Coral bleaching and mortality in the Chagos Archipelago, 2024

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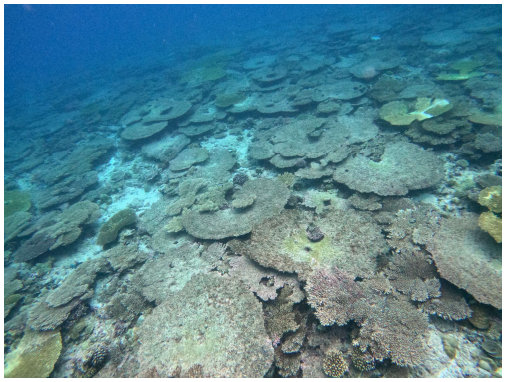
Bleaching, Ile Diamant, May, 2024



Widespread mortality, Egmont Atoll, November, 2024

January, 2025

Abstract

A coral bleaching event took place in the Chagos Archipelago from April to June, 2024. Some 26 independent observations across the archipelago noted highly variable bleaching ranging from 5-85% of all coral cover, with an archipelago-wide mean of 35%. A subsequent survey in November and December 2024 assessed recent coral mortality which may be largely attributed to this bleaching event. Some 51 observations were made across all five atolls and noted a range from 0-95% mortality, but with a mean mortality across the Archipelago of 23%.

Contents

Background

In April-May 2024, high water temperatures were observed in the Chagos Archipelago, driving coral bleaching events. A small number of observations of these events were documented, with a more extensive review of subsequent coral mortality undertaken in November and December. (Annex 1 gives some further details of the challenges of identifying bleaching-related mortality.)

Regional summary data show that sea surface temperatures were high, with a maximum SST anomaly of a little over 2°C, and with bleaching alert levels reaching AL2 at least in the western parts of the Archipelago and degree heating week metrics at 7-10 DHW, again highest in the western areas. Summary maps showing summary data on these impacts is provided in Annex 2.

Methods

Simple visual assessments of coral bleaching and subsequent mortality were made following the NOAA Coral Reef Watch Monitoring Guidelines. These include a simple 4-point scale of intensity, for both bleaching and mortality. Observers also make more direct assessments of percentage bleaching /mortality. In all cases photos (or videos) of the substrate were taken and are available for independent assessment.

Bleaching surveys were largely conducted from 27 April until 9 May 2024, with a few observations until 3 June. The start of these surveys coincides with the middle period of the temperature anomalies, and it is possible that bleaching may have continued or expanded after these observations. Observers (Marion Bourasseau, Isha, and Lindsey Hollingsworth) were restricted to snorkel surveys, but included observations across 23 lagoon and outer reef sites in three atolls.

Further snorkel surveys were undertaken 29 August until 26 September 2024 by Marion Bourasseau, at 15 sites in the northern atolls. At this point bleaching had almost finished, but both bleaching and recent mortality were observed.

A more comprehensive review of recent mortality was conducted from 11 Nov until 7 December, 2024 (primarily by Mark Spalding). Visits were made to 22 reef locations across all five atolls of the Chagos Archipelago. Locations included seven lagoon sites for which basic lagoon reef monitoring has been underway for a number of years, as well as further lagoon sites and outer reef slopes (down to 15m). At seven outer reef sites and one deeper lagoon site observations were made while diving. Remaining observation were taken while snorkelling. At most deeper sites two or three separate observations were made at different depths, giving a total of 39 separate assessments. A summary of mortality by atoll is given in Annex 3.

The endemic Chagos brain coral *Ctenella chagius* was also sought out in two known sites, as this species has been highly impacted by past bleaching[1] and has become critically endangered.

[1] Sheppard, C., A. Sheppard, and D. Fenner. 2020. Coral mass mortalities in the Chagos Archipelago over 40 years: Regional species and assemblage extinctions and indications of positive feedbacks. Marine Pollution Bulletin **154**:111075. http://www.sciencedirect.com/science/article/pii/S0025326X20301934

Summary observations

A significant coral bleaching event took place in 2024 across the Chagos Archipelago. While bleaching onset was not recorded it was likely in early to mid April. Observations of bleaching from late-April and early-May, which was likely close to the peak, suggests rates of bleaching between 5% and 85% of all corals (median 30%, average 42%). Bleaching was still ongoing until 3 June, with some early signs of mortality. Further observations in September indicate that bleaching levels had dropped to 1-2% even at the worst affected sites, and that widespread mortality had occurred. Table 1 gives a brief summary of bleaching and mortality obsevations, with a full set of observations laid out in Annex 4.

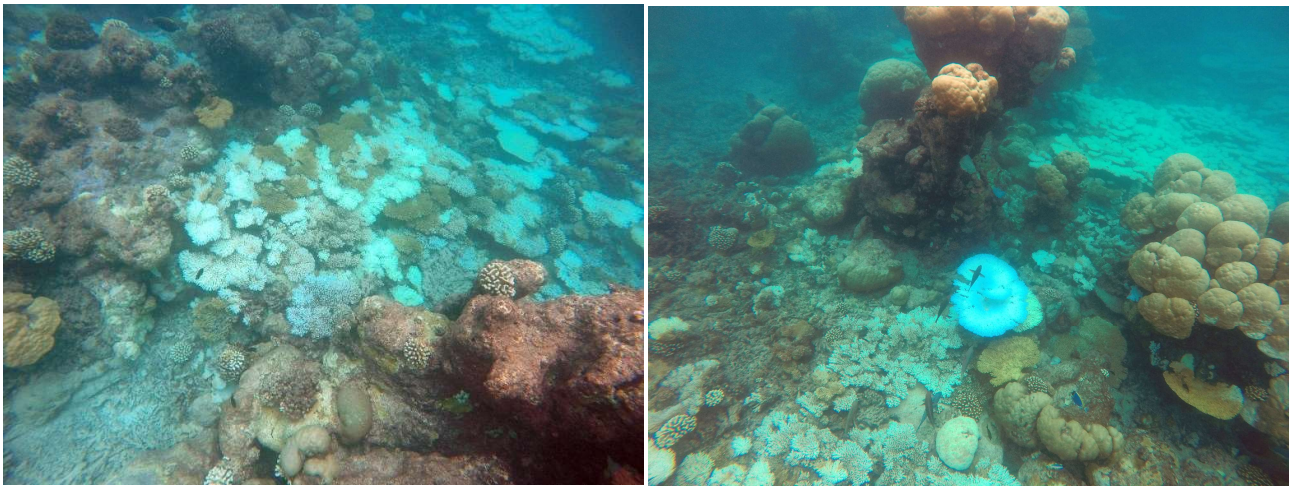
Table 1: Summary of bleaching observations by atoll, separating lagoon reefs from outer reef slopes. Full data in Annex 4 includes individual site (and depth) observations.

