


DISCUSSION PAPER

BENEFIT SHARING IN THE MINING SECTOR

An analysis of the role of District Mineral Foundations

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Stakeholder consultations with policymakers, researchers, and practitioners were conducted to understand the nature of the mining sector in India and the challenges and opportunities pertaining to benefit sharing in this sector.

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SUGGESTED FORMAT FOR CITATION

Ghose, Joyita (2018). Benefit sharing in the mining sector: An analysis of the role of District Mineral Foundations, TERI Discussion Paper (New Delhi: The Energy and Resources Institute)

Editorial and design: Naina Mukerji, Rajiv Sharma, Santosh Gautam

PUBLISHED BY

The Energy and Resources Institute (TERI)

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ABOUT THIS DISCUSSION PAPER

Abstract

District Mineral Foundations (DMFs) are local institutions established in mining regions across the country for the socio-economic development of communities affected by mining operations. DMFs are managed by the government using funds which mining companies are legally bound to provide, and fund projects which seek to: (i) improve health, educational, and environmental outcomes; (ii) increase access to water and sanitation and energy; and (iii) develop infrastructure, irrigation facilities, and watersheds, amongst others.

While they present an opportunity to improve socio-economic and environmental outcomes in mining areas, the experience of similar funds in other country contexts shows that these funds may be mismanaged through the misidentification of spending priorities, faulty project selection, ad hoc decision-making, and pilferage. It is therefore important to evolve regulatory frameworks which can check the mismanagement of these funds and enable them to share benefits with communities effectively.

State governments began to establish DMFs in 2015, following the commencement of the Mines and Minerals (Development and Regulation) Amendment Act, 2015. Although it may be early to conclusively determine if DMFs have met the objective(s) for which they were established—over the three years (or less in some states) of their functioning—certain issues have been highlighted in their functioning pertaining to project planning and implementation, stakeholder involvement, and transparency and accountability mechanisms. Some of these issues may be addressed through modifications in the regulatory framework which currently governs DMFs.

I. Purpose

This discussion paper examines the regulatory framework within which DMFs operate, identifies key gaps in this framework, and makes recommendations to address these gaps in order to enable effective benefit sharing through these recently established institutions. A review of international practices pertaining to benefit sharing also informs the identification of gaps and development of strategies.

The paper aims to provide policymakers, practitioners, civil society organizations, and mining companies with a specific set of actions, which can be taken to improve the functioning of DMFs, within the broader context of benefit sharing in the mining sector.

II. Structure

After the introductory section, the second section provides an overview of reasons why governments and companies may choose to share mineral revenues and other benefits with affected communities. These include: (i) addressing ownership claims over natural resources; (ii) mitigating negative impacts of mining operations on local socio-economic and environmental outcomes; (iii) managing local resource-driven conflict; (iv) promoting intra- and inter-generational equity; and (v) obtaining greater legitimacy to operate in resource-rich regions.

The third section discusses key interventions available to governments and companies to share benefits with affected communities, including the creation of shared-use infrastructure, the provision of employment to members of mining-affected communities, and sharing mineral revenues with affected communities.

The fourth section details the legal and policy framework within which DMFs operate in India and analyses the functioning of two DMFs. A review of the central guidelines and DMF rules notified by some state governments is conducted to examine the differing manner in which states have conceptualized benefit sharing through DMFs within the broad parameters of the central guidelines.

The fifth section outlines key institutional and procedural issues which may prevent effective benefit sharing through DMFs and makes recommendations to address these issues. The final section discusses possibilities for further research. The key issues and recommendations are summarized ahead.

III. Key Issues and Recommendations

1. Stakeholder participation

A review of DMF rules notified by state governments shows that in several states, stakeholders, such as members of affected communities, mining lease holders, and elected representatives have been left out of the decision-making committees of DMFs.

The inclusion of these key stakeholders in these committees should be specified in state DMF rules, central guidelines, or the law, instead of leaving it to the discretion of the chairperson.

2. Role of local representative institutions

In scheduled areas, DMFs are required to obtain the approval of gram sabhas prior to starting any projects and while identifying beneficiaries. They are also required to submit periodic reports on their activities to gram sabhas. However, these requirements are only for scheduled areas.

Given the role that they perform as local representative institutions, the specific role of gram sabhas and urban local bodies in governing the activities of a DMF should be outlined with greater clarity. Mandating their approval in both scheduled and non-scheduled areas is one method of including these institutions within the decision-making process.

3. Amount allocated to DMFs

Currently, 10% of an amount equal to the royalty is to be deposited in DMFs for mines which are auctioned. This amount—the only portion of revenue from mining which is allocated specifically to communities affected by mining operations—forms a small part of the total revenue which the government generates from mining. The remaining amount can be used for general purposes by state governments.

In this context, three alternative mechanisms to share mineral revenues with affected communities through DMFs are discussed: (i) creating a permanent fund for all mining revenues; (ii) allocating an amount equal to royalty for DMFs; and (iii) allocating a part of the royalty payment to DMFs. The advantages and disadvantages of each of these approaches are discussed.

4. Project planning and implementation

The Model DMF Trust Deed and several state DMF rules require that an annual plan be prepared outlining the activities proposed to be carried out in the coming year.

It is important to evolve processes and mechanisms for participatory and targeted planning to ensure the selection of high-impact projects which are also in consonance with any district or state-level development plans.

5. Transparency

Websites are to be created for each DMF with the following information: status of on-going projects, annual plan, composition of DMF committees, list of beneficiaries, and area covered under the DMF, amongst others.

Given the low literacy levels and low access to technology amongst beneficiaries, alternative methods for providing citizens, especially affected communities, information about DMF activities should be evolved. Secondly, DMF websites should make information available in a timely and accessible manner.

6. Accountability

Currently, projects are to be monitored by the DMFs themselves in some states.

A monitoring mechanism that is independent of DMFs should be established in order to add greater legitimacy to the functioning of DMFs. Social audits are mandated under certain other programmes of the central government. This mechanism could also be used to monitor DMFs.

7. Sustainability

The central guidelines issued under the Pradhan Mantri Khanij Kshetra Kalyan Yojana state that a part of the annual receipts of a DMF should be kept in an endowment fund.

An endowment fund is a type of a financial asset used by non-profits, universities, and similar organizations. These funds have spending and saving rules to enable the long-term financial sustainability of such organizations.

Some states such as Andhra Pradesh, Goa, and Karnataka have provided for the establishment of endowment funds and specified the amount to be transferred to these funds. Other states have either not specified the amount to be transferred or have not included any provisions for the establishment of endowment funds.

While DMFs allow communities that are impacted by mining to meet their immediate developmental needs, endowment funds can help ensure that projects do not halt because of a lack of funds in years when the production of a particular mineral is low or when mining companies leave the region.

Given large intra-state disparities in fund collection, those DMFs which collect amounts greater than their absorptive capacity could consider transferring any additional funds towards an endowment fund. In this context, absorptive capacity refers to the extent to which a public agency is able to use funds allocated to it in an effective manner.

8. Benefit sharing beyond DMFs

The creation of DMFs is an important step towards ensuring that profits from mining activities are shared with affected communities.

State governments can consider developing a more holistic framework for benefit sharing involving other interventions to promote local area development such as the provision of employment for community members and procurement from local companies.

I. INTRODUCTION

The extraction of mineral resources such as coal, petroleum, and natural gas can have several negative environmental and social consequences for communities which reside close to mining areas, including displacement, the loss of livelihoods, environmental degradation and pollution, and health impacts.[1] At the same time, the extraction and sale of minerals can generate revenue for governments and create employment and infrastructure in mining regions.[2]

Globally, the literature examining the linkages between mineral resource wealth and economic growth has found that, paradoxically, mineral wealth can have a negative impact on economic growth, impede democratic processes, and even fuel civil conflict in mineral-rich countries.[3] The impact of mineral resources at the subnational level is the subject of more recent studies, which have found that mineral-rich regions within countries can experience: (i) increased public spending with little or no impact on the provision of public goods; (ii) increased inequality; (iii) increased corruption; and (iv) increased conflict as a result of multiple claims over ownership of resources.[4] In addition, social impacts such as the displacement of communities, the loss of established community institutions, and the migration of people into mining areas have also been documented. Some of these result in increasing the pressure on infrastructure, services, and natural resources, which in turn affect environmental and health outcomes.[5]

In India, the three most resource-rich states, Jharkhand, Odisha, and Chhattisgarh, have higher poverty rates, lower literacy rates, and lower life expectancies as compared to the national average.[6] These states also contain zones of civil conflict.[7] It is, therefore, important to understand the interlinkages between mineral resources, development, and conflict, and develop strategies which are cognizant of the ways in which these may interact to perpetuate poverty in mining regions.

In order to address these issues, several governments and mining companies have developed interventions to share the benefits generated from mining with the affected communities, and compensate them for any damages caused. The Indian Parliament enacted a law in 2015 which mandated the creation of local institutions called District Mineral Foundations (DMFs) to fund projects for the socio-economic development of communities affected by mining operations.[8]

This paper examines the concept of benefit sharing in the mineral sector and analyses the current and potential role of DMFs in the Indian context. The second section outlines the key theoretical frameworks used to understand and justify the sharing of benefits generated by mining with affected communities. The third section discusses major interventions which are used to share benefits. The fourth section specifically examines the functioning of DMFs, including the institutional framework within which they operate. The fifth section outlines policy gaps and makes recommendations to enable the effective delivery of benefits, through DMFs, to communities affected by mining operations. The final section discusses directions for future research.

II. CONCEPTUALIZING BENEFIT SHARING: WHY SHARE MINERAL REVENUES WITH COMMUNITIES?

While there appears to be a general consensus on the need for affected communities to receive benefits from the extraction and use of mineral resources, there are multiple narratives in the global discussion on benefit sharing. Governments may share benefits from mineral wealth for several reasons, including claims by local communities over natural resources, compensation for environmental degradation, promoting the socio-economic development of mineral-rich regions, and addressing civil conflict in these regions.[9] Five theoretical frameworks with varied yet interrelated justifications for sharing benefits derived from mineral resource development with affected communities and citizens are discussed ahead.

1. Public Trust Doctrine

The public trust doctrine refers to the idea that the sovereign state, and the government as an element of that state, has a duty, as a trustee of natural resources on behalf of its citizens, to preserve these resources and use them for the welfare of its citizens.[10] In MC Mehta vs Kamal Nath, the Supreme Court held that the public trust doctrine is a part of the Indian legal system, and, therefore, the state is a trustee of natural resources and has a legal duty to protect them.[11] Further, it stated that natural resources should only be used for private or commercial purposes if it is in the public interest to do so. However, the definition of public interest remains contested. For example, it is not established whether benefits from mining operations ought to be shared with all citizens or only those citizens affected by mining operations. Nonetheless, from this perspective, mineral resources should be extracted primarily to share the value derived from their extraction and sale with citizens.

2. Equity, InterGenerational Equity, and Sustainable Development

Equity considerations imply that no community or individual should have to bear a greater share of the burdens of resource extraction without gaining benefits which are commensurate with the costs that are borne.[12] This supports the notion that communities which bear environmental costs of resource extraction should also receive benefits in lieu of the costs borne by them. The notion of intergenerational equity takes this idea further with its emphasis on equity not just in the present generation, but also between the current and future generations, a concept which is central to sustainable development.[13]

In the mineral sector, this implies that the value which is created from mining today should also be available for future generations, especially as they may not have access to the same level of resources if the present generations continue extracting non-renewable resources at the current levels.[14] Several governments, such as those of Azerbaijan, Botswana, Kuwait, Norway, and Venezuela, have established natural resource funds (NRFs) to address this issue.[15] NRFs are types of government-owned sovereign wealth funds that invest the revenue earned from mineral extraction in order to allow for long-term returns from investments.[16]

3. The Resource Curse

Some studies which have examined the relationship between mineral wealth and economic growth have developed the concept of a 'resource curse'.[17] These studies suggest that resource-rich countries tend to have lower economic growth when compared to non-resource-rich countries. Other studies have also found that mineral wealth may impede democratic processes and promote armed civil conflict.[18] This 'paradox of plenty' has perplexed many and has been attributed to several factors, including: (i) the volatility of mineral prices; (ii) an increase in exchange rates with a high inflow of foreign currency and a consequent drop in the demand for exports, termed the 'Dutch disease'; (iii) lower incentives for governments to strengthen public institutions and service delivery, given the easy access to large amounts of revenue from the sale of mineral resources, and a consequent weakening of democratic processes; and

(iv) conflicting claims over mineral resources resulting in violence and civil strife.[19]

While early studies examined the resource curse at the national level often through cross-country comparisons, more recently, research has begun to investigate this phenomenon within countries to understand if natural resource wealth also negatively impacts local economic development.[20] Benefit sharing with local communities is recommended as a strategy to address the potentially negative consequences of mineral wealth on economic development.[21] Box 1 discusses the findings of two studies in the Indian context.

