

DRAFT

# MODEL

# STATE MINERAL POLICY, 2010

## Model State Mineral Policy 2010

**1. Introduction:-** Minerals are a finite and non-renewable resource, and must be exploited wisely in the larger interest of the State. While on the one hand, mineral exploration brings about increased economic activity and development of the State, it can have adverse social and ecological consequences which must be sincerely and adequately addressed in the interest of wellbeing of all the citizens of the State. Scientific mining has to go hand-in-hand with sustainable management practices for the long-term economic development of the State. The Mineral Policy has been prepared with this perspective in view. In this document the phrase “State Directorate” means the Directorate of Geology & Mining of the State Government.

**2. Geological Context:-** The mineralization of the State is primarily constituted in the Indian Peninsular Shield constituting rock formations of the Archean Age (i.e., 3500 million years ago). The generalized regional stratigraphy is as follows:-

Eon/Era/Epoch	Suite/Assembly	Group/Formation	Lithology

**3. Mineral Resources:-** Given the geological evolution of the State, many parts of the State are known to be rich in minerals. The Indian Mineral Yearbook published by the Indian Bureau of Mines annually, gives the ‘reserves’ and ‘remaining resources’ of major minerals (*latest data for the State to be reproduced in Appendix I*). In addition, the State also has extensive minor mineral resources (*latest data to be given in Appendix II*).

**4. National Mineral Policy:-**

The salient features of the National Mineral Policy, 2008 (NMP) generally applicable to the States are as follows:-

- Minerals being a valuable resource, extraction has to be optimised through scientific methods, beneficiation and economic utilization. Zero waste mining will be the goal (para 2.1 of NMP).
- The regulatory environment will be made more conducive to investment. Transparency in allocations of concession will be assured with security of tenure to a concessionaire (para 2.2 of NMP)
- 'First in time' and 'continuity or seamlessness' principles will be fully recognized (para 3.3 of NMP).
- The duration of all concessions shall be rationalised (para 5.2 of NMP).
- Data filing requirements will be rigorously monitored and concessionaires will be closely monitored in this regard (para 6.2 of NMP).
- A framework of sustainable development will be designed to ensure that mining can take place along with restoration (para 2.3 of NMP).
- Mining shall not be undertaken in ecologically fragile or biologically rich areas. Mining in forest areas will be accompanied by time-bound reclamation (para 7.10 of NMP).
- Special care will be taken to protect the interests of host and tribal populations (para 2.3 of NMP).
- Project affected persons will be protected through comprehensive R&R packages (para 2.3 of NMP).
- Old disused mining sites will be converted into forests or used in some other appropriate manner (para 7.10 of NMP).
- When mine closure becomes necessary, it should be orderly and systematic with rehabilitation of workers (para 7.12 of NMP).
- Value addition will be encouraged, as also growth of mineral sector as a stand alone industrial activity (para 2.4 of NMP). Mining as a backward linkage and value addition as a forward linkage within the State will be encouraged (para 7.4 of NMP).

- Mining sectoral value addition through beneficiation, calibration, blending, sizing, concentration, pelletisation, purification and customization will be encouraged (para 7.2 of NMP).
- Mining infrastructure requires a special thrust. Infrastructure needs will be financed through innovative structures including user charges, PPP mode and viability gap funding (para 2.5 of NMP).
- An enabling environment will be created to motivate large capacity mining companies to undertake creation of transportation network (para 7.7 of NMP).
- In the public funding of infrastructure, greater thrust will be given to development of health, education, drinking water, road and other related facilities for integrated regional development (para 7.7 of NMP).
- State agencies involved in mineral sector development and regulation will be encouraged to modernize in the areas of prospecting as well as regulation (para 2.6 of NMP).
- The State Directorates will be suitably strengthened to enable them to regulate mining in the interests of conservation and scientific development of the sector (para 2.2 of NMP).
- States will be assisted to overcome the problem of illegal mining through operational and financial linkages with IBM (para 2.6 of NMP).
- Mining of small deposits will be suitably regulated to promote scientific and efficient extraction and to control illegal mining. A cluster approach shall be encouraged through formation of consortia of small scale miners (para 7.9 of NMP).
- There will be arms length distance between State agencies that mine and those that regulate (para 4 of NMP).
- Ore bodies shall be reserved for PSUs only if there are no applications from private players for the area (para 4 of NMP).
- Use of machinery and equipment which improve the efficiency, productivity and economics of mining operation and safety and health of workers and others shall be encouraged (para 7.5 of NMP).