Atoll Lagoon or oceanic	**Average bleaching**	**N**	**Average mortality**	**N**
Diego Garcia	**33%**	**3**	**17%**	**20**
Lagoon reefs	40%	2	28%	5
Ocean reefs	20%	1	13%	15
Egmont			**23%**	**9**
Lagoon reefs			0%	1
Ocean reefs			25%	8
Great Chagos Bank	**35%**	**2**	**1%**	**2**
Lagoon reefs	35%	1	1%	1
Ocean reefs	35%	1	0%	1
Peros Banhos	**53%**	**10**	**45%**	**13**
Lagoon reefs	58%	7	46%	9
Ocean reefs	45%	4	44%	4
Salomon	**20%**	**11**	**11%**	**7**
Lagoon reefs	17%	6	13%	5
Ocean reefs	24%	5	6%	2
Grand Total	**35%**	**26**	**23%**	**51**

In assessing overall numbers, as summarised above and in Annex 4, we have used the peak bleaching numbers from April-May, and have utilised mortality data from the later surveys. Where data on mortality are available from both September and November, the latter is used, but only three sites were visited on both occassions and all show very close corellation.

Overall, across all sites there appears to have been a average mortality of 23% of live coral cover (median 15%), with a range from zero (NW Lagoon, Egmont Atoll) to 95% (a lagoon knoll in Western Peros Banhos Atoll). Some sites with particularly high initial coral cover also suffered higher than average proportional losses and so these figures may be conservative for estimating total coral loss across the archipelago. This is lower than losses from other recent bleaching events, however certain sites have suffered considerable mortality. There appears to be notable variance in mortality across multiple scales, between atolls, within atolls, across depth and exposures. Peros Banhos appears to have been hit hardest, and this would corellate with the apparent weighting of higher temperatures to the north-west of the Archipelago.

Multiple colonies of the Chagos brain coral were found at a key site for this species in Middle Brother. Only one of ~20 colonies appeared to have suffered likely bleaching related mortality, with partial loss of live coral on the upper surface (see Annex 3 Great Chagos Bank). A dive on Diego Garcia at a know location for this species only found one colony, although this too appeared to be in good health. Photographs have been shared with researchers working on this species.



Bleaching photo from Ile Anglaise (left) in Peros Banhos on 8th May 24.

Discussion

A 23% average coral mortality is a notable impact, although it is likely to be considerably lower than past bleaching related mortalities. Earlier mortalities, notably in 2016, were linked to more extensive and continuous high temperatures, with degree heating weeks metrics reaching over 17[2] (Head et al. 2019), compared to a maximum of 9 or 10 in 2024. In most places, by November, there were clear signs of recovery in the form of active growth of survivors, re-sheeting, notably of many massive corals, and recruitment. In the unlikely absence of future bleaching impacts it might only take a few years for a recovery towards coral cover similar to that at the start of 2024.

In general, the very low levels of local pressure on the reefs should greatly enhance recovery, and most reefs show very high levels of grazing fish such as parrotfish and surgeonfish which can be essential for creating viable spaces on the reef for new corals to settle and grow.

The impacts of this loss on wider communities have not been assessed. Previous studies have suggested that, while the overall reef structure remains, net fish biomass can remain high and, with only 25% mortality and active coral growth it is possible that biomass impacts will be minimal. The smaller number of species that are wholly dependent on live coral cover are more directly impacted, however on almost all reefs we observed obligate corallivores, including certain butterflyfish and the threatened harlequin filefish *Oxymonacanthus longirostris*. The latter, in particular, has been badly impacted during previous mass mortality events.

[2] Head, C. E. I., D. T. I. Bayley, G. Rowlands, R. C. Roche, D. M. Tickler, A. D. Rogers, H. Koldewey, J. R. Turner, and D. A. Andradi-Brown. 2019. Coral bleaching impacts from back-to-back 2015–2016 thermal anomalies in the remote central Indian Ocean. Coral Reefs. https://doi.org/10.1007/s00338-019-01821-9

Looking at individual sites (Annex 3 and 4) the story is more variable, and recovery patterns may be similarly variable. Near total mortality on the lower parts of the lagoon knoll in Peros Banhos will mean that this reef will have few surviving corals for re-growth, and will rely solely on recruitment from reefs some distance away. By contrast the apparent complete survival of the coral in NW Egmont lagoon is of considerable interest, especially in comparison to the significant loss of coral on the upper reef slope on the adjacent outer reef. This site did appear to have suffered considerable losses in the previous bleaching event, but has increased from 23% to 71% in seven years, but always just a monospecific cover of branching *Acropora*.

The survival of the Chagos brain coral *Ctenella chagius* is a highly positive observation. This was first reported to have suffered considerable losses down to 20m in the 1998 coral bleaching, with further losses following later bleaching events[3] (Sheppard et al. 2001).

Longer-term recovery from past events in Chagos has been variable, with some locations, including outer reef sites and some of the lagoon monitoring sites, showing very limited recovery even after several years. It is not clear whether this is driven simply by a lack of recruitment, or whether other factors may be at play.

Overall, these repeated mass-mortality events appear to be leading to an increased variability of coral cover across the archipelago. Sites with reduced long-term coral cover are likely to have reduced biodiversity and productivity. They may also become locations of net erosion, through a combination of natural processes of physical erosion and bioerosion. This, in turn, may lead to increased wave impacts on adjacent land, and potential decreases in sediment and rubble production essential to island growth and maintenance.

It is important to try to better understand these processes in areas of particular importance either for human use or biodiversity. For example, the rapidly eroding islands of Middle Brother and West Island are critical for nesting birds, but erosion is significantly reducing their size, year-on-year. Meanwhile areas of ongoing erosion on the main island of Diego Garcia (Mile 10 ½, Northern Runway, Golf Course, and on the eastern shore the Southern Narrows where there is a risk of an island breach) could have significant implications for the security of human activities and infrastructure over the longer term.

The extent of coral reefs of the Chagos Archipelago makes the undertaking of a comprehensive assessment of coral cover and health an impossibly costly task, however the rapid assessment provided here indicates the importance of widespread sampling. Given the variability in condition, a simple gathering of just a few observations could have led to considerable under- or over-estimation. Even the current sampling, being both simplistic and geographically restricted runs this risk, and there remains insufficient information to call out patterns or possible drivers.

