

Post-Lease Clearances Streamlining the Time-Cost

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Post-Lease Clearances

Streamlining the Time-Cost*

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Abstract

India is a mineral-rich country. While mining is essential to the development of the Indian economy, it is associated with costs to the environment and the local communities. There are four major steps in the mining lifecycle – granting the mining lease; obtaining the relevant licences and permits; producing minerals; and end-of-life practices, such as mine closures. This paper focuses on the second stage of the mining process, that is, obtaining the relevant licences and permits. This stage also includes addressing the issues of displacement and rehabilitation of the local communities through public hearings. The paper discusses three case studies on Jharkhand, Odisha and Karnataka to highlight procedural problems with these regulations. Based on the observations related to the case studies and the procedural norms involved, several regulatory reforms including pre-embedded clearances, social impact assessment and single-window processes are suggested. These recommendations focus on bridging the gap between the regulatory policies and long-term sustainable mining practices.

Introduction

The mining sector is essential for the development of an economy. It is the primary sector for industries, including manufacturing and infrastructure. While the mining sector accounted for only about 1.8 per cent of India's total gross domestic product (GDP) in 2019–20, it is significant for developing the Indian economy (Government of India, 2020). However, mining is associated with costs to the environment and local communities, some of which are irreversible. A strong policy framework is required to control forest and land usage as well as air, water and land pollution (Baleitti, Page, Pande, Rowe, & Sudarshan, 2018). Countries with stringent and stable environmental regulations are considered favourable for investment by mining companies (OECD, 2019).

The lack of a mining-specific international regulatory framework means that mining countries must establish their respective domestic regulatory norms. Often, these state regulatory bodies suffer from corruption, and there is information asymmetry between mining companies and the government (Heffron, 2018). Many countries adopt the best practices recommended under the United Nations Framework Classification (UNFC), which provides for a system to account for the socio-economic viability, including the environmental impact of a project (United Nations Economic Commission for Europe, 2022). The Sustainable Development Goals (SDGs) and Agenda 2030 adopted by the United Nations set goals such as effective hazardous waste management, sustainable use of natural resources and requirement of greater public consultation for the prevention of hazardous activities (United Nations, 2022). This has encouraged large mining countries to take effective steps under their commitment towards SDGs and Agenda 2030.

In India, the Ministry of Environment, Forest and Climate Change (MoEF&CC) is the central authority with all decision-making powers concerning the use of forest land, and environmental regulations (Kashwan & Kodiveri, 2021). Every mining leaseholder must obtain statutory clearances from the MoEF&CC before commencing mining operations. This post-lease clearance mechanism has been a key issue in the policy discourse of the last decade, and remains a challenge for mining businesses, given the complexity and the large number of clearances and permits involved in the process (Banerjee, 2020).

Environmental regulation through risk assessments and compulsory licensing is important for ensuring a sustainable future. However, compliance with these regulations, while necessary, can often lead to massive delays and backlogs. This paper provides a detailed account of the mining-related clearances in India that a leaseholder must procure before commencing any mining operations. The paper discusses three case studies on Jharkhand, Odisha and Karnataka to highlight procedural problems with these regulations. Based on the observations related to the case studies and the procedural norms involved, several regulatory reforms are suggested. These recommendations focus on bridging the gap between the regulatory policies and long-term sustainable mining practices.

Post-Lease Clearances: Mechanism

There are four stages in the mining process: getting the mining lease; obtaining the relevant licences and permits; producing minerals; and end-of-life practices, such as mine closures. This paper focuses on the second stage of the mining process, that is, obtaining the relevant licences and permits. This stage also includes addressing the issues of displacement and rehabilitation of the local communities through public hearings.

There are four primary clearances that a leaseholder is required to obtain, depending upon the location and nature of the mining activity: (1) Forest Clearance (FC); (2) Environment Clearance (EC); (3) Wildlife Clearance (WLC); and (4) Consent to Operate (CTO). These clearances involve complex processes that are spread across authorities at the centre, state and district levels. These

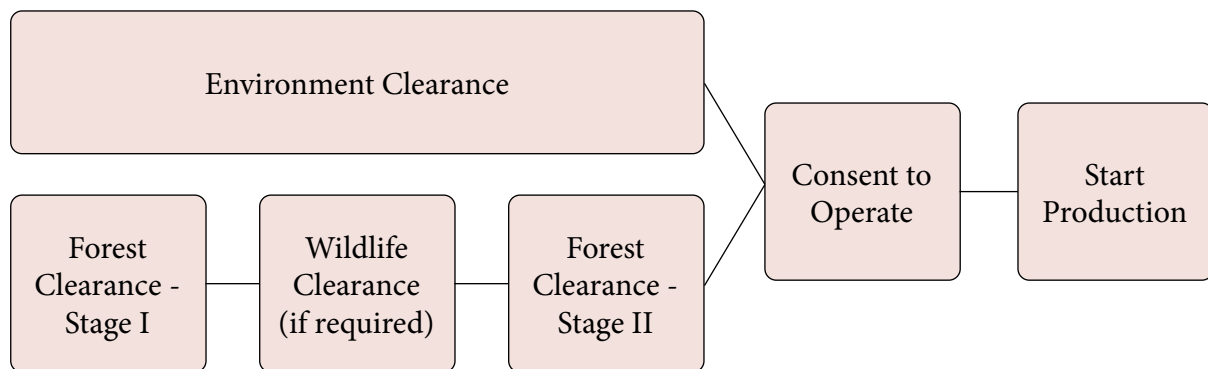
clearances must be obtained by the leaseholder to begin production processes, although the new Mines and Minerals (Development and Regulation) (MMDR) Amendment Act 2021 provides relief to the mine leaseholders. Under Section 8B, the Act specifies,

“... all valid rights, approvals, clearances, licences and the like granted to a lessee in respect of a mine... shall continue to be valid even after expiry or termination of the lease and such rights, approvals, clearances, licences and the like shall be transferred to, and vested... in the successful bidder of the mining lease selected through auction under this Act” (Ministry of Mines, 2021).

Existing permits and clearances are transferred to the successful bidders, and these permits would be valid till the end of the period granted. Environment Clearances are valid for 10 to 30 years, while Forest Clearances are valid until the end of the lease period. The Consent to Operate licence is valid for 5 years.

Figure 1 shows the process of obtaining these licences. The first step is to apply for the EC and FC, which can be done simultaneously. The FC has two stages: Stage I and Stage II. Applying for the WLC is part of the FC, and it can be applied for after obtaining a valid Stage-I FC permit. Finally, the CTO can be applied for once the EC, both stages of FC, and WLC are received.

Figure 1: Process of Obtaining Clearances



Source: MoEF&CC guidelines

Data for post-lease clearances is available publicly on the Pro-Active and Responsive facilitation by Interactive and Virtuous Environmental Single-window Hub– the PARIVESH portal. This is a web-based application developed to monitor and allow online submission of applications for environment, forest, wildlife and coastal regulation zone (CRZ) clearances. It is a single-window system that tracks applications at the central, state and district levels. The portal has automated the entire process of monitoring these applications, and includes options for submitting a new proposal, editing applications and checking the proposal’s status. The database is publicly available and accessible to all (Ministry of Environment, Forest and Climate Change, Government of India, 2018).

The PARIVESH portal was launched in August 2018 as a part of the “Digital India” campaign, with the aim of minimum government involvement and maximum governance. The portal offers a framework to generate economic growth and strengthen sustainable development through e-governance (Press Information Bureau, 2018). It has been used to obtain data on pending and granted proposals for forest clearances, environment clearances and wildlife clearances. Odisha, Jharkhand and Karnataka have been chosen for this study since these are among the foremost states engaged in non-coal mining. The portal also includes data on major (iron ore, manganese ore, gold, copper, etc.) and minor (sand, stone, etc.) minerals.