- Emphasis will be laid on mechanization, computerization and automation of the mining units and the manpower development programmes shall be suitably reoriented (para 7.6 of NMP).
- Educational institutions will be geared to meet the needs of the sector in the medium and long-term (para 7.6 of NMP).

In the light of the National Mineral Policy, it is desirable to set out a State Mineral Policy that deepens the thrust of the National Policy and gives focus to it in the context of the specific needs and conditions in the State. Accordingly this document has been developed. The detailed features are explained in the paragraphs below.

**5. Survey and Exploration:-** The State Department of Mines and Geology and Geological Survey of India (GSI) are the two main agencies which carry out survey and exploration of minerals in the State. These activities will be further continued and strengthened to discover new mineral deposits by deploying state-of-the-art technology. Private entrepreneurs possessing such technology will be encouraged to expedite identification of new mineral deposits.

Particular attention will be paid to exploration for gold, base metals, platinum group of minerals, ilmenite, diamonds, as well as low grade iron ores.

The State Geological Programming Board shall prioritise the projects and finalise annual programmes to maximize the benefits for the State.

**6. Estimation of Mineral Resources:-** In order to increase the resource base of the State, the State Directorate will be suitably strengthened and shall take up annual programmes for the purposes of:-

- Detailed mapping and exploration of potential areas.
- Prospecting operations of promising areas and preparation of feasibility reports to enable auction of ore bodies prospected by the Directorate.

Where possible programmes will be taken up in a collaborative mode with GSI through joint use of S&T, manpower and laboratory facilities. Activities may also be outsourced, particularly prospecting activities to Mineral Exploration Corporation Limited (MECL) or Central Mine Planning and Design Institute Limited (CMPDIL), or reputed exploration agencies in the private sector.

It shall be ensured that the applicable United Nations Framework Classification (UNFC) system is fully adopted and utilized for reporting reserves and other resources in a scientific manner.

**7. Grant of concessions:** The State shall actively encourage private investment in exploration and exploitation of mineral resources and in particular shall:-

- Fast track applications for Reconnaissance permits and shall ensure that reconnaissance data after the lock-in period is put on the website of Directorate and is easily accessible to other prospectors.
- To the extent possible, notify areas of potential mineralization where detailed exploration is required to quantify the resources, and invite applications for grant of prospecting licences. In case of Forest areas, the State Government would ensure “First stage” clearance before notification.
- Respect the right of the prospector to obtain mining lease over his prospect.
- Ensure that mining concessions recognize techno-economic principles of estimation of reserves and resources in UNFC.

Accordingly, a mining concession will be given only to a prospector after he completes his prospecting and submits his prospecting data or through a process of auction based on appropriate prospecting data and feasibility report. The State shall make particular efforts to build investor confidence and to this extent shall:-

- Respect the right of a concessionaire to transit to the next stage of concession irrespective of other claimants.

- Strictly follow first-in-time principle for grant of concession in non-notified areas.
- Frame and implement a transparent system of notifying promising areas for grant of mineral concessions, and grant concessions as per equitable and just criteria published in the notification.

In order to ensure that selection of concessionaires in notified areas follows a transparent and equitable system, it shall be ensured that:-

- Areas will be notified in a manner so as to reduce fragmentation and sterilization of reserves.
- Notification of an area shall disclose all relevant information of its mineralisation.
- Notification will invite applications within a publicised period which shall be reasonable and adequate and which shall not be extended.
- The notification shall list out the criteria based on which selection shall be made, and shall allot weightage to each criterion in a consistent manner. The criteria shall be in consonance with the National and State Mineral Policy.
- In case of large areas, manageable parcels shall be made and selection of concessionaire may be made, in addition to capacity and capability, on the basis of 'need' particularly in the context of captive requirements and all the applicants shall be evaluated equally for this purpose.
- As far as possible a fair opportunity would be given to all the applicants before one/few among the applicants is/are selected for grant of mineral concession.

**8. Scientific and systematic mining:-** There is need to enforce scientific and systematic mining practices so that, the precious natural resources are not left unutilized. The State Department of Mines and Geology through their Directorates and the Indian Bureau of Mines (IBM) and Directorate General of Mines Safety are the main authorities to ensure systematic and scientific mining.

Concerted efforts will be made to achieve better coordination between these departments for fulfilling the objectives of scientific and zero waste mining.

For this purpose, the State Directorate shall endeavour to develop expertise in Mining Plans and Mine Closure Management Plan. As far as possible, the State Directorate shall ensure that mining activities adhere to the approved plans. The State Directorate will also develop expertise in ore beneficiation techniques and preparation of techno-economic feasibility Reports.

