Precautionary measures before a cyclone

- 1. Check the strength and stability of buildings, reinforce all the fragile and breakable parts of the house such as doors, windows and roofs.
- 2. Cut and remove all unsafe dead and dying branches around buildings.
- 3. Clean up the roof, rain gutters, drain channels and floor drains
- 4. **Secure all light and loose objects** that may be thrown around by the strong wind.
- 5. Be careful and make sure **no** heavy **objects** are blocking the emergency exits.
- 6. Identify the nearest safe places and the route to get there quickly with your family.
- 7. Know the **contact numbers of family** members and arrange a meeting point.
- 8. **Inform** all family members about prevention measures during and after the cyclone.
- 9. Keep important documents in a safe place and have copies of documents in other safe places.
- 10. Listen to **official news** and **instructions** from the Department of Meteorology and Hydrology.
- 11. Prepare an emergency kit.
- 12. Learn first aid techniques and have a store of necessary medications and equipment.

Precautionary measures during a cyclone

- 1. Close all doors and windows and make sure that they cannot break with the wind.
- 2. **Protect** windows with adhesive tape to avoid breaking glass doors or windows.
- 3. To prevent injuries by breaking glass, stay away from glass doors and windows.
- 4. **Avoid** unnecessary **calls** that could burden the connection lines.
- 5. Listen to **officially released news** and follow the instructions.
- 6. Turn off electricity in possible flooding areas.

- 7. Be prepared to **move to safe places**, if you are living in coastal/flood prone areas.
- 8. Take pets with you if possible and do not bind if not necessary.

Cautions after a cyclone

- 1. Beware of damaged cables, power lines and tree branches. Inform the relevant authority and help clarify.
- 2. Clean up mud and dirty water after withdrawal of the cyclone.
- 3. Check buildings, water pipes, power lines and other connecting lines for damages.
- 4. **Dry out the parts** of the building that could be damaged by mould or pest.
- 5. Avoid contact with flooded areas as electricity may flow from damaged power lines.
- 6. Wear **appropriate footwear** to avoid injuries from sharp objects.

Emergency numbers:

Police Department 199 (or) 01 549309 191 (or) 01 252011 **Fire Service Department Ambulance from General Hospital** 192 (or) 01 295133

Publisher of the pamphlet

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University of Cologne Institute of Geography www.geographie.uni-koeln.de













Development, Ministry of Construction



Yangon





University of Centre of Excellence for Urban and Regional Development

April 2023

www.myrisk.uni-koeln.de

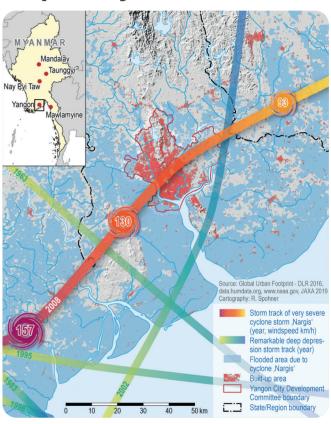
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Recommendations for tropical cyclones



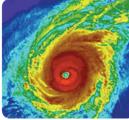
Tropical cyclone preparedness

Yangon is exposed to a variety of hazards such as earthquakes, floods, tropical cyclones, and fires. Dealing successfully with these hazards requires preventative measures and preparation. This pamphlet contains information on tropical cyclone preparedness.

What is a tropical cyclone

A tropical cyclone is a **storm** that can **cause enormous damage to people, animals and infrastructures.** Cyclones are caused by the evaporation of the warm ocean surface. The humid air with water vapors creates clouds that are constantly forming as the earth rotates and the wind blows harder. These clouds can move from the ocean towards the mainland and becomes storms of hundreds of kilometers in size.





Source: Department of Meteorology and Hydrology

Inside the cyclone is a **windless and cloudless area, the** 'eye'. It is surrounded by the strongest winds, heavy rain, and clouds. It is important to know how a cyclone is constructed: stormwinds can blow due to the cyclone precursor before the actual cyclone reaches the coast. The wind can calm down at the epicenter (eye). After a calm wind period, strong winds blow again due to the clouds around the cyclone's eye. The **behavior of cyclone** could **change immediately** even after its silent condition and could turn out to be a strong cyclone.

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An annual Calendar of Disasters in Myanmar, Source: Department of Meteorology and Hydrology

It will be safe only when the relevant authorities and the media report that the cyclone is over. In Myanmar, tropical cyclones occur mainly after the intense heat in the pre-monsoon season (April to May) and after the monsoon season (October to November).

Possible hazards of tropical cyclones

- 1. Storm surges **like tsunamis** are the **most dangerous force during a cyclone.**
- 2. In coastal areas, tropical cyclones are particularly dangerous.
- People can be injured by the objects scattered in cycloneaffected areas.
- Invisible objects floating in flooded areas can also be dangerous (for example; underwater trees and rocks, and power lines/electric cables).
- Tropical cyclones can cause terrible damage through thunderstorms and violent winds, heavy rainfall with floods, and landslides in lowland areas.
- The cyclone's pathway can change immediately so
 the exact nature of a cyclone can only be determined shortly
 before it strikes. Therefore, it is necessary to be prepared.

Cyclone alert colours according to the intensity and tract of cyclone

Yellow	Cyclone forming but not headed towards the Myanmar coastal area
Orange	Cyclone forming and heading towards the Myanmar coastal area
Red	Cyclone approaching and will move towards the Myanmar coastal area in the next 12 hours
Brown	Cyclone directly passing the Myanmar coastal area
Green	Cyclone withdrawing from the cyclone disaster. The area is safe.

Source: Department of Meteorology and Hydrology

Types of cyclones

Cyclone level	Wind speed kevel	Distinctive features or characteristics				
Low pressure area	< 20 miles	Dust and paper are scattered.The leaves and twigs move and the wind blows.				
Weak cyclone	20 - 31 miles/hour	The small trees, twigs, and the telephone lines will be swinging.Umbrellas will be difficult to use.				
Small cyclone	32 - 38 miles/hour	Trees will swing and the wind will blow.				
Cyclone	39 - 54 miles/hour	Branches and small trees will break, roofs and chimneys will be blown off and some buildings will also be destroyed.				
Strong cyclone	55 - 72 miles/hour	Trees will uproot and buildings will be destroyed.				
Extremely strong cyclone	73 - 137 miles/hour	 Trees will uproot and several places will be destroyed. There will be coastal floods and electricity shortage. 				
Super strong cyclone	>138 miles/hour	There will be complete destruction of wooden houses, collapsed roofs, rising waves, tree falling, and electricity shortage.				