

Study in Decay Process of Rock-built Monuments of Rajasthan, India:A Geoenvironmental Approach.

The monument particularly rock built monument all over the world have been found decaying under the influence of the geological agents. However with the rapid industrialization of the countries, the monument which survived for centuries without serious damage are being decomposed beyond recognition. (Gauri 1990). The weathering and Decay of the building material of these monuments are controlled by the factors that are intrinsic of rocks such as chemistry of the rock , texture and structure, porosity etc and as wellas by influence that are external such as physico-chemical condition of the ambient environment .

The objective has been to understand the causes of the decay of some of the historically, archeologically and culturally relevant monument of Rajasthan belonging to the medieval period. The monuments selected for study are from rural and urban setup having diverse geoenvironmental setup.

The samples from the monument sites as well as from the source was collected in the form lump and reaction product which were subjected to petrographical, geochemical , SEM and porosity studies .The ambient atmosphere of the monuments were also sampled by means of respirable dust sampler in order to assess the character of the chemically active pollutant present in the ambient and its role in decay process of the building stone . The paper contains the outcome of the study and its implication in the conservation of the monuments