

Sarvajeet Kumar Sinha  
R. Srikanth



# SUSTAINABLE PATHWAYS TO ENERGY UTILISATION

## VOLUME 1:

### IMPROVING THE ENVIRONMENTAL GOVERNANCE OF COAL MINES IN INDIA THROUGH A UNIFIED AUTHORITY



NATIONAL INSTITUTE OF ADVANCED STUDIES  
Bengaluru, India



# Sustainable Pathways to Energy Utilisation

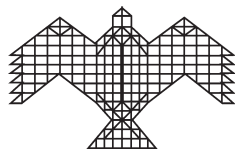
Improving the environmental governance of coal mines in India  
through a unified authority

Volume 1 of the Energy component of the research conducted in the  
Intensification of Research in High Priority Area (IRPHA) Project  
SB/IR/NIAS/2016

“Interdisciplinary Forays into Human-Environment Interactions:  
An Integrative Research Initiative in Energy, Ecology and Nonlinear  
Modelling”

**Sarvajeet Kumar Sinha and R Srikanth\***

*(\* Principal Investigator)*



Energy and Environment Programme  
School of Natural Sciences and Engineering  
**NATIONAL INSTITUTE OF ADVANCED STUDIES**  
Bengaluru, India  
2021

© National Institute of Advanced Studies, 2021

**Published by**

National Institute of Advanced Studies  
Indian Institute of Science Campus  
Bengaluru - 560 012  
Tel: 2218 5000, Fax: 2218 5028  
E-mail: [publications@nias.res.in](mailto:publications@nias.res.in)

NIAS Report: NIAS/NSE/EEP/U/RR/06/2021

Cover photo: (Front cover) Aerial view of a modern, environment-friendly coal mining project  
(Back cover) Biological reclamation of an overburden dump in a coal mine

Typeset & Printed by  
Aditi Enterprises  
[aditiprints@yahoo.com](mailto:aditiprints@yahoo.com)

# Contents

<b>1. Introduction</b> .....	1
<b>2. Background</b> .....	3
2.1. The relevance of coal to the overall economy .....	3
2.2. Conceptual framework .....	4
<b>3. Key issues with the appraisal process for grant of clearances related to forest, environment, and mineral conservation for coal mines in India</b> .....	6
3.1. Mining Plan Approval .....	9
3.2. Forest Clearance .....	9
3.3. Environment Clearance .....	10
3.4. Mine Closure .....	11
<b>4. Unified authority for coal mining</b> .....	13
4.1. Unified Authority to enable sustainable coal mining in USA .....	14
4.2. Global examples of a coordinated approach to environmental regulation of the mining sector .....	15
<b>5. Sustainable Coal Mining bill</b> .....	16
5.1. Important Authorities under the proposed legislation .....	17
5.2. Changes in the appraisal processes for grant of key clearances to coal mines as per the draft SCM bill .....	18
5.3. Better self-compliance by the coal mining companies .....	20
5.4. Offenses and penalties under the SCM Bill .....	21
<b>6. Amendments required in the existing legal framework</b> .....	21
<b>7. Conclusions and policy recommendations</b> .....	22
<b>8. Acknowledgements</b> .....	24
<b>9. References</b> .....	25
<b>Annexure 1 - Draft Sustainable Coal Mining Bill</b> .....	31
<b>Annexure 2 - Draft Environment, Forest and Mineral Laws (Amendment) Bill</b> .....	67

# Abbreviations

BAU	: Business-as-Usual
CBA Act	: Coal Bearing Areas (Acquisition and Development) Act, 1957
CCO	: Coal Controller Organization
CIL	: Coal India Limited
CMEA	: Coal Mines Environment Authority
CMCD Act	: Coal Mines (Conservation and Development) Act, 1974
DG-CMEA	: Director-General of Coal Mining Environment
DGMS	: Directorate General of Mines Safety
DFO	: Divisional Forest Officer
EAC	: Expert Appraisal Committee
EC	: Environmental Clearance
EIA	: Environmental Impact Assessment
EMP	: Environment Management Plan
EP Act	: Environment (Protection) Act, 1986
ERR	: Earth Resources Regulation
FAC	: Forest Advisory Committee
FC Act	: Forest (Conservation) Act, 1980
FC	: Forest Clearance
FDP	: Forest Diversion Proposal
GHG	: Green House Gases
GoI	: Government of India
ISO	: Internal Safety Organization
kWh	: kilowatt-hour
LARR Act	: The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013
MMDR Act	: Mines and Minerals (Development and Regulation) Act, 1957
MoC	: Ministry of Coal, Government of India
MoEF	: Ministry of Environment and Forest, Government of India
MoEFCC	: Ministry of Environment, Forest and Climate Change, Government of India
MoLE	: Ministry of Labour and Employment, Government of India
MoLJ	: Ministry of Law and Justice, Government of India
MoP	: Ministry of Power
Mtpa	: Million tons per annum
NEAMA	: National Environment Assessment and Monitoring Authority
NEMA	: National Environment Management Authority
NEMLA	: National Environmental Management Laws Amendment,
NEPA	: National Environment Protection Authority
OSMRE	: Office of Surface Mining Reclamation and Enforcement
PC	: Public Consultation
PH	: Public Hearing
PP	: Project Proponent
R/P	: Reserve-to-Production
SCI	: Supreme Court of India
SCCL	: Singareni Collieries Company Limited
SCM	: Sustainable Coal Mining
SEMA	: State Environment Management Authority
SPCB	: State Pollution Control Board
TOR	: Terms of Reference
TWh	: Terawatt-hour

# SUSTAINABLE PATHWAYS TO ENERGY UTILISATION

## IMPROVING THE ENVIRONMENTAL GOVERNANCE OF COAL MINES IN INDIA THROUGH A UNIFIED AUTHORITY

### 1. Introduction

Coal is one of the most significant growth drivers for the Indian economy and coal-fired power plants constitute around 56% of the total installed capacity and 72% of the electricity generated by utilities in India during FY 2019-20. India is in the process of enhancing domestic coal production to provide affordable electricity to its population of 1.33 billion. The Government of India has taken numerous steps, including auctioning coal mines for commercial coal mining, inviting foreign direct investment, relaxing end-use restrictions, and opening a single portal to track different approvals and clearances required for commencing coal mining operations.

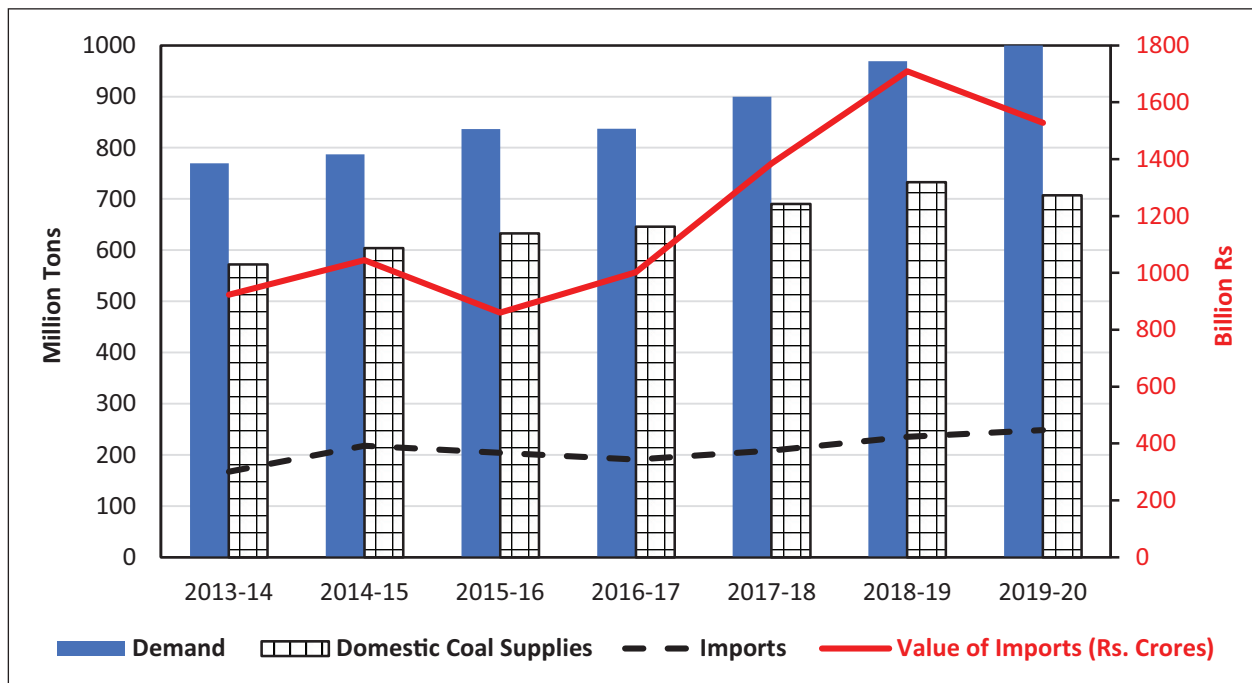
India's proven coal reserves are sufficient to meet the country's needs for several decades, even if India can double its current coal production rate of 731 million tons per year (CCO, 2021). Specifically, the Reserve-to-Production (R/P) ratio in India for coal is 140, while it is 15.5 for oil and 49.4 for gas (BP, 2020). The R/P ratio of 140 indicates that India's proved coal reserves at the end of 2019 are adequate for 140 years if India continues to mine coal at the same production rate as it did during the year 2019. In addition to electricity generation, coal is also a vital input for other core industries like steel and

cement, which play a critical role in the country's development. Therefore, the predominance of coal-fired power generation in India will continue for several years to provide energy security and drive economic growth. However, as shown in the following figure, India imported 249 million tons of coal at the cost of more than Rs.1.5 Trillion during FY 2019-20 despite being the World's second-largest coal producer (CCO, 2020).

While mining operations and coal-fired power generation have positive economic impacts on the local area in terms of infrastructure development and provision of employment and business opportunities for the local population, they also create adverse impacts on the ecology and air environment of the local area. These impacts are particularly significant in the case of opencast coal mines which account for more than 94.4 percent of the coal produced in India (CCO, 2021).

While more than 91% of the coal produced in India is mined by Central Government companies, in March 2020, the Government of India (GoI) enacted the Mineral Laws (Amendment) Act to remove the five-decade-old restrictions on commercial coal mining

## Coal Supply, Demand and Imports (Coal Controller, 2021)



(MoC, 2020a). Subsequently, on 18 June 2020, GoI launched an auction process of coal blocks for commercial mining (PIB, 2020). This step is the culmination of earlier initiatives taken by GoI including, the enactment of Coal Mines (Special Provisions) Act, 2015, the Cabinet approval for the methodology of auctioning coal and lignite mines/blocks for sale of coal/lignite, and lastly the enactment of the Mineral Laws (Amendment) Act, 2020 (Gupta and Goyal, 2018; PIB, 2018). However, the current framework of multiple authorities under different laws governing various approvals and clearances has resulted in the overlap of jurisdictions, duplicity of procedures, and inadequate monitoring and enforcement of environmental laws.

Therefore, in this study, we examine various acts and rules related to the environmental regulation of coal mines in India to highlight the issues in the grant of key approvals and clearances. Specifically, India's environmental governance must be reviewed to strike a correct

balance between sustainability, local livelihoods, and developmental pressures (Lele et al., 2009). The well-documented violations of mining, environmental, and forest laws in the states of Goa, Jharkhand, Odisha, and Karnataka also indicate the need to reinforce the environmental governance of the mining sector when multiple private miners are allowed to undertake mining operations (Justice M B Shah Commission of Enquiry 2013a; 2013b; 2013c; Samaj Parivartana Samudaya & Others v. State of Karnataka & Others, 2013). Therefore, one of the key areas of research undertaken as a part of this Project is to examine the entire gamut of the current regulatory framework in India's coal mining industry and propose a way forward through an alternative paradigm of environmental regulation to address the deficiencies.

One of the potential solutions to improve the environmental governance of coal mines is to enact a Law to set up a unified authority staffed with multi-disciplinary expertise to assess and



minimize the adverse environmental impacts of coal mining projects with an integrated approach involving forest, hydrology, public health, and the concerns of the local communities. Such an Authority will not only eliminate duplication of efforts by multiple agencies but also ensure more effective and transparent compliance of pollution control measures during operations as well as a sustainable post-closure ecosystem for the welfare of local communities.

Currently, GoI-controlled Coal India Limited (CIL) produces more than 82% of the coal mined in India. However, in order to meet India's burgeoning demand for coal, CIL is planning to enhance its annual production capacity to one billion tons of coal by FY 2023-24. This has considerable implications for the environment as well as the health of Indians who will be impacted by the attendant pollution. CIL has stated that they are planning to seek environment clearances for an incremental coal production capacity of 487 Million tons per annum (Mtpa) and diversion of additional forest land to the tune of 20,041 hectares to produce one billion tons of coal by 2023-24 (Parliamentary Standing

Committee, 2020). An expansion of mining operations of this magnitude, combined with the advent of private capital in mining activities, calls for a comprehensive assessment of the adequacy of the existing regulations in dealing with the consequent environmental and health hazards.

Therefore, we propose a “Sustainable Coal Mining Bill” to constitute a unified authority named “Coal Mines Environment Authority” to minimize the adverse environmental impacts of coal mining projects through an integrated approach to both mining and the environment. This independent authority is expected to enhance the effectiveness, efficiency, and transparency of the environmental regulation of coal mines to ensure sustainable energy security for India. We also outline the composition and functioning of this Authority and the changes required in the extant laws to enhance energy security and sustainable development in India since environmental challenges are bound to increase with the participation of the private players.

## 2. Background and Conceptual Framework

### 2.1. The relevance of coal to the overall economy

Coal plays a vital role in India's economic development through its dominant role in India's electricity sector, which is now the third-largest in the World (BP, 2020a). Coal-fired Power Plants contributed approximately 72% (933 TWh) of the 1389 TWh of the electricity generated in India in Financial Year 2019-20 (CEA, 2020a; 2020b; 2020c). India's per capita electricity consumption which is only 1181 kWh per year (one-third of the world's average), will continue

to increase to cater to the developmental needs and aspirations of its people in accordance with India's Sustainable Development Goals (SDG), particularly SDG 7 that calls for access to affordable, reliable, sustainable, and modern energy for all (CEA 2020b; IEA, 2019; UNDP, 2015).

The energy sector accounted for 73% of the total Green House Gases (GHG) emissions (2.607 Billion tons) from India during the year 2014 (MoEFCC, 2020a). While India's per capita

CO<sub>2</sub> emission in 2014 was 1.8 tons which is less than one-third of the global average, GoI has ambitious targets related to renewable energy expansion. However, the overall contribution of non-fossil fuel energy sources is held back by the intermittent nature of solar and wind energy, high cost of battery storage to supply power during the evening peak demand, and the endemic delays in constructing hydel and nuclear power plants due to issues related to land acquisition (MoP, 2018a; 2018b). Further, the roles of oil and natural gas in India's power sector are marginal since oil and gas fired power plants generated less than 3.5% (48.4 TWh) of the 1389 TWh of electricity generated by utilities in India (CEA, 2020d). In the Business-as-Usual (BAU) scenario between 2017 and 2050, India's energy consumption is projected to increase by 2.5 times while coal's share will come down from the 2018 level of 56% to 40% (BAU scenario) despite an increase in absolute levels of coal consumption from 19 Exajoules (2018) to 35 Exajoules in 2050 (BP, 2020b). As a result, India's share in global carbon-di-oxide emission is projected to double from 7.3% in 2019 to 14% by the year 2040 (BP, 2020a) unless a more rapid energy transition takes place as per the NDCs.

Coal mines are also one of the important sources of income and employment generation in coal-bearing states of India. For example, Coal India Ltd. (which produced about 83% of the 729 Million tons of coal produced in India during FY 2019-20) provides direct employment to 273,000 persons (MoC, 2020b). Singareni Collieries Company Limited (SCCL) employs 44,000 persons on its rolls (SCCL, 2021). Additionally, CIL and SCCL also employ thousands of workers through contractors since they have outsourced the major portion of overburden removal in their opencast coal mines. Moreover, people living in the adjacent communities depend on the coal

industry for their subsistence. Further, coal is also an important feedstock for major industries like steel, sponge iron, cement, pulp, and paper which are major employers in India. Therefore, the coal sector is critical to India's economy and job growth.

Opencast mining methods are preferred to underground coal mining methods in India because of their greater safety, productivity, and lower cost of production (Satyanarayana, 2012). During FY 2019-20, the average strip ratio, which is defined as the volume of OB excavated per ton of coal mined, of all opencast coal mines in India was 2.54 m<sup>3</sup>/ton, which translated to a total excavation (coal and OB) of approximately 2182 million cubic meters from these coal mines during FY 2019-20 (CCO, 2011; 2021). The strip ratio in opencast coal mines of India has increased from 2.27 m<sup>3</sup>/t in FY 2010-11 to 2.54 m<sup>3</sup>/t in FY 2019-20, an increase of nearly 16% in five years (CCO, 2011; 2021). This ratio is projected to increase further as deeper coal reserves are mined. However, this increase in strip ratio compounded by the projected increase in production will enhance the volume of excavation in opencast coal mines and therefore create risks of heightened environmental impacts, particularly to local ecosystem and population unless effective policies, institutional mechanisms, and control measures are put in place.

## 2.2. Conceptual framework

The conceptual framework for this study is drawn from various disciplines.

There is a plethora of literature on the theory of 'tragedy of the commons.' According to this theory, overexploitation and the consequent depletion of natural resources is inevitable in a situation where the costs to the environment

and/or health are socialized. At the same time, the benefits accrue to private businesses (Hasnas, 2009). In 1985, the Government of India (GoI) elevated the Department of Environment established in 1980 to a full-fledged Ministry of Environment and Forest to regulate all industrial and other activities that impact the environment (MoEF, 2007). Yet, the effectiveness of such regulation is crucially dependent on monitoring and enforcement (Shimshack, 2014). While India has a fairly comprehensive environmental policy, enforcement is lax (Bedoya and Mani, 2020). An environment policy requiring high enforcement cost along with imperfect compliance is ineffective. (McKean, 1980). It becomes necessary, therefore, to deliberate upon whether the current legal framework, appraisal, and clearance processes in India are adequate to minimize the harmful effects of coal mining and whether they are properly enforced in the interest of sustainable development.

The second approach is to examine the legal framework within which the coal mining industry in India operates. There is no common legal framework to deal with mine, environment, and public health (Jariwala, 1995; Otto et al., 1999). The mining sector in India is governed through two sets of laws, i.e., environmental laws and mining laws, with several overlaps between the two. The key environmental laws that are used to limit the harmful impact of coal mines comprise the Water (Prevention and Control of Pollution) Act, 1974 (Water Act), Air (Prevention and Control of Pollution) Act, 1981, Environment (Protection) Act 1986 (EP Act), and the Forest (Conservation) Act, 1980 (FC Act). Additionally, there are specific provisions of mining laws that deal with the protection of the environment, such as the Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act), and the

Coal Mines (Conservation and Development) Act, 1974 (CMCD Act).

Modern law enforcement requires various public authorities to undertake vertical co-ordination (hierarchical) and as well as horizontal co-ordination across the different administrative organizations at the same level (Steinbach, 2019). Scharpf (1976) maintains that both intra-organization and inter-organizational boundaries are an impediment to the free flow of information. This results in the asymmetric relationship between the involved authorities. O'Toole and Montjoy (1984) explain why a government policy that requires two or more agencies for implementation creates hindrances in implementation in proportion to the number of organizations that are required to coordinate; it also increases complexity, leading to a decrease in the specificity of the mandates requiring action and interaction within the participating organizations. Further, even specific mandates are less amenable to monitoring and enforcement in the inter-organizational setting. Often, the un-cooperative agency gets shielded from the regulatory authorities where multiple actors are involved.

Marisam (2011) explains that the problem of multiple authorities for implementation of Government's policy gets further aggravated through duplicative delegations of the same regulatory power to different agencies under separate statutes and statutory provisions. He further describes that in case all agencies exercise their duplicative regulatory power, it shall cause interagency conflict resulting in loss to the exchequer, undermining of regulatory goals, and overlapping oversight causing regulatory burden to the regulated entities (Marisam, 2011). Through their study of inter-organizational

implementation, O’Toole and Montjoy (1984) suggest that “the surest way to avoid the problem is to establish a new agency, give it a specific mandate, and provide resources.” This paper, therefore, advocates a new agency that will harness the synergies existing between the various regulatory regimes to avoid overlap and multiplicity of jurisdictions.

Conceptually, there is a potential conflict of interest in a government ministry regulating a government company, namely CIL. Regulation tends to be lax or lenient when both the regulator and the regulated agency are owned by the same entity, in this case, the Government of India. With private capital entering India’s mining industry, there is a need to provide a level playing field,

which is possible only under an independent environmental regulator. Therefore, this paper advocates a regulatory agency independent of all stakeholders, especially the government and is autonomous in its remit.

