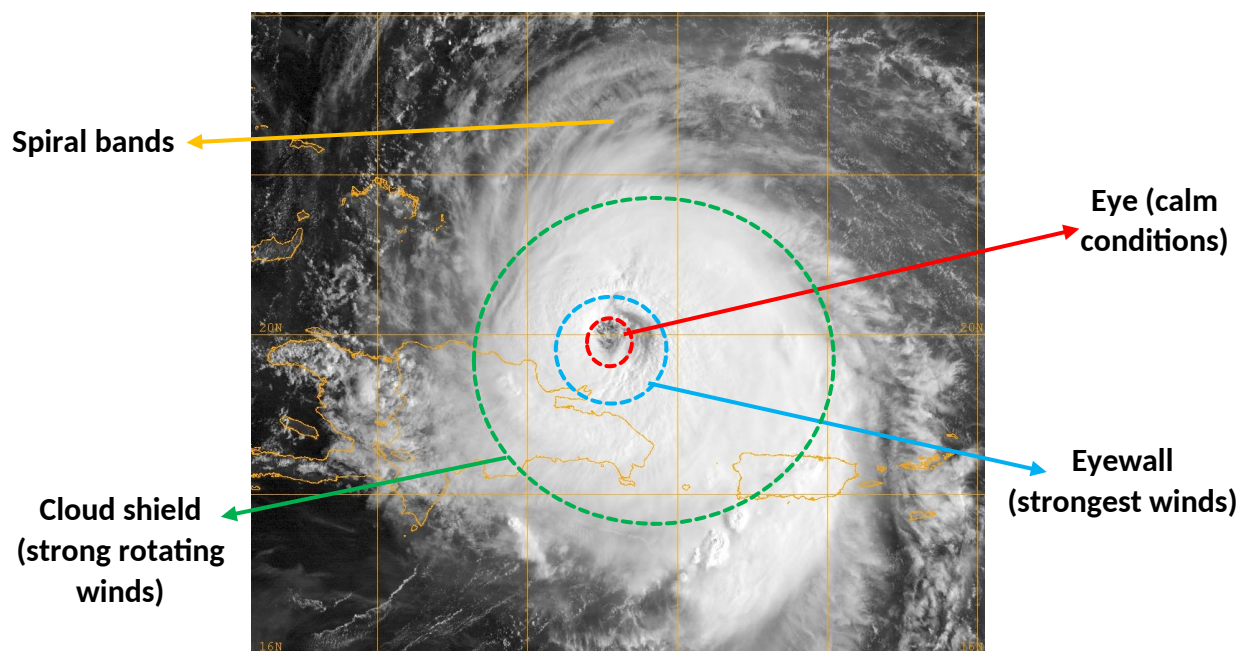


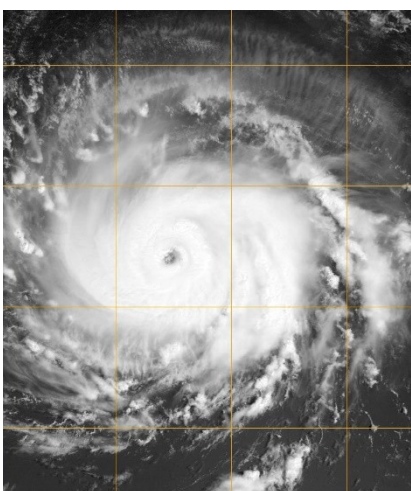
## Observing tropical cyclones (hurricanes) from space

Satellites in the sky **detect light** reflected from the earth. If you look up at the clouds, they usually look white (or grey), which means **they reflect a lot of light** in the visible wavelengths. This light is reflected in all directions, so satellites can see them very clearly.

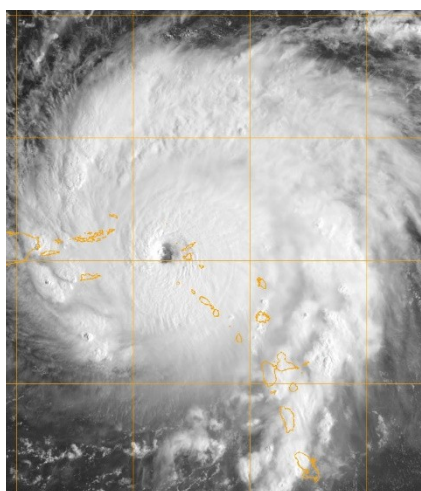
Tropical cyclones, also called hurricanes, have **lots of clouds to be detected** by the satellites. This helps us to understand **where the storm is moving** and **how strong it is**. Below, you can see a satellite image of Hurricane Maria, with the main features highlighted.



