

An Online Peer Reviewed / Refereed Journal Volume 3 | Issue 4 | April 2025 ISSN: 2583-973X (Online)

Website: www.theacademic.in

# The Development of NMDC's Nagarnar Steel Plant in Bastar District, Chhattisgarh: Opportunities, Impacts, and Challenges

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#### **ARTICLE DETAILS**

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Research Paper

**Accepted:** 17-04-2025

**Published:** 10-05-2025

## **Keywords:**

National Mineral
Development Corporation,
Nagarnar Steel Plant,
Bastar

#### **ABSTRACT**

The Nagarnar Steel Plant (NSP), a 3 million tonnes per annum (MTPA) integrated steel facility established by the National Mineral Development Corporation (NMDC) in Bastar district, Chhattisgarh, represents a significant industrial intervention in a tribal and historically conflict-affected region. Commissioned in 2023, the plant aims to transform Bastar's economic landscape by leveraging its rich iron ore reserves, creating employment, and fostering socio-economic development. This paper examines the NSP's development, its economic and social impacts, challenges such as land acquisition and privatization debates, and its potential to reshape Bastar's future. Drawing on secondary sources and regional context, the study highlights the interplay between industrial growth and socio-political dynamics in a sensitive tribal region.

DOI: https://doi.org/10.5281/zenodo.15390466

#### 1. Introduction

Bastar district, located in southern Chhattisgarh, is a predominantly tribal region endowed with vast mineral resources, particularly iron ore. Despite its natural wealth, the area has historically faced underdevelopment, Maoist insurgency, and socio-economic marginalization. The NMDC, India's largest iron ore producer, established the Nagarnar Steel Plant (NSP) to capitalize on the region's resources, diversify its portfolio, and contribute to India's steel production targets under the National Steel Policy. Conceived in 2000 and operational since 2023, the NSP is a greenfield project built at a cost of



approximately ₹24,000 crore over 1,980 acres in Nagarnar, 16 km from Jagdalpur. This paper analyzes the NSP's role in Bastar's development, focusing on its industrial significance, socio-economic contributions, and the challenges of operating in a complex socio-political environment.

## 2. Background and Project Overview

## 2.1. NMDC and the Nagarnar Steel Plant

NMDC Limited, a public sector undertaking under the Ministry of Steel, is primarily a mining company operating mechanized iron ore mines in Chhattisgarh and Karnataka. The NSP was envisioned in 2009–10 as a strategic move to shift from raw material extraction to value-added steel production, mitigating the volatility of iron ore prices. The plant employs Hi-Smelt technology, which is energy-efficient and environmentally friendly, aligning with global trends in sustainable steel production.

## 2.2. Infrastructure and Operations

- Capacity and Output: The NSP has a 3 MTPA capacity, with plans to scale up to meet 10% of
  India's steel demand by 2025 and potentially reach 30 MTPA by 2030. It produces hot-rolled
  (HR) coils and specialized steels for automotive, generator, and transformer industries.
- Raw Material Linkage: The plant is strategically linked to NMDC's Bailadila mines in Dantewada, 100 km away, via a 131-km slurry pipeline under construction to reduce reliance on rail transport. A joint venture with Chhattisgarh Mineral Development Corporation (CMDC) develops Bailadila Deposit-4, ensuring a 7 MTPA iron ore supply.

## Key Milestones:

- o Coke Oven Battery commissioned: October 28, 2022.
- o Blast Furnace ('Maa Danteshwari') commissioned: August 12, 2023.
- o HR coil production began: August 24, 2023.

# 3. Economic and Industrial Impacts

#### 3.1. Industrial Growth

The NSP has positioned Bastar as an emerging hub in India's steel industry. Its proximity to iron ore reserves and advanced technology provide a competitive edge, enabling cost-efficient production. The



plant's output, including high-grade HR coils, caters to domestic and industrial demand, reducing India's reliance on imported steel. The project aligns with the National Steel Policy's goal of increasing domestic steel capacity to 300 MTPA by 2030.

## 3.2. Employment Generation

The NSP is expected to create approximately 50,000 direct and indirect jobs, significantly impacting Bastar's youth in a region with limited industrial opportunities. Locals whose land was acquired for the plant were promised employment, fostering economic inclusion. However, the exact number of jobs filled by tribal communities remains under scrutiny.