**9. Land use planning and Sustainable Development:-** To facilitate and ensure sustainable development of mineral resources in harmony with the environment, a comprehensive view on land use will be taken keeping in view the needs of development as well as needs of protecting the forest, environment and ecology. Compliance of Environmental laws by miners will be enforced through the Department of Forest and Environment.

Attempts will be made to utilize mine wastes and also promote the concept of zero waste mining to minimize the impact on the environment.

Mining Plans and Mine Closure Plans will be dovetailed and harmonized for sustainable development.

Local communities including Panchayats, NGOs, etc. will be closely associated with the process of preparation of Mine Closure Plans and it will be ensured that such Plans include adequate provision for long-term sustainability of host populations and for the best possible use of the mined out areas based on the needs of the local communities.

**10. Development of Infrastructure:-** For extraction and utilization of minerals and promotion of mineral based industries, infrastructure development is a basic necessity. Existing infrastructure in the mineral-bearing regions is not adequate. Hence, development of roads within the mining areas and connecting roads to railway stations/ports would be given top most priority.

Large potential mineral bearing areas will be notified and applications invited from large capacity mining companies who can take up integrated development of the area and develop transportation network along with large scale mining operation.

In public funding of infrastructure, royalty funds will be transparently applied in mining affected areas for development of health and educational institution and for their confirmed management. Facilities like drinking water, power and village development will also be systematically funded.

Transportation of ore from mining area to railway siding/stockyard through conveyor belts, rope ways and other similar methods will be encouraged. This will avoid pollution in neighbouring villages, congestion and damage of roads and prevention of accidents. The State will identify and develop by-pass roads on PPP basis across towns and villages through which the minerals are transported.

National Mineral Policy, 2008, categorically states that Government of India will support States in developing infrastructure in and around mining areas. Government of India will be requested to come out with a plan programme for infrastructure and other developments in mining area on the lines of JNNURM.

Transportation costs from pit mouth port is the highest in India due to poor rail and port infrastructure. Coordination with Rail and Ports department of the State and Central Government to upgrade, expand and develop rail lines and improve existing and new seaports in the State to export minerals and value added products will be a priority.

**11. Mineral Concession Regulation:-** The State Computerised Land Records shall will be dovetailed with a computerized mining concession system to enable the status of land parcels to be seen online for the purpose of application and management of concessions.

The concession application processing will be simplified through a concession management system which will track progress online. All concession applications will be received at State Directorate to ensure that applications are processed on uniform criteria and are centrally monitored from inception.

Data filing by concessionaires will be strictly enforced and after the lock-in period is over, the data will be put on the website of the Directorate and gainfully used.

A State Empowered Committee headed by the Chief Secretary or Additional Chief Secretary and including all Departments concerned shall be set up to monitor the progress of grant of concessions and the proper management of the concession system including mine closure events.

**12. Mineral Based Industries:-** Efforts will be made to attract mineral based industries into the State to add value and increase economic activity and bring in best practices in mining and sustainable development. Preference will be given in the following order

- Quantum of investment.
- Value addition at ore stage.
- Induction of new technologies.
- Creation of infrastructure.
- Mechanisation, automation and computerization.
- Sustainable development and R&R practices.

The State shall enter into equitable arrangements for supply of water, power and inputs including mineral ores and creation and management of general infrastructure. A conducive industrial environment will be created and every effort will be made to ensure that law and order is adequately maintained.

Suitable areas for prospecting shall be identified and applications invited for prospecting licence based on the above preference.

**13. Ore-linkage and value addition:** The State policy on ore-linkage(including captive linkage) and value addition shall be based on the following:-

- The basic effort will be to ensure that all mineral based industries have a reasonably assured supply of inputs including ore. For this purpose, in respect of minerals such as iron ore which are openly traded, the first priority will be to create a system of long-term ore-linkages by designating large-scale professional and technologically advanced mining companies including Public Sector Units for providing the ore linkage, and regulating their arrangements in a transparent manner in keeping with market conditions. Beneficiation, calibration, blending, sizing, concentration, pelletisation and customization, etc. at ore stage will be incentivised and encouraged and overriding preference in allocation of prospects will be given to such companies who provide long term ore linkage to the sector, with further preference to the extent of value addition.
- In respect of ores such as limestone which are not substantially traded, or where long-term linkages are not possible because of the nature of the mineral, or the market, or in respect of pioneer industries in new mining areas, captive mines shall be allocated where possible through an auction process. For this purpose, the State Government will proactively carry out prospecting at public expense to delineate ore bodies.
- Where mines are given on captive basis (through either the prospecting route or the auction route) the intention will be to ensure that the entire run-of-the-mine is gainfully utilized to the maximum possible by beneficiation or other value addition processes. Ore not possible to be utilized by the captive unit shall be encouraged to be beneficiated to industry standard and traded under specified conditionalities, including ore linkages with other end-use industries.
- New mineral-based industries will be encouraged for setting up units in or near mineralized areas through appropriate tax and other incentives.