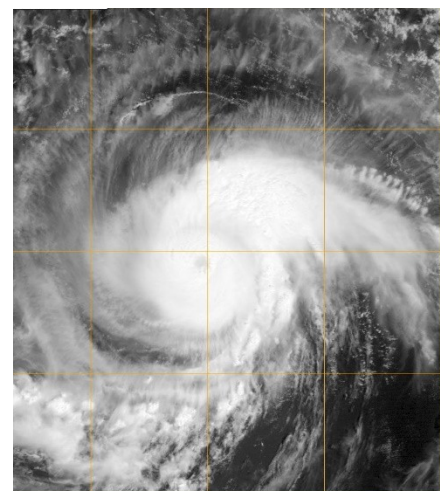
Stronger tropical cyclones have a **clearer structure and larger cloud shield**. The strength is on a “category” scale, where **category 1 is the weakest** and **category 5 is the strongest**. Order the satellite images below based on the storm’s strength:



2



1 (strongest)



3 (weakest)





## Ingredients of a tropical cyclone (hurricane)

Tropical cyclones form within 5 degrees (around 500 km) of the equator, because this provides enough rotation from the Coriolis force.

The perfect sea-surface temperatures for tropical cyclone formation is above 26°C. In fact, these temperatures need to be maintained for the top 60m of the sea surface.

Tropical cyclones get energy from condensing water on the sea, so when they reach land, they begin to weaken.

The UK doesn't get hurricanes because at our latitude there is too much wind, for example the jet stream would destroy the storm's structure.

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## How do tropical cyclones cause damage?

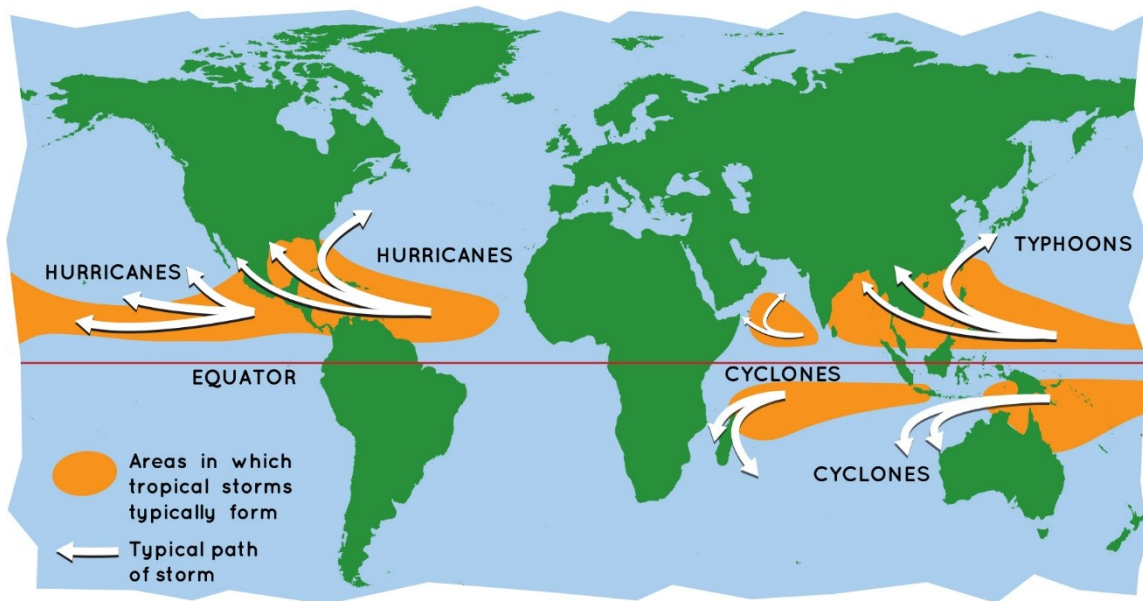
The calmest part of a tropical cyclone is called the eye, where there is almost no wind and the skies are clear. On the other hand, the most destructive part of the storm is called the eyewall, where the winds are the strongest. The most rain happens in the rainbands, which can cause flooding.

Here's a photo taken from inside a hurricane by the Air Force Reserve:



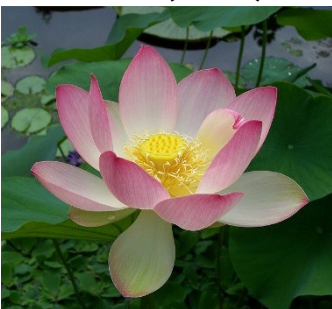
## Hurricane, cyclone or typhoon?

All of these terms mean the same thing, but they have different names depending on where in the world they happen. This map from NASA shows the regional names.



Can you match these national flowers to what their country calls hurricanes? Draw a line from the flower to the right box.

Lotus (India)



Dahlia (Mexico)



Jasmine (Philippines)



Rose (USA)



Hurricane

Cyclone

Typhoon