

Geologic characteristics of rock mass failures caused by the heavy rain event of July 2018 in Uwajima, Ehime

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The heavy rain event of July 2018 caused many rock mass failures around Hokezu bay area in Uwajima city and Seiyo city, Ehime. This paper reports geologic characteristics of those failures. The rock mass failures are relatively small, because they occur on relatively low relief topography. The scarps of failures are weathered, and have dense cracks and separating planes cutting slope or mountain flanks. Webby weak mineral veins and fault fractures are found at some failure sites. These characteristics have lowered strength of the rock mass microscopically and macroscopically in the area. Because of the low strength, gravitational deformation probably proceeds in small slope, and it forms flow path to penetrate with abundant rain water in the slope before collapse. The Hokezu bay area is a characteristic low relief area in Shimanto belt in Sikoku. Similar low relief topographic areas are distributed along Butsuzo tectonic line traversing Shikoku island.

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