There would be considerable value to increasing the geographic and temporal scope of simple, observational sampling. The bleaching observations in this report were limited, and it would certainly have been helpful to have regular observations to better understand onset and duration of bleaching, and background coral cover estimates. The quantification of recent mortality would also be greatly simplified if undertaken within a shorter time-frame from the bleaching event. Such work should be done by the Environment Officers, but also encouraged by visiting science groups where appropriate. It

[3] Sheppard, C., A. Sheppard, and D. Fenner. 2020. Coral mass mortalities in the Chagos Archipelago over 40 years: Regional species and assemblage extinctions and indications of positive feedbacks. Marine Pollution Bulletin **154**:111075. http://www.sciencedirect.com/science/article/pii/S0025326X20301934
Sheppard, C. R. C., M. Spalding, C. Bradshaw, and S. Wilson. 2001. Reef condition, coral growth and erosion, and fish populations on Chagos reefs, 2001.

should be enabled by the BIOT Administration, for example making better use of Outer Island Security Patrols to ensure they are prioritising and supporting such work.

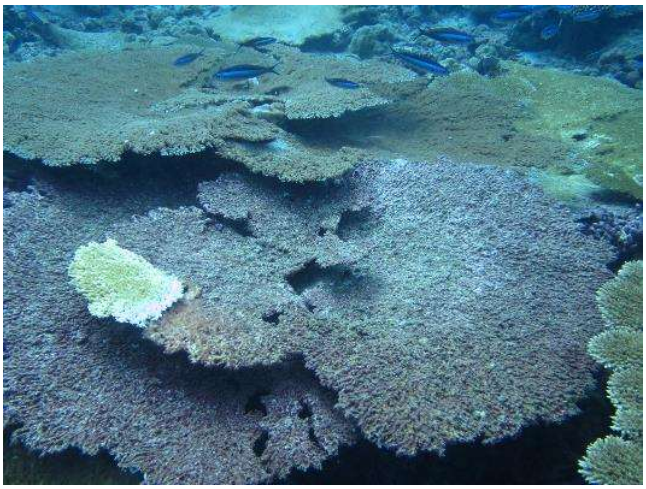
Acknowledgements

We would like to thank Caroline Gittins, Giverny Helliar and Roger Malone, for their support in the field, and to Catherine Head for review comments. Thanks also to the captains and crew of the BIOT Patrol Vessel Grampian Endurance and the coxswains who enabled field research in the northern Atolls, and to the BIOT Administration staff, and to Port Ops and MWR staff in Diego Garcia.

Healthy coral cover, Cannon Point, Diego Garcia, December, 2024

Annex 1: Identifying bleaching-related mortality

Determining recent mortality becomes harder with time. Firstly, the identification of recent mortality can be challenging, but in addition to this, recent mortality may be caused by other factors than bleaching. An example of the latter was a substantive die-off of plate *Acropora* in Chagos in 2014: this led to widespread losses prior to the major coral bleaching event of 2015/16, although subsequent descriptions of coral loss have largely ignored this impact.



Disease took a major toll on plate corals across Peros Banhos in 2014, before the 2015 coral bleaching, but most of the subsequent mortality was blamed on the bleaching.

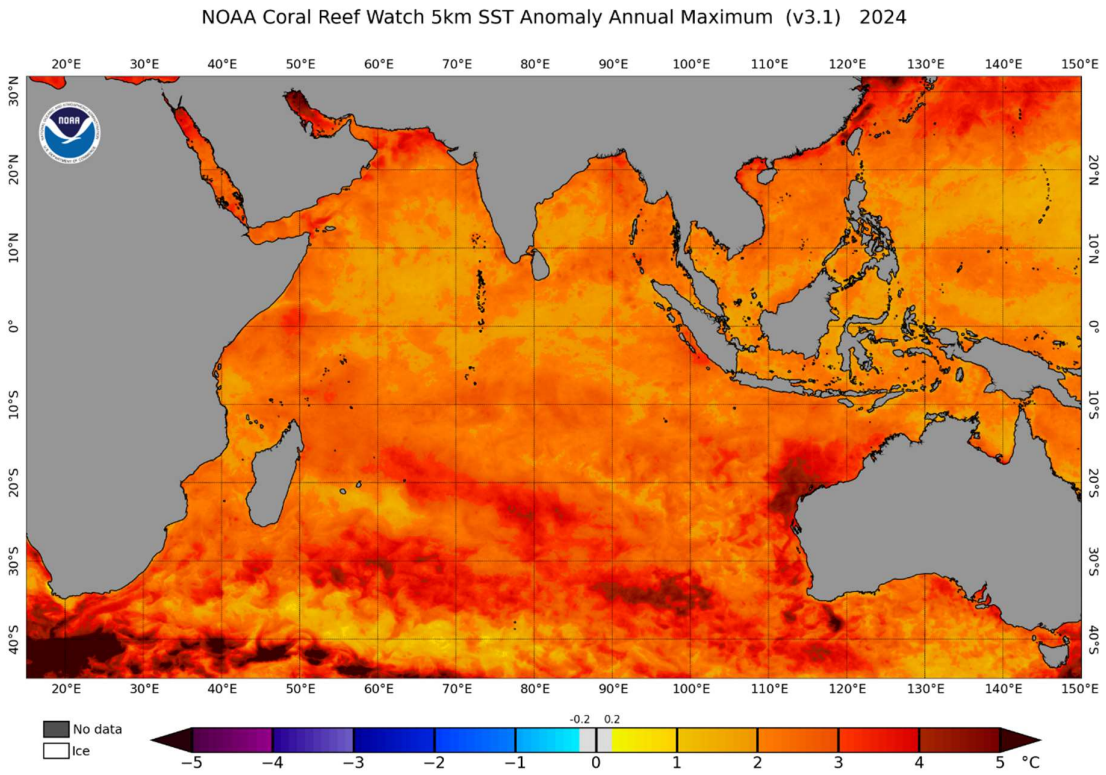
In terms of recognising recent mortality, it is noteworthy that in the 6-7 months since the observed 2024 bleaching, the dead coral has already been colonised by crustose coralline algae or algal turf. Where mortality is partial across a colony is it relatively easy to identify recent death by the comparable size of dead versus living coral of the same structure. Such colonies are critical in informing the diver of the state of likely recently dead corals where the entire coral colony has been lost. Even so, recently dead massive and encrusting corals may be easily overlooked, and it is likely that the estimates of recent mortality below are conservative.

Partially dead corals (Ile Bois Mangue W, Peros Banhos), showing the similar size of living and dead coral, a useful sign that death is recent, and informing the observer of the likely state of coral in fully dead colonies.

