

## **Abstract**

The sinking or settling of the Earth's surface caused by various factors such as groundwater extraction, mining activities, or natural geological processes is known as land subsidence. The study area chosen is the Kolkata Municipal Corporation (KMC) region as my study area. For accomplishing this whole research various data has been taken from various portal such as WRIS, GWYB from where groundwater data has been collected and for LULC maps satellites images were taken from USGS portal. Three years data has been collected to examine the approximate difference that is leading to subsidence. In methodology IDW (Inverse Distance Weighting) method has been applied on chemical data and groundwater level increase and decrease in monsoon, pre-monsoon and post-monsoon period. Through AHP, analysis of MCDA to compare the analysis. In conclusion the result which has been extracted is that there have been various changes in the groundwater level which is decreasing due to excess extraction of groundwater. Other than Kolkata and its sub regions there are many other places which are facing subsidence all over the world such as Mexico City in Mexico, Bangkok in Thailand, Jakarta in Indonesia, Ho Chi Minh City in Vietnam, Shanghai in China, etc. and all of these places are subsiding due to high growth of urbanization which is leading to excess groundwater extraction and subsidence.