This analysis relies on empirical observations drawn from the existing legislative and administrative frameworks in terms of laws, rules, orders, etc.; it is followed by an analysis of how they operate in practice. For the latter, this study relies on government reports, Parliamentary Standing Committee reports, Supreme Court judgments, and other authentic sources. The authors then suggest a way forward in terms of a new regulatory paradigm, fleshing out its contours and remit.

### **3. Key issues with the appraisal process for grant of clearances related to forest, environment, and mineral conservation for coal mines in India**

Currently, the Ministry of Coal (MoC) approves the mining plan for coal mines under the MMDR Act, 1957, while the Ministry of Environment, Forest and Climate Change (MoEFCC) grants the Forest Clearance (FC) and Environmental Clearance (EC) under the Forest (Conservation) Act, 1980 and the EP Act, 1986, respectively. The Coal Controller (a subordinate office of the MoC) also performs certain regulatory functions under the CMCD Act, 1974 (and the associated Rules) as well as the Colliery Control Rules, 2004 by *inter alia*, appraising mine opening and closing permissions, monitoring mine closure activities, and controlling the Escrow Agreement between the Coal Controller, the coal mine owner, and the concerned bank.

The coal sector in India is affected by many problems, *inter alia*, multiple regulatory approvals leading to delays, regulatory overlaps leading to conflicts, inadequate regulatory capacity leading to poor environmental governance and issues related to transparency and accountability. The current structures and systems that have given rise to these problems in the first place are summarized in Table 1.

The key approvals/clearances, viz, Mining Plan, Forest Clearance (FC), Environment Clearance (EC), and Mine Closure are elaborated in Sections 3.1, 3.2, 3.3, and 3.4, respectively.

**Table 1: Key Authorities responsible for granting Statutory Clearances in Coal Mines in India**

Stage clearance	Authorities with their related jurisdiction/mandate
Auction/vesting order/allotment order	<p>Nominated authority of the MoC under the Coal Mines (Special Provisions) Act, 2015:</p> <ul style="list-style-type: none"> <li>to conduct auctions as per the procedures prescribed by the Central Government.</li> </ul>
Mining plan approval	<p>MoC with the technical assistance of the Coal Controller.</p> <p>(i) to issue guidelines for the preparation, assessment, and approval of Mining Plans for coal and lignite blocks and the calculation of Escrow amounts to be deposited by the mine owner in relation to mine closure.</p> <p>(ii) to approve Mining Plans for coal and lignite mines as per the MMDR Act, 1957.</p>
Wildlife Clearance	<p>National Board of Wildlife:</p> <ul style="list-style-type: none"> <li>to examine proposals for wildlife clearance under the Wildlife (Protection) Act, 1972.</li> </ul>
Recognition and vesting of forest rights under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (2 of 2007) or Forest Rights Act	<p>District Collector: (under the Forest (Conservation) Amendment Rules, 2017):</p> <p>(i) to complete the process of recognition and vesting of forest rights following the provisions for the entire forest land indicated in the proposal.</p> <p>(ii) to obtain the consent of each Gram Sabha having jurisdiction over the whole or a part of the forest land indicated in the proposal for the diversion of such forest land and compensatory and ameliorative measures, if any, having understood the purposes and details of diversion, wherever required; and,</p> <p>(iii) to forward his report in this regard to the Conservator of Forests (CF).</p> <p>Forest Clearance can be granted in areas covered by the Forest Rights Act only after the Collector completes the above process and submits his report to the CF.</p>
Forest clearance (FC) under the Forest Conservation (FC) Act	<p>District Collector:</p> <ul style="list-style-type: none"> <li>to acquire government land for compensatory afforestation.</li> </ul> <p>Divisional Forest Officer:</p> <ul style="list-style-type: none"> <li>to assess the suitability of land identified for compensatory afforestation; and</li> </ul> <p>MoEFCC:</p> <ul style="list-style-type: none"> <li>to approve grant of FC (in stages) on the basis of the advice received from the Forest Advisory Committee (FAC) after considering the Forest Diversion Proposal (FDP) submitted by the State Government and the status of compliance with the conditions laid down in Stage I clearance (if granted); and</li> </ul> <p>State Government:</p> <p>(i) to forward the FDP to MoEFCC with terms and conditions as per rules.</p> <p>(ii) to assess the compliance of Stage 1 conditions by the user agency and recommend to MoEFCC regarding the same.</p> <p>(iii) to issue the formal letter granting FC after receiving the prior approval of MoEFCC.</p>

Stage clearance	Authorities with their related jurisdiction/mandate
Tree felling permission	District Forest Officer: <ul style="list-style-type: none"> <li>to consider the user agency’s application after receiving Stage II forest clearance from MoEFCC and the State Government.</li> </ul>
Environmental clearance (EC)	State Pollution Control Board (SPCB): <ul style="list-style-type: none"> <li>to conduct Public hearing (PH) for the Project as per EIA Notification, 2006 and relevant guidelines.</li> </ul> Expert Appraisal Committee (EAC) formed to appraise EC proposals <ul style="list-style-type: none"> <li>to appraise the project considering <i>inter alia</i>, the EIA/EMP submitted by the Project Proponent and the report submitted by the SPCB after the Public Hearing (PH) conducted for the Project.</li> </ul> MoEFCC: <ol style="list-style-type: none"> <li>to consider and grant approval for the Terms of Reference (ToR) for the preparation of an Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) for the Project.</li> <li>to grant EC based on the report submitted by the EAC.</li> </ol>
Consent to Establish (CTE), and Consent to Operate (CTO)	SPCB (under Air Act, 1981 and Water Act, 1974): <ul style="list-style-type: none"> <li>to review and grant the consents consistent with the EC.</li> </ul>
Grant of Mining Lease (ML)	State Government (under MMDR Act, 1957): <ul style="list-style-type: none"> <li>to review and grant ML with suitable terms and conditions as per rules.</li> </ul>
Land acquisition	District Collector (under the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 or LARR Act): <ul style="list-style-type: none"> <li>to update land records, to submit draft R &amp; R scheme, and adjudicate disputes related to land and compensation.</li> </ul> Coal Controller (under the Coal Bearing Areas (Acquisition and Development) Act, 1957 or CBA Act): <ul style="list-style-type: none"> <li>to adjudicate any disputes related to land acquisition under the CBA Act.</li> </ul>
Mining permissions related to Health & Safety	Director-General of Mine Safety (under Mines Act, 1952). <ul style="list-style-type: none"> <li>to consider and grant approvals as per Coal Mines Regulations, 1957.</li> <li>to enforce compliance with Mines Act, 1952.</li> </ul>
Approvals for the usage of explosives	Chief Controller of Explosives: (under Explosives Act, 1884). <ul style="list-style-type: none"> <li>to consider applications and grant approvals as per rules.</li> <li>to enforce compliance with Explosives Act, 1884.</li> </ul>
Opening of an escrow account	Coal Controller (under the Coal Mines Conservation and Development Act, and the rules framed under this Act):
Mine opening permission	<ul style="list-style-type: none"> <li>to grant mine opening permission as per rules.</li> <li>to control the Escrow account as MoC’s guidelines.</li> </ul>
Mine closure	<ul style="list-style-type: none"> <li>to assess status of progressive and final mine closure and certify final closure as per rules.</li> </ul>

### 3.1. Mining Plan Approval

A mining plan is an essential document according to which the mining company has planned out the mining operations in a phased manner. Besides, the mining plan also contains information related to land requirements, safety management, environment management, progressive and final mine closure plan. MoEFCC (2018) has directed the coal mine owners to obtain MoC's approval for the mining plan before applying for the grant of FC and EC.

However, the mining plan is not available for public scrutiny at any time and is not even part of the set of documents presented at the time of the mandatory public hearing for the project. Since the mining plan is approved at the start of the project without public scrutiny, it leads to concerns related to coal mines such as project boundaries, diversion of watercourses, the distance between the project and local communities, which surface at a later stage when a Public Hearing is held for the project as per the EIA Notification, 2006.

### 3.2. Forest Clearance

Any diversion of forest land for non-forest purposes, including mining, requires FC from the various authorities under the Forest (Conservation) Act, 1980. In India, FC is granted in two stages, viz., in-principle approval (Stage I) and final approval (Stage II). In-principle approval means the conditional approval for FC to the User Agency (UA) by the MoEFCC after a series of approvals starting from the Divisional Forest Officer (DFO), progressing through the hierarchy of the State Forest department before the Forest Advisory Committee (FAC) finally recommends the grant of Stage I FC to the MoEFCC. Once Stage I clearance is granted to the Project, the State's Forest Department

recommends the grant of Stage II FC after the UA complies with the Stage I clearance conditions. These conditions primarily relate to compensatory afforestation, including the hand-over of equivalent land by the UA to the State Forest department, making other payments (e.g., the net present value of the forest produce in the diverted forest area and compensatory afforestation charges), catchment area treatment plans, wildlife conservation plan, etc. The MoEFCC grants final approval for the FC after the UA complies with all the conditions of Stage I clearance to the satisfaction of the State forest department and MoEFCC.

Between 1980 and July 2016, 15 percent (132,465 hectares) of the 897,698 hectares of forest land diverted to non-forest use in India were diverted for coal and non-coal mining projects (MoEFCC, 2016a). However, the ecological impact of forest diversion is neither considered in the mining plan nor the EIA report. Further, the appraisal of applications for FC even at the State level involves multiple officials in the forest department hierarchy, starting from the DFO up to the State Forest Secretary. Once the State Government recommends the Forest Diversion Proposal (FDP) to MoEFCC, the FAC assesses the FDP and submits its recommendation to MoEFCC, which grants or rejects the FC largely following the FAC's advice. The involvement of multiple layers of the forest department bureaucracy makes the FC process tedious and long-drawn since the forest officials are already burdened with other key responsibilities under the Indian Forest Act, 1927. As per the Forest (Conservation) Rules (FC Rules) 2003, the timeline fixed for Stage I approval for the FCs related to mining projects is 300 days, whereas Stage II clearance is scheduled to be granted within 80 days after the UA submits the

compliance report with the conditions laid down in the Stage 1 clearance. However, hardly any coal mining project has been granted the FC within the prescribed timelines (MoC, 2011). The delay in grant of FC process by over three years is also attributed to the confusion created by several ambiguous guidelines issued by the MoEFCC, especially in coal leases involving both forest and non-forest land (HLC, 2014; MoEF, 2011a; 2011b; MoEFCC, 2020b). Further, there have been several cases related to grant of FCs for coal mining projects where the impact of cutting thousands of fully-grown trees on the ecology of the area has been grossly understated due to lack of scientific assessment (MoEF, 2014a). Therefore, the current process of appraising proposals for forest diversion must be improved from the perspective of the environment as well as regulatory certainty.

Moreover, the State forest departments in the country are already struggling with the protection of forests as per the Indian Forest Act, 1927 and carrying out the compensatory afforestation as pointed out in the government reports and supreme court judgments (CAG, 2013; Lafarge Umiam Mining Private Limited v. Union of India and Others, 2011). Precious time of the DFO and his subordinates is lost in the counting and survey of trees for the FC instead of maintaining the quality of forest, compensatory afforestation, and enforcing compliance with the Indian Forest Act, 1927 and Wildlife Protection Act, 1972 (Hooda Committee, 2006; Planning Commission, 2007). Therefore, the FC process must be amended to shift the burden of granting and monitoring of FC for coal mines from the Forest department to the CMEA, as proposed by the authors in this paper.

### 3.3. Environmental Clearance

Environmental clearance for all coal mining projects in India is granted as per the process laid down in the EIA Notification, 2006, issued under the EP Act, 1986. As per the EIA Notification, the Expert Appraisal Committee (EAC), a committee constituted by the MoEFCC, issues the Terms of Reference (TOR) for the EIA process to be conducted by the Project Proponent (PP). The PP conducts the EIA and prepares the EIA report and an Environment Management Plan (EMP) to minimize the harmful impact on the environment (together called EIA report). The State Pollution Control Board (SPCB) completes a Public Consultation (PC) process by inviting written comments or objections and conducting a Public Hearing (PH) near the project site. The EAC members appraise coal mining projects for EC after considering the EIA report, the minutes of the PC and PH, and clarifications from the PP. Finally, the MoEFCC grants or rejects the EC application after considering the EAC's appraisal report. However, there are significant problems associated with the current process of appraising applications for grants of EC for major projects in India.

- Firstly, the members of EAC are appointed only for three years, and that too on a part-time basis. Since these expert members are also engaged in other full-time occupations and participate in the EAC only on a part-time basis, they are not in a position to devote the requisite time and efforts to assess the voluminous documents (EIA/EMP, risk assessment, maps) submitted by the PP. This structure not only creates severe constraints in the core function of the EAC to assess the EIA/EMP prepared by third parties on behalf of the PP but



also results in a lack of continuity and loss of institutional memory when the EAC is reconstituted every three years.

- Secondly, the EAC deals with each coal mining project separately even as multiple projects in a single coal field may raise the pollution loads in the area to a level that the pollution levels in and around the coalfield may exceed the applicable standards laid down to prevent or minimize adverse impact on the environment and public health.
- Thirdly, the MoEFCC and its regional offices do not have the necessary capacity and poor infrastructure to monitor the compliance of the EC conditions (Bhal and Shankar, 2011). This creates critical gaps in monitoring and enforcement of EC conditions and subverts the purpose of environmental protection through the EC process.
- In certain cases, the multiplicity of authorities involved in approving the mining plan and the EC has also resulted in the MoEFCC imposing conditionalities in the EC that contradict the mining plan approved by the MoC to ensure scientific mining and post-mining reclamation of mined-out land. In certain cases, the MoEFCC has imposed conditions on the post-mining reclamation of the de-coaled void left at the end of mine life, which contradict the mine closure plan approved by the MoC. (MoEF, 2014b; 2015; MoEFCC, 2016b). These conditionalities to limit the depth of the final void to a level of 35-40 m from the original ground level require the rehandling of overburden dumps that have been physically stable and biologically reclaimed due to the growth of natural vegetation.

### 3.4. Mine Closure

The permanent alteration of the topography and subsequent pollution of air, water, and soil due to mining activities is one of the most prominent impacts of opencast coal mining (Jacobs and Testa, 2014). Therefore, in 2009, MoC issued mine closure guidelines mandating all coal mines to prepare and submit progressive and final mine closure plans in a specific format to the MoC for approval (MoC, 2009). In 2013, the mine closure plan was made an integral part of the mining plan for any coal mine (MoC, 2013). As per these guidelines, the coal mine owner has to open a tripartite escrow account in a scheduled bank which is operated by the Coal Controller to provide security in case a coal mine owner fails to carry out mine closure activities as per the approved mine closure plan. The current practices related to mine closure practices in Australia, Canada, and India are summarized in Table 2.

As of December 31, 2020, the Coal Controller has signed 560 tripartite Escrow Agreements related to 589 coal/lignite mines (Moc, 2021). The amount of money to be deposited in the Escrow Account is based on MoC's estimate of Rs.900,000 per acre (Rs.364,373 per hectare) for the final closure of an opencast coal mine in India as of April 1, 2019 (MoC, 2020c). However, MoC's practice of identification of activities of mine closure and cost estimate is only indicative in nature. The practice of releasing up to 50% of the amount accumulated in the Escrow Account every five years for progressive mine closure activities may not leave behind adequate resources at the time of final mine closure. As a result, the liability for final mine closure may devolve on the Government in case a private coal mining company is unable to complete the final mine closure as per the approved mine closure plan.

**Table 2: Comparison of Mine Closure Practices in three major coal producing Countries**

	<b>Evaluation Criteria</b>	<b>Canada</b>	<b>Australia</b>	<b>India</b>
<b>Legal basis</b>	Does the Law explicitly state the legal framework in place that requires mine closure?	√	√	√
<b>Planning (Scoping)</b>	Does the closure planning clearly outline the objectives of closure?	√	√	√
	Is the closure planning integrated to project lifecycle as early as possible?	√	√	*
	Does the mine closure planning identify all possible domains of mine closure?	√	√	*
	Does the closure planning include progressive reclamation of mine closure?	√	√	*
<b>Impact Identification</b>	Does the mine closure planning adequately include social and environmental impacts?	*	*	*
	Does the planning recommend for mitigation measures to address social and environmental impacts?	*	*	*
<b>Analysis</b>	Does the mine closure planning provide information on alternative closure options?	*	*	X
	Does the closure planning adequately analyse the alternative closure options with justification?	X	X	X
<b>Implementation and Monitoring</b>	Does the planning outline monitoring and implementation of closure tasks?	*	*	*
	Are the responsibilities for monitoring clearly outlined?	√	√	*
	Does the planning incorporate post-closure management and monitoring of impacts?	*	*	*
	Does the closure planning include costing of the tasks of closure to be implemented, including monitoring program implementation?	√	√	*
<b>Community Engagement</b>	Does the closure planning explicitly outline the relinquishment criteria?	*	*	X
	Is there any community engagement strategy at each phase of the mine closure?	√	√	X
	Does the plan include input from community in relation to impacts and strategies for mitigation of impacts?	*	*	X

Note:

√ indicates “YES”

X indicates “NO”

\* indicates “Partially”

Further, the coal mine owner is required to submit progressive mine closure reports to the Coal Controller at 5-year intervals and the final mine closure plan five years before the intended final mine closure. However, the Coal Controller does not have the resources to ensure that the mine closure activities are completed by the coal mine owner as per the approved final

mine closure plan (Srikanth and Nathan, 2017). In turn, the Coal Controller has to rely on the audit and certification carried out by third parties before the issue of the mine closure certificate. Finally, lack of public consultation before the final mine closure is another issue that plagues the process of mine closure in India (Srikanth and Nathan, 2017).

## 4. Unified authority for coal mining

As explained in Section 3, the challenges faced by the current fragmented approach in the area of environmental governance in India have been documented in reports submitted by Government committees as well as in landmark judgments of the Supreme Court of India (SCI). As shown in Table 3, some of these reports/

judgments also included recommendations or directives to GoI to constitute a unified authority for enforcing environmental laws in India which have not been implemented till date (T. N. Godavarman Thirumulpad v. Union of India and Others, 2014; Goa Foundation v. Union of India & Others, 2014).

**Table 3: Reports/Judgments suggesting unified authority and its functions**

Date	Author/Judgment	Proposed authority	Key functions of the unified authority
March 2007	Planning Commission	National Environment Clearance Authority	<ul style="list-style-type: none"> <li>To improve quality, independence, and transparency in the EIA process.</li> </ul>
Sept 2009	MoEF	National Environment Protection Authority	National Environment Protection Authority (NEPA): <ul style="list-style-type: none"> <li>to deal with EIA, enforcement and compliance, environmental planning, sustainability studies, etc.</li> </ul>
March 2011	Kanika T. Bhal & Ravi Shankar	NEAMA	National Environment Assessment and Monitoring Authority (NEAMA): <ul style="list-style-type: none"> <li>to process environment-related clearances; to monitor and enforce compliance with conditions of EC.</li> </ul>

Date	Author/ Judgment	Proposed authority	Key functions of the unified authority
July 2011	Lafarge Umiam Mining Private Limited v. Union of India and Others	Appropriate authority in the form of a Regulator	To: <ul style="list-style-type: none"> <li>• implement National Forest Policy, 1988;</li> <li>• appraise projects for grant of EC;</li> <li>• enforce EC conditions, and</li> <li>• impose penalties on the polluters.</li> </ul>
January 2014	T. N. Godavarman Thirumulpad v. Union of India and Others	Regulator under Section 3 of EP Act, 1986	The SCI stated that its direction to appoint a regulator in the said Lafarge Case is binding on GoI. SCI also directed GoI to appoint a regulator under Section 3 of Environment Protection (EP) Act, 1986 with offices in as many states as possible.
April 2014	Goa Foundation v. Union of India & Others	Regulator under Section 3 of EP Act, 1986	The SCI reiterated its Judgment in the aforesaid Lafarge Case and its Order in the above-mentioned T. N. Godavarman Thirumulpad Case.
Nov 2014	High Level Committee constituted by MoEFCC	NEMA at the Central level; and SEMA at the State level	To develop a technical database for forests, provide a single window for EC and enforce EC conditions: National Environment Management Authority (NEMA): <ul style="list-style-type: none"> <li>• to clear Category “A” projects; and</li> <li>State Environment Management Authority (SEMA)</li> <li>• to clear Category “B” projects.</li> </ul>

While GoI has not implemented the aforesaid SCI directives, a review of environmental regulation in three major coal mining countries, viz., Australia, South Africa, and the United States, indicates that the environmental regulation of coal mines in these countries is already (or proposed to be) carried out by a unified authority or through a coordinated inter-agency mechanism as explained in sub-sections 4.1 and 4.2.