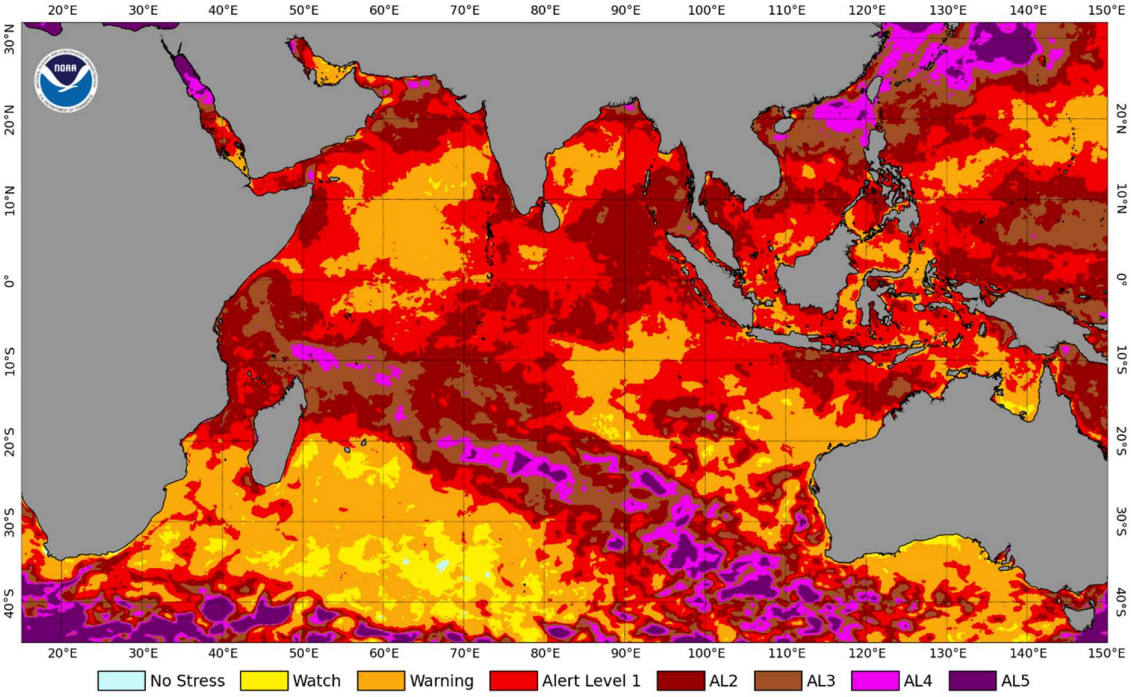
In some settings, including lagoon reefs at Ile Boddam and in Orient Bay, apparently prolific growth of algae and possible more rapid coral growth may further challenge the identification of recently dead colonies. Thick algal growth can obscure the recently killed coral, and in some places as the living components of partially dead corals appear have begun to grow above the areas of recent death.

Partially dead corals in Boddam Lagoon. Here there appears to have been some coral growth since the mortality, but this is likely due to highly suitable conditions for growth at this site.

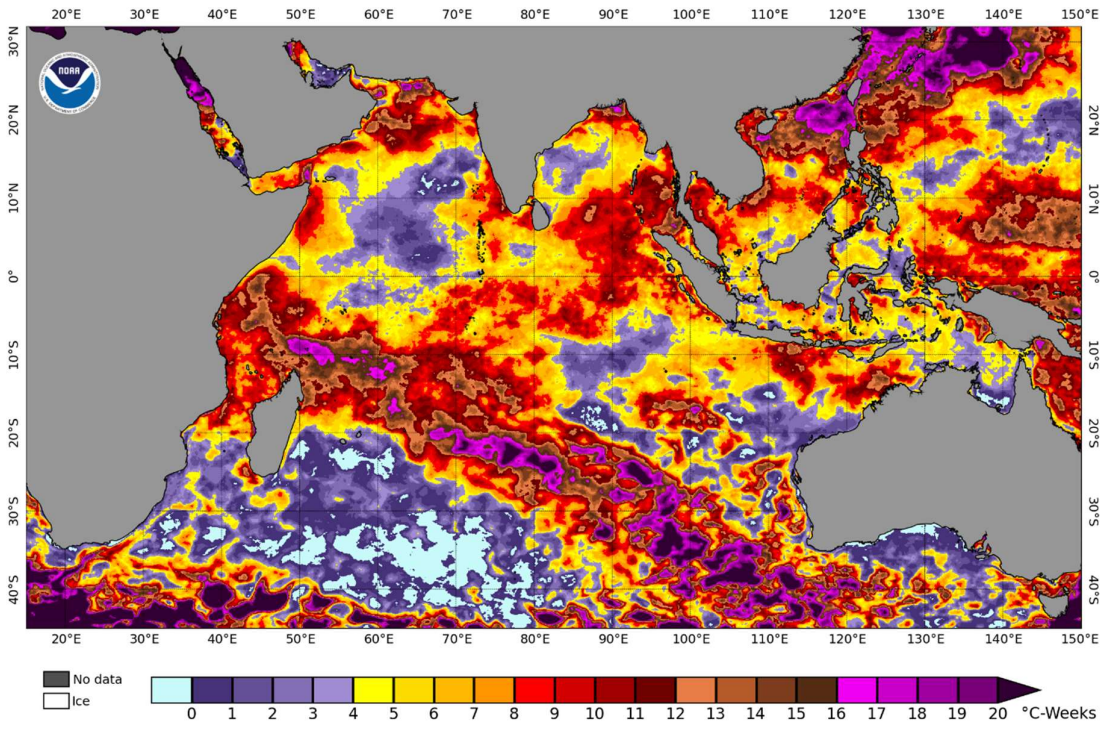
Annex 2: NOAA Coral Reef Watch Summary Maps