Environment Clearance (EC)

An EC application can be made through the PARIVESH portal. Each application is divided into Category A and Category B. Table 1 provides the details of mining projects that are distributed according to these categories.¹ All non-coal mining leases greater than 50 hectares, asbestos mining, and coal mining leases greater than 150 hectares are classified under Category A. The rest of the cases fall under Category B. For the Category A cases, the Environment Impact Assessment Authority (EIAA) at the Centre is the granting authority, whereas for Category B cases, it is the State Level Environment Impact Assessment Authority (SEIAA). Additionally, ECs for minor mineral mining projects of five hectares and below are granted by the District Level Environmental Impact Assessment Authority (DEIAA).² All of the respective impact assessment authorities are constituted by the MoEF&CC.

Table 1: Different Categories of Projects

Category A	Category B
Non-Coal Mining: ≥ 50 Ha	Non-Coal Mining: ≥ 5 and < 50 Ha
All Asbestos mining	
Coal Mining: > 150 Ha	Coal Mining: ≥ 5 Ha and ≤ 150 Ha

Source: MoEF&CC Guidelines for Environment Clearance

Figure 2 provides a flowchart describing the application process for EC. The EC process is divided into 4 steps: (1) Screening, (2) Scoping, (3) Public Consultation and (4) Appraisal. At each stage, relevant authorities scrutinise the applications and conduct necessary investigations.

Step 1: Screening³

Only Category B cases go through the screening stage, during which the application and all relevant documents submitted online are scrutinised. Based on the mining area's location and nature, the applications are further divided into Category B1 and Category B2. For Category B2 applications, the Environment Impact Report is not required as these are smaller minor mineral projects, and the proposal is forwarded to the appraisal stage directly. Category B1 applications are further scrutinised through Steps 2 (scoping) and 3 (public consultation) before the final appraisal step.

Step 2: Scoping⁴

The Expert Appraisal Committee (EAC) at the centre and the State Expert Appraisal Committee (SEAC) at the state level determine the terms of reference (TOR). The TORs inform the applicants about all the documents required, depending on the relevant environmental concerns. The TOR must be sent to the applicant within a period of 60 days from the application. An application can also be rejected at this point, if it has not been submitted in the prescribed format, provided the same is communicated by the EAC within 60 days from the period of application. In order to reduce delays at the time of scoping, in 2020, the MoEF&CC introduced standard terms of references that are sector-specific, reducing the total time for scoping from 60 days to 30 days.⁵

¹ S.O.3067(E), [01/12/2009] - Environmental Impact Assessment Notification-2009

² S.O. 147 (E), [15/01/2016]

³ para 7(I), S.O.1533(E), [14/09/2006] - Environmental Impact Assessment Notification-2006

⁴ Ibid, para 7(II)

⁵ S.O. 751 (E), [17/02/2020]

Step 3: Public Consultation⁶

This is one of the most crucial parts of the application process, wherein the concerns of the locally affected people and any other issues raised by members of the general population are addressed. Therefore, a public consultation is mandatory except in the cases of defence projects, highways and industrial estates. The public consultation process is carried out, at the request of the project proponent, by the respective State Pollution Control Board (SPCB) within 45 days from the request being made. The applicant is also required to submit a draft Environment Impact Assessment (EIA) report for the public hearing. The draft EIA and the summary EIA reports are then forwarded to the following authorities:⁷

- a. MoEF&CC
- b. District Magistrate/District Collector/Deputy Commissioner
- c. Zila Parishad or Municipal Corporation or Panchayats Union
- d. District Industries Office
- e. Urban Local Bodies (ULBs)
- f. Concerned Regional Office of the MoEF&CC

The SPCB is then supposed to advertise the public hearing in one major national daily, and one regional vernacular daily newspaper.⁸ No changes to the date, time and venue of the public hearing can be made without the district magistrate's recommendation. The public hearing is presided over by one of these officials: district magistrate, district collector, deputy commissioner or additional district magistrate.⁹ The public hearing is also video-recorded by the SPCB. The minutes of the hearing, along with the issues raised, are published in a vernacular language daily and English daily, and also displayed at the offices of the panchayat, zila parishad, districts magistrate and the SPCB.¹⁰

The process of public consultation has been criticised for multiple reasons. There have been many instances where the exemption granted under Paragraph 7 (III) of the EIA notification, 2006, has been loosely applied, without recording the reasons for the same in writing.¹¹ The SPCBs have often not followed the correct procedure while conducting the public hearing, making it difficult for the public to raise necessary concerns on time.¹² The responsibility for addressing the concerns raised by the public is on the applicant. Therefore, in many instances, there are no means through which the public can hold the applicants responsible for failing to address the concerns raised during the public consultations.

Step 4: Appraisal¹³

The EAC thoroughly scrutinises the Environment Impact Report that contains the necessary documents required based on the TOR and the complete report of the public consultation. The appraisal of the application is to be completed within 15 days from the date of receiving the final EIA report. The EIAA and SEIAA grant the EC based on the recommendations of the EAC and SEAC, respectively. The EIAA and the SEIAA conduct all necessary investigations related to the proposals. Therefore, their recommendations are binding on the EAC and SEAC. The final approval is granted within 45 days of receiving the Environment Impact Report.

⁶ Ibid, para 7(III)

