

GIS implementation on drought

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Drought is a recurring phenomenon affecting natural habitats, ecosystems, and many economic and social sectors that include agriculture, urban water supply and modern complex industries. The region in Balochistan is characterized by low rainfall, extreme drought and flood conditions. Balochistan was the worst drought-affected province in Pakistan during 1998-2004. About 88 percent of it was directly affected by drought worsening significantly its economic situation. Droughts are caused due to lack of precipitation during a length of period. It is an episode of unusually low precipitation that causes damage to agriculture, ecosystems, and freshwater supplies. Drought is a regional phenomenon that characteristics vary from one climate regime to another. Monitoring and assessment of drought through remote sensing and GIS depend on the factors that cause drought and the

factors of drought impact. Based on the causative factors, drought can be classified into Meteorological, Hydrological and Agricultural droughts.

Remote sensing and GIS plays an important role in detecting, assessing and managing droughts as they offer up to date information on spatial and temporal scales. The remote sensing based method for rectification of drought liable zones uses chronological vegetation index data from satellite sequences and delivers spatial information on drought prone area provision also the inclination in vegetation expansion, frequency of low development and their standard abnormalities.

Its severity would depend on the duration, moisture deficiency, and size of the area affected. In drought years vegetation growth gets limited and chances of occurrence of sparse, vegetation also become less. Remote sensing platforms can provide large amounts of data

quickly and inexpensively relative to other means of collection. Environmental, urban, precision farming, and agriculture are applications that have benefited in the present study, multi-sensor remote sensing data is analyzed to assess land cover changes occurred due to impact of prolonged drought in the Balochistan area. The would provide base for future risk assessment of droughts and effective land use planning and adaptation for risk mitigation in the area. I am confident that, given the resolve of the current leadership and support of the federal government, the Government of Balochistan is fully poised to take up the responsibility of the essential structural and policy reforms. The increase in concern about drought in the meteorological drought analysis in the current literature use precipitation as an individual used as reference periods to monitor the meteorological drought events commercially available software.