4. Environmental Justice

Environmental justice is both a movement and a theoretical paradigm.[22] Situated in the North American context, early studies which developed the concept of environmental justice argued that some communities bore greater environmental risks because of their class and race positions, and this was an example of social injustice.[23] The environmental justice framework has since been used to examine and critique environmental inequities in a range of country contexts, including India.

Over time, the focus has begun to shift from the socio-geographical distribution of environmental 'goods' and 'bads' to an examination of the relationship between exposure, risk and vulnerability, structural constraints and opportunities available to communities for participatory decision-making, and the manner in which certain forms of production produce socio-ecological injustices.[24] A shift from a liberal 'individualist' conception of justice to a community-oriented approach is also evident.

From this perspective, the historical exclusion of local communities from the fruits of resource developmental projects and the failure of the state to ensure a clean environment for all, across class, caste, and gender, stem from inequitable and unjust socio-economic and political contexts.[25] In the mining sector, these contexts have implications for the distribution of burdens and benefits of mining, rights of local communities to environmental and cultural preservation, and their participation in the decision-making processes.[26]

5. Social Licence to Operate

The concept of a social licence to operate refers broadly

Is there a subnational resource curse in India?

The Economic Survey (2016–17) examines whether there is a subnational resource curse in India, based on the performance of five states: Jharkhand, Odisha, Chhattisgarh, Rajasthan, and Gujarat; which it classifies as the five most resource-rich states in the country based on the per capita value of minerals in 2014. It examines the performance of these states on six indicators: (i) poverty reduction, (ii) per capita expenditure, (iii) per capita gross state domestic product (GSDP) growth, (iv) share of manufacturing in GSDP, (v) 'fiscal effort' by states captured by own tax revenue (OTR) in GSDP, and (vi) governance.

It concludes that there is no concrete evidence in support of a subnational resource curse in India, but makes three important observations. First, there does appear to be a positive correlation between natural resource endowment and low per capita GSDP as well as low per capita expenditure in four out of the five resource-rich states. The exception in this case is Gujarat. Second, while there does not appear to be a negative correlation between natural resource endowment and the share of manufacturing in GSDP, there is no strong positive correlation either, contrary to expectation. Finally, there is a significant difference in performance on key indicators among the top five resource-rich states in the country, with Gujarat performing much better than the other four states.

In a study on the impact of mining booms on local development in India, Asher and Novosad (2014) find that a cross-sectional analysis of data supports a subnational resource curse, while a time series analysis of the same data does not. A cross-sectional analysis shows that villages near mining areas tend to be smaller, with smaller manufacturing and retail trade sectors. Interestingly, a time series analysis of the same data shows that increases in mineral wealth lead to economic growth in the manufacturing and service sectors. However, they point out that the data they analyse is for a 7–8 year period and it is possible that over a longer horizon a negative impact on the manufacturing sector may be observed.

Both the Economic Survey (2016–17) and Asher and Novosad (2014), do not identify causal factors in their analyses. Asher and Novosad (2014) do indicate that the quality of governance may explain the positive effect of resource wealth in some cases but state that further research is needed to establish this.

Sources: Economic Survey (2016–17), Asher and Novosad (2014) to the acceptability of a company's operations by the local community.[27] The concept emerged in the 1990s, as companies realized that the support of a community can play a critical role in determining the success of mining operations. From this perspective, sharing value created from mining with the local communities can increase the legitimacy of a company, thereby granting it a social licence to operate.[28] The absence of a social license may result in the community blocking the mining operations, a lack of interest from locals in working for the company, and legal challenges to the company's operations even after regulatory permits have been obtained.[29]

Thus, there are at least five interrelated justifications for sharing the value created by mining with affected communities, including: (i) the state and, by extension, the government, as a trustee of natural resources; (ii) making value derived from natural resources available to all citizens in a fair and just manner, including the future generations; (iii) countering the resource curse; (iv) ensuring socially just outcomes of resource extraction; and (v) giving mining companies a social licence to operate.

The structure of any policy intervention must be informed by the objective that it seeks to achieve. Therefore, addressing the resource curse will require a different set of policy interventions as compared to enabling intergenerational equity. Questions pertaining to beneficiary identification (whether all citizens should receive benefits or only affected communities/regions) and the nature of the benefits (monetary or non-monetary) can be addressed more effectively when there is clarity on the outcomes that are sought to be achieved. This clarity on the objectives and outcomes can also allow policymakers and civil society to evaluate the success of the intervention.

The Statement of Objects and Reasons of the Mines and Minerals (Development and Regulation) Amendment Bill, 2015 (MMDR [Amendment] Bill, 2015), which was subsequently enacted, and mandates the establishment of DMFs, states that DMFs are to be established to safeguard the interests of affected persons in districts where mining takes place.[11] This seems broad enough to include the public trust doctrine, equity, and environmental justice principles and, possibly, the resource curse. However, more clarity on the specific objectives of DMFs will allow for more focused actions through DMFs. The next section briefly outlines key interventions available to governments and companies for benefit sharing in the mining sector.

III. POLICY AND PRACTICE OPTIONS FOR SHARING MINING-RELATED BENEFITS WITH COMMUNITIES

This section discusses the major interventions available to governments and companies to share the benefits generated by mining activities with affected communities, along the extractives value chain. The extractives value chain represents the major stages at which value is created and managed while developing mineral resources such as the decision to extract, the award of mineral rights, resource extraction, revenue collection, and spending resource revenue.[31] It can be used by governments, communities, companies, and civil society organizations to structure policy options and interventions at various stages of resource development.[32] This framework may be used to identify: (i) interventions which can be made at each stage and (ii) stages of the value chain at which interventions to achieve a particular objective may be made.

For example, in the first case, interventions to be made at the stage of deciding to extract and awarding licences may include transparent and competitive bidding procedures, clearly written contracts, requiring an environmental and/or social impact assessment, and ensuring clarity in rules governing taxation. In the second case, within this framework, interventions to share benefits with affected communities can be identified at each stage of the value chain, as outlined in Figure 1. These range from compensation for resource rights at the early stages of project development to funding projects for community development once revenue is generated.

1. Payments for the Rights to Use Resources: Compensation, Rehabilitation, and Resettlement

Compensation for the rights to use mineral resources can be provided to communities once the decision to extract is made and mining rights are awarded to a company or even during the detailed exploration stage. This can be monetary and/or non-monetary in the form of land, housing, employment, and resettlement options, amongst others.[33]

At this point, consultations with community members can also begin in order to discuss the possible outcomes of projects, both positive and negative, and the expectations of communities regarding benefit sharing. Globally, several types of consultation processes have been used. For example, in Peru, consultations are a space for indigenous communities to raise objections to the project. Canada requires that a consultation process be carried out and efforts to accommodate community demands be demonstrated. Papua New Guinea requires convening 'development forums' with representatives from mining companies and affected communities. While there is no legally mandated outcome which is to

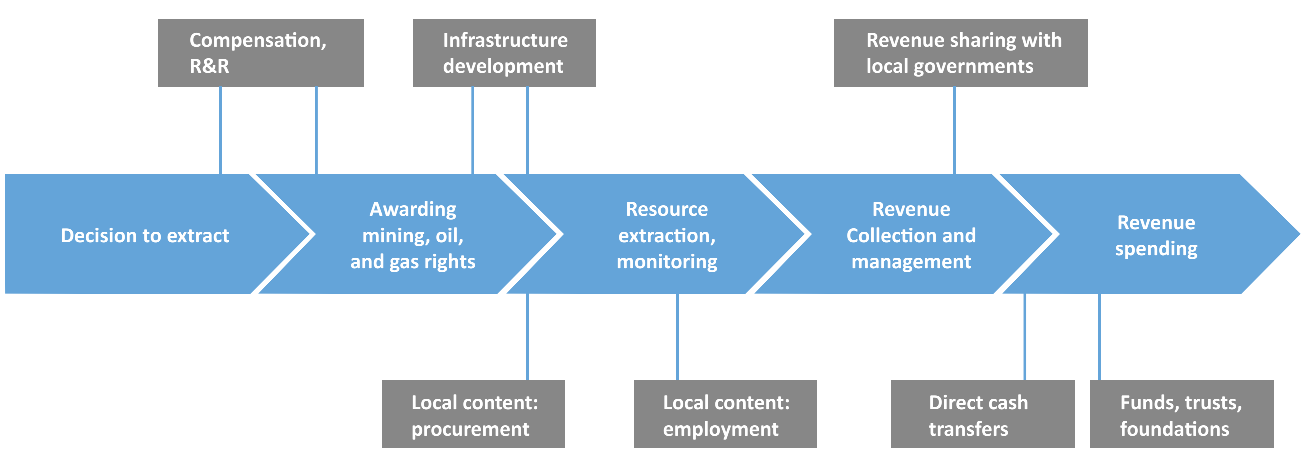

Figure 1: Benefit sharing with the affected communities along the extractives value chain
Sources: Adapted from various sources (The World Bank [2009], the NRGI [2010], and the United Nations [2015])

be achieved through these forums, in practice benefit-sharing arrangements are created at this stage.[34]

In India, when land is acquired under the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, including for mining purposes, land-owners are legally entitled to compensation, resettlement, and rehabilitation, for example, through the provision of housing, land ,or employment.[35] This law also requires that a social impact assessment (SIA) be conducted and provides for public consultations at this stage. Rules and notifications issued under the Environment (Protection) Act, 1986, require that an environment impact assessment (EIA) be conducted prior to beginning certain activities, including mining.[36] The preparation of the EIA report also requires a public consultation. While both these activities create the space for public consultation, in practice, there is limited dialogue between companies, governments, and communities at this stage. Typically the process involves the granting of approval by the affected community to plans for social and environmental impact management. These plans are prepared by consultants on behalf of the company.[37]

2. Infrastructure development: Shared-use mining infrastructure

Mining operations require access to infrastructure, such as roads, railways, ports, airports, power supply, and water supply in order to operate. This infrastructure can often be shared with citizens without much additional cost.[38] Globally, some contracts signed between mining companies and governments have involved creating infrastructure by companies instead of upfront payments or future taxes.[39] In smaller communities, companies may commit to creating small-scale infrastructure for power supply, water and sanitation, schools, hospitals, and transport.[40]

In India, the National Mineral Policy (NMP), 2008, states that large-capacity mining companies should be encouraged to build infrastructure in mineral-bearing areas, which tend to be located in regions with poor infrastructural facilities.[41] However, typically, as is the case in other countries, shared-use infrastructure development is determined at the contract level, and not at the policy level.[42]

The experience of shared-use infrastructure development in other countries shows that creating infrastructure may not deliver the expected outcomes without the required service providers.[43] For example, the building of schools and hospitals will not be able to achieve the intended educational and health outcomes without creating a pool of trained teachers and doctors. In addition, it is important to plan for the maintenance and repair of any physical infrastructure that is created, especially towards the end of the project cycle.[44] This requires moving from a corporate social responsibility (CSR) approach to infrastructure development, which may require companies to act in isolation, to a more integrated approach involving companies, governments, and the community.

3. Local content: Procurement and employment

Once mining operations commence, there are opportunities to support the local economy by instituting local content (LC) requirements.[45] LC, sometimes termed 'domestic content', is the value which a resource-extraction project brings to the local or national economy.[46] For example, foreign companies may be required to procure goods and services from the country or hire a certain percentage of nationals. Similarly, a company may be required to procure goods and services from the mining-affected region.

The definition of what constitutes a local business varies across countries, based on: (i) the place of registration, (ii) ownership by locals, (iii) the number of local employees in the business workforce, and (iv) the percentage of goods or services being produced locally.[47] It has been suggested that LC should be measured using the value added to the local economy in terms of employment, capacity building, purchase of outputs, and so on. rather than solely by the ownership of the supplier.[48]

The Organisation for Economic Cooperation and Development (OECD) has mapped LC interventions in Australia, Brazil, Canada, Finland, Ghana, Liberia, Mozambique, Papua New Guinea, Peru, and South Africa.[49] Some practices followed in these countries are summarized in Table 1.

In India, the NMP, 2008, states that employment, both from value-addition activities as well as mining, should be encouraged.[50] However, this is not a legal requirement in the country and tends to be mentioned at the contract level, when instituted.[51] Certain public sector undertakings (PSUs) of the central government have instituted purchase preference policies linked with local content.[52]

4. Revenue sharing with affected communities

At the stage of revenue collection and management, interventions to share revenue with affected communities can include: (i) giving subnational governments the power to tax mineral resources; (ii) taxation of mineral resources by national governments with subsequent transfers to subnational governments; (iii) establishing extra-budgetary funds, trusts, or foundations (FTFs) to finance projects to bolster local area development; and/or (iv) transferring revenues directly to citizens through cash transfers. Table 2 provides an overview of these interventions.