#### 3.3. Infrastructure Development

The project has spurred ancillary infrastructure, including:

- A raw material handling system with a wagon tippler operational since 2018.
- Planned slurry pipelines to Visakhapatnam and Raipur, enhancing logistics efficiency.
- Housing projects worth ₹1,200 crore by the Chhattisgarh Housing Board.

#### 4. Socio-Economic Contributions

## 4.1. Education and Skill Development

NMDC has invested in social infrastructure to address Bastar's low literacy rates and skill deficits:

- **Residential School**: A school in Nagarnar enrolls over 600 tribal students annually, benefiting over 5,000 first-generation learners with free education.
- Industrial Training Institute (ITI): Established in 2010–11, the ITI provides vocational training, equipping local youth for industrial jobs.

#### 4.2. Community Development

Promises of a super-specialty hospital (21.68 acres allocated) and a sports complex (50 acres) were made to secure tribal consent for land acquisition. However, delays in fulfilling these commitments have sparked local discontent.



## 4.3. Empowerment of Tribal Communities

The project aims to integrate tribal communities into the economic mainstream by providing jobs and education. However, the emotional attachment of locals to the plant as a public sector entity underscores their resistance to privatization.

## 5. Challenges and Controversies

## 5.1. Land Acquisition and Tribal Protests

The acquisition of 1,996 acres of tribal land, including 1,506 acres of private land, faced significant opposition in the early 2000s. Approximately 50,000 villagers from Nagarnar and nearby areas protested, citing threats to their livelihoods and cultural identity. The government mitigated resistance by offering jobs and community development projects, but tensions persist.

#### 5.2. Privatization Debate

The proposed disinvestment of NMDC Steel Limited (NSL), the demerged entity operating NSP, has been a contentious issue:

- **Government Stance**: The Cabinet Committee on Economic Affairs approved the demerger and strategic disinvestment in 2020, with preliminary steps like appointing advisors completed.
- Local Opposition: The Chhattisgarh government, led by Chief Minister Bhupesh Baghel, passed a unanimous resolution in 2020 to buy the plant if disinvested, citing its importance to Bastar's identity and tribal trust. Protests intensified in 2023–24, with Congress leaders accusing the central government of reneging on promises made by Prime Minister Narendra Modi and Home Minister Amit Shah to keep the plant public.
- Socio-Political Implications: Privatization fears have fueled distrust among tribals, with concerns that private ownership could prioritize profits over local welfare, potentially exacerbating Maoist tensions.



# 5.3. Environmental and Logistical Challenges

The project faced delays due to environmental clearance issues, pushing commissioning from 2014 to 2023. The reliance on rail transport for iron ore, coupled with limited rake availability, has posed logistical bottlenecks, which the slurry pipeline aims to address.

#### **6. Future Prospects**

The NSP holds transformative potential for Bastar if managed inclusively:

- **Economic Diversification**: Expanding production to specialized steels could attract downstream industries, creating an industrial ecosystem.
- Sustainability: The slurry pipeline and Hi-Smelt technology position the plant as a model for green steel production.
- Social Stability: Fulfilling promises of hospitals, schools, and jobs could rebuild trust and counter Maoist influence, aligning with regional development goals.

## • Policy Recommendations:

- Retain public ownership or ensure privatization includes robust safeguards for tribal employment and community benefits.
- o Accelerate infrastructure projects like the slurry pipeline to enhance efficiency.
- o Strengthen skill development programs to maximize local participation.

## 7. Conclusion

The NMDC Nagarnar Steel Plant is a landmark project that has brought industrial prominence to Bastar, a region long marginalized by conflict and underdevelopment. Its contributions to employment, education, and infrastructure are significant, but challenges like land disputes, privatization concerns, and unfulfilled promises threaten its social license to operate. Balancing industrial ambitions with tribal welfare and regional stability will be critical to realizing the plant's potential as a catalyst for sustainable development. Future research should explore the long-term socio-economic impacts and the effectiveness of community engagement strategies in mitigating local resistance.



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