

1. TITLE OF PROJECT

RESEARCHING TO IDENTIFY THE WEATHER SYSTEM AND FEATURE KEYS IN VIETNAM TO SERVE WEATHER FORECASTING, SPECIALY DANGEROUS WEATHER PHENOMENA

2. AUTHOR

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3. ABSTRACT

The study of weather systems and patterns, overseas has a lot of works; but, as you know, their meteorological conditions are very different from ours. Vietnam also has many research projects, but such works has been done long ago, so still limited to data and computing conditions. The fact that, on the basis of the existing conditions of the data sources and calculation conditions, the project will conduct research on some main characteristics of the main weather systems and patterns as well as what the weather patterns causing the cold weather damage, causing snow and hail in Vietnam. After two years of implementation, the project has obtained the following results:

- Defining a clearer, more systematic origin, structure, activities, frequency as well as weather of four weather systems (Siberia high pressure, Shouthern Asia low pressure, Pacific high pressure and Tibet high pressure) and 7 of the weather patterns (ITCZ, MST, tropical Storm, upper sub-tropical west jet trough, eastly waves, equatorial waves and the southwest monsoon) affect Vietnam. In particular, for the equatorial waves, it is the first study on the South China Sea and its impact on Vietnam. Or for the southwest monsoon, with the synthesis of the wind on the different air pressure levels, project has given a closed monsoon diagram, described Hadley circulation in the monsoon adequately;

- Identifying clearly the origin, structure, rules of operation, the frequency of occurrence and consequences of Hoa Dong and Thanh Tang pressure highs, two pressure highs with Siberia high created cold waves penetrate into Vietnam. Accordingly, the Hoa Dong pressure high affects Vietnam in September, October, while pressure high influences in Vietnam in summer months, when cold continental pressure high had weakened sharply and drawed to the west;

- Identifying China pressure low, the low operates on the northern part of mainland China and mainly during the months from May to August. During this period, the pressure low almost constantly exists and affects Vietnam weather dramatically, causing the heat wave, even intense heat;

- Reconfirming that the weather causes the snow and cold weather damage, analyzing the similarity and difference of two shapes that weather patterns. Accordingly, the weather caused the snow that will inevitably cause cold weather damage, so the weather only causes cold weather damage is not also snow can cause. For snow, the AT850 must have hot advection due to cyclone activity in the northwest territory of Vietnam caused.

- Having additional steps that weather patterns caused the hail. Accordingly, hail in northern Vietnam usually occurs when penetration of cold front, while upper sub-tropical west jet trough. Also in the south, east waves have a certain role for the appearance hail.