



ARAVALLI HILL DEFINITION BY MOEFCC: LEGAL & ENVIRONMENTAL ANALYSIS

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INTRODUCTION

One of the planet's oldest mountain ranges, the Aravalli Range crosses Rajasthan and Haryana on its more than 800-kilometre journey from Gujarat to Delhi. The fertile Indo-Gangetic plains in northwest India are protected from the encroaching Thar Desert by this ancient geological formation that dates back billions of years. However, its integrity has been seriously threatened by unchecked mining, construction, and urbanisation, which have resulted in deforestation, biodiversity loss, and environmental degradation. A uniform definition of the "Aravalli Hills" was proposed by the Ministry of Environment, Forests, and Climate Change (MoEFCC) in 2025 in response to these difficulties, and it was later approved by the Indian Supreme Court.¹ Environmentalists contend that this definition dilutes protections and leaves large areas vulnerable to exploitation, even though it attempts to standardise regulatory measures across states.

Historical discrepancies in how various states interpreted "Aravalli" for environmental regulations, especially under the Environment (Protection) Act, 1986, and various Supreme Court directives, led to the need for a precise definition. Legally speaking, the definition is based on constitutional principles found in Article 21 (Right to Life, interpreted to include a right to a clean environment) and Article 48A (Directive Principles of State Policy for environmental protection).² In terms of the environment, the Aravallis are essential for replenishing groundwater, moderating the climate, and halting desertification. Aquifers have been depleted, climate vulnerabilities have increased, and air pollution in the National

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¹ Ministry of Environment, Forest and Climate Change (2025) Report of the Committee on Uniform Definition of Aravalli Hills and Ranges. Retrieved from <https://www.pib.gov.in/FachtsheetDetails.aspx?id=150596>.

² Down to Earth (2025) Uniform Definition of Aravallis Accepted by Supreme Court Will Be Catastrophic. Retrieved from <https://www.downtoearth.org.in/forests/uniform-definition-of0aravallis-accepted-by-supreme-court-will-be-catastrophic-for-indias-oldest-mountain-range>.

Capital Region (NCR) has been made worse by mining and construction in these hills.

The definition, necessity, legal standing, involvement of the Supreme Court, and wider environmental implications of the MoEFCC are all critically examined in this article. It contends that although the definition offers regulatory clarity, its limited scope runs the risk of jeopardising long-term ecological sustainability, drawing on concepts of sustainable development from environmental law and constitutional mandates. In my view, balancing development with environmental imperatives requires a more inclusive approach.

THE NEED FOR A UNIFORM DEFINITION OF ARAVALLI HILLS

Environmental governance in India has long suffered from the lack of a common definition of the Aravalli Hills. The range, which is spread across several states, has been interpreted differently, creating regulatory gaps that allowed illicit mining and building. For example, Haryana and Rajasthan frequently classified low-elevation features differently, permitting activities in areas that Gujarat or Delhi considered protected.³ In addition to making it more difficult to enforce the Forest (Conservation) Act, 1980, this fragmentation went against the environmental law's precautionary principle, which requires taking precautions against possible harm.

The MoEFCC's initiative stemmed from Supreme Court directives dating back to the 1990s, emphasising the need for uniform criteria to protect this ecologically sensitive zone.⁴

The 2018 Forest Survey of India (FSI) report, which pointed out discrepancies and suggested a pan-Aravalli framework, was a major catalyst. In order to comply with India's obligations under the United Nations Framework Convention on Climate Change (UNFCCC) for biodiversity conservation and to operationalise Eco-Sensitive Zones (ESZs) under the Environment (Protection) Rules, 1986, the definition was judged essential.

The urgency was further highlighted by growing environmental crises like Rajasthan's groundwater depletion and Delhi's deteriorating air quality. Over the past ten years, the degradation of the Aravallis recharge aquifers, which provide water to millions of people, has

³ The Leaflet (2025) How the Supreme Court's New Definition of the Aravalli Redraws the Landscape. Retrieved from <https://theleaflet.in/environment/how-the-supreme-courts-new-definition-of-the-aravalli-redraws-the-landscape-of-indias-oldest-hill-rang>.

⁴ Pan_Aravalli_SC_20_Nov_2025. Images. assettype.com/downtoearth/2025-12-02/fpv7xvaz/Pan_Aravalli_SC_Order_20_Nov_2025.pdf

caused a 20–30% decrease in groundwater levels in the impacted areas.⁵ Article 51A(g) of the Constitution, which requires citizens to protect the environment, could be further violated if sustainable mining plans were not clearly defined. Fundamentally, even though uniformity is unquestionably necessary, the selected criterion—which emphasises elevation—ignores geomorphological continuity. This might negate the exercise's goal by excluding connected low-lying areas that are essential for ecosystem services.

