

The Role of the Supreme Court of India in the Preservation of the Taj Mahal: A Heritage Monument in India

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Abstract

Industrialization and urbanization have their own consequences. Industries using not environmentally friendly machines certainly pollute the air and water. The industries located in and around Agra City in Uttar Pradesh State, India, are causing air pollution, and its impact has been witnessed on the beauty of the Taj Mahal. The Taj Mahal is a historical heritage monument that is considered a pride of India. Industries located in the Taj Trapezium Zone (TTZ), such as oil refineries, foundries, glass works, brick kilns, and tanneries, dump garbage into the Yamuna River, adding to it automobile smoke which is causing acid rain in and around the Taj Mahal, resulting in corrosion on marble, black patches, and white marble turning yellow color. The Taj Mahal is recognized as a heritage structure by UNESCO and the Archeological Survey of India (ASI). Millions of visitors from around the world flock to the Taj Mahal to see its architectural beauty. A Public Interest Litigation (PIL) was filed by M.C. Mehta, advocate, before the Supreme Court of India to pass directions to the appropriate authorities for preservation of the beauty of the Taj Mahal. The court monitored the case for several years and directed the 292 industries to change from the use of coal and carbon fuels to natural gas, and the industries not willing to follow the directions were ordered to relocate from the TTZ area. The study recommends that development must be sustainable and eco-friendly to preserve nature, natural resources, and archaeological sites.

Keywords: *Taj Mahal, Heritage Monument, Air and Water Pollution, Marble, Corrosion, TTZ Area.*

Introduction

The Declaration of the United Nations Conference on the Human Environment, 1972 (Stockholm Declaration) emphasized the need to adopt sustainable development. The United Nations Conference on Environment and Development (UNCED), 1992, held in Rio de Janeiro, Brazil, adopted the framework for sustainable development to achieve the integration of environment and development [1]. Article 21 of the Constitution of India guarantees the right to life and personal liberty, which includes the right to a pollution-free environment. The Supreme Court of India, in *L.K. Koolwal v. Rajasthan* [2] and *Rural Litigation & Entitlement Kendra v. Uttar Pradesh* [3], held that the environmental pollution has been violating the constitutional rights of the citizens.

The air and water pollution is not only affecting human life but also threatening historical monuments. The Taj Mahal is one of the wonders of the world, built with white marble by the fifth Moghul emperor, Shah Jahan, on the banks of the Yamuna River in Agra city during the years 1632-1653. It was recognized as a world heritage site by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in the year 1983 [4].

In the words of a Taj Mahal visitor, it is the most exquisitely beautiful structure in the world [5]. It is a must-visit site for the foreign dignitaries who are on official visits to India. The Taj Mahal stands as a symbol of love built by Shah Jahan in memory of his beloved wife, Mumtaz Mahal, after her death. The Taj Mahal is built with white glassy marble and intricate gemstone inlays and is an example of mathematically precise symmetry [6]. A foreigner described the significance of Taj in the following words: Go to India. The Taj alone is well worth the journey [5].

The white glassy marble structure of the Taj Mahal is very sensitive to the pollutants. At the end of the 20th century, overcrowding of factories nearby the Taj Mahal posed a threat to the beauty of the Taj

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Mahal. When the industries, garbage burning, brick kilns, and vehicular pollution emanate gases and smoke, react with moisture, and cause acid rain, which is posing a threat to the white marble structure of the Taj Mahal. The scientist noticed deposits of black carbon and dust particles on the surface of Taj Mahal marble, reducing the surface reflection and leading to discoloration over a period of time [7]. The continuous exposure to the pollution is causing the Taj Mahal to suffer from a situation like 'marble cancer' [8].

