Post-Weather Reef Condition Report Dharavandhoo

Photographic documentation and weather event analysis following adverse southwest monsoon conditions in Dharavandhoo, Baa Atoll, Maldives.

Weather period reviewed: 10-12 August 2026

Primary impact window reviewed: 11 August 2026

Report date: 23 August 2026

Prepared by Muraka Farm from field photographs and publicly available weather, tide and scientific sources.

EXECUTIVE SUMMARY

What the evidence shows

Muraka Farm documented clear physical injury to branching and digitate coral colonies in post-weather photographs from reef areas around Dharavandhoo. Across twelve distinct images, recurring features include broken or shortened branches, sharply localized pale skeletal cross-sections at damaged tips, irregular colony structure and surviving pigmented tissue. Within Muraka Farm's own monitoring record, physical coral damage of comparable visible extent has not previously been documented at these monitored locations since monitoring began.

ALERT COVERAGE

05:15-17:00

Baa Atoll remained within consecutive White Alert periods on 11 Aug.

REGIONAL WAVES

4-7 ft

About 1.2-2.1 m forecast for northern and central Maldives.

SQUALL GUSTS

Up to 40 mph

About 64 km/h (35 kt); rough seas reported during squalls.

DHARAVANDHOO RAIN

93 mm

Highest reported 24-hour total nationally in the cited observation period.

PHOTO EVIDENCE

12 images

All distinct photographs used once; physical breakage visible in multiple frames.

MONITORING RECORD

Highest to date

No physical coral damage of comparable visible extent previously documented at these monitored locations.

Overall interpretation

The strongest evidence points to a multi-hour alert and adverse-weather window on 11 August rather than a single damaging moment. Heavy rain, thunderstorms, strong squalls and rough regional seas were forecast and reported across several hours, creating an environmental setting capable of imposing mechanical stress on shallow corals. The observed damage is therefore documented as a post-weather physical disturbance, with wave action considered a plausible immediate driver.

Scientific scope

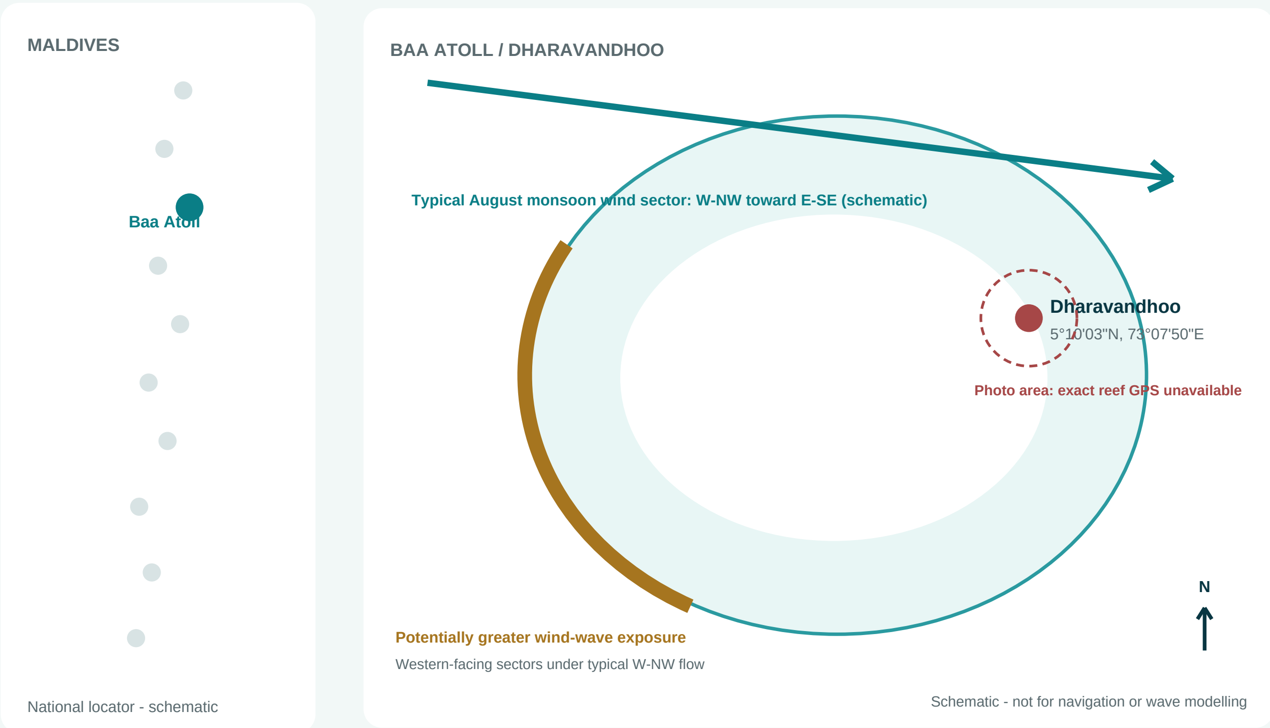
This report documents what is visible in the supplied photographs and places those observations within the dated weather record. Reef-wide percentage damage remains unknown because no systematic transect or fixed pre-event baseline was available. Detailed limitations are stated in a dedicated section.

SETTING AND ORIENTATION

Dharavandhoo, Baa Atoll and regional orientation

Dharavandhoo lies in Baa Atoll, a UNESCO Biosphere Reserve. A published Baa Atoll island list places Dharavandhoo at approximately 5°10'03"N, 73°07'50"E. August falls within the southwest monsoon season, when published Maldives climatology indicates winds are predominantly westerly to northwesterly, although event-scale wind direction can vary. Reef exposure therefore depends strongly on which side of an island or reef faces the incoming wind and wave field, as well as on channels, reef geometry and water depth.

SCHEMATIC LOCATOR AND MONSOON ORIENTATION



How to read the exposure map

The map is a schematic orientation aid, not a reconstruction of wave energy at the photographed colonies. The supplied image files do not contain GPS coordinates, so the exact reef sector cannot be plotted. The western exposure shading simply indicates where wind-wave exposure may be greater under typical August westerly to northwesterly flow; local bathymetry, channels, reef geometry and reef barriers can substantially modify that pattern.

