

PREFACE

The GRACE Satellite data is used to estimate the mass changes which are occurred on the earth as its studies gravity changes across globe. The dataset is a coarse one as it is having a spatial resolution of 1 degree. It is a very useful dataset for understanding the flood and also drought in a particular region of the world. This data set is also useful to understand the TWS of a particular area. GRACE noticed changes in the local pull of gravity as water moved about Earth due to varying seasons, weather, and climatic events.

The Earth's ice sheets have been monitored as they melt, and GRACE has also improved understanding of the processes that cause sea level rise and ocean circulation. It has also shown where the world's groundwater resources may be expanding or contracting, where dry soils may be causing drought, and where changes in the solid Earth have occurred. Especially for appraising the changes in groundwater storage, With the advances in space technology, it is now viable to supervise the behavioral pattern of surface and subsurface waters over a large region. GRACE mission is one measures the subtle changes in gravitational field including the variations in shallow aquifers due to the fluctuation in water table. The satellite-based observations if integrated with other ancillary data, hydrogeological investigations, and thematic layers generated in GIS environment would strengthen the study of spatial- temporal changes in aquifer storage vis-a-vis groundwater availability in that region.