In India, mineral revenues are collected and utilized by state governments, but royalty and tax rates for certain minerals are determined by the central government. More information on the revenue-sharing model in India is provided in Section III. In 2015, DMFs were constituted as local-level institutions to share mineral revenues with affected communities.[53]

Thus, a range of interventions are available to governments which seek to share revenue with communities that are affected by mining operations, including the creation of FTFs such as DMFs. FTFs are essentially local institutions established to channelize resource revenue to affected communities. The terms 'fund' or 'trust' or 'foundation' need not mean the same thing in different country contexts. For example, in India, even though they are called foundations, DMFs are technically registered as trusts.[54] However, whether they are titled funds or trusts or foundations, in the context of benefit sharing from the extractives sector, a common feature of these organizations or institutions is that they are established to share benefits with local communities and work towards local area development. Elizabeth Wall and Remi Pelon classify various types of FTFs using six criteria. This classification is outlined in Table 3.[55]

Table 1: Interventions to promote local content

Intervention	Implications	Countries
Labour requirements	A certain percentage of local labour should be hired compulsorily or local employment should be encouraged without any specific quotas. Designation-wise quotas can be required.	Australia, Brazil, Canada, Ghana, Peru, South Africa
Local procurement	Certain categories of procurement should be reserved for local businesses, or local businesses should be given preference.	Canada, Ghana, South Africa
Preferential prices	Bids with the highest level of LC should be given preference if they are within a specified percentage of the price.	Ghana
Equity participation	Investors should concede a certain percentage of equity in share capital to local investors.	Mozambique
Joint ventures	Foreign investors should partake in joint ventures with local businesses, or should establish a local affiliate.	Brazil, Finland, Mozambique
Consulting communities	Local communities should be consulted while developing a benefit-sharing agreement or prior to mining.	Canada, Papua New Guinea, Peru
Training and capacity building	Firms should train a certain percentage of local labour.	Australia, Canada, Ghana, South Africa
R&D and technology transfer	Improved technologies should be provided at the different stages of mineral extraction and processing, including those related to environmental conservation.	Canada, Finland, Liberia, South Africa
Information sharing	Job vacancies should be advertised widely and/or tenders should be published.	Australia, Canada, Mozambique
Reporting	Companies should publish compliance reports and submit these to the specified authorities.	Australia, Brazil, Canada, Ghana, Peru

Source: Organisation for Economic Cooperation and Development (2017)

Table 2: Interventions to share resource revenue with the affected communities

Type of Intervention	Implications	Countries
Resource revenue collection by national authorities, followed by budgetary transfers to subnational authorities[1]	Derivation-based transfers: Resource revenues are collected by national governments and shared with the producing regions based either on production volumes or the value created. Indicator-based transfers: Resource revenues are collected by national governments and shared with the subnational authorities based on indicators such as population and poverty rates rather than the point of origin.	Derivation-based: Brazil, Democratic Republic of Congo, Ghana, Indonesia, Philippines, Uganda Indicator-based: Bolivia, Ecuador, Mexico, Mongolia, Uganda
Resource revenue collection by subnational authorities[1]	The rights to collect resource taxes are given to subnational authorities. However, this need not imply a right to set tax rates.	Canada (some regions), Malaysia, Philippines, UAE, USA
Funds, trusts, and foundations[2]	FTFs are institutions established by governments and/or companies to channelize resource revenue to the affected communities through funding projects for local area development.[3]	Australia, Canada, Chile, Ghana, Indonesia, Laos, Papua New Guinea, Peru, South Africa
Direct cash transfers[4]	Resource revenues are transferred to citizens directly. These can either be dependent on certain criteria (conditional cash transfer) or can also be universal (unconditional cash transfer).	Bolivia, Canada (Alberta), Mongolia, USA (Alaska)

Source: [1] UNDP (2016); [2] Wall and Pelon (2011); and [3] Natural resource funds and stabilization funds are typically established at the national level and are, therefore, excluded here. However, there are a small number of subnational resource funds; [4] Moss (2011)

Table 3: Types of FTFs

Programming approach	
Grant-making	Operational
Provide grants to other organizations to deliver benefits to communities.	Deliver benefits to communities themselves.
Saving and spending rules	
Endowment funding	Annual budgeting funding
Invest resource revenue and use the returns from investments to run FTFs. These can be used finance projects even after the mining project ends.	Provide annual budgetary support to finance projects for the duration of the mining project.
Geographic focus	
Local impacted area	Regional or national
Activities are restricted specifically to those areas which are impacted locally.	Activities may be undertaken at the regional or national levels.
Community participation in decision-making	
No representation	Board membership
No representation by community members in decision-making bodies.	Representation by key stakeholders in decision-making bodies.
Influence of the mining company	
No influence	Owned by the mining company
No representation or influence in decision-making bodies of the mining company.	Significant influence of the company in the design of the FTF, its governance, selection of projects, and monitoring and evaluation.
Influence of the government	
No influence	Legal requirement
Entirely run by the mining company.	Governments establish legal requirements for companies, determine tax rates, and regulate the activities of FTFs.

Source: Wall and Pelon (2011)

Globally, the number of FTFs grew from approximately 5 in 1980 to over 80 by 2008.[56] They have been established in several countries, including Ghana, Papua New Guinea, Peru, Philippines, Namibia, and Senegal, and, more recently, in India. Several FTFs are established and run by large mining companies, for example, the Mozal Community Development Trust in Mozambique, Asociación Ancash in Peru, and the Palabora Foundation in South Africa.[57] In other cases, FTFs may be managed by companies based on certain legal requirements such as the Fondo Solidaridad Cajamarca in Peru.[58] Alternatively, governments establish and manage FTFs by creating a legal framework which mandates that mining companies deposit a share of their revenues in these FTFs, for example, in the case of the Ghana Mineral Development Fund, the Mining Social Plan in Senegal, and DMFs in India.[59]

The next section discusses the evolution and functioning of DMFs in India.

IV. DISTRICT MINERAL FOUNDATIONS: INSTITUTIONAL FRAMEWORK AND PERFORMANCE

This section provides an overview of the key developments in the evolution of DMFs in India, their current institutional structure, and their performance.

1. Overview of the Mining Sector in India

The mining and quarrying sector accounted for 2.4% of the gross value added (at constant prices) in 2014–15.[60] India is not classified as a resource-rich country when the classification is done on the basis of the contribution of the mining sector to fiscal revenues or exports.[61] However, some studies do include India as a resource-rich country, possibly based on production volumes. India produces 95 minerals, including fuel, metallic, and non-metallic minerals.[62] The key minerals include coal and lignite, iron ore, petroleum and natural gas, zinc, limestone, chromite, manganese, and bauxite.[63]

Minerals are spread unevenly across the country. On the basis of the per capita value of fuel, metallic, and non-metallic minerals mineral production in 2014, following states are classified as the five most resource-rich states in *Economic Survey* (2016–17): Jharkhand, Odisha, Chhattisgarh, Rajasthan, and Gujarat.[64] Annexure 2 provides details about the production of key minerals in the country.

Minerals are regulated jointly by the central and state governments. The Constitution of India grants state governments the power to regulate and tax minerals within their boundaries, subject to any law passed by Parliament in the public interest.[65] Parliament enacted the Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act, 1957), and issued rules under this law, to regulate certain minerals.[66] Petroleum and natural gas and certain minerals which the MMDR Act, 1957, classifies as 'minor' minerals are excluded from the purview of this law. These include clay, gravel, stone, and marble, amongst others. Minor minerals are regulated by state governments.

Minerals not classified as minor are termed 'major' minerals. These include coal and lignite, bauxite, and iron ore, amongst others. Under the MMDR Act, 1957, royalty and tax rates for major minerals are set by the central government, while these are collected and utilized by state governments. The NMP, 2008 provides a guiding framework for the mining sector. However, its recommendations are not binding on the government.[67]

The MMDR Act, 1957, was amended most recently in 2015, when, amongst other changes, it was mandated that DMFs be established by state governments at the local level for the socio-economic development of communities affected by mining.[68]

2. Evolution of DMFs

Even though DMFs were first established in 2015, there is a history of public discussion in India on sharing benefits generated from mining with local communities and compensating them for any adverse effects. The courts have played an important role in taking these discussions forward to inform and compel policy action.

In 1997, in *Samatha vs State of Andhra Pradesh*, the Supreme Court examined the validity of certain mining leases in a scheduled area in the Visakhapatnam district. The court revoked all mining leases granted by the state government to mining companies owned by non-tribal people (effectively all the private mining companies in question) and held that only the Andhra Pradesh Mineral Development Corporation (APMDC), as a PSU, could continue mining in the area. In its judgment, the court held that it was the responsibility of the government to ensure the social and economic development of tribal communities, and that land in scheduled areas must be preserved for their socio-economic development. It stated that natural resources should be used to further the common good, and legislative and executive measures should be taken along these lines. It specifically gave direction to enact a law to allow for a consistent application of its judgment in mineral-rich scheduled areas in the country.[69] Two other landmark cases which discussed benefit sharing include *Goa Foundation vs Union of India* and *Samaj Parivartana Samudaya vs State of Karnataka*.[70] While the former mandated the creation of an Iron Ore Permanent Fund in Goa to enable intergenerational equity, the latter mandated the creation of a special purpose vehicle (SPV) to implement an environmental restoration plan in the districts of Bellary, Chitradurga, and Tumkur in Karnataka.

In 2006, a high-level committee (the Hoda Committee) constituted to review the NMP, 1993, recommended that a sustainable development framework be created for the mining sector and that interventions to address environmental concerns and needs of the local population affected by mining be strengthened. Specifically, in its discussion on benefit sharing, the Hoda Committee observed that while laws provide for compensation to communities for diversion of resources, and for conducting EIAs prior to starting mining operations, there is a need for mining and its related activities to also contribute to the socio-economic well-being of the local communities.[71]

Acting on the recommendations made by the Hoda Committee, the central government revised the NMP in 2008 and published a Sustainable Development Framework for the Indian Mining Sector in 2011 (SDF, 2011).[72] The NMP, 2008, highlights the need to improve the living standards of affected communities and points out that they should have a greater involvement in decision-making processes.[73] The SDF, 2011, outlines seven principles for sustainable mining, and principle five specifically discusses benefit sharing through DMFs.[74]

In 2011, the central government introduced the Mines and Minerals (Development and Regulation) Bill, 2011 (MMDR Bill, 2011), in Parliament.[75] The Bill sought to amend the MMDR Act, 1957, and provided for the establishment of DMFs, in addition to institutions at the state and national levels, amongst certain other provisions. However, this Bill lapsed with the dissolution of the 15th Lok Sabha in 2014.

An ordinance was promulgated by the central government in January 2015 to bring in some of the changes which the MMDR Bill, 2011, had proposed, including DMFs.[76] The ordinance was subsequently introduced in Parliament in February 2015 as the Mines and Minerals (Development and Regulation) Amendment Bill, 2015, and was enacted in March 2015.[77]

Table 4 outlines the key differences between the MMDR Bill, 2011, and the MMDR (Amendment) Act, 2015, on provisions relating to DMFs.

Table 4: Comparison of key provisions of the MMDR Bill, 2011, and the MMDR (Amendment) Act, 2015

Provision	MMDR Bill, 2011	MMDR (Amendment) Act, 2015
Payment to DMFs	Major minerals (except coal and lignite): Amount equal to royalty to be paid to DMFs. Coal and lignite: 26% of the profit. Minor minerals: Amount to be decided by state governments in consultation with a National Mining Regulatory Authority (proposed to be created by the Bill).	Major minerals: To be prescribed by the central government. It has been set as an amount equal to 10% of the royalty for mining leases granted after January 12, 2015, and an amount equal to 30% of the royalty for leases granted before that date. Minor minerals: Amount to be decided by state governments.
Institutions established	Proposed to establish: (i) National Mineral Fund, (ii) State Mineral Fund, and (iii) District Mineral Foundations. In addition, sought to establish a National Mining Regulatory Authority, State Mining Regulatory Authorities, National Mining Tribunal, and State Mining Tribunals.	Establishes DMFs at the district level. Establishes a National Mineral Exploration Trust.
Committees to govern DMFs	Provided for a governing council and specified the functions of the governing council in the Bill.	Composition and functions of the DMF (and any DMF committees) to be prescribed by the state government.
Membership of DMF committees	Specified composition of the governing council in the Bill to include stakeholders such as at least three representatives of the affected community and holders of mining leases, amongst others.[78]	Composition and functions of the DMF (and any DMF committees) to be prescribed by the state government.
Transparency and accountability	Annual report to be forwarded to the state government, published on the government's website.	Composition and functions of the DMF to be prescribed by the state government.