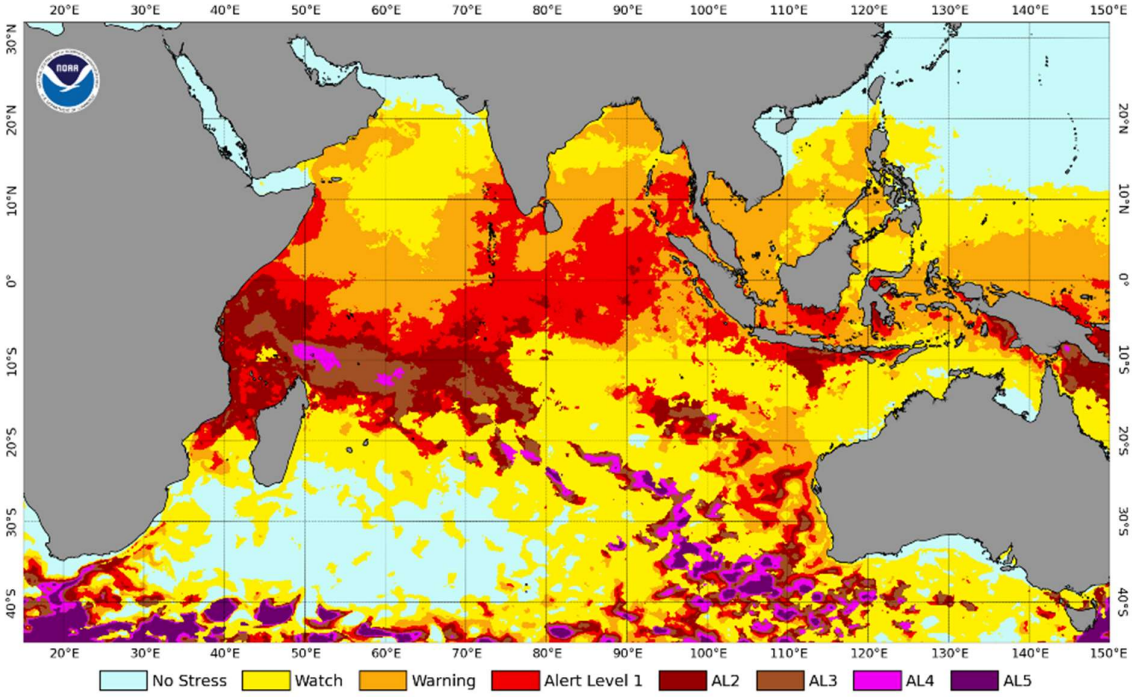
NOAA Coral Reef Watch 5km Bleaching Alert Area Annual Maximum (v3.1) 2024



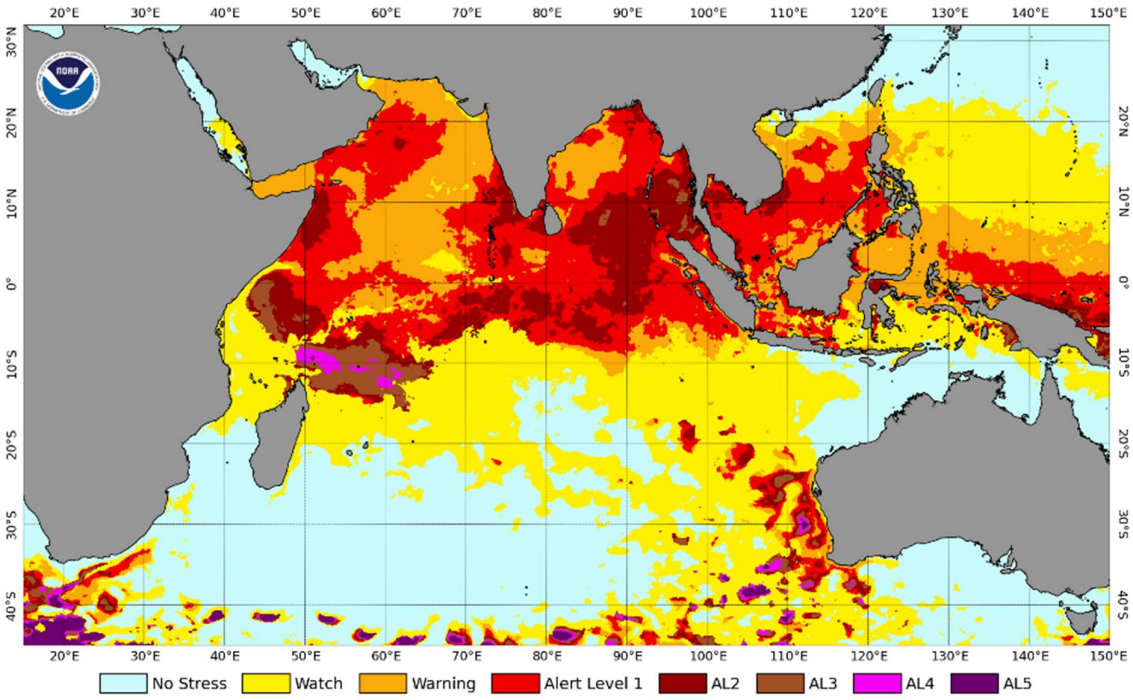
NOAA Coral Reef Watch 5km Degree Heating Week Annual Maximum (v3.1) 2024