Public Interest Litigation (PIL)

Since 1980, the Supreme Court of India has welcomed the social activists and public-spirited individuals to bring the public issues for redressal. The court began to compel the government agencies to take remedial actions, appointed amicus curiae, established expert committees, and monitored the compliance of court directions as a part of Public Interest Litigation (PIL). The Supreme Court of India on many occasions rose to the expectations of the poor and downtrodden and protected the rights of women and children. On many occasions, the court rectified the miscarriage of justice in lower courts. The court in *M.C. Mehta v. Union of India & Others* (the Taj Mahal case) [9] invoked its right to life jurisprudence and held that none of the polluting industries are allowed to operate in the TTZ area [10].

The Supreme Court of India has recognized that every individual has a fundamental right to "enjoy pollution-free water and air. The right to life guaranteed under Article 21 of the Constitution of India includes the right to pollution-free water and air; its deprivation is a violation of the fundamental rights of citizens [11]. The court recognized the importance of public awareness for the protection of the environment and directed the use of cinema theaters and videos to show environmental protection measures to the public [9]. The court also directed the government to include environmental education in the curriculum at all levels of education in schools and colleges [12].

The Supreme Court of India, through its judicial activism, addressed the many issues that violated the fundamental rights of the citizens. Justice P.N. Bhagwati devised the mechanism of Public Interest Litigation (PIL) and allowed the petition exposing shocking conditions of undertrial prisoners in Bihar prison as a Public Interest Litigation (PIL) [13]. Similarly, the court defended the rights of child labor, the right to privacy, sexual harassment of women at workplaces, minimum wages, bonded labor, and environmental protection. The courts in India always enforced the public policy to enforce the public law [14].

Research Problem

After independence India's priority was to grow the economy, but if the development is not sustainable, certainly that will lead to different kinds of environmental damage. The industrial and vehicular pollution and polluting of water bodies started posing a threat to human life and historical monuments. Pollution in Agra from various sources poses a threat to the Taj Mahal's white marble structure; therefore, unless urgent measures are taken to eliminate the pollution, the beauty of the Taj Mahal; is under a serious threat. The government agencies and Archeological Survey of India were unable to take necessary measures to preserve the white marble of the Taj Mahal, therefore, the issue of environmental pollution was brought to the notice of the Supreme Court of India. Consequently, the court directed them to take several measures to protect the Taj Mahal.

Research Methodology

The researcher adopted doctrinal research and referred to various judicial decisions pertaining to environmental pollution, with special focus on the protection of archeological monuments, including the Taj Mahal in India.

Discussion

The Taj Mahal has been a symbol of Indian civilization and culture for more than five hundred years. The enormous air pollution is causing damage to the edifice of the Taj Mahal. India has applied 19th-century methods to 21st-century industrialization, which resulted in the emission of poisonous pollutants into the air, thereby causing pollution of the air, water, forest, and wetland and a serious threat to urban life [15].

The Taj Mahal is a beautiful jewel of India. Acid rain and air pollution from Mathura oil refineries are eating away at the glossy white marble, turning it to a yellow color. The Agra city metro population is estimated at 2,572,000 [16]; it is surrounded by 300 major industries, including foundries, glass works, Mathura oil refineries, brick kilns, tanneries, and other small-scale industries. The discharge of carbon

and sulfur from these industries into the air reaches and settles on the surface of the Taj Mahal. As a chemical reaction, oxides of carbon and sulfur damage marble, in M.C. Mehta's words, the Taj Mahal is suffering from "marble cancer" [8]. The causes of air and water pollution at the Taj Mahal include oil refineries, tanneries, brick kilns, glass industries, garbage dumping into the upper part of the Yamuna River, vehicular traffic, household use of coal and firewood, and accelerated industrialization. The Taj Mahal is also affected by residential fuel combustion, vehicular pollution, and use of generators by the thickly surrounded residential houses and commercial establishments [9].

In the Taj Mahal case, the counsel M.C. Mehta reminded the judges of their constitutional duty to hear the case and protect the environment and lives of the people. The Supreme Court of India accepted the petition of M.C. Mehta exposing the deteriorating condition of the Taj Mahal due to industrial pollution as a Public Interest Litigation (PIL) [9].

