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Title	**:**	**Environmental Impact Assessment of Quarrying in the Southern Bihar: A Geographical Analysis**

ABSTRACT

The present study is related to the assessment of the Environmental Impact of Quarrying in the Southern Bihar. Quarrying is the process of obtaining quarry resources, usually rocks, found on or below the land surface. The rapid rate of industrialization and urbanization have put immense pressure to fasten the rate of development which in turn, resulted rapid rate of exploitation of stones for building purposes and other issues. But the quarrying activities while extracting stones neglected the impact the impact they are having on the environmental elements and the human beings living in the nearby region. The fast rate of quarrying has damaged environment by degrading the quality of air, creating noise and vibrations, large scale deforestations, habitat fragmentation, loss of biodiversity, landscape degradation and many more. The present study aims to realize the necessity for assessment of quarrying on environmental conditions and the human beings living in the neighboring region. In this regard, Primary and Secondary data has been collected. Secondary data has been collected from various government and non-governmental sources with vital line of information. The primary data regarding the topic has been collected through a well-designed questionnaire. Purposive Random Sampling Technique has been used. Group discussions with government officials and community heads have been carried out to assess the ground realities and actual for scenario in the area. The six quarrying sites in the study area have been sampled. Three villages and one town within a radius of 5 km

from each of six major quarries have been selected. So in all there are 18 villages, 6 towns and 10 households have been surveyed for the research study. The first-hand information includes data related to the environmental visibility, air quality, noise levels and the public health of the neighboring regions along with biodiversity loss due to expansion of quarrying in the South Bihar. The secondary data related to Air Quality shows that components of air like Respirable Suspended Particulate Matter (RSPM), Suspended Particulate Matter (SPM), Oxides of Sulphur (SO_2), Oxides of Nitrogen (NO_x) and Lead (Pb) Particles in the air have increased manifolds and thus, making air filled with dust particles and poisonous gases. Consequently, there is reduction in Environmental Visibility and the health of communities living in the nearby regions is also affected by the degraded air quality. The people in the neighboring regions are more prone to respiratory diseases like Bronchitis, Emphysema, Asthama & Lung Cancer while ailments like cough, Breathlessness, Chest Pain are very common in people. Further, there is considerable changes in the levels of noise and vibrations in the study area and consequently, people are suffering from hearing loss and other behavioral and psychological ailments. Apart from these two major impacts, quarrying activities have also resulted in deforestation, loss of biodiversity. The population of both domestic and wild animals have reduced to considerable level. Proper measures like mechanical measures, curative and preventive measures and regulatory measures should be taken to minimize the adverse effects of quarrying at stone crusher units, stone crusher areas, overall mining areas and the neighboring areas.