NOAA Coral Reef Watch 5km Bleaching Alert Area Monthly Maximum (v3.1) Apr 2024



NOAA Coral Reef Watch 5km Bleaching Alert Area Monthly Maximum (v3.1) May 2024



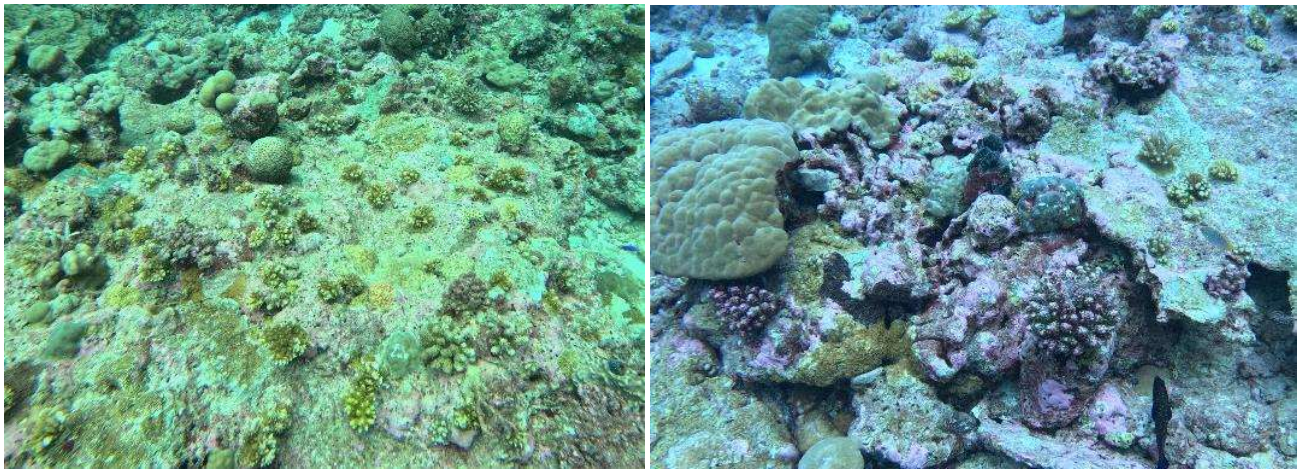
Annex 3: Atoll mortality summaries

Egmont

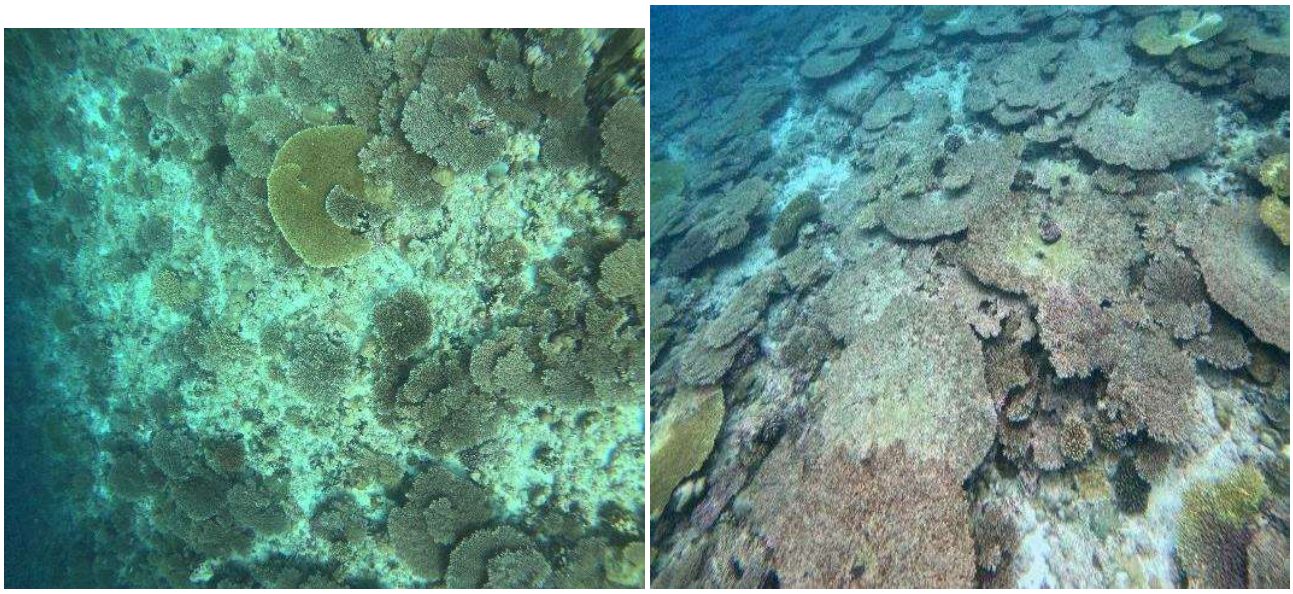
The lagoon survey site showed no signs of mortality, still having near monospecific branching Acropora at 70% LCC. This site was also unimpacted by previous mass bleaching events.

West outer had low levels or mortality across depths and high levels of recent (1-2years) recruitment

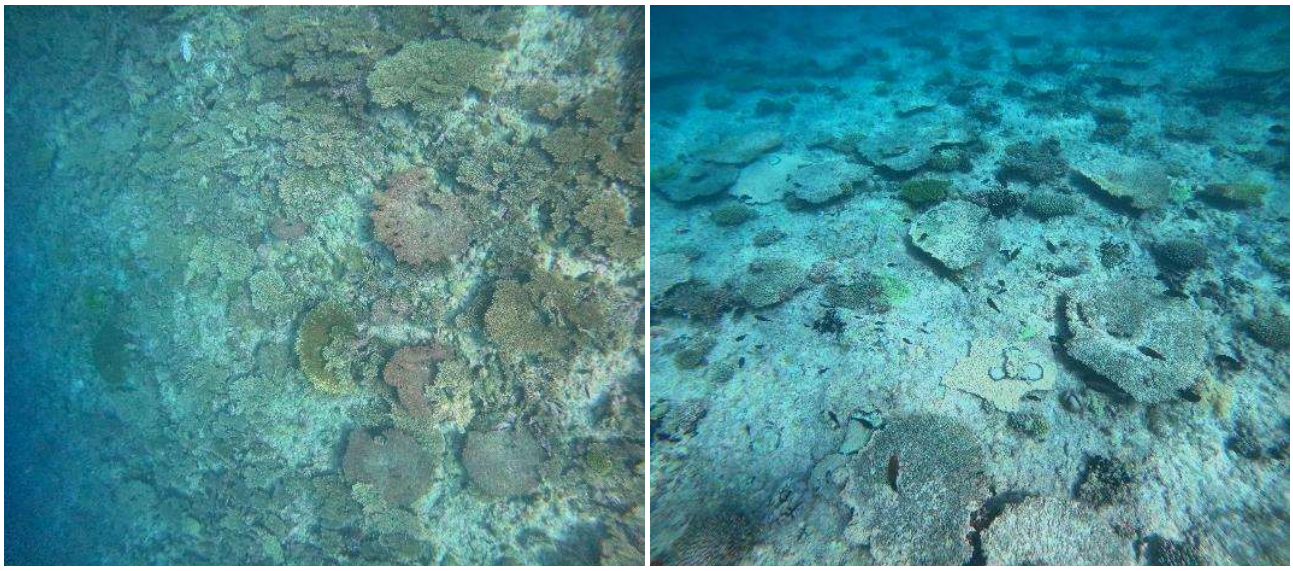
North coast was a mixed story, but with quite high mortality in the shallower water – up to 60%. Mortality of plate Acropora was notable, though far from total, and some disease. In shallowest upper reef slope most of the dominant digitate coral was dead.



Egmont W: Left - recruitment at 10m, Right - higher coral cover, dead digitate corals showing cover of CCA



Egmont N: Left - coral cover above drop-off. Right - area of extensive dead plate coral at ~8m



Egmont Manta Alley: Left - lower reef slope with mostly healthy branching corals but notable losses of plate corals. Right - at 3m, transitioning from plate to digitate corals, very high mortality.

Peros Banhos

Lagoon reefs:

Long-term monitoring at Ile Vache Marine had ~20% mortality in shallower waters, but massive die-off, mostly of plate corals below 5m and down the drop-off. Some massive/sub-massive also showing top-burn. Older massives which died and have patchy recovery seem to have survived.

Lagoon knoll in SE lagoon showed near total mortality at 8-10m, nearly all plate, but some branching, and 75% mortality above 7m, with the appearance of mostly living massives

Back reef to south of Ile Longue had lower mortality at perhaps 15%, at 2-4m, on a base of low original coral cover. There is little coral cover deeper than this at this site.

Peros Banhos, Vache Marine: lower reef slope with heavy mortality below 5m. Right - – continued survival of massive coral that had suffered partial mortality, probably in 1998, but has recovered and continued to grow in surviving patches in subsequent years (MS has 2018 photo from same colony).

