

## Effect of Climate Change Rate in Indonesia against the Shrinking Dimensions of Granules and Plasticity Index of Soils

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**Abstract :** The soil is a dense granules and arrangement of the pores that are related to each other, so that the water can flow from one point which has higher energy to a point that has lower energy. The flow of water through the pores of the porous ground is urgently needed in water seepage estimates in ground water pumping problems, investigate for underground construction, as well as analyzing the stability of the construction of Weirs. Climate change resulted in long-term changes in the distribution of weather patterns are statistically throughout the period start time of decades to millions of years. In other words, changes in the average weather circumstances or a change in the distribution of weather events, on average, for example, the number of extreme weather events that increasingly a lot or a little. Climate change is limited to a particular regional or can occur in all regions of the Earth. Geographical location between two continents and two oceans and is located around the equator is klimatologis factor is the cause of flooding and drought in Indonesia. This caused Indonesia' geographical position is on a hemisphere with a tropical monsoon climate is very sensitive to climatic anomaly El Nino Southern Oscillation (ENSO). ENSO causes drought occurrence in sea surface temperature conditions in the Pacific Equator warms up to the middle part of the East (El Nino). Based on the analysis of the climate of the last 30 years show that there is a tendency, the formation of a new pattern of climate causes the onset of climate change. The impact of climate change on the occurrence of the agricultural sector is the bergesernya beginning of the dry season which led to the above-mentioned pattern planting due to drought. The impact of climate change (drought) which is very extreme in Indonesia affect the shrinkage dimensions grain land and reduced the value of a percentage of the soil Plasticity Index caused by climate change.

**Keywords :** climate change, soil shrinkage, plasticity index, shrinking dimensions

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