

Land Strong Wind Advisory Township Signal

Taiwan is located at the junction of the Eurasian continent and the Pacific Ocean. Due to its geographical location and the influence of the northeast monsoon in winter and the southwest monsoon in summer, along with its complex terrain and land-sea distribution, Taiwan frequently experiences strong winds in coastal open areas, corners, offshore islands, and mountain ridges. During typhoons, strong winds may also affect inland areas.

Statistics on the annual average number of days with strong winds (where the average wind speed reaches 10.8 m/s or higher) indicate (Figure 1) that during the northeast monsoon season (October to April), strong winds frequently occur along the coastal areas of Taiwan from Tainan northward, the Hengchun Peninsula, Ludao, Lanyu, Penghu, and Matsu. Strong winds also frequently occur in Taiwan and its outlying islands in the southwest monsoon season (May to September) or during typhoon events, disrupting transportation, daily life, agriculture, and the economy, and requiring precautions.

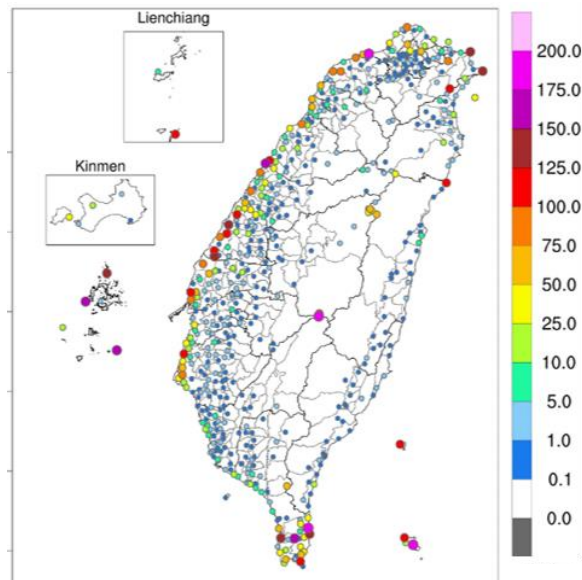


Fig1. The map of the annual average number of days with average wind speed reaches 10.8 m/s or higher.

In 2024, the Central Weather Administration (CWA) gathered input from central and local government agencies regarding strong wind

warnings, considering Taiwan's geographical features. After thorough evaluation, the thresholds and advisory content for the Land Strong Wind Advisory Township signal were established, and will be piloted in March 2025. This initiative aims to enhance public awareness and preventive measures.

The Land Strong Wind Advisory Township Signal has three levels: yellow, orange, and red, defined as follows:

- Yellow: Issued when the average wind speed reaches 10.8 m/s or the wind gust reaches 17.2 m/s, serving as a reminder to stay alert.
- Orange: Issued when the average wind speed reaches 20.8 m/s or the wind gust reaches 28.5 m/s, requiring heightened awareness and caution.
- Red: Issued when the average wind speed reaches 32.7 m/s or the wind gust reaches 41.5 m/s, advising people to stay indoors and take immediate protective measures.

Land Strong Wind Advisory Q&A

1. What are the commonly used units for wind speed around the world?

What is the Beaufort Wind Scale?

Ans: Commonly used units for wind speed include meters per second (m/s), knots (kt), and the Beaufort Wind Scale, which is the internationally recognized scale for measuring wind strength. It was introduced by British Admiral Sir Francis Beaufort in 1805. For detailed information about the Beaufort Wind Scale, please refer to the Meteorology Encyclopedia on the CWA's website ([link](#)).

2. How is strong wind defined in Taiwan?

Ans: The CWA defines strong wind as a phenomenon where the average wind speed reaches 10.8 m/s or the wind gust speed reaches 17.2 m/s.

3. How are Land Strong Wind Advisory Township Signals defined?

Ans: They are categorized into three levels—yellow, orange, and red—based on observed or forecasted wind speed.

- Yellow: The average wind speed reaches 10.8 m/s or the wind gust reaches 17.2 m/s.
- Orange: The average wind speed reaches 20.8 m/s or the wind gust reaches 28.5m/s.
- Red: The average wind speed reaches 32.7 m/s or the wind gust reaches 41.5m/s.

4. Why implement a graded alert system?

Ans: The three-tier system (yellow, orange, red) helps the public quickly assess wind impact and take appropriate precautions, assisting disaster response agencies in risk evaluation and reducing potential dangers.

5. Which areas are covered?

Ans: The pilot of the Land Strong Wind Advisory Township Signal will begin in March 2025, providing detailed township-level advisories based on observed and forecasted wind data. Some weather stations in special locations (e.g., high-altitudes, mountain ridges, wind gaps, or capes) may record extreme winds but are not representative of the entire township; therefore, township signals will not be issued based on data from these stations.

6. How should the system be applied to large townships?

Ans: In large townships with complex terrain (e.g., Xiulin Township in Hualien, Ren'ai and Xinyi Townships in Nantou), strong winds may

occur only in localized areas. It is recommended to check the latest wind observation data to better understand the actual distribution of strong winds within these townships.

7. When and where are strong winds most common in Taiwan?

Ans: Strong winds in Taiwan are most common from October to April due to the northeast monsoon, primarily affecting coastal areas from Tainan northward, the Hengchun Peninsula, Penghu, Luda, Lanyu, and Matsu. Although strong winds are less frequent from May to September, southwesterly winds or typhoons can still bring strong winds, which may extend further inland and require special attention.

8. How does CWA alert the public about strong winds during severe weather?

Ans: The Land Strong Wind Advisory covers prolonged winds caused by larger-scale systems, such as northeast monsoons or typhoons. For short-lived, localized strong winds associated with thunderstorms or smaller-scale convective weather systems, the CWA issues "Severe Thunderstorm Alerts" or "Real-time Weather Information" to inform the public.

9. How can the public access the Land Strong Wind Advisory Township Signal information?

Ans: The "Land Strong Wind Advisory Township Signal" is published on the CWA website (<https://www.cwa.gov.tw/eng/>), the "Taiwan Weather" app, and the CWA's Facebook fan page. It is also broadcast through media outlets and shared via SMS and fax. Disaster response units and local governments receive these alerts via SMS and fax systems. Users are encouraged to apply this information for added

value. When sharing or republishing, please comply with the Meteorological Law and credit the "Ministry of Transportation and Communications, Central Weather Administration."

10. When does CWA issue or update the Land Strong Wind Advisory Township Signal?

Ans: If the criteria are met, the Land Strong Wind Advisory Township Signal is updated at approximately 4:30, 10:30, 16:30, and 22:30 daily (local time), based on the latest forecast and actual strong wind monitoring. During typhoon warnings or special circumstances, updates may occur more frequently.

11. How does the advisory complement wind forecasts during typhoon warnings?

Ans: Typhoon wind forecasts provide county-level predictions every six hours, updated every three hours, covering an 18-hour period. In contrast, the Land Strong Wind Advisory Township Signal presents strong wind distribution for approximately the next day. County-level forecasts should be the primary reference, with the township advisory offering additional insights into wind distribution.

12. Where can actual wind observations be found?

Ans: The CWA website (<https://www.cwa.gov.tw/eng/>) provides weather rankings, listing the top 20 locations, times, and stations for average wind and wind gust speeds over the past hour, 24 hours, and current day.