



# Preparation of Sustainable Development Framework (SDF) for Indian Mining Sector

**Ministry of Mines (MoM)**

**Draft Report**

20 September 2010

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Ministry of Mines (MoM)

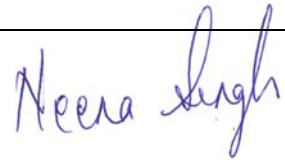
## Preparation of Sustainable Development Framework (SDF) for Indian Mining

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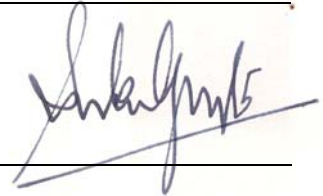
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## 0 **SUSTAINABLE DEVELOPMENT FRAMEWORK FOR THE MINING SECTOR: INTRODUCTION**

This report is the Draft Sustainable Development Framework for the Mining Sector for the Ministry of Mines (GoI) and the second deliverable of Phase I under the contract signed between the Ministry and ERM India Private Limited (ERM).

### 0.1 **BACKGROUND**

Historically, the extraction of mineral reserves has always resulted in varying degrees of environmental resource degradation and social impacts, including displacement, all across the globe. Whilst acknowledging that no mining can be entirely free of all negative impacts, there is sufficient ground to suggest that all-round performance on this subject in the mining sector needs to be urgently and substantially improved in the country.

#### 0.1.1 ***Brief recap on the existing mining scenario***

The Indian mining sector has been facing severe criticism on several issues relating to its performance vis-à-vis sustainable development. Some issues highlighted are:

- To a great degree, minerals, forests and tribal tracts are concentrated in the same geographic areas;
- Notably, several areas with very high mining activity are in the poorest districts. This brings home the reality that in recent decades, mining activities have resulted in little local benefit, and in fact, has been at the cost of environmental degradation;
- This situation has greatly contributed to general social dissatisfaction and unrest in these mining belts; further exacerbated by undervaluation of lands that were acquired by the government for development of mines. Long pending and pertinacious resettlement (legacy) issues have contributed to a deep local mistrust of mining and all associated activities (including exploration studies) and continues to colour all discussions on the subject;
- This is not helped by the fact that the issue of land ownership is a highly complex one, layered with a variety of rights granted over its use- some of which are customary and traditional, and may not be recognised under law; this is perhaps most problematic in tribal areas.





To illustrate, the recent provision for the settlement of forest rights for forest dwelling communities creates a whole new challenge for the mining companies and the administration to settle those rights, and a long demanded opportunity for the communities to claim those rights.

- The co-occurrence of rich biodiversity with mineral bearing areas, is understood but not adequately factored into the comprehensive assessment and mitigation of long term impacts, leading to inadequate response from the project proponents and the regulators;
- The recent boom in the demand for low grade iron ore has contributed to intensifying the above issues, in addition to giving an impetus to illegal mining;
- Legal and regulatory loopholes and inadequate policing has allowed the illegal mining operations to flourish and grow;
- Commentators point out that the boom is also responsible for unforeseen profits across the board from small to large mining and associated operations, contributing a substantial increase, especially over the last 7 years. Internationally dropping standards of acceptable grades of iron ore have led to mines being re-opened, mine life being revised, even old over-burdens being mined (as what was previously waste, is now a resource). This may also happen in the case of nickel in the over burden from chromite mines, in the coming years.
- Even as it is hard to ignore the contribution that the resultant economic development has made it has been at a very high cost, the impacts of which, environmentalists and social activists feel have not been fully understood and appreciated;
- More intensive use beyond sustainable limits has been contributing significant pressures on land, air, water, forests, biodiversity , especially due to the increased pace resulting from market demands and made possible through newer, improved technologies;
- Immediate and long term damages sustained as a result of this increase have already severely compromised the lives of the local communities (even as some sections have benefitted economically from it), and are set to







manifest into longer term damages in terms of health, livelihoods and overall living quality; and

- Community benefit-sharing as managed by mining companies (eg. truck transport contracts for ore movement to local community) in several areas, while creating a social support, has resulted in exacerbation of environmental degradation which has come to be institutionalised into a vicious circle that, on the one hand has become hard to break because it is profitable for the beneficiary community, and on the other, goes unregulated as part of the business of mining, has added to the list of conflicts associated with the sector.

#### Range of Conflicts

Community vs Mining

Mining vs Environment

Community vs Environment

- Unorganised/artisanal mining has come to be characteristic of certain mining areas (North-eastern states) as a result of the occurrence of easily minable resources, market demand for the mineral and the community's ability to easily mine them. This has contributed to the community's economic gains but is also a problem in that the mining is unscientific, unorganised, with multiple cumulative impacts that are not addressed by anyone. Additionally, there is also less willingness to regulate this, on the part of the government given how much employment it generates and the large number of people dependent on it, in certain geographies.
- Enforcement, is a key drawback with regulatory arrangements in the sector and is the biggest point of criticism from all stakeholder groups involved. It has been stated during several discussions on the subject that it is **better enforcement**, rather than more regulation that can begin to remedy the ills plaguing the sector today;
- Regulators at all levels are also severely limited by the lack of adequate and usable information/data, as also clarity and definition on several aspects pertaining to mining operations. This lack compounds the issue of inadequate enforcement and also creates the necessary gaps for illegal operations to function and flourish unchecked. A case in point is Karnataka Hospet-Bellary which has become the most glaring example of how several levels of illegality can flourish, in terms of boundary violations, over-extraction, under-reporting production and export, among others, though lesser degree violations are also rampant in other mining regions of the country.
- Mandated government agencies like IBM, DGM, SPCBs also report significant lack of capacity to perform their regulatory functions to the levels required;



- Capacity issues within mining companies (small and medium) in terms of technical know-how and an understanding on environmental and impact aspects limit their ability to undertake scientific mining. Mining engineers, required to prepare, understand and follow the provisions of mining plans are in short supply, especially with smaller mines.
- The rate of extraction is currently seen to be a function of market demand alone (and the capacity of the miner to extract) - not taking into account the stress on existing (and limited) network infrastructure. Fluctuations in the market make planning for peak flows on infrastructure networks difficult. Several mining areas in the country report more acute problems faced by the resident community, in terms of vehicular pollution, traffic jams, dust and road conditions, than about the mining activity itself.
- While there are some economic benefits that may be gained by the communities living around mining areas in terms of employment and business, it is the vulnerable sections: women, children and old people, who sustain several negative impacts, and have more limited coping mechanisms;
- These impacts range from health, reduced access to resources, increased drudgery, insecurity due to influx of outsiders and finally little benefits from mining;
- Mining companies are the biggest defaulters on issues like provision of safe working environment, labour health and safety and human rights issues especially in quarry sites (classified under minor minerals, thus poorly regulated). While small mines provide the most significant employment opportunities in this sector, they also demonstrate a poor record on and commitment to these issues.
- The classification and consequent provisions for **major** and **minor** minerals has raised several debates that bring into question their current management, regulation and control. Irregularities, illegality, under-reporting, widespread violations of labour and safety norms, persistence of child labour, poor working conditions, and a general disregard for environmental safeguards have all been reported in the minor minerals segment;
- The situation is made more difficult with multiple agencies responsible for regulation, the lack of proper documentation and approvals **in**

**Indian Bureau of Mines (IBM):  
Capacity Issues**

Current capacity within the IBM can cover only about 2500 leases, while in the country there are approximately 7000 leases and 5000 operational mines. Each operating mine can be visited no more than once a year. The priority then is to monitor large mines, and small mines get naturally ignored. Again



**practise**, where significantly more stringent regulations apply to the minor minerals segment, **on paper**. This wide gap, recognised in commentary, has thrown up several suggestions for the proposed resolution and management of the emerging issues;

- Several states would like a more complete control in regulating minor minerals without sharing that responsibility with IBM, which they suggest, should play a more ‘national-level’ role. They feel that state level specificities to do with minor minerals are better appreciated at the state level and will be better managed with more localised regulation and control;
- Some states have demonstrated improved administrative practises by using royalty-sharing arrangements to target fund provision for local area improvement, infrastructure finance, while also demonstrating a closer, consequent relation between mining and area improvement in the same geography. Eg. Gujarat provides for 90% of the royalties collected by the state (from the minor minerals segment) to flow back to the source district, and 20% of that to be allocated to the source *tehsil*, for development of the area;
- Communities local to the mining areas and mining companies, on their part, raise concerns on such arrangements regarding royalties and the imposed cesses, questioning their appropriate utilisation by the tehsil/district administration.
  
- What has come to be known as the landmark “Samatha Judgement” opened up a range of highly controversial issues to do with mining activities in Schedule V areas. Even as there is a current impasse on the acceptance and implementation of this judgement, it has brought into sharp focus the complex issues of land alienation around mining areas and the need to share direct benefits with local communities, to continue uninterrupted business;
- The Hoda commission, set up in 2005 to review the status and explore the potential for increasing investment in the Indian mining sector was a

#### **Samatha Judgement**

- In 1997 the Supreme Court of India ruled that mining in Schedule V areas should not be allowed without the participation of the local people.
- The judges laid out certain duties for any entity that mined in Scheduled areas:
  - 20% of net profits to be set aside as a permanent fund for the establishment and maintenance of water resources, schools, hospitals, sanitation and transport facilities, reforestation and maintenance of ecology, among others
- It suggested to the state government to organise cooperative societies solely composed of scheduled tribes, to undertake mining operation in those areas

In the last few years, various state governments have been seeking clarification on these issues. The implementation of these provisions in the judgement remains in an impasse and have yet to be implemented.



thorough exercise that brought out several issues and made recommendations for sector development. The need for a sustainable development framework to apply to the Indian mining sector, was first flagged in this report;

- A National Mineral Policy was drafted to reflect several recommendations and policy provisions proposed in the Hoda Commission Report;
- As the next logical step, the Mines and Minerals (Development Regulation) Act 1957 is currently under revision to address, among others issues, benefit sharing arrangements especially in tribal areas, a National and State Mineral Development Fund to address the existing gaps of network infrastructure supply and maintenance in mining areas;
- The industry is largely in agreement with the findings of the Hoda Commission report and is keen to see its recommendations on promotion of investment in the sector and its development in the Indian context translated into reality. Environmentalists however have reservations on the recommendations to reduce public consultation obligations in some categories of mines

## 0.2

### *NEED FOR SUSTAINABLE DEVELOPMENT IN MINING*

The High Level Committee which was set up under the Chairmanship of Shri Anwarul Hoda, Member, Planning Commission in the year 2005, to review the National Mineral Policy recommended that apart from introducing best practices in implementation of environment management, there was also a need to take into account the Global trends in sustainable developments. 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 may be measured objectively.

In their assessment the High Level Committee relied quite extensively on the Sustainable Development Framework (SDF) modeled by International Council of Mining and Metals (ICMM)/ International Union for the Conservation of Nature and Natural Resources (IUCN). The committee accordingly recommended development of an SDF specially tailored to Indian context taking into account the work done and being done in ICMM & IUCN. The SDF was to comprise principles, reporting initiatives and good practice guidelines.

This assignment follows through on the commitment of the committee on the SDF.



### 0.2.1 *Sustainable development in mining: a working definition*

A working definition for ‘Sustainable Development’ in the mining sector was outlined, based on consultation with sector experts, secondary sources on the subject and the Indian context. The definition provided the framework and boundaries for the ERM team to analyse and prioritise issues while developing the SDF.

“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 partnerships between government, communities and miners, based on integrity, cooperation and transparency”.

A further clarification of some terms is given below to more fully illustrate and define the task at 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

### 0.2.2 *A framework approach*

The SDF (a framework approach), 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 progress the sector towards sustainable development.

It incorporates not only regulatory requirements, but goes beyond that and recommends practices and best in class aspects to address the challenges of sustainable development more fully.

It provides a path towards achieving sustainable development aided by guidance steps, measurable outcomes and reporting and assurance. The framework approach is a flexible one in that allows for the achievement of sustainable development objectives without being too prescriptive and formulaic.





Since 'continual improvement is the key, the framework approach allows for players in the mining sector at different levels of performance to become compliant over a period of time and continue to improve thereafter. This is significant given the wide diversity in the mining sector's profile and performance in different parts of the country.

The approach anticipates the incorporation of some of the key elements not already in the regulatory regime to become law in the near future, raising the bar on the sector's performance in terms of sustainable development.

### **0.3 USING THE SDF DOCUMENT**

#### **0.3.1 *How can it be used?***

At the very least, the SDF provides guidance for the mining companies to improve performance on environmental and social aspects, however, over time 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. Once this SDF is accepted, its use can be determined through more focussed consultations and seeking consensus.

The Ministry of Mines (MoM) has to engage with other permitting agencies to integrate this more fully with their existing processes.

In spite of challenges and current practical constraints, the framework sets the highest bar on principles defining the path to sustainable development in the mining sector, and should not be diluted to facilitate its immediate practical application across the board.

#### **0.3.2 *Who is it for?***

This document has been prepared on behalf of the Ministry of Mines, Government of India, for all concerned stakeholders in the mining sector (non coal, non-fuel, non-atomic minerals, not covering off-shore mining). It is intended to be in the public domain for anyone to access freely. Even as it has



a wide audience, the principles are clearly directed at key stakeholder categories involved in the sector, with focused guidance notes for each.

Key stakeholder groups associated with the mining sector include regulators: central and state government, mining lease holders/operators, impacted community, civil society organisations, NGOs, CBOs, activists and advocacy groups, academic institutions, research and training institutes.

### **0.3.3** *Who will drive the SDF process?*

The SDF is a document owned by the Ministry Mines who will undertake to ensure its up-take with the mining sector covering major and minor mineral categories and be the agency in-charge of driving it.

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 for environmental and other clearances.

It is expected that the industry could, over time, choose to drive the wider adoption of the SDF as demonstration of performance and commitment to sustainable development goals

Civil society and the local community could use the SDF to drive mining companies and regulators for increased accountability and mining performance related disclosure.

### **0.3.4** *Who will monitor it?*

A key aspect of the SDF is that it requires mining companies, the state government and the ministry of mines to report on their SDF performance (as relevant) on a regular basis. By disclosing this report, the SDF opens up the reportee for scrutiny by a whole range of stakeholders, whereby increasing accountability and dialogue. In addition there is a provision of assurance that will enable the SDF report to be whetted and assured by independent auditors on its authenticity and factual accuracy. Agencies like the MoM, IBM, state department of mines and geology and the Ministry of Environment and Forests (MoEF) will use these audited report to assess applications for mining leases, expansions, environmental clearances etc. So the key monitoring mechanism is self reporting on SDF performance in addition to monitoring by regulatory agencies which may cover some aspects of the SDF for their own purposes. In time, when the SDF becomes more institutionalised and



entrenched in the mining sector permitting and evaluation process, the Ministry of Mines should consider setting up of an independent monitoring body to monitor SD performance of monitoring companies.

#### 0.4

##### *LAYOUT OF THE DOCUMENT*

This document is in two parts:

- Part I: Introduces the SDF and presents the framework that comprises eight principles, detailed in the eight sections that follow
- Part II: presents the Way Forward, discussing key aspects of SDF implementation

##### *Part I: SDF Principles*

- Incorporating Environmental and Social sensitivities in Decisions on Leases
- Strategic 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
- Ethical Functioning and Responsible Business Practices
- Assurance and Reporting



**1** **PRINCIPLE I:**  
**INCORPORATING ENVIRONMENTAL AND SOCIAL SENSITIVITIES IN**  
**DECISIONS ON LEASES**

**1.1** **CONTEXT**

**1.1.1** ***Conservation of Environmental Resources Vs Mining of Mineral Reserves***

The historical and ongoing conflict between mining mineral reserves and conserving environmental resources will continue to exist even in future as India's forests, mineral bearing areas, major river watersheds, tribal habitat regions and most backward regions overlap significantly; a closer look shows that many of these share a common geography with the most ecologically rich and culturally sensitive areas in Orissa, Chhattisgarh, Jharkhand, Madhya Pradesh, Maharashtra, Rajasthan, to name a few

A report published by Kalpavriksh in 2003, *Undermining India – impacts of mining on ecologically sensitive areas* found that at least 90 sanctuaries and national parks and hundreds of other ecologically sensitive areas across the country – in the Western Ghats, Eastern Ghats, Aravallis, coasts, central forest belt, Northeast hills, Western Himalaya, and natural desert areas are threatened by existing or proposed mining activities. The list includes over fifty Important Bird Areas (IBAs). The report recommended that to safeguard such vital environmental resources appropriate land-use planning and comprehensive designation of 'off-limit' areas where no mining can be permitted must be enforced.