Sources: The MMDR Bill, 2011; MMDR (Amendment) Act, 2015

As can be seen in the table, while the MMDR (Amendment) Act, 2015, also provides for the establishment of DMFs, unlike the MMDR Bill, 2011, it allows the state government to determine key provisions pertaining to the functioning of DMFs by notifying state-level rules. Leaving rule formation to state governments allows for the development of context-specific implementation processes. On the other hand, this may also lead to the exclusion of certain key stakeholders from the decision-making process, depending on the manner in which state governments frame their DMF rules. This is discussed in greater detail in Section IV.1. The current legal and institutional framework for DMFs as outlined in the MMDR (Amendment) Act, 2015, is detailed in the following section.

3. Current Legal and Institutional Framework for DMFs

The MMDR (Amendment) Act, 2015, directs state governments to establish DMFs into which mining companies can deposit the amount they are required to pay under this law. The structure and composition of DMFs can be determined by state governments through state-level rules notified under the MMDR (Amendment) Act, 2015.

The central government has launched a new scheme, the Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY), which provides guidelines to DMFs, on the types of activities which they can fund.[79] In addition, the central government has published a Model District Mineral Foundation Trust Deed to serve as an example of how states may frame their rules.[80] However, a key difference between the two is that while it is mandatory for state governments to incorporate the provisions of the PMKKKY guidelines, it is not mandatory for them to follow the Model DMF Trust Deed while framing their state-level DMF rules.

Thus, the specific manner in which DMFs function varies across states based on the rules notified by state governments. For example, the DMF rules notified by Odisha may differ from those notified by Chhattisgarh in certain respects. However, there are some provisions which may be common to all DMFs. These common provisions are outlined ahead.

4. Key Features of DMFs

Amount to be paid to DMFs

For minerals classified as major minerals, such as coal, manganese ore, and iron ore, lease holders must deposit an amount equal to 10% of the royalty if the mining lease was granted after January 12, 2015, or an amount equal to 30% of the royalty if the mining lease was granted before that date.[81] Therefore, the amount to be paid is in addition to the royalty but is determined on the basis of the royalty rates. For minerals classified as minor minerals, such as stone, gravel, and marble, state governments can determine contributions to be made.[82]

The PMKKKY guidelines, which are mandatory for state governments to incorporate in their DMF rules, outline the following provisions:[83]

Utilization of funds

At least 60% of the funds must be used for high-priority areas, including: (i) drinking water supply, (ii) measures to control environmental pollution, (iii) healthcare, (iv) education, (v) the welfare of women and children, (vi) skill development, and (viii) sanitation. Up to 40% of the funds may be used for other priority areas, such as: (i) physical infrastructure, (ii) irrigation, (iii) energy and watershed development, and (iv) any other measures to improve environmental outcomes in the area. Administrative expenses should not constitute more than 5% of the budget.

Endowment fund

A 'reasonable sum' of the annual receipts of the fund should be kept as an endowment fund for providing a 'sustainable livelihood'. An endowment fund is a type of a financial asset used by organizations such as non-profits or universities to ensure financial sustainability. While there are several types of endowment funds, typically, they are governed by saving and spending rules, which prohibit using the principal amount and allow organizations to meet operational expenditures using returns on investments. The link between endowment funds and sustainable livelihoods is not clear, unless sustainable livelihood in this context refers to a regular long-term source of income for the affected families through the activities of the endowment fund.

Identification of affected areas

Two types of affected areas are identified: (i) directly affected areas, and (ii) indirectly affected areas. Directly affected areas are those where mining operations (such as excavation, mining, blasting, beneficiation, and waste disposal) occur. This could include: (i) areas (spread across villages, blocks, districts, or states) where mining operations take place, (ii) areas within a specific distance from a mine, as determined by the state government, (iii) villages where people displaced by mining operations have been resettled, and (iv) villages which depend on mining areas for their economic needs, and have usufruct or traditional rights over the project areas. Indirectly affected areas are those which have experienced negative social, economic, and environmental consequences of mining operations through the deterioration of water, soil, and air quality, reduction in stream flows and depletion of groundwater, and an increased burden on the existing infrastructure and resources, among others. DMFs must maintain lists of both types of areas.

Identification of affected people

Directly affected people include those identified as: (i) an affected family under the LARR Act, 2013, (ii) a displaced family under LARR Act, 2013, and (iii) any other family identified by the gram sabha.[84] In addition to the directly affected people, indirectly affected people are those who have legal, occupational, usufruct, and/or traditional rights over the land being mined. Affected families should be identified in consultation with representatives of the gram sabha, as far as possible, and a list of such families should be maintained by DMFs.

Special provisions for scheduled areas

The process of utilizing DMF funds must be guided by provisions of Article 244, Schedule V and Schedule VI of the Constitution, the provisions of the Panchayats (Extension to the Scheduled Areas) Act, 1996, and the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.[85,86,87] These broadly mandate obtaining the gram sabha approval for certain activities, and vest the gram sabha with the power to determine the nature of individual and community rights in forest areas. In these areas, the approval of the gram sabha will be required prior to commencing any projects funded through DMF funds and for the identification of the beneficiaries of these projects. Annual progress reports on these projects must be sent to the gram sabha.

5. Comparison of State DMF Rules

As mentioned in the previous section, even though some provisions are common to all DMFs, there are some variations in the manner in which states have conceptualized DMFs. Table 5 outlines the key provisions of DMFs in five states (Chhattisgarh, Goa, Karnataka, Madhya Pradesh, and Odisha) along with the central guidelines.

6. Performance of DMFs

After the passage of the MMDR (Amendment) Act, 2015, state governments started the process of notifying state-level DMF rules. Some started as early as April 2015 (Goa), while others have notified rules as recently as November 2017 (Uttarakhand).[88] Since DMFs have been operational for approximately three years at the most, an official evaluation of the functioning of DMFs has not been conducted. However, several civil society organizations have begun to examine the types of projects which DMFs are choosing to fund, decision-making processes used to select projects, and the status of projects being implemented using the DMF funds.

A. Financial performance: Collection and utilization of the DMF funds

The Ministry of Mines has established a web portal with state-wise data on fund collection and utilization. The following table provides an overview of the amount collected and utilized by DMFs in 12 key mineral-producing states till April 2018. As can be seen in Table 6, fund collection has been the highest in Odisha, Chhattisgarh, Jharkhand, Rajasthan, Telangana, and Madhya Pradesh. However, fund utilization has been low across states. In total, approximately 20% of the total funds collected in the 12 key mineral-producing states had been utilized till April 2018. Chhattisgarh is an exception with 62% of the DMF funds being utilized. However, while low fund utilization may point to issues, such as lack of clarity on procedures, limited staff, or low absorptive capacity at the district level, the identification of high-impact projects should be prioritized over meeting utilization targets.[89]

Table 5: Comparison of the DMF rules of the selected states

	Central guidelines/rules	Chhattisgarh	Goa	Karnataka	Madhya Pradesh	Odisha
Amount to be paid by lease holders (for major minerals)	Central rules: An amount equal to 10% of the royalty if the lease was granted after January 12, 2015 or 30% of the royalty if the lease was granted before that date	Common to all states. Lease holders must deposit an amount equal to 10% of the royalty payable if the mining lease was granted after January 12, 2015, or 30% of the royalty payable if the mining lease was granted before that date.				
Decision-making bodies and their responsibilities	Model deed: a managing committee for day-to-day management and a governing council for the broad policy framework	A managing committee for day-to-day management, a governing council for the broad policy direction, and a state-level monitoring committee	A district mineral foundation responsible for implementing and monitoring projects and a member secretary for day-to-day administration	A management committee for day-to-day management and a governing council for the broad policy direction	An executive committee for day-to-day management; a board of trustees for the broad policy framework; a state mineral fund to which a certain percentage of the dmf funds are deposited	An executive committee for day-to-day management and a board of trustees for the broad policy framework
Stakeholder representation in decision-making bodies	Model deed: governing council—all trustees to be members; members to be decided by the state government A managing committee: to be decided by the state government	Governing council: 3 community members, 17 government officials, 3 elected representatives, 3 company representatives Managing committee: 15 government officials and 1 elected representative	One person from the fields of mining, engineering, medicine, forest, wildlife, agriculture, biodiversity, and rural development and planning along with a chairperson and a member secretary	Governing council: 3 community members, 10 officials, 2 company representatives, 2 elected representatives, 1 non-governmental organization (NGO) representative, 2 industry (dependent on minerals) representatives Managing committee: all official members of the governing council	Board of trustees: 11+ government officials, 6+ elected representatives Executive committee: 9 government officials and 1 elected representative	Board of trustees: 8+ government officials, 3 elected representatives Executive committee: 6 official members

Table 5: Comparison of the DMF rules of the selected states

Fund utilization	PMKKKY: 60% to priority areas, 40% to other areas, administrative expenditure less than 5%, a certain amount can be kept in an endowment fund	**Chhattisgarh, Madhya Pradesh, and Odisha**: 60% to priority areas, 40% to other areas; administrative expenditure less than 5%; a certain amount can be kept in an endowment fund (not specified in Chhattisgarh and Odisha; no provision for endowment fund in Madhya Pradesh). **Goa**: 50% kept in an endowment fund and 90% of the returns to be used to fund specified activities, while 10% gets reinvested. The remaining 50% to be invested in infrastructural and other projects **Karnataka**: 20% kept in an endowment fund for projects once the mining has stopped; of the remaining 80%–60% to be used for priority areas, and the remaining 40% to others areas				
Accountability measures	PMKKKY: Accounts of the DMF to be audited by a chartered accountant (CA) to be appointed by the DMF; the annual report shall be submitted to the government and is to be laid before the state legislative assembly	Accounts audited by a CA from a CAG list; annual plan and report is to be shared with the zila parishad (ZP), administration, and the state government	Accounts to be audited as decided by the state government and the annual report is to be submitted to the state government	Accounts to be audited by a CA to be appointed by the DMF; the annual report is to be submitted to the state government and laid before the state legislative assembly	Accounts to be audited by a CA to be appointed by the DMF; the annual report is to be submitted to the state government and laid before the state legislative assembly	Accounts to be audited by a CA to be appointed by the DMF; the annual report is to be submitted to the state government and laid before the state legislative assembly
Transparency measures	PMKKKY: Website to be maintained by each DMF with details, such as composition, contributions, and annual plans	Website to be maintained by each DMF with details, such as composition, contributions, and annual plans	Not mentioned	Website to be maintained by each DMF with details, such as composition, contributions, and annual plans	Website to be maintained by each DMF with details, such as composition, contributions, and annual plans	Website to be maintained by each DMF with details, such as composition, contributions, and annual plans

Sources: *State DMF rules and notifications of Chhattisgarh (No. F7-19/2015/12, Dated: 22 December, 2016), Goa (DMG/MMDR/DMF/01/2015/4151, Dated: 15 January, 2016), Karnataka (No.CI 2O7 MMN 2015 (P-1), Dated: 11 January, 2016), Madhya Pradesh (No. F. 19.5.2015-12-2, Dated: 28 July 2016), and Odisha (No.7745—IV(A)SM-44/2015(Pt-IV)/SM Dated: 18 August, 2015) (links for all state DMF rules available in Annexure 3). Central Guidelines: The PMKKKY guidelines (No.16/7/2015-M.VI(Part) Dated: 16 September 2015), Central Rules: The Mines and Minerals (Contribution to District Mineral Foundation) Rules, 2015*

Note: Provisions of the PMKKKY are mandatory for states to incorporate in their rules, while incorporating the provisions of the Model Deed is optional.

Provisions of the Model DMF Trust Deed (not mandatory for state governments)

Establishment of DMF trust

The state government can establish a DMF trust as a non-profit body and appoint trustees. Trustees can be appointed for a period of three years, for a total of three terms at the most. This implies that a trustee can be appointed for a total of nine years. However, this does not apply to those members who are nominated by virtue of their designation. They cease to be trustees once they cease to hold office. The appointment and removal of trustees is the responsibility of the state government.

Governing Council

The governing council consists of all the trustees and is responsible for overseeing the functioning of a DMF. The key responsibilities of the governing council include: (i) laying down the broad policy framework for the DMF; (ii) preparing and approving the annual action plan and annual budget of the DMF; (iii) approving any other expenditures as prescribed by the state government; (iv) approving the recommendations of the managing committee; and (v) approving the annual reports and audited accounts of the DMF. In case the governing council is unable to prepare and approve the annual plan and budget, the chairperson of the Governing Council may be able to do so. The governing council must meet at least four times a year.

Managing committee

The managing committee is responsible for the day-to-day management of a DMF. Its key responsibilities include: (i) ensuring the timely collection of funds from lease holders; (ii) preparing a vision document for the DMF; (iii) assisting in the preparation of the annual plan and annual budget; (iv) overseeing the execution of the annual plan; (v) sanctioning projects and disbursing funds for them; (vi) managing funds of the DMF, and any investments; (vii) monitoring the utilization of DMF funds; (viii) preparing the audited accounts and annual report; and (ix) laying down rules and procedures for the functioning of the DMF. The managing committee must meet at least six times in a year.