Brief climate background

The event occurred while El Nino was strengthening in the tropical Pacific. The Maldives Meteorological Service August 2026 outlook listed El Nino Advisory conditions; the Indian Ocean Dipole was near neutral at the start of the month and expected to trend positive later. These large-scale climate modes can influence regional rainfall and wave climate, but they are treated here only as background. The local event is described as a southwest monsoon weather episode, not as an event directly attributed to El Nino or the IOD. Weather conditions deteriorated from 10 August, the strongest documented conditions occurred on 11 August, and enhanced monsoon conditions were forecast to continue through 12 August.

WEATHER EVENT CHRONOLOGY

10-12 August 2026

Times are Maldives Time (UTC+5). The timeline prioritizes the Maldives Meteorological Service alert record and dated reports quoting the MET Office.

10 AUG | daytime

Conditions deteriorate

Heavy rain and thunderstorms were forecast nationwide. A White Alert from Noonu to Laamu Atoll, including Baa, was active until 14:00. Central and northern winds were forecast around 8-18 mph; gusts up to 35 mph and rough seas during showers were possible.

10 AUG | 14:00 brief

Monsoon strengthening forecast

A MET weather news brief said the southwest monsoon was likely to strengthen on 11 and 12 August, with enhanced convective activity, widespread rainfall, occasional heavy showers and thunderstorms.

11 AUG | 05:15-11:00

Early White Alert

A White Alert covering Haa Alif to Thaa Atolls, including Baa, warned of heavy rain and thundershowers. Reporting quoting MET said squalls could produce gusts up to 40 mph and rough seas.

11 AUG | 10:43 report

Northern and central winds elevated

A MET duty forecaster was quoted as expecting central and northern winds of 13-23 mph, with gusts up to 40 mph during squalls and rough seas during squalls.

11 AUG | 11:00-17:00

Official White Alert continues

MMS displayed an official White Alert from Haa Alifu to Thaa Atoll for heavy rain and thunderstorms with gusts of 40 mph. Baa Atoll was inside the alert area.

11 AUG | 24-hour report

Rainfall and rough-sea signal

Dharavandhoo was reported to have recorded 93 mm of rainfall in the preceding 24 hours, the highest total reported nationally in that observation period. Northern and central waves were forecast at 4-7 ft.

12 AUG

Forecast continuation

The strengthened southwest monsoon was forecast to continue through 12 August, with showers, thunderstorms and rough conditions remaining possible. This is forecast continuation rather than a site-specific observation of continuous reef conditions.

Tidal context - deliberately de-emphasized

A published Dharavandhoo tide table predicted a high of about 0.9 m around midday on 11 August. This is treated as normal tidal context, not as the primary explanation for the damage. The report instead emphasizes the multi-hour wind, wave and squall conditions described in forecasts and dated reporting.

EVENT DATA

11 August: multi-hour adverse-weather window

The environmental context is strongest when the event is viewed as a multi-hour period. Baa Atoll was covered by consecutive alerts from 05:15 until 17:00. Across this alert window, forecasts and MET reporting described heavy rain, thunderstorms, rough seas, central and northern winds in the 13-23 mph range, squall gusts up to 40 mph and regional wave heights of 4-7 ft. These forecast and reported conditions provide more relevant context for possible mechanical coral stress than any single tidal minute.

ALERT SPAN

11 h 45 m

05:15-17:00 across two consecutive alert periods

REGIONAL WAVES

4-7 ft

About 1.2-2.1 m for northern and central atolls

SQUALL GUST

40 mph

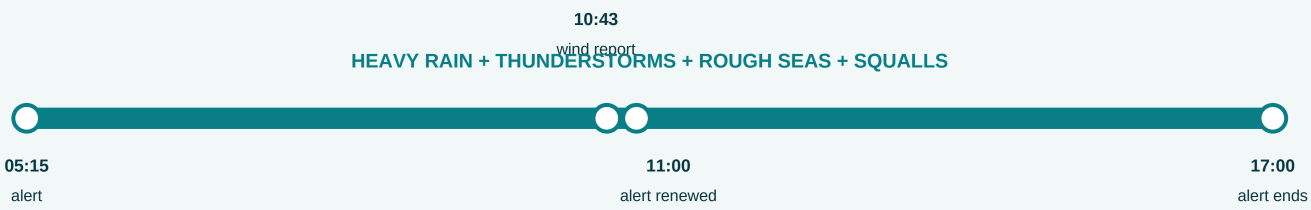
About 64 km/h (35 kt)

RAINFALL

93 mm

Dharavandhoo 24-hour total in cited report

11 August: reported weather sequence



Why duration and exposure matter

Coral breakage depends on repeated loading, wave direction, wave period, water depth, reef orientation and colony shape. A regional wave-height forecast alone cannot describe the force on one colony, but a prolonged rough-sea and squall window is physically consistent with repeated mechanical loading of shallow branching corals.

Tide retained only as background

The published midday high tide of about 0.9 m is not presented as a special or exceptional tidal event. It may affect water depth over shallow reef surfaces, but the available evidence does not support linking the observed damage to that tide peak.

SCIENTIFIC INTERPRETATION

How the event could affect corals

Physical weather damage to coral reefs can range from broken tips to partial colony loss, fragmentation and dislodgement. Branching growth forms are particularly vulnerable because projecting branches experience repeated bending and impact under strong surge. The amount of damage depends on duration, wave period and direction, reef exposure, depth, local bathymetry, colony morphology and pre-existing condition.

DIRECT BREAKAGE

Repeated surge and wave loading can flex projecting branches until they fracture. Multiple localized break surfaces in the photographs are consistent with this type of mechanical injury.

ABRASION AND RUBBLE

Loose fragments and mobile rubble can strike living tissue and create secondary wounds during and after rough conditions.

EXPOSURE AND DEPTH

Shallow, exposed reef sectors can experience stronger orbital motion than sheltered areas. Channels and reef crests can concentrate or redirect flow.

FRESHWATER / LOW SALINITY

Heavy rainfall can produce short-lived low-salinity surface layers in nearshore waters. Low salinity is a recognized physiological stressor for reef-building corals.

TURBIDITY AND SEDIMENT

Rainfall, runoff and resuspension can increase turbidity. Reduced light and sediment deposition can add stress to already injured colonies.

RECOVERY PATHWAY

Surviving tissue may heal and regrow over exposed skeleton. Stable fragments can sometimes survive, whereas unstable fragments are vulnerable to abrasion or burial.

