

Sustainable Development Framework

highlights

The Mining Sector faces the challenge of integrating the economic activity with environment protection and addressing social concerns.

A High Level Committee set up in the year 2005 under the Chairmanship of Shri Anwarul Hoda, Member Planning Commission to review the National Mineral Policy recommended the need to take into account the global trends in sustainable development.

7.9 SUSTAINABLE DEVELOPMENT FRAMEWORK

7.9.1 Introduction

The Mining Sector in India has a tremendous potential for growth as the country is rich in mineral wealth. The demand for minerals from Manufacturing and Infrastructure Sector is on the rise. The side-effects of such accelerated growth in exploration and mining are ecological imbalance and environmental disturbance. It is therefore a compulsion to adopt an effective policy and standardised approach to ensure that the damage caused to the natural resources, such as, air, water, soil, biomass and various life forms, including human beings due to mining are kept to the minimum.

The challenge that the Mining Sector faces is that of integrating the economic activity with that of environment protection and addressing social concerns. An effective system of governance is the key to achieving this integration of socio-environmental-economic factors which could result in sustainable development. This requires a robust framework based on an agreed set of principles, an understanding of the key challenges facing the Sector at different levels and in different regions and the action needed to address these problems; a process for responding to these challenges for protecting the rights and interest of people involved, ability to set priorities; ensure that action is taken at an appropriate levels; and an integrated set of institution and policy instrument to ensure minimum standards of compliance as well as responsible voluntary actions. It also requires variable measures to evaluate progress and enable consistent improvements. In this context, it is necessary to evolve a Sustainable Development Framework (SDF) within which all mineral development activities must be carried out.

7.9.2 SDF — Background

A High-Level Committee set up in the year 2005 under the Chairmanship of Shri Anwarul Hoda, Member, Planning Commission, to review the National Mineral Policy recommended that apart from introducing best practices in implementation of environment management, there was need to take into account the global trends in sustainable development. The High-Level Committee specifically studied the impact of mineral development with the need to develop principles in mining, best practices and reporting standards which could be measured objectively. The Committee held that some of the challenges facing the Indian Mining Sector for sustainable development would be to identify the appropriate use of land within a Land Planning framework, through a democratic decision-making process on the basis of integrated assessment of ecological, environmental, economical and social

impact. The panel also held that mining should contribute to economic, social and cultural well-being of indigenous host populations and local communities creating stakeholder interest in mining operations for the Project-affected Persons (PAP).

In its assessment, the High-Level Committee relied extensively on the Sustainable Development Framework (SDF) modelled by International Council of Mining and Metals (ICMM)/ International Union for the Conservation of Nature and Natural Resources (IUCN). Accordingly, it recommended development of an SDF specially tailored to Indian context taking into account the work done and being done in ICMM & IUCN. The said SDF envisaged would comprise of principles, reporting initiatives and good practice guidelines for the three sectors of Indian mining i.e. SME, captive and large stand alone sectors. It should be applicable to mining operations in India, and the same would be monitored through a regulatory mechanism. The recommendations of the High-Level Committee were accepted by the Government.

Similarly, the National Mineral Policy, 2008 recognises the fact that extraction of minerals does prove a negative impact on other natural resources like land, water, air and forest. The Mineral Policy holds that it is necessary to take a comprehensive view to facilitate the choice or order of land use keeping in view the needs of development as well as needs of protecting the forests, environment and ecology. Both aspects have to be properly coordinated to facilitate and ensure a sustainable development of mineral resources in harmony with environment. In doing so, the Policy lays emphasis on the need to address issues pertaining to prevention and mitigation of environmental problems like land degradation in opencast mining and land subsidence in underground mining, deforestation, air & water pollution, soil erosion due to disposal of solid wastes — all which affect the ecological balance of the area to alarming proportions. The Policy enunciates that guiding principle shall be that a miner shall leave the mining area in better ecological shape than he found it. The Policy stipulates that as far as possible, reclamation and afforestation will proceed concurrently with mineral extraction. The Mineral Policy recognises the significance of Rehabilitation and Resettlement of local host population and enunciates that apart from compensation as an important aspect of the Sustainable Development Framework, models of stakeholder interest for the local host populations in the mining operation shall be encouraged. A mechanism will be evolved which would actually improve the living standards of the affected population and ensure for them a sustainable income above the poverty line. The Policy also lays stress on effective mine closure that not only addresses restoration of ecology and regeneration of bio-mass but also takes into account the socio-economic aspects of such closure.