Such conflict situations demand a process of rationalisation that takes into account various negative impacts and suggests the least-damaging proposition. A decision needs to be taken to clearly outline the areas to exclude from mining activity, based on ecological, environmental, and socio-cultural significance for the nation (National Parks, sanctuaries, areas occupied by primitive tribes, among others), so that potential areas may be identified for mining and mineral development.

However, this process of decision making requires an information base on the location of viable mineral ore bodies generated out of a more thorough, systematic and scientific assessment along with the areas of overlap and potential conflict.

The Hoda Committee Report clearly points out that the Indian mining sector is still largely dependent on evidence of ancient mines working, surface manifestations and geological maps for search of minerals instead of investing



in exploratory work. This gap needs to be addressed before consistent decisions can be taken to more-completely address the inherent conflicts.

### 1.1.2 *Gaps and Issues*

Identifying environmental and social sensitivities at the earliest possible phase of mine life cycle and integrating them in mining and mineral development decision-making process is vital to ensure sustainable mining of minerals to the optimal extent possible.

The extant process of mining lease award does not take into consideration overlaps with forests, protected areas, areas inhabited by vulnerable communities etc, thus missing an early opportunity to exclude areas of higher risks and impacts. This has resulted in several conflict situations that may have been avoided. Additionally, there have also been cases where exclusion areas (for environmental and ecological justifications) have been declared on existing mining leases thereby adversely affecting legitimate mining businesses.

Such situations create uncertainty amongst stakeholders, demonstrate a lack of clarity and policy direction whilst severely compromising long range planning for the businesses, the area & its people and, the aim of ecological and environmental protection is also not achieved.

Consultations with representatives of the mining sector brought out they preferred that clear decisions on excluded areas even if it meant a reduction in potential areas available for mining, to an atmosphere of uncertainty and arbitrary decisions. Some suggested that exploration and prospecting activities in the excluded areas also not be allowed for mining companies. Others

These considerations suggest that a more systematic approach is required to categorise mining areas based on associated sensitivities.

## 1.2 *PRINCIPLE*

This principle integrates sustainable development concepts at the earliest phase of the mining life cycle. The underlying philosophy of the principle is to prioritise mining land in potentially feasible mineral bearing areas based on an environmental and social analysis taking a risk based approach.



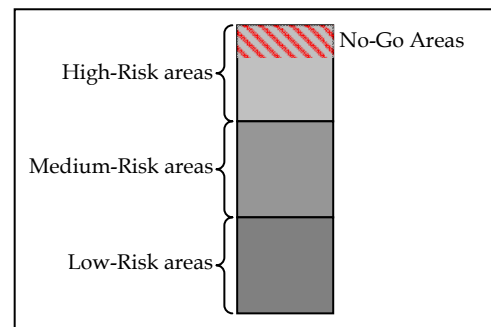


If the environmental and social risk is estimated to be high in a particular area, the area will be low in priority for mining, whereas if the area is deemed low on risks, it will be given a high priority for mining.

This principle allows for the government to balance environmental and social interests of the nation, with mining priorities in the longer term.

**1.2.1** *Incorporate environmental and social sensitivities in decisions on leases as early as possible to minimise adverse impacts of mining in the most sensitive areas/sectors.*

- Categorise mineral reserves and resources at the National and State levels, into high, medium and low risk groups based on environmental and social sensitivities.
- Map environmental and social sensitivities using available databases on subjects like protected area, dense forests (high canopy cover and endangered species as per Red Data book), and scheduled areas (defined in the Constitution of India as V and VI), to begin with. Eventually, ensure the incorporation of other key sensitivities like water resources, fragile ecosystems, dense habitations etc.
- Use the overlaid information on mineralised areas as the decision making tool required to prioritise and rationalise leases for award, that are least damaging.
- Classify as No-Go zones areas that are statutorily declared as prohibited or protected zones under various central, state and local government regulations and international conventions. Consider the criteria adopted by the Ministry of Coal for defining No-Go Areas for consistency in approach.
- Additional No-Go areas on social considerations can be demarcated. At the first step, mineral areas inhabited by Primitive Tribe Groups (PTGs) can be considered as excluded, but on a case-to-case basis and only after consultations with each of the PTGs and their consent.
- Exclude these No-Go areas from mineral development and mining considerations. Decisions of declaring and reviewing No-Go areas will rest with the Ministry of Mines, in consultation with concerned ministries/departments, at the centre.
- Review/revise this list of No-Go areas every 10 years based on development considerations and priorities at that point of time.





### 1.2.2 *State level categorisation*

- Each state to undertake a similar exercise of categorisation through overlays, to identify state sensitivities and development priorities. No-Go areas, however remain the decision at the level of Ministry of Mines.
- The states are expected to follow the Ministry of Mines categorisation of mineral areas, unless they decide to upgrade an area (e.g. an area categorised as medium risk by the centre to high risk) in line with state development priorities.
- Avoid awarding leases in high risk areas until low and medium risk areas are exhausted, where this option is available.
- Require environment and social management systems and operational procedures from mining companies that are appropriate and commensurate to the environmental and social risk classification of mine leases.
- Require much higher levels of demonstrated capacities of mining companies to handle complex environment and social risk management, when awarding leases in high-risk area.
- Periodically review the categories and revise as necessary in consultation with stakeholders.
- Disclose criteria used for arriving at categorisation of lease areas and the locations of areas by category.
- Appropriately scaled maps of all leases under consideration (and awarded), overlaid on the sensitivity categorisation, to be disclosed on State and Ministry of Mines websites (updated 6 monthly).

### 1.3 *COVERAGE*

This principle addresses the sector as a whole and is intended for use as a decision-making tool by the centre and state governments.

Whereas it applies to leases to be awarded in the future, it may be used to re-assess the risks associated with existing leases, for mid-course correction, in terms of environmental and social impact management measures in place. Overall coverage of this principle is in a phased manner.

### 1.4 *POLICY AND REGULATORY ANCHOR*

Current policy and regulatory framework in both mining and environment sector does not have any similar provisions as envisaged in this principle. As brought out earlier, the environmental regulatory framework is triggered only before the mines are to be operated irrespective of location-specific



sensitivities. Even then mines that are less than 5ha in size are not covered by the environment regulatory framework irrespective of type of mineral, location sensitivities, mining methods and other factors etc (though Forest regulations have no such drawback as it is applicable on all diversion of forest lands for non-forest purpose irrespective of the size and scale of the mines). Mining sector regulators issue mining lease subject to project proponent obtaining all necessary and statutory clearances and permits.

The principle outlined here attempts to vacate such scenario and provides an opportunity to government and regulators to play a proactive role in managing the mining sector in a sustainable way. Governments can determine exclusion areas before even notifying the areas for mining and hence can drive and direct the mining sector to operate in low to medium risk areas.

MoEF has initiated a similar such procedure with regards to coal mining sector by declaring Go and No-go areas in the identified coal mining blocks. This initiative of MoEF has been undertaken using the powers vested with MoEF under the Environment Protection Act, 1986, it can be expected that soon this initiative will be codified and extended to other sectors as well to give a firm policy and regulatory footing. A consistent approach to define such areas between the two Ministries is advisable.

One another initiative undertaken by Central Pollution Control Board (CPCB) in collaboration with State Pollution Control Boards (SPCB), research and academic institutions in the early 1990s is the District Zoning Atlas project. The project aims to assign and identify areas for different category of industries at district level (Red, Orange and Green category of Industries which is the standard categorisation of industries followed all over the Country). This project is similar in approach, as it uses a risk based approach for siting of industries. Notably, this project has not been well received and hence only partially completed across the country in the last two decades.

Since application of this principle will have a major impact on the way the mining leases are being administered across the country both in major and minor minerals sector, policy and regulatory support from the relevant departments will be necessary.

## 1.5 *INSTITUTIONAL ASPECTS*

In order to effectively implement this principle consistently and uniformly across the country in both major and mineral sector, a dedicated institutional mechanism at central and state government levels will be required. To begin



with, capacity augmentation of the existing institutions - Ministry of Mines at the central government level and Directorate of Mines and Geology at the state government level, will have to be undertaken.

The principle envisages a periodical review and update of the environment and social risk database at country, state and district levels while ensuring wider stakeholder participation in the process. Co-ordination with sector administrative agencies (National, State and local level agencies that administer sectors as varied as mineral (geological), environmental, forest, social, archaeological, religious etc) and agencies that are specialising in spatial data analysis and mapping services (NRSA, RRSAC, State Remote Sensing Agency etc) will be required to effectively implement the principle. Ministry of Mines along with Department of Forests (MoEF) have already started the process of overlaying mining lease boundaries on updated forest maps. This process can be further built-upon with additional overlays of relevant information.

## 1.6

### *OUTCOMES*

- Reduced environmental and social conflicts in areas awarded for mining
- Greater clarity for all concerned stakeholders, on excluded areas and areas available for mining
- Reduced delays in obtaining clearances (environmental, forest) for mines
- Time, effort and money saved due to reduced conflict situations on lease award issues
- Improved protection of high risk areas in terms of environment and social considerations

Suitable and measurable indicators will be developed to report on the performance of this principle.

## 1.7

### *CHALLENGES*

The expected challenges in the implementation of this principle are given below:

- Building stakeholder consensus regarding criteria for categorisation, especially at the state-level
- Development of the decision making tool to ensure that pertinent, coherent, updated, reliable, comparable and consistent data is input at regular intervals, to make the tool usable.
- Political will to see this coordinated effort through
- Inter-departmental coordination on the decision making tool



- Capacity issues within the administrative machinery, regulatory and monitoring agencies
- Application of the principle on currently operating mines and those that have applied for fresh/renewal leases will be a challenge. A transition strategy will need to be developed to address this.
- In addition, delays will occur in the case of areas under PL and RP, as the risk categories will take some time to be defined and become operational.





2

## **PRINCIPLE II: STRATEGIC ASSESSMENT IN KEY MINING REGIONS**

2.1

### **CONTEXT**

Mining activity whether surface/open cast or underground, has significant environmental and social footprints much beyond the physical boundaries of mining lease boundaries. Adding to that, the in-situ beneficiation and long distance transportation of minerals also significantly contribute to expand the mining footprint over a geographically large area. Impacts of mining are felt much beyond the physical boundaries of individual mining leases and more the number of mining leases operating in an area, larger is the environmental and social footprint of mining in that region.

As the Indian mining sector rapidly grows due to favourable market demand, supported by policy and investment climate, the mining footprint either grows in spread or intensity of adverse impacts on environmental and social aspects. These issues accumulate significantly leading to deteriorating quality of life at places across the mining belt. Mines clustered in a region intensively use the same natural resources like water and land, use the same available infrastructure like roads, and source their labour from the same hub of communities, hence the cumulative impacts on the local environment and communities are significant and often not adequately considered during award of fresh leases and environmental clearance.

2.1.1

#### ***Status, Issues and Gaps***

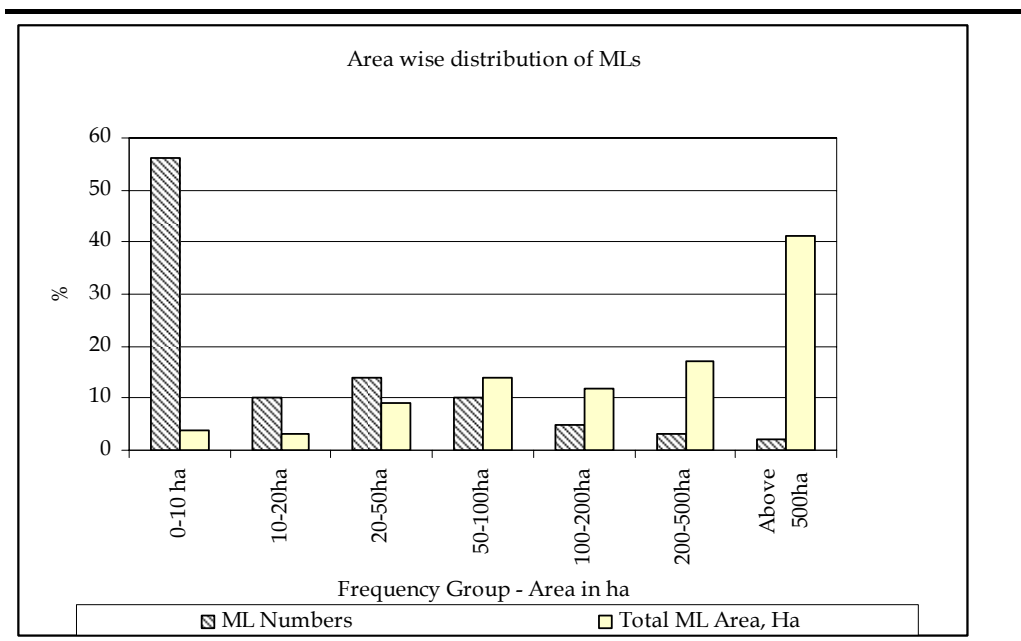
- Currently, mine sector administrators or environment- sector regulatory mechanisms do not adequately take into consideration regional environmental and social impact assessments or studies based on “carrying capacity” for planning mine leases and overall mine development in regions. Adding to the lack of “regional capacity” based planning processes, mine leases smaller than 5 ha in size – irrespective of type of mineral, mining method, location specific sensitivities etc – are not subjected to careful environmental scrutiny or appraisal by the concerned regulatory authorities.
- The concept of mineral development plans at a regional scale is not incorporated in the current mining lease administration regime. Ideally, a regional mines and mineral development plan must assess aspects such as: local infrastructure capacity, number and type of mining leases in an area; beneficiation requirements, prevalent mining methods; ore transportation alternatives etc. before suggesting an optimal number and amount to be mined. Additionally, it must also address individual sizing of mining



leases; mining lease layout plans; and an overall cap on mineral production across individual mine leases as also for the region.

- In India, small scale mines and artisanal mines form a major proportion though their geographical area of operation may be small (see *Figure 2.1*). Out of the 9416 mines (excluding fuel, atomic and minor minerals) in the Country, there are about 5345 (56%) number of mining leases that have a lease area less than 10ha in size. However, their cumulative lease area is 21,000 ha which is 4% of total mine lease area in the country. There is no reliable information on the physical distribution pattern of mining leases in the minor mineral sector wherein small and medium scale mines and artisanal mines of less than 5ha in size dominate.

**Figure 2.1** *Mining Leases Distribution (excluding fuel, atomic and minor minerals)*



Source: <http://ibm.nic.in/mldistribution.pdf>

### *Regional Environmental Impact Assessment Studies*

In the last decade, given the increasing number of critically polluted areas either due to industrial sector or due to mining sector, the concerned regulatory authorities have undertaken regional EIAs to assess the regional impact scenario and formulate appropriate management strategies. It was ascertained during stakeholder consultation process that States like Orissa, Karnataka, Gujarat and Goa have either conducted Regional EIA for critically polluted areas in their respective States or propose to conduct such studies in the future. These regional EIAs have been commissioned more as a reactive management strategy rather than a proactive planning strategy which this principle attempts to bring in into the mining sector management.