Secondary stressors associated with the 93 mm rainfall

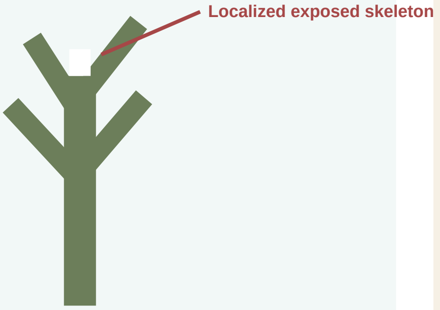
The reported 24-hour rainfall total does not prove that low salinity or high turbidity occurred at the photographed reef. However, heavy rainfall can temporarily freshen surface waters, and storm-driven runoff or sediment resuspension can reduce water clarity. Both low salinity and turbidity are documented coral stressors. If they occurred locally, they could have added physiological stress after the physical breakage. No salinity, turbidity or suspended-sediment measurements were available for this report.

VISUAL INTERPRETATION

Physical fracture is not the same as bleaching

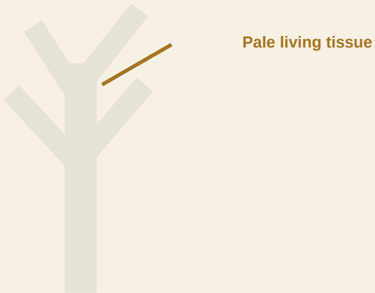
White areas on corals can have different causes. In the supplied images, many white or pale areas occur at sharply truncated branch ends, directly beside normally pigmented tissue. That pattern is more consistent with exposed skeleton at a physical break than with uniform thermal bleaching of an intact colony.

PHYSICAL FRACTURE



- Abrupt broken tip / missing branch
- White area concentrated at fracture
- Nearby tissue can remain pigmented

THERMAL / STRESS BLEACHING



- Colony shape may remain intact
- Pale/white tissue can cover broader areas
- White skeleton is seen through living tissue

Why the photographed tips are interpreted as fractures

The key features are structural: branches are shortened or missing, the white surfaces are localized at apparent break points, and adjacent tissue often remains pigmented. Bleaching, by contrast, is a loss of pigmentation in living tissue and may affect larger continuous areas without requiring a broken skeletal edge.

Important diagnostic boundary

Photo interpretation cannot exclude partial bleaching, disease or old tissue loss elsewhere on the reef. The report therefore identifies visible physical fracture where structural evidence is present and does not diagnose every white area solely from color.

FIELD EVIDENCE

What was examined and how

This report reviews twelve distinct underwater JPEG photographs supplied by Muraka Farm as post-weather documentation from Dharavandhoo. Three images are landscape orientation (1280 x 720 pixels) and nine are portrait orientation (720 x 1280 pixels). The files contain no embedded EXIF capture time or GPS metadata, so filenames are not treated as proof of exact field time or coordinates. Interpretation is based on visible structural features and the external weather record.

Evidence confidence

Confidence	Finding
HIGH	**Physical branch breakage is visible** Multiple images show shortened or missing branches and sharply bounded exposed skeletal surfaces.
HIGH	**Living tissue remains on affected colonies** Pigmented tissue is visible on substantial portions of several damaged colonies.
MODERATE	**Some fractures appear recent** Pale exposed cross-sections are compatible with recent exposure, although color alone cannot date a fracture precisely.
PLAUSIBLE	**Rough weather contributed to breakage** The weather sequence is physically consistent with wave-driven injury, but no local wave sensor or pre/post fixed colony comparison was available.
UNKNOWN	**Reef-wide severity** The photographic sample has no systematic denominator from which to calculate percentage damage.
UNKNOWN	**Species-level identity** Growth form can be described, but species identifications are not assigned from these photographs alone.

Muraka Farm monitoring observation

Since Muraka Farm began monitoring these waters, the team has not previously documented physical coral damage of comparable visible extent at the monitored locations. This is a statement about Muraka Farm's monitoring record, not a claim about the complete historical record of Dharavandhoo or Baa Atoll.

LIMITATIONS

What this report cannot determine

The photographic record is useful for documenting condition, but it is not a quantitative reef-wide damage assessment. The following limitations define the boundary of the conclusions that can be drawn from this report.

NO SYSTEMATIC TRANSECT OR PHOTO-QUADRAT SURVEY

The twelve photographs were not collected as a randomized or fixed-area sampling design. There is no surveyed denominator of all colonies or reef area against which damaged colonies can be expressed as a percentage.

NO FIXED PRE-EVENT BASELINE FOR THE SAME COLONIES

Without matched before-and-after photographs or repeated fixed stations, the exact amount of change caused during 10-12 August cannot be calculated colony by colony.

NO GEOREFERENCED IMAGE METADATA

The supplied files contain no embedded GPS, depth or capture time metadata. Exact exposure sector and field timing therefore cannot be reconstructed from the image files alone.

NO SITE-SPECIFIC WAVE, CURRENT OR PRESSURE RECORD

Regional forecasts describe the wider sea state but do not measure wave height, period, direction or hydrodynamic force at each photographed colony.

NO SALINITY, TURBIDITY OR TEMPERATURE MEASUREMENTS

Heavy rainfall makes freshwater and turbidity stress plausible secondary factors, but their magnitude at the reef was not measured.

NO SPECIES-LEVEL DIAGNOSTIC SURVEY

Growth forms can be described visually, but species, disease state and bleaching status cannot be comprehensively diagnosed from this image set alone.

Bottom line

The overall percentage of coral damage across Dharavandhoo reef remains unknown. Establishing reef-wide extent requires a defined survey design - for example belt transects, line-intercept transects or repeat photo-quadrats - together with site coordinates and consistent sampling effort.

PHOTOGRAPHIC RECORD

Plate A | Wide views of structural damage

Image 3 - wide view of partial structural loss

A landscape view shows a damaged branching/digitate colony on hard substrate. Multiple truncated projections and localized pale exposed-looking surfaces are visible beside surviving pigmented branches.