#### 4.1. Unified Authority to enable sustainable coal mining in USA

In 1977, the US Congress passed the Surface Mining Control and Reclamation Act (SMCRA) inter alia to enable cooperation between the

federal government and the states concerning the regulation of surface coal mining operations, and the acquisition and reclamation of abandoned mines. Under the SMCRA, an authority currently named Office of Surface Mining, Reclamation and Enforcement (OSMRE) has been set up at the federal level to govern surface coal mining in federal lands and Indian reservations. At all U.S. coal mining operations, detailed reclamation plans must be approved by the OSMRE (or its State equivalent) before mining begins. Reclamation bonds are posted by coal mine owners to ensure the successful completion of the process. OSMRE or the equivalent regulatory authority in each State has the necessary multi-disciplinary expertise and is fully empowered

to perform all key regulatory and enforcement functions concerning environmental governance of surface coal mining operations within their respective jurisdictions (OSM, 2021).

As explained in Section 3, these functions in India are regulated by multiple authorities (including, MOC, Coal Controller, MOEFCC, and the relevant SPCB) constituted under various mining and environment-related legislation, leading to uncertainties, delays, inconsistencies, and risks due to ineffective compliance despite the high regulatory burden (Planning Commission, 2007; HLC, 2014; MoEF, 2009).

## 4.2. Global examples of a coordinated approach to environmental regulation of the mining sector

Advanced coal mining countries like Australia, South Africa, and the US have also created coordination mechanisms to establish a ‘single-window’ approach to environmental regulation of coal mines while reducing regulatory burden. For example, four federal agencies in the USA, viz., Army Corps of Engineers, Environmental Protection Agency, the US Fish and Wildlife Service and OSMRE have signed a memorandum of understanding to develop collaborative processes that emphasize early and close inter-agency coordination, while maintaining their independent jurisdictional roles (EPA, 2005).

In the State of Victoria, Australia, Earth Resources Regulation (ERR) is the principal regulator for mines and quarries (Commissioner for Better Regulation, 2017). However, other regulators such as the Environment Protection Authority, WorkSafe Authority, Catchment Management Authorities, etc., are also authorized to regulate different activities related to earth resources (Commissioner for Better Regulation, 2017). In July 2017, the Treasurer of Victoria directed the Commissioner for Better

Regulation to initiate a continuous improvement project to identify practical steps for improving the regulation of the earth resources sector to secure the goals set out in the Mineral Resources (Sustainable Development) Act, 1990 (Commissioner for Better Regulation, 2017). An Earth Resources Approvals Coordination group comprising of members from the different regulatory authorities was formed under this project. The major responsibility of this Group was to address inter alia, the logjams in approval processes governing the earth resources sector, provide strategic advice to government for the development of a particular project, and submit recommendations for streamlining approvals across the whole of the State Government. On 17 September 2019, the Mineral Resources (Sustainable Development) Amendment Bill, 2019 was passed by the Parliament of Victoria to establish a unified Mine Land Rehabilitation Authority to ensure better rehabilitation of the mined-out land (Victoria State Government, 2019).

The New South Wales Mining Act of 1992 as well as Queensland’s Environment Protection Act of 1994 mandate the applicant for mining permits to address the issue of final voids left after mine closure with the aim of minimizing potential sterilization of post-mining land (NSW Government, 2021a; Queensland Government, 2021). Detailed procedures and guidebooks have also been developed and suitably-qualified and well-equipped regulatory bodies have been put in place. As a result, mine owners in Australia have developed innovative solutions to rehabilitate closed mines, and several mine sites have been adapted for tourism, agricultural, and ecological uses.

In India, due to the lack of an effective consultative mechanism between the three major permitting Authorities (MoC, the Environment

and Forest & Wildlife Wings in MoEFCC) for coal mines within the Central Government itself, opportunities to enable more optimal post-mining land uses and/or reduce environmental impact are missed out during the preparation and approval of the Mining Plan, while some of the conditions imposed by MoEFCC lead to a sub-optimal solution from the point of view of resource extraction as well as ecological protection and community acceptance. These anomalies also arise due to the time gap between the independent review and approval processes followed by these Authorities. Finally, the multiplicity of Government Authorities involved (MoC, MoEFCC, Coal Controller, etc.) dooms the entire process by sheer delay, thereby increasing risk and cost, without achieving a *self-sustained eco-system* as per the Government's mandate.

Sustainable innovations in mine planning and mine closure can be facilitated by setting up an empowered unified authority with interdisciplinary expertise. In December 2014, the Government of South Africa started the rollout of the 'One Environmental System,' under which the Minister of Mineral Resources will be empowered to issue environmental authorizations and waste management licenses

for mining and related activities, whereas the Minister of Environmental Affairs will act as the appellate authority for these authorizations (Department of Environmental Affairs, 2014). Subsequently, to give effect to the One Environmental System, the National Environmental Management Laws Amendment (NEMLA) Bill was passed by National Assembly of South Africa (Mining Review Africa, 2019), and amendments have been made inter alia in the Mineral and Petroleum Resources Development Act, 2002, the National Environmental Management: Air Quality Act, 2004, National Environmental Management Act, 1998, the National Water Act, 1998, and the National Environmental Management: Waste Act, 2008 (Parliamentary Monitoring Group, 2018). These include changes in the role of various authorities, an integrated public participation process, and fixed timeframes for the consideration and issuing of decisions in terms of the respective legislation. The integration of different laws towards the complete realization of the One Environmental System is presently underway (Parliamentary Monitoring Group, 2018). Currently, the NEMLA Bill is pending with the National Council of Provinces (Parliament of South Africa, 2020; Githahu, 2020).

## 5. Sustainable coal mining bill

While the decision to open up coal mining can lead to greater self-sufficiency in coal supplies, the country needs sound regulatory oversight in coal to boost investments, adopt cutting-edge technologies in mining and beneficiation, minimize disputes over environmental and forest compliance and encourage sustainable mining practices (Economic Times, 2018). Coal mines can impose significant environmental impacts unless effectively controlled and regulated.

However, as we have pointed out in Section 3, the environmental governance of coal mines in India is riddled with a plethora of laws and regulations without adequate oversight to ensure effective and efficient protection. Further, the multiplicity of authorities appointed under these laws also creates undue delays in approvals and clearances without an integrated and efficient approach adopted in other major coal-producing countries.

Governance has overarching importance in ensuring that the economic, social, and environmental spheres of sustainable development function in harmony (Zvarivadza, 2018). Therefore, India needs a unified authority in the form of the Coal Mines Environment Authority (CMEA) empowered through a proposed Sustainable Coal Mining (SCM) Bill that also incorporates the principles of sustainable development. The CMEA can promote effective, efficient, and participatory, transparent governance while ensuring accountability for the coal mine owners for resource conservation, forest conservation, environment protection, public health, and post mine closure reclamation and rehabilitation.

### 5.1. Important Authorities under the proposed legislation

The authors propose the creation of an independent, empowered, and inter-disciplinary 11-member CMEA chaired by a person who has served as a retired High Court Judge or a Secretary to the Government of India, the highest-ranking civil servant in each ministry. In addition to the Chairperson, the CMEA will include six full-time experts in relevant fields, three ex-officio members (Director-General of Forests, Coal Controller, and the Chairman of Central Pollution Control Board), and the person appointed as the Director-General of Coal Mining Environment (DG-CMEA) under the SCM Bill. The DG-CMEA will act as the Member-Secretary of the CMEA. The six expert members to be appointed by the Central Government will have domain expertise in environmental science, forestry, hydrology, mining, public health, and environmental law.

The major functions of the CMEA *inter alia* include ownership of the current approval process for coal mines under various Central

Laws - conduct of the mandatory PC process before approving the integrated mining plan (incorporating the environment management plan and forest diversion plan as appropriate) under the MMDR Act, the grant of EC and FC under the EP Act and Forest (Conservation) Act respectively, and the grant of mine opening permission and mine closure certificates under the CMCD Act, the Colliery Control Rules, and the mine closure guidelines (MoC, 2020c). Besides, the CMEA will be empowered to assess violations of the conditions related to forest, environment, and mine closure and penalize the violators for ensuring accountability.

The CMEA will also perform other vital functions related to coal mines including, the declaration of land unfit for coal mining, the prescription of standards for post-mining reclamation, and is entrusted with the publication of various reports on its website promptly to enhance transparency and public participation concerning environmental matters related to coal mines. While the CMEA will primarily focus on policy formulation besides acting as the appropriate Authority to appraise applications from coal mines for clearances related to forest diversion, environment, and the mining plan, the DG-CMEA will act as the executive arm of the CMEA. The DG-CMEA will be armed with exclusive powers and responsibility to monitor the land, air, and water pollution in coalfields to make regular assessments of the cumulative impact of coal mines on the environment, forest quality, tree cover, land use, water bodies, and the local communities, and carrying out public health surveys in and around the coalfields, etc.

The DG-CMEA will also monitor all coal mines' compliance with the statutory provisions of mining, forest, and environmental laws applicable to coal mines (whether the CMEA grants them

or not) and ensure sustainable mine closure *inter alia* by controlling the escrow account created by each coal mine. In addition to the DG-CMEA, the Central Government must appoint Directors of Coal Mining Environment reporting to the DG-CMEA with their offices in all coal-bearing states. To ensure effective compliance with various provisions related to environment protection, the DG-CMEA shall install, operate, and maintain an adequate number of measuring instruments to ensure the availability of unbiased and reliable environmental data to assess the state of the environment in the coalfields of India.

## 5.2. Changes in the appraisal processes for grant of key clearances to coal mines as per the draft SCM bill

Currently, the MoC approves the mining plan, whereas the MoEFCC grants FC and EC based on the recommendations of the FAC and EAC, respectively. Additionally, the Coal Controller is responsible for granting the mine opening permission and the monitoring of the progressive and final mine closure up to the grant of the mine closure certificate. All these approvals and clearances are granted through different routes, which require convergence and linkage at a single point for more effective, efficient, and transparent environmental governance in the coal mines. This can be achieved by implementing the following changes in the appraisal process for grant of approvals related to a mining plan, EC, and FC as detailed in the draft SCM bill:

- The mining plan is the primary document to assess the environmental impact of coal mines and also determine the need for a forest diversion proposal. A review of the application proforma required to obtain MoC's approval for the mining plan and MoEFCC's approval for the EC indicates that 30 out of 33 items in the checklists

annexed to these applications are almost identical.

- To avoid the current sequential appraisal process for coal mines by MoC and MoEFCC, the scope of the mining plan can be changed to incorporate the information requirements required to appraise the proposal for grant of EC as well. Similarly, the appraisal of forest diversion proposals for coal mines also requires information from the mining plan and the EIA report. Therefore, the information requirements for the approval of the FDP can also be satisfied by including some additional documents and information in the proforma application for approval of the EC with the mining plan. This integration of the information necessary for three major clearances related to a coal mine in a single application is a pre-requisite to developing an integrated approach to the appraisal process of coal mines for their impacts on forest, environment, and resource conservation.

The key steps to be followed by the owner of a coal mine to secure statutory approvals for the mining plan, environmental clearance, and forest clearance as per the proposed SCM Bill are summarized as follows:

- The owner of a coal mine shall submit to the CMEA, the draft mining plan along with an application for the ToR to conduct an EIA under the EP Act, 1986. This application shall also include an FDP if the coal mine also requires FC under the Forest (Conservation) Act, 1980.
- On receiving the approved ToR from the CMEA, the coal mine owner shall conduct



the EIA as per the prescribed ToR and prepare a mining plan which incorporates a draft EIA report as well as an FDP if FC is required under the Forest (Conservation) Act, 1980.

- The owner of a coal mine shall then apply to the DG-CMEA to conduct the mandatory public consultation and public hearing based on the aforesaid mining plan.
- The DG-CMEA shall coordinate the PC and the PH for the coal mine in consultation with the District Collector or Executive Magistrate.
- The coal mine owner shall submit a revised mining plan after incorporating the final EIA report and the revised FDP (as applicable), giving due consideration to the approved minutes of the PC and the PH as well as any clarifications sought by the CMEA.
- Based on the revised mining plan submitted by the coal mine owner, the proceedings of the public consultation and public hearing processes, and the clarifications received from the owner, the CMEA shall either reject the revised mining plan for reasons to be recorded in writing or approve the mining plan under the MMDR Act, 1957 with such conditions as may be necessary.
- Once the mining plan is approved as above, the CMEA shall also grant EC to the coal mine under the EP Act, 1986, with such conditions as may be necessary.
- If the mining plan also includes an FDP, the Authority shall also grant Stage I approval for FC under the FC Act, 1980. Provided,

however, that the CMEA shall not grant this Stage I clearance unless it has satisfied itself that the District Collector has completed the process of recognition and vesting of forest rights under the provisions of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 for the entire forest land indicated in the FDP, and has obtained the consent of each Gram Sabha having jurisdiction over the whole or a part of the forest land indicated in the proposal for the diversion of such forest land and compensatory and ameliorative measures, if any, having understood the purposes and details of diversion, wherever required.

- The CMEA shall issue one complete set of the approved and duly authenticated mining plan incorporating the final EIA report along with the approved FDP (as applicable) to the coal mine owner. The complete set of documents shall be published on the website of the CMEA as well as the website of the coal mining company.
- Once the owner of a coal mine receives Stage I FC, he shall comply with the terms and conditions within six months and submit a compliance report to the CMEA along with an application to accord Stage II FC.
- On receiving an application for Stage II FC, the CMEA shall either reject the application or approve the grant of Stage II FC with such terms and conditions as may be necessary. The CMEA shall consult the relevant State Government before granting Stage I FC and again before granting Stage II FC.

- Based on the Stage II FC granted by CMEA, the State Government shall issue the final order under the FC Act, 1980 leasing the said forest land to the owner of the coal mine or coal mining project for non-forest purposes as per the terms and conditions approved by the CMEA.

To overcome the existing lacunae in defining and monitoring the mine closure activities, the CMEA shall replace the Coal Controller as approving authority for mine closure and operation of the escrow account in the draft SCM bill. The coal mine owner is required to submit the draft final mine closure plan to the DG-CMEA or a Director five years before the intended final mine closure. The Director-General or a Director shall inspect the coal mine to assess the details and costs of the activities required to complete the final mine closure activities in such a manner that the area affected by the coal mine is reclaimed and rehabilitated for the benefit of the local communities.

The Director-General or Director shall invite written comments from the general public based on the final mine closure plan submitted by the coal mine owner. In case the funds in the escrow account are not sufficient, the coal mine owner will have to top up the Escrow Account, after which the CMEA shall approve the final mine closure plan to ensure that the coal mine owner reclaims and revegetates the mining areas for the optimal benefit of the local communities. The coal mine owner shall implement and submit the annual reports for the mine closure activities as per the approved final mine closure plan. The DG-CMEA shall grant the mine closure permission and return fifty percent of the escrow amount after the Director-General satisfies himself that the owner has carried out the reclamation, rehabilitation, and

revegetation of the mining-affected areas for the benefit of the local communities as per the final mine closure plan, and has also completed the protective works required to ensure that drainage controls in the area affected by the coal mine are sufficient to control any pollution of water bodies within limits permitted by law. The balance of fifty percent in the Escrow Account will be returned after the expiry of three years from the date of completion of the prescribed final mine closure activities.

### **5.3. Better self-compliance by the coal mining companies**

Apart from energy demand, the poor occupational health and safety conditions for workers in coal mines was the significant reason for the nationalization of coal in India between the years 1971 to 1973 (MoLJ, 1972; 1973; MoC, 2017). The Fifth Conference on Mines Safety held in New Delhi between 26-27 December 1980 recommended the creation of an Internal Safety Organization (ISO) within the mining companies to improve the monitoring and ensure self-compliance of health and safety conditions in the mining industry (DGMS, 2017). The ISO in coal mining companies has also played a role in the declining fatality rates (per 1000 persons employed) in coal mines from 0.55 during 1971-80 to 0.20 during 2011-2019 (MoLE, 2020).

Therefore, a similar approach is proposed to improve the environmental conditions in and around the coal mines by mandating that the coal mining companies set up an internal environment department to monitor the status of compliance with the Mining plan, EC, and FC by each of the coal mines in the coal mining company. This environment department shall comprise experts from environmental law, forestry sciences, mining, pollution control, public health, and reclamation, while the staff

organization in every coal mine shall also include an environment officer *inter alia* to inspect and report any environmental incidents.

#### 5.4. Offenses and penalties under the SCM Bill

Environmental Laws require provisions for punishment and penalties for deterrence and better compliance. However, the current provisions in the Environmental Laws in India are inadequate to fix individual responsibility

for non-compliance. Further, the international best practice with relation to environmental offenses is to classify the offense based on its severity and accordingly award punishment (NSW Government, 2021b). In the draft SCM Bill, the authors have proposed various measures to ensure accountability for the owner, agent, and manager of a coal mine to comply with Laws related to forest, environment, and mineral conservation with enhanced penalties benchmarked with international practice.

## 6. Amendments required in the existing legal framework

The constitution of CMEA will require amendments in the existing environment, forest, and mineral laws. Some of the major changes in these will entail:

- EP Act, 1986: The Central Government must notify the CMEA to provide legitimacy under the Environment (Protection) Act, 1986 and also amend the EIA Notification, 2006, to include the CMEA as the sole authority to grant EC for coal mining projects.
- FC Act, 1980: The FC Act, 1980 the FC Rules, 2003 will have to be suitably amended to include the CMEA as the sole authority to approve the diversion of forest land for a coal mine.
- MMDR Act, 1957: The Central Government will have to authorize the CMEA to approve the mining plan under the MMDR Act, 1957.
- Colliery Control Rules, 2004: The Central Government must delegate to the CMEA its powers to grant prior permission to open a coal mine or seam or section of a seam, and issue a notice of suspension or closure under these rules.
- CMCD Act, 1974: The Central Government will have to assign to the CMEA its powers to control and regulate coal mines' development under the CMCD Act.
- CMCD Rules, 1975: These rules must be amended to transfer the Coal Controller's powers to grant prior permission to open a coal mine, to monitor implementation of the approved mine closure plan, to operate the escrow account formed for funding mine closure activity, and finally issue mine closure compliance certificates to the CMEA.

## 7. Conclusions and policy recommendations

Go's policy on coal has traversed a full circle from the nationalization of all commercial coal mines in two phases during 1972 and 1973 to the amendment of mineral laws to permit commercial coal mining by private coal mining companies in 2020 (MoC, 2020a; MoLJ, 1972; 1973). However, the Central Government's decision to allow commercial coal mining before the setting up the regulator which can monitor both the Government as well as private coal mining companies, is akin to putting the cart before the horse because we have seen the environmental destruction caused by the private miners in the States of Jharkhand, Odisha, and Karnataka due to an ineffective regulatory system (Justice M B Shah Commission of Enquiry, 2013a; 2013b; Samaj Parivartana Samudaya & Others v. State of Karnataka & Others, 2013).

Major coal producers like Australia, South Africa, and USA have either constituted a special regulatory authority for coal mining or integrated their approval process to enhance the efficiency and effectiveness of the environmental governance system for coal mines (Humby, 2015; Victoria State Government, 1990; OSMRE, 2021). Since MoEFCC, MoC, and the Coal Controller do not have the expertise or the capacity required to properly appraise the voluminous applications submitted by the coal mine owner, this fragmented appraisal process is flawed in several aspects while the mine owners often complain of the delays in securing these clearances. Further, there are certain areas where the views of different Ministries and Authorities are not coherent (e.g., final pit voids, water bodies, height of OB dumps). In certain cases, these views have led to imposing divergent (and even contradictory) conditions as a part of the

appraisal and approval processes followed by these Ministries and Authorities. These issues can be resolved only when a unified authority is empowered and equipped to appraise the applications for grant of mining plan approval, forest clearance, and environmental clearances with an integrated approach. Additionally, the structure for monitoring the coal mines in India to ensure effective compliance with these clearances is also deficient since these Authorities lack the required capacity to monitor and enforce compliance. These factors lead to environmental damages and extensive litigation in the National Green Tribunal as well as in the Supreme Court of India, which may increase with the ongoing allotment of coal blocks for commercial mining. The constitution of the CMEA under the proposed SCM bill will enable the country to overcome the aforesaid lacunae. Some of the key advantages of the CMEA as proposed in the draft SCM bill are as follows:

- The CMEA will include officials with multi-disciplinary expertise with adequate human and financial resources to enable the proper appraisal of the applications for grant of EC, FC, mining plan approval, while the DG-CMEA will enable more effective monitoring of the coal mines with an integrated approach.
- As proposed in the draft SCM bill, an integrated mining plan incorporating the EIA report and the FDP (if required) will put an end to any inconsistency in the conditionalities associated with these approvals and clearances. To ensure transparency, the approved mining plan shall be published on the website of the

CMEA as well as the website of the coal mining company within seven days of its submission.