At MoEF level, current thinking is that the time had come for undertaking a comprehensive environmental impact assessment study of all mining activity across the country. As a first step, Goa has been advised to commission NEERI to undertake such comprehensive EIA of mining activities in the State. During the nation-wide stakeholder consultation process held as part of formulating these SDF principles, there has been a broad acceptance to undertake regional impact assessment specific to mining sector activities and formulate mineral development strategies based on such assessment outcome.

## 2.2

### ***PRINCIPLE: UNDERTAKE MINING SECTOR SUSTAINABILITY ASSESSMENT AT PERIODIC INTERVALS AT REGIONAL LEVEL***

Major elements of this principle are as below.

- Undertake at the level of the mining region<sup>1</sup>, a mine sector specific, strategic environmental and social impact assessment to determine a sustainable “regional capacity<sup>2</sup>”, at periodic intervals<sup>3</sup>.
- Based on the above assessment, evolve a Regional Mineral Development Plan for the selected area, which would include strategies to address environmental and social impact issues and drive the internalisation of their management and the associated mitigation costs (eg., mine waste management; conservation, protection and development of water and ecological resources; regional social issues etc.)
- Formulate management systems to implement supporting regional strategies for sustainable mineral development and ensure that the plan is reviewed, updated, audited and reported periodically.
- Continually focus on conservation of biodiversity and include such strategies in the plan.
- Overall, the Regional Mineral Development Plan for the defined area would include, but not be limited to :
  - Regional resource planning including land use, biodiversity, infrastructure, water resource, mine waste and social resources for the mining activities;
  - Optimising the number of mines, size of individual leases, scale of operations; suggested alternate mining methods, beneficiation technologies for mineral conservation, mineral storage and

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(1) <sup>1</sup> Region- this may be taken as the most feasible administrative unit, or set of units (block, tehsil/taluka, district); boundaries of watersheds/sets of micro-watersheds may also be considered based on their suitability for the assessment.

(2) <sup>2</sup> Loosely based on the concept of ‘carrying capacity’ it must be a dynamic measure that takes into account key determinant changes like status of technology and infrastructure, new systems and methods, other impacting aspects,

(3) <sup>3</sup> The periodicity of these assessments must itself emerge from the first assessment and may vary from region to region.



transport; energy conservation; common infrastructure facilities and their management; local community and social infrastructure development etc;

- Assessment of cumulative impacts and setting threshold limits and monitor-able indicators for performance on the identified criteria;
- Clustering strategies/instruments (Special Purpose Vehicles or a cooperative society, to name a couple) and to encourage small scale miners (of lease size less than 5ha), to prepare and follow common management plans to achieve and comply with the overall regional plan, using shared resources
- Formulating strategies to deal with illegal mines operating in that region with active involvement of all concerned stakeholders and a strong focus on enforcement.
- Facilitate and encourage responsible mine design; deployment of efficient machinery; efforts for energy conservation; and use, re-use, recycling and disposal of mine products and wastes All these to ensure the combined and cumulative impacts of the mining activities in such regions in minimized and undertaken with a certain degree of planning.
- Prepare and regularly update mine and quarry tenement register covering all mine/quarry activities and both legal and illegal mining/quarrying operations using geo-spatial technologies such as satellite imageries and remote sensing. Publish updated tenement registry and maps for wider stakeholder information and knowledge.
- Institute and seek continual improvement processes on sustainability parameters, monitoring, assurance and reporting systems and ethical functioning, in line with Principles VII and VIII for sustained environment, safety, health and social performance at sector level. Establish sector and mine level sustainable performance threshold limits and indicators for performance reporting.
- Continuously engage all stakeholders in developing this regional plan.
- Prepare and disclose performance periodically, covering the sector on Environment, Health, Safety and Social aspects based on agreed indicators in the Regional Mineral Development Plan.

## 2.3

### *COVERAGE*

The principle applies to key mineral bearing areas (non-coal and non-fuel) irrespective of the classification of major and minor minerals. The principle aims at an overall, integrated assessment based on sustainable development criteria that addresses the impacts of both major and minor mineral mining over a defined study area.



The individual boundaries of the regions requiring this approach should be determined by each State, based on criteria deemed most suitable to its purposes. The boundaries may be based on administrative units, the ore body, watershed boundaries, or other, and could vary from one region to another. Coverage of regions in need of such an approach may be gradually achieved. It is suggested that critically polluted areas, and areas assessed to become critically polluted in the coming 3 years may be taken up in the first phase. It is recommended that all areas of concentrated mining activity be covered in a 4-5 yr time-frame.

## 2.4 *POLICY AND REGULATORY ANCHOR*

Currently, there is no policy or regulatory requirement to undertake such regional assessments either under the provisions of the mining or environment departments. However, environmental regulatory authorities can commission such regional assessment or studies on “carrying capacity” based on the powers vested in them under Environment Protection Act, 1986 and other environmental statutes. As pointed out earlier, regulatory authorities have used these powers to commission Regional Environment Impact Assessment studies in a few states -Orissa, Karnataka, Goa, Gujarat etc.

Among regulators in the sector, the 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<sup>1</sup>. Though the approach advocated under this principle has been built into the mandate of IBM (which was formed in 1948), it has thus far not exercised this, and may not have sufficient internal capacities to do so either.

Taking a more reactive stand, the MoEF (as a one-off case) has asked the State of Goa to undertake a comprehensive EIA (along lines similar to those mentioned in this principle) of the mine sector to determine cumulative impacts and arrive at a “carrying capacity” for the region.

In sum, though the approach advocated under this principle is largely agreed upon by all stakeholder groups and is also being implemented on a case -by-case basis across the country, mechanisms to roll this out routinely, where required need to be set-up and reflected in the mining sector policy and mining regulations.

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(4) <sup>1</sup> <http://ibm.nic.in/functions.htm>





## 2.5 *INSTITUTIONAL ASPECTS*

There is no institutional body at the regional level or state level that is currently competent to handle this kind of regional assessment and development plans with a mining focus. There are a number of options to address this. One option is to realign/re-engineer the role and mandate of an existing government agency to undertake this. Another option may be to set up a state level authority that will undertake the regional assessments and studies and be responsible for implementation of the plans. Yet another option is to form an SPV with representation of the miners in the area, state Directorate of Mines and Geology and the infrastructure development agency to undertake plan implementation. The SPV would also be responsible for sourcing funds (contributions, multilateral funding agencies, FIs and applicable government schemes) or even undertaking projects within the plan on a commercial basis for cost recovery. Some of this fund can be used to incentivise smaller players to come together to share resources and facilities and reap benefits of economies of scale. The SPV can catalyse this process by seed funding (this is further discussed in Section 9).

## 2.6 *OUTCOMES*

Key outcomes:

- A Regional Mineral Development Plan for selected mining areas.
- Addressing key regional and cumulative impacts of mining through coordinated and collective action.
- Controlled and regulated development of the mining sector and its associated activities to prevent overstressing regional systems and networks.
- Opportunity for clustering of small operators to become more competitive, and compliant.

## 2.7 *CHALLENGES*

Major challenges envisaged to effectively implement this principle include the following:

- Acceptance by State government stakeholders – Implementing this principle will essentially bring in an additional mandate of undertaking periodic sustainability assessment on the State government agencies. Besides the additional workload, the principle will change the way the mine sector is managed especially in the minor mineral sector.
- Institutional challenge – to identify and agree upon the most suitable institutional arrangement to coordinate this process given that it spans



several sectors and needs to deal with other activities that may be also impacting the same region.

- Capacity challenge - Creating new capacities on a permanent basis at the State government level across the Country to provide consistent implementation of this principle.
- Funding - sustained funding resource will be needed to undertake periodic sustainability assessments at the State level.
- Engaging government, sector and community stakeholders on a continuous basis through the mine life cycle.
- There has been a demand for awarding prior environmental clearances and forest approvals based on regional sustainability assessment proposed under this Principle from the mining industry. They have cited the examples of Industrial estates/Parks/Complexes/ Areas; Export Processing Zones (EPZs); Special Economic Zones (SEZs), Biotech Parks and Leather Complexes that are provided area-based environmental clearances and individual industrial units do not have to obtain separate ECs under the EIA Notification, 2006.



### 3 **PRINCIPLE III: MANAGING IMPACTS AT THE MINE LEVEL IMPACT THROUGH SOUND MANAGEMENT SYSTEMS**

#### 3.1 **CONTEXT**

The context and background to this principle can be grouped under the following sub-heads:

- Gaps in the regulatory framework
- Lack of continual improvement approach and its enforcement
- Duplication of management and monitoring systems

##### 3.1.1 ***Gaps in the Current Regulatory Framework***

The prevailing regulatory regimes enforced by both mining and environmental sector administrators provide for mine or lease level environmental and social impact assessment (EIA) and management systems by verifying them during the lease permitting and environmental clearance process respectively. However, environmental regulatory regime – most stringent of the two – do not cover all the mines operating in the non-coal and non-fuel mining sector.

Under the environmental regulatory regime, undertaking mine level EIA and formulating management plans (EMP) are mandatory for seeking Environmental Clearance (EC) under EIA Notification, 2006. Mining projects that have a lease area more than 50 ha in size are classified under Category A and need EC from National level Environmental Impact Assessment Authority created with MoEF in GoI. Mining projects that have a lease area between 5 ha to 50 ha are classified as Category B projects and require EC from SEIAA created with respective State Department of Environment in the State Government. Mine leases smaller than 5 ha in size is not covered under the EC process initiated by EIA Notification, 2006.

Considering the Indian mining sector scenario wherein small and medium scale mines and artisanal mines dominate especially in the minor mineral sector, majority of them can be expected to have lease areas less than 5 ha in size and do not fall within the purview of EIA Notification, 2006. Reliable data on number of mines not coming within the purview of EIA Notification, 2006 is not available especially in the minor mineral sector. Rampant illegal mining has become the face of Indian mining sector and this also adds to number of mines that operate without prior environmental and social assessment and appraisal by appropriate authorities.



Under the mine sector regulatory regime, environmental protection and mineral conservation has always been accorded high priority unlike other sector regulations. Specifically, the following mining regulations provide for environmental protection by integrating it as part of mining plans:

- Mines and Minerals (Development and Regulation) Act, 1957: Section 4A provides for powers to terminate lease holdings in case of detrimental to environment due to mine operations and Section 18 provides for ensuring environment protection along with mineral development.
- Mineral Concession Rules, 1960: Section 22(5) states that mining plan shall incorporate environmental assessment and management.
- Mineral Conservation and Development Rules, 1988: Chapter 5 covers the Environmental protection issues comprehensively.

Even the State Minor Mineral Concession Rules stipulate the environmental protection as basic and minimum requirement for quarry license issuance and operations.

Significantly, the mining regulations cover all mines that operate legally unlike environmental regulations which do not cover mines less than 5 ha in size. However, rampant illegal mining operations across the country and poor enforcement of mining sector regulations have rendered the above provisions in different mining regulations ineffective and notional as for as environmental and social assessment and management aspects are concerned.

### 3.1.2

#### *Lack of Continual Approach elements in the Management Systems*

One aspect that has been repeatedly observed by government appointed expert committees and independent consultants have been the poor quality of environmental and social impact assessment and management systems that are prepared and submitted in requirement of various regulations especially the earlier EIA Notification enacted in 1994 and now in 2006<sup>1</sup>.

With respect to mining sector, besides the poor quality of assessment and inadequate management systems that are not commensurate to the impacts envisaged, the environmental clearance conditions and management plans approved by appropriate authority under EIA Notification, 2006 remains static till the mining lease comes up for renewal. That means, EC conditions and approved EMP remains relevant without incorporating any continual improvement elements that are now standard in any of the ISO systems for the entire lease period of 20-30 years. This is a significant gap and do not encourage mine sector to adopt better technologies and sustainable

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(1) <sup>1</sup> [http://www.sustainabledevelopment.in/pdf/dr%20gsv\\_pre.st.pdf](http://www.sustainabledevelopment.in/pdf/dr%20gsv_pre.st.pdf)



alternatives that could emerge in the intervening period as miners will benefit from adopting low-cost unsustainable technologies and management methods that will keep the E&S management cost low and improve their profit margins. There is no regulatory procedure for intermittent review and appraisal of performance during the mine lease period.

Notably, the mining plan format prescribed by IBM under Mineral Conservation and Development Rules, 1988 for EMP requires that a 5 year rolling plan is presented<sup>1</sup>. However, as mentioned earlier, poor appraisal and enforcement by mining regulators have rendered the above provision ineffective and notional as for as environmental and social assessment and management aspects are concerned.

### 3.1.3 *Duplication of Management and Monitoring Systems*

Regulatory agencies from mining and environmental sector demand different set of environmental assessment and management systems resulting in duplication of efforts. An EMP has to be prepared under Mineral Conservation and Development Rules, 1988 and got approved by IBM. However, this EMP is not acceptable to the MoEF. The miner has to prepare two EMPs separately – one for IBM and another for MoEF<sup>2</sup>. It was seen that it is the EMP approved by IBM, and linked to the mining plan, that is operationally used and updated with the changes in the mining plan, while the MoEF approved EMP becomes more or less redundant, except for compliance to the EC conditions.

Similarly, the monitoring and supervision of operational mines is conducted by multiple agencies such as RO, MoEF; SPCB; and IBM (and a host of other sector agencies). These agencies undertake monitoring and supervision with very little co-ordination among themselves and functioning in silos. Hence despite institutional arrangements in place for monitoring performance, enforcement remains weak and uncoordinated.

## 3.2 ***PRINCIPLE 3: MANAGING IMPACTS AT THE MINES LEVEL THROUGH SOUND MANAGEMENT SYSTEMS***

Major elements of this principle are presented below.

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(2) <sup>1</sup> <http://ibm.nic.in/msg1.htm>

(3) <sup>2</sup> Section 3.47 from Hoda Committee Report, 2006





### 3.2.1 *Impact Assessment:*

- Scope out the key environmental, social and health and safety issues early to resource the subsequent ESIA appropriately. Seek involvement of stakeholders in identifying risk issues.
- Undertake Mine Lease level Environmental and Social Impact Assessment in commensurate with risk classification of mineral bearing land as per Principle I.
- For mining in High Risk areas, ensure that the ESIA is comprehensive in assessment of sensitive issues that forms the basis of its categorisation as High Risk area.
- Focus on conservation of biodiversity in the mine management framework whenever the mining activity has to take place in forest areas or non-forest areas with significant wildlife and biodiversity.
- Disclose the ESIA to the local community and seek their inputs on mitigation measures and in choosing alternatives.
- Use this mine level impact assessment for both mine related as well as environmental related clearances.

### 3.2.2 *Management framework and systems*

- Formulate mine level, Environment and Social management framework and systems that are periodically reviewed, updated, audited and reported.
- Include, formulate and implement community health and safety management strategies as part of mine management framework.
- Include, formulate and implement occupational health and safety management strategies.
- Implement risk management strategies including effective emergency response plans in partnership with stakeholders.
- Align mine lease level environment and social management framework and systems to regional framework management plans and strategies evolved as per Principle II.
- While not required to conduct comprehensive ESIA's, small mining leases or quarry leases (that are less than 5 ha in size) to adopt environmental and social management systems that are in line with regional framework management plans and strategies evolved as per Principle II and commensurate with their scale of operation.

### 3.2.3 *Continual Improvement*

- Institute and seek continual improvement process, monitoring, assurance and systems in line with Principles VII and VIII for sustained environment, safety, health and social performance at mine level.



