CRISIS24 HORIZON

Advice Sheet - Personal Safety during Hurricane

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Categories: Environment

Hurricanes, also called tropical cyclones or typhoons (depending on where in the world they occur), are low pressure weather systems that most often form in the tropics. The three terms for hurricanes have the same meaning and are used interchangeably here. Hurricanes are among the world's most destructive weather phenomena; damage is usually due to storm surge, flooding, and/or high winds. Tornadoes are possible during hurricanes, which can cause significant damage *(Check out Crisis24's Advice Sheet on tornadoes)*. Tropical cyclones require tremendous energy to develop. The warm, moisture-laden air of the tropics contains this energy, so most hurricanes develop within 20 degrees of the equator and begin to dissipate as they move into mid-latitudes. These tropical weather systems are classified as follows:

- Tropical Depression: An organized system of clouds and thunderstorms with a defined surface circulation and maximum sustained winds of 61 kph (38 mph) or less.
- Tropical Storm: An organized system of strong thunderstorms with a defined surface circulation and maximum sustained winds of 63-118 kph (39-73 mph).
- Hurricane/Tropical Cyclone/Typhoon: An intense tropical weather system of strong thunderstorms with a well-defined surface circulation and maximum sustained winds of 118 kph (74 mph) or higher.

Tropical systems' naming convention varies depending on where in the world they form; however, they are all categorized based on wind speed. Hurricanes are categorized according to the strength.

- **Category 1**
  - Sustained winds of 64-82 kts / 119-153 kph / 74-95 mph
  - Resulting in Minimal damage: Unsecured mobile homes, vegetation, and signs.
- **Category 2**
  - Sustained winds of 83-95 kts / 154-177 kph / 96-110 mph
  - Resulting in moderate damage: All mobile homes, roofs, small boats, flooding.
- **Category 3**
  - Sustained winds of 96-112 kts / 178-208 kph / 111-129 mph
  - Resulting in extensive damage: Small buildings, low-lying roads flooded.

- **Category 4**
    - Sustained winds of 113-136 kts / 209-251 kph / 130-156 mph
    - Resulting in extreme damage: Roofs destroyed, felled trees, roads cut off, mobile homes destroyed. Beach homes flooded.
- **Category 5**
    - Sustained winds greater than 137 kts / 251 kph / 156 mph
    - Resulting in catastrophic damage: Buildings and vegetation destroyed. Major roads cut-off. Homes flooded.

Preparing for a Hurricane/Typhoon/Tropical Cyclone

In most cases, meteorologists provide a fairly accurate forecast of where a storm will strike at least 36 hours in advance. People in a storm's path will often have three or more days to prepare.

Preparations to take in advance of a storm - Personal

- Learn the most likely hazards you will face if the storm strikes your area. Some locations are more vulnerable to storm surge (for example, low-lying areas near shallow bays) while others are more susceptible to wind damage or landslides (which can occur after significant rain). You could face the greatest threat from the building you are in, if it is poorly constructed.
- Determine where you could go if it becomes clear that the storm will impact your area. You may decide to stay where you are (for example, if you are in a sturdy building on relatively high ground), or move to another building in the local area. You may also decide that leaving the area will be the best strategy; in that case, learn the best evacuation routes, find out in advance how congested they become during evacuations, and plan accordingly. Making sure the gas tank in the car is filled in case you need to evacuate
- Once you know a storm strike is almost certain, preparing an emergency kit and buying enough bottled water to last a few days - whether you are staying or evacuating - and nonperishable food, such as energy bars, in case you become stranded. Additionally, ensure you have a flashlight with extra batteries, blankets, weather radio, medication, important documents, etc.
- Trim large trees or shrubs, especially weak branches. Bring all removable objects inside like patio furniture and secure immovable objects like sculptures with burlap or blankets tied with rope. Clean drains, gutters, and downspouts.
- Contact someone outside of the area and inform them of your plans (whether you are staying or evacuating).
- Plan for the evacuation of pets as well, including buying pet food to include in an emergency kit. Most emergency shelters will not admit pets without proof of up-to-date vaccinations (such as a rabies tag).
- Even a Category 1 storm can knock out communications systems, including cellphone towers. Do not assume you will be able to make calls or have internet access during a storm. Depending on wind speeds and other conditions, local authorities may shut off

electrical power several hours before the brunt of a storm hits an area. Ensure you have a radio with extra batteries, and be prepared to live without electrical power and communications for a few days.

Preparations to take in advance of a storm - Business

- Review and update emergency action plans well in advance of the storm. Consider conducting drills. Think about evacuating personnel outside of the storm's area of impact. If there is any doubt as to the viability of a structure, evacuate ahead of time.

- Stock up on nonperishable supplies and bottled water for essential personnel who must remain during the storm. Procure additional first aid supplies, insect repellent, ice, vehicle fuel, spare batteries, flashlights, radios, mobile phones, etc. Consider purchasing a few non-powered hand tools (hammer, nails, crowbars, wood, etc.) to have on hand.

- Test emergency backup power supplies and ensure there is plenty of fuel to operate a backup generator, should power be knocked out for an extended period.

- Secure buildings, or make sure building owners do so well in advance of the storm's approach. Remove or secure any equipment that could become airborne during a storm

- If possible, ensure that critical business operations can fall over to business units outside of the storm zone as needed.

During a Hurricane/Typhoon/Tropical Cyclone

If a hurricane/tropical cyclone/typhoon watch is issued, the storm will affect the local area in 24 to 36 hours. Personnel should be prepared to do the following:

- Monitor local media for updated forecasts and evacuation notices.

- Review evacuation plans. Obey evacuation orders issued by authorities. Evacuations may be voluntary or mandatory, or may apply only to non-residents. Make sure you fully understand the order.

- If unable to evacuate or not ordered to do so, stay indoors and away from glass windows and doors. Keep curtains and blinds closed. Turn refrigerators to the lowest setting, and shut off utilities if instructed to do so.

- During periods of high winds, take shelter well into the interior of your building lodging, and close all interior doors. Secure and brace all exterior doors. If possible, do not stay on the top floor of a building, which could become unsafe if the roof is damaged or destroyed.

- If trapped in a building due to flooding, move to the highest floor but do not climb into a closed attic.

- Do not walk, swim, or drive through flood waters. (*Check out Crisis24's Advice Sheet on flooding)*

What To Do after the System Passes

Once the storm has passed, several residual threats pose problems to businesses and personnel.

- Monitor local media for information related to medical treatment, potable water, and food supply, and availability of shelter.

- Remain in your safe location until authorities state it is safe to leave, especially if you want to return to an area that had been evacuated.
- Heed the advice of authorities, especially government-imposed states of emergency or curfews.
- Limit driving. Streets will be strewn with debris - and possibly downed power lines - and authorities working on clean up, restoring power, and other safety issues will need priority on roads. Avoid flooded roads and waterways (*Check out Crisis24's Advice Sheet on flooding)*.
- Do not drink or prepare food with tap water - unless you boil it first - until local officials have declared the water supply clean and safe.
- Avoid downed power lines. Report them or any other broken utility lines (gas, water, sewer) to local officials.
- Remain cautious in hilly or mountainous areas, as the storm's rainfall may have increased the threat of landslides (*Check out Crisis24's Advice Sheet on landslides)*.

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