7.9.3 Development of SDF

The Committee noted that in order to prepare a Sustainable Development Framework suiting the Indian conditions, the Government initiated the process by appointing a consultant. As per the Terms of Reference for the consultant, the draft Sustainable Development Framework would cover the following aspects among other with regard to all non-coal, non-fuel minerals (both major and minor minerals):





- a) Factors and parameters influencing sustainable and scientific mining (and indicators thereof).
- b) Broad criteria beyond which mining may not be deemed sufficiently sustainable and scientifically manageable.
- c) Systemic measures needed to be taken or built to increase sustainability of mining operations considering its entire life cycle inter alia
 - ▶ Ensuring minimal adverse impact on quality of life of the local communities.
 - ▶ Protecting interests of affected persons including host population.
 - ▶ Create new opportunities for socio-economic development, including sustainable livelihoods.
 - ▶ Mineral conservation (both in terms of mining technologies/practices and mineral beneficiation).
 - ▶ Reduction in waste generation and adopting the best waste management practices.
 - ▶ Minimising and mitigating adverse environmental impacts particularly on surface as well as ground water (both in terms of its quality and availability as resource), air, ambient noise and land.
 - ▶ Ensuring minimal ecological disturbance in terms of bio-diversity, flora, fauna and habitat.
 - ▶ Promoting restoration and reclamation activities so as to make optimal use of mined out land for the benefit of the local communities.
- d) A system to devise measurable indicators of sustainable development and draft contours of Sustainable Mining Management System.
- e) The regulatory and other mechanisms to ensure that the systemic measures are in place and are working.
- f) Consultative mechanism with stakeholder groups from pre-mining stages (including exploration) through the life cycle and to post closure stages to ensure that the stakeholder groups involvement and participation in identifying and addressing the sustainability issues, in developing the broad contours of the approaches to the sustainable management of all the activities including formulation of the measureable indicators and monitoring mechanisms for the purpose.
- g) A system of public disclosure of mining related activities and environmental parameters including indicators and mechanisms to facilitate formal and informal sustainability audits.
- h) Measures to ensure industry acceptance and adoption of the SDF including indicators for benchmarking the nature and extent of SDF adoption.
- i) Roll out mechanism for adoption of the SDF at the grassroot level through training, publicity, conducting workshops, handholding etc. and time frames for the Roll-out.

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The definition of 'Sustainable Development' in the Mining Sector is outlined as "Mining that is financially viable; socially responsible; environmentally, technically and scientifically sound; with a long term view of development; and that which uses mineral resources optimally and ensures sustainable post-closure land uses.

The SDF ought to be flexible and that which allows achievement of the desired objectives without being too prescriptive and formulaic.

7.9.4 SDF— The concept

The Consultant appointed for the purpose prepared the draft report and suggested a framework for sustainable development in Indian Mineral Sector. The working definition for 'Sustainable Development' in the Mining Sector outlined in the draft report is that "Mining that is financially viable; socially responsible; environmentally, technically and scientifically sound; with a long term view of development; uses mineral resources optimally; and ensures sustainable post-closure land uses. Also, one based on creating long-term, genuine, mutually beneficial partnership between government, communities and miners, based on integrity, cooperation and transparency." The report further clarified some of the terms as given below to more fully illustrate and define the task in hand.

