Railway accident investigation report

Railway operator : Kyushu Railway Company.
Accident type : Train derailment.
Date and time : About 11:07, June 21, 2014.
Location : At around 37,250 m from the origin at Kagoshima Chuo station, between Satsuma Imaizumi station and Nukumi station, single track, Ibusuki Makurazaki Line, Ibusuki City, Kagoshima Prefecture.

SUMMARY
On June 21, 2014, the inbound Diesel Limited Express 3072D train, one-man operated and composed 2 vehicles, starting from Ibusuki station bound for Kagoshima Chuo station, Ibusuki Makurazaki Line of Kyushu Railway Company, passed Satsuma Imaizumi station at 11:06, on schedule. The driver of the train, running in powering operation at the velocity of about 50 km/h, noticed the trees disturbing the track about 60 m ahead, and immediately applied an emergency brake, but the train ran onto the trees and the earth and sand, and derailed.
It was found by the inspection implemented after derailed, that all 2 axles in the front bogie of the first vehicle were derailed to right. Here, the rear bogie of the first vehicle and all axles of the second vehicle were not derailed.
There were 44 passengers and 3 train crews, i.e. the train driver and 2 cabin crews, were onboard the train, 16 passengers were injured, 3 were seriously injured and 13 were slightly injured, and 2 cabin crews were slightly injured.

PROBABLE CAUSES
It is highly probable that the accident occurred as the train collided with the trees and ran onto the trees and the earth and sand stacked on the track, and derailed because the trees and the earth and sand flew into the track from the cut slope in the left side of the track.
It is somewhat likely that the slope collapsed because of the increased weight of earth due to rain of the maximum hourly rainfall of 39 mm and the continuous precipitation of 100 mm, where the stability of the slope was in nearly its limit level due to the deterioration of the dynamical firmness by age of the ground of the cut slope, in addition to the topography and geological conditions of the collapsed slope.