Mayon Volcano Hazards Map Generation Using GIS

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Abstract: Delineation of volcanic hazards around Mayon Volcano, Philippines, was obtained using GIS techniques (Arc/Info) and remote sensing data (AIRSAR). The main procedures involved in the generation of hazard maps were identification of topographic maps; digitization of map features and the 1984 and 1993 volcanic product deposits; correction and editing of the coverages; database creation for the analysis; buffer analysis for hazards delineation; and creation of the final hazards map. The buffer command was applied to the map features by using topographic data (elevation and slope values), prevailing wind direction and the solution to the equation of motion for the hazard flows.

Keywords: GIS, remote sensing, volcanic hazards, hazard map generation.