

## **Thailand wind map forecasting**

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Wind speeds and directions are key weather parameters because strong winds are always associated with natural disasters such as heavy rain, storm, forest fire, etc. To monitor and mitigate losses from those disasters, it is important to use the best available weather data sources and the latest physics-based weather modeling technology to forecast wind map with a high horizontal grid resolution. The Regional Atmospheric Modelling System (RAMS) model was chosen to run the three-dimensional numerical simulations of atmospheric meteorology. With a High Performance Computer (HPC), the system could compute a 3-day forecast of hourly wind map on a twice-forecasts-per-day basis covering Thailand at horizontal grid resolution of 3 km. The model accuracy will be tested by satellite weather images and telemetry observations. Additionally, ground surface wind maps are also useful for applications such as assessment of wind power potential, coastal erosion analysis, air quality monitoring, and structural design.