- Public health is not considered during the approval of the Mining plan and EC for coal mines today. We have proposed that a public health expert shall be a member of the CMEA while the DG-CMEA will also conduct annual health surveys in and around coal mines and also publish a cumulative EIA report for the entire coalfield at regular intervals.
- All major coal-producing countries (other than USA), permit the final mine voids to be rehabilitated as “pit lakes.” For example, the lignite mining pits of Saxony and Brandenburg in former East Germany have been converted into a series of 26 lakes with a well-planned rejuvenation program costing Euro 2.2 Billion. In Australia, several multi-disciplinary (geology, hydrology, climate, hydrogeology, and limnology) studies have been conducted in pit lakes, along with long term monitoring of water balance and water quality. The CMEA can conduct such inter-disciplinary studies, particularly in opencast coal mines, since India produces more than 94 percent of its coal from opencast coal mines.
- Stakeholder consultation is a critical tool in mine closure planning, which ensures post mine closure land use meets the community’s needs (Government of Australia, 2016). While stakeholder consultation prior to final mine closure is an established international practice, mine closure requires no public scrutiny under the existing laws of India (Evans, 2020; Government of Western Australia, 2021; OSMRE, 2021). The authors propose that the DG-CMEA

shall conduct a public consultation process by inviting written comments before the approval of the final mine closure plan to ensure public acceptance of final mine closure.

- The CMEA will eliminate duplication of efforts by multiple agencies but also ensure more effective and transparent compliance of pollution control measures during operations as well as a sustainable post-closure ecosystem for the welfare of local communities.
- The SCM Bill promotes better self-compliance through the constitution of an environment department within each coal mining company and a dedicated environment officer in each coal mine.
- The CMEA maintains the harmonious federal structure of our country and does not infringe on the powers of the State Government to control industrial pollution, the land rights of the local communities, and the existing provisions for wildlife conservation and biodiversity protection under extant Laws.

As the World moves away from coal in the move towards a “net-zero” energy transition (albeit, at different rates in each country), coal mine closure is going to be more important since “Just Transition” is particularly important in a sector which employs hundreds of thousands of people in specific coal-bearing States (World Bank, 2020). In this context, the role of the Coal Mines Environment Authority becomes very important in a developing country like India.

Further, the institutional capacity to regulate, monitor, and control pollution in India has remained static or even weakened during the

era of economic growth with environmental toxification (Planning Commission, 2007). While energy and environmental issues are intertwined, there are significant gaps between environmental policy formulation and its implementation

(ASCI, 2009; UNEP, 2019). The CMEA will be vital to fill the current gaps and lacunae in the coal mining sector in India since environmental challenges are bound to increase with the participation of the private players.

## 8. Acknowledgments

The authors are grateful to the Science and Engineering Research Board (SERB) in the Department of Science & Technology of the Government of India for funding this Study under their grant no. SB/IR/NIAS/2016 for “Interdisciplinary Forays into Human-Environment Interactions: An Integrative Research Initiative in Energy, Ecology and Nonlinear Modelling” We also acknowledge the support of Singareni Collieries Co Ltd. for providing the much-needed logistics and other support during this Study. The authors also acknowledge the valuable guidance provided by industry/regulatory experts like Sh. D N Prasad and Prof Sudha Mahalingam as well as the legal inputs provided by Profs M K Ramesh, Sairam Bhat, and Sharachchandra Lele, and several Law researchers from CEERA-NLSIU. The authors

also acknowledge the valuable comments and suggestions provided by Sh. Surya Prakash Kansal, Sh. Bhaskar Rao, Sh. R Prabhakar, Sh. Pankaj Satija, Dr. Manoranjan Hota, Sh. Koushik Chakraborty, Dr. Hippu S K Nathan, Ms Roopa Madhav, and other participants during the Stakeholder Consultation Workshop held by NIAS with SERB funding and participation on September 5, 2020. The authors are grateful to the management and countless officials of Singareni Collieries Company Ltd. for their practical inputs and logistics support during this research. Finally, the authors thank Dr Shailesh Nayak, Director (NIAS) for his constant encouragement and support during this research and Mr. Srinivasa Aithal and his administration team for the logistics support.

## 9. References

- ASCI (Administrative Staff College of India) (2009). Analysis of existing environmental instruments in India. Administrative Staff College of India, Hyderabad, India. pp 59.
- Bedoya, S.F. and Mani, M., The Drivers of Firms' Compliance to Environmental Regulations: The Case of India (2020). retrieved from <<https://elibrary.worldbank.org/doi/abs/10.1596/1813-9450-9468>> (Last accessed on February 16, 2021).
- Bhal, Kanika and Shankar, Ravi (2011). Report on scope, structure, and process of the National Environment Assessment and Monitoring Authority (NEAMA) for MoEF. Department of Management Studies, Indian Institute of Technology: Delhi.
- BP (2020a). Statistical Review of World Energy (2020). 69th Edition, Energy Outlook, BP Energy Economics. retrieved from <<https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2020-full-report.pdf>> (Last accessed on April 5, 2021).
- BP (2020b). Energy Outlook-India. retrieved from <<https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/energy-outlook/bp-energy-outlook-2020-country-insight-india.pdf>> (Last accessed on April 5, 2021).
- CAG (2013). Report of the Comptroller and Auditor General of India on Compensatory Afforestation in India. retrieved from <<http://iced.cag.gov.in/wp-content/uploads/2013/02/1.%20CAG%20Report%20on%20Compensatory%20Afforestation%20in%20India.pdf>> (Last accessed on January 25, 2021).
- CEA (2020a). Summary All India March. retrieved from <[http://cea.nic.in/reports/monthly/generation/2020/March/actual/opm\\_01.pdf](http://cea.nic.in/reports/monthly/generation/2020/March/actual/opm_01.pdf)> (Last accessed on August 5, 2020).
- CEA (2020b). Renewable Energy Generation Report March. retrieved from <<http://cea.nic.in/reports/monthly/renewable/2020/renewable-03.pdf>> (Last accessed on August 5, 2020).
- CEA (2020c). Fuel Wise Details -Coal/Lignite/Multifuel March. retrieved from <[http://cea.nic.in/reports/monthly/generation/2020/March/actual/opm\\_11.pdf](http://cea.nic.in/reports/monthly/generation/2020/March/actual/opm_11.pdf)> (Last accessed on August 5, 2020).
- CEA (2020d). Energy Generation, Program, and Plant Load Factor for Gas / Liquid Based Stations. retrieved from <[http://www.cea.nic.in/reports/monthly/generation/2020/March/actual/opm\\_17.pdf](http://www.cea.nic.in/reports/monthly/generation/2020/March/actual/opm_17.pdf)> (Last accessed on August 15, 2020).
- CCO (Coal Controller) (2011). Coal Mining Directory 2010-11. retrieved from <<http://www.coalcontroller.gov.in/writereaddata/files/download/coaldirectory/Coal%20Directory%20of%20India%202010-11.pdf>> (Last accessed on April 5, 2021).
- CCO (2021). Coal Mining Directory 2019-20. retrieved from <<http://www.coalcontroller.gov.in/writereaddata/files/download/coaldirectory/CoalDirectory2019-20.pdf>> (Last accessed on May 5, 2021).
- Commissioner for Better Regulation (2017). Getting the Ground Work Right: Better Regulation for Mines and Quarries. Commonwealth of Victoria.
- Department of Environmental Affairs (2014). The Republic of South Africa, Government's One Environmental System commences. retrieved from <<https://www.environment.gov.za/mediarelease/oneenvironmentalsystem>> (Last accessed on August 5, 2020).
- DGMS (Directorate General of Mine Safety) (2017). Circulars. retrieved from <[https://mineportal.in/assets/study\\_material/COMPLETE\\_DGMS\\_CIRCULAR\\_UPTO\\_JUNE\\_2017\\_459.pdf](https://mineportal.in/assets/study_material/COMPLETE_DGMS_CIRCULAR_UPTO_JUNE_2017_459.pdf)> (Last accessed on August 5, 2020).

- January 26, 2021).
- Economic Times (2018): Activate Removal of Coal Nationalization. The Economic Times, Feb 21.
- EPA (2005). Memorandum of Understanding Among the U.S. Army Corps of Engineers, the U.S. Office of Surface Coal Mining, the U.S. Environmental Protection Agency and U.S. Fish and Wildlife Service. retrieved from <<https://www.epa.gov/sites/production/files/2015-03/documents/feb2005surfacecoalminingmou.pdf>> (Last accessed on August 5, 2020).
- Evans, Alice (2020). International Council of Mining Metals: How Integrating mine closure into business planning and decision making can generate value, reduce risks and liabilities. retrieved from <[https://www.icmm.com/website/publications/pdfs/environmental-stewardship/2019/guidance\\_integrated-mine-closure-2020.pdf](https://www.icmm.com/website/publications/pdfs/environmental-stewardship/2019/guidance_integrated-mine-closure-2020.pdf)> (Last accessed on January 26, 2020).
- Githahu, Mwangi (2020). Environmental bills open for public comment, retrieved from <<https://www.iol.co.za/capeargus/news/environmental-bills-open-for-public-comment-50507518>> (Last accessed on August 10, 2020).
- Goa Foundation v. Union of India & Others (2014). retrieved from <<https://main.sci.gov.in/jonew/judis/41437.pdf>> (Last accessed on August 5, 2020).
- Government of Australia (2016). Mine Closure: Leading Practice Sustainable Development Program for the Mining Industry. retrieved from <<https://www.industry.gov.au/sites/default/files/2019-05/lpsdp-mine-closure-handbook-english.pdf>> (Last accessed on January 25, 2021).
- Government of Western Australia (2021). Statutory Guidelines for Mine Closure Plans. retrieved from <<http://www.dmp.wa.gov.au/Documents/Environment/REC-EC-111D.pdf>> (Last accessed on January 26, 2021).
- Gupta, Priyanshu and Goyal, Anuj (2018). Coal Auctions: A Facade of Good Governance, *Economic & Political Weekly* Vol 53, No 28, pp 14–18.
- Hasnas, John (2009). Two Theories of Environmental Regulation, Social Philosophy and Policy. Vol 26 (2), pp 95-129.
- HLC (High-Level-Committee) (2014). Report of the High-Level Committee on Forest and Environment Related Laws. Ministry of Environment, Forest and Climate Change, Government of India.
- Humby, Tracy-Lynn (2015). One environmental system: Aligning the laws on the environmental management of mining in South Africa. *Journal of Energy & Natural Resources Law*, Volume 33, Issue 2, pp 110-130. retrieved from <<https://www.tandfonline.com/doi/pdf/10.1080/02646811.2015.1022432?needAccess=true>> (Last accessed on May 5, 2021).
- Hooda Committee (2006). National Mineral Policy: Report of the High-Level Committee. Planning Commission: New Delhi.
- Jacobs, J.A. and Testa, S.M. (2014). Mine Reclamation Policy and Regulations of Selected Jurisdictions. In Jacobs, J.A., Lehr, J.H., and Testa, S.M (Eds), *Acid Mine Drainage, Rock Drainage, and Acid Sulfate Soils: Causes, Assessment, Prediction, Prevention, and Remediation* (pp. 319-324). John Wiley & Sons.
- Jariwala, CM (1995). Mining and Environment: Indian law Scenario. *Journal of the Indian Law Institute*, Vol 37, No 4, pp 431– 441.
- Justice M. B. Shah Commission of Enquiry (2013a). The first report on illegal mining of iron and manganese ores in the State of Jharkhand. Vol. I. retrieved from <<https://www.mines.gov.in/writereaddata/UploadFile/First%20Report%20on%20Jharkhand%20Vol%20-%20I.pdf>> (Last accessed on January 25, 2021).
- Justice M. B. Shah Commission of Enquiry (2013b). The first report on illegal mining of iron and manganese ores in the State of Odisha. Vol. I. retrieved from <<https://www.mines.gov.in/writereaddata/UploadFile/First%20>



- Report%20of%20Shah%20Commission%20on%20Odisha%20-%20Vol%20I.pdf> (Last accessed on January 25, 2021).
- Justice M. B. Shah Commission of Enquiry (2013c). Third Report on Illegal Mining of Iron and Manganese Ores in The State of Goa”, Vol. I. retrieved from <<https://www.mines.gov.in/writereaddata/UploadFile/Third%20Report%20on%20Goa%20Part%20I.pdf>> (Last accessed on January 25, 2021)
- Lafarge Umiam Mining Private Limited v. Union of India and Others (2011). retrieved from <<https://main.sci.gov.in/jonew/judis/38179.pdf>> (Last accessed on January 22, 2021).
- Lele, Sharachchandra, Navroz K Dubash, and Shantanu Dixit (2010). A Structure for Environment Governance: A Perspective. Economic & Political Weekly. Vol 45 No 6, pp 13–16.
- Marisam, Jason (2011). Duplicative Delegations, Administrative Law Review, Vol. 63, No. 2, pp. 181-244.
- McKean, R.N. (1980). Enforcement Costs in Environmental and Safety Regulation, Policy-Analysis, Vol. 6(3), pp. 269-289.
- Mining Review Africa (2019). NEMLA IV: Potential ground-breaking changes for mine closures. retrieved from <<https://www.miningreview.com/features-analysis/nemla-iv-mine-closures/>> (Last accessed on August 5, 2020).
- MoC (Ministry of Coal) (2009). Guidelines for the preparation of mine closure plan. retrieved from <<https://elibrarywcl.files.wordpress.com/2015/02/guide-lines-for-preparation-of-mine-closure-plan.pdf>> (Last accessed on January 25, 2021).
- MoC (2011). Report of the Working Group on Coal & Lignite for formulation of the Twelfth Five Year Plan (2012-2017). Ministry of Coal. Government of India.
- MoC (2013). Guidelines for the preparation of mine closure plan. retrieved from <[https://www.cmpdi.co.in/env/MCP%207\\_1\\_2013.pdf](https://www.cmpdi.co.in/env/MCP%207_1_2013.pdf)> (Last accessed on January 24, 2021).
- MoC (2017). History of coal mining in India. retrieved from <<https://coal.nic.in/content/historybackground>> (Last accessed on January 6, 2021).
- MoC (2020a). The Mineral Laws (Amendment) Act, 2020. Act 2 of 2020. retrieved from <<http://www.coal.nic.in/sites/default/files/2020-08/gazette%20biil17032020.pdf>> (Last accessed on January 31, 2021).
- MoC (2020b). Annual Report 2019-20. Ministry of Coal, Government of India. retrieved from <[https://www.coalindia.in/media/documents/Coal\\_India\\_English\\_\\_final.pdf](https://www.coalindia.in/media/documents/Coal_India_English__final.pdf)> (Last accessed on April 5, 2021).
- MoC (2020c). Guidelines for preparation, formulation, submission, processing, scrutiny, approval, and revision of the Mining Plan. retrieved from <[https://coal.nic.in/sites/upload\\_files/coal/files/curentnotices/Comprehensive\\_Guideline\\_Mining\\_Plan\\_29\\_05\\_2020.pdf](https://coal.nic.in/sites/upload_files/coal/files/curentnotices/Comprehensive_Guideline_Mining_Plan_29_05_2020.pdf)> (Last accessed on August 5, 2020).
- MoC (2021). Annual Report 2020-21. Ministry of Coal, Government of India. retrieved from <<http://coal.nic.in/sites/default/files/2021-03/chap1AnnualReport2021en.pdf>> (Last accessed on April 6, 2021).
- MoEF (Ministry of Environment and Forests) (2007). Induction Material. retrieved from <<http://moef.gov.in/wp-content/uploads/2017/08/induction-meteail.pdf>> (Last accessed on February 16, 2020).
- MoEF (2009). Towards Effective Environmental Governance: Proposal for National Environment Protection Authority. Discussion Paper, Ministry of Environment and Forests, Government of India.
- MoEF (2011a). Revision of para 4.4 of the guidelines on FC Act, 1980 regarding projects involving Forest as well as Non-forest Lands. retrieved from <<http://moef.gov.in/wp-content/uploads/2018/03/FC-amendment.pdf>> (Last accessed on January 6, 2021).
- MoEF (2011b). Revision of para 4.4 of the guidelines on FC Act, 1980 regarding projects involving

- Forest as well as Non-forest Lands. retrieved from <http://moef.gov.in/wp-content/uploads/2018/03/guidelines-revision-mar-11.pdf> (Last accessed on January 6, 2021).
- MoEF(2014a).Site Inspection Report for the proposed Talabira II and III opencast coal projects. retrieved from [http://forestsclearance.nic.in/writereaddata/2014\\_4\\_17\\_Apr\\_2014\\_095620750\\_siteinspect\\_SiteInspectionReport.pdf](http://forestsclearance.nic.in/writereaddata/2014_4_17_Apr_2014_095620750_siteinspect_SiteInspectionReport.pdf) (Last accessed on January 22, 2021).
- MoEF (2014b). EC Letter for Manuguru OC IV. retrieved from <https://scclmines.com/env/docs/ECS/13004.pdf> (Last accessed on January 6, 2021).
- MoEF (2015). EC Letter for Kakatiya Khani OC. retrieved from <https://scclmines.com/env/docs/ECS/24001.pdf> (Last accessed on January 6, 2021).
- MoEFCC (Ministry of Environment and Forests and Climate Change) (2016a). Ecological Impact of Mining. reply given to Question No. 334 by Minister of State (Independent Charge) for Environment, Forest and Climate Change in the Lok Sabha on 9 August 2016. retrieved from <http://164.100.24.220/loksabhaquestions/annex/9/AS334.pdf> (Last accessed on February 1, 2021).
- MoEFCC (2016b). EC Letter for Jawahar Khani 5 OC. retrieved from <https://scclmines.com/env/docs/ECS/12006.pdf> (Last accessed on January 6, 2021).
- MoEFCC (2018). Office Memorandum: Application for seeking prior Environmental Clearance for the projects/activities given in the schedule of EIA Notification, 2006 regarding. retrieved from [http://environmentclearance.nic.in/writereaddata/public\\_display/circulars/KJPTB0QU\\_OM\\_Form-2.pdf](http://environmentclearance.nic.in/writereaddata/public_display/circulars/KJPTB0QU_OM_Form-2.pdf) (Last accessed on January 25, 2021).
- MoEFCC (2020a). Emission of Greenhouse Gases, reply given to Question No. 4464 by Minister of Environment, Forest and Climate Change in the Lok Sabha on 20 March 2020. retrieved from <http://164.100.24.220/loksabhaquestions/annex/173/AU4464.pdf> (Last accessed on August 5, 2020).
- MoEFCC(2020b).Draft minutes of the Forest advisory committee meeting held on 25 November 2020: Agenda No. 4. retrieved from [http://forestsclearance.nic.in/writereaddata/FAC\\_Minutes/121121124712111MoMofFACHeldon25-12-2020.pdf](http://forestsclearance.nic.in/writereaddata/FAC_Minutes/121121124712111MoMofFACHeldon25-12-2020.pdf) (Last accessed on January 6, 2020).
- MoLE (Ministry of Labour and Employment) (2020). Annual report 2019-20. retrieved from [https://labour.gov.in/sites/default/files/Annual%20Report%20\(English\)%202019-20.pdf](https://labour.gov.in/sites/default/files/Annual%20Report%20(English)%202019-20.pdf) (Last accessed on January 26, 2020).
- MoLJ (Ministry of Law and Justice) (1972). The Coking Coal Mines Nationalisation Act, 1972. Act 36 of 1972. Act. retrieved from <http://legislative.gov.in/sites/default/files/A1972-36.pdf> (Last accessed on January 24, 2020).
- MoLJ (1973). The Coal Mines Nationalisation Act, 1973. Act 26 of 1973. retrieved from <http://legislative.gov.in/sites/default/files/A1973-26.pdf> (Last accessed on January 24, 2020).
- MoP (Ministry of Power) (2018a): Hydro Power Projects, reply given to Question No 2186 by Minister of Power in the Lok Sabha on 8 March 2018. retrieved from <http://164.100.24.220/loksabhaquestions/annex/14/AU2186.pdf> (Last accessed on August 5, 2020).
- MoP (2018b). Report of the Committee on Optimal Energy Mix in Power Generation on Medium and Long-term Basis, Ministry of Power, Government of India.
- NSW (New South Wales) Government (2021a). Mining Act of 1992. No. 29. retrieved from <https://www.legislation.nsw.gov.au/view/whole/html/inforce/current/act-1992-029> (Last accessed on April 6, 2021).
- NSW Government (2021b). Protection of the Environment Operations Act, 1997 No. 156. retrieved from <https://www.legislation.nsw.gov.au/view/whole/html/inforce/current/act-1997-156>

