

## **IMPACT OF ENVIRONMENTAL POLLUTION ON HISTORICAL MONUMENTS OF INDIA: CONSERVATION PROBLEMS AND REMEDIAL MEASURES**

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### **Abstract**

It has been proven from different researches that the archaeological and heritage sites located within the different parts of India are exposed to the risks of industrial pollution that threatens the existence of these historical evidences. With the increasing size of factories and workshops and residential complexes, the rate of increase of pollution is on the rise, so we must take preventive measures to halt the deterioration in the foundations of these buildings and then implement a plan to mitigate damage caused by industrial pollution. The colour of white marble of which Taj Mahal is built is going to be yellowish in colour which is due to  $\text{SO}_2$  (Sulphur di oxide) emitted from the Mathura refinery, resulting in formation of acid rain which later on corrodes the marble surface by dissolving the  $\text{CaCO}_3$  (calcium carbonate) present in the marble. Besides this some other monuments like Gwalior Fort located between the dense crowd of Gwalior in Madhya Pradesh is also suffering damage from industrial as well as vehicle emitted pollutants like CO (Carbon monoxide),  $\text{SO}_2$  (Sulphur dioxide), which are responsible for the deterioration of red colored sand stone of Gwalior Fort. Similarly, dust deposition on the surface of ancient monument Charminar of Hyderabad is causing blackening of the surface. The organic matter that settles on the structure along with the dust leads to moth formation when it rains. Vehicles playing in the close vicinity can produce pollutants like  $\text{SO}_2$  (Sulphur dioxide), CO (carbon monoxide) and also levels of vibration that can result in plaster peeling off. World heritage data available indicate that air pollution in urban environments is mainly due to traffic and industrial pollutants. Since diesel vehicles greatly contribute to smoke and blackening of monuments, these should be replaced by electric vehicles in city centers or converted to alternative fuels. In addition, proposals for new air quality standards could require power plants, factories, car manufacturers and other major polluting industries to adapt cleaner technologies.

*Keywords:* Environmental pollution, cultural Heritage, Acid rain, Archaeological sites, Deterioration