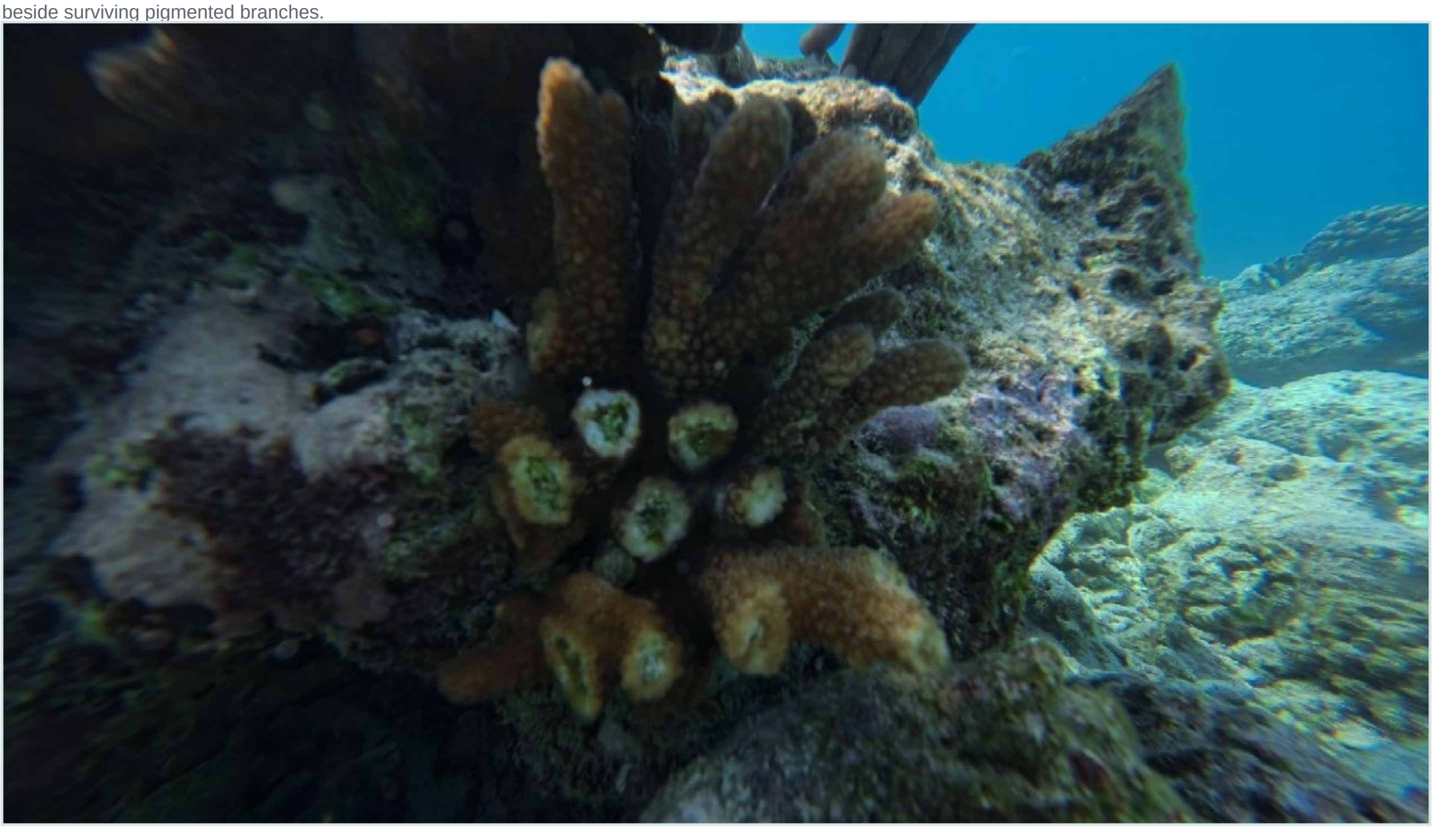


Image 7 - close wide view of a damaged branching colony

Several pale exposed-looking ends are concentrated near the colony centre while intact pigmented branches remain around the damaged area.

PHOTOGRAPHIC RECORD

Plate B | Branch-tip loss within living tissue

Image 1 - branch-tip loss within living tissue

Several shortened tips and pale cross-sections are visible while much of the colony remains pigmented. A second, less-damaged colony and the surrounding reef are visible in the background.

PHOTOGRAPHIC RECORD

Plate C | Multiple localized break surfaces

Image 2 - multiple localized break surfaces

Pale branch-end surfaces are sharply localized rather than uniformly distributed across the whole colony. Living pigmented branches remain adjacent to the exposed skeletal surfaces.