- ▶ **Socially responsible:** mining operations that have a social license to operate broad-based, creating lasting social and economic wealth which will outlast mine life.
- ▶ **Environmentally, technically and scientifically Sound:** implying the proper management of natural resources.
- ▶ **Long term view of development:** as opposed to a short operational point of view (ref-mine closure, rehabilitation, later development) one that goes beyond the life of the mine.
- ▶ **Uses mineral resources optimally:** with reference to the Mineral Conservation and Development Rules, 1988 (MCDR), for conservation and systematic development of minerals.

The SDF takes into account the biggest issues facing the Sector in the context of existing laws and regulations and defines a set of principles that collectively would progress the Sector towards sustainable development. It incorporates not only regulatory requirements, but also goes beyond that and recommends practices and best-in-class aspects to address the challenges of sustainable development fully. It provides a path to achieve sustainable development aided by guidance steps, measureable outcomes and reporting and assurance. The framework approach is a flexible one that allows achievement of sustainable development objectives without being too prescriptive and formulaic.

At the very least, the SDF provides guidance for the mining companies to improve performance on environmental and social aspects. However, in the long run, it can also become the common benchmark against which all mining operations may be evaluated in terms of their comparative performance on sustainable development terms. The SDF can be used by mining companies to demonstrate commitment to sustainable development, and may be submitted to regulators at the time of seeking clearance or renewal or extension. It may also be used by regulators to evaluate the mining company's commitment to achieving environmental and social goals. Investors and financiers may use this to assess risk and could additionally use it to demand better performance of the associated mining operations.



The draft report suggested that the process of driving the SDF will include several initiatives:

- ▶ Inclusion of some elements of the SDF into regulation;
- ▶ Inter-departmental cooperation for jointly reviewing performance against the SDF; and
- ▶ Evaluating applications and bids using additional criteria from the SDF from environmental and other clearances.

It is expected that the industry could, over a time, choose to drive the wider adoption of the SDF as demonstration of performance and commitments to sustainable development goals. Civil Society and the local community can use the SDF to drive mining companies and regulators for increased accountability and mining performance related disclosures.

SDF Principles

- ▶ Incorporating Environmental and Social sensitivities in Decisions on Leases.
- ▶ Strategies assessment in Key Mining regions.
- ▶ Managing Impacts at the Mine Level through sound management systems.
- ▶ Addressing land, resettlement and other Social Impacts.
- ▶ Community Engagement, Benefit sharing and contribution to socio-economic development.
- ▶ Mine Closure and Post Closure.
- ▶ Assurance and Reporting.

7.9.5 The Envisaged Role of IBM for SDF Implementation

7.9.5.1 The key aspect of SDF draft report is that it requires mining companies, the state government and Ministry of Mines to report on their SDF performance (as relevant) on a regular basis. By disclosing this report, the SDF opens the performance achieved for scrutiny by a whole range of stakeholders, thereby increasing accountability and dialogue. In addition, there is a provision of assurance that enables the SDF report to be vetted by independent auditors for its authenticity and factual accuracy. Agencies like Ministry of Mines, Indian Bureau of Mines, State Departments of Mines and Geology and the Ministry of Environment and Forests will use these audited report to assess applications for mining lease, expansions, environmental clearances etc. So, the key monitoring mechanism is self appraisal on SDF performance in addition to monitoring by regulatory agencies.

7.9.5.2 The draft report on the SDF provides for public participation in the following manner:

- ▶ **At the Mining Company Level** — It requires that there should be formal as well as informal consultation and an information-sharing process right from the exploration stage to mining and closure stages. In large-scale mining, it requires a formal community consultation forum to be established with a clear mandate and a set of functional rules and accountabilities that will allow the mining company and community representatives to exchange information and address impacts through mutual agreements.
- ▶ **At the Regional or District Level**— It requires that at least once a year, the key mining regions should have a district level public consultations on key regional issues and how to address them. Once every 5 years, when a strategic regional impact assessment is conducted, the study findings should be disclosed in the public consultation forum by the District Mineral Foundation.
- ▶ **At the State Level** — SDF reports of the mining companies will be disclosed by the state SDF cells and these reports will be increasingly referred to IBM and potentially by the MoEF during their monitoring.