The counsel presented that industrialization and pollution from various sources pose a threat to the elegant beauty of the Taj Mahal. It is threatened by wear and tear, and natural causes of decay and social and economic conditions have aggravated the situation, leading to damage and destruction. The government of India has created a Taj Trapezium Zone (TPZ), which is spread over a five hundred square kilometer air pollution protection zone around the Taj Mahal.

To protect the Taj Mahal architectural heritage monument from the threat of industrial and other kinds of pollution, several cases have been filed before the courts in India. In the *Taj Mahal case* [9], the petitioner argued that the Taj Mahal's white marble has yellowed and blackened in place, with a yellow color pervading the entire monument, appearing with ugly brown and black spots. The petitioner also alleged that 292 foundries, chemical factories, the Mathura refinery, diesel generators, and vehicular pollution are causing the air pollution and resulting in damage to the Taj Mahal. All these industrial activities are resulting in acid rain that is causing corrosion to the Taj Mahal's white marble. Therefore, it is on the way to degradation due to atmospheric pollution, unless preventive steps are taken to reduce the air pollution near the Taj Mahal. The petitioner requested the Supreme Court of India to pass appropriate orders to the authorities to take urgent measures to stop air pollution in the Taj Trapezium Zone (TTZ). The defendants' industries (292) argued that the use of coal is environmentally benign, the main cause for pollution is automobiles, and therefore, there is no causal connection between their industries and the damage to the Taj Mahal.

The petitioner cited the report of the Varadharajan Committee [17] on the question of whether smoke generated from Mathura Oil Refinery poses a threat to the Taj Mahal and other monuments. The emissions from the refinery, such as sulfur dioxide (SO₂) lead to acceleration of deterioration of the white glossy marble surface. The committee also found the other causes for pollution in the TTZ region: vehicular pollution, foundries using coal, emissions from small-scale industries, domestic fuel burnings, and brick kilns in the region. The committee recommended using and upgrading pollution control technology, strictly monitoring the level of SO₂ in the refinery emission, adopting cleaner fuel, creating green belts around the pollution source, shifting small industries away from the TTZ, and encourage people to use Liquefied Petroleum Gas (LPG) for cooking purposes. The measures must be taken to stop the establishment of industries in TTZ, such as fertilizer and petrochemical industries, which emanate more pollution. There must be an exclusive authority with the power to pass appropriate orders and to monitor air quality levels in the Agra region continuously.

The Central Board for the Prevention and Control of Water Pollution (CBPCWP), New Delhi, found that foundries, rubber processing units, chemical factories, thermal power stations, railway marshalling yards, and vehicular traffic are the causes for pollution in the Taj Mahal region [18]. The National Environment Engineering Research Institute (NEERI) Report on the Taj Mahal in 1990 identified the causes for pollution around the Taj Mahal, such as the existence of small-scale industries around the Taj Mahal monument, which resulted in significant deterioration of air quality within the TTZ. The report noted that rapid industrial establishment around the Taj Mahal region resulted in acidic emissions into the air at an alarming rate, which is a cause of serious concern.

Based on the directions of the Supreme Court on M.C. Mehta's presentation in person [9], notices were issued to 511 industries Based on the report filed by the Uttar Pradesh Pollution Control Board (UPPCB), the court passed the orders (5 May 1993) requiring the industries to install anti-pollution devices and effluent treatment plants.

The NEERI report (16 October 1993) also identified the causes for deterioration of the Taj Mahal marble quality. It stated that decline in marble quality occurs due to reaction with sulphur dioxide and the presence of fly ash, manganese, iron, and vanadium in the air and its reaction with marble structure.

The study also revealed that the presence of gaseous pollutants in the air, particularly in the winter period, reacts with the marble surface of the monument and causes deterioration in quality. Therefore, the court ordered the use of gas in place of fuel for the glass and foundry situation around the Taj Mahal.

