

Hurricanes

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Hurricanes refer to spiraling tropical storms with wind speeds of up to 160 miles (257kilometres) an hour and bear the capability to unleash more than 2. 4 trillion gallons of rain in a day. The Atlantic Ocean’s hurricane season usually peaks from mid-August up to late October and averages around five to six hurricanes per year. During this period, hundreds of storm systems spiral out of tropical regions (5 to 15 degrees latitude north and south of the equator) of which 40-50 of the storms strengthen to hurricane levels. Within the Northern hemisphere, the hurricane season runs from June to November, while the Southern hemisphere experiences the hurricane season from January to March. The paper explores hurricanes centering on the formation and characteristics of the hurricanes.

Introduction

A hurricane assembles energy as it progress across the ocean water, drawing up warm, moist tropical air from the surface and supplying breezy air aloft. The Coriolis force is essential in the creation of a hurricane although the force becomes weak near the equator. Thus, hurricanes can never form at the equator. Hurricanes typically has an average diameter of about 500 km (311 miles) with strong winds spiraling inward and upward at speeds that range from 75 to 200 mph (Ahrens, 2007).

Hurricanes usually start as tropical disturbances in warm ocean waters with surface waters temperatures reaching at least 80 degrees Fahrenheit (26. 5 degrees) or warmer. The low pressure systems derive energy flowing from the warm seas. A hurricane usually starts as a tropical wave before it becomes a tropical disturbance. In the event that a storm attains wind speeds of about 38 miles (61 kilometers or less) an hour, the storm is

otherwise referred to as a tropical depression. A tropical depression is known as tropical storm when it sustains wind speeds of about 39 miles to 73 mph (63 kilometers) an hour. If a tropical storm reaches sustained wind speeds of about 74 miles or more (119 kilometers) an hour, it becomes a hurricane and gains a category rating of 1 to 5 based on the Saffir-Simpson Scale.

Hurricanes represent massive heat engines that generate energy at an immense scale. Hurricanes usually derive heat from warm, moist ocean air and release it via condensation of water vapor in thunderstorms. Hurricanes rotate around a low-pressure centre known as the “ eye,” exemplified by light winds and fair weather. The “ eye” emanates from sinking air at the centre. Hurricanes mainly spiral in a counter-clockwise direction with the centre (eye) being the calmest part (Ahrens, 2007). The eye is enveloped by a circular “ eye wall” that hosts the storm’s strongest surface winds and rain.

Hurricane intensity is grounded in the highest sustained wind speed that the hurricane yields. The Saffir-Simpson scale gauges hurricane strength from category 1 to category 5, which are based on the damage that each category is capable of producing. Category 1 has a wind speed of about 74-95 mph with minimal damage, Category 2 (96-110 mph, moderate damage), Category 3 (111-130 mph, extensive damage), Category 4 (131-155 mph, extreme damage), and Category 5 (> 155 mph, catastrophic damage). As air nears the centre, the air rises rapidly and condenses into clouds and later rain. The condensation of the air releases massive amounts of heat into the atmosphere resulting to lower surface temperature and powerful winds (Ahrens, 2007). The air must cool off quickly as it rises with the wind blowing

in the same direction and at a similar speed in order to force air upward from the ocean surface.

Tropical storms usually visit destruction ashore in diverse ways. When a storm makes landfall, it frequently produces a destructive storm surge that can attain 20 feet (6 meters) high, and that can extend to area of about 100 miles (161 kilometers). Approximately 90 % of deaths associated with hurricanes emanate from storm surges. Torrential rains from the storm inflict further damage by causing floods and landslides, which maybe occur many miles further from the coastline.

Conclusion

The best defense against hurricanes hinges on accurate forecast that avails people with information and time to get out of its way. The National Hurricane Centre mainly issues hurricane watches for storms that may put in danger communities, and hurricane warnings for storms that are likely to make a landfall within 24 hours.

References

Ahrens, D. (2007). *Meteorology today: An introduction to weather, climate, and the environment*. Belmont, CA: Thomson Higher Education.