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High-Speed 360-Degree in 30-Seconds Scan of Rain Clouds to Improve Weather Forecasting Accuracy in Asia

Weathernews Begins Global Deployment of New Meteorological Radars for 3D Observation

First One to Be Installed in Hanoi, Vietnam, for Early Detection of Flood Risks and Issuance of Warnings ~

Weathernews Inc. in cooperation with VNMHA, will initiate the overseas deployment of high-frequency compact meteorological radar EAGLE, the first of which is to be installed in Hanoi, Vietnam. Weathernews entered into an agreement on provision of a radar to the Vietnam Meteorological Hydrological Administration on April 27. The first radar is scheduled for installation in Hanoi and commencement of operation by July 2022.

The EAGLE radar is a new meteorological radar that performs 3D observation of 50-km periphery in 30 seconds. The radar enables near real-time tracking of the development of cumulonimbus clouds within a 50km radius, making it possible to capture severe rainstorms, wind gusts, hail, and other localized weather events with greater accuracy.

Weathernews and VNMHA will improve the accuracy of weather forecasts by installing an EAGLE radar in Hanoi to realize higher-resolution observations. Efforts will be made to enhance resilience, using the observation data as reference information for the early detection of flood risks and decision-making regarding the issuance of warnings. Observation data from the radar is also expected to be used in connection with railways, roads, airports, and other transportation infrastructures.

Weathernews will continue to install radars and strengthen weather monitoring systems for disaster risk reduction in Asian regions, where there is insufficient observation data.



Chihito Kusabiraki, Weathernews' CEO (left) and Dr. Hoang Duc Cuong, Vice Administrator of The Vietnam Meteorological Hydrological Administration (right)



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New Compact Meteorological Radar to Be Installed in Vietnam for Enhancement of Resilience

Weathernews and VNMHA entered into a strategic partnership in 2015 and have been undertaking various efforts to enhance urban resilience, including the sharing of meteorological data and installation of observation infrastructures. Vietnam is prone to tropical cyclones and tend to be affected by typhoons that develop over waters around the Philippines. As a result, floods occur yearly in Vietnam, significantly impacting the lives of the its people as well as its socioeconomics.

Given this situation, Weathernews works together with VNMHA to install and commence the operation of an EAGLE radar in Hanoi through an international cooperation program of the World Meteorological Organization and cooperation with Japan Meteorological Agency. The new radar will enable higher-resolution observation, making it possible to capture severe rainstorms and other localized weather events with greater accuracy. The Vietnam Meteorological Hydrological Administration will use the radar for the early detection of flood risks and for the improvement of prediction accuracy.

Observation data from the radar can also be made available to businesses and are expected to be utilized by the railroad, expressway, and airline industries.

♦ Viet Nam Meteorological and Hydrological Administration Vice Administrator Dr. Hoang Duc Cuong

"Currently, Vietnam's existing weather radar system cover the whole country. However, the terrain of Vietnam is complicated and there are mountainous areas, so it is difficult to detect local short-term heavy rain. The introduction of EAGLE radar will be a great support in detecting, monitoring, observing, and issuing warnings for clouds that cause localized heavy rainfall. Along with the radar equipment, we hope for Weathernews's continued support in sharing the know-how, in utilization and operation of the EAGLE radar in Vietnam. We hope that the cooperation between Vietnam Meteorological and Hydrological Administration and Weathernews Inc. will further develop in order to contribute to the reduction of disaster risk and sustainable economic development."

Weathernews Inc. CEO Chihito Kusabiraki

"Enhancement of the cooperative relationship with the Vietnam Meteorological and Hydrological Administration is extremely important for the global expansion strategy of Weathernews, particularly the technical cooperation such as radar and the development of new meteorological markets. In addition, since this initiative of private-public partnership in observation infrastructure is the first attempt in the global meteorological industry, it is also drawing WMO's attention. From that point of view, I definitely hope for the success of this project. And above all, I hope that the EAGLE radar will help Vietnamese people's lives and economic activities as much as possible by reducing the risk of natural disasters."



EAGLE Radar, the high-frequency compact weather radar

◆Eagle Radar, the high-frequency compact weather radar, for 3D Observation of 50-km Periphery in 30 Seconds

Weathernews has been working on the development of the EAGLE radar that is new high-frequency compact meteorological radar in collaboration with the University of Oklahoma since 2014.

This WNI-proprietary radar, through 360-degrees high-speed scanning, enables near real-time spatial observation of the size of rain drops and the direction in which the clouds are moving. The radar completes a rotation in a minimum of five seconds, quickly obtaining detailed three-dimensional data over a 50 km radius in 30 seconds. The achievement of high-speed observation will render it possible to capture guerilla thunderstorms, linear precipitation zones, heavy snow, wind gusts, hail, and other sudden, localized weather events.

We will be installing the radars in a total of 50 locations throughout Asia within the next two years under the current plan.

Weathernews will continue to install radars and strengthen weather monitoring systems for disaster risk reduction in Asian regions, where there is insufficient observation data.

Related News

Field Test Initiated of New Radar for 3D Observation of 50-km Periphery in 30 Seconds to Reinforce Monitoring of Weather Events in Japan and Asia(Nov 24, 2021)
Weathernews, OU and Nanowave Technologies Announce Research Collaboration(Jun 22, 2017)

Weathernews Inc. (Head Office: Mihama-ku, Chiba-shi; CEO: Chihito Kusabiraki) was founded in 1986 and is one of the largest weather information companies in the world. We started as a service supporting safe maritime operations aimed at shipping companies, and we now provide weather information services 24 hours a day, 365 days a year to clients across 44 different markets in a total of 50 countries around the world. With our guiding motto of "wanting to help people in times of crisis," we continue to take on new challenges with an innovative approach, such as developing our own original radar to pick up torrential rainstorms and sudden gusty winds, launching weather satellites to capture views of Arctic Ocean sea ice, and making use of AI technology to achieve high-accuracy weather predictions.