

## L-8 WINDS, STORMS AND CYCLONES

Class-VII

SCIENCE

MODULE-4/4

### **CYCLONE**

Before cloud formation, water takes up heat from the atmosphere to change into vapour.

When water vapour changes back to liquid form as raindrops, this heat is released to the atmosphere.

The heat released to the atmosphere warms the air around.

The air tends to rise and causes a drop in pressure.

More air rushes to the centre of the storm. This cycle is repeated.

The chain of events ends with the formation of a very low-pressure system with very high-speed winds revolving around it.

It is this weather condition that we call a cyclone.

Factors like wind speed, wind direction, temperature and humidity contribute to the development of cyclones.

### **Structure of a cyclone**

The centre of a cyclone is a calm area. It is called the eye of the storm.

A large cyclone is a violently rotating mass of air in the atmosphere, 10 to 15 km high.

The diameter of the eye varies from 10 to 30 km .

It is a region free of clouds and has light winds.

Around this calm and clear eye , there is a cloud region of about 150 km in size.

In this region there are high-speed winds (150–250 km/h) and thick clouds with heavy rain.

Away from this region the wind speed gradually decreases.

The formation of a cyclone is a very complex process.



A cyclone is known by different names in different parts of the world.  
It is called a 'hurricane' in the American continent.  
In Philippines and Japan it is called a 'typhoon'

## **Tornadoes:**

A tornado is a dark funnel shaped cloud that reaches from the sky to the ground.  
Most of the tornadoes are weak.  
A violent tornado can travel at speeds of about 300 km/h.  
Tornadoes may form within cyclones



## **EFFECTIVE SAFETY MEASURES**

A cyclone forecast and warning service.

Rapid communication of warnings to the Government agencies, the ports, fishermen, ships and to the general public.

Construction of cyclone shelters in the cyclone prone areas, and Administrative arrangements for moving people fast to safer places.

### **Action on the part of the people**

1. We should not ignore the warnings issued by the meteorological department through TV, radio, or newspapers.
2. We should — make necessary arrangements to shift the essential household goods, domestic animals and vehicles, etc. to safer places.
3. Avoid driving on roads through standing water, as floods may have damaged the roads; and keep ready the phone numbers of all emergency services like police, fire brigade, and medical centres

### **Some other precautions, if you are staying in a cyclone hit area —**

1. Do not drink water that could be contaminated. Always store drinking water for emergencies.
2. Do not touch wet switches and fallen power lines.
3. Do not go out just for the sake of fun.
4. Do not pressurise the rescue force by making undue demands.
5. Cooperate and help your neighbours and friends

## **ADVANCED TECHNOLOGY**

It has become easier to monitor cyclones with the help of advance technology like satellites and radars.

Cyclone alert or Cyclone watch is issued 48 hours in advance of any expected storm and a Cyclone warning is issued 24 hrs in advance.

The message is broadcast every hour or half hour when a cyclone is nearer the coast.

Several national and international organisations cooperate to monitor the cyclone-related disasters.

\*Why is Chandigarh unlikely to be affected by cyclone?