

# Tropical Cyclones

Tropical Cyclones are low pressure systems in the tropics that, in the Southern Hemisphere, have well-defined clockwise wind circulations with a region, surrounding the centre, with gale force winds (sustained winds of 63 km/h or greater with gusts in excess of 90 km/h). The gale force winds can extend hundreds of kilometres from the cyclone centre. If the sustained winds around the centre reach 119 km/h (gusts in excess of 170 km/h), then the system is called a severe tropical cyclone. These are referred to as hurricanes or typhoons in other regions of the world.

The circular eye or centre of a tropical cyclone is an area characterised by light winds and often by clear skies. Eye diameters are typically 40km but can range from under 10km to over 100km. The eye is surrounded by a dense ring of cloud about 16km high known as the eye wall which marks the belt of strongest winds and heaviest rainfall.

Tropical cyclones derive their energy from the warm tropical oceans and do not form unless the sea surface temperature is above 26.5°C. Once formed, they can persist over lower sea surface temperatures. Tropical cyclones can persist for many days and may follow quite erratic paths. They usually dissipate over land or colder oceans.

Most of the northern coastline of Australia is covered by the Bureau of Meteorology's weather watch radar network. Real time images and information about the weather watch radar can be found at [www.bom.gov.au](http://www.bom.gov.au) .

## **Tropical Cyclone Outlook**

Outlook statements are issued daily by each Tropical Cyclone Warning Centre. These present 3-day outlooks on possible tropical cyclone development in the region and surrounding oceans.

## **Tropical Cyclone Information Bulletins**

For further information contact Palm Island Aboriginal Shire Council Phone: 4770 1177



*Tropical Cyclones are common in North Queensland. Everyone should be prepared and Cyclone ready.*



*You should start to prepare your Emergency Kit and have a Family Plan in place (including the care of pets) from October to March each year.*

Bulletins are issued every six hours if a tropical cyclone exists within the Australian region, but is not expected to threaten any coastal or island communities within the next 48 hours. Bulletins include the cyclone's name, current location and its forecasted movement.

### ***Tropical Cyclone Watch***

A watch is issued every six hours when there are indications that gales or stronger winds are expected to affect coastal or island communities within 48 hours but not within 24 hours. A watch identifies the communities that are expected to be affected and gives a brief estimate of the cyclone's location, intensity, severity category and movement.

### ***Tropical Cyclone Warning***

A warning is issued every three hours when there are indications that gales or stronger winds are expected to affect coastal or island communities within 24 hours. As well as information provided in a watch advice, warning advices also provide information regarding the expected maximum wind gusts. Forecasts of heavy rainfall, flooding and abnormally high tide are included where necessary. Communities under threat are also advised to take necessary precautions to safeguard their lives and property. When a cyclone is under radar surveillance close to the coast, hourly advices may be issued.

The general name given to Tropical Cyclone Watch or Warning messages is an Advice or Tropical Cyclone Advice. A tropical cyclone advice is prefixed "FLASH" when it is the first warning to a community not previously alerted by a cyclone watch. It is also issued when major changes are made to the previous warning due, for example, to unexpected movement towards the coast or rapid intensification.

### ***Standard Emergency Warning Signal***

The Standard Emergency Warning Signal is an audible signal that is used by broadcast media in an emergency situation to gain public attention. This would typically occur in an area where a tropical cyclone of Category 2 or stronger is expected to affect a community within 12 hours.

### ***Tropical Cyclone Track and Threat Maps***

Track maps are designed to visually complement information contained in watch and warning advices. They show the past track of the cyclone, with distinctive colours or shades to depict watch and warning zones. These maps can be found at [www.bom.gov.au](http://www.bom.gov.au).