The NEERI Report (19 December 1993) stated that the government has passed stringent regulations to control the pollution around the Taj Mahal structure; however, industries are not meeting the prescribed emission standards and continue to use it for their fuel requirements. The NEERI proposed the use of clean fuel such as natural gas or compressed natural gas in place of solid and liquid fuels.

The court in its order (11 February 1994) suggested that NEERI examine the use of propane fuel instead of coal by the industries located in TTZ. The court also directed to examine the relocation of industries from TTZ by offering certain incentives to the industries. Upon the directions of the court, the U.P. State Industrial Corporation Limited (UPSIDC) has agreed to serve individual notices and public notice to the industries to relocate from the Taj Mahal region.

On the directions of the Supreme Court of India, the government of India appointed a committee on May 18, 1994, headed by Dr. S. Varadharajan, to undertake a survey of the TTZ area and submit a report regarding the source of pollution in the TTZ and the measures to be adopted to mitigate the same [18]. The Varadharajan Committee report suggested the relocation of the different industries from the TTZ area, measures for the improvement of the atmosphere around the Taj Mahal structure, and the Ministry of Environment and Forests is responsible for the preservation of the Taj Mahal. The court directed the ministry to examine the NEERI and Varadharajan reports and take positive steps to preserve the Taj Mahal. The court also concluded that in view of above reports the polluting industries from the TTZ area shall be relocated, for which the Ministry of Environment and Forests must take positive steps within four weeks from the order of the court [19].

Following the report of the Indian Oil Corporation (IOC), the court held that (5 August 1994) the use of natural gas is the best option for the fired heaters and boilers in the Mathura refinery. The counsel M.C. Mehta suggests for laying a pipeline from Auria or Barbala to Mathura for the supply of natural gas to the Mathura oil refineries. The court in its order dated 14 March 1996 directed the Gas Authority of India Limited (GAIL), IOC, and the UPSIDC to identify industrial areas outside TTZ and take steps for providing gas supply connections.

After receiving the technical report from NEERI (7 March 1994), the court summarized alternative measures for relocation of industries from the Agra-Firozabad region:

- Access to cleaner fuel.
- Availability of environmentally friendly alternate fuels.
- Safety considerations.
- Use of modern technology.
- Availability of electricity, water, telecommunication, sewage, drains, and roads.

The government of India also sought the expert advice of UNESCO about the preservation of the Taj Mahal monument. The experts from UNESCO [20] submitted the report stating that the Suspended Particulate Matters (SPM) level and dust fall on the surface of the structure are responsible for causing the yellow colour on the Taj Mahal marble.

According to the Second Varadharajan Committee Report (1995), the only threat to the Taj Mahal is environmental pollution; therefore, polluting industries from Agra must be shifted to outside the TTZ area. The Supreme Court directed the UPSPCB to issue public notices to all the industries to furnish the information, such as the name of the industry, location, total land, nature, and quantum of fuel being used, number of workers employed, the product of the industry, and type of the alternate safe fuel required. The UPSPCB has identified 510 industries as pollutants from the TTZ; however, the court confined to it to 292 industries, and ordered them to change over to natural gas as industrial fuel or stop functioning.

The Supreme Court of India monitored the case for three years and observed that the Taj Mahal is an industry itself, which attracts two million visitors every year; it is a source of revenue for the country. The court noted that there is no compromise in the protection of the Taj Mahal from deterioration and damage caused by atmospheric pollution. At the same time, development cannot be halted, but

sustainable development is the solution. The development is essential for the economy of the nation; at the same time the environment and ecosystem of the country must be protected. The court also referred to the *Vellore Citizens Welfare Forum v. Union of India & Others* [21], in which the court laid down the rules of "the precautionary principle" and the "polluter pays principle."

The precautionary principle refers to appropriate environmental measures by the state governments and the onus of proof is on the industries to show that their actions are environmentally benign. The court upheld the "polluter pays principle" as a sound principle in *Indian Council for Environmental Action v. Union of India* [22], the industry causing environmental harm should be liable to make good for the loss caused. The liability is for the harm caused to the people living in the area, soil, and water. The polluter pays principle requires absolute liability to compensate victims and pay the cost of restoring the environmental degradation.