Fund collection and utilization

Fund Collection	Fund Utilization
The trust fund should include: (i) funds collected from mining lease holders (for major and minor minerals); (ii) any other contribution from another agency, institution, or person; (iii) investments, other deposits, and interest accrued on these investments or deposits; and (iv) other properties of the DMF trust and any income derived from them.	The fund should be used for: (i) developing affected areas in accordance with the annual plan; (ii) creating local infrastructure for improved socio-economic outcomes; (iii) creating, maintaining, or upgrading community assets and services; and (iv) organizing skill development and capacity-building trainings. Administrative expenses for each year must be kept to within 6% of the total funds received that year.

In addition, trustees can charge the DMF trust fund with expenses incurred for: (i) the operation of the trust; (ii) obtaining contributions; (iii) any legal proceedings and any legal expenses in the operation of the fund; and (iv) organizing meetings. The accounts of the trust should be audited at least once a year by an auditor chosen by the trustees. The approved annual plan, annual budget, annual report, and audit report must be forwarded to the district panchayat, district administration, and the state government for publication on their websites. A quarterly progress report (relating to physical and financial outcomes) must be prepared and sent to the district panchayat and district administration for publication on their websites.

Source: Government of India, Ministry of Mines, Draft Foundation Trust Deed District Mineral

Table 6: Amount collected and utilized by DMFs (in Rs billion) (total till April 2018)

State	Amount Collected (A) Coal & lignite	(B) Major minerals other than coal & lignite	(C) Minor minerals	(D) Total (A+B+C)	Utilized (% of (total collected (D))
Odisha	15.2	27.7	0.2	43.0	4.8 (11%)
Chhattisgarh	16.1	10.6	0.8	27.5	17.0 (62%)
Jharkhand	22.0	4.9	0.5	27.3	5.4 (20%)
Rajasthan	0.5	17.3	2.2	20.1	0.4 (2%)
Telangana	12.3	1.6	2.4	16.2	0.1 (1%)
Madhya Pradesh	13.2	2.9	Nil	16.1	4.0 (25%)
Karnataka	N/A	8.5	1.3	9.8	2.3 (24%)
Maharashtra	4.1	1.2	1.9	7.2	0.4 (6%)
Andhra Pradesh	-	2.4	2.3	4.7	0.6 (12%)
Gujarat	0.6	1.9	1.1	3.6	0.5 (13%)
Tamil Nadu	0.9	1.3	0.5	2.7	0.0 (0%)
Goa	N/A	1.8	Nil	1.8	-
Total	84.7	82.2	13.1	179.9	35.5 (20%)

Source: Ministry of Mines, http://mitra.ibm.gov.in/pmkkky/Documents/21%20major%20mineral%20producing%20states.pdf (accessed on June 8, 2018)

Note: The amount collected and utilized annually is not available for all states.

Table 7: District-wise amount collected in three mineral-rich states (in Rs billion) (total till April 2018)

Odisha		Chhattisgarh		Jharkhand	
District	Amount	District	Amount	District	Amount
Keonjhar	16.0	Korba	11.7	Dhanbad	7.2
Angul	8.4	Dantewada	5.9	West Singhbhum	4.4
Sundergarh	8.2	Raigarh	1.7	Ramgarh	4.2
Jajpur	4.9	Baloda Bazar	1.6	Chatra	4.1
Jharsuguda	4.9	Balod	1.5	Bokaro	2.7
Remaining districts (25)	2.1	Remaining districts (22)	5.1	Remaining districts (19)	5.0

Source: Ministry of Mines, http://mitra.ibm.gov.in/pmkkky/Pages/National_Dashboard.aspx (accessed on June 8, 2018)

Table 7 provides details of funds collected in the districts of Odisha, Chhattisgarh, and Jharkhand, where revenue collection has been the highest.

As can be seen, in each of these states mineral resources tend to be concentrated in four to five districts. In this context, it becomes important to understand how intra-state divergences in mineral wealth may impact the economic growth, socio-political dynamics, and civil conflict in these states. This remains a gap in our current understanding of the socio-economic and political contexts of mineral-rich states in India.

B. Project implementation

The number of projects initiated by all DMFs in the country as of May 2018 was 35,966. Of these, 7,523 had been completed, 26,666 were being implemented, 1,762 were yet to start, and 15 had been terminated. Thus, 21% of projects had been completed, while 74% were ongoing.[90]

Project selection and implementation varies across states. Project plans are typically submitted by government departments, or members of decision-making committees at meetings of the DMF, approved by the executive committee (or a similar body) of the DMF and implemented by government departments or their agencies, such as the public works department, the tribal welfare department, or the education department. Two case studies outlining the types of projects which DMFs are choosing to fund are presented below.

Case study 1: DMF Keonjhar, Odisha

Name: District Mineral Foundation, Keonjhar

Administrative structure: A board of trustees and an executive committee are responsible for the planning and implementation of DMF activities. Both are headed by the district collector, while the project director, District Rural Development Authority, is the chief executive officer of the DMF and are responsible for executive management. The board of trustees includes officials from the mines department, rural water supply and sanitation department, roads and building division, and public representatives, such as the member of parliament (MP), four members of the legislative assembly (MLAs), and members of Panchayati Raj institutions. The executive committee includes officials from the rural works division, rural water supply and sanitation department, roads and building division, and the mines department. A project management unit has been established and is run by a consulting agency.[91]

Key minerals: Iron, manganese, dolomite, limestone, and chromite[92]

Fund collection: In 2016–17 ₹8.6 billion was collected. Of this amount, the majority was collected from companies extracting major minerals and ₹ 1.7 million was collected from companies extracting minor minerals.[93]

Fund utilization: A total of ₹2.4 billion was utilized in the year.[94] The following table provides an outline of the major types of activities which were funded through the DMF in 2016–17.

As can be seen in Table 8, while the largest number of projects was in the education sector (241 projects),

Table 8: Amount allocated by category in 2016/17 (in Rs million)

Sector	Sanctioned amount	Number of projects	Implementing agency	Types of projects
Physical infrastructure	1,631	30	BDO Ghatgaon and Jhumpura, R&B Keonjhar, RWD-II Keonjhar and RWD Anandapur	Road construction
Education	398	241	RWSS Keonjhar and SSA Keonjhar	Tube wells, additional classrooms, and hostel buildings
Drinking water	107	76	RWSS Keonjhar and RWSS Anandpur	Tube wells (conventional) and solar-powered tube wells
Health	98	3	R&B Keonjhar	Medical college and hospital
Irrigation	73	37	OLIC Keonjhar, PD Watershed Keonjhar, and MI Anandpur	Lift irrigation, watershed development, and micro-irrigation
Skill development	41	3	SSA Keonjhar and ITDA Keonjhar	Hostel building and tribal museum
Welfare of women and children	18	26	BDO Banspal, Harichandanpur, Hatadihi, Joda, and Jhumpura	Construction of anganwadi centres[95]
Energy and watershed	4	1	ITDA Keonjhar	(renovation of a pond)
Total	2,370	417		

Source: Annual Report, DMF Keonjhar 2016–17

Note: The RWSS (Rural Water Supply and Sanitation), SSA (Sarva Shiksha Abhiyan); ITDA (Integrated Tribal Development Agency); R&B (Roads and Building); OLIC (Odisha Lift Irrigation Corporation); PD Watershed (Project Director Watershed); MI (Micro-irrigation); BDO (Block Development Officer); and RWD (Rural Works Department) the largest amount was allocated for road construction (69%).

Projects are implemented by government agencies, such as the Rural Water Supply and Sanitation Department, Sarva Shiksha Abhiyan, Integrated Tribal Development Agency, Roads and Building division, and Rural Works Department. Some are implemented by block development officers. Projects largely relate to tube well construction and the construction of buildings and roads.

Case study 2: DMF Dantewada, Chhattisgarh

Name: District Mineral Foundation Trust, Dantewada

Administrative structure: A governing council and a managing committee are responsible for the planning and implementation of DMF activities.

The governing council is headed by the District Collector, with 9 other members: 4 are public representatives, 2 are representatives of mining companies, and the remaining 3 belong to Panchayati Raj institutions.

The managing committee consists of the collector, with 14 other official members, including the superintendent of police, the district forest officer, the district mining officer, the district education officer, and representatives of the chhattisgarh state power distribution company limited, state public works department, rural engineering services, the tribal and schedule caste department, and the public health engineering department, amongst others.[96]

Key minerals: Iron ore, stone, murram, clay, and tin ore.[97]
Fund collection: ₹791 million was received by the DMF in 2016–17.[98]

Fund utilization: ₹275 million was utilized by the DMF in 2016/17.[99] The following table provides an outline of the major types of activities which were funded through the DMF in 2016–17.

As can be seen in Table 9, the majority of the funds were allocated for activities related to education in 2016/17, followed by healthcare, energy and watershed development.

However, an analysis of the total expenditure from the year that the DMF was established in 2015, to 2018, as shown in Table 10 shows that, cumulatively, the largest amount (55% of the total amount allocated) has been invested towards physical infrastructure, followed by healthcare and education.

Table 10 also shows that 32% of projects have been completed while 68% are ongoing.

The utilization of funds (41%) is higher than the national average of 20%, although it is lower than the state average of 62%.

In terms of the types of projects which are specifically funded under these categories, there appears to be some lack of clarity regarding categorization of projects, as the construction of anganwadi centres or hostels is classified under the head of education at times and physical infrastructure at other times.[32] It is, therefore, important to develop a common categorization of projects across DMFs.

C. Evaluating effectiveness

No official evaluation of the functioning of DMFs has been conducted yet, and it is important that more research studies document the manner in which these institutions are able to achieve their stated objectives across states. This will enable policymakers and civil society organizations to gain insights into how DMFs can deliver benefits to citizens across varied contexts and

Table 9: Amount allocated by category in 2016–17 (in ₹ million)

Activity	Amount Sanctioned
Education	89
Healthcare	39
Energy and watershed development	38
Physical infrastructure	32
Agriculture and allied activities	30
Sanitation	8
Irrigation	7
Environmental preservation	7
Skill development and employment	6
Others (social welfare and drinking water)	3
Total (projects)	259
Administrative expenses	16
Total (project and administrative expenses)	275

Source: Audit Report (2016–17) DMF Dantewada identify challenges and solutions which are state-or even district-specific.

Early studies by civil society organizations, such as the Centre for Science and Environment (CSE), Environics Trust, and Oxfam; and news reports from states, point to issues such as low stakeholder involvement, the absence of planning, an ad hoc allocation of funds based on directives from state governments rather than district-level planning, weak administrative arrangements, and limited transparency.[101] Some of these can be addressed through changes in state DMF rules, for example, mandating representation by communities and companies, while others require an improved implementation of the existing directives, such as information sharing through DMF websites. The next section discusses these issues in greater detail and makes recommendations to address them.19 The Governing Council was to include: (i) district magistrate, (ii) chairperson of district panchayat, (iii) all holders of mining lease in the district, (iv) heads of relevant departments of the state government, (v) at least three representatives nominated by the district magistrate in consultation with the chairperson of the district panchayat, from amongst the affected persons or families in the areas affected by mining operations, (vi) representative of the Indian Bureau of Mines, and (vi) district mining officer.

Table 10: Amount allocated and projects undertaken (2015–18) (in Rs million)

Category	Sanctioned	Utilized (% of sanctioned)	Total projects	Completed (% of total)
Physical infrastructure	1,696	472 (20%)	1,150	286 (25%)
Healthcare	316	133 (42%)	125	39 (31%)
Education	316	218 (69%)	360	110 (31%)
Agriculture and related	261	125 (48%)	76	24 (32%)
Energy and watershed	126	75(60%)	158	86 (54%)
Works of public welfare	96	72 (75%)	86	25 (29%)
Irrigation	67	46 (68%)	62	45 (73%)
Drinking water supply	66	23 (35%)	42	13 (31%)
Welfare of women and children	40	25 (64%)	27	13 (48%)
Others (environment, cleanliness, capacity building, etc.)	105	64 (60%)	122	61 (50%)
Total	3,089	1,253 (41%)	2,208	702 (32%)

Source: Chhattisgarh DMF portal; http://www.dmf.cg.nic.in/district_dmf/backlog_work_entry_status_details.aspx?di=376&d=DANTEWADA accessed on July 11, 2018

V. ENABLING EFFECTIVE BENEFIT SHARING THROUGH DMFS: KEY ISSUES AND RECOMMENDATIONS

The creation of DMFs is an important step towards institutionalizing benefit sharing in the country, taking the process beyond individual CSR projects which are currently implemented by some large mining companies. In the Indian context, this becomes important given that there are very few large mining companies with the resources to implement large-scale projects, as is done in certain other countries.[102]

Further, while the courts have played an active role in placing benefit sharing on the policy agenda, as was noted by the Supreme Court in 2011 in *Lafarge Umiam Mining Pvt. Ltd vs Union of India*, a court or tribunal can react when an issue is brought to its notice while regulators can take proactive steps through discussion and public participation.[103]

While the MMDR (Amendment) Act, 2015, did not go so far as to create a regulator for the mining sector, something the MMDR Bill, 2011, had proposed, it created a national framework for benefit sharing, giving communities in all mineral-rich regions of the country a legal entitlement to a share in the value created by mining activities.[104] DMFs have the potential to make resource governance in the country more equitable, participatory, transparent, and socially just.