- Establish periodical mine level sustainable performance threshold limits or standards to be achieved and indicators for performance reporting.
- Report on the status of performance on key environmental and social indicators.
- Continuously engage all stakeholders and involve them through the entire process of assessment, management, monitoring, auditing and reporting.
- Prepare and publish Sustainability Reports covering the mine performance on Environment, Health, Safety and Social aspects on a periodical manner.

(This principle needs to be read together with Principle IV on Land, Resettlement and Social Impacts and Principle VIII on Reporting and Assurance).

### 3.3 *COVERAGE*

The principle applies to both major and minor minerals as per the prevailing regulatory mechanism. As for mines or quarries that are less than 5ha in size in both major and minor minerals sector, the principle applies to the extent of adopting the management systems and approaches formulated as an outcome of Principle 2.

### 3.4 *POLICY AND REGULATORY ANCHOR*

Current regulatory regime seeks mine level EIA and management systems as part of clearance process. However, the following issues have to be incorporated in the regulatory framework in line with the principle:

- In line with Hoda Committee report recommendations, a composite EMP format agreeable to all regulators specifically MoEF and IBM needs to be formulated and published.
- Periodical review by regulators and appraisal of environmental performance by mines needs to be included in the prevailing sector management procedures. Regulatory reporting would need to be extended to also include performance reporting on key indicators.
- Integrated monitoring mechanism to avoid duplicity among various regulators such as RO, MoEF; SPCBs; DoMG and IBM.

### 3.5 *OUTCOMES*

Key outcomes expected of implementing this principle include the following:



- A robust E&S Management framework enabled with continual improvement systems guiding sustainable development of mine and which is commensurate to risk category of mineral bearing area as enunciated under Principle I.
- Sustainable Mine Development strategy covering the entire life cycle of mine that is reviewed and updated periodically.
- Regional/national benchmarks leading to continual improvement by individual miners and collectively as a sector.
- Focussed and intensive monitoring of individual MLs leading to less of abandoned mines/orphaned mine issues.
- Opening up of illegal mining activities to intensive stakeholder scrutiny as geo-spatial information regarding mining activity will be a published periodically.
- Intensive use of geo-spatial and geo-scientific information at mine level for assessment, planning, management and monitoring of the mining sector

### 3.6

#### *CHALLENGES*

Major challenges envisaged to effectively implement this principle include the following:

- Acceptance by State government stakeholders – Implementing this principle will essentially bring in an additional mandate of intermittent reviewing and appraisal of mine performance. Besides the additional workload, the principle will change the way the mine sector is managed especially in the minor mineral sector.
- Engaging government, sector and community stakeholders on a continuous basis through the mine life cycle.
- Significant resistance to change can come from small and artisanal mines if they have to adopt, follow and implement E&S Management systems and subject themselves to monitoring and auditing in line with Regional framework enunciated under Principle II.



## 4 ***PRINCIPLE IV: ADDRESSING LAND, RESETTLEMENT AND OTHER SOCIAL IMPACTS***

### 4.1 ***CONTEXT***

While environmental performance is largely regulated, social performance and management is yet mostly unregulated and left to the discretion and voluntary commitments of the project proponents. Land acquisition and resettlement are the state's responsibilities, and the mine developer or proponent has merely to deposit the compensation amount with the state. The primary social aspect that is regulated is one related to labour and working conditions, and even here, the performance of the mining sector, remains erratic and poor. In not addressing core social impacts due to loss of land and livelihood, displacement and loss of access to natural resources, the mining sector has eroded its community support, and is perceived to be doing more harm than good. These and related issues are addressed by this principle.

#### 4.1.1 ***Status***

The most significant social impacts arise from land acquisition. Land for mining can be either directly purchased or leased from land owners (as is mostly in the case of small scale mines) or acquired by the Government for the mine under the provisions of the Land Acquisition Act, 1894). Land requirements for mining activities and all their associated facilities can be significant. Historically, land for large mines has been acquired by the state.

The LA Act is currently being modified to link it with the resettlement and rehabilitation (R & R) policy. The draft version of the act seeks to make resettlement and rehabilitation enforceable, includes livelihoods, habitats, cultural and natural resources as critical areas of impact to be compensated and addressed, and, modification of the clause of 'public purpose' for acquisition. It also provides for valuing land at replacement value and not market value as is the status today. The revised bill however is yet to be tabled before the Parliament. Land acquisition is still being done under the Land Acquisition Act 1894, amended in 1984.

Another regulation of relevance to land is The Scheduled Tribe and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (FRA) establishes a process by which forest dwelling and other forest dependent communities can claim and get their rights settled on designated forest land. Settlement of forest rights is still at an early stage and only some states have



initiated the settlement process. A number of projects, including mining projects, are being asked to investigate forest rights, even in cases of some who have already received forest clearance and environmental clearance. The settlement of forest rights may become one of the most challenging aspects of mine development in the near future.

To understand impacts on land and livelihoods, a Social Impact Assessment is currently mandated under the EIA notification 2006, during diversion of forest land under the Forest Conservation Act, 1980, and under the National Policy on Resettlement & Rehabilitation 2007 (NPRR) which is triggered when more than a defined number of families are displaced for a project. The proposed Land Acquisition Bill also makes a social impact assessment mandatory when resettlement of a certain scale occurs.

Projects do not need a separate permit or clearance on the basis of social impacts. The Environmental Clearance (EC) process does query on land and resettlement issues, but the depth of questioning and the requirements from an SIA can significantly vary. Provision for an SIA has been included in the NPRR, which, however, remains a policy directive and not law, and hence not enforceable or mandatory. It does not clearly provide links to the existing project approval processes. The SIA clearance process has not yet been operationalised

#### *Issues/gaps*

Under the acquisition process, it is now commonly agreed that land is significantly undervalued. This is a key reason why land owners are increasingly refusing to give land under this act. In states (e.g. Haryana and Gujarat) where land values have been rationalised, and a broader consensus based acquisition process undertaken, there have been fewer conflicts around land. It has to be acknowledged though that land productivity in such areas is relatively lower.

The most controversial aspect of the LA Act is the provision of forced or involuntary acquisition of land for “public purposes”. The land owner therefore does not have a right to refuse. The draft version indicates a decreased role of the state in acquiring land for private projects, with the onus on the project developer, to demonstrate that a majority of the community/land owners are willing to give their land for the project.

Long term livelihood impacts are not considered while compensating land under the acquisition process. Experience has repeatedly shown that monetary compensation is never enough to provide for a lifelong livelihood support for the affected people, making them worse off than before.





Informal, customary and traditional use of land and resources are not assessed, identified or compensated under the land acquisition process. This is especially true in the case of revenue or government land taken for the project, where such informal, sometime deemed illegal, and traditional rights generally exist. The process of establishment of user rights of sharecroppers and agricultural labour, or customary rights of a community is weak enough to result in many of such families not being compensated and hence significantly impacted by the land acquisition process.

Detailed guidance and rules for the interpretation of the Forest Rights Act are still being developed. While it recognises individual as well as customary rights, in absence of detailed guidance and rules, the settlement process is marred with inconsistencies in interpretations and often the non-recognition and settlement of customary rights. Recent developments in Orissa where two large projects have been put on hold on the issues of non-compliance to the FRA points out towards the challenges ahead.

The track record on resettlement in mining has been very poor. The National R & R policy sets the minimum benchmark for resettlement and rehabilitation. The key issues that it still needs to address is that it only get triggered when there is significant displacement, rehabilitation is focussed on monetary support and not on the complex and difficult process of livelihood restoration. It also does not provide guidance on private sector projects where the government may not be involved in the resettlement process.

Social impacts assessment, in most EIA studies, remain at best, a collation of secondary research based data (mostly Census of India information) supplemented by some interviews and stakeholder consultations. Critical issue of impacts of land acquisition on individual households, incidence of landlessness or marginalisation of farmers, severance of access to natural resources on which there could be significant dependence, gender based impacts, impacts on children, specially around mining areas and informal mining activities, and cultural impacts get assessed only in rare reports, in many cases as a response to public protest and stakeholder pressures, rather than it being a genuine effort to understand and address such impacts early in the project.

## 4.2

### *PRINCIPLE*

This principle demands a comprehensive assessment of social impacts and displacement of mining projects at the household, community and mining



region level, and management commitment to address those impacts through mitigation measures and management plans.

#### 4.2.1 *Seek a broad-based local support for procuring land for mining and minimize land take*

- Use the proposed Community Consultative/Dialogue mechanism set up early in the project (see the following Principle on Community Engagement) to discuss the land requirements of the project and the most preferred mechanism to get land as a part of regular consultations and dialogue, and with adequate lead time before the actual time for land take.
- Op to purchase land for mining on a willing buyer/seller arrangement, rather than acquiring the land through the Land Acquisition Act.
- Demonstrate through baseline studies, data and design that the most productive agricultural land or land with strong cultural dependence of the community is brought or acquired for mining only as a last resort, and only when it is not avoidable for technical reasons.
- Use efficient technology and scientific mining practice to minimize land requirements. Invest in options like underground mining where technically feasible. In case of smaller mines, or mines located in clusters, share infrastructure and facilities to reduce costs as well as land requirement.
- Rehabilitate land after closure to a use most valued by the community and return it back to the community and land owners for their long term use. Enhance the value of returned land (also see Principle VI on the mine closure).

#### 4.2.2 *Value land at replacement cost*

- Set up an independent land valuation mechanism that establishes the replacement cost of land in mining regions and ensures consistency in approach in valuation and compensation.
- Involve the Panchayats and independent real estate agents in determining replacement value of land in the area.
- Where acquisition is considered necessary, use the “consent” provisions under the land acquisition law that allows the value of land be determined through a negotiation with the land owners and not unilaterally by the district administration.
- In direct negotiations for land, ensure that the purchase process is fair and transparent and equitable without any sort of coercion and that all land losers have adequate information on the project and the land rates before the negotiations commence. All such processes should be open to third party scrutiny when necessary.



#### 4.2.3 *Settle all rights before the land is brought/acquired*

- Wherever land rights are disputed or in conflict, provide adequate lead time and resource to the concerned agencies to settle/resolve these rights before land is acquired for mining.
- Ensure all rights under the Forest Rights Act are settled at the individual and community level if there is any forest area that will need to be diverted. Support the Gram Panchayat and District Administration in the process and seek the expertise of tribal specialists and anthropologists to ascertain these rights in a fair and reasonable manner.

#### 4.2.4 *Specific provisions in Scheduled Areas*

- For land in Scheduled Areas, seek free, prior and informed consent of the Gram Sabhas for both major and minor minerals under PESA before starting the process of land take (purchase or acquisition). The consent process needs to be clearly defined in a manner and a timeframe that gives a fair chance to both parties to negotiate.
- To ensure that the consent process does not get reduced to a tool for negotiation, consider putting on hold the mining proposal for a reasonable period of time – say 10 years if the community does not give consent. The community needs to be aware that the consent decision has to be taken very responsibly, keeping in mind the immediate as well as long term ramifications.
- To reduce the risk of dispossession of the tribal communities through mining, explore the option of giving preferential rights over land and minerals (initially limited to minor minerals but could in future be considered even for major minerals) to tribal landowners/ cooperatives and communities who request such rights and can demonstrate capacity to exploit the minerals themselves, or through agencies or mining companies they choose to hire. Such preferential mining rights should not mean compromising on the environmental and social performance required for mining in such sensitive areas.
- In case of preferential land being given, the same provisions of community benefit sharing (refer to Principle V) should apply to the tribal entity/entities.

#### 4.2.5 *Assess social impacts at every stage of the mining activity*

- Establish a baseline of the community and identify sensitive social issues at the reconnaissance stage through stakeholder analysis, consultations and focus group discussions. Include this baseline



assessment, proposed risk mitigation measures and a consultation strategy during explorations as a part of the PL application. Report on the implementation of the strategy as a part of reporting on prospecting activities.

- Comprehensively assess the social impacts of a mining project through its lifecycle before the start of any mining activity as a part of the mining lease application. Ensure that gender based impacts and impacts of children living around mining areas are an integral part of the impact assessment. Revisit the SIA before any mine expansion, significant change in mining technology or activity and before mine closure.
- Develop a Social Management Plan (SMP) and specific mitigation measures to address these impacts. In case of displacement of families, prepare a Resettlement Action Plan as one of the mitigation measures. The SMP should be submitted as a part of the EMP and should be considered by a group of social experts during the environmental clearance for major minerals and for approval of the mining plan by IBM in all cases.
- Disclose the SIA and SMP reports to the community as a part of the disclosure for public consultation. Incorporate feedback and suggestions on mitigation measures and management plans from the community. In addition, disclose these as a part of the mining plan in the Ministry of Mines website.
- Report on the SMP implementation on a regular basis to the district administration and the state regulatory agencies.

#### **4.2.6 *Provide for resettlement and rehabilitation of project affected families in all cases involving physical, economic and cultural displacement***

- Avoid displacement to the extent feasible. Consider resettlement as a highest risk issue and a critical consideration during the analysis of alternatives for the project site and design.
- Assess resettlement impacts and develop either compensation and rehabilitation procedures (for small scale displacement or projects involving displacement of less than 100 families) or a full Resettlement Action Plan for project involving displacement of more than 100 families)
- Provide adequate time for consultation, assessment of impacts and for development of an entitlement framework that has the consent of the project affected families.
- Ensure that no construction or project development activity takes place before all displaced people have been shifted, allocated the entitlements due to them, and being provided support for livelihood restoration.



- Make every effort to provide alternate housing/resettlement site as close to the project as possible to allow the displaced families to reap the benefits of proximity to the mine.
- Make the outcomes of resettlement a key sustainability performance indicator for the mine, to be closely tracked and monitored. Poor performance on this aspect to be heavily penalised.

#### 4.2.7 *Restore livelihoods affected by the mining activity*

- Comprehensively assess the livelihood dependence on land (private, government or community), natural resources, and all other sources of income that gets impacts by the mining activities, irrespective of the legality of ownership and use.
- Design rehabilitation measures that either replace the sources of livelihood, or compensates them on the basis of a term livelihood loss. Identify and focus on the vulnerable groups in this process.
- Encourage asset building among the affected families through a basket of measures and incentives so that compensation money is used productively and people have a living standard better than before.
- Focus on programmes that enable the affected communities to participate in the economic benefits of the mine, through employment, business, services and contracts.

### 4.3 *COVERAGE*

This principle addressing land and social impacts covers all mining activity - major and minor minerals, but is tailored to suit the size of the mine and their specific locations. All new mining projects will need to develop socio-economic baselines and impacts assessment. In case of displacement, resettlement procedure or resettlement plan will need to be prepared, depending upon the scale of displacement.

All existing mining operations may not have conducted an SIA or resettlement planning (depending on the number of years they have been operational). This principle will require all such projects to conduct a rapid independent assessment of status today against this framework. If there are significant gaps, the company will prepare and action plan with a specified time frame to address the issues and show progress towards meeting the SDF requirements.





#### 4.4

#### *POLICY AND REGULATORY ANCHOR*

The principle has implications for the land acquisition process as well as policy guidelines and acts that cover resettlement aspects. While currently the land acquisition act and the national and state resettlement policies are not linked, this principle seeks to integrate the two on the premise that physical and economic displacement gets triggered by the land acquisition process, and any mitigation strategy has to holistically address both. The principle is already embedded in the revised land acquisition and resettlement bill. Till such time that the bill gets approved and enacted, mining projects (in collaboration with the state government) are encouraged to address land acquisition and resettlement issues in an integrated manner.

The principle directly addresses the issue of land pricing, and goes beyond providing market value of land as the current land acquisition regime require. Replacement value at its most conservative would be the market value + all transaction costs for purchasing another land plot. Ambitiously, replacement costs would take into account the potential land use of the land and the speculative hike in land prices in the near future, to enable the land loser to replace land of identical quality and area despite inflationary tendencies in land prices. It is recommended that the revised LA and R & R bill considers replacement value of land for determining compensation.