⁷ Ibid, para 2.2, Appendix IV

⁸ Ibid, para 3.1, Appendix IV

⁹ Ibid, para 4.1, Appendix IV

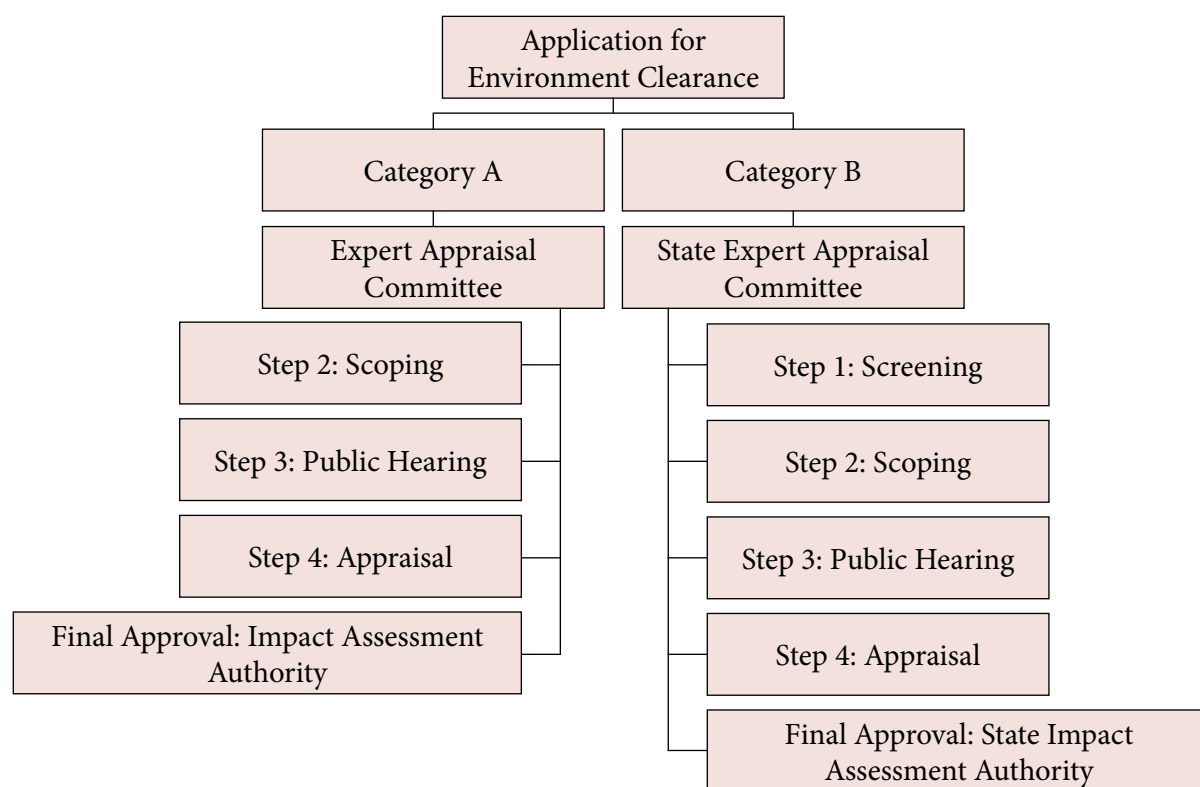
¹⁰ Ibid, para 5.1, Appendix IV

¹¹ Notification No. J-11013/41/2006-IA. II(I), Dated: 3rd June, 2009

¹² Ibid, Dated: 25th January, 2010

¹³ Ibid, para 7(IV)

Figure 2: Flowchart for Processing of Environment Clearance Application



Source: MoEF&CC Guidelines for Environment Clearance

These four steps are to be completed in about 180 days, as shown in Table 2. Looking at the data collected using the PARIVESH portal (Table 3), a total of 3,065 ECs have been applied for in Odisha (951), Jharkhand (471) and Karnataka (1,643) from 2015 onwards. In Odisha, about 68 per cent of the applications have been granted, while the remaining 30 per cent are pending. Similarly, Karnataka has granted EC in 71 per cent of its applications. On the other hand, Jharkhand has only 8 per cent of its applications pending.

As shown in Table 3, most ECs are granted in less than six months. However, in Karnataka, a majority of the EC applications are granted after more than 24 months (about 730 days). Odisha and Jharkhand appear to be meeting their targets considering, on average, 80 per cent and 87 per cent respectively of their total EC applications, are granted within six months. On the other hand, only two per cent of the applications in Karnataka are granted within six months.

Table 2: Days Prescribed for EC

Process	No. of Days
Scoping	30
Public consultation	45
Appraisal	60
Decision on the proposal	45
Total	180

Source: MoEF&CC Guidelines for Environment Clearance

Table 3: Environmental Clearances in Jharkhand, Odisha and Karnataka

Criteria	Jharkhand		Odisha		Karnataka	
	Minor	Major	Minor	Major	Minor	Major
Total EC applications	471		951		1643	
Applications Granted	417	14	434	42	975	20
Applications Pending	40	0	263	38	225	8
Applications Granted offline	0		174		174	
From application date, granted within (%):	Minor	Major	Minor	Major	Minor	Major
< 6 Months	88.5	42.9	82.5	59.5	4.1	0.0
6–12 Months	4.1	35.7	9.9	23.8	9.4	20.0
12–24 Months	5.3	7.1	7.4	14.3	16.7	15.0
> 24 Months	2.2	14.3	0.2	2.4	69.7	65.0
From application date, pending for (%):	Minor	Major	Minor	Major	Minor	Major
< 6 Months	40.0	0.0	98.1	28.9	4.4	0.0
6–12 Months	5.0	0.0	0.4	18.4	38.7	50.0
12–24 Months	5.0	0.0	0.4	7.9	20.0	0.0
> 24 Months	50.0	0.0	1.1	44.7	36.9	50.0

Source: Authors' Calculations based on data from PARIVESH

Forest Clearance (FC)

Section 6 of the Forest (Conservation) Act, 1980,¹⁴ mandates that no authority can grant any permission for the de-reservation of forests or use of forest land for non-forest purposes, without the prior approval of the MoEF&CC. Under the Forest (Conservation) Rules, 2003,¹⁵ forest clearance is granted in two stages. In Stage I, the applicant receives an “in-principle” approval, which stipulates that it is a prima-facie approval, subject to the applicant complying with other conditions. Final approval is granted in Stage II after the relevant authorities under the MoEF&CC are satisfied that the proposal is complete. The flow chart in Figure 3 illustrates the breakdown of the FC structure.

Stage I: In-Principle Approval

At this stage, every application must go through two levels of scrutiny by the state government, and regional or central offices of the MoEF&CC. Any applicant requesting diversion or denotification of forest land must submit their proposal in the prescribed format to the nodal officer of the state government. First, the nodal officer scrutinises the completeness of the proposal, and if satisfied, it is forwarded to the divisional forest officer (DFO) and district collector (DC).¹⁶ The DFO can conduct site inspections if deemed necessary.¹⁷ The DC has the important function of obtaining

¹⁴ Section 2

¹⁵ Rule 6

¹⁶ Rule 6(3)

¹⁷ Rule 6(3)(c)

consent for the diversion of forest land, from the gram sabhas that have jurisdiction over the forest lands relevant to the proposal. A forest area can fall under more than one gram sabha, giving each part jurisdiction over the same. The DC would then need to obtain consent from all of these gram sabhas.¹⁸

The DFO and the DC forward their findings to the conservator of forests (CoF)– a senior state forest department officer. The CoF's main focus is verifying the earlier findings and conducting a site inspection if the forest area is greater than 40 hectares. On concluding these examinations, the proposal is reverted to the nodal officer, who forwards the application to the concerned state government. If the state government agrees that the proposal is fit for de-reservation or diversion of forest area, then it forwards the same to the relevant office of the MoEF&CC. This concludes the first level of scrutiny of the proposal at Stage I.

The state government forwards proposals involving forest land of 40 hectares or less to the concerned regional office of the MoEF&CC, and the rest are forwarded to the MOEF&CC at the centre.¹⁹ However, the regional office can only grant in-principle approval to small mining projects involving areas of up to five hectares.

The regional office forwards all mining projects above five hectares to the Regional Empowered Committee (REC) constituted by the MoEF&CC.²⁰ The REC examines all mining projects thoroughly before they are forwarded to the MoEF&CC.²¹ Based on the recommendations of the REC and after conducting further necessary enquiry, the MoEF&CC may grant in-principle approval to mining projects with areas between 5–40 hectares. Additionally, it may place required conditions to be complied with, before obtaining Stage II approval.

Proposals involving forest land over 40 hectares are received by the MoEF&CC and are further scrutinised for their completeness, before being granted in-principle approval. If the proposal is complete, it is forwarded to the Forest Advisory Committee (FAC). This committee is formed by the MoEF&CC at the central level. The FAC evaluates the proposal considering its impact on the flora and fauna, and the displacement and rehabilitation of the affected people. The FAC further suggests any such conditions or restrictions on the use of the forest land that may minimise adverse environmental impact. After considering the advice of the FAC, the central government grants the in-principle approval and places further necessary conditions to be fulfilled by the project proponent.