PHOTOGRAPHIC RECORD

Plate D | Dense concentration of truncated tips

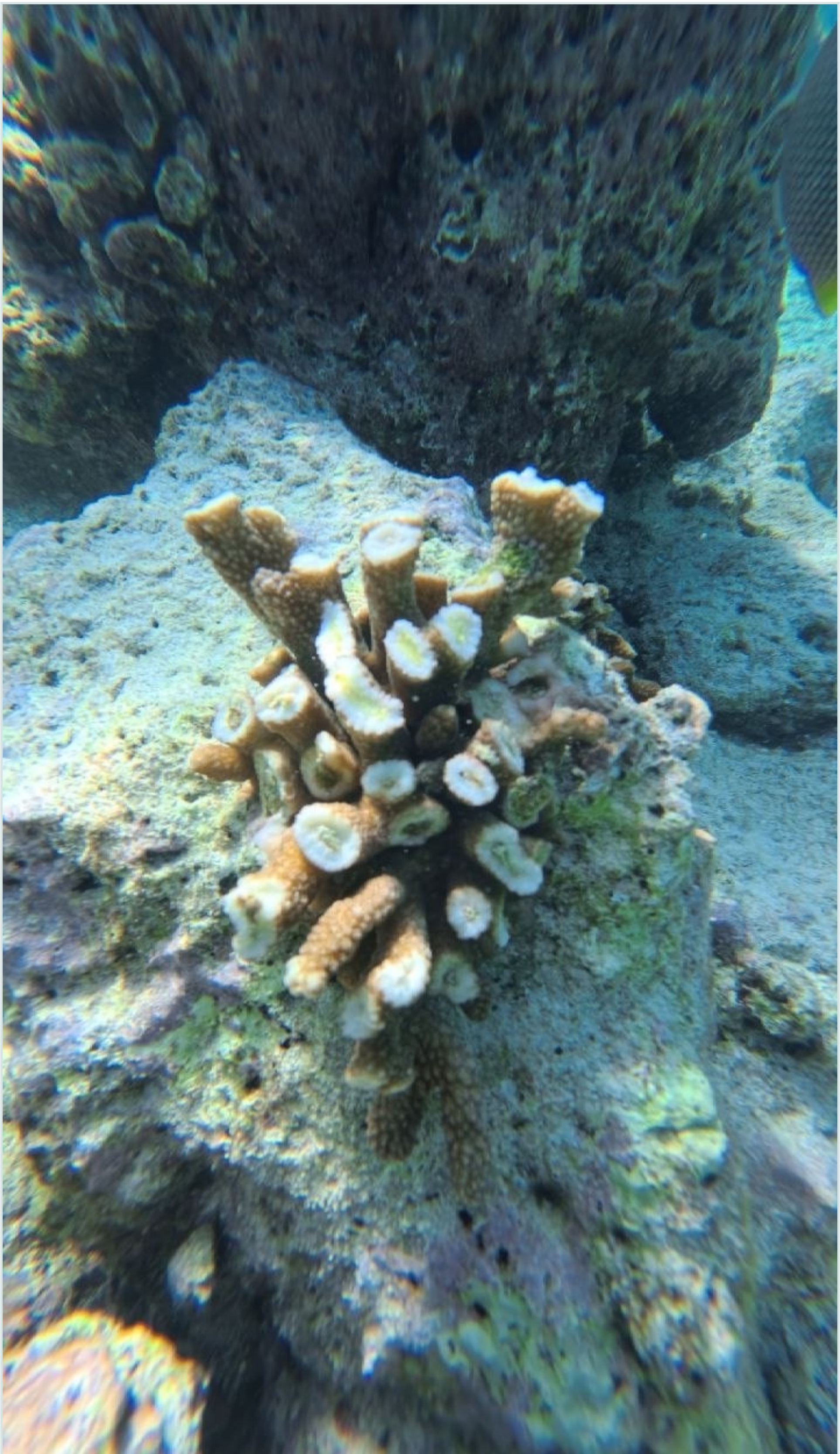


Image 4 - dense concentration of truncated tips

Numerous pale cross-sections occur across a small colony, providing strong visual evidence of repeated tip breakage. The exposed surfaces are clustered across several branch ends rather than confined to one point.

PHOTOGRAPHIC RECORD

Plate E | Reduced colony structure on exposed substrate

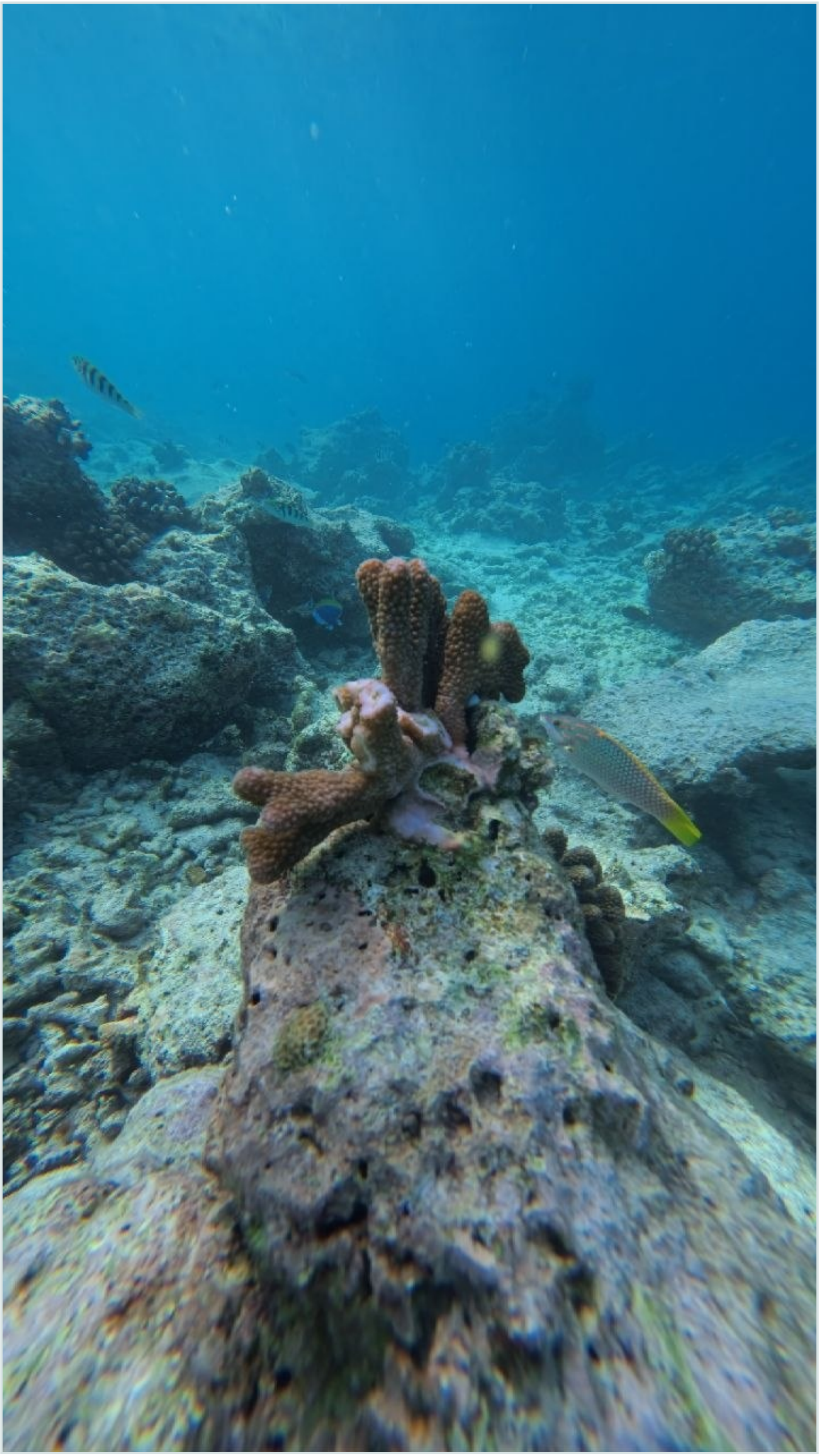


Image 5 - reduced colony structure on exposed substrate

A smaller surviving colony section remains attached on the reef, with limited branching structure and an irregular central area. Surrounding reef habitat and open water provide context for the colony's exposed position.