At the same time, the experience of similar funds in other countries shows that the mismanagement of these funds can lead to wasteful expenditure and pilferage. Subnational governments that experience a sudden increase in resource revenues may face the following challenges: (i) lack of clarity on the amount of revenue to expect annually; (ii) difficulty in identifying and investing in high-impact projects; (iii) limited capacity in public financial management; (iv) poor accountability and consequently higher corruption; (v) a decrease in budgetary funding for the area; (vi) an increase in conflict because of regional inequalities; and (vii) pressures to meet immediate demands, which make preparing for long-term growth, especially after the resources have been extracted, politically challenging.[105,106]

Research shows that the successful management of such funds requires: (i) transparency and accountability in fund collection and utilization; (ii) stakeholder participation at different levels, including at key decision-making stages; (iii) clearly outlined rules and responsibilities; (iv) identification of specific development objectives which are to be met; (v) improving the technical capacity of managers; and (vi) planning for sustainability, amongst others.[107]

This section identifies certain issues with the current policy framework which governs DMFs and recommends measures to enable DMFs to meet their objective(s) more effectively — the socio-economic development of communities and regions that are impacted by mining. These issues and recommendations relate to processes which are to be followed in the day-to-day management of DMFs as well as to the wider framework within which DMFs operate.

1. Stakeholder Participation

Though stakeholder participation can lead to an increase in time and resources spent on decision-making, it can also ensure that the selected projects are more suited to the local context and acceptable to affected communities, thereby increasing the likelihood of their successful completion.[108]

The MMDR (Amendment) Act, 2015, allows state governments to determine the composition of decision-making committees of DMFs.[8] A survey of state rules relating to DMFs shows some variation in the composition of these committees. In some states, affected families, members of local governments, other elected representatives, and representatives of mining companies, have been excluded from the decision-making processes. Table 11 outlines stakeholder involvement in decision-making committees of DMFs.

A. Affected communities

As can be seen in Table 11, while Andhra Pradesh, Chhattisgarh, and Karnataka specify the inclusion of affected community members in either the governing council or the managing committee, other states do not specifically require their inclusion, opening the possibility

Table 11: Stakeholder involvement in decision-making committees (a comparison of state DMF rules)

State	Decision-making committees	Affected community	Government officials	Elected representatives	Mining company	Others
Andhra Pradesh	Governing council [110]	2 women SHG members	16	1 (CEO, ZP)	2	1 NGO representative
Chhattisgarh	Governing council	3 public representatives	17	3 (2 sarpanches, 1 CEO ZP)	3	-
	Managing committee	-	15	1 (CEO, ZP)	-	-
Goa	DMF	Should include persons from the fields of mining, engineering, medicine, forest, wildlife, agriculture, biodiversity, rural development, and planning; It is unclear if these are government officials. One chairperson and member secretary is to be appointed by the government [111]				
Jharkhand	Governing council	-	9	7+ (representative of MP; all MLAs/their representatives; representative of the chairman ZP; heads and deputy heads of panchayat samitis; and gram sabhas)	2	1 representative of the Small Industries Association
	Managing committee	-	7	-	-	-
Karnataka	Governing council	3 from the community of affected persons	10	2 (District-in-charge Minister; President, ZP)	2	3 (1 NGO representative and 2 representatives from industries using minerals)
	Management committee	-	10	2 (district-in-charge, minister, president, ZP)	-	-
Madhya Pradesh[112]	Board of trustees	-	11+	6+ (district-in-charge minister; CEO ZP, MP, MLAs; president ZP and chairpersons of urban local bodies [ULBs] of the affected areas)	-	-
	Executive committee	-	9	1 (CEO, ZP)	-	
Maharashtra	Governing council	-	8	10 (district guardian minister; 3 MLAs, 3 members of the legislative council; CEO, ZP)	3	2 NGO representatives
	Managing committee	-	9	1 (CEO, ZP)	1	1 NGO representative
Odisha	Board of trustees	-	8+	6+ (Lok Sabha MPs, MLAs, 1 ZP member in whose constituency a major mineral concession is situated, and 3 members of Panchayati Raj Institutions [PRI]/ULBs)	-	-
	Executive committee	-	6	-	-	-

Sources: State DMF rules and notifications of Andhra Pradesh (G.O.Ms.No.36, Dated: 14 March, 2016), Chhattisgarh (No. F7-19/2015/12, Dated: 22 December, 2016), Goa (DMG/MMDR/DMF/01/2015/4151, Dated: 15 January, 2016), Jharkhand (No.Kha.Ni.(Vividh)-76/2015-804/M Dated: 21 March 2016), Karnataka (No.CI 2O7 MMN 2015 (P-1), Dated: 11 January, 2016), Maharashtra (MDF-0615./C.R.34/Ind.9, Dated: 1 September, 2016), Madhya Pradesh (No. F. 19.5.2015-12-2, Dated: 28 July 2016), and Odisha (No.7745—IV(A)SM-44/2015(Pt-IV)/SM Dated: 18 August, 2015) (links for all state DMF rules are available in Annexure 3).

of no representation of affected communities in the decision-making bodies in these states, unless they are added at the discretion of the chairperson.

The MMDR Bill, 2011, which lapsed in 2014, required the inclusion of at least three affected families in the governing council in addition to representatives of the local government and lessees.[113] The Parliamentary Standing Committee which examined the Bill recommended increasing the number of members of the affected community in the governing council to more than three.[114] The SDF, 2011 also recommends a larger representation by affected communities than was provided in the MMDR Bill, 2011.[115] It is, therefore, important to provide for the inclusion of these stakeholders in DMF committees either through the central law or through state DMF rules.

For example, the Compensatory Afforestation Fund Act, 2016 (CA Act, 2016), specifies the composition of the state- and national-level authorities, Compensatory Afforestation Fund Management and Planning Authorities (CAMPAs), which it creates to collect and use funds from companies or agencies seeking to use forest land for non-forest purposes.[116] This ensures that the inclusion of stakeholders, such as community members, representatives of PRIs, and NGOs is mandatory rather than discretionary.

In the Indian context, given the heterogeneous socio-economic composition of affected communities, it is also important to identify a cross section of representatives, to ensure that it is not merely the relatively privileged within these communities who are able to present their requirements.[117]

B. Elected representatives

Similarly, members of local governments have been included in the decision-making committees in some states, but not in others. As Table 11 shows, in Odisha, for example, three representatives of PRIs or ULBs are to be included in the board of trustees, which oversees the activities of the executive committee. Chhattisgarh requires that two sarpanches be nominated to the governing council, which oversees the work of the managing committee.

Similarly, while there is a provision to include local MLAs in the governing council of DMFs in Jharkhand, Madhya Pradesh, Maharashtra, and Odisha, several states have not included local MLAs or MPs in the decision-making structures. The Parliamentary Standing Committee which examined the MMDR Bill, 2011, recommended that local MPs and MLAs be mandatorily included in the decision-making processes of DMFs.[118]

Such provisions should be uniformly implemented across the state DMF rules to ensure that elected representatives are not excluded from the decision-making process. In addition, states may consider making members of PRIs part of the managing or executive committees rather than limiting their role to the governing council, which is advisory in nature.

C. Representatives of mining companies

Andhra Pradesh, Chhattisgarh, Jharkhand, Karnataka, and Maharashtra have included representatives of mining companies in the decision-making processes pertaining to DMFs, while others have not specified their inclusion. Given that DMFs operate on the funding provided by mining companies, other states could consider involving these stakeholders in their decision-making committees. This would also create a platform for communities, companies, and the government to discuss the manner in which revenue from mining should be shared and used.

The inclusion of all these stakeholders (affected communities, elected representatives, and representatives of mining companies) can either be mandated through changes in the state DMF rules, or to ensure greater uniformity across states, the following actions may be taken by the central government: (i) amendments may be made to the MMDR (Amendment) Act, 2015; (ii) central (PMKKKY) guidelines may be modified; or (iii) rules may be notified under the MMDR (Amendment) Act, 2015.

2. Role of Panchayati Raj Institutions and Urban Local Bodies

The PMKKKY guidelines mandate approval from the gram sabha in scheduled areas for: (i) any plans or projects carried out by a DMF; and (ii) identification of beneficiaries. In addition, a report on the functioning of projects funded by the DMF should be provided to the gram sabha. These provisions do not apply to non-scheduled areas. It is unclear what role PRIs currently play in the selection of projects or in holding DMFs accountable in non-scheduled areas.

Given the mandate that PRIs have regarding democratic decision-making, their role in decision- making regarding the DMF expenditure should be clearly outlined. Mandating gram sabha approval in both scheduled and non-scheduled areas is one method of including PRIs within the decision-making process. Similarly, where urban areas are affected, and projects are sanctioned using DMF funds in these areas, the role of ULBs should be clearly outlined in project selection and monitoring processes. In addition, local bodies could also play a role in monitoring expenditure and project implementation. Current gaps in the monitoring framework of DMFs are discussed in greater detail later in this section.

3. Amount Allocated to DMFs

The central government has specified the amount to be paid by mining lease holders to DMFs.[119] For major minerals lease holders must deposit an amount equal to 10% of the royalty if the mining lease was granted after January 12, 2015, or an amount equal to 30% of the royalty if the mining lease was granted before that date.[120] The amount is in addition to the royalties paid by lease holders but is determined on the basis of the existing royalties paid by them. For minor minerals, state governments may determine contributions.

Currently, the central government sets the royalty rates for major minerals, but the royalty is collected and utilized by state governments. The amount generated through auctions, mandated for certain minerals in the MMDR (Amendment) Act, 2015, is largely utilized by state governments. However, revenue generated from royalties and auctions can be used for any purposes by the state government, unlike the funds collected for DMFs, which are specifically for areas and people affected by mining.

The regulatory regime established through the MMDR (Amendment) Act, 2015, effectively requires 10% of an amount equal to the royalty to be deposited in the DMF for mines, which are auctioned as the auction system came into place after 2015. Table 12 depicts the revenue that the government received from the auction of 41 mineral blocks and the amount of that revenue which is earmarked for DMFs.

As can be seen in Table 12 (and Figure 5), DMFs revenues specifically earmarked for the affected communities and regions are only 2%–3% of the total revenue from the sale of these 41 mineral blocks. It was only 3% of the total amount generated from auctions in 2015–16, and 2% in 2016–17, and 2017–18. For example, in 2017–18, of the

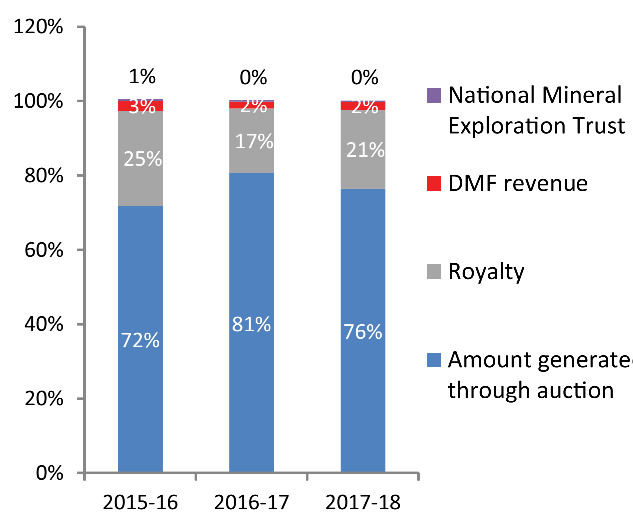

Figure 6: Amount of revenue generated by auction of 41 blocks (2015–17)

Table 12: Mineral auctions and statutory payments for 41 blocks (2015/16 to 2017/18) (in Rs billion)

A	B	C	D	E	F	G	H	I
Year	**Number of blocks auctioned**	**Auction amount**	**Royalty**	**DMF (Additional 10% of (D))**	**NMET**	**Total statutory payments (D+E+F)**	**Total revenue (C+G)**	**DMF as a % of total revenue [(E/H)*100]**
2015/16	6	130	46	5	1	51	181	3%
2016/17	15	445	96	10	2	107	552	2%
2017/18	14	539	149	15	3	167	705	2%
Total	41	1,150	296	30	6	331	1,482	2%

Source: Ministry of Mines, https://mines.gov.in/writereaddata/Content/yearwiseauction18062018.pdf (accessed July 4, 2018)

Note: *These blocks are of non-fuel minerals, such as limestone, iron ore, manganese, gold, diamond, graphite, and bauxite*

₹705 billion generated through the auction of the 41 blocks, only ₹15 billion was for DMFs.

