



Forecasting and nowcasting process: A case study analysis of severe precipitation event in Athens, Greece

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An early warning process is the result of interplay between the forecasting and nowcasting interactions. Therefore, (1) an accurate measurement and prediction of the spatial and temporal distribution of rainfall over an area and (2) the efficient and appropriate description of the catchment properties are important issues in atmospheric hazards (severe precipitation, flood, flash flood, etc.).

In this paper, a forecasting and nowcasting analysis is presented, regarding a severe precipitation event that took place on September 21, 2015 in Athens, Greece. The severe precipitation caused a flash flood event at the suburbs of Athens, with significant impacts to the local society. Quantitative precipitation forecasts from European Centre for Medium-Range Weather Forecasts and from the COSMO.GR atmospheric model, including ensemble forecast of precipitation and probabilistic approaches are analyzed as tools in forecasting process. Satellite remote sensing data close and six hours prior to flash flood are presented, accompanied with radar products from Hellenic National Meteorological Service, illustrating the ability to depict the convection process.