The principle calls for strengthening of the EIA notification to give a stronger focus and review of the social baseline and impact assessment during the ESIA process. It seeks a much more robust and comprehensive assessment of social issues, reviewed by a group of subject experts. It seeks to deny project environmental clearance if the social impacts are not addressed adequately. Alternatively, it calls for a separate clearance process based on social considerations.

For Scheduled Areas, under the PESA provisions, prior recommendation of the Gram Sabhas is a prerequisite for minor minerals. Under special provisions for Scheduled Areas, the principle requires consent for all kind of mining activities in such area, and adds the requirement of “free, prior and informed” consent. Specific guidelines will need to be developed under PESA to give a step by step guidance on what these terms mean in practice.

And finally the principle seeks to bring about a greater cohesion between a company’s commitment to manage the social impacts it creates, and philanthropic and social investment activities it covers under its CSR umbrella. It has been often seen that companies may have a good CSR strategy and a social investment programme on the one hand, but on the other performs poorly on addressing social impacts. This is because the current



regulatory regime does not put any accountability on the mining company. This principle seeks to put performance on management of social impact, including land acquisition and resettlement as a critical indicator of sustainability performance.

#### 4.5 *INSTITUTIONAL ASPECTS*

Land is a state subject, with the District Administration playing the pivotal role in undertaking land acquisition and resettlement. The recommendation for setting up a land pricing committee at the mining region level has its implication for the current institutional structure. Currently land prices are determined by the Land Acquisition Officer or the District Collector, and are based on the average value of land sale in the past 3 years. The mechanism suggested in this principle is already being used in some states.

The current arrangement for evaluating social impacts of projects lay within the EC process, where the social impacts are assessed by the expert environmental committees set up by the MoEF to review and grant environmental clearances to projects. This principle requires the strengthening of such committees with relevant social experts who will review the SIA and SMP during the permitting process and pin the mining company to specific commitments on social performance. Alternately, separate and parallel clearance process based on social impact assessment should be set up preferably within the MoEF organisational structure.

The District Administration will need to play a stronger monitoring role to ensure that the objectives set out in the resettlement plan and the SMP are met, and provide support and oversight when necessary. A key aspect of that role would be to facilitate maximum synergy between rehabilitation, livelihood restoration and key government programmes on employment, skill development and poverty alleviation.

Independent third party monitoring of the RAP implementation would be mandatory wherever displacement of more than 100 families occurs. The independent monitoring report should be disclosed.

Linking with Principle II on strategic regional impact assessment, the agency will store, review and update baseline socio-economic baseline information, sensitive areas and no-go areas.



## 4.6

### OUTCOMES

Key outcomes envisaged include:

- Minimization of impacts and displacement due to the mining activity.
- Broad consensus for the project among the local community
- Land owners and other PAFs reasonably satisfied with the compensation package and other rehabilitation measures.
- The livelihoods of the Project Affected People restored, and preferably better off than before.
- Majority of the land brought rather than acquired.
- Less court cases and conflicts.

## 4.7

### CHALLENGES

Key challenges for this principle include:

- Capacity of the MoEF, SPCB, IBM or the current regulators to review and examine the social baseline and impact assessment in detail.
- Resistance among developers arising from apprehensions that the process of consultation, impact assessment etc will have a negative effect on the community, raise their expectations, escalate land prices and make it unfeasible for the project to start.
- Apprehension that a detailed social impacts assessment may highlight issues, hereto not known, that may jeopardise the project.
- Availability of skilled people/organisations like NGOs to undertake the baseline, impacts, resettlement studies to provide practical and time tested solutions, primarily as mines are in relatively remote areas.
- In going beyond what may be currently required by law, mining companies will have to face the challenge of getting government support and help at their project level.



## 5 **PRINCIPLE V: COMMUNITY ENGAGEMENT, BENEFIT SHARING AND CONTRIBUTION TO SOCIO-ECONOMIC DEVELOPMENT**

### 5.1 **CONTEXT**

The status, gaps and issues to do with community engagement, benefit sharing, and contribution of mining companies to local socio-economic development are discussed below.

#### 5.1.1 **Status- Community Engagement**

- Community engagement and regular consultation and disclosure are not mandatory under law.
- The key legal requirement for public consultation is at the pre-project stage, during the EIA, which is lead by the concerned state government through the district administration, where the mining project is located. The EIA document is disclosed in the MoEF web site and is a powerful document that provides information on the project.
- Others requirements are in the form of no-objection certificates to be obtained from the concerned Gram or from the Gram Panchayats as the case may be. For mining projects < 5 ha, only consent from the land owner is required.
- Policies on resettlement ask for stakeholder consultations during surveys and developing the Resettlement Action Plan. Some of them call for a development of a communication plan. These plans are not currently disclosed. Policies are not mandatory and can only provide guidance.
- The national R & R policy now calls for a separate clearance of the SIA, wherein a public consultation will be required to hear the concerns of the project impacted persons on social issues. The specific mechanisms and guidelines on how this will be implemented is awaited.
- Grievance redressal mechanisms for projects currently primarily led by the state through the district administration, courts or mechanism like the Grievance Redressal Cells created wherever the National and state R & R policies are triggered. Mechanisms like the Rehabilitation and Peripheral Development Advisory Committee (RPDAC) in Orissa are also playing the role to some extent. These generally entertain litigations/complaints on pre-project aspects like land acquisition, compensation, resettlement or eligibility issues. Complaints or grievances on ongoing project operation are not specifically directed or addressed.



- There is a big evolution in the field of development planning and programme implementation on participatory approaches and community engagement- this has not yet been adopted or institutionally in project development in the public as well as private sectors.

#### *Issues/gaps*

- Most projects talk to the stakeholders during the start of the mine project, primarily to get consents and a go-ahead. Beyond this, levels of engagement with the community mostly depends upon the pressure the community or external stakeholders (NGOs, Lenders etc) can exercise.
- Consultation and disclosure processes mandated by law are limited in their effectiveness as they do not provide adequate safeguards to ensure free, prior and informed consultations and consent processes. Legally mandated consultation processes like Public Hearings/Consultations during project clearances can be circumvented by vested interests, disallowing the community to participate meaningfully. More tighter guidelines required;
- Companies seem to be primarily communicating with the local population on CSR activities during operations. These are focussed around development and welfare programmes, and very often not linked with project activities or impacts. Structured and regular information sharing on the project through all its phases, its development, impacts, mitigation measures – these are left to the company as their voluntary initiative. Hence approaches are inconsistent and the process very limited.
- The impacted community does not have adequate information to make informed opinions and negotiation positions. There are few companies that actually have established forums for community consultation and grievance redressal on an ongoing basis.

#### **5.1.2 Status – Benefit Sharing and Contribution to Socio-economic Development**

- There are yet no national and legal arrangements that make benefit sharing from projects mandatory. There have been some recent inclusions in some state R & R policies.
- Royalty sharing arrangements between the state and the centre for both minor and major minerals do not define how much, if any, part of the royalty is channelized back to the project district and villages.
- Some state government have started formal process of the company contributing from its profits into a local/peripheral area development





funds, but these initiatives have been intermittent, and been challenged on legal grounds.

- Some state government have R & R policies that call for sharing benefits with the project affected persons.
- The Ministry for Company Affairs has recently brought out a guidance for earmarking 3% of profits of public sector agencies for CSR activities.

### *Issues*

- Benefit sharing till date has not been binding on companies.
- There is no tracking mechanism that can be used to assess how much of the royalty collected is used for local area development in mineral areas. Mining companies point out that they pay their due to the state in form of royalty, and it is the state's prerogative and responsibility to ensure that the local area get development benefits from that royalty.
- Most benefit sharing arrangements are CSR activities focussed on community development rather than bringing direct benefits to people who have lost land or access to resources (project affected persons) to the mining activity. This does not address the core issue of conflict.
- There is limited national and international experience in how these arrangements work and to what extent they are binding. The limited experience is also heavily biased towards indigenous people.

## 5.2

### *ELABORATION OF THE PRINCIPLE*

The principle seeks commitment to regular engagement with the local community as well as sharing of project benefits with the affected families.

### 5.2.1

***Proactively engage with local community (men and women) through the life cycle of the project to disclose relevant information as well as time resolution of issues and conflicts.***

- Start process of engagement with the local community in areas affected by operations as early as possible – before explorations.
- As early as possible, prepare a profile of the local area, and the community, understand the social, cultural and political dynamics and identify and profile key stakeholders. Develop a plan for consultation and disclosure based on this understanding, for the entire project lifecycle. Annex this plan in the application for prospecting license, mining plan as well as the EMP.
- Complement the government mandated public consultation process with project level consultations programmes. Engaging with the



community, especially the project impacted families, is a responsibility of the mining company.

- Provide relevant information to the project affected families about the mining activities, impact management measures, the potential employment and other social and cultural benefits and CSR programmes planned on a regular basis, in a format agreed with the community. Allow the community to seek clarifications and ask questions, without intimidation and fear of reprisal. Always formally inform the community before any major activity.
- Disclose the Mining Plan, the EIA and EMP, SIA and SMP, the RAP and well as the socio-economic development plan in the local community before the start of the mining activity in a format they understand as well as the regulatory agency, the company and Ministry of Mine's website.
- Ensure free prior informed consultation, especially when the community is required to give its consent for a project under PESA for example. Where the project is spread over a large area, undertake smaller, community level meetings and Focus Group Discussions (especially with women and other vulnerable groups) to explain the project details and other relevant information before the community participates in the formal, government led Public Consultation.
- Provide the community with independent technical and legal advice if the community so requests before their participation in public consultations. Records of these support measures should be attached to the minutes of the Public Consultations.
- Provide for independent observers for the Public Consultation process in contentious mining projects with significant impacts on land, as well as projects in Scheduled Areas. The report of the observer should be available for the MoEF and any other permitting agency to consider.

### 5.2.2

#### *Establish mechanism and systems for dialogue with the affected communities that are inclusive, culturally appropriate and include grievance redressal*

- For projects in the High Risk mine category, establish suitable Community Consultative/Dialogue mechanisms with the community through concerned Gram Sabha Sabhas/Panchayats, and community leaders, with the purpose of holding regular consultations and to resolve issues of conflicts amicably. Ideally provide for a three- way dialogue process between the company and the community with the District Administration in the role of a Facilitator.
- Partner with the District Administration to build the capacities of the Gram Sabha/Panchayats in the local area to understand the legal framework that guides mining activities, and safeguards their rights



and to participate in consultations and negotiations in an informed manner.

- Identify the more vulnerable groups in the community and empower them participate in the dialogue process. Be responsive to their concerns, suggestions and priorities.
- Ensure that the participation of women and marginalised groups in this process are facilitated through targeted engagement and mobilisation.
- Recognise and respect the unique profile, land connectedness and concerns of the tribal communities, and ensure that the dialogue/consultation process is culturally appropriate and through mechanisms and institutions trusted and recognized by the tribal communities.
- Establish formal processes for grievance redressal at the project level that proactively seeks to identify grievances of the community, address them appropriately and in a time bound manner, to the satisfaction of the aggrieved people.

### 5.2.3

#### *Assess local needs and contribute to the socio-economic development of the local communities through the project lifecycle*

- As a part of the social impact assessment process, develop a robust assessment of the community needs, capacities and skills, and understand their vision for a sustainable future. Develop social investment programmes that address these needs.
- Contribute from the company's annual profits to local area/peripheral area development mechanisms/funds or any other mechanism for this purpose to partner in the local and regional development process.
- Focus on capacity building and skill development of the youth to foster their growth and facilitate their gainful employment in the mining sector in the area.
- Create opportunities for diversifying the local and regional economy by supporting local enterprise and businesses as well as products and opening avenues for employment.
- Engage with the community in decisions about mine closure and post closure land use.
- Explore mechanism of social audits of the CSR and other development programmes undertaken with participation of the community. Report audit findings in company's Sustainable Development report.
- Develop partnerships with government, non-governmental organisations and other mining companies to leverage development programmes and funds, complement skills, and ensure effective design and implementation resulting in favourable outcomes in the local communities.



#### 5.2.4 *Identify and establish benefit sharing arrangements with the affected communities*

- Make provisions to share benefits with the affected community and land losers through broad based agreements/MoUs with them. These could cover aspects like employment and training, economic development and business opportunities; social cultural and community support; financial provisions and equity participation, environmental and health protection etc.
- Develop policy and financial mechanisms to share a significant part of the royalties generated from both major and minor minerals with the mining district, block and panchayats.
- Explore basket of options to share benefits that are not only focussed on cash, but adopt innovative approaches to target social welfare, including long term livelihood safeguards, insurance against various risks, incentives to protect and nurture girl child's education and well being, old age pensions etc
- In large scale projects, engage with the affected community to develop formal benefit sharing arrangements, agreements or MoUs that will allow both sides to get surety on commitments as well as of mutual expectations and responsibilities.
- Where required, include the Government as an assurer for both parties in the agreements to comply with commitments made.
- Monitor these agreements and commitments through internal processes and third party monitoring, Report on performance in financial as well as CSR and Sustainability reports

#### 5.3 *COVERAGE*

The process of community engagement should be included in all scales of projects, major as well as minor minerals.

Benefit sharing should be a “must-do” in large projects in high risk zones and encouraged in all mining of major minerals.

#### 5.4 *POLICY AND REGULATORY ANCHOR*

Public Consultation: The EIA notification 2006 needs to have clearer guidelines on “Free Prior Informed” public participation in Public Consultation for Environmental Clearance. Currently they are more focussed on the disclosure process, and do not have adequate provisions to “enable” more informed participation of the affected communities. The NPRR and



state R & R Policies have not yet rolled out the provision, guidelines and procedures for a Public Consultation for clearance on the SIA.

Contribution to Socio-economic development: Various state R & R policies now talk about direct financial contribution to a local area / peripheral area development fund – e.g. Orissa and Himachal Pradesh. The Samatha Judgement and subsequent judgement of the Courts (refer to the SC judgement on the Mining in Lanjigarh) call for sharing profits to the extent of 10-20% annually into a fund or an SPV that will be used for local area development. They do not adequately define the institutional mechanism, capacities and legal provisions for these funds and how the local community, especially the affected communities, participate in decision making of such funds. In not providing a focus on the immediate impacted areas, these funds have become more district level funds with a wider mandate, and accrue limited direct benefits to the project area and its affected communities. Hence this contribution does not directly result in increased support for the project.

Benefit sharing: The Orissa R& R policy and the Haryana R & R policy seek equity participation or sharing of annuities respectively with the land losers. They have been recent phenomenon (2006-2007) and hence have not yet demonstrated impacts or increased community acceptance and support of mining as an activity that benefits the community. The Uttar Pradesh Government has recently declared a rehabilitation package that defines mandatory provisions of sharing project benefits.

The Samatha Judgement has also outlined a method of contributing a portion of the project profits into series of local benefit activities.

## 5.5

### *INSTITUTIONAL ASPECTS*

- The role of local government bodies, like the Panchayat and the Zilla Parishad in enabling participation and agreements should be enhanced.
- Setting up consultative dialogue mechanisms early so that this forum can begin to talk about issues of common interest much before the project. Land should no longer be the only reason to engage with the community.
- Arrangements to oversee benefit sharing arrangements/agreements need to address the boundaries of such agreements, responsibilities, stakeholders to be involved and legal provisions of the arrangement if the arrangement is formal.





## 5.6

### OUTCOMES

Key outcomes:

- An informed community that is aware of the mining activity, and is enabled to participate in project decisions.
- A disclosure process that provides stakeholders with relevant and timely information, and allows issues to be raised in engagement forums.
- Increased incomes, social and livelihood security and other direct benefits from the project to the affected families.
- Improved social and economic development indicators in the immediate project area and the region showing improved education and health access, improved infrastructure, better and diverse employment and livelihood avenues.
- Broad community support for mining.
- Resolution of grievances and possible conflicts in an amicable manner through institutions and mechanism that are transparent and fair and are trusted by all parties.