Every proposal granted in-principle approval is required to fulfil certain conditions before seeking Stage II approval.²² These conditions include contributing towards compensatory afforestation under the Compensatory Afforestation Fund (CAF) Act, 2016 and paying the net present value (NPV) of the forest land that has been diverted. The Supreme Court mandated the collection of NPV and it was later included in the CAF Act.²³ The NPV of a piece of forest land is decided by a panel of experts appointed by the MoEF&CC. All funds collected under the CAF Act are compensations paid by every applicant seeking to use forest land for non-forestry purposes. Under Section 4 of the CAF Act, a state fund is established, which is managed by the state authority formed by the central government.²⁴ The CAF Rules 2018, provide that the state authority must use the funds to undertake artificial regeneration, assisted natural regeneration, and protection of forests and wildlife.²⁵ Although the CAF collected by the forest departments of state governments

¹⁸ Rule 6(3)(e)

¹⁹ Rule 6(4)(a)

²⁰ Rule 7(2)(c)

²¹ Rule 7(2)(d)

²² Rule 7(2)(g)

²³ W.P (Civil) No. 202 of 1995, T.N. Godvarman Thirumulpad v. Union of India

²⁴ Section 10, Compensatory Afforestation Fund Act, 2016

²⁵ Section 6, Compensatory Afforestation Fund Rules, 2018

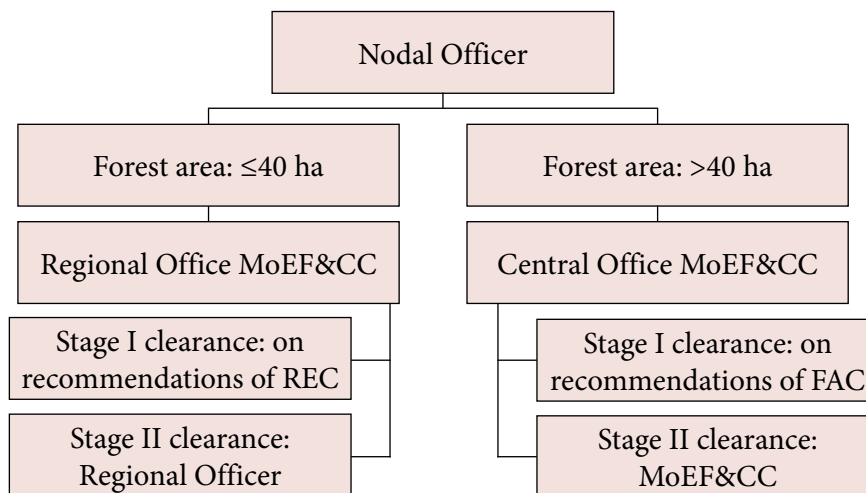
are to be utilised for reforestation and maintaining the quality of forests, inefficient allocation of these funds has resulted in a significant decline of tree cover in forest regions (Sinha, Nathan, & R Srikanth, 2021).

Stage II: Final Approval

The DFO provides the applicant with a demand note containing the item-wise number of compensatory levies, such as compensatory afforestation and NPV, along with details of other documents that comply with the conditions stipulated in the in-principle approval. Within 30 days of receiving the demand note and other conditions, the applicant must comply with all the requirements. The nodal officer, DFO, CoF and the state government each check for compliance with the conditions laid down during the in-principle approval. Once all four authorities—nodal officer, DFO, CoF and the state government—are satisfied with the compliance report, it is forwarded for final approval to either the regional officer or the MoEF&CC.

The authority for granting final Stage II clearance is with the regional officer for cases in which the forest area is up to 40 hectares, and the MoEF&CC for those in which the forest area is greater than 40 hectares. Both these bodies rely on the verified reports submitted by the authorities, as mentioned above.

Figure 3: Flowchart for Processing of a Forest Clearance Application



Source: MoEF&CC guidelines for Forest Clearance

Forest (Conservation) Rules, 2022

The new rules published on June 28, 2022, supersede the earlier 2003 rules. Under the new rules, FC is still granted in two stages: (i) “In-principle” approval and (ii) “Final” approval.²⁶ The applicant submits the proposal to the nodal officer, who forwards the same to the DFO, DC, CoF and chief conservator of forests. Each of them individually and simultaneously reviews the proposal as a part of the Project Screening Committee. This committee that has been newly added under the 2022 rules, reviews the proposals for their completeness without examining the merits of the proposal.²⁷ The committee has a prescribed time frame in which it must review these proposals, and the time frames differ based on the size of the forest land being diverted under the proposal.²⁸ The in-principle approval for all mining projects is given by the REC. The regional office and the

²⁶ Rule 9, Forest (Conservation) Rules, 2022
²⁷ Rule 9(4)(a), Forest (Conservation) Rules, 2022
²⁸ Schedule – II, Forest (Conservation) Rules, 2022

central government grant in-principle FC for other projects as mentioned in the rules.²⁹ The central government alone can grant the final approval as per the new rules, which differ from the earlier rules wherein the final approval to applications could be granted by regional officer, as prescribed by the central government.

It is important to note that the procedure for granting FC under the new rules remains largely the same, however, the period for granting FC has now increased overall. For instance, under the 2003 rules, members of the project screening committee could take up to 120 days, if a proposal covered more than 100 hectares of land; the same has now been increased to 150 days under the 2022 rules. The new rules contribute to the significant ongoing delays in the FC process.

As discussed and shown in Table 4, the 300 days prescribed by the government to obtain an FC with both Stages I and II clearances translate to a time period of about 10 months. A total of 192 FCs have been applied for from Odisha (110), Jharkhand (15) and Karnataka (67) from 2015 onwards. In Odisha, only 14 per cent of the applications have been granted a Stage-II FC, while two per cent have been granted in Karnataka. However, of the 15 applications in Jharkhand, none have been granted a Stage II clearance.

The prescribed time for a Stage-I FC is about 180 days (about six months). Table 5 shows that less than 20 per cent of the applications were granted a Stage-I FC within 10 months in Jharkhand and Karnataka. No application was granted a Stage-I FC within 10 months in Odisha. A Stage-II FC is prescribed to be granted within 120 days (about 4 months). However, none of the applications received a Stage-II FC in less than 12 months in Odisha and Karnataka, whereas no such application has been granted in Jharkhand.

Table 4: Number of Days Prescribed for a Forest Clearance

Process	5 ha	5–40 ha	40–100 ha	>100 ha
Stage I				
Nodal Officer	10	10	10	10
DCF and District Collector for FRA	30	30	45	60
CF	10	10	30	30
Nodal Officer/ PCCF	10	20	25	30
State government	30	30	30	30
Transit Period	20	20	20	20
Total	110	120	150	180
Stage II				
Pre-inspection	5	5	10	10
Site inspection	-	-	-	45
FAC	-	-	30	30
REC	-	30	-	-
Approval by competent authority (CA)	20	-	30	30
Communication of approval	5	5	5	5
Transit period	-	-	-	10
Total	30	40	75	120

Source: MoEF&CC guidelines for Forest Clearance

²⁹ Rule 9(4)(a), Forest (Conservation) Rules, 2022

Table 5: Forest Clearance in Jharkhand, Odisha and Karnataka

Criteria	Jharkhand		Odisha		Karnataka	
Total FC applications	15		110		67	
	Minor	Major	Minor	Major	Minor	Major
Applications Granted Stage I	0	1	0	10	0	11
Applications Granted Stage II	0	0	0	15	0	1
Applications Pending	0	14	2	83	0	55
Stage I Granted Within (%):	Minor	Major	Minor	Major	Minor	Major
< 6 Months	0	0	0	0	0	0
6–12 Months	0	0	0	0	0	0
12–24 Months	0	0	0	0	0	54.5
> 24 Months	0	100	0	100	0	45.5
Stage II Granted Within (%):	Minor	Major	Minor	Major	Minor	Major
< 6 Months	0	0	0	0	0	0
6 –12 Months	0	0	0	0	0	0
12–24 Months	0	0	0	6.70	0	0
> 24 Months	0	0	0	93.30	0	100
Pending For (%):	Minor	Major	Minor	Major	Minor	Major
< 6 Months	0	7.15	0	12	0	7.3
6–12 Months	0	0	0	2.40	0	7.3
12–24 Months	0	7.15	0	26.50	0	16.4
> 24 Months	0	85.70	100	59.10	0	69

Source: Authors' Calculation based on data from PARIVESH

Wildlife Clearance (WLC)

The Wildlife (Protection) Act, 1972, lays down the procedure for the notification of national parks, sanctuaries and conservation reserves. Under section 5C of the Act, the National Board for Wildlife (NBWL) is conferred with powers to carry out an impact assessment of various projects and activities on wildlife or its habitat. The guidance document for taking up non-forestry activities in wildlife habitats issued by the MoEF&CC lays down the process for WLC.³⁰ As per the guidelines, the project proponents must obtain recommendations from the standing committee of the NBWL under the Wildlife (Protection) Act, for non-forest activities in restricted areas, as made mandatory by law and the orders of the Supreme Court.