PHOTOGRAPHIC RECORD

Plate F | Small colony within its reef setting

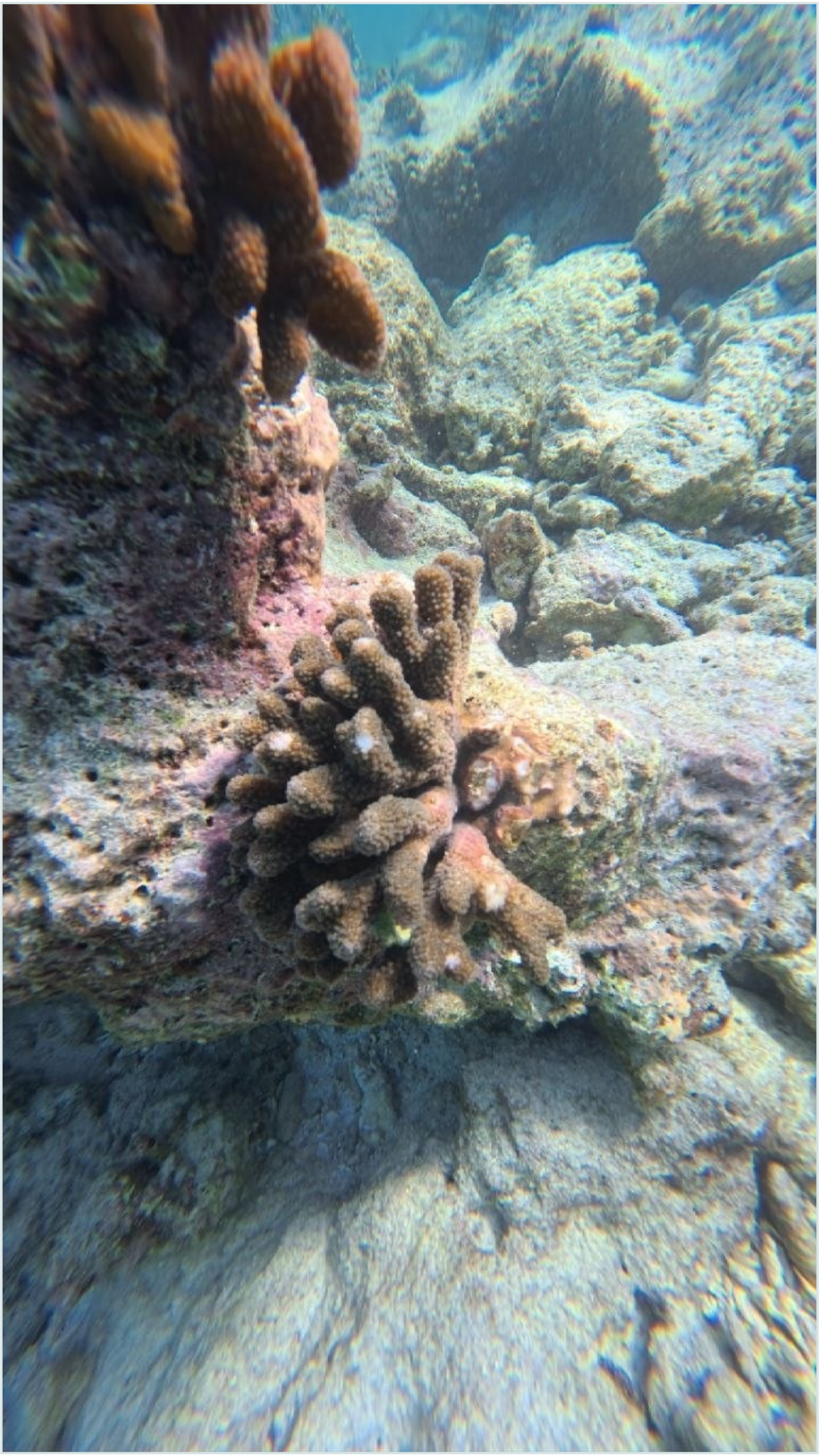


Image 8 - small colony beside larger coral structure

A small branching colony is visible at the base of larger coral growth, showing the affected colony within its immediate reef setting and beside other surviving coral structure.

PHOTOGRAPHIC RECORD

Plate G | Partial branch loss in mixed reef habitat

Image 9 - partial branch loss in mixed reef habitat

A compact coral section with broken-looking projections is surrounded by encrusted hard substrate and other benthic growth. Pale exposed-looking areas occur beside larger pigmented branches.

PHOTOGRAPHIC RECORD

Plate H | Small attached colony on open substrate

Image 10 - small attached colony on open substrate

The image documents a small colony or remnant section attached to hard reef substrate. Multiple pale central break surfaces are visible, and the surrounding habitat provides a useful reference for future repeat photography.

PHOTOGRAPHIC RECORD

Plate I | Close wound detail with visual scale

Image 11 - close-up with many pale broken ends

A hand provides visual scale while numerous pale branch-end surfaces are visible in the central portion of the colony. Surviving branches remain pigmented around the damaged centre.

PHOTOGRAPHIC RECORD

Plate J | Clustered skeletal exposure

Image 12 - clustered skeletal exposure with surviving branches

Several pale exposed-looking surfaces occur among darker pigmented branches. The contrast between localized physical wounds and remaining living tissue is clearly visible across the colony.

CROSS-PHOTO SYNTHESIS

Recurring patterns across the image set

BRANCH LOSS	**Repeated across frames**	Shortened branches, missing projections and blunt or truncated ends recur throughout the record.
EXPOSED SKELETON	**Strong visual signal**	Pale or white cross-sections occur at several damaged tips and central break surfaces.
SURVIVING TISSUE	**Clearly present**	Pigmented tissue remains on substantial portions of many affected colonies.
LOCALIZED INJURY	**Consistent morphology**	White areas are concentrated at structural wounds rather than distributed uniformly across whole colonies.
ATTACHED COLONIES	**Common in the record**	Most photographed colonies or remnants remain attached to hard reef substrate rather than appearing as loose rubble.
MIXED REEF CONTEXT	**Visible around damage**	Surviving coral growth and other benthic structure remain visible around affected colonies, showing a patchy rather than visually uniform condition.

Field pattern

Taken together, the photographs show repeated localized structural injury within living coral tissue: truncated branches, exposed skeletal ends and surviving pigmented sections occur in multiple independent frames. This repeated morphology is the strongest visual basis for describing the documented condition as physical coral breakage.