## 5.7

### CHALLENGES

The biggest challenge is that the local community cannot be clearly defined, hence companies hesitant to enter into formal agreements. Most MoUs till date have been village based agreements or agreements with only the directly impacted land losers.

Mining companies would like to be assured of the sanctity of the agreement and of business continuity at the time of signing or renewal of these arrangements.

Based on past experience, the community will be very wary to enter into any formal agreements. They would like to be assured that by signing such agreements or getting into formal and informal understanding, they are not deprived of their rights to protest about specific project related issues later on.

Capacities and abilities of the community to define its sustainable development goals and move away from immediate benefits (preferably cash).

The role of the regulatory agencies to provide increased weightage to these sensitive elements of community consent for permitting process- more robust data, proof of consultation, and response to issues to be sought.



## 6 *PRINCIPLE VI: MINE CLOSURE AND POST-CLOSURE*

### 6.1 *CONTEXT*

Mine closure is regarded to be a recent subject of attention in the mining industry and its significance is yet to be fully appreciated in its larger circles. Several respondents from the industry expressed their reservations on the new regulatory provisions (since 2003) that require mine closure planning to be included in the mining plans that are to be submitted periodically, for clearance by IBM. The reservation is based on the commonly held belief in the industry that since most mines (required to submit mining plans) still have a long time to go before they will become exhausted of the reserves, mine closure planning today may not be accurate or appropriate to the requirements of when the mine will actually close. The regulatory provision for 'progressive closure' too, is regarded within the industry (specially in the case of iron-ore) as impractical, as optimum-value operations require several pits to be mined concurrently to facilitate ore-blending.

On the other hand, 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. The existing financial arrangements required by the regulator are largely inadequate to cover closure costs. Given that several mines will need to be closed in the coming decade, financial planning by mining companies while the mines are still remunerative, is the most prudent approach to ensure proper closure and to prevent the threat of abandoned hazardous sites in the future.

Early financial planning for eventual mine closure, by the miners as well as ensuring its adequacy, on the part of the regulator, cannot be emphasised enough.

Planning for post closure land use is an even rarer situation given how few mines are even actively planning for closure. Even so, a few experiments have been tried with closure and potential post-closure use of reclaimed land. To illustrate, Goa, Ballarpur, Neyvelli, Noamundi (the last 2 are examples of closed coal mines) are some areas that have experimented with scientific closure and options of post closure use. The rehabilitated sites, however, are not slated to be returned to the community and continue to be in the possession of the holder of the mining lease. Rehabilitation measures are still being tested as experiments and not shared with the community as benefits.



### 6.1.1

#### *Issues*

Emerging issues with regard to mine closure in the country today are:

- Enormous financial ramifications of closure resulting in inability of mining companies to address this adequately at the time of closure unless planned for in advance.
- Issue of abandoned mine or mines not closed as per requirement (will lead to the creation of legacy issues): scientific closure in accordance with environmental and other requirements is a high-cost exercise which prompts several lease-holders to abandon exhausted/unviable mines without proper closure.
- Need to affix liability for the above transgressions, ecological, environmental impacts: given the current 'boom' in the iron ore sector, most mines previously thought to be abandoned have re-opened, but the threat still looms, upon resource exhaustion or a dip in the market demand for the ore.
- Land is a precious resource and there is a need for proper closure to enable beneficial post-closure use to the proximate communities; also, for miners to appreciate that mining is a temporary use of a limited recourse: land, and that it must revert to the community, for their use.
- As mine closure is not within vision of most miners, post closure issues are even lower in priority.

### 6.1.2

#### *Existing arrangements*

India did not have mandatory closure regulations till 2003 (rule incorporated as per MCDR 1988). Even the current law is not watertight- the financial surety asked for closure is too low to be a deterrent for non-compliance. This is not in line with the 'true value' principle.

A conceptual mine closure plan must be submitted at the time of new lease or renewal of licence; progressive closure plan has to be submitted every 5 yrs and a final mine closure plan a year before actual closure (recent inclusion).

A financial assurance has to be furnished at the rate of Rs 25,000/ha for Category A and Rs 15,000 per Ha for Category B mines, with a minimum pegged at Rs 2 lakh for Category A and Rs 1 lakh for Category B. This can be submitted as:

- Letter of credit
- Performance or surety bonds
- Trust funds
- Or any other guarantee acceptable to the state.



The closure plan should address:

- Environmental issues and proposed remedial measures
- Social issues mainly to do with employees being let-off and socio-economic repercussions and proposed remedial measures

## 6.2

### *PRINCIPLE*

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. This must be an auditable document and include a fully scoped and accurate estimate of planned cost of closure to the company. The cost estimates must be adequately provisioned to cover national, regional and local legal and regulatory requirements for closure; and must also include the cost of servicing all agreements/commitments made with stakeholders towards post-closure use.

Potential threats, pitfalls and complexity of environmental-social aspects must be flagged as necessary.

The scope of measures to be undertaken at closure must be thoroughly and comprehensively defined to reach a realistic estimation of the costs, and to provide the necessary assurance to the regulators and stakeholders that adequate financial provision for closure has been made.

### 6.2.1

#### *Elaboration of the principle*

- Assess report and disclose real costs of closure on agreed principles, standards and outcomes.

#### *Types of costs to be included in closure planning*

The table alongside is an illustration of the types of cost heads to be considered for closure planning.

Direct closure costs	Calculated using conditions which represent the maximum closure cost.
Indirect closure costs	Contract preparation and administration costs for staff time. Calculated by project staff and site specific.
Mobilization	1 to 5 percent of direct closure cost
Contingencies	Project uncertainties and unexpected natural events, 2 to 5 percent of direct closure costs.
Engineering and Design	Redesign to reflect current conditions, 2 to 10 percent of direct costs.
Profit and Overhead	Contract profit and overhead not included in direct cost calculations, 3 to 14 percent of direct closure costs.
Closure management	Project inspection and supervision, 2 to 7 percent of direct closure costs.

Source:

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- Minimal compliance to be measured in terms of (and as a composite of): environmental impacts including ecology, regenerate bio mass, legacy issues (see Principle IV on **socio-economic impact aspects**)
- Underlying assumptions and standards used for calculations to be discussed with the competent authority (CA) and disclosed (See Principle VIII on reporting)
- Use of financial guarantees/ sureties to be agreed upon at the time of approval of closure plan and this should become legally binding. A financial guarantee is a critical component of the reclamation and post-closure process because it can be used to cover the costs of closure should the mine operator be unable to do so especially since the sector is vulnerable to significant fluctuations in metals prices, and many companies have gone bankrupt, sometimes before mine closure or reclamation is complete. “Due to its high costs, regulators need a dependable source of funds to pay for the physical reclamation of the mine site as well as the necessary implementation management. Since mine closure is the responsibility of the mine developer, these costs are not included in the budgets of regulatory agencies, nor should they be. Government agencies need financial sureties that are readily available to ensure that mine reclamation occurs. Should a mining company default on its closure commitments, funds will be required immediately to operate and maintain mine facilities, such as water treatment plants. “<sup>1</sup>Given the large size of most financial bonds, a surety agent stands to gain financially by collecting interest on the bond amount while potentially unsuccessful legal challenges are debated in the courts. Finally, the reclamation cost estimate upon which the surety is based must be accurate and up to date. Errors in this regard may also cost the state exchequer.

A variety of financial guarantee instruments are available and used internationally, in this sector. Each that may be considered with its attendant issues (see reference table alongside).

Closure costs	Financial guarantees must cover the mine company's costs, both rehabilitation and the post-closure monitoring period.
Liquidity	All forms of financial guarantee should be reasonably liquid.
Accessibility	Financial assurance should be readily accessible, dedicated and only released with the specific assent of the regulatory authority, so that regulators can promptly obtain funding to initiate proper closure in case of operator default.
Healthy guarantors	Regulators must carefully screen guarantors' financial health before accepting any form of assurance.
Public involvement	Regulators must give the public notice and an opportunity to comment both before the setting of a bond amount and before any decision on whether to release a bond.
No substitute	Any financial guarantee should not be regarded as a surrogate for a company's legal liability for mine closure.

Financial Guarantee Principles, after Da Rosa (1999). (*ibid*)

(4) <sup>1</sup> Source: Financial Guarantee Principles, after Da Rosa (1999). (*ibid*)





- Financial guarantee, as an economic instrument, must be complemented by permitting, inspection, enforcement and the necessary knowledge base to be effectively implemented. A structured permitting process is necessary for defining clear criteria for mine closure, robust planning for closure from the outset of mine planning and successfully ensuring enforcement of closure criteria. The enforcement capacity of the regulator should be clearly defined since it allows all parties involved to be aware of the implications for the financial guarantee in case of permit violations or bankruptcy.
- Determination of the amount of the closure guarantee must reflect the cost of mine closure and be adjustable, up or down, to reflect changes in the proposed closure plan. This cost may be higher than the cost borne by the lease holder to close<sup>1</sup>.
- Financial estimates for the 'worst-case scenario' and the 'optimal scenario' to be included and guarantees to be determined accordingly.
- Cost estimates must take into account the envisaged post-closure use and agree on the lease-holder's participation, based on community consultations and approval of the post-closure use. Include post-closure issues in mine closure planning, especially at the pre-mine planning stage. These may include monitoring and maintenance -for the period deemed technically necessary from the point of view of impacts, water treatment, and catastrophic events.
- An important aspect of post-closure, monitoring and maintenance issues include long-term water quality sampling, geotechnical inspections of tailings dams and waste rock facilities, and minor repair work such as re-grading the slopes of dams and waste dumps and re-vegetation where primary seeding or planting have failed. If water treatment is required, significant financing will be necessary after the mine has closed as long-term water-treatment can even double the cost of mine closure.

## 6.3

### COVERAGE

It is understood that full coverage of all mining sites will take a longer period of time., This principle, however, must be immediately applicable to higher risk closures (risk levels to be judged by the Competent Authority), but eventually apply across the board.

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(5) 1 Costs to the lease holder could be lower as they would use the existing equipment, labour, facilities to close whereas the cost of undertaking closure by the government would be higher, in comparative terms. The guarantee must take this into account, as also to discourage defaulting on the part of the lease-holder



In the shorter term, a classification may be evolved to prioritise mining leases according to risk (in terms of closure and post closure issues, proximity to densely populated areas, presence of hazardous chemicals, physical instabilities, ground-water issues etc. ), and the period of remaining mine life, to facilitate early action on closure planning.

#### 6.4 POLICY AND REGULATORY ANCHOR

The principle is anchored in the National Mineral Policy which states the following on Mine Closure:

“Once the process of economical extraction of a mine is complete there is need for scientific mine closure which will not only **restore ecology** and **regenerate bio mass** but also take into account the **socio-economic aspects** of such closure. Where mining activities have been spread over a few decades, mining communities get established and closure of the mine means not only **loss of jobs** but also **disruption of community life**. Whenever mine closure becomes necessary, it should be **orderly** and **systematic** and so **planned** as to **help the workers** and the **dependent community rehabilitate themselves** without undue hardship.”

- **Zero waste** mining will be the national goal and mining technology will be upgraded to ensure extraction and utilisation of the **entire run-of-mines**
- Mineral prices should reflect their value and the royalty structures will be designed to ensure that the producer earns and the consumer pays the **true value** of the minerals produced and consumed [true value includes cost of scientific and socio-economically appropriate closure]
- “Perpetual liability” and “polluter pays” principles

#### 6.5 INSTITUTIONAL ASPECTS

Mine closure is a multidisciplinary activity, and the institutional structure required to regulate the process will include a number of agencies. The table below identifies some of these:

Thematic Aspect of closure and post closure	Relevant Regulatory authority
Environmental aspects	MoEF, IBM
Mining aspects (technical and, scientific)	IBM, State Directorates of Mines and Geology
Financial aspects	Competent Authority supported by relevant technical advisors
Socio-economic aspects	District Administration and other relevant agencies like the Commissioner for Tribal Affairs.
Land (tenure/ ownership/ transfer)	IBM and State Dept of mining, Forest dept, Panchayat, and district administration.



## 6.6 *OUTCOMES*

- Recognition and realization of positive legacies for local communities;
- Lower exposure to future potential negative legacies
- Enhanced value of land post closure;

## 6.7 *CHALLENGES*

- Clearer definition of ‘scientific closure’ and applicable standards (social and environmental) against which the performance of the companies may be measured.
- Given the important role financial planning plays in guaranteeing effective closure, the proposed use of financial guarantee instruments, must be supported by permitting, inspection, enforcement and the necessary knowledge base on the part of the regulatory and financial institutions in the country, willing to be involved with the sector.
- The enforcement capacity of the regulator is also necessary on technical, financial, economic fronts.
- Should the guarantee be forfeited, the state must have a back-up plan for implementing scientific closure and delivering on post closure use, in line with the spirit of this principle.



## 7 ***PRINCIPLE VII: ETHICAL FUNCTIONING AND RESPONSIBLE BUSINESS PRACTICES***

### 7.1 ***CONTEXT AND STATUS***

This principle is perhaps the “soul” of the SDF, without which this entire framework will become meaningless. It underlines the need of mining companies to be committed to functioning in an ethical manner, within the ambit of the legal framework of the country, and demonstrating that they conduct business responsibly. This sector more than others, on this count, bears the burden of proof. It has a very poor reputation and inspires little trust- be it from local stakeholders, regulators or investors. To change this reputation and image a paradigm shift in the way the mining sector wants to project itself is required – it needs to go the extra mile to demonstrate this.

Commitment to ethical functioning has to be driven internally, through the corporate structure as well as through the government institutions that manage and regulate this sector at the centre and state-level. Most external pressures, primarily regulatory, can be circumvented, as has been demonstrated so often by the rampant illegal mining in nearly all the states. Enforcement of these laws has been weak. In recent years, the windfall profits from mining have far outweighed the risks of breaking the law and the financial liabilities of penalties, which till date are not significant enough.

While there is the strongest case for enforcement to be strengthened to ramp up the levels of compliance to laws, going forward, there is also the recognition that there needs to be parallel voluntary and internally driven actions. The sector has to now recognise that another key external pressure is now become increasingly forceful and influential – and this is pressure from the community and civil society, and increased scrutiny from investors. This pressure has shown that with concerted action and mobilisation, miners are being slowly brought to book, for poor performance on sustainability parameters.

The other strong pressure, beside enforcement of regulations, should arise from erosion of reputation and consequently loss of investor trust. Investors today can play a very influential role in defining the governance of an investee. Most investments in the mining sector are limited to a few large players who have demonstrated capacity to operate mines and have the confidence of shareholder and investor. It is telling that smaller mines today reportedly, do not source their major funds from formal banking sources which will require a certain degree of corporate governance and compliance to



law (though even this requirements varies from bank to bank). Investors do not put money in small mining (which constitutes a major chunk of mining in India) because the risk profile is high. Several factors contribute to this risk profile of which the lack of accountability and assurance is one key factor, the uncertainty about the deposits and technology constraints the other, and most importantly the very specific funding needs of this segment that do not suit the lending profile of banks and financial institutions). On the other hand, smaller miners may selectively invest in better technology and explorations but maybe not in better corporate management systems because many of them are into mining for a short period of time (to reap the benefits of the spurt in market prices), invest speculatively, have few drivers to invest in the long term

This is not to say that there are no exceptions. There are mining companies that have demonstrated that by openly committing to doing responsible business, adopting good practices and management systems, being more transparent about their performance and intention to improve, and standing to scrutiny by all their stakeholders by reporting on their performance in public domains, they have managed to garner more support and a social licence to operate even in extremely sensitive environments.

