

Impact of Mining Activities on the Environment of Dehradun-Mussoorie Mine Belt Area

Year of Starting: 1988

Year of Completion: 1989

Funding Agency & Fund Received: Dept. of Space, Govt. of India. Work was carried out in collaboration with Uttar Pradesh State Mining Development Corporation, Directorate of Geology & Mining and SAC, Ahmedabad.

Objectives: To delineate active and abandoned mines along with mapping of forests, deforestation and degradation of forests in their vicinity, the landslide areas, and the impact on water resources of the area by digital analysis and visual interpretation techniques.

Study Area: About 290 sq. km. area of Dehradun- Massorrie mine belt.

Data Used: LANDSAT MSS, TM data of 1972, 1985 and December, 1987. IRS-1A, LISS-II data of May & October, 1988.

Salient Results: Mining activities started in 1911. In 1955 Supreme Court ordered to close all but three mines. The study showed a considerable degradation in the environmental quality of the Dehradun-Mussoorie mine belt region due to mining activities. Results of the study are given below-

- The total forest area decreased by 2.8 sq. km during 1972 to 1988 (2.6%)
- At some places, the density of thick Sal forest has reduced from closed to open, and open mixed forests turned to scrubland.
- Latest landuse/vegetation maps were prepared showing forest and other landuse classes such as Sal forests, Oak forests, dense mixed forests, low density mixed forests, scrub lands, grassland/ barren hills, agrl. land, active mines, abandoned mines, using supervised classification approach.
- Due to lime stone mining, several springs have either dried up or water flow has reduced. Mine waste and landslide debris have caused shallowing of river beds and widening of river channels.
- Changes in river courses have also been observed.

Report No. : Prepared by SAC, Ahmedabad (ISRO)

Recommendation/Special achievement: Mining in the area should be stopped and suitable soil conservation measures be adopted to check further degradation and to increase vegetation cover.

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