



Change Detection of the Vegetation Cover based upon Advanced Very High Resolution Radiometer (AVHRR) Data

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The goal of the current study is to map location and extent of the changes in vegetation in northeastern portion of The Kingdom of Saudi Arabia due to the 1991 Gulf War. AVHRR data acquired in different dates were the main source of information. Changes in vegetation during three different time periods may be related to smoke plume impact and / or military activities. The change detection analysis of the NDVI results showed a circular shaped area near the Kuwaiti border, had experienced the most vegetation loss in Saudi

territory between the years 1989 and 1992. However, the results should be viewed with caution, as there are multiple potential sources of error including rainfall events prior to the image dates and varying amounts of atmospheric haze that possibly was not completely normalized. The results should be compared with other sources of ground information for validation. The most common technique for measuring vegetation change,

based upon AVHRR data, was used without complication to detect some patterns of change.

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