

Satmala Range, Location, Peaks, Rivers, Flora & Fauna, Challenges

February 17, 2026 • vajiramandravi.com

The Satmala Range is a major east-west mountain chain running across Nashik district in northwestern Maharashtra. It forms an important northern offshoot of the Sahyadris in the Western Ghats system and stretches roughly 200 kilometers from Saputara near the Gujarat border to Manmad, later merging with the Ajanta hills. Its elevations generally range between 600 meters and 1,472 meters, with Dhodap as the highest summit. The range acts as a watershed divide between the Godavari and Tapi River basins and is geologically formed from ancient Deccan Trap basalt flows.

Satmala Range Features

Satmala Range forms the backbone of Nashik's landscape with geological, hydrological and strategic importance across northern Maharashtra.

- **Location:** The range runs centrally through Nashik district between Saputara and Manmad, covering nearly 100 miles.
- **Extent:** It continues eastward into the Ajanta hills, while the Chandvad range lies along its eastern flank, forming a continuous elevated ridge system.
- **Highest Peak:** Dhodap rises to 1,472 meters or about 4,829 feet above sea level. It is the second highest peak in Nashik district and among the highest summits in Maharashtra. Its distinct rock profile makes it easily identifiable from surrounding plains.
- **Major Peaks:** Saptashrungi stands at 1,264 meters and is a major religious hill. Achala reaches 4,062 feet and Ahivant 4,024 feet. Indrai rises to 4,495 feet, while Markandya measures 4,370 feet, forming a rugged skyline.
- **Geological Structure:** The hills are built from layered basalt formed during the Deccan volcanic eruptions around 66 million years ago. Horizontal lava flows created flat topped plateaus and steep scarps. Continuous erosion produced mesas, pinnacles and step like slopes typical of trap topography.
- **Rivers:** Rivers south of the range such as Kadva and Darna flow toward the Godavari basin. Northern streams including Girna and Mosam drain into the **Tapi basin**. This natural divide influences water availability across the **Deccan Plateau**.
- **Climate:** The region experiences a tropical monsoon climate. Annual rainfall averages between 900 and 1,200 millimeters, mainly during June to September. Summers can touch 40 degrees Celsius, while winters remain mild between 10 and 25 degrees Celsius.
- **Strategic Fort Network:** The range hosts 14 historic forts. Major ones include Hatgad at 3,656 feet, Rawlya Jawlya at 4,056 feet, Kanchana at 3,722 feet, Koldher at 3,209 feet, Rajdher at 3,579 feet and Chandwad at

3,611 feet.

- **Dhodap Fort:** Dhodap fort contains bastions, rock cut caves, fortification walls and water cisterns. Its internal reservoirs ensured water supply during sieges, making it strategically strong during Maratha and Mughal conflicts.
- **Twin Fort Complexes:** Ankai-Tankai near Manmad and Rawlya-Jawlya on plateau bases are twin hill forts. These controlled trade routes linking Khandesh with the Deccan interior and functioned as military lookout stations.
- **Saptashrungi:** Saptashrunggad at 4,659 feet is a major pilgrimage site attracting thousands annually. Vehicles reach its foothills and devotees climb to the temple complex during major festivals.

Satmala Range Biodiversity

The Satmala Range supports dry deciduous forests, grasslands and basalt hill ecosystems with varied species richness.

Flora

- **Forest Type:** Vegetation is dominated by southern tropical dry deciduous forests. Teak, tendu, dhawda and khair form the upper canopy, while bamboo species such as *Dendrocalamus strictus* thrive in valleys and slopes.
- **Medicinal Plants:** Surveys indicate more than 297 medicinal plant species in the region. Around 74 taxa belong to the Fabaceae family, including *Acacia* and *Dalbergia* species valued for traditional medicine and rural **healthcare systems**.
- **Endemic Species:** Species such as *Achyranthes nashikensis* grow in localized basalt plateaus. Elevation variation from 600 to 1,451 meters creates microhabitats that support narrow endemic plant communities.
- **Soil Influence:** **Black cotton soils** derived from basalt support agriculture in valleys. On upper slopes, lateritic soils rich in iron oxide influence plant diversity and create seasonal grasslands during monsoon months.
- **Seasonal Bloom Cycles:** Monsoon months trigger rapid vegetative growth across plateau tops, transforming dry slopes into green landscapes. From March to June, vegetation becomes sparse due to intense heat and moisture loss.

Fauna

- **Large Mammals:** Leopard populations were estimated at 11 individuals in earlier wildlife counts. Indian wolf numbers were around 115, while chinkara populations stood near 100 in dry grasslands.
- **Ungulate Diversity:** Blackbuck numbers were recorded around 849 in regional counts. Wild boar and deer species occupy scrub forests, contributing to trophic balance in the ecosystem.
- **Avifauna Richness:** Over 200 bird species inhabit the hills. Painted stork and vulture species nest in tall trees and rocky cliffs. Grasslands near the range have recorded the critically endangered great Indian bustard.

- **Butterfly Species:** Basalt plateau zones such as Ikhara and Kanchan support 49 butterfly species. Common rose, lemon pansy and common pierrot are frequently observed during post monsoon months.
- **Reptilian Species:** Rocky terrains provide habitat for Indian cobra and Russell's viper. These species adapt well to dry deciduous and scrub habitats common across the Satmala slopes.

Satmala Range Challenges

The Satmala Range faces ecological pressure due to human activities and climatic stress as mentioned here:

- **Habitat Fragmentation:** Agricultural expansion has affected over 2,200 hectares of forest land. This reduces wildlife corridors and disrupts leopard and wolf movement patterns across hill slopes.
- **Forest Fires:** Recurrent summer fires damage dry deciduous forests. High temperatures above 40 degrees Celsius increase vulnerability of leaf litter and grasslands to ignition.
- **Illegal Mining:** Basalt extraction in certain stretches leads to slope instability, soil erosion and long term ecological degradation of plateau ecosystems.
- **Water Scarcity:** Rainfall concentration within four months causes seasonal water stress. Post monsoon months witness depletion of small streams and surface reservoirs.
- **Tourism Pressure:** Peak season from July to February increases footfall on trekking routes and forts. Waste accumulation and trampling disturb fragile plateau vegetation.

Way Forwards

- **Protected Area Management:** Strengthening protection in parts linked with the Gautala Autramghat sanctuary area of 260.61 square kilometers can conserve dry deciduous forest patches and associated wildlife.
- **Community Participation:** Involving local villages such as Pimpri-Achala and Hatti in eco tourism management can reduce unsustainable practices and generate livelihood alternatives.
- **Fire Monitoring Systems:** Use of camera traps and early warning systems can detect forest fires quickly, preventing large scale habitat loss.
- **Sustainable Trekking Regulation:** Limiting visitor numbers during sensitive seasons and enforcing strict waste management policies can protect plateau biodiversity.
- **Watershed Conservation:** Check dams, contour bunding and soil conservation programs can improve groundwater recharge and reduce erosion in basalt derived soils.

Source: <https://vajiramandravi.com/current-affairs/satmala-range/>

© Vajiram & Ravi. For personal use only.