- [gov.au/view/whole/html/inforce/current/act-1997-156#ch.5-pt.5.1](http://gov.au/view/whole/html/inforce/current/act-1997-156#ch.5-pt.5.1)> (Last accessed on January 26, 2021).
- OSMRE (2021). Surface Mine Reclamation Act 1977. retrieved from <<https://www.osmre.gov/lrg/docs/SMCRA.pdf>> (Last accessed on January 29, 2021).
- Otto, J., Naito, K. and Pring, G. (1999). Environmental Regulation of Exploration and Mining Operations in Asian Countries. *Natural Resources Forum*, Vol. 23, pp 323-334. retrieved from <<https://doi.org/10.1111/j.1477-8947.1999.tb00920.x>> (Last accessed on May 5, 2021).
- O'Toole, Laurence J and Montjoy, Robert S (1984). Interorganizational Policy Implementation: A Theoretical Perspective, *Public Administration Review*, Vol. 44, No. 6, pp. 491-503.
- Parliamentary Standing Committee (2020). Standing Committee on Coal and Steel (2019-20) Seventeenth Lok Sabha: Ministry of Coal Demands for Grants (2020-21) Sixth Report. retrieved from <[http://164.100.47.193/lsscommittee/Coal%20&%20Steel/17\\_Coal\\_And\\_Steel\\_6.pdf](http://164.100.47.193/lsscommittee/Coal%20&%20Steel/17_Coal_And_Steel_6.pdf)> (Last accessed on February 2, 2021).
- Parliamentary Monitoring Group (2018). NEMLA Bill [B14-2017]: Department of Environmental Affairs briefing. retrieved from <<https://pmg.org.za/committee-meeting/25732/>> (Last Accessed on August 5, 2020).
- Parliament of South Africa (2020). Status on Section 76 Bills before the NCOP. retrieved from <<https://www.parliament.gov.za/status-on-section-76-bills-before-ncop>> (Last accessed on August 10, 2020).
- Planning Commission (2007). Report of Steering Committee on the environment and forest Sector for the eleventh Five-Year Plan. Planning Commission. Government of India.
- PIB (2018): Cabinet approves methodology for auction of coal mines/blocks for sale of coal. Retrieved from <<https://pib.gov.in/PressReleasePage.aspx?PRID=1625303>> (Last accessed on August 5, 2020).
- PIB (2020): PM launches Auction process of Coal blocks for Commercial mining. Retrieved from <<https://www.pib.nic.in/PressReleasePage.aspx?PRID=1632309>> (Last accessed on August 5, 2020).
- Queensland Government (2021). Environmental Protection Act. retrieved from <<https://www.legislation.qld.gov.au/view/html/inforce/current/act-1994-062#>> (Last accessed on April 6, 2021).
- Satyanarayana, I. (2012). Basics of open pit mining. retrieved from <<https://www.slideshare.net/isnindian/basics-of-openpit-mining>> (Last accessed on August 14, 2020).
- Samaj Parivartana Samudaya & Others v. State of Karnataka & Others (2013). retrieved from <<https://main.sci.gov.in/jonew/judis/40304.pdf>> (Last accessed on August 5, 2020).
- SCCL (2021). Production. retrieved from <[https://sclmines.com/sclnew/performance\\_production.asp](https://sclmines.com/sclnew/performance_production.asp)> (Last accessed on April 5, 2021).
- Scharpf, F.W. (1976). Does Organization Matter? Task Structure and Interaction in the Ministerial Bureaucracy. retrieved from <<https://bibliothek.wzb.eu/pdf/1976/iim-pre-i76-12.pdf>> Last accessed on February 16, 2020.
- Shimshack, Jay P. (2014). The Economics of Environmental Monitoring and Enforcement. *Annual Review of Resource Economic* Vol (6). pp 339–60.
- Srikanth, R. and Nathan, H S K (2017). Towards sustainable development: Planning surface coal mine closures in India. *Contemporary Social Science*, Vol. 13, No. 1, pp 30–43. retrieved from <<https://doi.org/10.1080/21582041.2017.1394484>> (Last accessed on May 5, 2021).
- Steinebach, Yves (2019). Instrument choice, implementation structures, and the effectiveness of environmental policies: A cross-national analysis, *Regulation and Governance*. retrieved

- from <https://onlinelibrary.wiley.com/doi/full/10.1111/rego.12297>> (Last accessed on February 10, 2021).
- T.N. Godavarman Thirumulpad v. Union of India and Others (2014). retrieved from <https://main.sci.gov.in/jonew/bosir/orderpdfold/1883063.pdf>> (Last accessed on August 5, 2020).
- UNDP (2015). Sustainable Development Goals Booklet, United Nations Development Program, New York.
- UNEP (United Nations Environment Program) (2019). Environmental rule of law: First global report, Nairobi: United Nations Environment Programme.
- Victoria State Government (1990). Mineral Resources (Sustainable Development) Act 1990 (No. 92 of 1990). retrieved from <https://content.legislation.vic.gov.au/sites/default/files/2020-12/90-92aa123%20authorised.pdf>> (Last accessed on January 31, 2021).
- Victoria State Government (2019). Mineral Resources (Sustainable Development) Amendment Act 2019 (No. 32 of 2019). retrieved from [https://content.legislation.vic.gov.au/sites/default/files/83e45e19-e4ea-3988-8203-91a55d155050\\_19-032aa%20authorised.pdf](https://content.legislation.vic.gov.au/sites/default/files/83e45e19-e4ea-3988-8203-91a55d155050_19-032aa%20authorised.pdf)> (Last accessed on August 16, 2020).
- World Bank (2020). Coal mine closure and a just transition for all. retrieved from <https://www.worldbank.org/en/results/2020/11/10/coal-mine-closure-and-a-just-transition-for-all>> (Last accessed on April 6, 2021).
- Zvarivadza, T (2018). Sustainability in the mining industry: An evaluation of the National Planning Commission’s diagnostic overview. Resources Policy. Vol 56. pp 70–77.

# Annexure - I

## DRAFT SUSTAINABLE COAL MINING BILL, 2021 ARRANGEMENT OF SECTIONS

Section		Page
<b>Chapter I</b>		
<b>Preliminary</b>		
1	Short title, extent, and commencement	34
2	Definitions	34
3	Goals and Principles of Sustainable Development	37
<b>Chapter II</b>		
<b>Establishment of the Coal Mines Environment Authority for sustainable coal mining</b>		
4	Constitution of the Authority	39
5	Composition of the Authority	39
6	Terms of office and conditions of service of the Chairperson and Members	39
7	Resignation, removal, and suspension of Chairperson and Members	40
8	Meetings of the Authority	40
9	Establishment of Offices of the Authority in coal-bearing states	41
10	Appointment of Director-General and Director of Coal Mining Environment	41
<b>Chapter III</b>		
<b>Powers and Functions of the Authority</b>		
11	Functions of the Authority	43
12	Powers of the Authority	44
13	Interagency Cooperation	44
14	Power of entry and inspection	45
15	Functions of the Director-General and Director(s)	45
16	Powers of the Director-General and Directors	46
17	Powers of the Director-General and when environmental hazards not expressly provided against exist	46
<b>Chapter IV</b>		
<b>Duties and Responsibilities of Owner</b>		
18	Duties and responsibilities of owners, agents, and managers	48
19	Formulation of environment policy	49
20	Setting up an Environment department in a coal mining company	49
21	Functions of the Environment department of a coal mining company	50
22	Appointment of an Environment officer for a coal mine	50
23	Facilities to be afforded to the Members of the Authority, the Director-General, and Director(s)	51
24	Obligations of persons employed in a coal mine	51

<b>Chapter V</b>		
<b>Procedure for various approvals from Authority</b>		
25	Coal Mines to operate in accordance with approved Mining plan, Environment Clearance, and Forest Clearance	52
26	Procedure for approval of Mining plan, Environment Clearance, and Forest Clearance	52
27	Mine opening permission	55
28	Final mine closure plan and Mine closure certificate	55
29	Continued validity of approvals, clearances, and permission granted prior to the commencement of this Act	57
<b>Chapter VI</b>		
<b>Offenses and penalties under this Act</b>		
30	Obstruction	58
31	Falsification of records	58
32	Omission to furnish plans etc.	58
33	Failure to set up the Environment department and appoint an Environment Officer	59
34	Notice of environmental incident	59
35	Special provision for contravention of orders under section 17	59
36	Special provision for contravention of law with dangerous results	59
37	Enhanced penalty after a previous conviction	60
38	Protection of action taken in good faith	60
39	Prosecution of the owner, agent or manager	60
40	Limitation of prosecutions	60
41	Cognizance of offenses	61
<b>Chapter VII</b>		
<b>Complaints to the Authority and appeals against the orders, decisions or directions of the Authority</b>		
42	Exclusion of jurisdiction of civil courts	62
43	Complaints to the Authority	62
44	National Green Tribunal to have appellate jurisdiction against an order or decision or direction by the Authority	62
<b>Chapter VIII</b>		
<b>Funds, Accounts, and Audit</b>		
45	Grants by the Central Government	63
46	Constitution of Fund	63
47	Accounts and audit	63
<b>Chapter IX</b>		
<b>Miscellaneous</b>		
48	Powers of the Central Government to issue directions	65
49	Powers of the Central Government to make rules and regulations	65
50	Act to have overriding effect	66
51	Restriction on employment of Chairperson and Members of Authority, the Director-General, and Directors in certain cases	66

## DRAFT SUSTAINABLE COAL MINING BILL, 2021

A Bill to consolidate and amend laws related to environmental governance of coal mines with the overarching objective of promoting sustainable coal mining which makes the best use of the country's natural resources in a way that is compatible with the goals and principles of sustainable development.

WHEREAS India needs more effective, efficient, participatory, transparent, and accountable regulatory governance to enforce better compliance with extant Laws related to resource conservation, forest conservation, environmental protection, public health and post-closure reclamation and rehabilitation in coal mines.

AND WHEREAS, an independent, multi-disciplinary “Coal Mines Environment Authority” with in-house professional expertise in the fields of environmental protection, forestry, geology, hydrology, mine planning, public health, reclamation, as well as social aspects of coal mining is required to consider all these facets in an integrated manner before granting certain approvals or clearances or

permissions for coal mines.

AND WHEREAS, the approvals or clearances or permissions to be considered exclusively by the Coal Mines Environment Authority include, the mine opening and mine closure permissions under the Coal Mines (Conservation and Development) Act, 1974, environment clearance under the Environment (Protection) Act, 1986, forest clearance under the Forest Conservation Act, 1980, and the mining plan under the Mines and Minerals (Development and Regulation) Act, 1957.

AND WHEREAS, the Coal Mines Environment Authority must be exclusively empowered to ensure holistic and effective compliance with the approvals, clearances, and permissions granted to coal mines under the Coal Mines (Conservation and Development) Act, the Environment (Protection) Act, the Forest Conservation Act, and the Mines and Minerals (Development and Regulation) Act irrespective of the Authority which has granted these approvals, clearances, and permissions before the date notified by the Central Government.

## CHAPTER I

### PRELIMINARY

#### Section 1.

##### Short title, extent, and commencement

- (1) This Act may be called the Sustainable Coal Mining Act, 2021.
- (2) It extends to the whole of India.
- (3) It shall come into force on such date as the Central Government may, by notification in the Official Gazette, appoint.

#### Section 2.

##### Definitions

In this Act, unless the context otherwise requires,--

- (1) “Agent” shall have the same meaning as assigned to it in the Mines Act, 1952 (Act 35 of 1952);
- (2) “Authority” means the Coal Mines Environment Authority constituted under Section 3 of this Act;
- (3) “Coal” means a readily combustible rock containing more than 50% by weight and more than 70% by volume of carbonaceous material, including inherent moisture; formed from compaction and induration of variously altered plant remains similar to those in peat. Differences in the kinds of plant materials (type), in degree of metamorphism (rank), and in the range of impurity (grade) are characteristic of coal and are used in classification;

- (4) “Coal Controller” means the person appointed as such by the Central Government under the provisions of the Coal Controller’s Organisation (Group ‘A’ Posts) Recruitment Rules, 1986;
- (5) “Coal mine” means a mine in which there exist one or more seams of coal or lignite;
- (6) “Coal mining operations” means any operation undertaken for mining coal or lignite;
- (7) “Coal mining company” means a company which owns or operates one or more coal mine;
- (8) “Coal mining project” means a proposed greenfield coal mine or an increase in the mining lease area and/or annual production capacity (previously approved under the Environment Protection Act, 1986) of an existing coal mine;
- (9) “Company” means a company incorporated under the Companies Act, 2013 (Act 18 of 2013) or under any previous company law;
- (10) “Director-General” and “Director” of Coal Mining Environment means a person appointed by the Central Government as per Section 10 of this Act;
- (11) “District Collector” means an officer appointed by the State Government or the Union Territory administration, as the case may be, under the designation of District Collector or Deputy Commissioner or any such similar designation, to hold charge of



- the administration of the revenue district having jurisdiction over the forest land for which the approval of the Central Government under the Act is required.
- (12) “Environment” shall have the same meaning as assigned to it in the Environment (Protection) Act, 1986 (Act 29 of 1986);
- (13) “Environmental clearance” shall have the same meaning as assigned to it in the Notification issued by the Central Government under Rule (5) of the Environment Protection Rules on September 14, 2006;
- (14) “Environmental compliance” means compliance of all the provisions of this Act;
- (15) “Environmental compliance report” means a consolidated report of all compliances with the provisions of this Act submitted by the owner, agent, and manager to the Authority in the manner, form, and frequency prescribed by the Authority;
- (16) “Environment department” means the department constituted as per Section 20 of this Act.
- (17) “Environmental disaster” means a specific event caused by any coal mining activity that results in an adverse impact on the environment resulting in large scale disease or death of living beings including, fishes, animals, and human beings;
- (18) “Environment Impact Assessment (hereinafter referred to as ‘EIA’)” is the process of examining the anticipated environmental effects of a coal mine or coal mining project;
- (19) “EIA report” is the document prepared by the owner for a coal mine or a coal mining project which includes a risk assessment and management plan based *inter alia* on the Terms of Reference prescribed by the Authority and an EMP:
- a. “Draft EIA Report” is the EIA Report prepared by the owner for the purpose of public consultation or public hearing that includes the mitigation measures to address the anticipated risk and environmental effects of a coal mine or coal mining project along with the time bound action plans and financial commitments made by the owner to implement these mitigation measures to comply with law;
  - b. “Final EIA Report” is the EIA Report prepared by the owner after the public consultation and public hearing conducted by the Authority which includes the details of the concerns raised by the public as well as the time bound action plans and financial commitments made by the owner to implement the mitigation measures required to address these concerns in addition to comply with law.
- (20) “Environmental incident” means non-compliance of any provisions under this Act causing harm or potential harm to the environment or any event which is a violation of any conditions laid down by the Authority or by any other authority having jurisdiction over coal mines;
- (21) “Environmental pollutant” shall have the same meaning as assigned to it in the Environment (Protection) Act, 1986 (Act 29 of 1986);

- (22) “Environmental pollution” shall have the same meaning as assigned to it in the Environment (Protection) Act, 1986 (Act 29 of 1986);
- (23) “Environment officer” means any officer appointed as per Section 22 of this Act;
- (24) “Environmental management plan (hereinafter referred to as ‘EMP’)” in relation to a coal mine means a report documenting how the owner, agent, and manager of a coal mine will implement appropriate control and mitigation measures to minimize the residual risks for each component of the environment affected by the coal mine or coal mining project.
- (25) “Escrow Account” means the bank account opened by the owner before commencing any coal mining operations under the Coal Mines (Conservation and Development) Act, 1974 (Act 28 of 1974) to provide financial assurance related to coal mine closure activities;
- (26) “Forest clearance” means a lease of any reserved forest or any portion thereof, or any forest or any portion thereof, for coal mining as per Section 27 of this Act;
- (27) “Host state” in relation to a coal mine means the State or Union Territory of the Indian Union in which the said coal mine is located;
- (28) “Manager” shall have the same meaning as assigned to it in the Mines Act, 1952 (Act 35 of 1952);
- (29) “Member” means a member of the Authority, as the case may be, and includes the Chairperson thereof;
- (30) “Mine” shall have the same meaning as assigned to it in the Mines Act, 1952 (Act 35 of 1952);
- (31) “Mining lease” shall have the same meaning as assigned to it in the Mines and Minerals (Development and Regulation) Act, 1957 (Act 67 of 1957);
- (32) “Mining plan” is a composite document which integrates all information about a coal mine including, biodiversity, flora and fauna, forest diversion, geology, hydrogeology, mining and processing, resources, reserves, mineral conservation, surface and underground water, health and safety, land schedule, topography, wildlife, progressive and final mine closure plans, and the EIA report.
- (33) “Mine opening permission” means the approval from the Authority to open a coal mine, seam or section of a seam after all other statutory approvals and grant of licenses required under relevant laws are obtained by the Owner from the respective authorities including, approval of mining plan, environmental clearance, forest clearance, wildlife clearance, approval for land acquisition, the grant of mining lease, mining permissions from the Director-General of Mines Safety, groundwater clearance, license for explosives, water drawl permit, the opening of an escrow account, consent to operate, and other relevant approvals required as per laws of the host state;
- (34) “Notification” means a notification published in the Official Gazette;
- (35) “Opencast working” shall have the same meaning as assigned to it in the Mines Act, 1952 (Act 35 of 1952);

- (36) “Owner” shall have the same meaning as assigned to it in the Mines Act, 1952 (Act 35 of 1952);
- (37) “Prescribed” means prescribed by rules, regulation or byelaws, as the case may;
- (38) “Public Consultation” means the process by which the concerns of the project-affected-persons and others who have a plausible stake in the environmental risks related to the project or activity are ascertained through written responses to consider all the material concerns in the project or activity design as appropriate;
- (39) “Public Hearing” means the meeting organized at the mine site (or in its close proximity within the district) to be carried out as per procedure established by law for ascertaining the concerns of project-affected persons;
- (40) “Regulations”, “rules”, and “byelaws” means respectively regulations, rules, and byelaws made under this Act;
- (41) “Revised mining plan” is the updated and amended version of the mining plan which shall be deemed to be the Mining plan as soon as it is duly approved by the Authority under the Mines and Minerals (Development and Regulation) Act, 1957.
- (42) Risk assessment is a process in which information is analyzed to determine if an environmental hazard might cause harm to exposed persons and ecosystems.
- (43) the expressions, General Exploration (G2), Detailed Exploration (G1), Geological Study (F3), Pre-Feasibility Study (F2), and

Feasibility Study (F1) used in this Act shall have the meanings assigned to them in Part-I of the Schedule to the Minerals (Evidence of Mineral Contents) Rules, 2015 under the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957).

Other words and expressions used herein and not defined but defined in the other Acts, including any rules or regulations made thereunder shall have the meanings, respectively, assigned to them in those Acts.

### **Section 3. Goals and Principles of Sustainable Development**

- (1) It is the intention of Parliament that in the administration of this Act regard should be given to the overarching goals and principles of sustainable development.
- (2) For the purposes of this Act, the goals of sustainable development are:
- (a) community wellbeing and welfare should be enhanced by following a path of economic development that also safeguards the welfare of local communities;
  - (b) biological diversity should be protected and ecological integrity maintained;
  - (c) intra-generational equity and inter-generational sustainability are ensured with due consideration to the democratic principles enshrined in the Constitution.
- (3) For the purposes of this Act, the principles of sustainable development are—
- (a) environmental and social impact assessments are conducted in a transparent manner before considering

- the potential health, safety, and environmental risks related to coal mines;
- (b) if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation and decision-making should be guided by:
    - i. a careful evaluation to avoid serious or irreversible damage to the environment wherever practicable; and
    - ii. an assessment of the risk-weighted consequences of various options;
  - (c) if the activity carried on is hazardous or inherently dangerous, the person carrying on such activity is liable to make good the loss caused to any other person by his activity irrespective of the fact whether he took reasonable care while carrying on his activity;
  - (d) development should make a positive contribution to regional development and respect the aspirations of the local communities by involving the local community in issues that affect them;
  - (e) measures to be adopted should be cost-effective and flexible, not disproportionate to the issues being addressed;
  - (f) decisions and actions must be based on local facts and global knowledge.

## CHAPTER II

### ESTABLISHMENT OF THE COAL MINES ENVIRONMENT AUTHORITY FOR SUSTAINABLE COAL MINING

#### Section 4. Constitution of the Authority

The Central Government shall, with effect from such date as it may, by notification in the Official Gazette, constitute an Authority to be called as “Coal Mines Environment Authority” to exercise the powers conferred on and perform the functions assigned to as it may.

#### Section 5. Composition of the Authority

The Authority shall consist of the following members, namely:

- (1) Chairperson: The Central Government shall appoint a full-time Chairperson. A person shall not be qualified for appointment as the Chairperson unless he is or has been a Judge of a High Court or has served in a position not below the rank of a Secretary to Government of India.
- (2) Other Members: The Central Government shall appoint six Members of which, one member shall be an expert in environmental science or engineering, one member shall be a forestry expert, one member shall be an expert in hydrology, one member shall be a mining expert, one person shall be an expert in public health, and one member shall be an environmental law expert. The Central Government shall prescribe the qualifications, experience, and other criteria for the selection of these Members.

- (3) The Central Government shall nominate the Chairperson of the Central Pollution Control Board, the Coal Controller, and the Director-General of Forests in the Ministry of Environment, Forest and Climate Change as ex-officio members of the Authority who shall be duly invited to participate in every meeting of the Authority in person or through their authorized representative when they are unable to attend in person.

- (4) The Director-General shall be the Member-Secretary of the Authority.

- (5) The Chairperson may, if considered necessary, may invite any one or more persons having specialized knowledge and experience in a particular case before the Authority to assist the Authority in that case.

- (6) The Chairperson and other members of the Authority shall be persons of ability, integrity and standing who have shown capacity in dealing with problems relating to their fields of expertise which, in the opinion of the Central Government, shall be useful to the Authority.