THE MOEFCC'S DEFINITION: AN OVERVIEW

An "Aravalli Hill" is defined by the MoEFCC as any landform that rises 100 meters or more above the local relief. This definition was formalised through a committee report and approved by the Supreme Court on November 20, 2025.⁶ Moreover, the "Aravalli Range" is made up of two or more of these hills that are within 500 meters of one another. This covers 29 districts in four states and includes a buffer zone of 100 meters around designated hills for extra security.⁷

The FSI's geospatial analysis led to the development of this elevation-based strategy, which aims to cover notable features while omitting plains. According to the ministry, mining is only allowed in roughly 2% of the range under strict guidelines, and over 90% of the range is protected.⁸ Critics argue that it removes protections and reclassifies up to 90% of the lower hills as non-Aravalli.⁹ From the standpoint of environmental law, this definition is consistent with the National Environment Policy, 2006's sustainable development principle, but it raises concerns about its suitability under the polluter pays principle because it might not adequately account for cumulative impacts.

LEGAL VALIDITY OF THE MOEFCC DEFINITION

The MoEFCC's definition of legal validity depends on how well it complies with statutory and constitutional frameworks. While Article 21 has been interpreted broadly to include

⁵ Mountains older than memory: How new "definition" of Aravalli risks undercutting 'Viksit Bharat' <https://timesofindia.indiatimes.com>. Times of India. (2025). Mountain Older Than Memory: How New 'Definition'

⁶ Down to Earth. (2025). Uniform Definition of Aravallis Accepted by Supreme Court Will Be Catastrophic. Retrieved from <https://www.downtoearth.org.in/forests/uniform-definition-of-aravallis-accepted-by-supreme-court-will-be-catastrophic-for-indias-oldest-mountain-range>

⁷ Supreme court approves Aravalli hills definition; halts new mining leases. <https://English.mathrubhumi.com>

⁸ Economic Times. (2025). 90% of Aravallis Protected, Govt Clarifies Amid Mining Criticism. Retrieved from <https://m.economictimes.com/news/india/aravalli-protection-mining-allegations-bhupender-yadav-supreme-court-sensitive-zones/articleshow/126115156.cms>

⁹ Forest survey & importance of Aravali Hills. <https://iasgyan.in>

environmental rights in cases such as *Vellore Citizens' Welfare Forum v. Union of India* (1996), Article 48A requires the state to preserve and enhance the environment.¹⁰ The definition is legally sound because it gives the central government the authority to implement environmental protection measures under Section 3 of the Environment (Protection) Act, 1986. Its legitimacy is strengthened by the Supreme Court's 2025 decision, which ordered the creation of a Management Plan for Sustainable Mining (MPSM) to guarantee regulated operations.¹¹ However, because it excludes low-elevation areas that are vulnerable to degradation, its limited scope has been contested as possibly going against the precautionary principle established in *A.P. Pollution Control Board v. Prof. M.V. Nayudu* (1999). Opponents argue that it dilutes earlier notifications, like the MoEF's 1992 ban on mining in Aravalli without clearance, and runs the risk of being subject to judicial review for arbitrariness under Article 14.¹²

Although enforcement will be crucial, the government's clarification that mining is prohibited in ESZs and 90% of the land is still protected upholds its legality. In order to avoid irreversible harm, I believe that the definition's validity should be evaluated against intergenerational equity, a fundamental environmental law principle, even though it is legally defensible.

THE SUPREME COURT'S ROLE IN ARAVALLI PROTECTION

Since the 1990s, the Supreme Court has led the way in Aravalli conservation. *M.C. Mehta v. Union of India* (1996) used the public trust doctrine to prohibit mining in Aravalli, Haryana, without environmental impact assessments.¹³ The range's role in preventing desertification was highlighted by later orders in 2002 and 2009 that extended prohibitions to Rajasthan.

To resolve definition inconsistencies, the court established a Central Empowered Committee in 2018, which resulted in the MoEFCC's proposal.¹⁴ To balance development

¹⁰ Aravalli Reclassification And Constitutional Environmentalism: A legal Critique <https://livelaw.in>

¹¹ Court orders Management plan for sustainable Mining in Aravali. Retrieved from <https://www.scobserver.in/supreme-court-observer-law-reports-scolr/court-orders-management-plan-for-sustainable-mining-in-aravali-in-re-issues-relating-to-definition-of-aravali-hills-and-ranges/>

¹² How is the aravalli range to be protected. Retrieved from <https://www.civildaily.com/news/how-is-the-aravalli-range-to-be-protected/>

¹³ The Hindu. (2025). How Is the Aravalli Range to Be Protected? Retrieved from <https://www.thehindu.com/sci-tech/energy-and-environment/how-is-the-aravalli-range-to-be-protected-explained/article70408703.ece>

¹⁴ BBC. (2025). Why India's Aravalli Hills Are at the Centre of Growing Protests. Retrieved from <https://www.bbc.com/news/articles/cn5ln4wee7wo>

and protection, the 2025 ruling approved the 100-meter criterion but prohibited new mining leases until the MPSM was completed.¹⁵ As demonstrated by the court's expansion of forest definitions in *T.N. Godavarman Thirumulpad v. Union of India* (1997), this judicial activism is consistent with constitutional environmentalism. Protests have been triggered by the 2025 ruling, though, with supporters calling for a review due to the decision's dilution of protections.¹⁶ Although the court's role emphasises its role as an environmental guardian, the need for more robust legislative frameworks is highlighted by its reliance on executive definitions.

