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FIRST UPDATE REGARDING TROPICAL STORM “ELOISE”

The rain which Severe Tropical Storm “Chalane” brought to southern Africa during the Christmas and New Year period last year is still fresh in the minds of the general public. Now, a fresh tropical system named “Eloise” has developed and is currently positioned off the north-eastern quadrant of Madagascar.

At the current time, “Eloise” is classified to be a Moderate Tropical Storm, with a central pressure slightly less than 1000 hPa (hectopascal) but nevertheless set to intensify in the coming days. “Eloise” is positioned at 14.2 degrees South and 56.7 degrees East, moving briskly at 14 knots (about 26km/h) in a west-south-westerly direction. The most likely track “Eloise” will follow should take it close to the coast of Madagascar tomorrow, as it intensifies further to a Severe Tropical Storm, with sustained winds likely to exceed 100km/h. Hence as “Eloise” makes landfall on this coastline in the latter part of tomorrow, it is likely to cause considerable wind-related damage, as well as delivering torrential rain. Given the steep geographic terrain of eastern Madagascar, flooding and washaways are also a distinct possibility. Moreover, along the coast there will also be a risk of storm surge, especially on the southernmost leading quadrant of the storm system.

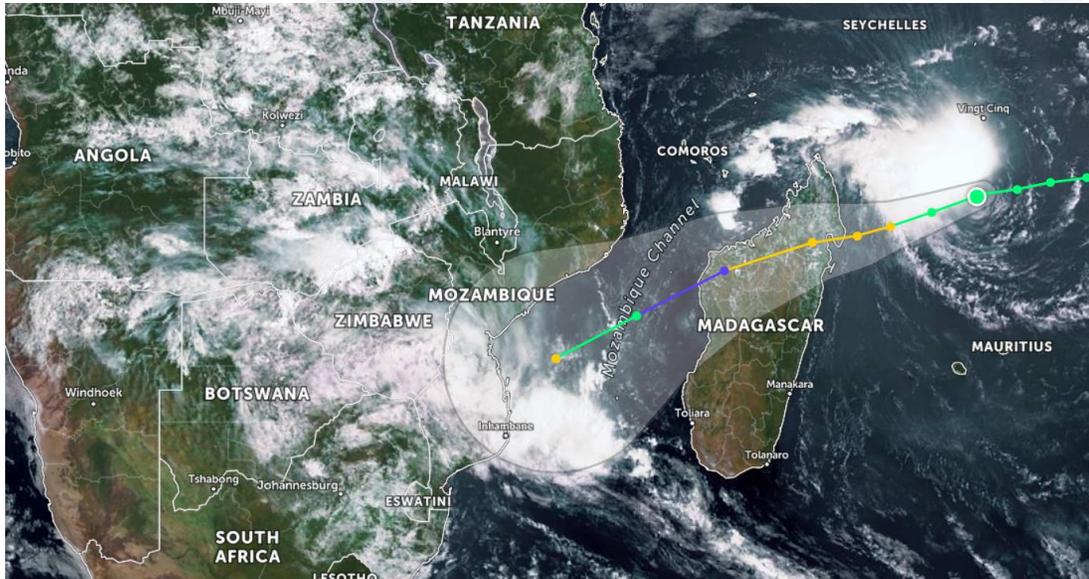


Figure 1. The current position of “Eloise”, relative to Madagascar as well as southern Africa. Image courtesy of Zoom Earth.