³⁰ F. No. 6-10/2011 WL, dated: 19 December 2012

Non-forest activities conducted under the following would require prior approval from the relevant authority:

- Activities inside protected areas.
- Activities inside wildlife sanctuaries.³¹
- Activities inside national parks.³²
- Activities inside tiger reserves.³³
- Activities inside conservation reserves.
- Activities within 10 kilometres from the boundaries of national parks and wildlife sanctuaries.³⁴
- Activities in areas connecting tiger reserves.³⁵

Any leaseholder with project activities falling within the ambit of the above-mentioned particulars is required to submit the mining proposal online in the prescribed proforma set by the MoEF&CC. The proforma includes details on the biodiversity of the area, maps, activities proposed, possible impacts of the activities, etc. The forest officer forwards the proposal to the chief wildlife warden through the chief conservator of forests. The chief wildlife warden, after giving specific comments on the proposal, will forward the same to the Government of India through the forest secretary. Before forwarding the proposal to the centre, the chief wildlife warden is also required to take recommendations of the State Board for Wildlife.

The centre, on receiving the proposal, places the same before the standing committee of the NBWL. The standing committee is scheduled to meet once every two to three months. Any person aggrieved by the order and recommendations of the committee can further approach the Central Empowered Committee (CEC). The CEC was constituted by order of the Supreme Court, to monitor the implementation of the Court's orders and to place the non-compliance cases before the Court. Its powers include looking into cases with respect to encroachment removals, implementations of working plans, compensatory afforestation, plantations and other conservation issues.³⁶ There is no prescribed timeline for granting a WLC, as the standing committee meets only once in two to three months.

As shown in Table 6, 31 WLC applications have been submitted since 2015. Of these, about 12 applications relate to major minerals, including iron ore, bauxite and gold. Of the 31 applications submitted, only five have been granted. A general trend that can be seen is that WLC is awarded within 24 months of the application. However, some cases have been pending for more than two years.

³¹ Supreme Court of India, Writ Petition (Civil) No. 337/1995, order dated May 9, 2002

³² Section 35 (6) of the Wild Life (Protection) Act, 1972

³³ Section 38(W), Wild Life (Protection) Act, 1972

³⁴ Supreme Court of India, Writ Petition, (Civil) No. 4690/240, order dated December 4, 2006

³⁵ Section 38 O (g), Wild Life (Protection) Act, 1972

³⁶ Order 09.05.2002, I.A. No. 295 in W.P (C) No. 202 of 1995

Table 6: Wildlife Clearance in Jharkhand, Odisha and Karnataka

Criteria	Jharkhand		Odisha		Karnataka	
	Minor	Major	Minor	Major	Minor	Major
Total WLC applications	17		4		10	
Applications Granted	2	2	0	0	1	0
Applications Pending	7	6	3	2	7	2
From application date, granted within (%):	Minor	Major	Minor	Major	Minor	Major
< 6 Months	50	50	0	0	0	0
6–12 Months	0	50	0	0	0	0
12 - 24 Months	50	0	0	0	100	0
> 24 Months	0	0	0	0	0	0
From application date, pending for (%):	Minor	Major	Minor	Major	Minor	Major
< 6 Months	100	0	0	0	0	0
6 - 12 Months	0	0	0	0	0	0
12–24 Months	0	0	0	0	57	0
> 24 Months	0	100	100	100	43	100

Source: Authors' Calculation based on data from PARIVESH

Consent to Establish and Consent to Operate

There are two levels of consent that are mandatory under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 and Section 25 of the Water (Prevention and Control of Pollution) Act, 1981. These two Acts require prior consent to be taken from the relevant State Pollution Control Board (SPCB) before establishing and operating any industrial plant, if the said plant falls within the ambit of the section. Section 18 of both Acts gives the Central Pollution Control Board (CPCB) the power to issue directions and help standardise procedures among all SPCBs. In order to further harmonise the process of granting consent orders, the CPCB has classified industrial sectors into Red, Orange, Green and White Categories. The metric used for the categorisation is the composite score (0–100) of the Pollution Index (PI).³⁷ A pollution index considers the following:

- Air Pollution parameters – 40 per cent weightage
- Water Pollution parameters – 40 per cent weightage
- Hazardous Wastes as generated by the industry – 20 per cent weightage

On the basis of the Pollution Index, the following categorisations are made:

- If the score is 60 and above, the category is Red.
- If the score is 30 to 59, the category is Orange.
- If the score is 15 to 29, the category is Green.
- If the score is less than 15, the category is White.

³⁷ Notification No. B-29012/ESS(CPA)/2015-16/, Dated: March 07, 2016, Central Pollution Control Board

The consent to all these industries is issued by the SPCBs. The validity of a consent issued is based on the category of the industry. Consent for different industry categories may be issued for the following periods: Red category industries for five years; Orange category for 10 years; and Green category for 15 years. White category industries do not require any consent.

All mining projects fall under the Red category.³⁸ The CTE and CTO are to be granted within a period of four months from the date of application to the SPCB, under both the Air Act and Water Act. Under the Water Act, if the application is not processed within the four-month period, then the consent is deemed to have been granted to the applicant. The CPCB, vide its notification, has removed the need for obtaining the CTE.

As shown in Table 7, a total of 4,185 applications were submitted for CTO since 2015 in Odisha. The Odisha SPCB granted 4,078 CTO applications. About 80 per cent of these have been granted within the prescribed period of four months (120 days). Only 106 of the total applications are pending, which implies that the authorities have been able to clear a majority of the applications within the statutory period. Only CTO data for Odisha is given below, due to non-availability of this data from Karnataka and Jharkhand.

Table 7: Consent to Operate in Odisha

Criteria	No. of Applications
Total CTO applications	4,185
Applications Granted	4,079
Applications Pending	106
From application date, granted within:	
<4 Months	3,232
4–8 Months	418
8–2 Months	149
> 12 Months	280
From application date, pending for:	
< 4 Months	3
4–8 Months	0
8–12 Months	13
> 12 Months	90

Source: Authors' Calculations based on data from SPCB, Odisha

³⁸ Ibid. Table G-2

Status of Mines Auctioned Since 2015

As per the regulations discussed in the previous sections, the maximum number of days required and prescribed by the government bodies to obtain the EC, FC (Stage I and Stage II), and CTO/CTE is 420 days (approximately 1.15 years), as the EC and FC can be applied for simultaneously. For ECs, the government has mentioned that it is a process of 180 days while the FC (Stage I and Stage II) require 300 days to be processed. After obtaining both the EC and FC, the project proponent can then obtain a CTO which takes 120 days to be issued. Besides these clearances, if wildlife is present in the mining lease area, a WLC also needs to be obtained. There is no prescribed time frame for issuing a WLC.