In this context, three alternative revenue-sharing options are discussed ahead, which allow for a greater share of mining revenues to be transferred to DMFs. However, given that at present there may be limited absorption capacity at the district level to utilize transfers to DMFs, these alternative revenue-sharing options ought to be considered along with measures to improve effective use of DMF funds at the district level.

A. A permanent fund for all mining revenues

Economic Survey (2016–17) recommends creating a permanent fund (a non-wasting asset) into which all mining revenue is deposited. Further, it recommends that the real income accrued by the fund be redistributed to those affected by mining.[121] However, this may not be acceptable to state governments as it would mean a significant reduction in 'untied' funds for some of them.[122] Further, a permanent fund may reduce the amount of money available for immediate consumption, which can be challenging to justify in economically backward regions.

B. DMF contributions in addition to royalty and 100% of royalty

An alternative scheme was suggested in the MMDR Bill, 2011, which required an amount equal to the royalty to be paid to the DMF.[123] This may have been premised on the public trust doctrine, which, as mentioned previously, holds that the state, and by extension, the government, is a trustee of natural resources on behalf of citizens. From this perspective, the amount allocated for affected communities should be at least equal to the revenue which the government generates for itself through mining. However, this provision would lead to an increase in the total amount of tax that mining companies currently pay to the government.

Table 13 depicts revenue sharing using this alternative formula for transfers to DMFs. Actual data from the sale of 41 mineral blocks is used to calculate potential transfers to DMFs when an amount equal to the royalty (in addition to the royalty) is required to be paid to DMFs.

C. DMF contributions included within royalty

A third option which has been discussed entails directing a part of the royalty to DMFs instead of charging an amount in addition to the royalty. However, a potential issue with this arrangement is that while the total revenue collected by states would remain the same, part of the revenue would be used by DMFs, leaving less available as untied funds to be used for general purposes.

In addition, the amount will be routed through state budgets, which may lead to delays in fund sharing. Funds for CAMPAs, created by the CA Act, 2016, are also routed outside the state government's budget, possibly for this reason.[124] However, if it is possible to ensure timely fund transfers to meet the requirements of DMFs, this possibility could allow for an increase in the total amount to be shared with DMFs without increasing the existing taxation levels, if, for example, more than 10% of the royalty was shared with DMFs.

Table 14 depicts revenue-sharing arrangements using this formula for transfers to DMFs. Actual data from the

Table 13: Potential transfers to DMFs when amount to be paid is 100% of royalty (in ₹Billion)

A	B	C	D	E	F	G	H	I
Year	**Number of blocks auctioned**	**Auction amount**	**Royalty**	**DMF = additional 100% of D**	**NMET**	**Total statutory payments (D+E+F)**	**Total revenue (C+G)**	**DMF as a % of total revenue ([E/H]*100)**
2015-16	6	130	46	46	1	93	223	21%
2016-17	15	445	96	96	2	194	639	15%
2017-18	14	539	149	149	3	301	840	18%
Total	41	1,150	296	296	6	598	1,748	17%

Data on (E), (G), (H), and (I) are calculated by the author using the alternative formula for DMF transfers suggested above.

Source: Data on (B), (C), (D), and (F) are from the Ministry of Mines based on the actual sale of 41 mineral blocks; https://mines.gov.in/writereaddata/Content/yearwiseauction18062018.pdf (accessed July 4, 2018).

Table 14: Amount for DMF is included within royalty (entire amount of royalty transferred to DMFs)

A	B	C	D	E	F	G	H	I
Year	**Number of blocks auctioned**	**Auction amount**	**Royalty**	**DMF inclusive of (D) (entire royalty transferred to DMF)**	**NMET**	**Total statutory payments (D+F)**	**Total revenue (C+G)**	**DMF as a % of total revenue [(E/H)*100]**
2015-16	6	130	46	46	1	47	177	26%
2016-17	15	445	96	96	2	98	543	18%
2017-18	14	539	149	149	3	152	691	22%
Total	41	1,150	296	296	6	302	1,452	20%

Source: Data on (B), (C), (D), and (F) are from the Ministry of Mines based on the actual sale of 41 mineral blocks. Data on (E), (G), (H), and (I) are calculated by the author using the alternative formula for DMF transfers suggested above.

sale of the 41 mineral blocks is used to calculate potential transfers to DMFs when the amount to be transferred to DMFs is part of the royalty paid. In this example it is assumed that the total royalty amount is transferred to DMFs.

4. Project Planning and Implementation through DMFs

The Model DMF Trust Deed and several state DMF rules require that an annual plan be prepared outlining the proposed activities of the DMF for the following year.[125] A 2017 survey of 50 mining districts across 11 states by the CSE found that there is no planning in most districts.[126] In this context, it is important to evolve processes to enable participatory and targeted planning in order to ensure that high-impact projects are selected which are also in consonance with any district or state level development plans.

As mentioned earlier, the PMKKKY guidelines provide a basic framework outlining the manner in which the DMF funds may be spent.[127] The guidelines specify that at least 60% of the funds must be used for what are termed 'high-priority areas', including: (i) drinking water supply; (ii) measures to control environmental pollution; (iii) healthcare; (iv) education; (v) the welfare of women and children; (vi) skill development; and (viii) sanitation. Up to 40% of the funds may be used for 'other priority areas', such as: (i) creating physical infrastructure; (ii) irrigation; (iii) energy and watershed development; and (iv) any other measures to improve environmental outcomes in the affected area.

The guidelines clarify that activities meant to be funded under the 'polluter pays' principle should not be funded by DMFs. The 'polluter pays' principle holds the owner of any industry responsible for mitigating any negative environmental impacts of its operations.[128] This implies that DMFs should only fund those projects which mitigate environmental pollution that cannot be attributed to a single company. Thus, when the source of pollution can be identified as a particular company, it is the responsibility of that company to take steps to prevent, minimize, and mitigate it, using its own funds, according to the polluter pays principle.

The basis on which certain areas of work have been classified as high priority is not clear. If the objective is to align the expenditure through DMFs with the national developmental objectives, there are two issues to consider. Firstly, whether such an exercise is against the principles of democratic decentralization and participatory decision-making; and secondly, even if such an alignment can be justified, whether this division of spending areas actually aligns with the national developmental priorities. If the objective is to check arbitrary expenditure by the local authorities, it is worth considering if a 60–40 division of priorities fulfils that objective, or if a more robust framework for accountability is required to ensure that the expenditure is reserved for high-impact projects. The creation of longer duration plans (for example, three to five year plans) instead of annual plans may enable a more systematic investment in projects.

The PMKKKY guidelines recommend convergence with state and district plans to enable DMFs to supplement the work done under these plans. Several activities have begun under DMFs to supplement centrally sponsored schemes on water and sanitation.[129] Interestingly, while skill development is identified as a high-priority area; livelihood generation, which is broader in its scope and also includes self-employment, does not find mention in either the high-priority or other priority areas.[130]

However, additional district-level research is required to develop context-specific expenditure frameworks for DMFs, which can also ensure that DMF funds (which are extra-budgetary) do not lead to a reduction in the budgetary support provided to an area, thereby resulting in the total expenditure remaining the same.

5. Transparency

When decision-making appears opaque or non-inclusive, there is a greater likelihood of projects being challenged by stakeholders who are excluded from these processes. In an attempt to inculcate greater transparency in the functioning of DMFs, the PMKKKY guidelines require that a website be created for each DMF with the following information: status of ongoing projects, the annual plan, composition, list of beneficiaries, and the area covered under the DMF, amongst others.[131] Most state governments have incorporated these provisions in their rules. Recently, a national-level web portal has been created by the Ministry of Mines to aggregate data from states, thus allowing for an easier monitoring of fund utilization across states.[132] While creating a web portal can serve as a useful means to increase transparency, there are two issues which need to be addressed. Firstly, beyond mandating that data be shared, it is important that this data be accessible, timely, and relevant. Secondly, alternative mechanisms for transparency ought to be developed for those communities and individuals that cannot access information using web portals.

While no study has been published on perceptions towards and awareness of DMFs, news reports from several states argue that awareness about DMFs remains low amongst beneficiaries.[133] Given low literacy levels and low access to technology amongst certain intended beneficiaries, other methods for providing citizens information about fund utilization could be evolved. For example, the LARR Act, 2013, requires that the findings of the SIA be put up at public places in the local language. Similar context-specific mechanisms could be developed to share information about the functioning of DMFs amongst affected communities. However, central guidelines should provide greater clarity on whether the information education, and communication (IEC) activities can be funded through administrative expenses or if a separate budget head is to be created for IEC activities, as is the case in certain other schemes of the central government such as the Swachh Bharat Mission.[134]

6. Accountability: Monitoring Funds and Projects

The PMKKKY guidelines outline the following accountability mechanism for DMFs: (a) annual auditing of the accounts of each DMF by a chartered accountant as specified by the state government; (b) placing the audit report in the public domain; and (c) preparing an annual report which must be submitted to the state government, placed on the website of the DMF, and laid before the legislative assembly of the state.[135]

Currently, in the Model DMF Trust Deed prepared by the central government, the governing council of the DMF has been assigned the responsibility of both preparing and approving the annual plan and budget.[136] This document is meant to serve as an example of the administrative structure which state governments can create for DMFs. To ensure greater accountability, the agency approving the annual plan and budget should be different from the agency preparing these documents. In addition, the Model DMF Trust Deed gives the chairperson of the Governing Council the power to prepare and approve both these documents in case the governing council is not able to meet.[137] This provision technically allows one person to determine the annual plan and budget for the DMF.

Secondly, in addition to monitoring funds, it is important to evolve a mechanism to monitor projects implemented by DMFs and to measure the extent to which projects are able to meet the objectives of DMFs. Currently, monitoring is done by the DMF itself in some states. For example, in Madhya Pradesh and Odisha, the board of trustees is to monitor the functioning of the DMF, while in Andhra Pradesh the governing council is to monitor the functioning of the DMF.[138] It is useful to establish a monitoring mechanism which is independent of decision-making structures to add greater legitimacy to the process.

For example, Chhattisgarh and Maharashtra have incorporated social audits of DMFs by gram sabhas in their state DMF rules.[139] This could be an important mechanism for improving the accountability of DMFs and could be considered by other state governments. The social audit units (SAUs) and related processes instituted in 2011 as a part of the Mahatma Gandhi National Rural Employment Guarantee (MGNREG) Scheme could be used to conduct social audits of DMFs.[140]

7. Sustainability: Enabling Inter-generational Equity through DMFs

A 'reasonable sum' of the annual receipts of the DMF should be kept in an endowment fund, according to the PMKKKY guidelines.[141] Along similar lines, *Economic Survey* (2016–17) recommends creating a permanent, non-wasting fund into which all mineral revenues may be deposited. It also recommends redistributing the real income accrued by this fund to affected individuals in the form of a universal basic income.[142]

An endowment fund is a type of a financial asset which is used by NGOs, universities, and similar institutions to ensure long-term financial stability. There are several types of endowment funds. Typically, they are governed by saving and spending rules which prohibit using the principal amount and allow the organization to meet operational expenditures using returns on investments. In the mining sector, endowment funds have been used to enable financial support for projects even after the 'mining boom' is over.

While DMFs will help meet the immediate developmental needs of communities impacted by mining, setting up an endowment fund can help ensure that projects do not halt because of a lack of funds in years when the production of a particular mineral is low or when mining companies leave the region. Some states, such as Andhra Pradesh, Goa, and Karnataka have provided for the establishment of endowment funds in their rules and have specified the amount to be transferred to these funds. Other states have either not specified the amount to be transferred or have not included any provisions for the establishment of endowment funds.

For example, in Goa up to 50% of DMF funds will be placed in an endowment fund. The Goa DMF Rules mandate that 50% of the amount collected by DMFs be used to fund projects and the remaining 50% be invested in a fixed deposit (or a government bond/bank bond). Of the interest earned on the invested amount, 90% may be used to fund projects. The remaining 10% of the interest must be reinvested so that the corpus of the fund remains 'permanently enhanced surpassing the period of exploitation of mineral ore and such fund shall be used in posterity for the benefit of generations to come thereby protecting the rights of the future generations and creating the inter-generational equity'.[143]

Given that states have various economic and political compulsions to spend on immediate needs, some may not be able to put aside 50% of the DMF revenues towards an endowment fund. Nonetheless, there is flexibility in the current guidelines and states, such as Andhra Pradesh (20%) and Karnataka (0.2%) have also opted to transfer some money to endowment funds, although not to the extent that Goa has.[144] Other states could consider establishing similar structures to ensure both immediate and long-term development benefits from mining. Alternatively, given the disparity in fund collection across districts within the same state, shown in Table 7, those districts which collect amounts greater than their absorptive capacity could consider channelizing the additional funds towards an endowment fund.

