

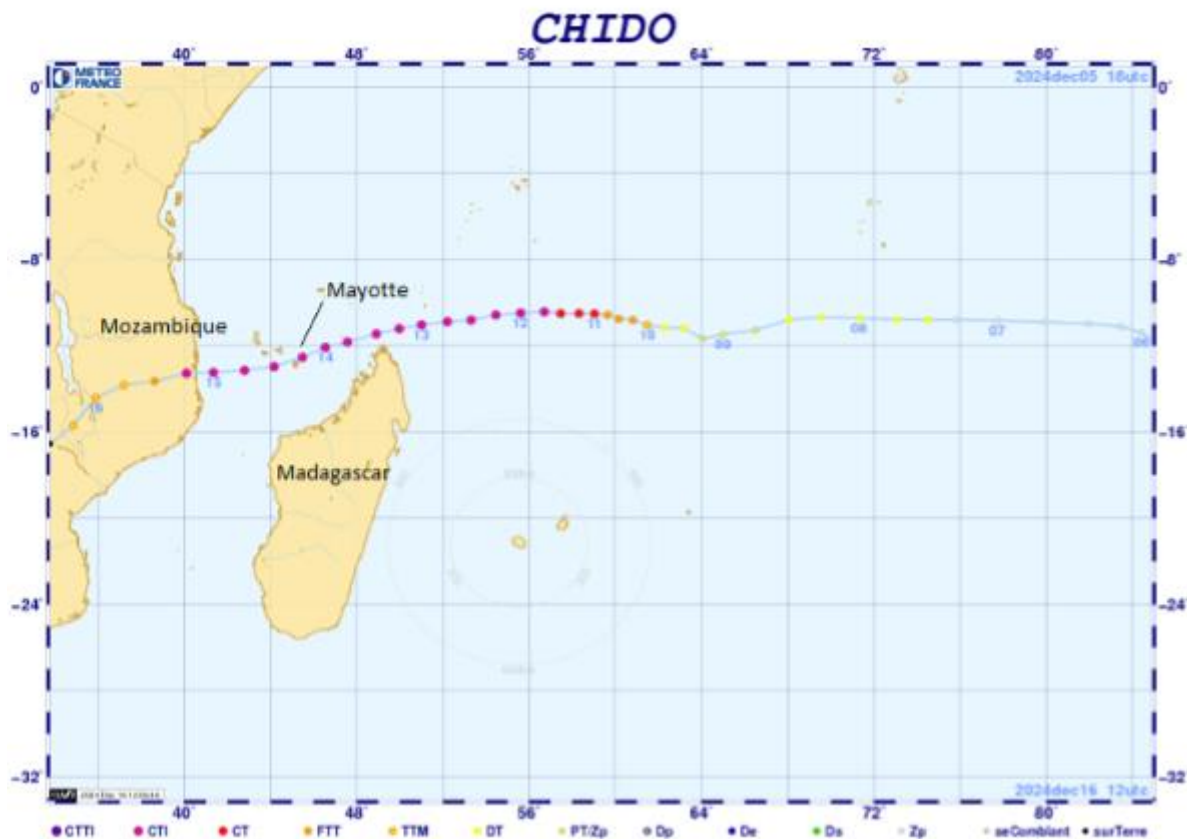


## ***Cyclone Chido: Chaos and destruction on the other side of the Indian Ocean***

*Cover image source: BBC News*

**MAXIME MARIN**

While Australians commemorated the 50-year anniversary of cyclone Tracy which devastated Darwin on Christmas day of 1974 and prompted unprecedented changes to Australian construction wind code, Australians were able to celebrate the end of 2024 without any cyclone threat. However, on the other side of the Indian Ocean, celebrations were ignored due to the devastation of Cyclone Chido, which hit the Mayotte archipelago, an overseas department of France, and Mozambique.



Cyclone Chido track and intensity. Intensity is measured on the Saffir-Simpson scale. [Source: Meteo France]

Cyclone Chido formed on Dec 11<sup>th</sup> 2024, north-east of Madagascar and quickly intensified to a Category 5 storm (Category 4 on the Saffir-Simpson scale), with 10-min sustained winds of 215 km/h. The cyclone maintained its intensity as it avoided landfall in Madagascar by staying North and entered the Mozambique channel on Dec 14<sup>th</sup>. After a brief weakening due to an eye wall replacement cycle, the storm regained high Category 4 status just before crossing the islands of Mayotte on Dec 14<sup>th</sup> at 11am local time. A maximum wind gust of 226 km/h was recorded by the French meteorological agency (Meteo France) at Pamandzi airport before the instrument were damaged. Meteo France estimates that maximum wind gusts of 250 km/h were likely experienced during Chido's landfall in Mayotte. Chido continued its track through the Mozambique channel as a Category 5 cyclone and made landfall in the morning of Dec 15<sup>th</sup> in Pemba, Mozambique, with 10-min maximum winds estimated at 205 km/h. Chido quickly decayed to a tropical storm, tracking inland through Mozambique into Malawi where it officially dissipated on Dec 16<sup>th</sup>.