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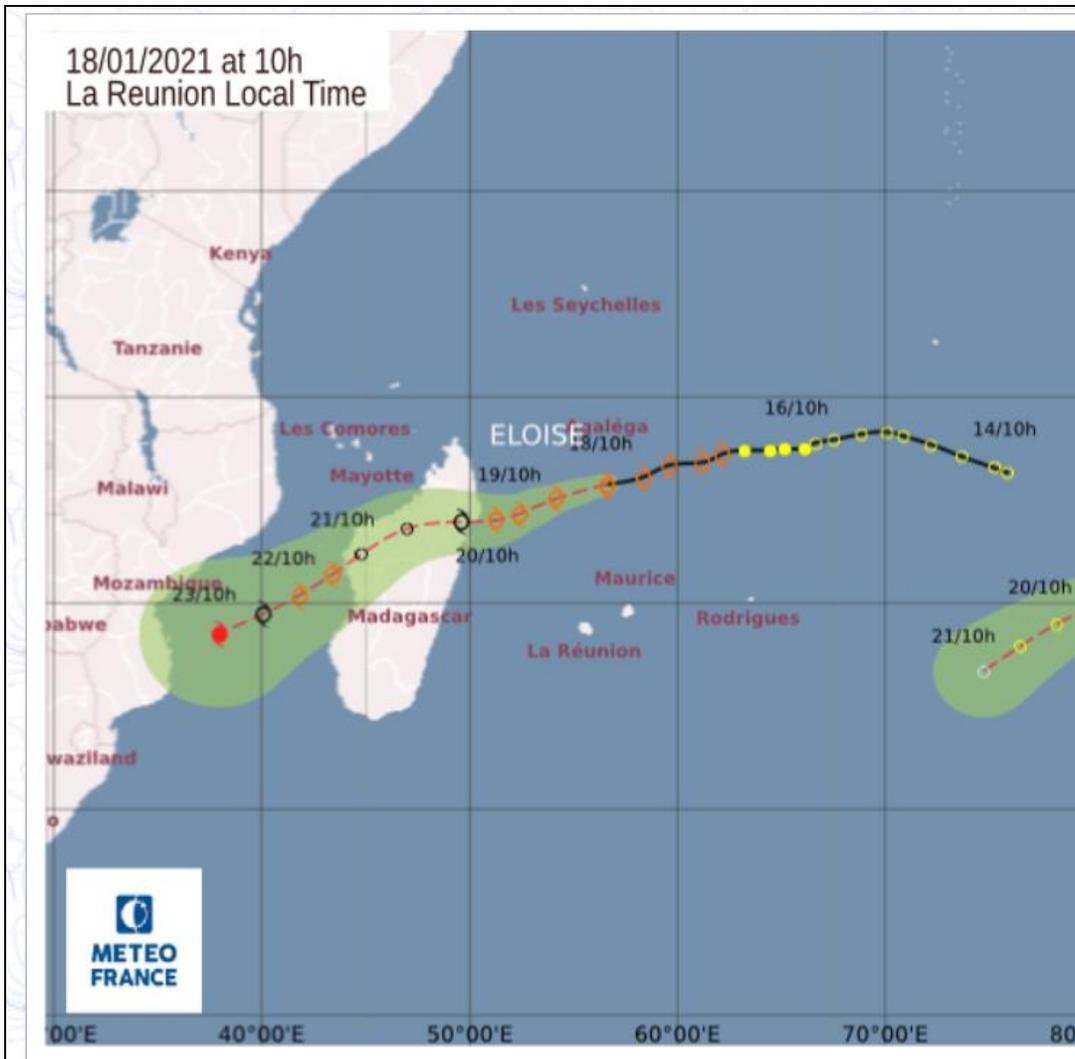


Figure 2. The predicted track for “Eloise” over the next few days, as supplied by WMO RSMC La Reunion (MeteoFrance). The green shaded region represents the highest confidence region for the position of “Eloise”. This region expands and becomes larger, as uncertainty increases with increasing lead-time. “Eloise” is projected to be positioned south east of Beira, Mozambique by midday on Saturday 23 January 2021. Courtesy: RSMC LaReunion

The good news is that, as “Eloise” moves across the landmass of northern Madagascar, it will be exposed to increased friction, as the winds interact with the rough land surface. Moreover, “Eloise” will be deprived of the latent heat energy which it would normally receive from a warm, tropical ocean. We can therefore confidently predict that “Eloise” will weaken significantly during this particular period. However, later in the lifecycle of “Eloise” it will without doubt begin to redevelop as it drifts back into the open ocean region of the Mozambique Channel this Friday. It will be at this stage that “Eloise” will require close monitoring, as it has the potential to make landfall along the southern Mozambican coastline, between Beira and Vilanculos during the coming weekend. Alternatively, “Eloise” could gradually begin to move on a more southerly parabolic path (often termed a “polewards-accelerating” trajectory), which could potentially take it further down the Mozambican coastline and (possibly) into the north-eastern lowveld region of South Africa. At the current time, the speculative possibility of “Eloise” directly affecting South Africa is only one of a multitude of possible outcomes, given the long lead-time, and should be considered to be a “low probability / high uncertainty” worst-case scenario.

In light of the above, the South African Weather Service (SAWS) wish to strongly emphasise that, as with any and every tropical system worldwide, there is much uncertainty surrounding the prediction of future development and movement of “Eloise”. *Tropical systems are notoriously fickle and unpredictable, often exhibiting very erratic movement.* Modern satellite remote sensing as well as advanced ensemble numeric modelling techniques do, however, mitigate much of this uncertainty, at least in the short-term.

Notwithstanding the above, the general public can rest assured that SAWS will continue to be vigilant and to closely monitor the future evolution of “Eloise”. Further timely updates in relation to “Eloise” will be issued as and when necessary.

Compiled by Kevin Rae and edited by Ezekiel Sebego.

For technical and weather enquiries:

National Forecasting Centre: Tel: 012 367 6041

Media enquiries: Ms Hannelee Doubell: Manager, Communications; Tel: (012) 367 6104; Cell: 072 222 6305; E-mail: hannelee.doubell@weathersa.co.za

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