ENVIRONMENTAL IMPACTS: MINING, CONSTRUCTION, CLIMATE, AND GROUNDWATER

In the Aravallis, mining and construction have a significant negative impact on the environment. Since 2000, illegal mining has reduced the amount of forest cover by 15–20%, flattening hills and upsetting biodiversity hotspots that are home to more than 300 bird species and leopards.¹⁷ The Wildlife (Protection) Act of 1972 has been broken by construction, including real estate in Gurgaon. In terms of climate, the Aravallis moderate temperatures in the NCR by blocking dust storms from the Thar Desert. Heatwaves and pollution are made worse by degradation; Delhi's AQI deteriorates as a result of increased particulate matter from mining dust.¹⁸ According to studies, this increases the likelihood of drought and raises local temperatures by two to three degrees Celsius.¹⁹ Groundwater impacts are severe: mining has caused a 50-meter drop in water tables in Rajasthani districts, but the hills replenish aquifers through percolation.²⁰ This affects 30 million people and goes against the National Water Policy, 2012's sustainable yield principle. All things considered, these actions violate Principle 15 of the Rio Declaration on precaution,

¹⁵ The hon'ble supreme court ruling on the aravalli hills, 2025: a landmark decision for environmental conservation <https://jpassociates.co.in/the-supreme-court-ruling-on-the-aravalli-hills/>

¹⁶ Advocate Urges CJI to Revisit Supreme Court's Aravalli Definition, Warns '100-Metre Test' May Dilute Protection <https://lawbeat.in/top-stories/advocate-urges-cji-to-revisit-supreme-courts-aravalli-definition-warns-100-metre-test-may-dilute-protection-1548970>

¹⁷ "Save Aravalli Hills: Why Protecting India's Oldest Mountain Range Matters" <https://visionias.in/blog/current-affairs/save-aravalli-hills-why-protecting-indias-oldest-mountain-range-matters>

¹⁸ The Wire. (2025). The Aravalli Hills Have A New Definition. Here's Why This Is A Problem. Retrieved from <https://m.thewire.in/article/environment/the-aravalli-hills-have-a-new-definition-heres-why-this-is-a-problem>

¹⁹ "Redefining the Aravalli Hills: Why Economic Development Carries Ecological Risks" <https://www.outlookbusiness.com/explainers/redefining-the-aravalli-hills-why-economic-development-carries-ecologicalrisks#:~:text=Redefining%20the%20Aravalli%20Hills%3A%20Why%20Economic%20Development%20Carries%20Ecological%20Risks>

²⁰ PubMed. (2025). Understanding the Impact of Aravalli Hills Mining on Groundwater. Retrieved from <https://pubmed.ncbi.nlm.nih.gov/40299189/>

hastening resource scarcity and climate vulnerability.

CRITICAL ANALYSIS AND OPINION

The MoEFCC's definition is flawed due to its anthropocentric bias, which prioritises economic thresholds over ecological ones, even though it offers clarity. It disregards geomorphic connections by eliminating hills under 100 meters, which could permit mining in 90% of the range and violate sustainable development standards.²¹ This is similar to the Vellore case, where environmental health took precedence over economic gains. The definition, in my opinion, is a step backwards that compromises India's obligations under the Paris Agreement. A comprehensive strategy that takes vegetation, slope, and hydrological factors into account would better enforce Article 21. Restoration, such as the planned Green Wall, must take precedence over exploitation for policymakers.²² It prioritises short-term gains over long-term survival and, if left unrevised, could result in an ecological disaster.

CONCLUSION

Regulatory uniformity is provided by the MoEFCC's Aravalli definition, but complete protection is sacrificed in the process. To protect this essential ecosystem, immediate judicial and policy interventions are needed to strike a balance between legal validity and environmental imperatives.

²¹ "India Faces Major Ecological Setback as Aravalli Hills Lose Protection" <https://newsreel.asia/articles/ecological-setback-aravalli-hills-lose-protection#:~:text=India%20Faces%20Major%20Ecological%20Setback%20as%20Aravalli%20Hills%20Lose%20Protection>

²² https://moef.gov.in/uploads/pdf-uploads/pdf_682f0a92983b08Wall.pdf