheet by Species Common Names

Diver Name: Christine, Judy, Paul		Date: July 22, 2021	Lineups from shore if no GPS:						
Site Name: Bluefields		Latitude: N 18° 09.735'	Depth Range: 20 - 30 feet		Survey Time (in mins): 30				
Site Protected? Y (Yes) or N (No)		Longitude: W 78° 03.090'	Habitat: Reef and sandy bottom		Comments:				
Group or Species		Tally Number			Photos? Y (Yes) or N (No)	Total Number of Diseased and Recently Dead Coral Colonies	Total Number of Coral Colonies	Percentage Diseased & Recently Dead Within Species	Percentage Diseased & Recently Dead Within All Susceptible Species
Code	Name	Live	Diseased	Recently Dead					
DCYL	Pillar Coral								0
MAZE	Any Maze Coral	4	5	0		5+0 = 5	4+5 = 9	5/9 X 100=56	5/23 x 100 = 22
BRAIN	Any Brain Coral, or	1	1	1		1+1= 2	1+1+1+1 = 3	2/3 x 100 = 67	2/23 x 100= 9
CNAT	Boulder Brain Coral								
DLAB	Grooved Brain Coral								
PCLI	Knobby Brain Coral								
PSTR	Symmetrical Brain Coral								
STAR	Any Star Coral, or	4	2	5		2+5 = 7	4+2+5 = 11	7/11 x 100 = 64	7/23 x 100 = 30
DSTO	Elliptical Star Coral								
MCAV	Great Star Coral								
OANN	Lobed Star Coral								
OFAV	Montainous Star Coral								
OFRA	Boulder Star Coral								
SSID	Massive Starlet Coral								
LETTUCE	Any Lettuce Coral								
OTHERS (describe)									
Total		9	8	6		19	23		22+9+30 = 61

Figure 1. Entering the data into an Excel or common source spreadsheet.

Group or Species		Tally Number			Photos? Y (Yes) or N (No)	Total Number of Diseased and Recently Dead Coral Colonies	Total Number of Coral Colonies	Percentage Diseased & Recently Dead Within Species	Percentage Diseased & Recently Dead Within All Susceptible Species
Code	Name	Live	Diseased	Recently Dead					
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Figure 2. How to calculate the percentage of affected corals within species / group.

How to analyze monitoring data

Disease prevalence of each species / group

In order to determine how the disease prevalence of each species or group contributes to the total percentage of diseased corals at a site you should:

- Add up the number of corals within species identified as diseased and recently dead
- Divide that by the total number of corals that were counted at the site.
- Multiply by 100

This should include the number of live, diseased and recently dead corals across all species and groups. (Figure 3)

Total prevalence or percentage of diseased and recently dead corals

In order to calculate the total prevalence or percentage of all the diseased and recently dead corals at the site you should:

- Sum the percentages of diseased and recently dead corals within each surveyed susceptible species and group. (Figure 4)

Enter your findings

Please report your findings to AGRRA.
There's a **video** that will demonstrate how to enter your data.

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DSTO	Elliptical Star Coral								
MCAV	Great Star Coral								
OTHERS (describe)									
Total		9	8	6		19	23		22+9+30 = 61

Figure 3. Calculating total prevalence of each species / group.

Group or Species		Tally Number			Photos? Y (Yes) or N (No)	Total Number of Diseased and Recently Dead Coral Colonies	Total Number of Coral Colonies	Percentage Diseased & Recently Dead Within Species	Percentage Diseased & Recently Dead Within All Susceptible Species
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MCAV	Great Star Coral								
OTHERS (describe)									
Total		9	8	6		19	23		22+9+30 = 61

Figure 4. Calculating the total prevalence or percentage of diseased and recently dead corals.