

IAF EARTH OBSERVATION SYMPOSIUM (B1)
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DETERMINING THE MAGNITUDE OF DEFORESTATION IN BAKU WITH EARTH
OBSERVATION SATELLITE IMAGERY

Abstract

Deforestation and the reduction of greenery are among the main issues that damage the environment. The area of forests in Azerbaijan has decreased over the years. In big cities, forests and green areas tend to decrease due to increased urbanization of these areas, which leads to lower air quality and higher pollution levels. According to the results obtained as a result of the observation of the earth's surface, we can easily see that the greenery in Baku is decreasing. "Landsat 8" and "Landsat 9" satellite images were used to study changes in the area of forests in Azerbaijan over time and to determine environmental damage using observation methods such as "Global Forest Watch" and "Google Earth." Observations made between 2001 and 2023 show that the area of forests has decreased significantly in Azerbaijan, especially in Baku, and the maps clearly show the destruction of forest areas as a result of the increasing urbanization of these areas, which leads to the reduction of forests. air quality and higher pollution levels, forests and greenery tend to decrease due to the increasing urbanization of these areas, which leads to lower air quality and higher pollution levels. According to the results obtained as a result of the observation of the earth's surface, we can easily see that the greenery in Baku is decreasing. Using Landsat 8 and 9 satellite images and analytical methods such as the Normalized Difference Vegetation Index (NDVI) and land cover/land use change mapping, we can analyze changes in forest areas over time. An NDVI (normalized difference vegetation index) analysis was carried out to determine the environmental damage to the vegetation map of Baku city, which shows built-up areas, grassland, and aridity. As a result of research, it is known which areas are included in the risk group and that the greenery tends to decrease over the years. In conclusion, let us note that deforestation has a serious and long-term negative impact on the environment in Baku. To preserve and protect Baku's forests, it is important to develop a comprehensive approach that combines education and awareness programs, sound resource management plans, and strict enforcement of laws.