Among the bounties of nature, mineral resources are by far the most valuable treasures to the society for marching ahead on the road of planning to achieve economic development and growth. Mineral products are beyond doubt the backbone of industrialization. The mining may be defined as the removal of the mineral from the earth’s crust and converting them into consumable products for the welfare and prosperity of mankind. Mining is the second only to agriculture as the world’s oldest and most important industry. The dependence of primitive societies upon mined products is illustrated by the nomenclature of these epochs: stone age, bronze age, and iron age, a sequence which also shows the increasing complexity of society’s relationship with mining. In a sense, the history of mining is the history of civilization itself. There is no doubt that mining is a vital sector of the economy in any country. The minerals which are extracted from the earth’s crust, serve as a raw material for several industries, on which our standards of living depend. To meet the ever-increasing standards of living, the demand for raw materials keep on growing and to meet this growing demand, the size of mining must be continued if civilization is to survive. Since mining operations cause irretrievable damage to environment, it must be our endeavor at least to reduce, if not to entirely eliminate, the environment damage due to mining.

Minerals are non-renewable and limited natural resources of constitute vital raw materials in a number of basic and important industries. The extraction of mineral from nature often creates imbalances, which adversely affect the environment. The key environment impacts of mining are on wildlife, the water balance, local climates, and the pattern of rainfall, sedimentation, the depletion of forest and the disruption of the ecology. Therefore management of a country’s mineral resources must be closely associated with overall economic development and environment protection & preservation strategy.

As we all know that the Rajasthan, a state of rich cultural heritage, also enjoys the premier position in the Mineral wealth of our country. The Aravalli province constitutes the most important metallogenic province for base-metal and various non-metallic mineral deposits in India. Deposits of various minerals are scattered all over the state and mining industry plays an important role in the state economy.

Mining activities and the waste products produces can have significant impact on the surrounding environment-ranging from localized surface and ground water contamination to the damaging effects of the airborne pollutants on the regional ecosystem. The long term monitoring of environmental impacts requires a cost effective method to characterize land cover and land changes over time. As per the guidelines of Ministry of Environment and Forest, Govt. of India, it is mandatory to study analyze the impact of mining on its surroundings. The use of remote sensing and GIS technology to generate reliable land cover maps in a valuable asset to complete environment assessments over mining affected area.

Land management can be defined as the process of managing the use and development of land resources in a sustainable way. Land resources are used for a variety of purposes which interact and may complete with one another, therefore
it is desirable to plan and manage all uses in an integrated manner. The Land Management Sciences program provides scientific advice to government and other clients on land use and land management practices, feral animal and weed management, agricultural biotechnology, biodiversity in production systems, resource indicators, and greenhouse science.

Land use and land cover change research needs to deal with the identification, qualitative description and parameterization of factors which drive changes in land use and land cover, as well as the integration of their consequences and feedbacks (Baulies and Szejwach, 1998).

Timely and reliable landuse information is essential for effective landuse planning and management. GIS supported by remote sensing has extremely useful in monitoring the landuse and land cover changes, as well as to update the existing landuse maps (Gautam, et.al., 1994).

Remote Sensing technology is directed towards acquisition and analysis of data about earth’s environment and natural resources. And the GIS area expanding need for people extensions, spatial data will play an important role in providing powerful, economical and fastest solutions. In order to demonstrate the capabilities of this new GeoTechnologies, the Geographic Information System has following functionalities:

- Fast, efficient, interactive and dynamic system.
- Providing access to documents via thematic map and data functionality so that user can access the documents over an interactive map and /or by query functionalities.
- Easy accessing data what user want and their graphical representation that means to provide a scientific investigation.

This is the right time to formulate land use plans to cover pre-operational, operational and post operational phases of mine. Poor or no land use planning, with no respect for desert flora and fauna, has eroded the productive top soil, which is essential for good agriculture and perennial grasses, herbs and shrubs on which a variety of animal taxa survive in nature. As a result, the eco-system is becoming barren and there is greater desertification and poorer biomass turnover. The above measures will definitely improve the environmental conditions. A multi disciplinary approach and involvement of related research organization is essential for effective and pragmatic land utilization in the mining industry of Kishangarh region.

The Kishangarh region is one of the very productive areas of Rajasthan as far as mineral wealth is concern, particularly the marble and other mineral based industries. Thus, this area is selected to identify and monitor the wasteland, where it has been formed due to human interference rather than due to natural causes.

I concentrate on environmental impact of mining activities and mineral processing by the feasibility, mechanisms and potential of spatial and non-spatial data and the implementation of appropriate data base in Geographic Information System.