Whether small or large mining companies, and operating in diverse environments, they have shown that by functioning ethically, following what they have stated as their guiding policies, mining can be seen as a viable and chosen option for development.

## 7.2 *PRINCIPLE*

This principle underlines the need for ethical business practises and a strong sense of corporate responsibility among mining companies. It recommends companies to go beyond legal compliance.

### 7.2.1 *Commit to setting up and implementing corporate/organisational level principles and policies on ethical practice*

Develop company statements on ethical business practices based on guidance from the SDF that are endorsed by the Board of Directors who also actively monitor these. The statements should reflect the SDF framework and the relevant principles.

Involve employees at all levels in developing these statements, and in preparing a Code of Conduct for all direct employees as well as indirectly employed. The Code of Conduct should cover sensitive issues like





discrimination, harassment, human rights, and be supported by a grievance redressal mechanism.

Conduct regular independent assessments to assure internal and external stakeholders on the company's adherence to its policies and codes.

Commit to respecting law in letter and spirit and performing beyond minimum regulatory requirement to achieve sustainable development.

### **7.2.2 *Demonstrate non-tolerance to bribery and corruption***

Clearly define what bribery and corruption means in the context of the operations and the locations.

Train and develop awareness of employees to understand and apply the no-bribery policies in their workplace.

Use systems to ensure that relevant issues are recognised, recorded, managed and reported transparently.

### **7.2.3 *Uphold gender equality, children's rights and human rights at the workplace and among the community it impacts.***

Give a clear message that these issues are non-negotiable and not tolerated.

Provide clear corporate commitment to taking care of environment, health and safety and social impacts.

Where required, conduct gender based impact assessment, and root cause analysis of human right abuses in the sector. Ensure that the mining activities are not aggravating social discrimination and inequity, but using the mine's influence to bridge gaps and benefit the weakest.

Ensure fair remunerations and working conditions for labour and employees and through the supply chain for the mine.

Promote a safe work culture by emphasise on safety in all mining activities.

Provide for constructive engagement with employees and project affected people on a regular basis.

Respect the culture and heritage of local communities, specially the tribal groups.



### 7.3 *COVERAGE*

This principle targets all mining companies regardless of size and legal status. Many of these sub principles are already driven by law. The principle encourages mining companies to go beyond the law and report on performance against the SDF for this sector.

Each SDF report against this framework should have a section devoted to the commitments of the company to work ethically and follow responsible business practices.

### 7.4 *POLICY AND REGULATORY ANCHOR*

There is already a strong regulatory regime in the country that governs good corporate governance which is administered through the Ministry of Corporate Affairs (MCA) and the Securities and Exchange Board of India (SEBI). These agencies have been responsible for developing sets of systems, principles and guidance to ensure that corporate entities function for the interests of their shareholders, and increasingly their stakeholders. Through the Companies Act, 1956, the Companies Bill 2004, and its subsequent elaborations and changes recommended by committees like the Narayan Murthy Committee and the Naresh Chandra committee, corporate governance today covers the entire gamut of ethical functioning and independent assurance. This principle is perhaps only reiterating those already ingrained in laws and policies. The emphasis in this SDF is on demonstration and reporting of performance on these parameters and allowing stakeholders to scrutinise the report and the performance.

### 7.5 *OUTCOMES*

The key outcomes expected for the sector would be:

- Progressively improved governance structures in mining companies.
- More mining companies with formally adopted policies on ethical functioning and responsible business.
- More mining companies with action plans defining how they will meet these commitments.
- Monitoring and assurance systems and processes.
- SDF reporting on governance.



## 7.6

### *CHALLENGES*

The key challenges will include:

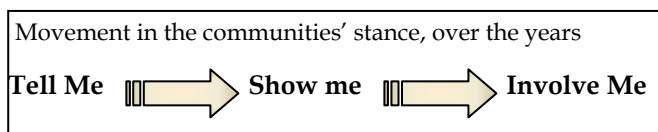
- Voluntary adoption of this by all companies- more importantly, small and medium size operations and those in the minor minerals sector.
- Government regulatory machinery's capacity and knowledge base to undertake assessments in this regard.
- Motivation and punitive regimes to incentivise and discourage this, respectively- of a nature that is recognised as a business advantage/ disadvantage.



8 **PRINCIPLE VIII:  
ASSURANCE AND REPORTING**

8.1 **CONTEXT**

Shareholders across the world are moving from a position of a passive receiver of information to an active participant in a company’s growth and development.



Similarly, stakeholders are now expecting companies to demonstrate and prove

what they have committed to. In this scenario, a critical component for any sustainable development framework is the process of reporting to the outside world the various ways the company is becoming more sustainable, or a responsible corporate.

The regulatory framework in the country has stepped up on financial and non-financial disclosures, but they do not specifically require reporting on environmental and social performance. While the Environmental Impact Assessment is a publicly available document, level of compliance to the EMP and other conditions is not. Companies are not required to demonstrate that they are meeting their legal and other obligations to all stakeholders, other than to the regulators. There are no regular process of disclosure that enable the local stakeholders to get information about mining activities and put across their concerns and suggestions.

There is strong inhibition among mining companies in both the private and the public sector to disclose information as it is perceived to be misused by stakeholders (in this case: community and NGOs) to compromise the company’s operations. In the absence of factual information, rumours and misinformation are spread and become the basis of hostility and agitations. The companies are then not in control of the message going out and often this message is not to the advantage of the company.

Even where information is shared, information is often restricted to “benign” issues rather than dealing with sensitive matters upfront. Most sustainability reports do not touch upon impact mitigation measures or performance on commitments made to their community.

Sustainable Development Frameworks are therefore encouraging companies to provide structured information on their social, environmental and



economic performance and demonstrate a commitment to be transparent. Reporting is seen to be a powerful tool to “involve” shareholder and stakeholders in the company’s activities, and assure them of its commitment to improve its triple bottom line.

### 8.1.1 *Status*

Currently the EIA reports the only one of the few documents made public. These are too technical and do not cover the entire bandwidth of sustainable development. The Ministry of Mines is now seeking more disclosure of other technical information like the mining plan to bring about more accountability in mines management. The Right to Information Act, 2005 is already enabling citizens to demand more information.

## 8.2 *PRINCIPLE*

This principle seeks mining sector stakeholders to assess their performance against this SDF and demonstrate continual improvement on this performance over the life of the project. It requires this performance to be reported in a structured manner in a Sustainable Development Report to be disclosed in the public domain as well as to regulatory agencies to consider during approval processes.

### 8.2.1 *Report on a regular basis performance against the Sustainable Development Framework.*

Prepare and disclose lease level (mining company), state level (state government) and national level (Ministry of Mines) SDF reports describing actions taken, or proposed to be taken at these three levels to meet the SDF requirements. The parameters to be covered by the state and national SD report will be more on how the sector is performing as a whole on the SDF rather than reporting on every lease in the state.

At the lease level provide a report, at least annually describing how the mining project through its lifecycle is meeting or will meet the requirements of this SDF. Wherever there are gaps or opportunities to improve, the mining company to report on progress till the closure of the mine.

Provide the report in a format, language and manner that is easily comprehended, accessible, useful and relevant, responding to the key stakeholders.





Report with data and information on concrete environmental, social, economic, health and safety and financial indicators disaggregated at the lease level that can be verified.

Include financial reporting in accordance with relevant and accepted accounting standards.

#### **8.2.2** *Provide third party assurance to the SDF performance report*

To enhance public confidence, utilise third party/independent verification and assurance processes on aspects being reported in the SDF report.

Validate data, information and processes in the performance reports.

Involve the project affected families and local community in the reporting and assurance process for activities of concern to them.

#### **8.2.3** *Involve stakeholders in the reporting and assurance and respond to their concerns*

As a part of the community dialogue process, set up a community monitoring mechanism for key aspects of mining activity that is of serious community concern. Agree upon the framework and boundaries of monitoring. Respond to the community monitoring data in the SDF report.

On performance on benefit sharing and social development commitments, consider regular social audits at the lease as well as mining region level to assess impacts, performance and opportunities for improvement. Involve professional/approved social auditors for the purpose.

Keep updating the stakeholder analysis and their interests (refer to Principle on community engagement) and make changes in the SDF format and coverage accordingly.

Utilise stakeholder feedback on the report format, structure, timeframes and verification to continually improve the reporting process.

#### **8.2.4** *Disclose the SDF Report*

Disclose the SDF report in the company website and as a part of the disclosures during permitting process – e.g. Mining plan, EIA and RAP disclosure.



### 8.2.5 *Consider the SDF performance for approvals*

At each stage of the mining permitting process (PL, ML and Mine Closure), seek the SDF report as a part of the applications, and in addition to impact assessment and other technical studies required for those stages. Make the SDF performance a key consideration (though not mandatory in the initial stages of adoption) for approvals to the extent relevant for that stage.

Provide incentives (fast tracking approvals, preferential treatment in awarding leases etc.) to encourage compliance to the SDF. Equally, poor performance against the SDF should become a deterrent in getting extensions of leases, expansion approvals and new leases.

## 8.3 *COVERAGE*

This principle applies to mining companies as well as the government institutions regulating the sector. All mining activities, small, medium or large, should have a SD reporting, albeit to different levels. The Prospecting Lease and Mining Lease applications should include a report on performance against the SDF and this should give it an additional weightage in terms of profile, reputation and capacity to deal with complicated issues. At the PL stage, the SD report will be limited, while at the ML stage, a detailed report needs to be provided.

## 8.4 *POLICY AND REGULATORY ANCHOR*

This principle already has an anchor in the Right to Information Act, 2005. This act has changed the dynamics of information management and access in India, and empowers ordinary citizens to seek a range of information from the government and public sector organisations. Information means any material in any form including records, documents, memos, e-mails, opinions, advices, press releases, circulars, orders, logbooks, contracts, reports, papers, samples, models, data material held in any electronic form and information relating to any private body which can be accessed by a public authority under any other law for the time being in force. It sets out obligations that public authorities have under this act including transparency and disclosure of its activities. The Act thus makes the activities of private and public organisations subject to scrutiny by the citizens and empowers request for information for the same. This implies that all future projects, plans and organisational objectives can be subject to public scrutiny.

Taking a lead, the Ministry of Mines plans to put more information on EIAs and the mining plans within the ambit of the RTI so that information on these



are public and can be sought by anyone who wants to. The Sustainable Development reporting principle however encourages mining companies to be proactive in disclosure and not reactive to RTI related queries.

The Sustainable Development report is expected to become a powerful document to assure investors and other stakeholders.

## 8.5

### *OUTCOMES*

The desired outcomes would be:

- More transparency among the mining companies.
- Improved performance on Sustainable Development indicators.
- More informed engagement and negotiations with the local community, based on better understanding of facts.
- Structured documentation on EHS and social performance that provides trends and institutional memory.
- Demonstration of continual improvement and a plan of action to reach the next set of goals.

## 8.6

### *CHALLENGES*

The challenge would be to provide enough incentives or disincentives for the mining companies to move towards reporting and assurance and be open to disclosing more and more relevant information. The Sustainable Development report cannot be a standardised one.



This section focuses on aspects to be considered in taking forward, the proposed principles for sustainable development in mining. Existing constraints and issues to be addressed before SDF implementation are flagged. It may not be possible to resolve them all before the SDF is rolled out but working at them alongside the SDF implementation is the proposed strategy and is discussed with the suggested implementation guidance.

Provisions of the SDF, as they have been conceived, will require several intersecting information systems to be adequately structured and designed around its processes. An outline of considerations is included that will help define the MIS requirements for the SDF. This is also included in the overall implementation framework.

Significantly, financial aspects of the SDF need special attention; whether it is the challenge of funding implementation aspects or structuring fund-flow to reflect the SDF objectives and use it, over time to incentivise SDF adoption.

The aspects discussed in this section jointly outline where attention needs to be focussed in order to take the larger objective of sustainable development, in the mining sector, forward. This will require much more detailing and consultation before it is finalised for implementation.

## 9.1

### CHALLENGES

The SDF takes a positive and forward-looking view of improvements in the Indian mining sector. While this is the outlook, the challenges to its implementation cannot be emphasised enough.

The introductory note underscores the challenges within the Indian mining sector with all its attendant issues in the current context. Challenges are also flagged within the field of each proposed principle, through the document. Even as the SDF and the revision of the MMDR Act aim to address some of these effectively, there are several challenges in the path of

#### Current Crises

Recently, in separate mining areas, long-festering situations were allowed to reach a point of severe crisis before concerted regulatory and administrative attention was directed to check/address them. In addition to contributing to the general perception of deep mistrust of the mining sector and its collusion with agents that help it to function illegally, flying under the administrative radar, it also came under severe criticism for further marginalising vulnerable groups, and having severe adverse impacts on the environment. Cases like this will continue to colour the perception of the mining industry and can only be addressed over time, through concerted efforts of the administration and the industry to demonstrate strong commitment to sustainable and responsible development values.



operationalising the SDF itself that need to be addressed prior to or concurrent with, its roll-out.

The key areas discussed here are included based on the urgency with which they need addressing their potential to prevent the SDF from being implemented.

### 9.1.1 *Enforcement*

Enforcement has emerged strongest, as a key challenge, be it the existing regulatory regime or the new one still under preparation. This is the single most powerful message received from all stakeholder groups. The overall credibility of any regulatory regime and administrative set-up hinges upon adequate, demonstrated enforcement and in the case of mining, this may be the key first step in the road to building confidence and restoring the reputation of the sector.

The implementation of the provisions of the revised MMDR Act and the SDF will require new layers of information and reporting, monitoring, capacity improvement and most of all, the willingness to enforce, with strong political backing to prosecute and punish powerful, and other violators.

Demonstrated action on this challenge will be key to overall success with legislative and process changes, currently underway

### 9.1.2 *Strengthening Exploration Phase*

Successful implementation of SDF and improving the sector performance on sustainability front heavily relies on strengthening the exploration phase practices and administrative processes. One of the key aspects of sustainability management in the mining sector is to have detailed baseline assessment of environmental and social aspects in the earliest phase of mining life cycle so that appropriate and commensurate management strategies can be formulated and enforced.

As has been highlighted earlier, out of 1.82 million sq. km of hard rock area (excluding the Deccan Trap), geophysical mapping of only 56,000 sq. km and geochemical mapping of only 73,000 sq. km has been completed. Even in the case of Scheduled minerals, proper reconnaissance or regional exploration of only 8–13 per cent has been done. Even this is of low quality in the modern day context as it is based on outdated technology<sup>1</sup>. In this background, ensuring sustainable development in Indian mining sector is going to be a

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(1) <sup>1</sup> Report on National Mineral Policy, High Level Committee, Planning Commission, 2006





major challenge and hence Ministry of Mines will have to thoroughly review the practices and administrative procedures followed in both major and minor mineral sector during the exploration phase. Based on the review, reforms will have to be introduced urgently to include and integrate sustainability concerns at the earliest possible phase of mining life cycle.

### 9.1.3 *Ensuring SDF Implementation in Minor Mineral Sector*

Administration and regulatory enforcement of minor mineral and artisanal mine sector at the State level is the weakest link in Indian mining sector management. Nearly 16,700 crore of mineral value is generated from minor mineral sector (in 2008-09) which is 13.7% of total mineral value (that includes fuel minerals). But still the administrative procedures and regulatory enforcement in minor mineral and artisanal mine sector is ineffective and archaic.

The quarry/mining lease award and other administrative procedures are non-standard across various States. Most of the states auction the minor mineral leases to highest bidder while some have decentralised the decision-making process upto taluk/tehsil level that have weak capacity to integrate environmental and social sustainability issues into lease agreements or at the least enforce them. Major section of this sector operates outside the purview of major regulatory agencies such as IBM, SPCBs, SEIAA/Department of Environment etc. Illegality is rampant in the minor mineral sector as administrative capacity vis-à-vis the scale of sector operations is meagre.