Lagoon knoll: Left - at 9m, Right - at 6m

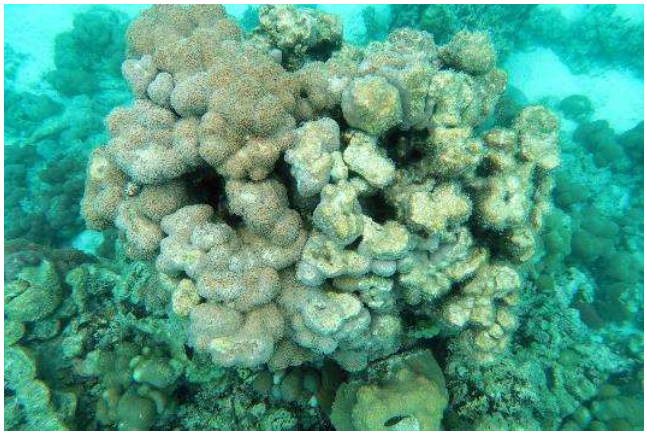
Ocean reefs:

Parasol showed mixed mortality in deeper reef (top of wall at 10-15m, but higher, about 50% in wide coral gardens of lower reef slope. Nearby at Ile Bois Mangue (W) mortality was much higher

Outer reefs of N Peros Banhos: Left - is lower reef slope at Parasol. Right - is nearby at Ile Bois Mangue W.

Salomon

Challenging conditions only allows an assessment of lagoon reefs near Boddam. Many colonies showed partial mortality, notably on the tops of many massive corals



Ile Boddam, Salomon lagoon: mixed mortality across a large colony (other photos in introductory section)

Great Chagos Bank

Middle Brother

Impact was almost undetectable, although dominance of *Heliopora* may mask some losses as this species often shows die-off on lower parts of actively growing colonies. Small losses on some massives. In a dive around the deeper edges of two lagoon knolls (5 and 6) to visit known *Ctenella chagius* some 20 colonies were observed, and only one showed possible signs of recent partial mortality.

Chagos brain coral, possibly showing bleaching induced mortality on its upper surface,

Diego Garcia

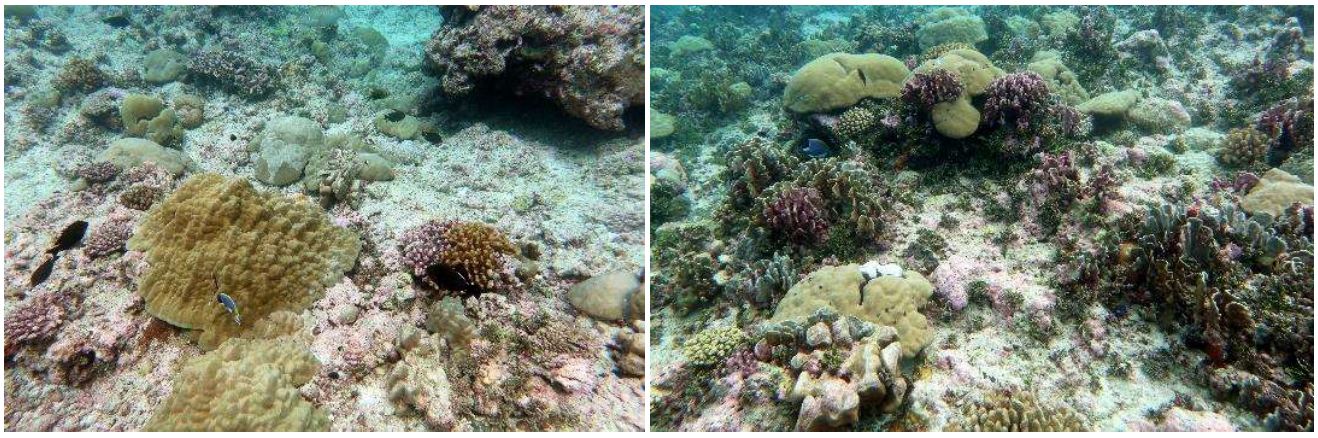
Lagoon reefs

A very mixed story with two outliers. Jake's Reef, and the west, and the site furthest into the lagoon, but formerly with remarkably high coral cover has suffered very large losses, perhaps 60%. By contrast on the eastern side, Orient Bay has 70% LCC and while there were signs of recent mortality, these were estimated at 3%. Both of the long-term monitoring sites had notable mortality at 20 and 40%, while the final monitoring site at Middle Island had 15% mortality.

Lagoon, DG: Widespread losses at Jake's place across all coral species, estimated at 60% mortality

Ocean reefs

Sites include those facing aspects from west to north-east. All showed some signs of mortality, ranging from 5% to 35%, with higher values typically in the shallower parts of the middle to upper reef slope. A possible pattern appears to show higher mortality along the east coast where the two sites both had a north-easterly aspect (prevailing winds prevented access at other sites), and had an average mortality of 20%, while the average for the remaining sites was only 8%.



East coast, DG: Left - Horsburgh bay above 7m had an estimated 35% mortality. Right - Cust point had an estimated 15% mortality on the lower reef slope (photo shows some top-dying on Porites in foreground and some dead blue coral Heliopora to the rear).

Annex 4 – Site summary data

Summary data from all sites visited in April-May coral bleaching surveys and/or in November-December mortality surveys. Sites or numbers in red are from the bleaching surveys, while all other data is from the mortality surveys. For clarity cells are left blank for bleaching observations during the mortality surveys (there was zero bleaching in November and only residual bleaching in the September surveys), while mortality assessments are left blank for the bleaching surveys (very low levels of mortality were recorded as a few sites, but these are not included).

Bleaching and mortality codes are based on NOAA Coral Reef Watch guidelines (0 No bleaching; 1 Mild (1-10% bleaching); 2 Moderate (11-50% bleaching); 3 Severe (>50% bleaching); and 0 No new mortality; 1 Mild (1-10% mortality); 2 Moderate (11-50% mortality); 3 Severe (>50% mortality)). Percent beached or mortality statistics are estimates of total proportion of live coral cover or, in the case of mortality, original live coral cover (LCC). In turn, original live coral cover is simply a visual estimate by the lead author, based on the combined estimate of current living cover and recent mortality.