#### Section 6. Term of office and other conditions of service of the Chairperson and Members

- (1) The term of office and other conditions of service of the Chairperson and the members referred to in section 5 (2) shall be five years

from the date on which they assume office. Neither the Chairperson nor the members shall be eligible for reappointment.

Provided that neither the Chairperson nor any other Member shall hold office after attaining the age of 65 years.

- (2) Notwithstanding anything contained in subsection (1), the Central Government shall have the right to terminate the services of the Chairperson or any Member appointed under section 5 (2), at any time before the expiry of the period prescribed under subsection (1), by giving a notice of not less than three months in writing or three months' salary and allowances in lieu thereof, solely for the reasons given in Section 7 below. The Chairperson or a Member shall also have the right to relinquish his office, at any time before the expiry of the period prescribed under subsection (1), by giving to the Central Government notice of not less than three months in writing.

### **Section 7.**

#### **Resignation, removal, and suspension of Chairperson and Members**

The Central Government shall remove the Chairperson or a Member from office if he:

- (1) is, or at any time has been, adjudicated as insolvent;
- (2) is of unsound mind and stands so declared by a competent court;
- (3) has been convicted of an offense which, in

the opinion of the Central Government, involves moral turpitude;

- (4) has, in the opinion of the Central Government, so abused his position as to render his continuation in office detrimental to the public interest:

Provided that no Member shall be removed under this clause unless he has been given a reasonable opportunity of being heard in the matter.

### **Section 8.**

#### **Meetings of the Authority**

- (1) The Chairperson and other Members shall meet at such times and places and shall observe such rules of procedure regarding the transaction of business at its meetings as may be provided by appropriate regulations adopted by the Authority. The quorum required for a meeting shall be a minimum of seven (out of 11 members) which shall include at least four of the six Members appointed by the Central Government under Section 5(2).
- (2) The Chairperson shall preside at each meeting of the Authority. If for any reason, the Chairperson is unable to attend a meeting, any other member chosen by the members present from amongst themselves at the meeting shall preside at the meeting.
- (3) The Chief Secretary of the host state or his nominee shall be invited for consultations with the Members of the Authority regarding any coal mine falling within the host state whenever the said coal mine is

included in the agenda for a meeting of the Authority.

- (4) While the Chief Secretary of the host state or his nominee shall have the right to speak in, and otherwise to take part in the proceedings of the Authority related to the coal mine(s) located in the said state, he shall not be entitled to vote during the proceedings.
- (5) All questions which come up before any meeting of the Authority shall be decided by a majority votes of the members present (including the ex-officio members) and voting. In the event of an equality of votes, the Chairperson, or in his absence, the person presiding, shall have a second or casting vote.
- (6) The Chairperson shall hold a special meeting of the Authority to deliberate on the annual reports submitted by the Director General under Section 15 of the Act.
- (7) The minutes of each meeting of the Authority shall be published on the website of the Authority within seven days of the date of the meeting.
- (8) No act or proceeding of the Authority shall be invalid by reason only of the existence of any vacancy among its members or any defect in the constitution thereof.
- (9) The general superintendence, direction and management of the affairs of the Authority shall vest in an empowered committee including the Chairperson and the Director-General, which may exercise all powers and do all acts and things which may be exercised or done by the Authority subject to rules drawn in this respect.

### **Section 9. Establishment of Offices of the Authority in coal-bearing states**

The Central Government shall establish subordinate offices of the Authority in all coal-bearing states to monitor and enforce compliance of the provisions of this Act. These offices shall function under the general control, supervision, and direction of the Director-General.

### **Section 10. Appointment of Director-General and Director of Coal Mining Environment**

- (1) The Central Government shall, by notification, appoint the Director-General, Directors, and other officers to monitor and enforce compliance of the provisions of this Act and for assisting the Authority in performing such functions as may be provided by or under this Act.
- (2) The Director-General and Directors shall exercise their powers and discharge their functions, subject to the general control, supervision, and direction of the Authority.
- (3) The salary, allowances, and other terms and conditions of service of the Director-General and Directors shall be prescribed by the Central Government.
- (4) The Director-General shall hold at least a Masters' degree in mining engineering or environment or forestry or pollution control or in any other relevant field of expertise approved by the Central Government, and shall have at least 20 years of post-Masters experience in mining engineering or environmental protection or forestry or pollution control or in any other relevant

- field of expertise approved by the Central Government.
- (5) A Director shall hold at least a Masters' degree in a relevant discipline from an educational institution approved by the Central Government, and shall have at least 15 years of post-Masters experience in mining or environmental/forest protection or pollution control or law or in any other relevant field of expertise approved by the Central Government.
- (6) No person shall be appointed to be Director-General or Director or having been appointed shall continue to hold such office, if he becomes directly or indirectly interested in any mine or mining rights in India.
- (7) Subject to rules laid down in this regard, the Authority may appoint experts in environmental science/engineering, forestry, geology, geographic information systems, hydrology, hydrogeology, mining engineering, pollution control, public health, reclamation, remote sensing and rural development to assist the Director General of Coal Mining Environment in the efficient discharge of his functions under this Act.
- (8) Subject to rules laid down in this regard, the Coal Mines Environment Authority may appoint such other officers and employees as it considers necessary to ensure effective implementation of this Act.
- (9) The term and other conditions of service of the experts, officers and employees appointed by the Authority under this section shall be such as may be determined by rules laid down in this regard.
- (10) After three years of commencement of this Act, the Central Government shall select for appointment to the Authority, officers from the Indian Environmental Service to be selected through an examination(s) conducted by the Union Public Service Commission.



## CHAPTER III

### POWERS AND FUNCTIONS OF THE AUTHORITY

#### Section 11. Functions of the Authority

- (1) Subject to the provisions of this Act, the main function of the Authority shall be to assure the effective implementation of the principles of sustainable development in coal mines as explained in Section 3 of this Act.
- (2) After a period of six months from coming into being of the Authority, this Authority shall have the exclusive responsibility for the grant and enforcement of the permissions, approvals, and clearances indicated in subsection (4) granted to a coal mine prior to the date notified by the Central Government.
- (3) Once the Authority takes over the responsibilities as described in subsection (4), the officials of the Ministry of Coal, Coal Controller, and Ministry of Environment, Forest and Climate Change shall cease to have jurisdiction over these functions with respect to coal mines with effect from the date notified by the Central Government.
- (4) In particular and without prejudice to the generality of the foregoing function, the Authority shall perform the following functions with respect to coal mines, namely:
  - (a) Approval of mining plans and revised mining plans under the Mines and Minerals (Development and Regulation) Act, 1957 (Act 67 of 1957);
  - (b) Grant of environmental clearance under the Environment (Protection) Act, 1986 (Act 29 of 1986);
  - (c) Grant of approval for use of forest land for non-forest use under the Forest (Conservation) Act, 1980 (Act 69 of 1980);
  - (d) Grant permission to open a coal mine under the Mines and Minerals (Development and Regulation) Act, 1957 (Act 67 of 1957);
  - (e) Approval of the final mine closure plan and monitoring the mine closure activities, under the Coal Mines (Conservation and Development) Act, 1974;
  - (f) Lay down the standards and guidelines for the preparation and submission of the documents or reports to be submitted to the Authority including but not limited to mining plan, risk assessment, EIA report, mine opening permission, final mine closure plan, and mine closure permission;
  - (g) Establish the rules, standards, procedures, and guidelines to be followed by the Authority, the Director-General and Director for dealing with the applications, complaints, reports, and other submissions made to them.
  - (h) Define the environmental performance standards applicable to all coal mines;
  - (i) Declaration of land unfit for coal mining due to environmental, technological, historical or other reasons as per rules prescribed in this regard;
  - (j) Prescription of standards for post-mining reclamation, rehabilitation, and revegetation of mining-affected areas and the protective works to be carried out by coal mines;

- (k) Implement a public consultation process as per the procedure established by law before issuing any rules, regulation, standards, procedures, or guidelines applicable to coal mines;
  - (l) Publish annual reports documenting the findings of public health surveys conducted by the Authority in and around each coalfield to assess the impact of coal mining on the health parameters of the local communities as per rules prescribed in this regard;
  - (m) Prepare updated geo-referenced maps of each coalfield, coal mine, coal block, and coal mining project to assess the impact of coal mining on the environment, forest, water bodies, and land use in consultation with the offices/undertakings of the Central and State Governments as per rules prescribed in this regard.
  - (n) Issue of rules, regulations, and orders under this Act;
  - (o) Impose penalties for non-compliance of any provisions under this Act; and
  - (p) Ensure that rules, regulations, guidelines, approvals, certificates, clearances, directions, orders, permissions, maps, reports, and surveys issued by the Director General and the Authority are published on the official website of the Authority within twenty-four hours of their issue.
- (5) Notwithstanding anything said in this Act, the Ministry of Coal, the Coal Controller, and the Ministry of Environment, Forest and Climate Change shall continue to have jurisdiction over coal mines for matters not related to the approvals or clearances or permission listed in subsection (4) of this section.

## **Section 12. Powers of the Authority**

- (1) The Authority constituted under section 4 may exercise such of the powers under this Act as it thinks necessary or expedient to exercise to discharge its functions under this Act.
- (2) The Authority shall determine the amount to be deposited by the owner of a coal mine into the escrow account with the Director-General as the exclusive beneficiary as well as the manner of its utilization and terms for its release post-completion of the final mine closure activities prescribed by the Authority.
- (3) The Authority shall, for the purposes of discharging its functions have the same powers as are vested in a court under the Code of Civil Procedure, 1908 when trying a suit in respect of the following matters, namely:
  - (a) discovery and inspections;
  - (b) enforcing the attendance of any person and examining him on oath;
  - (c) compelling the production of documents; and
  - (d) such other matters as may be prescribed.

## **Section 13. Interagency cooperation**

All departments, boards, commissioners, and authorities of the Central Government and State Government shall cooperate with the Authority by providing technical expertise, personnel, equipment, materials, and supplies to implement and administer the provisions of this Act.

In particular and without prejudice to the generality of this section, the Department of Science and Technology, the Ministry of Coal, the Ministry of Environment, Forest and Climate Change, and the Ministry of Mines in the Central Government, and all State Governments in India shall issue appropriate directions to all public sector undertakings and offices under their control to cooperate fully with the Authority *inter alia* by expeditiously providing the relevant documents, information, and expertise that may be required by the Authority to discharge its functions under this Act.

#### **Section 14. Power of entry and inspection**

All Members of the Authority, the Director-General and Director(s) are authorized to physically enter all coal mines for inspection and/or for collecting samples and records at such intervals along with such officials or assistants as they may deem fit to ensure compliance of this Act.

#### **Section 15. Functions of the Director-General and Director(s) of Coal Mining Environment**

(1) The overarching function of the Director-General and Director(s) of Coal Mining Environment is to implement the provisions of this Act and assure compliance with the provisions of this Act and the regulations, rules, clearances, approvals, permissions, and bye-laws, and orders made thereunder so that coal mines are operated in a manner that protects all citizens and the environment and forest during mining.

(2) The Director-General and Director(s) shall monitor, inspect, and assure that all coal mines are in compliance with the applicable mining plan, environment clearance, forest clearance, and other provisions of the Act at all times.

(3) The Director General shall arrange to install, operate, and maintain an adequate number of monitoring instruments to record the ambient levels of soil, air and water pollutants in each coalfield. The readings shown by these instruments shall be uploaded on the website of the Authority every 24 hours along with daily, weekly, and monthly trends.

(4) The Director-General and Director(s) shall monitor mine closure activities as per the final mine closure plan, and other clearances, permissions, and approvals granted by the Authority to assure that the land is restored to the beneficial use of the local communities following mining before issuing the Mine closure certificate.

(5) The Director-General shall operate the escrow account for funding the mine closure activities under the Coal Mines (Conservation and Development) Act, 1974 in the manner prescribed by the Authority;

(6) The Director-General shall submit an annual report to the Authority regarding the status of compliance of this Act in all coal mines.

(7) The Director-General shall submit an annual report to the Authority on the state of the environment in each coalfield of India which will include *inter alia* an assessment of the cumulative impact of coal mines on the

environment, forest quality and tree cover, land use, surface and underground water bodies, and the local communities.

- (8) The Director-General, may, with the approval of the Authority and subject to such restrictions or conditions as he may think fit to impose, by order in writing, authorize any Director named or any class or Directors specified in the order to exercise such of the powers of the Director-General under this Act as he may specify.
- (9) Subject to the other provisions contained in this section, the Director-General shall declare the local area or areas within which or the group or class of coal mines concerning which the Directors shall exercise their respective powers.

**Section 16.  
Powers of the Director-General and  
Directors of Coal Mining Environment**

The Director-General and any Director may:

- (1) make such examination and inquiry as he thinks fit to ascertain whether the provisions of this Act and the regulations, rules, clearances, approvals, permissions, and by-laws and of any orders made thereunder are observed in the case of any coal mine;
- (2) with such assistants, if any, as he thinks fit, enter, inspect, and examine any coal mine or any part thereof at any time by day or night:

Provided that the power conferred by this clause shall not be exercised in such a manner as unreasonably to impede or obstruct the working of the coal mine;

- (3) examine into, and make an inquiry concerning the state and condition of environmental compliance in any coal mine or any part thereof and take whether on the precincts of the coal mine or elsewhere, statements of any person which he may consider necessary for carrying out the purposes of this Act;
- (4) exercise such other powers as may be prescribed by regulations made by the Central Government in this behalf.

Provided that no person shall be compelled under this subsection to answer any question or make any statement to incriminate himself.

- (5) The Director-General and any Director may, if he has reason to believe, as a result of any inspection, examination or inquiry under this section, that an offense under this Act has been or is being committed, search any place and take possession of any material or any plan, section, register or other records appertaining to the coal mine in any form whatsoever, and the provisions of the Code of Criminal Procedure, 1973 (Act 2 of 1974) shall, so far as may be applicable apply to any search or seizure under this Act as they apply to any search or seizure made under the authority of a warrant issued under section 94 of the Code of Criminal Procedure.

**Section 17.  
Powers of the Director-General and  
Director when environmental hazards not  
expressly provided against exist**

- (1) If in respect of any matter for which no express provision is made by or under this Act, it appears to the Director-General or a Director that any coal mine or part

thereof or any matter, thing or practice in or connected with the coal mine, or with the control, supervision, management or direction thereof, is dangerous to the environment, he shall give notice in writing thereof to the owner, agent or manager of the coal mine and shall state in the notice the particulars in respect of which he considers the coal mine or part thereof or the matter, thing or practice to be dangerous to the environment, and require the same to be remedied within such time and in such manner as he may specify in the notice.

- (2) Where the owner, agent or manager of a coal mine fails to comply with the terms of a notice given under subsection (1) within the period specified therein, the Director-General or the Director as the case may be, shall, by order in writing, prohibit the employment in or about the coal mine or any part thereof of any person whose employment is not in his opinion reasonably necessary for securing compliance with the terms of the notice.
- (3) If the Director-General or a Director authorized in this behalf by general or special order in writing by the Director-

General, believes that there is an urgent and immediate danger to the environment, he shall, by order in writing containing a statement of the grounds of his opinion, prohibit until he is satisfied that the danger is removed, any activities in the concerned coal mine other than those required to be performed to remove the danger.

- (4) Every person whose employment is prohibited under subsection (2) or subsection (3) shall be entitled to payment of full wages for the period for which he would have been, but for the prohibition in employment and the owner, agent or manager of a coal mine shall be liable for payment of such full wages of that person:

Provided that the owner, agent or manager of a coal mine may instead of paying such full wages provide such person with alternative employment at the same wages which such person was receiving in the employment which was prohibited.

- (5) Nothing in this section shall affect the powers of a magistrate under Section 144 of the Code of Criminal Procedure, 1973.

## Chapter IV

### Duties and Responsibilities of the owner, agent, and manager of a coal mine

#### Section 18. Duties and responsibilities of owners, agents, and managers

- (1) The owner and agent of a coal mine shall each be responsible for making financial and other provisions and for taking such other steps as may be necessary for compliance with the provisions of this Act and the regulations, rules, bye-laws, and orders made thereunder.
- (2) If the carrying out of any instructions given otherwise than through the manager, results in the contravention of the provisions of this Act or of the regulations, rules, bye-laws, and orders made thereunder, every person giving such instructions shall also be liable for the contravention of the provisions concerned.
- (3) The owner, agent, and manager of a coal mine shall each be responsible to see that all operations carried on in connection with the coal mine are conducted in accordance with the provisions of this Act and of the regulations, rules, bye-laws, and orders made thereunder.
- (4) Every application to be made or information to be submitted by the owner, agent or manager of coal mine to the Authority or the Director-General or any Director for any purposes whatsoever shall be accompanied by a certificate stating that the facts stated are true and that no information that would be relevant to any permission or approval or clearance has been concealed or suppressed.
- (5) Concealment or falsification of relevant information by the owner, agent or manager of a coal mine for any approval or clearance or permission may result in revocation of such approval or clearance or permission along with the imposition of penalties as per the procedure established by law.
- (6) The owner, agent or manager of a coal mine shall give notice of any environmental incident in the prescribed form and within such time as may be prescribed to the Director-General and any Director authorized in this behalf.
- (7) The owner of every coal mine shall pay to the Authority, a sum equivalent to two per cent. of the royalty paid in terms of the Mines and Minerals (Development and Regulation) Act, 1957 (Act 67 of 1957), in such manner as may be prescribed by the Central Government.
- (8) In the event of any contravention by any person whatsoever of any of the provisions of this Act or the regulations, rules, bye-laws, and orders made thereunder except those which specifically require any person to do any act or thing or prohibit any person from doing an act or thing, besides the person who contravenes, each of the following persons shall also be deemed to be guilty of such contravention unless he proves that he had used due diligence to secure compliance with the provisions and had taken reasonable means to prevent such contravention:

- (a) the official or officials appointed to perform duties of supervision in respect of the provisions contravened;
- (b) the manager of the coal mine;
- (c) the owner and agent of the coal mine.

### **Section 19. Formulation of environment policy**

The owner of every coal mine shall submit to the Authority, the environment policy approved by him or (in the case of a coal mine owned by a Company) by the Board of Directors of the Company.

### **Section 20. Setting up an Environment department in a coal mining company**

- (1) Every owner of a coal mine shall set up an environment department for the coal mine(s) under his control or operation.
- (2) The chief of the environment department shall be a senior officer of the coal mining company serving in the level just below the owner.
- (3) The chief of the environment department shall hold a degree in mining engineering and a post-graduate degree in environmental science or engineering from an educational institution approved by the Central Government and shall have at least five years of post-qualification experience in the operations or environmental management of coal mines.
- (4) The environment department shall be made independent of the production line at all levels.

(5) The environment department shall be a multidisciplinary team consisting of experts in environmental law, forestry sciences, mining, pollution control, public health, and reclamation, with a field set-up which shall be above the coal mine level.

(6) The chief of the environment department of a coal mine (or a group of coal mines owned or operated by a Company) shall prepare and submit to the owner, agent, and manager, a report related to the status of environmental compliance in each coal mine owned or operated by the owner, agent, or manager at intervals not exceeding six months.

(7) The status reports of environmental compliance in each coal mine owned or operated by the coal mining company shall be reviewed and approved with such modifications as may be necessary during a special meeting of the board of directors of the coal mining company held at intervals not exceeding twelve months.

(8) The chief of the environment department shall prepare and submit to the owner, agent, and manager, an updated risk assessment and management plan for each coal mine owned or operated by the coal mining company at intervals not exceeding twenty-four months.

(9) The updated risk assessment and management plans prepared in accordance with subsection (7) shall be reviewed and approved with such modifications as may be necessary during a special meeting of the board of directors of the coal mining company held at intervals not exceeding twelve months.

- (10) The guidelines to be followed by the owner, agent, or manager for the preparation of the risk assessment and management plan mentioned in subsections 8 and 9 shall be prescribed by the Authority as per rules made in this regard.

### **Section 21.**

#### **Functions of the Environment department of a coal mining company**

- (1) All applications for statutory approval submitted by the owner, agent, and manager of a coal mine to the Authority shall be reviewed by the chief of the environment department before submission.
- (2) The owner shall enable and empower the environment department to develop and maintain a suitable organization to review all applications submitted for approval by the Authority, to train the requisite personnel required to ensure compliance with this Act, to carry out inspections of the coal mine(s) under his control for monitoring and reporting the status of compliance with the approved mining plan, environmental clearance, and forest clearance related to each coal mine at intervals not exceeding six months.
- (3) The manager of the coal mine shall submit a digitally signed electronic copy of a comprehensive environmental compliance report in the prescribed form to disclose the status of compliance with the mining plan, environmental clearance, and forest clearance in the coal mine to the Authority, to the Director-General, and any Director authorized in this behalf, on 1 June and 1 December of each calendar year.

- (4) The environment department of every coal mining company shall make an in-depth mine-wise, cause-wise analysis of all environmental incidents, and the owner, agent or manager shall submit digitally signed electronic copies of such reports to the Authority, to the Director-General, and any Director of Coal Mining Environment authorized in this behalf, every three months or within seven days of the occurrence of any environmental incident in the coal mining company.