7.9.5.3 For improved compliance and delivery, the SDF report suggested for putting into place instruments and channels of regular reporting and disclosure to the public — to enable greater scrutiny at the local community level as also by civil society at large. One of the recommendation to this end is to form joint monitoring/audits of SDF commitments by the mining companies and the local communities; Third party review of performance through accredited agencies; SDF reports to be considered during IBM approval and monitoring of mining plans; Significantly increasing the capacities of IBM to be able to regulate mining more effectively and along the needs of the SDF; Engage with the MoEF to consider SDF reports during the environmental clearance process as well as ongoing monitoring.

7.9.5.4 For implementation of SDF, the draft report emphasised that the SDF as an institutional system is understood to be fully integrated, though functioning at different levels through an arrangement of representative cells. The draft report suggested four levels with specific functions which are linked to different levels, and connect with existing entities. The four levels suggested in the draft report are:

- ▶ National level within the Ministry of Mines; with the secretariat at the Indian Bureau of Mines, where majority of the centralised functions are undertaken and housed;
- ▶ State level within the state Departments of Mines;
- ▶ At the mining region level where the SDF has proposed that strategic decisions be taken for mining, environmental and social safeguards and infrastructure development; and
- ▶ At the lease level, where each mine has to have an organisational structure in place to manage sustainable development performance.

SDF Principles include Incorporating Environmental and Social sensitivities in Decisions on Leases; Managing Impacts at the Mine Level through sound management systems; Community Engagement; Benefit sharing & contribution to socio-economic development etc.



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7.9.5.5 The draft report on SDF has outlined in detail the role and functions at different levels for implementation of SDF. It has specifically recommended that the Ministry of Mines sets up a discrete National-level SDF cell responsible for driving policy, seeking strategic collaboration with MoEF in particular, ensuring convergence with related ministries/departments, and engaging with state governments to carry forward its mandate. The draft report also recognised that a significant volume of work of this entity, at this level will involve the creation and management of complex databases to inform policy, and serve coordination and convergence functions. Therefore, it recommended that the secretarial functions of the SDF will be housed within IBM. An IMS unit envisaged to become a resource and repository of information on the subject will be set up specifically to undertake SDF related data processing and information flow. The draft report also recommended that the National Level SDF Cell would comprise of a team of experts from the Mining Sector as well as Environmental and Social Sectors (some deputed from relevant Ministries) with experience in preparing sustainable development strategies. External experts may be brought in, based on specific requirements as they evolve. This cell will be responsible for developing further guidelines, rules and help steer the regulatory changes that will inevitably be required to fully operationalise the SDF. The cell would be instrumental in leading the national mining area categorisation programme and defining areas based on relative 'risk' and hold stakeholder consultations for consensus on the categorisation. The cell would monitor the performance of states on the SDF, and consider giving incentives for better performance. This mandate fits well with the current mandate of IBM as a regulator for mining activities and allows it to broaden its capacities to look at sustainable development issues within the Mining Sector. The draft report recommended and identified IBM to be best suited to drive the SDF process. This would mean significant enhancement of the capacities of IBM to include social development, natural resources management and monitoring skills.

The report also suggested that a state-level SDF Cell be established in each mineral rich State with mining activities. This Cell will prepare the state-level mining area risk-based categorisation plan, make recommendations on the basis of this plan to the Directorate of Mines and Geology or appropriate state agency, define conditions and standards expected in different risk-category areas for mining, review SDF performance report as a part of the capability of the mining companies for new leases, expansion or renewal etc. It can also be part of the enforcement team that is typically led by IBM on mining and the SPCBs for environmental compliances to provide advice on sustainable development performance.