A second issue with this provision is the ambiguity in the PMKKKY guidelines which identify priority areas for spending (60% of funds to be spent on priority areas and 40% on other areas), but do not clearly specify whether this amount is after the transfer to the endowment fund. This ambiguity in the guidelines should be addressed to enable more states to establish endowment funds.

When considering an endowment fund, a key consideration is striking a balance between meeting the immediate requirements for developmental expenditure and putting off the immediate expenditure for longer-term returns. Even if an endowment fund is not created and funds are used only to meet the immediate developmental requirements, an expenditure framework should be developed to identify high-impact projects which can facilitate long-term development in a post-mining future.

8. Beyond DMFs: Identifying Other Interventions for Local Area Development

The creation of DMFs is an important step towards ensuring that profits generated from mining activities are shared with affected communities. However, as mentioned earlier, the establishment of foundations such as DMFs is one type of intervention, among several others, which can be made to share benefits from mining with affected communities.

State governments may also consider developing a more holistic framework for benefit sharing involving employment for community members, procurement from local companies, or the creation of shared infrastructure by mining companies to promote the development of the local economy. For example, in Australia, Canada, Mongolia, and Papua New Guinea, government regulations require that mining companies sign benefit-sharing agreements with certain mining-affected communities, which specify the rights and duties of both parties along with outlining the expected impacts and benefit-sharing measures.[145] In India, the public hearing processes, which are legally mandated while conducting SIAs and EIAs, could become a space to negotiate such benefit-sharing agreements, rather than remaining limited to the grant of approval to social and environmental impact-management plans prepared by project proponents.[146]

Finally, national legislation is not necessary to incorporate such interventions at various stages of mining activities. Elements of benefit sharing, including employment, local content, and shared infrastructure development, can be incorporated into state policies or even specific agreements which are signed with companies.

VI. DIRECTIONS FOR FUTURE RESEARCH

Given that DMFs are a recent policy intervention, additional research is required on the extent to which these institutions are able to meet their stated objectives in order to identify policy and project level gaps. For example, research can track changes in indicators under the Human Development Index or Sustainable Development Goals to quantify the impact of DMF-funded projects in the affected regions. In addition, research studies can also document practices which have been successful in certain districts or states to enable cross-state learning.

Future research can also explore whether the current classification of priority areas has enabled the selection of high-impact projects of if a more detailed district-level expenditure framework is required to ensure the accountability of project-implementing agencies while also providing them the flexibility to meet the specific requirements of the affected communities. Further research is also required to ascertain the impact of extra-budgetary resources such as the DMF funds on budgetary allocations to mining-affected regions.

In addition to these specific issues which require further study, researchers could examine the larger political, economic, and social dynamics which come into play with the inflow of largely untied funds to certain mineral-rich areas, which, historically, have had limited engagement with the state. Finally, research studies should continue to explore the conceptual underpinnings of benefit sharing to, hopefully, add new dimensions to the discussion on framing just and equitable benefit-sharing policies.

ANNEXURES

Annexure 1: Socio-economic indicators in Chhattisgarh, Jharkhand, and Odisha

State	% BPL (2011–12)	% of literate population	% of households with improved sanitation	Infant mortality rate	Extent of LWE violence (2017) (% of total)	
					Incidents	Deaths
Chhattisgarh	40%	70%	33%	54	373 (41%)	130 (49%)
Jharkhand	37%	66%	24%	44	251 (28%)	56 (21%)
Odisha	33%	73%	30%	40	81 (9%)	29 (11%)
India	22%	73%	48%	41	908	263

Sources:

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Note: BPL: Below Poverty Line; LWE: Left-wing extremism

Annexure 2: Mineral production in India

Production of select minerals (excluding atomic and fuel minerals) (2013/14 to 2017/18) (value in Rs crore)

		2013–14		2014–15		2015–16		2016–17 (P)		2017–18 (E)	
	Unit	Qty	Value	Qty	Value	Qty	Value	Qty	Value	Qty	Value
All minerals			90,882		97,215		94,004		100,242		113,541
Metallic			42,390		37,909		33,622		40,017		53,029
Bauxite	th.T	22,319	1,000	22,494	1,192	28,124	1,544	24,665	1,417	20,630	1,293
Chromite	th.T	2,878	2,376	2,164	1,880	2,916	2,121	3,728	3,644	3,462	4,018
Copper conc.	th T	139	668	108	529	152	655	135	640	150	767
Gold	kg	1,564	423	1,441	360	1,323	321	1,594	436	1,609	433
Iron ore	M.T	152	31,649	129	27,664	158	22,321	192	25,139	210	32,752
Lead conc.	th.T	194	437	198	564	262	789	268	967	349	1,267
Manganese ore	th.T	2,626	1,518	2,369	1,366	2,167	855	2,393	1,603	3,100	2,148
Zinc conc.	th.T	1,491	2,739	1,489	3,157	1,474	3,494	1,484	4,339	2,662	8,519
Other metallic minerals			1,580		1,197		1,522		1,833		1,833
Non-metallic minerals			7,516		6,496		7,572		7,415		7,702
Diamond	crt	37,517	61	36,107	61	36,044	62	36,516	64	43,936	77
Garnet (abrasive)	th.T	484	111	91	80	82	65	85	76	89	87

Production of select minerals (excluding atomic and fuel minerals) (2013/14 to 2017/18) (value in Rs crore)											
		2013–14		2014–15		2015–16		2016–17 (P)		2017–18 (E)	
	Unit	Qty	Value	Qty	Value	Qty	Value	Qty	Value	Qty	Value
Limeshell	th.T	19	4	16	4	10	3	12	3	30	7
Limestone	M.T	281	5,133	293	5,800	307	6,867	313	6,688	325	7,130
Magnesite	th.T	197	45	285	75	328	83	299	74	172	44
Phosphorite	th.T	1,454	475	1,607	376	1,572	376	1,181	389	915	217
Sillimanite	th.T	67	41	66	46	70	51	68	53	88	72
Wollastonite	th.T	193	16	187	16	175	15	166	16	137	11
Other non-metallic minerals			*1,630		39		50		51		59
Minor minerals			40,976		52,810		52,810		52,810		52,810

Source: Ministry of Mines, Annual Report 2017–18

*Note: *Includes 31 minerals declared as minor minerals vide notification dated 10.02.2015. The data for these minerals for 2014–15 onwards is included in minor minerals. th T: thousand tonnes, M.T.: million tonnes, kg: kilogram, (P): provisional, (E): estimated figures*

Annexure 3: Links to state DMF rules

State	DMF rules available at
Andhra Pradesh	https://mines.gov.in/writereaddata/UploadFile/Andhra%20Pradesh%20DMF%20Rules%20 2016.pdf
Bihar	http://mines.bih.nic.in/Acts/Bihar-District-Mineral-Foundations-Rules-2018.pdf
Chhattisgarh	https://mines.gov.in/writereaddata/UploadFile/Chhattisgarh%20DMF%20Rules.pdf
Goa	https://mines.gov.in/writereaddata/UploadFile/Goa%20DMF%20Rules.pdf
Haryana (draft)	http://minesharyana.gov.in/wp-content/uploads/2017/04/Draft_DMF_Rules_17.11.2016.pdf
Jharkhand	https://mines.gov.in/writereaddata/UploadFile/Jharkhand%20DMF%20Rules.pdf
Karnataka	https://mines.gov.in/writereaddata/UploadFile/Karnataka%20DMF%20Rules.pdf
Madhya Pradesh	http://ekhanij.mp.gov.in/appPrevious/Documents/FormsFormate/Not_01082016.PDF
Maharashtra	https://mines.gov.in/writereaddata/UploadFile/Maharashtra%20DMF%20rules.pdf
Odisha	http://dmf.orissaminerals.gov.in/website/images/ODMF_Rule_2015.pdf
Rajasthan	http://mines.rajasthan.gov.in/DMFT/images/DMFT-Rules2016.pdf
Tamil Nadu	https://mines.gov.in/writereaddata/UploadFile/Tamilnadu%20DMF%20Rules.pdf
Telangana	https://mines.gov.in/writereaddata/UploadFile/Telangana%20DMF%20Rules.pdf
Uttar Pradesh	http://mineral.up.nic.in/dmf%20rules/dmf%20combined.pdf
West Bengal (draft)	http://www.dmm.gov.in/NOTIF_142-CI_O_MM_84_11(PT-II).pdf

Source: Website of Ministry of Mine and state governments
Note: 1. The DMF rules of the other states were not available online at the time of publishing this paper.
2. Some states such as Jharkhand and Maharashtra notified the composition of the DMF committees separately from the state DMF rules.

Annexure 4: Key recommendations of committees or policy documents in India on benefit sharing in the minerals sector

A. High Level Committee on the NMP, 1993 (Hoda Committee, 2006)

- The capacity of local governments and institutions should be improved to enable them to provide benefits from mining to affected communities instead of companies taking on that role themselves. (3.7)
- Civil society organizations can act as bridges amongst communities, companies, and governments. (3.7)
- Local enterprise should be supported, for example, through preferential procurement, and employment and skill development of locals should be encouraged. (3.7)
- Mining companies can become more active in creating social infrastructure such as schools and hospitals. (3.7)

B. National Mineral Policy, 2008

- A mechanism will be evolved to improve the living standards of affected populations and ensure livelihoods to allow them to live above the poverty line. (7.11)
- The interest of local (especially indigenous) populations should be protected through their greater involvement in decision-making, based on the international best practices (2.3)

C. Draft NMP, 2018

The Ministry of Mines has constituted a committee to review the NMP, 2008, and while the new NMP is not final (as on date of publication) a draft National Mineral Policy 2018 has been published by the Ministry for comments. The key provisions of this draft NMP, 2018, pertaining to benefit sharing with affected communities include:

- DMFs, the functioning of which shall be guided by the Pradhan Mantri Khanij Kshetra Kalyan Yojana, will seek to devolve mining benefits to the project affected people. (6.12)
- The Government of India will create a national web portal to monitor the functioning of DMFs. (6.12)

D. Sustainable Development Framework for the Mining Sector (2011)

This policy document of the Ministry of Mines outlines the following seven principles for the Indian mining sector:

- Incorporating possible environmental and social impacts of mining early on to minimize adverse impact through classifying mineral resources and reserves into high-and low-risk
- Strategic assessment in key mining areas to understand wider regional ramifications of mining activities
- Establishing systems for continuous environmental, social, health, and safety management of mining operations
- Addressing loss of land, livelihoods and access to natural resources for local communities
- Community engagement, benefit sharing, and contribution of mining companies to local socio-economic development
- Planning for closure and post-closure of the mine
- Disclosure by companies of their social, environmental, and economic performance through regular reporting

Principle 5 of the SDF specifically recommends:

- Assessing needs, capacities, and skills of affected communities as a part of the social-impact assessment process and developing CSR programmes to address these needs
- Contributing towards the diversification of local employment through supporting local enterprise and employment generation
- Benefit sharing through DMFs

Sources: A. High Level Committee on the NMP, 1993 (Hoda Committee) (http://planningcommission.gov.in/reports/genrep/rep_nmp.pdf)
B. NMP, 2008 (https://www.mines.gov.in/writereaddata/Content/88753b05_NMP2008[1].pdf)
C. Draft NMP, 2018 (https://mines.gov.in/writereaddata/UploadFile/draftnationalmineralpolicy2018.pdf)
D. SDF, 2011 (https://www.mines.gov.in/writereaddata/UploadFile/Sustainable_Development_Framework.pdf)

Annexure 5: Recommendations of Parliamentary Committees Examining the MMDR Bill, 2011, and the MMDR (Amendment) Bill 2015

Standing Committee Report on the MMDR Bill, 2011:

- The provision of DMFs should be retained, but instead of an amount equal to 26% of the profit to be paid by mining companies (as was provided in the Bill), another amount should be provided for. This amount was not specified by the committee. (8.29)
- The Bill mandated the representation of three members of the affected community in the governing council. The committee recommended that the representation by the affected community should be increased. It also recommended mandating the inclusion of a local MLA/MP as a permanent special invitee to the governing council. (10.15)

Sources: 36th Report of the Standing Committee on Coal and Steel on the Mines and Minerals (Development and Regulation) Bill 2011, Report of the Select Committee on The Mines and Minerals (Development And Regulation) Amendment Bill, 2015

Select Committee Report on the Mines and Minerals (Development and Regulation) Bill, 2015:

- The Bill required state governments to make rules pertaining to DMFs. The Committee recommended that the state government should be guided by certain provisions relating to the administrative of scheduled areas and tribal areas (Article 244 read with the Fifth and Sixth Schedules of the Constitution) and the Panchayats (Extension to the Scheduled Areas) Act, 1996 and the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 while making their rules. (77) (Note: This recommendation has been incorporated in the 2015 Act).

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