- (5) The reports submitted by the coal mine under subsections (3) and (4) shall be published on the website of the Authority and that of the coal mining company within seven days of their submission to the Authority.

- (6) The formats for the reports mentioned in subsections 3 and 4 shall be prescribed by the Authority as per rules made in this regard.

### **Section 22.**

#### **Appointment of an environment officer for a coal mine**

- (1) The owner or agent of a coal mine having opencast workings shall appoint a full-time environment officer. In the case of a coal mine area consists of more than two hundred hectares, the owner or agent shall appoint additional environmental officers for every three hundred hectares increase in the coal mine area.
- (2) The environment officer shall hold a degree in mining engineering and a post-graduate degree in environmental science or engineering from an educational institution approved by the Central Government



and shall have at least two years of post-qualification experience in mining or environment.

- (3) The manager of a coal mine shall arrange for his subordinates to report immediately, every environmental incident to the environment officer orally at first followed by a written report within 24 hours of the incident.
- (4) The environment officer shall submit a written report to the owner, agent, and manager of a coal mine and (in the case of a group of coal mines owned by a Company) to the chief of the environment department immediately but not later than 48 hours after he comes to know of any environmental incident.

### **Section 23.**

#### **Facilities to be afforded to Members of Authority, the Director-General, and Director(s) of Coal Mining Environment**

The owner or agent of a coal mine shall provide such facilities to the Members and Chairperson of

the Authority, Director-General, and Director(s) which they deem necessary to inspect the coal mine(s) under their jurisdiction.

### **Section 24.**

#### **Obligations of persons employed in a coal mine**

No person employed in a coal mine shall:

- (1) wilfully interfere with or misuse any appliance, convenience or other thing provided in a coal mine to measure or record or controlling environmental pollutants;
- (2) wilfully and without reasonable cause do anything likely to endanger the environment;
- (3) wilfully neglect to make use of any appliances or other things provided to protect the environment;
- (4) obstruct the inspection and procedure being carried out by the Authority, Director-General, and Director, or any other persons authorized by the Authority.

## Chapter V

### Procedure for various approvals from the Authority

#### Section 25. Coal Mines to operate in accordance with approved Mining plan, Environment Clearance, and Forest Clearance

- (1) No mining lease for coal shall be granted or renewed without a Mining plan duly approved by the Authority under the Mines and Minerals (Development and Regulation) Act, 1957.
- (2) Every coal mining project shall seek prior environmental clearance from the Authority before any construction work, or site preparation (except for securing the land) as per the procedure established by law under the Environment (Protection) Act, 1986.
- (3) Except with the prior written approval of the Authority, no State Government or other authority shall issue any order with respect to a coal mine, directing that:
  - (a) any reserved forest (within the meaning of the expression “reserved forest” in any law for the time being in force in that State) or any portion thereof, shall cease to be reserved;
  - (b) any forest land or any portion thereof may be used for any non-forest purposes;
  - (c) any forest land or any portion thereof may be assigned by way of lease or otherwise to any private person or to any authority, corporation, agency or any other organization not owned, managed or controlled by Government;
  - (d) that any forest land or any portion thereof may be cleared of trees which have grown naturally in that land or

portion, for the purpose of using it for re-afforestation.

- (4) Notwithstanding anything said in this section, the approved mining plan, environmental clearance, and forest clearance granted to any coal mine or coal mining project before the commencement of this Act shall continue to remain valid for their remaining period as per the terms and conditions of these approvals and clearances unless they are either amended or suspended or revoked as per procedure established by law.

#### Section 26. Procedure for approval of Mining plan, Environment Clearance, and Forest Clearance

- (1) In the case of a coal mining project or coal mine (or any expansion thereof), the owner shall prepare a draft mining plan that incorporates a preliminary assessment of the environmental impacts of the proposed coal mining project or coal mine as well as a forest diversion proposal if forest clearance is required under this Act or the Forest (Conservation) Act, 1980. The owner shall prepare the draft mining plan as per the standards, guidelines, and procedures prescribed by the Authority.
- (2) The owner of a coal mine or a coal mining project shall submit to the Authority, the draft mining plan along with his application for Terms of Reference to conduct an environmental impact assessment for

the purpose of obtaining environmental clearance under the Environment (Protection) Act, 1986. This application shall be accompanied with the requisite fee, and shall also include a forest diversion proposal in the prescribed form if forest clearance is also required under this Act or the Forest (Conservation) Act, 1980.

- (3) The owner of a coal mine or a coal mining project shall conduct the environmental impact assessment as per the terms of reference issued by the Authority and prepare a draft EIA report as per the standards, guidelines, and procedures prescribed by the Authority.
- (4) The owner of a coal mine or a coal mining project shall prepare a mining plan as per the standards, guidelines, and procedures prescribed by the Authority. The mining plan shall also incorporate the draft EIA report prepared under subsection (3) as well as a forest diversion proposal in the prescribed form if forest clearance is required under the Forest (Conservation) Act, 1980.
- (5) The owner of a coal mine or a coal mining project shall apply to the Director General for the conduct of the public consultation and public hearing enclosing the mining plan prepared under subsection (4) and the requisite fees along with his application for the conduct of public consultation and public hearing. The mining plan shall be published on the website of the Authority as well as the website of the coal mining company within seven days of their issue.
- (6) The Director-General or the Director duly authorised by him shall conduct a public consultation and public hearing for

the coal mine or a coal mining project in coordination with the District Magistrate or any other officer not below the rank of Additional District Magistrate who shall preside over the public hearing. The dissemination of information regarding the public consultation and public hearing and the rules for the conduct of the public consultation and public hearing shall be as per the procedure established by law.

- (7) The Director-General or the Director who has conducted the public consultation and public hearing under subsection (6) shall publish the minutes of the public consultation and the public hearing on the website of the Authority within thirty days of the completion of the public hearing.
- (8) The owner of a coal mine or coal mining project shall revise the mining plan submitted by him under subsection (5) after incorporating the final EIA report,, and the revised forest diversion proposal (as applicable) giving due consideration to the approved minutes of the public consultation and the public hearing as well as any clarifications sought by the Authority as per the procedure established by law.
- (9) Based on the revised mining plan submitted by the owner under subsection (8), the proceedings of the public consultation and public hearing processes, and the clarifications received from the owner, the Authority shall either reject the revised mining plan for reasons to be recorded in writing or grant approval for the Mining plan under the Mines and Minerals (Development and Regulation) Act, 1957 with such conditions as may be necessary.

(10) Once the Mining plan is approved under subsection (9), the Authority shall also grant environmental clearance to the coal mine or coal mining project under the Environment Protection Act, 1986 with such conditions as may be necessary.

(11) If the Mining plan approved under subsection (9) also includes a forest diversion proposal, the Authority shall also grant in-principle approval for forest clearance under the Forest (Conservation) Act, 1980, as per the procedure established by law.

Provided however that the Authority shall not grant in-principle approval for the forest diversion proposal unless it has satisfied itself that the District Collector has completed the process of recognition and vesting of forest rights in accordance with the provisions of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (2 of 2007) for the entire forest land indicated in the proposal, and has obtained the consent of each Gram Sabha having jurisdiction over the whole or a part of the forest land indicated in the proposal for the diversion of such forest land and compensatory and ameliorative measures, if any, having understood the purposes and details of diversion, wherever required.

(12) The Authority shall issue one complete set of the approved and duly authenticated Mining plan incorporating the final EIA report along with the approved forest diversion proposal (as applicable) to the owner of the coal mine or coal mining project. The aforesaid set of documents shall be published on the website of the Authority as well as the website of the coal

mining company within seven days of their issue.

(13) Once the owner of a coal mine or coal mining project receives in-principle approval for a forest diversion proposal under subsection (11), he shall comply with the terms and conditions specified therein within a period of six months and submit a compliance report to the Authority duly certified by the Director General along with an application to accord final approval for forest clearance.

(14) On receiving an application for final approval of forest clearance under subsection (13), the Authority shall either reject the application for final approval of forest clearance for reasons to be recorded in writing or approve the forest clearance under the Forest (Conservation) Act, 1980 with such terms and conditions as may be necessary.

(15) The Authority shall consult the State Government before granting in-principle approval for forest clearance under subsection (11) and before according final approval under subsection (14).

(16) Based on the final approval of the forest clearance by the Authority under subsection 14, the State Government shall issue the final order under the Forest (Conservation) Act, 1980 leasing the said forest land to the owner of the coal mine or coal mining project for non-forest purpose as per the terms and conditions approved by the Authority.

(17) The owner, agent, and manager of a coal mine or coal mining project shall strictly comply with the Mining plan,

Environmental Clearance, and Forest Clearance (as applicable) along with other terms and conditions imposed by the Authority under subsections (10), (12), (14), and (16) till the time the final mine closure plan for the coal mine is duly approved by the Authority under Section 28. Any amendment in the terms and conditions of the Mining plan, the environmental clearance and the forest clearance shall be granted only by the Authority as per the procedure established by law.

### **Section 27. Mine opening permission**

- (1) The owner of a coal mine shall apply for the mine opening permission in the prescribed form to the Authority along with the requisite fees for grant of mine opening permission under the Coal Mines (Conservation and Development) Act, 1974 (Act 28 of 1974).
- (2) The Authority shall grant the mine opening permission for a coal mine after satisfying itself that all statutory approvals required for opening the coal mine have been granted by the respective Authorities and the owner has deposited sufficient funds in the escrow account as per the escrow agreement related to the coal mine.
- (3) The owner, agent, and manager of a coal mine shall operate the mine in accordance with the mine opening permission granted to the coal mine.
- (4) If the owner fails to deposit the required amount in the escrow account as per the escrow agreement, the Authority may withdraw the mine opening permission

and other approvals and clearances granted to the coal mine as per the procedure established by law.

### **Section 28 Final mine closure plan and Mine closure certificate**

- (1) It is the sole responsibility of the owner to ensure that the reclamation, rehabilitation, revegetation, pollution control, protective works and other measures indicated in the Mining plan, Environmental clearance, Forest clearance, and in the regulations, rules, bye-laws, and orders issued under this Act are carried out promptly so that the area affected by the coal mine is reclaimed, rehabilitated, and revegetated for the optimal benefit of the local communities.
- (2) If any coal mine is abandoned or closed before the completion of mine closure activities as per the Mining plan, Environmental clearance, and Forest clearance or any other approval granted to the coal mine, the Authority shall take suitable steps to carry out the prescribed mine closure activities and recover the cost thereof from the escrow account for the coal mine:

Provided that if the escrow amount is inadequate to complete the mine closure activities, the Authority shall recover the differential amount along with a penalty from the owner of the coal mine as per the procedure established by law.

- (3) The owner of a coal mine shall submit a draft final mine closure plan along with the updated details and cost estimates of mine closure activities and the requisite fee to

the Authority at least five years before the intended final closure of a coal mine.

- (4) On receipt of the draft final mine closure plan, the Director-General or a Director authorized by him in this behalf shall carry out a detailed inspection of the coal mine and the mining-affected area within thirty days of receiving the draft final mine closure plan. The Director-General or the aforesaid Director may be accompanied by such officials of the Authority whose assistance may be useful to assess the details and costs of the activities required to ensure that the area affected by the coal mine is reclaimed and rehabilitated for the benefit of the local communities.
- (5) Within a period of 30 days after the inspection carried out as per subsection (4), the Director-General or the aforesaid Director shall return the draft final mine closure plan to the owner along with directions containing any revisions that may be required to comply with rules prescribed in this behalf.
- (6) Within a period of 60 days from the receipt of the aforesaid directions, the owner shall submit a revised draft of the final mine closure plan that is compliant with these directions.
- (7) The owner and the Authority shall publish the draft final mine closure plan submitted in compliance with subsection (6) on their respective websites for inviting public comments.
- (8) Within a period of 60 days after publishing draft final mine closure plan under subsection (7), the Director-General or the Director authorized by him shall conduct

a public consultation as per the procedure established by law. The Director-General or the Director who has conducted the public consultation on his behalf shall publish the minutes of the public consultation on the website of the Authority within thirty days of the completion of the public consultation.

- (9) In case the Director General finds that the funds in the escrow account are inadequate to implement the final mine closure activities with due consideration to the minutes of the public consultation published under subsection (8), the owner shall top up the escrow account to bridge the deficit within thirty days of receiving a notice from the Authority failing which the owner shall be liable to pay the deficit amount along with a penalty as per the procedure established by law.
- (10) Once the escrow account is topped up by the owner following subsection (6), the Authority shall approve the Final mine closure plan with such additional conditions that may be required to ensure that the area affected by the coal mine is reclaimed, rehabilitated, and revegetated for the optimal benefit of the local communities.
- (11) The owner, agent, and manager shall implement the final mine closure activities as per the Final mine closure plan duly approved as per subsection (10), and submit a detailed report to the Authority in the prescribed format on 1 June and 1 December of each calendar year, giving the details and costs of the final mine closure activities carried out by them.
- (12) Each report submitted to the Authority under subsection (11) shall be published on the website of the Authority and the coal

mining company within seven days of its submission.

- (13) The owner of a coal mine shall apply for mine closure permission in the prescribed format to the Authority not less than six months before the projected date of final mine closure along with the requisite fee.
- (14) On receiving the application for mine closure permission, the Director-General or a Director authorized by him in this behalf shall inspect the coal mine not less than one hundred and fifty days before the projected date of final mine closure to verify whether that the owner, agent, and manager have implemented the mine closure activities as per the Final mine closure plan and issue appropriate directions containing any revisions that may be required to comply with rules prescribed in this behalf.
- (15) The Director-General shall issue the mine closure certificate and return up to fifty percent of the escrow amount to the owner only after satisfying himself that the owner has carried out the reclamation, rehabilitation, and revegetation of the mining-affected areas for the benefit of the local communities as per the final mine closure plan, and has also completed the protective works required to ensure that drainage controls in the area affected by the coal mine are sufficient to control any pollution of water bodies within the limits permitted by law:

Provided that the Director-General shall not issue the mine closure certificate unless he is satisfied that the owner has complied with this Act and the regulations, rules, bye-laws, and orders made thereunder, and shall not return the balance escrow amount

before the expiry of three years from the date of completion of the prescribed final mine closure activities.

### **Section 29.**

#### **Continued validity of approvals, clearances, and permission granted before the commencement of this Act**

- (1) All approvals, clearances, and permissions granted before the commencement of this Act shall remain valid till the time the Authority modifies or amend any of these approvals, clearances, and permission as per the procedure established by law.
- (2) Notwithstanding anything contained in this Act or any other law for the time being in force, in case of change of ownership of a coal mine, the new owner and lessee shall be deemed to have acquired all valid rights, approvals, clearances, licenses and the like vested with the previous lessee for two years:
- Provided that subject to such conditions as may be prescribed, such new owner or lessee shall apply and obtain all necessary rights, approvals, clearances, licenses and the like within two years from the date of taking control as the owner of the mine.
- (3) Notwithstanding anything contained in any other law for the time being in force, it shall be lawful for the new owner or lessee to continue mining operations on the land, in which mining operations were being carried out by the previous owner or lessee, for two years from the date of commencement of the new lease or from the date of taking over as the owner.

## Chapter VI

### Offenses and penalties under this Act

#### Section 30. Obstruction

- (1) Whoever obstructs the Director-General and Director under section 14 in the discharge of his duties under this Act or refuses or wilfully neglects to provide the Director-General and Director any reasonable facility for making any entry, inspection, examination or inquiry authorized by or under this Act in relation to any coal mine shall be punishable with imprisonment of a term which may extend to three months, or with a penalty which may extend to five lakh rupees, or both.
- (2) Whoever refuses to produce on the demand of the Director-General and Director of any registers or records (in any form) maintained in pursuance of this Act or prevents or attempts to prevent or does anything which he has reason to believe to be likely to prevent any person from appearing before or being examined by a Director-General and Director acting in pursuance of his duties under this Act, shall be punishable with a penalty which may extend to twenty thousand rupees per day.
- (2) counterfeit or knowingly uses as true any such counterfeit copy of a statutory permission or approval or clearance or;
- (3) makes or produces or uses any false declaration, statement or evidence knowing the same to be false for obtaining for himself or any other person any approval, or the renewal of any approval under this Act or;
- (4) falsifies any plan, section, register or record, the maintenance of which is required by or under this Act or produces before Authority such false plan, section, register or record, knowing the same to be false or;
- (5) makes, gives or delivers any plan, return, notice, record or report containing a statement, entry or detail which is not to the best of his knowledge or belief true;

shall be punishable with imprisonment for a term which may extend to three years or with a penalty which may extend to five lakh rupees or with both.

#### Section 31. Falsification of records

Whoever:

- (1) counterfeit or knowingly makes a false entry or statement in any report related to the provision of this Act or;

#### Section 32. Omission to furnish plans etc.

Any person who, without reasonable excuse, the burden of providing which shall lie upon him, omits to make or furnish in the prescribed form or manner or at or within the prescribed time any plan, notice, register, record or report required by or under this Act to be made or furnished



shall be punishable with a penalty which may extend to twenty thousand rupees per day.

### **Section 33.**

#### **Failure to set up the Environment department and appoint an Environment officer**

Whoever, in contravention of the provisions of sections 20 and 22, fails to appoint or constitute the environment department and appoint an environment officer shall be punishable with a penalty which may extend to twenty thousand rupees per day.

### **Section 34.**

#### **Environmental incident**

- (1) The manager of a coal mine who fails to give notice of an environmental incident to the Director-General and any Director as prescribed in subsection (6) of section 18 shall be punishable with imprisonment for a term which may extend to three months, or with a penalty which may extend to five lakh rupees or with both.
- (2) The Director-General and any Director after receiving the notice of an environment incident as per section 18 (6) or after coming to know about the environmental incident through any other means may impose a penalty which may extend to five lakh rupees for the manager and up to one crore rupees for the owner of the coal mine:

Provided that the owner of the coal mine shall be absolutely liable for the environmental incident and shall pay for ecological restoration based on the polluter pays principle.

### **Section 35.**

#### **Special provision for contravention of orders under section 17**

Whoever continues any work in a coal mine in contravention of any order issued under subsection (2) or subsection (3) of section 17, the agent and the manager of the coal mine shall be punishable with imprisonment for a term which may extend to five years, and shall also be liable to a penalty which may extend to five lakh rupees.

### **Section 36.**

#### **Special provision for contravention of law with dangerous results**

Whoever contravenes any provision of this Act or any regulation, rule or bye-law or any order made thereunder other than an order made under subsection (2) of section 18 shall be punishable:

- (1) if such contravention results in an environmental disaster, with imprisonment which may extend to seven years, or with a penalty which may extend to twenty-five crore rupees for the owner and five lakh rupees for the manager or the person liable for the said disaster by giving instructions otherwise than through the manager, or with both:

Provided that the owner shall be absolutely liable for the environmental disaster and shall pay for the ecological restoration based on the polluter pays principle.

- (2) Where a person having been convicted under this section is again convicted thereunder, he shall be punishable with double the punishment provided by subsection (1).

- (3) Any court imposing or confirming in appeal, revision or otherwise a sentence of penalty passed under this section may, when passing judgment, order the whole or any part of the penalty recovered to be paid as compensation to the person(s) affected by the environmental disaster, or in the case of his death, to his legal representative.

**Section 37.**  
**Enhanced penalty after a previous conviction**

If any person who has been convicted for an offence punishable under any of the foregoing provisions is again convicted for an offence committed within two years of the previous conviction and involving a contravention of the same provision, he shall be punishable for each subsequent conviction with double the punishment to which he would have been liable for the first contravention of such provision.

**Section 38.**  
**Protection of action taken in good faith**

No suit, prosecution or other legal proceedings shall lie against the Government or any officer of the Government or any member or any officer or other employee of the Authority in respect of anything which is done or intended to be done in good faith in pursuance of this Act or the rules made thereunder.

**Section 39.**  
**Prosecution of the owner, agent or manager**

No prosecution shall be instituted against any owner, agent or manager of a coal mine for any

offence under this Act except at the instance of the Director-General or the District Magistrate or a Director authorized in this behalf by general or special order in writing by the Director-General:

Provided that the Director-General or the District Magistrate or the Director as so authorized shall, before instituting such prosecution, satisfy himself that the owner, agent or manager of a coal mine had failed to exercise all due diligence to prevent the commission of such offence.

Provided further that in respect of an offence committed in the course of the technical direction and management of a coal mine, the District Magistrate shall not institute any prosecution against an owner, agent or manager of a coal mine without the approval of the Director-General.

**Section 40.**  
**Limitation of prosecutions**

No court shall take cognizance of any offence under this Act unless complaint thereof has been made:

- (1) within one year of the date on which the offence is alleged to have been committed, or
- (2) within six months of the date on which the alleged commission of the offence came to the knowledge of the Director-General or Director, or
- (3) In any case in which the accused is or was a public servant and previous sanction of the Central Government or the State Government or any other authority is necessary for taking cognizance of the

offence under any law for the time being in force, within three months of the date on which such sanction is received by the Director-General; or

Explanation - For the purposes of this section –

- (a) In the case of a continuing offence, the period of limitation shall be computed with reference to every point of time during which the offence continues,
- (b) Where for the performance of any act time has been extended under this Act, the period of limitation shall

be computed from the expiry of the extended period.