## Mayotte devastation

The impacts of cyclone Chido on Mayotte can be compared to the destruction caused by cyclone Tracy 50 years ago. The French department of overseas territory estimated that 90% of inhabitants were severely impacted by the cyclone. All electricity, communications and water supplies were cut off when cyclone Chido made landfall. The total communication blackout led authorities to believe that tens of thousands of people were missing with fears that most of them could have perished. Nevertheless, 35 casualties have been reported and 2500 injured with 67 critically. Although close to 200 mm of rainfall was recorded across the island in 24 hours, there have been no reports of landslides which are a typical cause of deaths during cyclones. Due to the rugged landscape of the island, flooding and damage from storm surge also remained minimal.



*Devastation in Mayotte after cyclone Chido in Comboni Mayotte, France. [Source: French Interior Ministry - Securite Civile]*

With reports from Mayotte stabilising, most of the damage caused by Chido was wind-induced damage to property. As of December 23<sup>rd</sup>, more than 100 000 people were without a home, which is almost one third of Mayotte's population. The Caisse Centrale de Reassurance, the French public reinsurer, estimates insured losses between 650-800M euros which is more than \$AUD 1 billion. However, in Mayotte, only 6% of properties are covered under this Natural Catastrophe reinsurance scheme, which means that large uninsured losses are to be expected.

## Absence of construction codes

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Most uninsured properties in Mayotte come from thousands of precarious houses built in numerous slums all around the island. For years, Mayotte has been struggling to control and manage a large influx of immigration from nearby countries such as The Comoros, fleeing to the poorer department of France, yet much richer than their own country. Migrants are estimated to account for half the population of Mayotte (BBC, 2024). As a result of a critical housing supply crisis, thousands of cabins made of metal sheets accumulate on the hills of Mayotte, without any control or regulation from local French authorities, including the enforcement of wind codes. Unsurprisingly, these houses were blown away by Chido's category 5 winds which, on top of the humanitarian disaster, will deepen the housing crisis in Mayotte for years.

Cyclone Chido also heavily affected Mozambique, where at least 120 people were killed and more than 600000 people are estimated to have been directly affected. Unlike Mayotte, Mozambique is more often impacted by cyclones due to its elongated coastline. In February 2023, record breaking cyclone Freddy (Risk Frontiers, Briefing Note 480) caused 67 deaths in Mozambique (Aljazeera, 2023). It is unlikely that authorities will enact meaningful changes to increase resilience, in part also due to their lack of resources. In Mayotte however, the local authorities should take measures to make the island less vulnerable and more resilient to future cyclones. As most precarious houses are now destroyed, there is a pressing need to re-build, but it is necessary that new housing construction be more controlled.



*Aftermath of Cyclone Tracy in Darwin, 1974. [Source: National Museum Australia]*

## Tracy parallel

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The effects of cyclone Chido on Mayotte remind us of the impact that cyclone Tracy had on Darwin and the whole of Australia in 1974. As Most of Darwin's houses were wiped out, there was a national effort to engineer a wind construction code meant to make all housing less vulnerable to cyclones. According to Meteo France, cyclone Chido is the most intense cyclone hitting the Mayotte archipelago since 1934 and certainly caused the most damage. Let it be their warning to look at reducing construction vulnerability and enhancing community resilience.

## REFERENCES

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BBC, 2024. <https://www.bbc.com/news/world-europe-68292604>

Aljazeera, 2023. <https://www.aljazeera.com/news/2023/3/19/cyclone-freddy-death-toll-in-southeast-africa-surpasses-500>

## ABOUT THE AUTHOR/S

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Maxime's interests focus on physical oceanography and climate sciences. He holds a PhD in Quantitative Marine Science from the University of Tasmania. During his PhD, Maxime investigated global characteristics, changes and drivers of marine heatwaves, to improve our knowledge of these ocean extreme weather events.