In this background, rolling out SDF and sustaining it across the minor and artisanal mine sector will be a major challenge unless until the State governments agree to upgrade the administration and enforcement procedures to at least at par with major mineral sector if not above.

### 9.1.4 *Capacity constraints*

The challenge of inadequate capacity within existing institutions and regulatory bodies is

#### **From a recent issues of Mckinsey Quarterly: How companies manage sustainability**

“One potential reason so many companies don’t actively address sustainability despite the attention paid to it by the media and some consumers and investors is that many have no clear definition of it. Overall, 20 percent of executives say their companies don’t. Among those that do, the definition varies: 55 percent define sustainability as the management of issues related to the environment (for example, greenhouse gas emissions, energy efficiency, waste management, green-product development, and water conservation). In addition, 48 percent say it includes the management of governance issues (such as complying with regulations, maintaining ethical practices, and meeting accepted industry standards), and 41 percent say it includes the management of social issues (for instance, working conditions and labour standards). Fifty-six percent of all the respondents define sustainability in two or more ways.

Even with this range of definitions, most respondents see sustainability as creating real value: 76 percent of executives say sustainability contributes positively to shareholder value in the long term, and 50 percent see short-term value creation.”



only going to intensify and become a bigger road-block with the additional burden of tasks and responsibilities, if concrete efforts are not put in place quite soon to address this. This issue is also the other face of the enforcement challenge, which cannot only be blamed on insufficient political will and administrative commitment. A separate exercise to evaluate the cumulative load of the proposed changes- the revised MMDR Act, the SDF, new provisions for mining in tribal areas being considered, will need to be undertaken, on the existing institutions and agencies, to assess the capacity gap and strategies for institutional strengthening, which could include greater private sector participation.

### 9.1.5 *Awareness and interpretation*

This challenge is spread across all levels and stakeholder categories and can only be addressed through coordinated efforts over a period of time. It must include attitudinal change and a change in world-view to shape how companies do business.

Understanding the ‘long-view’ on development and value creation that are the hallmarks of sustainable development, as against the easier, short term solutions that are more popular. Currently interpreted in its narrowest terms or those most expedient for business, (see box) it will take several years and very effective communication to ensure that the message and full import of ‘sustainable development’ drills down from policy to action.

#### *Big diversity in operations and issues*

That said, ‘sustainable development’ may translate into different decisions and choices in different contexts and at different scales of operation. The challenge of interpreting the SDF for different mining contexts across the country will only be compounded by the challenge of lack of awareness and capacity.

#### *Legacy issues (Reputation and trust issues):*

Legacy issues pose a particularly delicate challenge to present and future mining operations in areas that have historically felt wronged as a result of past transgressions of older mining operations. This has translated into bitter opposition and a lack of trust in any mining operations, even if they attempt to function ethically. Several stakeholder groups have clearly stated that the only way to break the impasse is by setting old records straight, which in itself makes for several contradictory dilemmas.

Geographically, these will be some of the toughest areas to work in as they are also areas of rich yet untapped mineral wealth.



## 9.1.6 *The future challenge*

### *Technology gap*

New mining projects are likely to be more remote, deeper lying, lower grade or metallurgically more complex (or a combination of these) and will therefore present additional technical challenges. Most mining operations in the country are yet to reach levels of the necessary advancement technically, geographically and geopolitically. Even regulators (technical and financial) will need to prepare to deal with this in order to not obstruct the change that will be influenced by global markets and trends.

### *Skill gap*

Insufficient industry skill has been and will continue to be a problem if not addressed through human resource development and skill development interventions in the education and training sector. Not enough qualified people enter the resources sector each year to fill demand. Large operations in prominent locations generally secure the best skills. The next level of available skills finds positions that have been seen to far exceed their abilities. The unfortunate result is that under cyclical downturns, these operations and their operators are left most vulnerable, even as they pose larger risks to the impacted areas.

## 9.1.7 *Addressing the challenges*

The challenges discussed above are well understood as impediments to the improvement of the sector as a whole and attempts to remedy this consist of a range of initiatives currently underway. The revisions to the MMDR Act, drafting the sustainable development framework, proposed revisions to the Land Acquisition Act, proposed changes in the MoEF structure for clearance, approval and enforcement, and the rolling out of the Forest Rights Act: all these are aimed at addressing some or several challenges discussed above. The SDF too, is located in the context of these challenges and several principles and guidance notes have been drafted to takes these into account but since they are far wider than the scope of the SDF, an overall and coordinated set of efforts is required to overcome them.

Taking a practical view, it is possible to forge ahead decisively, if one begins to seriously address a few key challenges, namely: enforcement, capacity gaps, skill and technology gaps, through system upgradation, transparent MIS, skill development and technology support, and broad-based awareness-generation strategies, tied up with specific outcomes.



Demonstrating that there is sincere effort in the direction will itself help in creating new dialogues and spaces, for negotiating the tougher challenges.

## 9.2

### *MANAGEMENT INFORMATION SYSTEMS (MIS)*

The SDF takes a scientific approach towards mining incorporating improved efficiencies in the sector, based on a systems view and proposes the development of clear outcomes that are comparable and measurable. Given this approach, the use of Management Information Systems at each stage becomes as much a reporting system as a decision making tool and an internal structuring system for operational processes.

It is therefore necessary to conceive of this to incorporate the following features:

- It must be well integrated and developed based on consultations and consensus of all parties that will use it.
- On the regulatory side, to illustrate, it will involve the Ministry of Mines, MoEF, State agencies, transport authorities, concerned inland waterways and port authorities, to name a few.
- Given the approach incorporating more disclosure, more and more aspects must be made available for the public at large to see, compare and monitor.
- For the above requirements, a web-based system is most suitable with agreed segments to be available in the public domain.
- Mining companies too, must be able to access the system and periodically update individual information, in the manner agreed- of course, physical verification by regulatory bodies will be in addition to this form of reporting and disclosure
- Internationally, there have been some similar exercises undertaken by governments in the operationalisation of Sustainable Development Frameworks, in various contexts and to various degrees. These must be used as guidance and inform this MIS as well.
- A dynamic system that develops progressively to incorporate greater sensitivity and response will also be one that is more representative of the ground realities while pointing in the direction of improvement.

The outline of a strategy for MIS development to address the requirements of the proposed SDF will be included in Phase II of this assignment.



### 9.3

#### *INSTITUTIONAL AND REGULATORY ASPECTS*

The institutional arrangement for an SDF is not simple as it envisages the involvement of a range of disciplines, departments and ministries. Any arrangement will therefore need to tackle three aspects:

- Creation of new institutions within the existing structure to specifically deal with SDF related issues;
- Strengthening existing structures to build capacities to understand, develop processes and monitor the SDF at each of their levels; and finally, and not the least;
- Inter-agency coordination to ensure that the policy and legal frameworks as well implementation of key strategies relevant for SDF are undertaken in tandem with each other, and with a consistent objective, approach and outcomes.

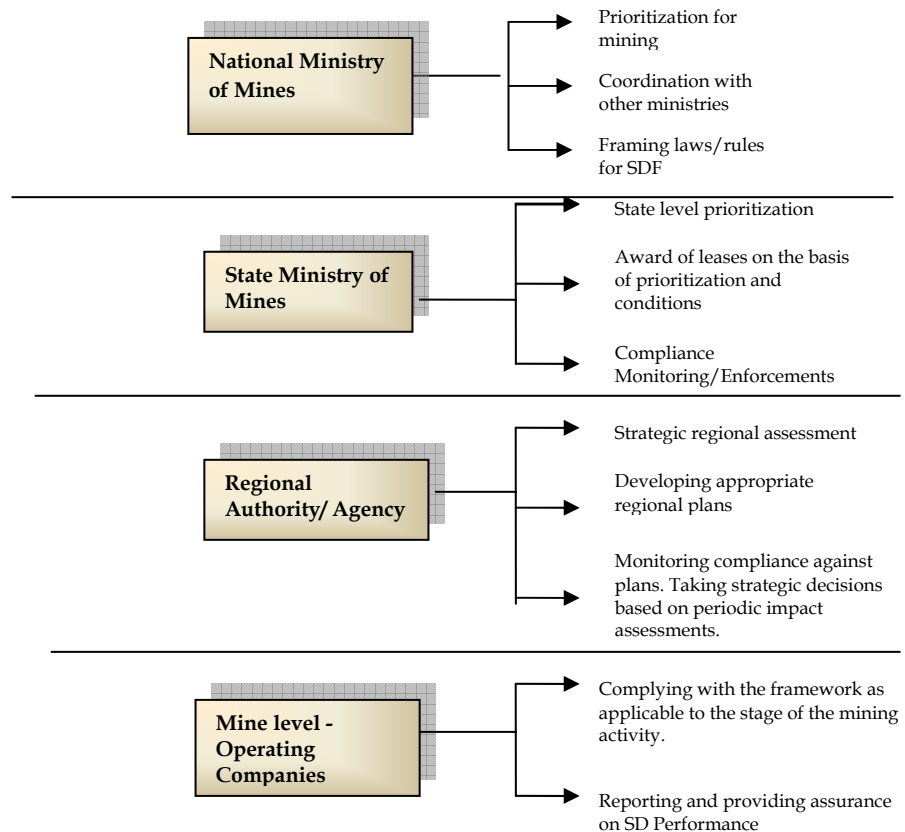
The institutional arrangement for the SDF is primarily placed at four levels:

- National level within the Ministry of Mines;
- State level within the state Departments of Mines;
- At the mining region level where the SDF has proposed for strategic decisions to 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.





## INSTITUTIONAL STRUCTURE FOR THE SDF



### 9.3.1 *New structures and revised mandates*

It is proposed that the Ministry of Mines set up a separate SDF cell for dedicated focus on SDF and coordination with other agencies, The cell could comprise of qualified people from the mining sector as well as core environmental and special specialists (some deputed from relevant ministries) with experience in preparing sustainable development strategies. External experts could be brought in from time to time. 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 prioritisation programme and defining no-go areas (Principle 1) and hold stakeholder consultations for consensus on the prioritisation. The cell would monitor the performance of states on the SDF, and consider incentivising states for better performances. We understand that the Planning Commission is already drafting a policy of incentivising states with higher environmental performance. The SDF can be linked up to that process by providing state level performance on SDF as one



of the indicators to be considered along with the criteria proposed by the Planning Commission.

A similar cell can be established in every mineral rich state with mining activities. That cell will prepare the state level mining area prioritisation plan, make recommendations on award leases on the basis of this prioritisation to the Directorate of Mines and Geology or to whichever state agency that awards leases, define conditions and standards expected in high, medium and low priority 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 roped in to become a 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.

At a regional level, as has already been discussed in Principle 2, there is currently no agency playing the role that is envisaged. This is a strategic assessment / planning role, and needs to be mandated through appropriate regulation. and a definition of the operational space of its function. The 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, and are already undertaking some carrying capacity studies for critically polluted areas in Orissa, for ecologically sensitive areas like the Konkan region and for some states like Goa. However they will need significant capacity enhancement to take on a regulatory and compliance role at a regional level. Yet another option is to form an SPV with representation of the miners in the area, Department of Mines and Geology and the infrastructure development agency to plan and undertake implementation. The SPV would also be responsible for sourcing funds (contributions, multilateral funding agencies, FIs and applicable government schemes) The SPV could even undertake planned infrastructure projects on a commercial basis for cost recovery. Some of this fund can be used to incentivise smaller players to come together to share resources and facilities and reap benefits of economies of scale. These options need to be thought through by each state, and the selection may differ between states. Even with variations, the broad mandate and purpose of the agency or authority must be agreed upon.

### 9.3.2 *Strengthening some key institutions*

This has already been discussed at length in the section on challenges. For the mining sector to adopt this framework, it will need strengthening of capacities of the existing regulators, planners, as well as the mining companies. Key



agencies that would need their skills to be diversified and capacities significantly enhanced include:

- 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.
- Indian School of Mines and other educational institutions developing mining professional- the curriculum and faculty will need to be significantly modified to include courses in social impact assessment, resettlement, stakeholder engagement, ecology and planning and regional economics to be able to bring out professional who will understand the value of the SDF and will know how to use it for their mining and management activities and decisions.
- Regulatory agencies like the SPCB to review compliance against conditions that go beyond purely environmental considerations.
- Administration at the District level to be able to guide and support the SDF, enable the operationalisation at the field, especially on aspects related to land, natural resources and communities and lead coordination with other agencies that have a role to play. They will also need to play a key safeguard role during negotiations with the community, overseeing benefit sharing agreements and ensuring compliance to it etc.
- Mining companies, large or small, to be able to understand the SDF and its implications for their mining exploration or operations and to bring in professionals that will help them meet their SD responsibilities and commitments;
- Local NGOs, CBOs and other community level organisations in the mining areas that have a key role to play, both as implementing agencies working with the companies, as well as watch dogs who need to ensure that all key stakeholders are meeting their part of the SD responsibilities;
- Gram Panchayats and Gram Sabhas, as they will be key partners in the SD process. Three of the principles (4, 5 and 6) place great emphasis on developing the capacities of the community and their representatives to be able to negotiate, to chart out their SD vision and requirements, and to be able to hold mining companies and the government accountable for the promises and commitments made.

While the key agencies have been highlighted above, it is understood that the sector as a whole, and its key institutions have to make a paradigm shift in the way mining will be done, and for that, capacity building and awareness raising will be applicable to many others.



### 9.3.3 *Outsourcing as an option*

Not all the required capacities need to be internalised. Outsourcing aspects to independent professional agencies, selected with due screening and accreditation, could also be considered, especially as the scale of capacity enhancement needed may not be possible in the immediate future. The MoEF is in the process of empanelling EIA experts. The MoM is already working towards empanelling mining professionals for reviewing and enforcing mining plans. It should now consider empanelling agencies that can assist the ministry in reviewing SD reports, monitoring performance in the field, independent auditing as well as due-diligence before award of leases. Such agencies can also be called to play a third party observer roles where required.

### 9.3.4 *Regulatory changes*

Each of the principles have been anchored on either existing acts and policies/regulatory regimes, or in proposed ones, or have indicated what kind of changes need to be brought into existing ones to be able to facilitate the implementation of the SDF. It is expected that the MoM will engage with the different ministries, primarily the Ministry of Rural Development, Ministry of Environment and Forests and the Ministry of Tribal Affairs to influence these changes.

## 9.4 *FINANCIAL ASPECTS*

It has been noted that making adequate financial arrangements will be a key challenge in the implementation of the SDF. Discussions and thoughts on the operationalisation of the SDF take into consideration that fund-flow ought to reflect and even strategically incentivise mining companies in the direction of the SDF objectives.

Several initial ideas in this regard have been discussed with a selection of stakeholders in the sector, who expressed very positive views on the subject. The basic thrust was that increased adoption of the SDF principles in business practices should result in a comparative business advantage to the adopting firms. Even as most medium and large firms expressed that they would like preferential consideration for award of new mining leases and lease extensions/renewals, the smaller and medium size firms preferred to focus on lease extensions and access to easier finance and better interest rates on loans. It must be pointed out that though no detailed assessments have been carried out on the subject, anecdotally, it seemed that smaller mining firms find it tough accessing credit from banks and formal lending.



Positive responses also emerged on the idea of using the SDF indicators to contribute to an overall risk assessment for operations when evaluating them as investment propositions, by banks/FIs.

This aspect holds great potential and needs to be explored further for the operationalisation stage of the SDF as it could emerge as the key driver for SDF adoption by SMEs in the mining sector, making sustainable development co-terminus with financial gains.

The regional development and infrastructure aspects are another key area of the SDF that need further and fuller integration through a common fund, at the operationalisation stage.



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