In 2015, the government introduced the mineral auction system to grant mining leases. Therefore, it is important to understand the progress of these auctioned mines in the post-lease clearance process. Data on mining lease auctions since 2015 in Odisha, Jharkhand and Karnataka have been collected and used. This data was obtained from the Ministry of Mines website. It contained information on successful auctions that include the name of the block, mineral, date of the auction, area, reserves, final bid percentage, preferred bidder, end use of the lessee, and status of the mining block (greenfield/ brownfield) (Ministry of Mines, Government of India, 2016a).

Finally, data from the State Pollution Control Boards (SPCBs) was also utilised for auctioned mines. Data on CTO/ CTE applications was collected from the SPCBs of Odisha, Jharkhand and Karnataka, and data on WCs from the PARIVESH portal.

Odisha

There were 886 EC and 110 FC applications from 2015, when the auction system for mining lease allocations was introduced. Of these applications, 29 relate to newly auctioned mines. The bids for these 29 auctioned mines vary from 12 to 154 per cent of the value of minerals which would be dispatched over the lifetime of the mining operation. On average, these newly auctioned mines have applied for clearances within a year of the auction date. Of the 29 leaseholders, seven have applied for clearances within the first six months of winning the auction.

However, not all of these mines are greenfield projects, only about 38 per cent. The rest are brownfield projects. One greenfield project has been approved Stage-II FC. The remaining 27 applications have been submitted, but are pending action from the authorities. One project has not applied for FC yet, but has been granted an EC (Table 8).

For ECs, 16 projects have applied for TORs. Of these 16, only three have submitted their EC application, out of which two projects were granted an EC while one application has been accepted but is pending approval.

Table 8: Forest Clearances for Auctioned Mines in Odisha

Mine Type	Brownfield		Greenfield	
	Approved	Pending	Approved	Pending
Captive	0	13	1	7
Merchant	0	4	0	3

Source: Authors' calculation based on various sources

Jharkhand

There were 474 EC and 15 FC applications from 2015. Of these applications, two relate to newly auctioned mines. One of these mines won the bid at 17 per cent while the other one won at 89 per cent. They have applied for clearances within 13 months of winning the auctions.

Both these applications are for greenfield projects. One is a merchant mining project while the other is a captive miner. Of these two applications, one has been granted an EC while the other one has not applied yet. Both projects have applied for FC but are pending Stage I approvals.

Karnataka

There were 1641 EC applications and 67 FC applications from 2015. Of these, 11 applications relate to newly auctioned mines. The winning bids start from 35 per cent and go up to 130 per cent. On average, these nine mines have applied for clearances within 12 months of winning their auctions. However, only three have applied for clearances within the first six months of winning.

All of them are brownfield mines leased by captive miners. One of these has been approved a Stage-II FC, while two have been approved at Stage I. A total of nine had applied for an FC, of which six are still pending. Two have applied for an EC, of which one has been granted and the other is pending approval.

Case Study: Ghoraburhani-Sagasahi Iron Ore Mine

The Ghoraburhani-Sagasahi iron ore mine is located in the Sundargarh district of Odisha. It is a greenfield captive mining lease auctioned in March 2016. The auction bid was won by the mining company Essar Steel, with a bid of 44.35 per cent. The greenfield mine has a mineralised area of 90.6 hectares, with an estimated value of resources at Rs 18,525 crores over a period of 50 years. The auction premium from this mine is approximately Rs 8,215 crores. In addition to this, the royalty, District Mineral Foundation (DMF) and National Mineral Exploration Trust (NMET) collections would be approximately Rs 3,112 crores (Ministry of Mines, Government of India, 2016b).

According to the documents shown in the FC application, about 91 per cent of the Ghoraburhani-Sagasahi mine lease area is under forest land, which requires an FC (Essar Steel India Limited, 2016). Essar steel applied for a FC soon after winning the auction in March 2016. It began the EC process in December 2016. This includes a public hearing session that was held in May 2017. One of the major concerns raised during the public hearing related to the creation of livelihood for the local people. The community mentioned that the mine should be open to employment of the local communities residing in the surrounding villages. Moreover, the villagers requested that the mining company should focus on providing social infrastructure such as clean drinking water, schools, roads, and health care facilities. Another major concern was the pollution and deforestation due to mining. Finally, concerns regarding the tribal population in the area, who are primarily forest

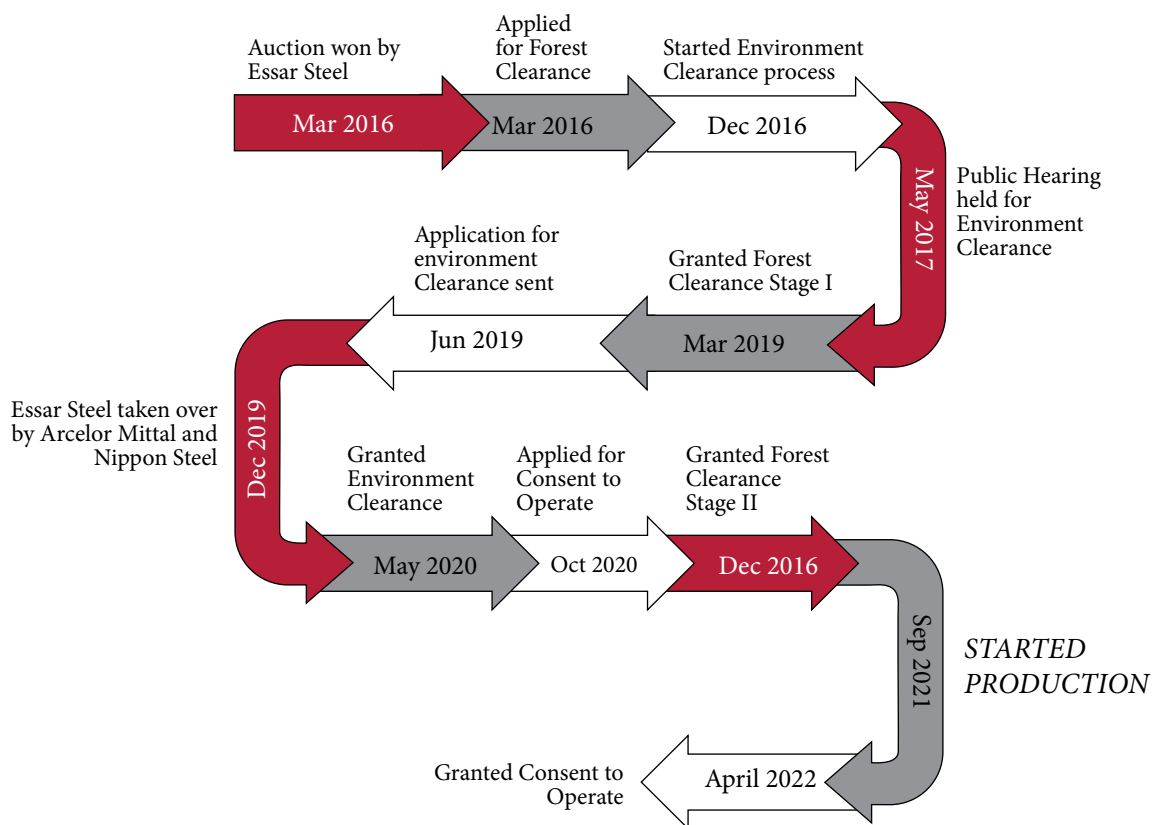
dwellers, were raised. The issues discussed a lack of communication with the tribal population of the area and a request was made to include them in the discussions. This would make them more willing to accept the mining project (State Pollution Control Board, Government of Odisha, 2017).