ECOLOGICAL IMPLICATIONS

Why this type of damage matters

Branching corals contribute strongly to three-dimensional reef structure. Even when a damaged colony remains alive, loss of branches can temporarily reduce structural complexity, create exposed skeletal surfaces and generate loose fragments. The ecological outcome depends on what happens after the disturbance.

HABITAT COMPLEXITY

Loss of projecting branches can reduce small-scale shelter and surface area used by reef organisms.

WOUND EXPOSURE

Fresh skeletal surfaces can be colonized by algae or other organisms if living tissue does not regrow over the wound.

SECONDARY MOVEMENT

Loose coral fragments or rubble can be remobilized by later waves, causing additional abrasion or burial.

POTENTIAL NATURAL RECOVERY

Surviving colonies can heal and grow. Some fragments can survive if they settle stably and reattach in suitable habitat.

CUMULATIVE STRESS

Recovery can be slowed when physical injury is followed by heat stress, poor water quality, disease or repeated rough-weather events.

PATCHY OUTCOMES

One colony may recover while another nearby colony declines. Repeat observations are needed to distinguish short-term injury from lasting loss.

Why rapid documentation is valuable

Post-disturbance photographs establish a visual baseline before wounds change appearance through healing, algal growth, sedimentation or further breakage. This makes the current image set valuable for later comparison even though it is not a quantitative survey.

MONITORING FRAMEWORK

Turning this event into a recovery record

The strongest next step is repeatable monitoring of the same reef areas and, where possible, the same identifiable colonies. Consistency is more valuable than collecting many unstructured images. The aim is to measure whether physical damage stabilizes, heals, expands or leads to colony loss.

Short term	Revisit identifiable colonies; record whether broken surfaces remain stable, whether fragments have moved and whether tissue persists around damaged areas.
1 month	Compare wound appearance, algal colonization, sediment accumulation, new tissue loss and additional branch breakage.
3 months	Assess survival, visible growth and structural stability; include nearby intact colonies as context where possible.
6-12 months	Document longer-term survival, regrowth, fragment establishment and whether the local reef area shows persistent structural loss or natural recovery.

Recommended data fields for repeat surveys

- Reef zone / site name and GPS position where appropriate
- Date, local time, depth and approximate visibility
- Photo direction and fixed reference point
- Colony or photo-station identifier
- Growth form without forcing uncertain species identification
- Breakage category and number of damaged tips where practical
- Living tissue / recent mortality / old mortality / algae
- Fragment stability, rubble movement and sediment condition
- New growth or tissue recovery at previous fracture surfaces
- Notes on additional disturbances between survey dates

For future quantitative reporting

A structured transect or photo-quadrat design would allow Muraka Farm to report values such as the proportion of colonies showing physical breakage, the distribution of damage among growth forms, change in live coral condition through time and the persistence or recovery of individual wounds. Those metrics should be based on a defined sampling protocol rather than estimated from the current twelve photographs.

CONCLUSION

A significant documented disturbance

From 10 August 2026, weather conditions deteriorated as the southwest monsoon strengthened. The strongest documented conditions occurred on 11 August, when consecutive alerts covered Baa Atoll from 05:15 to 17:00, squall gusts were forecast up to 40 mph, northern and central waves were forecast at 4-7 ft, and Dharavandhoo was reported to have recorded 93 mm of rainfall in the preceding 24 hours. MMS had forecast the enhanced monsoon disturbance to continue through 12 August. Together, these records provide a credible environmental context for mechanical stress on exposed shallow corals.

Muraka Farm's twelve distinct post-weather photographs show repeated physical injury: shortened branches, missing projections, localized pale skeletal ends and surviving pigmented tissue. The morphology is most consistent with structural fracture at the photographed colonies rather than uniform whole-colony bleaching. Heavy rainfall may also have introduced secondary stress through temporary freshwater influence or increased turbidity, although those water-quality conditions were not measured at the site.

Within Muraka Farm's own monitoring record, comparable physical coral damage has not previously been documented in these monitored waters since monitoring began. That makes this event important as a local monitoring milestone and a priority for repeat observation.

El Nino was strengthening during August 2026 and is relevant only as large-scale climate background; the immediate event is best described as a southwest monsoon weather episode. The midday tide is likewise retained only as context and is not treated as the primary driver.

The report now establishes a dated visual baseline. The next scientific step is systematic repeat monitoring using fixed locations, site coordinates and a defined survey method so that future reports can quantify spatial extent, colony survival, wound healing, fragment stability and longer-term reef recovery.

Key message

Muraka Farm documented a significant post-weather physical coral disturbance in Dharavandhoo following a multi-hour period of heavy rain, strong squalls and rough regional seas described in alerts, forecasts and dated reporting. Within Muraka Farm's monitoring record, no physical coral damage of comparable visible extent had previously been documented at these monitored locations. The current report documents the observed condition; structured follow-up surveys are needed to quantify reef-wide extent and recovery.

SOURCES

References and evidence record

1. Maldives Meteorological Service (MMS). Official White Alert displayed for 11 August 2026, 11:00-17:00: heavy rain and thunderstorms with gusts of 40 mph from Haa Alifu Atoll to Thaa Atoll.
https://www.meteorology.gov.mv/downloads

2. Maldives Meteorological Service. Maldives Monthly Climate Outlook for August 2026. Summary indicates below-normal rainfall likely over northern atolls and parts of central atolls; includes discussion of large-scale climate drivers.
https://www.meteorology.gov.mv/downloads/478/view

3. Maldives Media TV. "Adverse weather expected across Maldives until Wednesday," 10 August 2026. Reports White Alert from Noonu to Laamu until 14:00, central/northern winds 8-18 mph, gusts up to 35 mph and rough seas during showers.
https://en.mmtv.mv/11353

4. MV+ News. "Heavy Rain Expected Across Maldives Over Next Two Days," 10 August 2026. Reports MET weather news brief forecasting southwest monsoon strengthening on 11-12 August and enhanced convective activity.
https://www.plus.mv/english/heavy-rain-expected-across-maldives-over-next-two-days/

5. MV+ News. "White Alert Issued for Heavy Rain from Haa Alif to Thaa Atoll as Extreme Weather Continues," 11 August 2026. Reports 05:15-11:00 alert, gusts up to 40 mph during squalls and rough seas.
https://www.plus.mv/english/white-alert-issued-for-heavy-rain-from-haa-alif-to-thaa-atoll-as-extreme-weather-continues/