### **Section 41. Cognizance of offences**

No court inferior to that of a Metropolitan Magistrate or a Judicial Magistrate of the first class shall try any offence under this Act which is alleged to have been committed by any owner, agent or manager of a coal mine or any offence which is by this Act made punishable with imprisonment.

## Chapter VII

### Complaints to the Authority and appeals against the orders, decisions or directions of the Authority

#### Section 42. Exclusion of jurisdiction of civil courts

No civil court shall have jurisdiction to entertain any suit or proceeding in respect of any matter which the Authority is empowered by or under this Act to determine and no injunction shall be granted by any court or other authority in respect of any action taken or to be taken in pursuance of any power conferred by or under this Act.

#### Section 43. Complaints to the Authority

- (1) Any person aggrieved by the non-compliance of the provisions of this Act by a coal mining company or one of its employees, may within a period of one year from the date of such non-compliance file a written complaint to the Authority.
- (2) On receiving the said complaint, the Authority shall have the matter investigated by the Director-General and shall dispose of the complaint within six months as per procedure laid down by law.
- (3) Any person aggrieved by the decisions or orders or actions of the Director-General or by the decisions or orders or actions of

a Director, may within six months from the date of such non-compliance file a written complaint to the Authority.

- (4) On receiving the said complaint, the Chairperson of the Authority shall have the matter investigated by the Member who is an expert in environmental law. This Member shall dispose of the complaint within six months as per procedure laid down by law.

#### Section 44. National Green Tribunal to have appellate jurisdiction against an order or decision or direction by Authority

Any person aggrieved by an order or decision or direction of the Authority, may within sixty days from the date of such order or decision or direction is communicated to him, prefer an appeal to an appropriate bench of National Green Tribunal:

Provided no complaint shall be filed with the National Green Tribunal without giving thirty days' notice to the Authority to decide upon the grievance against which the aggrieved person wants to file an appeal with the National Green Tribunal.

## Chapter VIII

### Funds, Accounts, and Audit

#### Section 45. Grants by the Central Government

The Central Government may, after due appropriation made by Parliament by law in this behalf, grant such amounts of money to the Authority as may be required for achieving the purposes of this Act.

#### Section 46. Constitution of Fund

- (1) There shall be constituted a fund to be called the “Coal Mines Environment Authority Fund,” and there shall be credited thereto:
  - (a) all Government grants received by the Authority;
  - (b) the fees, fines, and penalties received under this Act;
  - (c) all sums collected from the owner of every coal mine under Section 18 of this Act;
  - (d) the interest accrued on the amounts referred to in clauses (a), (b) and (c).
- (2) The Fund shall be applied for meeting:
  - (a) the salaries and allowances payable to the Chairperson and other Members and the administrative expenses including the salaries, allowances, and pension payable to the Director-General, Director(s), officers, and other employees of the Authority;
  - (b) any other expenses of the Authority and the Director General in connection with the discharge of their functions

- and for the purposes of this Act.
- (c) The Fund shall be administered by the Chairperson of the Authority as may be determined by the rules laid down by the Central Government.

#### Section 47. Accounts and audit

- (1) The Authority shall maintain proper accounts and other relevant records and prepare an annual statement of accounts in such form as may be prescribed by the Central Government in consultation with the Comptroller and Auditor-General of India.
- (2) The accounts of the Authority shall be audited by the Comptroller and Auditor-General of India at such intervals as may be specified by him and any expenditure incurred in connection with such audit shall be payable by the Authority to the Comptroller and Auditor-General of India.
 

Explanation— For the removal of doubts, it is hereby declared that the orders of the Authority, being matters appealable to the National Green Tribunal or the Supreme Court, shall not be subject to audit under this Section.
- (3) The Comptroller and Auditor-General of India and any other person appointed by him in connection with the audit of the accounts of the Authority shall have the same rights, privileges and authority in connection with

such audit as the Comptroller and Auditor-General of India generally has, in connection with the audit of the Government accounts and, in particular, shall have the right to demand the production of books, accounts, connected vouchers, and other documents and papers and to inspect any of the offices of the Authority.

- (4) The accounts of the Authority as certified by the Comptroller and Auditor-General of India or any other person appointed by him in this behalf together with the audit report thereon shall be forwarded annually to the Central Government, and that Government shall cause the same to be laid before each House of Parliament.

## Chapter IX Miscellaneous

### Section 48.

#### Powers of the Central Government to issue directions

- (1) Without prejudice to the foregoing provisions of this Act, the Authority shall, in the exercise of its powers or the performance of its functions under this Act, be bound by such directions on questions of policy, other than those relating to technical and administrative matters, as the Central Government may give in writing to it from time to time:

Provided that the Authority shall, as far as practicable, be given an opportunity to express its views before any direction is given under this subsection.

- (2) The decision of the Central Government whether a question is one of policy or not shall be final.

### Section 49.

#### Powers of the Central Government to make rules and regulations

The Central Government may, by notification in the Official Gazette, make rules and regulations consistent with this Act for all or any of the following purposes, namely:

- (1) for the appointment of Members and Chairperson of the Authority and the Director-General and Directors;
- (2) for prescribing the qualifications required

for appointment as Director-General or Director;

- (3) for prescribing and regulating the powers of the Chairperson and Members of the Authority;
- (4) for prescribing the duties and responsibilities of owners, agents, and managers of coal mines as well as persons acting under them, to ensure compliance with this Act;
- (5) to prescribe the standards and guidelines to be followed for carrying out General Exploration (G2) and Detailed Exploration (G1) related to a future or existing coal mine.
- (6) for laying down the requisite standards and guidelines for the preparation of a Geological Study (F3), Pre-feasibility Study (F2), and the Feasibility Study (F1) for a coal mine or a coal mining project.
- (7) for requiring facilities to be provided by the owner of a coal mine for enabling the manager of a coal mine and other persons acting under him to efficiently discharge their duties to ensure compliance with this Act;
- (8) for prescribing the qualifications of competent persons to carry out General Exploration (G2), Detailed Exploration (G1), and Geological Study (F3) for a coal mining project;
- (9) to prescribe the qualifications of competent

persons to prepare a Pre-feasibility Study (F2), Feasibility Study (F1), and a Mining plan for a coal mining project or a coal mine;

- (10) for prescribing the formats for maintenance and submission of returns or reports or applications or any other document required to demonstrate compliance with this Act;
- (11) for fixing the fees, if any, to be paid in respect of approvals, clearances, and permissions under this Act and the manner and the purposes for which the amounts credited to the Coal Mining Environment Fund shall be utilized;
- (12) to prescribe the financial and administrative powers to be exercised by the Chairperson of the Authority and the Director General;
- (13) to frame the rules for declaring any land unfit for coal mining due to environmental, technological, historical or other reasons.
- (14) any such matter in respect of which the Authority shall have the powers of a civil court under subsection (3) of section 12;
- (15) for the constitution of an expert committee to render advice to the Authority and the terms of engagement of non-official members in such expert committees;
- (16) such other matters as may be necessary for implementing this Act.

**Section 50.**  
**Act to have overriding effect**

- (1) The provisions of this Act shall have effect

notwithstanding anything inconsistent therewith contained in any other law for the time being in force.

- (2) If any difficulty arises in giving effect to the provisions of this Act, the Central Government, may, by order published in the Official Gazette, make such provisions, not inconsistent with the provisions of this Act as may appear to it to be necessary for removing the difficulty:
- (3) Provided that no such order shall be made after the expiry of a period of two years from the commencement of this Act.
- (4) Every order made under this section shall be laid, as soon as may be after it is made, before each House of Parliament.

**Section 51.**  
**Restriction on employment of Chairperson and Members of the Authority, the Director-General, and Directors in certain cases**

The Chairperson, Members of the Authority, the Director-General, and Directors shall not, for a period of two years from the date on which they cease to hold office, accept any employment in, or connected with the management or administration of any coal mining company which has been a party to a proceeding before the Authority without the prior written permission of the Central Government.

Provided that nothing contained in this section shall apply to any employment under the Central Government or a State Government or local authority or in any statutory authority established by or under any Central, State or Provincial Act.



## Annexure - II

### DRAFT ENVIRONMENT, FOREST, AND MINERAL LAWS (AMENDMENT) BILL, 2021

#### ARRANGEMENT OF SECTIONS

Section	Amendments Required	Page
<b>Chapter I</b> <b>Preliminary</b>		
1	Introduction	70
2	Date of Commencement	70
<b>Chapter II</b> <b>Amendments to the Environment (Protection) Act, 1986</b>		
3	New section 3A	70
<b>Chapter III</b> <b>Amendments to the EIA Notification, 2006</b>		
4	New clause 4.1.	70
<b>Chapter IV</b> <b>Amendments to the Forest (Conservation) Act, 1980</b>		
5	New section 2A	70
<b>Chapter V</b> <b>Amendments to the Forest (Conservation) Rules, 2003</b>		
6	New rule 5C	70
<b>Chapter VI</b> <b>Amendments to the Mines and Minerals (Development and Regulation) Act, 1957</b>		
7	New subsection 5(3)	71
8	Proviso to subsection 13 (1)	71
9	Proviso to subsection 13 (2)	71
10	Proviso to subsection 18 (1)	71
11	Proviso to subsection 18 (2)	71
12	Proviso to subsection 20A (1)	71
13	Proviso to subsection 20A (2)	71

<b>Chapter VII</b>		
<b>Amendments to the Colliery Control Rules, 2004</b>		
14	Amendment to rule 15	72
15	New rule 15 (A)	72
<b>Chapter VIII</b>		
<b>Amendments to the Coal Mines (Conservation and Development) Act, 1974</b>		
16	Proviso to section 2	72
<b>Chapter IX</b>		
<b>Amendments to the Coal Mines (Conservation and Development) Rules, 1975</b>		
17	Amendment to rule 18G	72
18	Amendment to rule 18I	72
19	Amendment to rule 18K	72
20	Amendment to rule 18L	72
<b>Chapter X</b>		
<b>Amendments to the National Green Tribunal Act, 2010</b>		
21	Amendment to Section 16	72

Coal plays a vital role in India's economic development as a significant input for electricity generation as well as for several core industries. Coal mining has major environmental impacts on the land, water, environment, and the communities. The Central Government has not only made explicit statutory provisions for protecting the environment in the country's mining laws but has also enacted specific environmental laws to control pollution and protect the forest and environment. The Government has also constituted different authorities to enforce these laws in coal mines as well as in other areas. The Government is of the opinion that a consolidated framework

for more efficient and effective forest and environmental governance of coal mines is required in India, which will include inter alia, the role, responsibility, organization, and functioning of a unified authority, namely the Coal Mining Authority under a separate Act, i.e., the Sustainable Coal Mining Act, 2021.

A Bill further to amend the Environment (Protection) Act, 1986, and Forest (Conservation) Act, 1980, the Mines and Minerals (Development and Regulation) Act, 1957, and the Coal Mines (Conservation and Development) Act, 1974.

Be it enacted by Parliament in the Seventy-second Year of the Republic of India as follows: -



Pit lake in the final void of an opencast coal mine

**Chapter I  
PRELIMINARY**

1. This Act may be called the Environment, Forest, and Mineral Laws (Amendment) Act, 2021.
2. It shall come into force on such date, as the Central Government may, by notification in the Official Gazette, appoint and any reference in any such provision to the commencement of this Act shall be construed as a reference to the coming into force of that provision.

**Chapter II  
AMENDMENTS TO THE  
ENVIRONMENT (PROTECTION)  
ACT, 1986**

3. In the Environment (Protection) Act, 1986, the following section shall be inserted after section 3, namely: -  
“3A: Powers and functions of the Central Government to be delegated to the Coal Mines Environment Authority: In relation to coal mines, the Central Government shall delegate its powers under section 3 other than those sections included in 3(2)(iii) and 3(2)(iv) to the Coal Mines Environment Authority constituted under the Sustainable Coal Mining Act, 2021”.

**Chapter III  
AMENDMENTS TO THE EIA  
NOTIFICATION, 2006**

4. In the EIA Notification, 2006, a new clause shall be inserted after clause 4, namely: -

“4.1. Notwithstanding anything contained in EIA Notification, 2006, the Coal Mines Environment Authority shall regulate the grant of Environment Clearance for coal mines under the Sustainable Coal Mining Act, 2021”.

**Chapter IV  
AMENDMENTS TO THE FOREST  
(CONSERVATION) ACT, 1980**

5. In the Forest (Conservation) Act, 1980, a new section shall be inserted after section 2, namely: -

“2A. Notwithstanding anything contained in section 2, the Coal Mines Environment Authority shall be authorized to approve the diversion of forest land for the purpose of a coal mine under the Sustainable Coal Mining Act, 2021”.

**Chapter V  
AMENDMENTS TO THE FOREST  
(CONSERVATION) RULES, 2003**

6. In the Forest (Conservation) Rules, 2003, a new rule shall be inserted after rule 5 (b), namely: -

“5C. Notwithstanding anything contained in these rules, the Coal Mines Environment Authority shall be empowered to approve the diversion of forest land for the purpose of a coal mine under the Sustainable Coal Mining Act, 2021”.

**Chapter VI**  
**AMENDMENTS TO THE MINES AND**  
**MINERALS (DEVELOPMENT AND**  
**REGULATION) ACT, 1957**

7. In the Mines and Minerals (Development and Regulation) Act, 1957 (hereafter in this Chapter referred to as the principal Act), after subsection 5(2)(b), the following subsection shall be inserted, namely: -

“5(3). Notwithstanding anything contained in subsection 5(2), the State Government may grant a mining lease for a coal mine only after the approval of the mining plan by the Coal Mines Environment Authority under the Sustainable Coal Mining Act, 2021”.

8. In Section 13 of the principal Act, the following proviso shall be inserted for the subsection 13(1), namely: -

“Provided that the Central Government shall by notification in the Official Gazette, delegate such powers to the Coal Mines Environment Authority as may be required for the implementation of the Sustainable Coal Mining Act, 2021”.

9. In Section 13 of the principal Act, the following proviso shall be inserted for the subsection 13(2), namely: -

“Provided that the Central Government shall by notification in the Official Gazette, delegate such powers to the Coal Mines Environment Authority as may be required for the implementation of the Sustainable Coal Mining Act, 2021”.

10. In Section 18 of the principal Act, the following proviso shall be inserted after

subsection 18 (1), namely: -

“Provided that the Central Government shall delegate to the Coal Mines Environment Authority the powers required to take necessary steps for protection of the environment by preventing or controlling any pollution which may be caused by prospecting or mining operations in a coal mine”.

11. In Section 18 of the principal Act, the following proviso shall be inserted after subsection 18 (2), namely: -

“Provided that the Central Government shall delegate to the Coal Mines Environment Authority the powers required to take necessary steps for protection of the environment by preventing or controlling any pollution which may be caused by prospecting or mining operations in a coal mine”.

12. In Section 20A of the principal Act, after subsection 20A (1), the following proviso shall be inserted, namely: -

“Provided that, the Central Government shall authorize the Coal Mines Environment Authority to issue such directions in relation to coal mines”.

13. In Section 20A (2) of the principal Act, after subsection 20A (2), the following proviso shall be inserted, namely: -

“Provided that, the Central Government shall authorize the Coal Mines Environment Authority to issue directions in relation to coal mines, except in matters related to mineral concessions”.

**Chapter VII**  
**AMENDMENTS TO THE COLLIERY**  
**CONTROL RULES, 2004**

14. In the Colliery Control Rules, 2004 (hereafter referred to in this Chapter as the principal Rules), in rule 15, for the words and figures “rules 6, 9 and 11”, the word and figure “rule 6”, shall be substituted.
15. In rule 15 of the principal Rules, the following rule shall be inserted after rule 15, namely:-

Rule 15 (A) Delegation of power to the Coal Mines Environment Authority: The power of the Central Government specified under rules 9, 10, and 11 shall be delegated by notification in the Official Gazette to the Coal Mines Environment Authority created under the Sustainable Coal Mining Act, 2021.

**Chapter VIII**  
**AMENDMENTS TO THE COAL**  
**MINES (CONSERVATION and**  
**DEVELOPMENT) ACT, 1974**

16. In the Coal Mines (Conservation and Development) Act, 1974, after section 2, the following proviso shall be inserted, namely: -

“Provided that the Central Government shall by notification in the Official Gazette, delegate such powers to the Coal Mines Environment Authority as may be required for the implementation of the Sustainable Coal Mining Act, 2021”.

**Chapter IX**  
**AMENDMENTS TO THE COAL**  
**MINES (CONSERVATION AND**  
**DEVELOPMENT) RULES, 1975**

17. In the Coal Mines (Conservation and Development) Rules, 1975 (hereafter referred to in this Chapter as the principal Rules), in rule 18G, the words “Central Government” shall be substituted with the words “Coal Mines Environment Authority”.
18. In rule 18I of the principal Rules, the words “Central Government” wherever they occur shall be replaced with the words “Coal Mines Environment Authority”.
19. In rule 18K of the principal Rules, the words “ Coal Controller” wherever they occur shall be replaced with the words “ Director-General of Coal Mining Environment “.
20. In rule 18L of the principal Rules, for the words and figures “rules 18D, 18E, 18G, 18I, 18K”, the words and figures “rules 18D and 18E”, shall be substituted.

**Chapter X**  
**AMENDMENTS TO THE NATIONAL**  
**GREEN TRIBUNAL ACT**

21. In the National Green Tribunal Act, after subsection 16(j), the following subsection shall be inserted, namely:-  
“Any person aggrieved by an order or decision or direction of the Coal Mines Environment Authority, may within sixty days from the date of such order or decision or direction is communicated to him under the Sustainable Coal Mines Act, 2021”.

# DOCUMENT CONTROL SHEET

- 1 **Document No and Year** : NIAS/NSE/EEP/U/RR/06/2021
- 2 **Title** : Sustainable Pathways to Energy Utilisation – Volume 1:  
Improving the environmental governance of coal mines in  
India through a unified authority
- 3 **Type of Document** : Research Report
- 4 **No. of Pages and Figures** : 72 + iv pages, 3 tables and 1 figures
- 5 **No. of References** : 88
- 6 **Authors** : Sarvajeet Kumar Sinha and R. Srikanth
- 7 **Originating School** : Natural Sciences and Engineering
- 8 **Programme** : Energy and Environment
- 9 **Collaboration** : NA
- 10 **Sponsoring Agency** : IRPHA Project SB/IR/NIAS/2016 of the  
Science and Engineering Research Board

11 **Abstract:**

India's per capita electricity consumption is less than one-third of the World's average. Seventy two percent of the electricity generated in India is powered by coal of which India is the World's second-largest producer. India is in the process of enhancing domestic coal production to provide affordable electricity to its population of 1.33 billion.

Coal mining and thermal power generation are critical for India to achieve its Sustainable Development Goals, but their long-term sustainability must be improved. The Government of India has taken numerous steps, including auctioning coal mines for commercial coal mining, inviting foreign direct investment, relaxing end-use restrictions, and opening a single portal to track different approvals and clearances required for commencing coal mining operations.

However, the current framework of multiple authorities under different laws governing various approvals and clearances has resulted in the overlap of jurisdictions, duplicity of procedures, and inadequate monitoring and enforcement of environmental laws. In this research, the authors examine various acts and rules related to the environmental regulation of coal mines in India to highlight the issues in the grant of key approvals and clearances.

The authors then propose a "Sustainable Coal Mining Bill" to constitute a unified authority named "Coal Mines Environment Authority" and outline the composition and functioning of this Authority to minimize the adverse environmental impacts of coal mining projects. This independent authority will adopt an integrated approach to both mining and the environment to enhance the effectiveness, efficiency, and transparency of the environmental regulation of coal mines and ensure sustainable energy security for India.

Finally, the authors detail the enabling amendments in the extant mining, forest, and environment laws to balance energy security with sustainable development in India since environmental challenges are bound to increase with the participation of the private players.

12 **Keywords:**

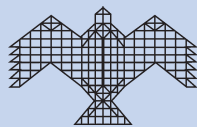
Coal Mine Environment Authority; Environmental regulation; Forest governance; Mine closure; Sustainable coal mining.

- 13 **Security Classification** : Unrestricted



## NATIONAL INSTITUTE OF ADVANCED STUDIES

The National Institute of Advanced Studies (NIAS) was conceived and established in 1988 by the vision and initiative of the late Mr. J.R.D. Tata primarily to nurture a broad base of scholars, managers and leaders to address complex and important challenges faced by society through interdisciplinary approaches. The Institute also engages in advanced multidisciplinary research in the areas of humanities, social sciences, natural sciences and engineering, as well as conflict and security studies.



Energy and Environment Programme  
**NATIONAL INSTITUTE OF ADVANCED STUDIES**  
Bengaluru, India