The Stage-I FC was granted almost three years later in March 2019. Before getting the Stage-II FC, the mining lessee is required to pay certain funds for the afforestation and rehabilitation of the land. As per the calculations of the regional offices of MoEF&CC in Odisha, Essar Steel India was required to pay about Rs 4.45 crores to the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) fund. These funds would then be allotted and utilised for afforestation and replantation (Ministry of Environment, Forest and Climate Change, Government of India, 2017).

The company submitted its EC application in June 2019. However, in December 2019, there was a change in ownership of this mine, as Essar Steel was taken over by the joint venture of Arcelor Mittal and Nippon Steel (AM/NS) (Arcelor Mittal, 2019). They were granted an EC in May 2020. It took about a year for the EC approval. AM/NS applied for a CTO in October 2020. The MoEF&CC granted the Stage-II FC in December 2020 about two years after the Stage-I approval.

The mine started production in September 2021 (Arcelor Mittal & Nipon Steel, 2021). However, the CTO was granted only in April 2022. The provisions in Section 25 (7) of the Water (Prevention and Control of Pollution) Act, 1981 mention that in case the decision on the CTO is not made within 120 days of the submission of the application, the applicant or mining company can consider the CTO as granted. This allowed AM/NP to begin production before the CTO was granted. The timeline shows that the overall process of obtaining the clearances and beginning production of iron ore took about 5 years and 6 months as compared to the prescribed timeline of 420 days or 1 years and 2 months (Figure 4).

Figure 4: Timeline of the Ghoraburhani-Sagasahi Mine in Sundargarh, Odisha



Source: Various news articles and company reports

Recommendations

Pre-embedded Clearances

Pre-embedded clearances were first mentioned in the National Mineral Policy 2019: “As part of Initiative for ease of doing business, the states shall make an endeavour to auction mineral blocks with pre-embedded statutory clearances” (Ministry of Mines, Government of India, 2019). In 2020, the Ministry of Mines issued an order for discussing and implementing the process of pre-embedded clearances. This order divided pre-embedded clearances into two types, one for brownfield mines and the other for greenfield mines. In the case of brownfield mines, the MMDR Amendment Act 2020 provides for the transfer of all valid clearances and permits to the new leaseholder for a period of two years. However, the above-mentioned order sought to provide pre-embedded clearances for greenfield mines as well. State governments will apply for an EC and Stage-I FC simultaneously, which will then be transferred to the successful bidder. This is being implemented on a pilot basis. Each state will be implementing five identified auction blocks and will set up a project monitoring unit (PMU) to obtain the clearances (Ministry of Mines, Government of India, 2020).

Delay in mineral production even after being granted a valid mining lease is often a result of failure to obtain the required post-lease clearances. The Essel Mining & Industries Limited (EMIL) won the auction for the Bunder diamond project, and they were granted the mining lease by the government of Madhya Pradesh in December 2019. There has been no commencement of mining operations, as the required clearances have still not been granted. The Forest Advisory Committee (FAC) of the MoEF&CC, in its meeting held on March 31, 2022, deferred the FC proposal. The FAC observed that a new mining lease would affect the tiger dispersal in the region. The FAC also concluded that the mining project requires changing the course of a stream and creating a water body, thereby affecting the biodiversity and the effectiveness of the Ken-Betwa link project. Additionally, the state government has to submit a report after examining “whether the ecological impact of diversion of stream and creation of water bodies has been taken into account or not” (Forest Advisory Committee, 2022). It has been about three years since the Bunder diamond mines were auctioned, but the leaseholder has still not been granted even Stage-I FC. Pre-embedded clearances obtained prior to granting of the mining leases would avoid such instances of massive delays due to MoEF&CC policy changes on the use of forest land (Chadha & Kapoor, 2022).

This is a positive step towards reducing the time taken to obtain the various clearances and begin production. It is important to have pre-embedded approvals for forest clearances. As shown in the sections above, a period of 300 days is prescribed to obtain both Stage-I and Stage-II FCs. However, a majority of the applications from Odisha, Jharkhand and Karnataka were granted after more than two years (700 days). Having pre-embedded clearances for these newly auctioned mines will significantly reduce the time taken to start production. For this pilot programme to be successful, it is imperative that the state governments, MoEF&CC, Ministry of Mines and the mining companies to work together to ensure a smoother process.

Social Impact Assessment

Mining may adversely affect the living conditions of the local communities in the mining region, causing displacement. The involvement of local communities in the clearance process is crucial, as members of these communities must be provided with adequate means for rehabilitation. In India, the concerns of the local communities are addressed during the public consultation, a process that is mandatory in the issuing of ECs. Public consultations are also open to members of the general public not residing in the area, such as environmental activists, journalists and stakeholders. Rules governing EC prescribe the procedure to be followed while conducting the public consultation, and mandate that a report, which includes the minutes of these meetings, is generated. Additionally,

the responsibility of addressing public concerns is to be borne by the applicant; the MoEF&CC is not involved in the process for addressing the public grievances. As there is no mechanism in place to ensure that issues raised at the public consultations are addressed thoroughly, an applicant may still be granted an EC without having resolved the legitimate concerns of the general public. Public participation only happens after the leaseholder has already drafted the EIA Report and the same is circulated before the public hearing.³⁹ The public consultation is ineffective if the EIA report has already been drafted, without first considering the concerns of the public.

Non-forest activities such as mining projects often result in the displacement and resettlement of tribal communities. Section 4 of the Forest Rights Act, 2006 lays down the conditions that must be adhered to before the displacement of any community that has been granted forest rights under the Act. It is mandatory to obtain free and informed consent, in writing, from the gram sabhas and elected representatives, with regard to the use of the forest land and resettlement of the communities.⁴⁰ In many instances the MoEF&CC failed to implement necessary regulations and the forest rights of communities were violated. The Supreme Court has intervened on multiple occasions to stop mining activities and uphold the rights of tribal communities (Kashwan & Kodiveri, 2021). Effective public participation is imperative for a smooth post-lease clearance process, wherein the rights of communities residing in forest areas are prioritised by the regulatory authorities.

The United Nations Economic Commission for Europe (UNECE) has also recommended that for effective public participation during the process of granting EC, the public must be involved at a very early stage. (United Nations Economic Commission for Europe, 2016). Public participation must also be continuous in nature, engaging with the project proponent throughout the clearance process.⁴¹ In India, public engagement happens only once during the public consultation and there are no follow-up meetings between the stakeholders and the project proponent. It is therefore suggested that the MoEF&CC create a separate Social Impact Assessment (SIA) mechanism. A SIA will help assess impacts relating to local livelihood in aspects such as health, employment and social cohesion (Mancini & Sala, 2018). This would help achieve the goal of sustainable mining by ensuring the growth of local communities.

One-Stop Shop for Environmental Approvals

In India, there are 4 different clearances that each lease holder is required to obtain before commencing mining operations. Different state or central bodies grant these clearances depending on the procedure stipulated by the rules. Each of these clearances is governed by a different law and follows very distinct procedures. The timeline for issuing each clearance also differs based on the number of authorities that scrutinise the proposals, before giving it final approval. The involvement of multiple government bodies and applying for each clearance individually makes the post-lease clearance mechanism very time consuming and often hard to monitor. Therefore, it is proposed that a “one-stop shop” method be adopted for post-lease clearance in India.