The court referred to Article 21 of the Constitution of India, which guarantees the right to life and personal liberty, which includes the right to have a pollution-free environment. The court also referred to Article 51 A(g), which recognizes the fundamental duty of citizens of India to protect and improve the natural environment, which includes protection of forests, lakes, rivers, and wildlife. The court also referred to the Environment Protection Act, 1986 (the Environment Act), the Water (Prevention and Control of Pollution) Act, 1974 (the Water Act), and the Air (Prevention and Control of Pollution) Act, 1981 (the Air Act). The Supreme Court held that in view of constitutional and statutory provisions, the precautionary principle and polluter pays principle, which are considered part of the environmental law of the country, must be applied; hence, the atmospheric pollution in the TTZ area must be removed at any cost. The court accordingly passed the following orders:

1. All the 292 industries must approach GAIL for a grant of gas connection.
2. The industries not willing to convert to operate on natural gas shall apply to the UPSIDC for allotment of an alternate site for relocation outside TTZ.
3. Industries not willing to convert to natural gas and also not willing to relocate shall stop functioning with effect from 30 April 1997. The supply of coal to these industries shall be stopped.
4. The GAIL shall commence the gas supply to these industries from 30 June 1997.
5. To facilitate the relocation of industries, the state government must appoint a single agency for smooth relocation.
6. The workers employed in relocating industries shall have continuity of employment at relocated place.
7. The terms and conditions of the employment shall not be altered to the detriment of the workers.
8. The period of closure during relocation should be treated as active employment.
9. All the workers who agreed to relocation shall be paid one year's wages as a bonus.
10. The workers who are not willing to work at the relocated place must be treated as retired and paid compensation according to the 25 F(b) of the Industrial Disputes Act, 1947.
11. The compensation to workmen shall be paid within two from the date of retrenchment.
12. Further, for controlling air pollution in the TTZ area, the court passed the following orders:
 - a. The setting up of hydrocrackers unit by the Mathura Refinery.
 - b. The setting up of a 50-bed hospital for treatment of affected people in the region.
 - c. Construction of the Agra bypass road to divert the traffic from the city, which must be completed by the end of December 1996.
 - d. Gokul Barrage must be constructed to infuse life into the river Yamuna, in the city of Agra beside which the Taj Mahal is located.
 - e. Setting up of a green belt around the Taj Mahal as suggested by the NEERI.
 - f. All the shops located within the Taj Mahal premises must be closed.

- g. The Government of India must decide the issue of declaring the Agra as a heritage city.

Conclusion

The right to a pollution-free environment has been recognized through various international and national instruments. The Stockholm Convention, 1972; Article 21 of the Constitution of India; Directive Principles of State Policy (Part IV, Articles 36-51); fundamental duties of citizens (Article 51A (g)); the Air Act 1981; the Water Act 1974; the Environmental (Protection) Act, 1986; precautionary principles; the polluter pays principle; and the sustainable development rule. The Supreme Court of India in the Taj Mahal case (1997), concurring with the argument of the petitioner, held that industries causing pollution and affecting the Taj Mahal must at any cost be eliminated from the TTZ area. The Central and State governments must take appropriate steps to preserve the prestigious archeological world heritage monument, the Taj Mahal. The study concludes that industrialization is necessary for the development of the country, but at the same time protection of the environment is essential; therefore, sustainable development is the answer. The decision of the Supreme Court of India demonstrates that the Indian judiciary is committed to protecting the heritage structures of the nation and the right to a pollution-free environment for the citizens.

Author Contribution

Mohammed Zaheeruddin is the sole author has contributed all parts of the paper.

Disclosure Statement

The author reports there are no competing interests to declare.

Conflict of Interest

The author declares there was no conflict of interest.

Ethical Approval

Ethical approval was not required as the study did not involve human participation.

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