

## **The importance of the Data Quality Control for the Disaster Prevention and Mitigation.**

Kazuhiko Nagata  
(Forecast Division, Japan Meteorological Agency)

Japan often experiences natural disasters such as sediment disasters, snow disasters, wave disasters, storm surge disasters, earthquakes, tsunamis and so on. In recent years, these disasters caused about 100 deaths and missing people. The most of these people were caused by gust, flood and snow disasters.

If hazardous weather conditions are expected, JMA delivers a variety of plain messages including warnings, advisories and bulletins to the general public and disaster prevention authorities. Warnings and advisories for appropriate municipalities are issued whenever forecasters suppose that weather elements, such as the amount of rainfall, wind speed, wave height, tide level and so on, will meet criteria.

Concerning the heavy rain warning, advisory and flood warning, advisory, which are information related to sediment disasters, flood and inundation, the criteria of these warnings and advisories are the amount of rainfall, “soil water index”, and “runoff index”. The “soil water index” shows the risk of sediment disaster and the “runoff index” shows the risk of flood. An accurate rainfall grid data are needed for these indices.

Instruments measuring the amount of rainfall are raingauges and radars. Raingauges can measure the actual amount of rainfall, but they can observe the amount of rainfall at only single points. On the other hand, radars can observe large areas with higher spatial resolution than the raingauge network, but they may produce readings different from rainfall observed on the ground, as it does not measure the amount of rainfall directly.

JMA uses “Radar/Raingauge-Analyzed Precipitation” for the forecast operation. The “Radar/Raingauge-Analyzed Precipitation”, which is calibrated radars data with raingauges data, depicts rainfall with high quantitative accuracy.

If radars and raingauges observe anomalous values, they contaminate the “Radar/Raingauge-Analyzed Precipitation” and they could obstruct the forecast operation.

In this presentation, I will show the sources of the anomalous value of the radars and raingauges and their impacts on the “Radar/Raingauge-Analyzed Precipitation” taking an example to show the importance the Quality control of observational data.