Studies on tornadoes and severe local storms in the northeastern region of the Indian subcontinent

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Purpose of this study is to clarify the actual conditions of damages of severe local storms such as tornadoes in the northeastern part of India. It is well known that cyclones and heavy rain during the rainy season cause heavy damages in this area, especially in Bangladesh. In addition, severe local storm, which is severe weather accompanied with deep convections, frequently occurs in this area during the pre-monsoon season and cause severe damages to life and property. The present study investigate the actual conditions of damages of severe local storms and attempts to contribute mitigating of damages of severe local storms in this area.

We conducted files survey to clarify damage property in the areas which were attacked by severe local storms in Bangladesh. Most houses in rural area in Bangladesh are so weak for strong wind such as tornadoes. Many houses are crudely constructed with bamboo and thin plate. When tornadoes attack these houses, thin plates can easily be blown by strong wind, and blown thin plate hurt people. Most victims were attacked by flying debris such as thin plates blown by strong wind. Many people felt sudden variation of meteorological conditions such as rising temperature and gust wind. Some people had difficulty in breathing. before tornadoes coming.

We constructed vast database of severe local storms in Assam area in India by using news papers published in this area. Articles containing damages of severe local storms were scanning and input to our database. The database contains date, place, time and property of damages. The database allows us to clarify climatological aspect of severe local storms and damage property in Assam area.