

The role of geomorphologic limitation on physical development of Tabriz metropolitan In order to optimize the land use

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Extended abstract

1- Introduction

Early studies in geomorphology limitation in urban areas for the identifying of the physical development of city's such as a stable (very low risk), relatively stable (low risk) and unstable (high risk) and also very risky area has a major role in planning and urban management. In city planning, should circumstances change in any activity that is likely to trigger a mass movement is to be given, (Roostail and Jabbari, 1386, 85). According to Rajaei opinion (1373: 209), damage to buildings and structures are usually occurred are often not relevant to operations, engineering and architecture, but more than 90% of losses related to the replacement and location of buildings and structures is based on inaccurate site selection. Landslide in the Offsaran town, Neginpark and Valiasr in Tabriz in 1369 and 1370 caused the

destruction of more than 20 residential units and approximately 60 units were in danger of destruction, Abedini (1388: 42).

2- Methodology

Due to the nature of this research, this study was done as form as documental, field work (Survey), and laboratory. First, with using topographic maps (1:50000) and air photos (1:55000) to do field work was done morphometric slopes. Then

The survey, observation and field samples of their various headquarters in Tabriz for different characteristics of the soil formation was done to indicators liquefaction, plastic limit, with granulometry of soil formation and experiment. In addition to drawing this research maps Arc GIS software was used.

3 –Dissuasion

Now a day due to geomorphologic limitations of Tabriz city in physical developing has been trend to section development such as Sahand and Marzdaran towns. Recently Baghmysheh, Roshdeh, Valiasr, Golpark, Fahmideh

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and, etc, due to vicinity to the North fault of Tabriz (the fault length is 170 km) and its branches on the mountain slope with loose marl formation are developing.

Tabriz fault with the records of earthquakes and even 7.7 Richter, indicate the area is high risk. In the past much of the city site several times due to earthquakes according to fault activity extensively destroyed. Author's field laboratory results indicate a high percentage of clay 7 / 50%, silt 6 / 34 and the sign of plasticity (4. 40) in the West of the Tabriz neat the railway and Ajichyi River margins (Table 1). The existent of sand (%4. 41), clay (%15/32)

Liquefaction Limit relatively is high (6.36) and plastic index (30.3) on the Valiasr Hill slope areas in the south East region of Tabriz and in Yagchyan indicates a potential instability in the Earth's tectonic stresses. Field studies result showed that the old alluvial alluvium with some combination of large and medium stones with a lower fine-grained matrix in the North West Airport reliable platform for future sectoral development is suitable. Subsidences of some structures, walls crack, and so is evidence of instability Baghmisheh Parks, Valiasr, and Golpark, etc.

Table 1. Results Granolometry soil texture to determine the extent and locations sampled them.

PI -Plasticity Index	Liquefaction Limit	Silt present	Clay present	Sand present	Sampling area
40.34	42.12	34.6	50.7	21	West of Tabriz (AjiChyi bank)
27.3	28.22	21.2	24.25	38	Tabriz university area
30.11	31.7	26.4	38.3	33.3	Center of Tabriz
30.3	36.6	28.32	32.15	41.4	Valiasr in north east of city
34.6	37.3	34.5	48.42	39.34	Roshdeh in the north of city

4 – Conclusion

Due to space restrictions in the physical development of Tabriz, topographic, geomorphic, and limitation in the industrial, commercial centers, and manufacturing city in the margins (as a gap), are very sensible. The range of mountains Oveneabn Ali in the north of Tabriz (the surfaces inclined between 10 to 25 degrees), with receptively layers of salty marl, limestone, sandstone and conglomerates during occurrence of earthquake and rainfall heavy, causing displacement of a material (rupture, slip, Soilefluation and liquefaction (Ticsotrophy phenomena) and will be exert damage to the foundation of urban

buildings. The slope deposits in North, North East and southern parts of Tabriz concluded unstable and disproportionate to the construction and urban structures are considered.

Today the site of Tabriz city due to the rapid development of urban land use d are contacted with varied topography and hydro- geomorphology situation problems. So would be avoiding from heavy and high constructions in the vicinity of active faults. Because of heavy investments in the region with alternating layers of marl slope (contains salt and limestone), sandstone, conglomerates and settlements ValiaAsr and Rshdyh, Fahmideh and so on, not only to intensify

the risks are hydro geomorphology but also during a strong earthquake caused to Liquefaction occurs, as well as movements in the slope layer and lead to the destruction of buildings. Therefore the from construction of the huge building on slopes greater than 20 degrees lands, especially in eastern and northern parts of East Tabriz must be avoided, because those slope pediment land areas have a loose marl and active faults.

Keywords: Tabriz metropolis city-
Geomorphological limitations-
morphodynamic phenomena

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