Mining nations like Australia and South Africa follow this “one-stop shop” process, which involves greater decentralisation and reduced duplication of the process. In Australia, the Commonwealth environmental minister can enter into a bilateral agreement with a state or territory government to allow them to conduct a single environmental assessment processes (Australian Government, 2022). From December 2014, South Africa initiated the “One Environmental System” where the minister of environmental affairs only acts as an appellate body, and environment-related clearances for mining projects are issued by the minister of mineral resources. For a one-stop solution for post-lease clearance in India, the MoEF&CC would have to allow the respective state governments to

³⁹ para 7(ii), S.O.1533(E), [14/09/2006] - Environmental Impact Assessment Notification-2006

⁴⁰ Section 4 (2)(e), Forest Rights Act, 2006

⁴¹ Ibid.

provide all the necessary clearances, and decentralise the process. The PARIVESH portal can be very effective in implementation of this solution, as currently, all clearances expected for the CTO and CTE are applied for through the PARIVESH portal. Therefore, the leaseholder can apply for all clearances in one go and be allotted a single application number. The respective state governments will then scrutinise these applications.

This would reduce the burden on the MoEF&CC at the centre and allow it to monitor the working of different state bodies. The MoEF&CC, through its regional bodies, can set up committees to review state performances and monitor large mining projects after they have been given clearance. The MoEF&CC has often been criticised for not effectively monitoring projects after they have been granted the necessary clearances. Decentralising the clearance mechanism and providing a one-stop solution would provide the MoEF&CC greater opportunities to reform the clearance and post-clearance regulatory mechanism.

References

- Arcelor Mittal & Nipon Steel. (2021). *Press Releases*. Retrieved from Am/NS India: <https://www.amns.in/press-releases?press-release=arcelormittal-nipon-steel-india-commences-operations-at-ghoraburhani-sagasahi-iron-ore-mine-in-odisha>
- Arcelor Mittal. (2019). *ArcelorMittal and Nippon Steel complete acquisition of Essar Steel*. Retrieved from Arcelor Mittal: <https://corporate.arcelormittal.com/media/press-releases/arcelormittal-and-nippon-steel-complete-acquisition>
- Australian Government. (2022). *Bilateral Agreements*. Retrieved from Department of Climate Change, Energy, the Environment and Water: <https://www.dcceew.gov.au/environment/epbc/bilateral-agreements>
- Baleitti, A., Page, L., Pande, R., Rowe, K., & Sudarshan, A. (2018). *Lease Splitting and Dirty Entrants: The Unintended Deforestation Consequences of India's Environmental Clearance Process Reform*. CEPR. Retrieved from <https://pedl.cepr.org/publications/lease-splitting-and-dirty-entrants-unintended-deforestation-consequences-indias>
- Banerjee, S. (2020). *Regulatory reform for non-fuel minerals: Improving the post-leasing clearance mechanism*. Brooking India (Working Paper). Retrieved from <https://www.brookings.edu/research/regulatory-reform-for-non-fuel-minerals-improving-the-post-leasing-clearance-mechanism/>
- Chadha, R., & Kapoor, I. (2022). *Non-Fuel Minerals and Metals: India's Trade and FDI Scenario*. CSEP. Retrieved from <https://csep.org/discussion-note/trade-and-fdi-scenario-of-non-fuel-minerals-in-india/>
- Essar Steel India Limited. (2016). *Justification for Locating the Project in Forest Area*. Retrieved from http://forestsclearance.nic.in/DownloadPdfFile.aspx?FileName=811212111220ACEWZC_Justification.pdf&FilePath=../writereaddata/FormA/Justification/
- Forest Advisory Committee, M. (2022). *Recommendation of Forest Advisory Committee in its meeting held on 31st: Agenda No. 4*. Retrieved from PARIVESH: http://forestsclearance.nic.in/writereaddata/FAC_Minutes/4116125112221MoMofFACHeldon31-3-2022.pdf
- Government of India. (2020). *Home page*. Retrieved from AatmaNirbhar Bharat: <https://aatmanirbharbharat.mygov.in/>
- Heffron, R. J. (2018). Commercial Arbitration in the Energy Sector: Mining Disputes. In M. Scherer, *International Arbitration in the Energy Sector*. Oxford University Press. Retrieved from <https://global.oup.com/academic/product/international-arbitration-in-the-energy-sector-9780198805786?cc=us&lang=en&#>
- Kashwan, P., & Kodiveri, A. (2021, Feb 6). Who Will Guard the Guardians? State Accountability in India's Environmental Governance. *Economic and Political Weekly*, 56(6). Retrieved from <https://www.epw.in/engage/article/who-will-guard-guardians-state-accountability>
- Mancini, L., & Sala, S. (2018). Social impact assessment in the mining sector: Review and comparison of indicators frameworks. *Resources Policy*, 98-111. doi:<https://doi.org/10.1016/j.resourpol.2018.02.002>.
- Ministry of Environment, Forest and Climate Change, Government of India. (2017). *Brief Note on the Proposed Forest Diversion Proposal*. Retrieved from http://forestsclearance.nic.in/DownloadPdfFile.aspx?FileName=0_0_12118122112111311ESSAR_NFL_SCHEME.pdf&FilePath=../writereaddata/DivertedLand/GirthFile/

Ministry of Environment, Forest and Climate Change, Government of India. (2018). *Home page*. Retrieved from PARIVESH: <https://parivesh.nic.in/>

Ministry of Mines, Government of India. (2016a). *Auctions*. Retrieved from Ministry of Mines website: <https://www.mines.gov.in/UserView/index?mid=1534>

Ministry of Mines, Government of India. (2016b). *Block Name: Ghoraburhani-Sagasahi*. Retrieved from TAMRA: https://tamra.gov.in/public_block_all_detail.php?view=13

Ministry of Mines, Government of India. (2019). *National Mineral Policy 2019*. Retrieved from <https://mines.gov.in/writereaddata/Content/NMP12032019.pdf>

Ministry of Mines, Government of India. (2020). *Order dated June 3, 2020 (Pre-embedded Clearances)*. Retrieved from <https://www.mines.gov.in/writereaddata/UploadFile/order03062020.PDF>

Ministry of Mines, Government of India. (2021). *MMDR Amendment Act, 2021*. Ministry of Mines. Retrieved from <https://mines.gov.in/writereaddata/UploadFile/mmdr28032021.pdf>

OECD. (2019). *Mining and Green Growth in the EECCA Region*. OECD. doi: <https://doi.org/10.1787/1926a45a-en>.

Press Information Bureau. (2018). *PARIVESH*. PIB. Retrieved from <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1542607>

Sinha, S. K., Nathan, H. S., & R Srikanth. (2021, December). Why India Needs a Coal Mines Environment Authority. *Economic and Political Weekly*, 56(51).

State Pollution Control Board, Government of Odisha. (2017). *Public Hearing for Ghoraburhani-Sagasahi Mine*. Retrieved from <http://environmentclearance.nic.in/DownloadPfdFile.aspx?FileName=xhN37T5EJQKjYACPNWSuQopHanHCFre35k2UJznUvGv09+LB+bS+KmlW86kldr0IOolrRHxMhdr1wdmNSqijvQ==&FilePath=93ZZBm8LWEXfg+HAIQix2fE2t8z/pgnoBhDIYdZCxzU58BnhvJgYCYZmnh7L8vuUpAjRlPQFm4dqIX0YXm9oQdIXvs4Cp>

United Nations. (2022). *Sustainable Development Goals*. Retrieved from Sustainable Development Goals: <https://sdgs.un.org/goals>

United Nations Economic Commission for Europe. (2016). *Good Practice Recommendations on Public Participation in Strategic Environmental Assessment*. Retrieved from https://unece.org/DAM/env/eia/Publications/2016/Good_Practice_Recommendations_on_Public_Participation_in_Strategic_Environmental_Assessment/1514364_E_Espoo_web.pdf

United Nations Economic Commission for Europe. (2022). *About UNFC and Sustainable Resource Management*. Retrieved from <https://www.unece.org/energywelcome/areas-of-work/unfc-and-resource-management/aboutunfc->

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