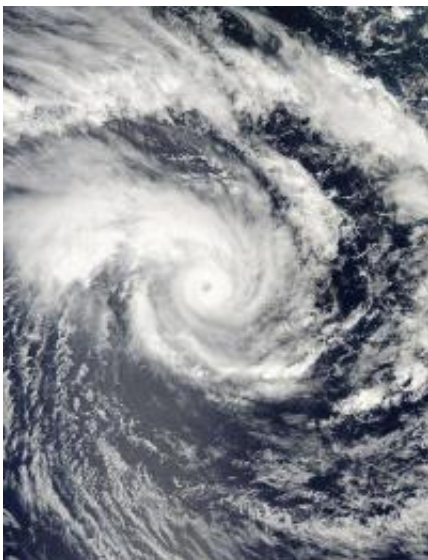


2 NASA satellites see Edzani power up in clouds and rainfall

January 7 2010



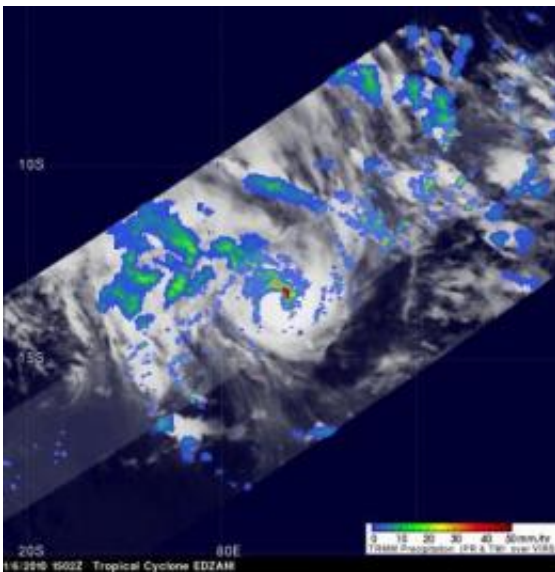
NASA's Aqua satellite captured a visible image of Tropical Cyclone Edzani in the South Indian Ocean on Jan. 7 at 0825 UTC (3:25 ET) and an eye is now clearly visible, indicating that the storm has strengthened. Credit: NASA MODIS Rapid Response Team

The latest satellite imagery from NASA's Aqua and Tropical Rainfall Measuring Mission satellites have provided forecasters with signs in clouds and rainfall that Edzani is strengthening in the Southern Indian Ocean. Edzani has become a tropical cyclone as a result of low wind shear and warm ocean temperatures.

The Tropical Rainfall Measuring Mission or TRMM satellite's main

mission is to monitor rainfall in the global tropics but has also proven very useful for checking on the development of [tropical cyclones](#). TRMM's Precipitation Radar instrument is especially valuable for checking the strength of tropical cyclones located far from land based radar stations. The [TRMM satellite](#) passed over Tropical Cyclone Edzani in a remote area of the South [Indian Ocean](#) on January 6 at 1502 UTC (10:02 a.m. ET).

TRMM rainfall analyses are derived from TRMM's Precipitation Radar (PR) instrument and the TRMM [Microwave Imager](#) instrument (TMI). That data is overlaid on an [infrared image](#) from TRMM's Visible and Infrared Scanner (VIRS). The Precipitation Radar analysis revealed that the tropical cyclone has strengthened to at least tropical storm strength with very heavy thunderstorms near Edzani's center of circulation.



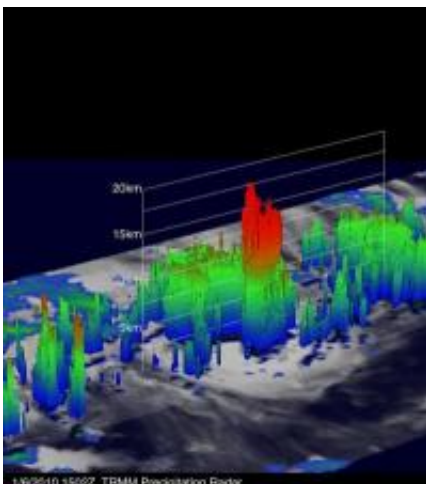
TRMM captured an image of rainfall in Edzani on Jan. 6. The yellow and green areas indicate moderate rainfall between .78 to 1.57 inches per hour. Red areas near Edzani's center are considered heavy rainfall at almost 2 inches per hour. Credit: NASA/SSAI, Hal Pierce

Most of the rainfall in Edzani was moderate, between .78 to 1.57 inches per hour. However, northeast of the center where the highest thunderstorms were located, TRMM indicated heavy rainfall at almost 2 inches per hour.

Further development may be likely because TRMM's Precipitation Radar instrument indicates that the powerful thunderstorms near Edzani's center tower to heights above 17 km (~10.6 miles). TRMM is a joint mission between NASA and the Japan Aerospace Exploration Agency (JAXA) designed to monitor and study [tropical rainfall](#).

Early this morning, January 7, the Moderate Resolution Spectroradiometer instrument aboard NASA's Aqua satellite captured a visible image of Tropical Cyclone Edzani in the South Indian Ocean. The image showed that circulation around the storm has tightened and an eye is now clearly visible, indicating that the storm has strengthened.

Because Edzani continues to be a favorable environment with warm sea surface temperatures over 80 degrees Fahrenheit, and low wind shear, the storm is expected to continue intensifying over the next two days before hitting cooler waters.



TRMM data provided a 3-D look at the cloud heights; temperature and rainfall in Tropical Storm Edzani, revealing a towering cloud near 17 km (10.6 miles) high indicating a strong storm. Credit: NASA/SSAI, Hal Pierce

On January 7 at 1500 UTC (10 a.m. ET), Edzani's center was about 590 nautical miles southeast of Diego Garcia, near 14.6 degrees South and 79.4 degrees East. Edzani is now a Category XX tropical cyclone on the Saffir-Simpson hurricane scale, because it's maximum sustained winds are near 115 mph (185 km/hr) with higher gusts. Edzani is moving southwestward near 5 mph (7 km/hr).

Edzani continues to intensify and will keep heading west-southwest before a turn to the south, passing far to the east of Mauritius and La Reunion island. By the weekend, Edzani is expected to run into cooler waters, which will weaken the system.

Provided by NASA's Goddard Space Flight Center

Citation: 2 NASA satellites see Edzani power up in clouds and rainfall (2010, January 7) retrieved 23 June 2024 from <https://phys.org/news/2010-01-nasa-satellites-edzani-power-clouds.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.