The report observed that at a regional level, there is currently no agency playing the envisaged role. This is a strategic assessment/planning role, and needs to be mandated through appropriate regulation; a definition of its operational space viz. its function is also required. IBM may have a broad mandate to ensure sustainable and scientific mining but does not have the breadth of expertise to handle environmental and social challenges. On the other hand the State Pollution Control Boards have the legal mandate to monitor environmental performance. However, they will need significant capacity enhancement to take on a regulatory and compliance role at a regional level.

7.9.6 Need for Capacity Building in IBM for Monitoring SDF

IBM has the mandate to play a proactive role in minimising adverse impacts of mining on the environment by undertaking environmental assessment studies on a regional basis. The Committee observed that though the approach advocated under these principles has been built into the mandate of IBM, it has so far not exercised this effectively except on occasional cases, and may not have sufficient internal capacities to do so.

To promote and monitor community development activities in the mining areas is also one of the assigned charters of functions of IBM. However, the Committee observed that this charter too remained to be notional in sense of compilation of information on the community development activities carried out by the mining companies. Presently, no statutory tools are available with IBM to monitor the same. There is no tracking mechanism in IBM that can be used to assess how much of the royalty collected is used for local area development in mineral areas. The mining companies point out that they pay their due to the State Governments in the form of royalty and it is the States prerogative and responsibility to ensure that the local area get developmental benefits from the royalty. It is observed that most benefit sharing arrangements are CSR activities focused on the community development rather than bringing direct benefits to people who have lost the access to resources to the mining activity.

IBM is also mandated to ensure the scientific mine closure by undertaking adequate protective and rehabilitative measures. There has been increased regulatory focus on closure, given the substantial financial requirements to do it in a manner that is scientific and in compliance with requisite environmental standards. It is essential that the mining operations must prepare, manage and progressively work on a process for eventual mine closure. This process must cover all relevant aspects and impacts of closure in an integrated and multi-disciplinary way. Therefore, the institutional structure required to regulate the mechanism requires a multi-disciplinary approach in which IBM is short of the same.

Mine Closure focuses on an intricate conglomerate of complex issues ranging from environmental, social, economic and developmental aspects. The Mine Closure may be on account of several factors, the foremost of which is the cessation of mining operations due to exhaustion of mineral deposit due to excavation of minerals. Here, the requirement of restoration of land plays the most significant role as a complex combination of geology, topography, hydrology, soil, flora and fauna. The past mining operations impacted environment negatively to a great extent in terms of broken ground, polluted water bodies, destroyed forest, unsafe mine slopes, etc. The global trend towards Mine Closure planning has witnessed quite a wider acceptance in a number of countries since eighties. In our country, it has been introduced in the year 2003.

The Draft Report of SDF suggests that a state-level SDF cell be established in each mineral-rich state that is engaged in mining activities.

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The implementation of the provisions of the SDF will require new layers of information and reporting, monitoring, capacity improvement and institutional mechanism to prosecute and punish the violators. The institutional arrangement for an SDF is not simple as it envisages the involvement of a range of disciplines. Therefore, it is necessary to strengthen the existing structure to build capacities to understand, develop process and monitor the SDF at each level. The draft report on the SDF recommended that it can rope in to become a part of the enforcement team that is typically led by Indian Bureau of Mines on mining and State Pollution Control Boards for environmental compliance to provide advice on sustainable development performance. The draft report on SDF suggested that for the Mining Sector to adopt this framework, it will need strengthening of capabilities of the existing regulators, planners as well as the mining companies. The draft report recommended that the key agencies that would need their skill to be diversified and capacities significantly enhanced includes Indian Bureau of Mines to be able to guide mining companies to bring in the SDF as a part of the mining plan where possible, or as additional aspects they would need to cover for approvals. IBM itself should have the capacity to review the SD reports, commitments and evaluate these in the field.