Atoll	Site name	Lagoon / ocean	Aspect	Lat	Lon	Depth	Bleaching severity	Percent bleached	Mortality code	Percent mortality	Original LCC
Diego Garcia	Jake's Reef	L	E	-7.277	72.377	0.5-3m			3	60%	90%
Diego Garcia	Marina	L	E	-7.272	72.375	1-3m	3	75%	2	20%	60%
Diego Garcia	Middle Island	L	S	-7.240	72.407	1-3m			2	15%	11%
Diego Garcia	Orient Bay	L	W	-7.244	72.447	1-2m			1	3%	70%
Diego Garcia	UH 7/8	L	E	-7.260	72.381	0.6-2.5 m	1	5%			
Diego Garcia	UPH6	L	E	-7.263	72.379	1-2m			2	40%	5%
Diego Garcia	Barton Point	O	N	-7.234	72.442	9-12m			2	12%	20%
Diego Garcia	Barton Point	O	N	-7.234	72.442	5-8m			2	10%	10%
Diego Garcia	Barton Point	O	N	-7.234	72.442	13-17m			1	6%	8%
Diego Garcia	Cannon Point	O	NW	-7.259	72.372	10-15m			2	10%	8%
Diego Garcia	Cannon Point	O	NW	-7.259	72.372	5-10m			1	8%	10%
Diego Garcia	Cust Point N	O	NE	-7.284	72.486	4-7m			2	20%	30%
Diego Garcia	Cust Point N	O	NE	-7.284	72.486	10-15m			2	15%	5%
Diego Garcia	Cust Point N	O	NE	-7.284	72.486	7-10m			1	9%	40%
Diego Garcia	East Island Outer Reef	O	N	-7.225	72.419	3-8m			1	10%	8%
Diego Garcia	Horsburgh Bay S	O	NE	-7.370	72.486	4-7m			2	35%	25%

Atoll	Site name	Lagoon / ocean	Aspect	Lat	Lon	Depth	Bleaching severity	Percent bleached	Mortality code	Percent mortality	Original LCC
Diego Garcia	Horsburgh Bay S	O	NE	-7.370	72.486	7-10m			2	25%	10%
Diego Garcia	Horsburgh Bay S	O	NE	-7.370	72.486	10-15m			2	15%	5%
Diego Garcia	Mile 8 1/2	O	W	-7.356	72.431	4-7m			1	8%	35%
Diego Garcia	Mile 8 1/2	O	W	-7.356	72.431	10-15m			1	5%	15%
Diego Garcia	Mile 8 1/2	O	W	-7.356	72.431	7-10m			1	5%	15%
Diego Garcia	Mile 9 3/4 oceanside	O	W	-7.371	72.427	10-15m	2	20%			
Egmont	NW Lagoon	L	S	-6.640	71.329	2-3m			0	0%	70%
Egmont	Egmont West	O	W	-6.648	71.309	7-10m			1	3%	30%
Egmont	Egmont West	O	W	-6.648	71.309	12-15m			0	2%	20%
Egmont	Manta Alley	O	NE	-6.649	71.371	2-5m			3	70%	5%
Egmont	Manta Alley	O	NE	-6.649	71.371	5-8m			2	20%	80%
Egmont	Manta Alley	O	NE	-6.649	71.371	8-10m			1	8%	80%
Egmont	Outer reef North	O	N	-6.635	71.327	5-8m			3	60%	80%
Egmont	Outer reef North	O	N	-6.635	71.327	8-10m			1	10%	80%
Egmont	Ocean NE			-6.651	71.373	10m			2	30%	
Great Chagos Bank	Middle Brother Lagoon	L	E	-6.156	71.521	1-3m	2	35%	1	1%	50%
Great Chagos Bank	Nelson's Island	O	N	-5.679	72.315	5-8	2	35%	0	0%	
Peros Banhos	Grande Ile Coquillage	L	W	-5.373	71.967	4.5m	2	15%	2	30%	
Peros Banhos	Grande Ile Mapou	L	SE	-5.267	71.757				2	20%	
Peros Banhos	Ile Anglaise	L	E	-5.439	71.757	4.8m	3	80%			
Peros Banhos	Ile Diamant	L	SE	-5.260	71.764	1.5-3.5m	3	75%			
Peros Banhos	Ile Finon	L	E	-5.332	71.748	2m			1	10%	
Peros Banhos	Ile Longue Lagoon	L	S	-5.272	71.869	2-4m	2	40%	2	15%	10%
Peros Banhos	Knoll	L	N	-5.398	71.775	9-12m			3	95%	80%
Peros Banhos	Knoll	L	N	-5.398	71.775	6-9m			3	85%	70%
Peros Banhos	Petite Ile Coquillage	L	W	-5.339	71.970	4m	3	80%			
Peros Banhos	Vache Marine	L	W	-5.424	71.827	5-10m	3	60%	3	70%	80%
Peros Banhos	Vache Marine	L	W	-5.424	71.827	2-3m			2	20%	35%

Atoll	Site name	Lagoon / ocean	Aspect	Lat	Lon	Depth	Bleaching severity	Percent bleached	Mortality code	Percent mortality	Original LCC
Peros Banhos	West Ile Bois Mangue	L	N	-5.269	71.885	2-6m			3	65%	30%
Peros Banhos	Grande Ile Coquillage	O	E	-5.372	71.975	3m	3	85%			
Peros Banhos	Ile Diamant	O	NW	-5.253	71.758	3-6m	3	55%			
Peros Banhos	Ile Gabrielle	O	W	-5.427	71.749	6.4m	2	20%			
Peros Banhos	Ile Poule	O	W	-5.405	71.746	4-8m	2	20%			
Peros Banhos	Parasol	O	NE	-5.262	71.847	5-10m			3	50%	80%
Peros Banhos	Parasol	O	NE	-5.262	71.847	10-15m			2	25%	40%
Peros Banhos	Petite Ile Coquillage	O	E	-5.342	71.980	11m			2	30%	
Peros Banhos	West Ile Bois Mangue	O	N	-5.269	71.885	7-10m			3	70%	70%
Salomon	Boddam Lagoon	L	N	-5.357	72.209	1-4m	2	40%	2	25%	65%
Salomon	Ile de La Passe	L	S	-5.306	72.252	1-4	1	3%	0	0%	
Salomon	Ile Fouquet T7-8 Lagoon side	L	NW	-5.339	72.264	4-6m	2	15%			
Salomon	Ile Mapou	L	W	-5.314	72.263	1-4	1	8%	0	0%	
Salomon	Ile Poule	L		-5.357	72.220	5m			2	25%	
Salomon	Ile Sepulture	L		-5.347	72.253				2	15%	
Salomon	T4 Coral bommies in the lagoon	L		-5.350	72.220	1.5m	2	10%			
Salomon	T6 Coral bommies in the lagoon	L		-5.350	72.221	3-8m	2	25%			
Salomon	Ile Anglaise North	O	W	-5.313	72.228	5-8	2	15%	1	5%	
Salomon	Ile Anglaise South	O	W	-5.337	72.215	5-8	2	20%	1	8%	
Salomon	Ile Anglaise T10 Ocean Side	O	W	-5.321	72.222	13-17m	2	30%			
Salomon	Ile Anglaise T11 Ocean Side	O	W	-5.321	72.222	5-8m	2	30%			
Salomon	Ile Anglaise T9 Ocean Side	O	W	-5.320	72.222	9-10m	2	25%			