

## Debris flows triggered by Typhoon Koppu in Nueva Ecija, Philippines in October 2015

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In October 2015, heavy rains brought by Typhoon Koppu generated debris flows in the towns of Bongabon, Laur and Gabaldon in Nueva Ecija province. Satellite images and clusters of landslides show that most of the rain fell in the Sierra Madre mountains. Landslides of rock, soil and debris then converged in the mountain stream networks where they were remobilized into debris flows that destroyed numerous houses and structures. Based on field and remote sensing data, the volume of the debris-flow deposit is estimated to be  $\sim$ 30 million cubic meters. Fortunately, timely warnings enabled residents to evacuate and thus prevented any loss of human life.