

Impact of Climate, Ecology and Environment on Art: A Case Study of Buddhist Chaitya, Stupa & Vihara

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Abstract

While analysing Impact of Climate, Ecology and Environment on Art, we see that art of any country of the world is born from the soil, shaped by the weather, and sustained by the resources of its environment. The Buddhist Chaityas, Stupas & Vihara of ancient period of India offer an interesting case study of how climate, ecology and geography directly influenced art & architectural form, choice of material, and artistic expression.

The Western Ghats of Maharashtra which receive over 2000 mm of rainfall annually, constructing brick or timber monasteries was impractical, as they would decay rapidly. Buddhist monks therefore used the Deccan basalt hills for the construction of Chaityas and Viharas. The barrel-vaulted ceilings of Chaityas at Karla, Bhaja, and Ajanta allowed rainwater to run off efficiently, while the Chaitya arch windows permitted light. The inside temperature was maintained around 25°C, with a cooling effect. At Kanheri we also notice evidence of rainwater harvesting.

The climate of Madhya Pradesh, Uttar Pradesh and Bihar shaped the design and construction of Stupa. The Great Stupa at Sanchi illustrates climate-responsive design. The solid, hemispherical dome of Sanchi Stupa minimizes surface area exposed to the scorching heat of sun, while its brick-and-stone core provides cooling effect. Its height and elevated terrace protected it from seasonal floods. The design of the stupa was also integrated with the movement of the sun. The availability of materials also had impact on the construction. For example, The locally available Red sandstone was used in Mathura art whereas the Grey sandstone in Gandhara Art. The Art symbols of Buddhism such as Lotus, Bodhi tree, Elephants, Deer, Yaksha, Yakshis and others signify harmony with nature and ecology, reflecting the Buddhist principle of Pratityasamutpada or dependent origination i.e. interconnectedness with climate, ecology and environment. Thus, local climate, ecology and environment shaped the Buddhist artistic styles. Buddhist Art stands as a perfect integrative interaction between human genius and the environment.

Keywords

Buddhist Chaityas, Stupas, Vihara, Climate, Ecology, Geography, Rainwater harvesting, Mathura art, Gandhara Art, Pratityasamutpada, Lotus, Bodhi tree, Elephants, Deer, Yaksha and Yakshis.