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The development of landforms in Bac Coc village, Nam Dinh prefecture, Vietnam : Viewed in electric survey

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Abstract

As the topography in the vicinity of the region investigated in this research falls under the wave dominated system and it is also adjoined with fluvial dominated system distributional areas, it is an important site in order to know changes in the geomorphic environment of the Red River delta. Further, as this region is situated in a low-lying area, it is considered that, even with just several tens of centimeters of sea level change, there would be an influence on rice crops, etc. Consequently, as a result of past changes in the hydrological cycle and the physical environment, clarifying the historical development of landform has great significance in predicting the environmental changes of this region in the near future.

In this research, together with conducting resistivity method vertical electric sounding, surface sediment sample resistivity metering experiments were conducted and through these we gained an understanding of the underground structure and examined the historical development of the landform. Through altitude of basement spatial distribution of flood plain sediment and natural levee sediment estimated through resistivity method vertical electrical sounding, the geomorphic development of the region can be generally classified into four stages. Stage 1 is regression period, Stage 2 is river A, B domination period, Stage 3 is natural levee erosion period and Stage 4 is the present landform.

Keyword: Historical development of landform, Resistivity method vertical electric sounding, Red river delta

The problem in policy for safety of Specified Investigation Organization System of Soil Contamination Countermeasures Law

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Abstract

The falsified earthquake-resistance data affair occurred in 2005. In Japan, there is a high risk about the real estate quality of consuming public (B to C) dealings with the real estate agency or the real estate quality among dealers (B to B).

The structure of this affair is that there are deep-rooted problems in construction and the real estate policy including the law system and thought. Moreover, the administration does the investigation work for the examination to a private specified investigation organization in the Soil Contamination Countermeasures Law and the Building Construction Standards Law. The ideal way of this examination system has the necessity of the reexamination.

Keyword: Nongovernmental consignment screening, Confirmation principle

Geological damage by the Noto Hanto Earthquake in 2007

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Abstract

The Noto Hanto Earthquake in 2007 hit Noto peninsula at March 2007. About one-third of the peninsula shook on JMA seismic intensity 6 upper and about four-fifth of the peninsula shook on over 5 upper at the earthquake.

Some of banks of Noto toll road, which is about 10km southeast of epicenter, collapsed by strong S wave with radial direction. Many of failed banks located on the uppermost part of gorges with rich in spring. The banks, composed of matrix supported gravelly mud, didn't have been included drainage system.

Large sand volcano with about 20m diameter distributed on reclaimed land in Fushiki port, about 60km southeast of epicenter. Trench sections on through the sand volcano vent were observed. Geology was investigated around the sand volcano by simple dynamic cone penetration tests. From these data it may be inferred that the artificial formation liquefied in from about 1m to about 4m depth. Then the liquefied sand jetted out through joint with east-west strike and low-angle south dip.

Most of the wooden buildings were damaged on Hashiride, Tachi and Touge in Momzen-machi, Wajima city near the epicenter.

These area were on alluvial fans. But little wooden building damaged on sand dune and the Miocene formation in Touge. Further damage on east part and west part of the fan are more serious than it on center part there. It is considered that the cause of these different damage are change of thickness and facie of alluvial deposits.

Keyword: The Noto Hanto Earthquake in 2007, Slope failure, Liquefaction-Fluidization, collapse of wooden buildings