

## **ABSTRACT**

Volcanic eruption is considered as one of the dangerous natural disasters in the world because of its various hazards that can cause massive damage in a community. The Philippines, which is part of the Pacific Ring of Fire, has 24 active volcanoes including Taal volcano located in Batangas Province. It is considered as the second most active volcano in the country. On January 12, 2020, after 43 years, Taal volcano erupted. One of the volcanic hazards that affected several communities in the country was the occurrence of ashfall. This study aims to describe the transport process and deposition of ashfall during the Taal eruption over CALABARZON and National Capital Region by using meteorological parameters and images of ashfall. Surface wind direction and speed and upper air data from the Philippine Atmospheric, Geophysical and Astronomical Services Administration and University of Wyoming will be examined to look for its influence on the transport process of ashfall. To further understand the process, the Hybrid Single-Particle Lagrangian Integrated Trajectory model developed by the National Oceanic and Atmospheric Administration will be used. Furthermore, different captured images of ashfall from various places in the country will be analyzed through image analysis to determine the extent of deposition of ashfall to an area. Analyzing transport process and deposition of ashfall can serve as supplementary data for formulating policies and strategies in disaster risk reduction and management and forecasting future events.