



EFFECTS OF POLLUTION ON HERITAGE OF TELANGANA

Meeta Joshi

HOD, history

St Anns college for women, Hyderabad

Pollution is the introduction of contaminants into the natural environment that cause adverse change. Pollution can take the form of any substance or energy. Pollutants, the components of pollution, can be either foreign substances/energies or naturally occurring contaminants. Pollution effects are not confined to the environment. The potential for damage to historical monuments has already been realized. Some damage, such as from wind or rain, is unavoidable. The effects may be minor, such as a blackening of the surface of monuments due to dust. Corrosion causing acids may attack the material both in wet and dry forms. Some of the pollutants in the gaseous form may fall close to the source of emissions causing direct damage. Sulphur dioxide frequently falls as dry deposition within 30 km of its source. Wet deposition of acids occurs when the pollutants are released in atmosphere. They react with water vapor present in clouds to form dilute acids. Sulphur dioxide, nitrogen dioxide and carbon dioxide are the most responsible pollutants causing damage to the material. The intensity of damage caused by sulphur dioxide is more compared to the other pollutants. Sulphuric acid mist in the atmosphere causes deterioration of structural materials such as marble sculptures, and buildings have suffered damage in the last 30 years as a result of increased sulphur dioxide content in the atmosphere.

The damage due to air pollution on materials is really a serious concern, since the service life of buildings is remarkably reduced. It is true that the intensity of manmade pollutants on building degradation is more than the impact of natural pollutants. Most important, the effects of soiling, degradation, corrosion and erosion caused by sulphur dioxide are very serious.

Due to an increase in air pollution by the industries in Agra, it has adversely affected the monument, Taj Mahal. Taj Mahal was at first clear white in color, however, due to industrial pollution and other activities, it has caused the color to fade. The color has faded due to the presence of carbon and dust in gases. The increasing pollutants in the air affect the stone material in the monuments. The acid from micro-vegetation and moss affects the structure. Golconda Fort, with a 500 year old history has been listed from the Telangana state as one of the heritage monuments. Academic, activist and writer Sohail Hashmi says that to realise the harm met out to the monuments on an elementary level, all one has to do is to rub a wet handkerchief on the wall of the monument. The industrial belt of Patancheru could be synonymous with pollution but not many would be aware that battling for life in this area are the Patancheru tombs, that dated back to the 16th century and have fallen prey to toxins that have clouded Hyderabad's environment. Located in close proximity to the Hyderabad-Mumbai highway, these Qutub Shahi style tombs are also fighting poisonous chemicals emitted by various small and large scale industries in the area. Heritage experts note that sulphur and other harsh chemicals that are let out by the nearby industrial belt have eaten into the stone and destroyed the

granite structure. They say that vibrations of heavy vehicles plying on the highway have also resulted in cracks on the monuments. "It has been proved over and over again that pollution from vehicles has caused tremendous damage to the famous Charminar by corroding its granite and lime mortar surfaces. As most of our other heritage monuments are also built using such materials, rising pollution levels are sure a matter of great concern," said a heritage conservation activist. Activists say several structures in the Tank Bund area, including the Saidanima's tomb, have suffered considerable damage because of the same reason. But the city's heritage pride is now in shambles. "The historic Moazam Jahi market, for instance, is covered with a thick layer of black deposit, thanks to the mad rush of vehicles in the area, which make it look like anything but a heritage site," notes Suryanarayana Murthy, a heritage architect stressing on the need to keep pollution levels around heritage structures under control to save them from perishing. Murthy suggests that a planned vegetation growth in the vicinity of these buildings can help the cause to some extent.

Charminar is one among the six monuments selected by the Archaeological Survey of India (ASI) across the country to assess the damage caused by pollution on the structures. Bibi-Ka- Maqbara in Maharashtra, Charminar in Telangana, Shore Temple and Sri Brihadeswara Temple in Tamilnadu, Sun Temple in Odisha and Taj Mahal. in Uttar Pradesh are the six monuments that have been selected by ASI.

The ASI has put in place specific mechanism at the selected monuments to assess the damage. The Science Branch of ASI regularly monitors the air quality and level of pollutants along with other physical parameters in the vicinity of select national monuments, said union Minister of Tourism G Kishan Reddy in Lok Sabha on Monday.

The union Minister of Tourism while replying to another question in Rajya Sabha said eight monuments or sites were identified as national importance in Telangana. The eight sites, include Pre-historic site, Janampet (Bhadradi Kothagudem), Charminar and Golkonda Fort (Hyderabad), Alampur temples (Jogulamba Gadwal), Ramappa Temple (Mulugu), Ancient Mound (Kondapur, Sangareddy), Thousand Pillars temple (Hanakonda) and Warangal Fort (Warangal).

The ASI protects 3693 monuments and sites across the country which were declared to be of national importance under the Ancient Monuments and Archaeological Sites and Remains Act, 1958, he added.

The Charminar, which is an iconic monument of Hyderabad, has been suffering from the deadly effects of air pollution. It was identified that the minarets of the monuments have developed air cracks at some places. It was decided by the Archaeological Survey of India (ASI) to take up repair activities at a cost of ` 10 lakh. In fact, ASI is authorised to look after its maintenance and it has also planned to take up a chemical wash of Charminar. According to available sources, it is believed that the air cracks formed might be the result of climatic change. The seepage of rain water and the dampness have also shown their impact on air cracks. The ASI has also identified that the vibrations produced by relentless movement of vehicles around it are not good for the Charminar. Hence, the ASI started an awareness programme called "Charminar Pedestrianisation Project" to divert traffic away from Charminar. The present contribution showed a general description on the current state of some of the historical structures. As far as the pollution on materials is concerned, the tropical climate with the presence of natural pollutants create conditions for deterioration of both metals and rocky materials. In fact, the present situation of historical structures is at critical junction. It is necessary that the government should initiate substantial measures to control the damage of structures. The awareness among the public is also important to stimulate the concerned authorities to initiate control and remedial measures.