Energy is the foremost requirement of life just next to air and water. Since food we consume also require input of energy. Its requirement is much more important for the development and sustaining the developed society. However the production of energy was never a clean process. This is of much more concerned when the generation is by coal. Coal on combustion produces air pollutants like SPM, SO\textsubscript{x} and NO\textsubscript{x} in large quantities. Indian coal though less in Sulphur content has very high ash, in the order of 30 to 50%. Hence the large quantities of suspended particulate matter is released in the air and on electrostatic precipitation, huge amounts of fly ash is produced. The disposal of fly ash and its related environmental problems are of much concern.

Vijayawada Thermal Power Station a major power generating unit at Vijayawada, A.P. is also a source of environmental degradation in its environs. The study has been carried as a post installation environmental impact analysis to see the extent of damage to the environs of V.T.P.S.

Remote sensing and GIS an effective tools for temporal spatial studies and multi-layered analysis respectively, have been used for the study. Land use pattern analysis has shown that, change in the land use pattern is more an indicated of any environmental damage than just monitoring the pollution levels. Over the period of time land use has changed in the vicinity of power station. Air pollution stress has affected mango plantations which have been replaced by annual and binnial crops. Healthy dense forest have been transformed in to the degraded varieties. As a result of degradation of the forest, soil erosion had increased in the hilly slopes deteriorating the land quality. Apart from this fly ash pond has occupied large stretch of fertile agricultural lands and heavily sedimented the, streams and rivers in the study area. Thus this study has attempted to spatially quantifv the environmental damage due to thermal power stations.