The SDF report recommended that SDF adoption will be actively monitored by the SDF Cell proposed to be set up in IBM, with the Ministry of Mines seeking regular updates from the IBM. The draft SDF report also suggested that the mining companies, large or small, should be able to understand the SDF and its implications for their mining exploration or operations and to bring in professionalism that will help them meet their SD responsibilities and commitment.

The Committee feels that IBM as a technical wing of the Central Government has to take additional responsibility of implementation of SDF as a regulatory part and also as an educator to the Mining Industry for achieving the desired results. However, the Committee observed that IBM does not have the necessary expertise and capabilities to shoulder the responsibility as envisaged in the draft SDF report. IBM would need to induct persons having expertise in the field of mining environment and socio-economic aspects with particular reference to mining projects in order to monitor the regulatory and developmental part of the SDF, and, therefore, the Committee recommends for inductions of persons of these disciplines in IBM. The Committee recommends that a "SDF Cell" comprising of persons of the disciplines of mining environment and socio-economic subjects may be formed at Headquarters who would work under the overall supervision of the Chief Controller of Mines. The SDF Cell would be responsible to monitor the various aspects of the SDF in the Mining Sector and would also extend assistance to the Training Centre in order to design training modules on SDF. The SDF Cell would undertake the need-based studies in various mining clusters of the country and would also be posted at Regional Offices covering the mineral-rich States.



Liaison Office At New Delhi

7.10 LIAISON OFFICE AT NEW DELHI

As indicated earlier, Indian Bureau of Mines was established in March 1948 with its headquarters at New Delhi. Subsequently, the headquarters of IBM was shifted to Nagpur. Although presently IBM has a small liaison office at New Delhi, its function has become redundant and notional as the office has only an Administrative Officer with meager staff of Group 'C' employees. Therefore, its utility has become practically restricted to just coordinate and assist the administrative work with the Ministry.

The Committee feels New Delhi is an important administrative unit of Government of India. All major ministries of Indian government including Parliament of India are situated in New Delhi. All the major government offices and departments find their place in New Delhi and nearby areas. The administrative Ministry controlling the IBM i.e. Ministry of Mines is also located at New Delhi. Therefore, often the senior officers of IBM are required to be present at New Delhi in connection with interactions and meetings with Ministry officials, Parliamentary Consultative Committee meetings, meetings with other Ministries, UPSC and so on.

The Committee also feel that given the large number of scientific institutions located in Delhi, as also the Departments of Government of India, it is imperative for IBM to show a strong high-level presence in Delhi. It is necessary to post a technical officer of Director Level on a regular and structured basis to interact on policy and scientific advice. The panel accordingly recommends that IBM upgrade its existing Liaison office in Delhi to 'Director' level office with adequate number of technical and administrative officers and staff to enable him to discharge the liaison and interaction functions. The technical officers and staff should be from all major disciplines of IBM having relevance to the work programme at Delhi. The Committee feels that Director level office can effectively contribute in various meetings and thus avoid evitable expenditure towards the tour of senior level officers from IBM headquarters. Therefore, the committee recommends the following officers and staff for Delhi office of IBM.





Restructuring of IBM

Sl. No.	Name of the Post	Numbers
1.	Regional Controller of Mines	1
2.	Regional Mining Geologist	1
3.	Mineral Economist (Int.)	1
4.	Deputy Mineral Economist (Stat)	1
5.	Senior Legal Officer	1
6.	Assistant Controller of Mines	1
7.	Administrative Officer	1
8.	Assistant Mining Geologist	1
9.	Steno Grade-I	2
10.	Senior Technical Assistant (Mining Engg.)	1
11.	Senior Hindi Translator	1
12.	Upper Division Clerk	1
13.	Lower Division Clerk	1
14.	Assistant Store Keeper (Tech)	1
15.	Hindi Typist	1
16.	Staff Car Driver Grade I	2
17.	Multi Task Force	4
	Total	22