6. One Online. "Heavy rain expected across Maldives, rough seas forecasted: MET," 11 August 2026. Quotes a MET forecaster: central/northern winds 13-23 mph, gusts up to 40 mph during squalls and rough seas during squalls.
https://www.oneonline.mv/en/123957

7. Maldives Media TV. "Dharavandhoo records highest rainfall as southwest monsoon strengthens," 11 August 2026. Reports 93 mm at Dharavandhoo, 4-7 ft waves for northern/central atolls and gusts up to 40 mph.
https://en.mmtv.mv/11383

8. Tides4Fishing. Dharavandhoo tide table for August 2026. 11 August: 00:02 0.7 m; 05:38 0.4 m; 12:20 0.9 m; 18:54 0.4 m. Used as a published tide prediction, not an observed water-level record.
https://tides4fishing.com/mv/maldives/dharavandhoo

Source note

Weather alerts and regional forecasts are used as environmental context. They are not presented as direct measurements at the photographed coral colonies. The tide reference is retained only as background and is not used as the main causal explanation.

SOURCES CONTINUED

Reef science and climate sources

9. UNESCO Man and the Biosphere Programme. Baa Atoll Biosphere Reserve profile. Baa Atoll was designated in 2011 and supports extensive coral reef habitats and significant marine biodiversity.
https://www.unesco.org/en/mab/baa-atoll

10. NOAA Ocean Service. "Natural Threats to Coral Reefs." Notes that large waves from severe weather can break coral heads and scatter fragments.
https://oceanservice.noaa.gov/education/tutorial_corals/coral08_naturalthreats.html

11. NOAA NCCOS. "Assessment of Hurricane Impacts to Coral Reefs in Florida and Puerto Rico." Describes post-storm damage ranging from broken branching coral pieces to dislodged or shattered colonies and emphasizes rapid post-storm assessment.
https://coastalscience.noaa.gov/project/assessment-of-hurricane-impacts-to-coral-reefs-in-florida-and-puerto-rico/

12. Puotinen, M., Maynard, J.A., Beeden, R., Radford, B. & Williams, G.J. (2016). "A robust operational model for predicting where tropical cyclone waves damage coral reefs." Scientific Reports 6, 26009. Describes physical damage from broken tips and branches to colony dislodgement and the role of wave intensity and duration.
https://pmc.ncbi.nlm.nih.gov/articles/PMC4868967/

13. NOAA Fisheries. "Restoring Coral Reefs." Includes examples of emergency stabilization and reattachment of storm-broken coral fragments followed by long-term monitoring.
https://www.fisheries.noaa.gov/national/habitat-conservation/restoring-coral-reefs

14. NOAA Climate Prediction Center. ENSO Diagnostic Discussion, 13 August 2026. El Nino Advisory; El Nino strengthening, July Nino-3.4 +1.4 C, with greater than 90% chance of a very strong event during Northern Hemisphere fall and winter 2026-27.
https://cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.shtml

15. World Meteorological Organization. Global Seasonal Climate Update for August-September-October 2026, 31 July 2026. Reports a strong El Nino developing and expected to strengthen through August-October 2026.
https://public.wmo.int/resources/publication-series/global-seasonal-climate-update/gscu-aso2026

16. Foley, A.M. & Kelman, I. (2020). "Precipitation responses to ENSO and IOD in the Maldives: Implications of large-scale modes of climate variability in weather-related preparedness." International Journal of Disaster Risk Reduction 50, 101726. Finds that local precipitation responses to ENSO and IOD vary by site and season.
https://www.sciencedirect.com/science/article/pii/S2212420920302211

Climate context note

El Nino and IOD sources support only the short climate-background paragraph. This report does not attribute the local 10-12 August weather event directly to a single climate mode.

SOURCES CONTINUED

Diagnostic, water-quality and map sources

17. Kumar et al. / Journal of Geophysical Research: Oceans (2019). "Influence of Natural Climate Variability on the Extreme Ocean Surface Wave Heights Over the Indian Ocean." Shows ENSO and IOD can modulate seasonal extreme wave heights across parts of the Indian Ocean, with strong regional variability.
https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2019JC015391

18. NOAA Coral Reef Watch. Coral Bleaching tutorial. Explains that bleaching involves loss of symbiotic algae from living tissue, causing the white skeleton to become visible through tissue; bleaching does not require skeletal breakage.
https://coralreefwatch.noaa.gov/product/50km/tutorial/crw02_coralbleaching.php

19. NOAA Coral Disease and Health Consortium. Discolored Tissue and Bleaching. Notes that bleaching can be distinguished from recent tissue loss because exposed skeletal elements are visible when tissue is absent.
https://cdhc.noaa.gov/coral-disease/characterized-diseases/discolored-tissue-and-bleaching-2/

20. NOAA Ocean Service. "In what types of water do corals live?" Notes that reef-building corals generally require saline and clear water, supporting the relevance of salinity and turbidity as environmental stressors.
https://oceanservice.noaa.gov/facts/coralwaters.html

21. NOAA AOML. Threats to Coral - Dredging and Sedimentation. Describes how increased turbidity reduces light available to coral symbionts and how sedimentation can smother corals.
https://www.aoml.noaa.gov/threats-to-coral/

22. Aguilar et al. / BMC Genomics (2019). Transcriptomic response of Acropora millepora to hyposaline stress. Documents low-salinity stress responses and notes that rainfall and runoff can expose reefs to salinity fluctuations.
https://pmc.ncbi.nlm.nih.gov/articles/PMC6381741/

23. Baa Atoll Conservation Fund. Island list for Baa Atoll. Provides Dharavandhoo coordinates approximately 5°10'03"N, 73°07'50"E, used for the schematic locator.
https://www.bacf.gov.mv/en/files/ISLANDS_FINAL_LATEST_VERSION.pdf

24. Maldives environmental assessment / monsoon climatology. Describes southwest monsoon winds as predominantly westerly, varying between west-southwest and west-northwest; used only for schematic orientation of the exposure map.
https://www.environment.gov.mv/v2/wp-content/files/publications/20231008-pub-environmental-impact-assessment-waste-to-energy-plant-main-report-part-a.pdf

Muraka Farm field evidence

Twelve distinct underwater photographs supplied by Muraka Farm form the visual evidence base of this report. Muraka Farm also records that, within its own monitoring history to date, physical coral damage of comparable visible extent has not previously been documented at these monitored locations.