While ore linkages shall be offered subject to availability, captive mines shall be allocated only through an auction process, or on the accepted principle of first-in-time at prospecting stage in non-notified areas or in accordance with the policy in notified areas.

- Application from new or intending mineral based industries for areas notified for prospecting or mining shall be considered in an equitable manner with weightage for all or any of the following criteria to the extent specified in the notification:-
  - ★ Non-availability of adequate ore linkage.
  - ★ Pioneering nature of the industry in a location.
  - ★ Induction of high end and sophisticated technology.
  - ★ Use of advanced equipment and successfully proved novel mining technologies.
  - ★ Beneficiation or value addition at ore stage and better utilization of the run-of-the-mine.
  
- Application from new or intending mineral based industries for areas not notified for prospecting or mining shall be considered along with all other applications in accordance with the provisions of the Mines and Minerals (Development and Regulation) Act, 1957 and Rules framed thereunder. Any applicant claiming preference for special reasons shall make a specific claim to this effect supported by documents and all such claims shall be considered together and disposed off in a transparent manner with reasons in support. Special reasons must be closely related to zero waste scientific mining, strategic mineral development and use of new and advanced technologies likely to qualitatively improve sectoral best practices.

**14. Public Sector:-** The public sector units of the State Government and Central Government are pioneers in the mineral development of the State and their viability will be protected consistent with the need to attract fresh investment in the State. Reservation of areas for public sector shall be made to meet

reasonable needs of a unit or for the purpose of supply of ore to local industries in a transparent and equitable manner as part of an ore-linkage scheme.

**15. Joint Venture with Public Sector:-** Joint ventures with public sector units for exploiting mineral resources or setting up mineral based industries shall be undertaken in a transparent manner by publically/globally inviting Expressions of Interest and selecting a suitable applicant based on notified criteria that may include all or any of the following

- Special expertise or knowledge.
- Long experience.
- Financial resources.

**16. Environmental and Forest related issues:-** The State Government shall ensure expeditious processing of cases involving forest land. It shall proactively identify areas where mining-related activities are likely to lead to unacceptable damage to the ecology and the environment and declare 'no-go' areas. It shall also identify suitable areas for compensatory afforestation, including mined out areas.

In all cases of ore bodies prospected at public expense the State Government shall ensure that before putting such ore bodies to auction first stage forest clearance is obtained wherever required.

The State Government shall ensure adequate coordination between the State Directorate and the State Pollution Control Board for the conduct of the Environmental Impact Assessment in a quick, transparent and professional manner and ensure facilitation of preparation, approval and monitoring of the Environmental Management Plan.

**17. Mining Tribal Areas:-** The State shall as far as possible ensure that mining in tribal areas if unavoidable, is done through State agencies in collaboration with local tribal communities, or by tribal organizations such as Tribal Cooperatives,

Forest Labour Cooperatives, etc. The State shall facilitate the setting up of such institutions and shall ensure arrangements for the technical support and financial credit, and for marketing of the ore.

**18. Stakeholder Participation:-** Mining by its very nature creates many stakeholders. Many are favourably impacted, including:-

- Labour in mining operations.
- Downstream industries.
- Transportation services.
- Construction industry, etc.

Many sections of stakeholders can also be adversely impacted, particularly if due care is not taken to address their concerns. These include:-

- Host populations who derived benefits from alternative land use in the mining area, including forest lands.
- Local population adversely affected in terms of biotic regimes, water regimes, environmental disturbance etc.
- Impact on local population due to migrant population, including attendant problems of crime and law & order and socio-economic perturbations.

Mining activities in the State shall be carried out in a way that minimizes adverse impact particularly to vulnerable sections including tribals, poor, women and children. To ensure this:-

- Mining Plans and Mine Closure plans shall be approved after adequate scrutiny in terms of stakeholders impact.
- All Mines will be asked to put in place Corporate Social Responsibility Schemes, setting aside 3% of their net profit of the previous year. Mines will be encouraged to form partnerships with the District Administration, Panchayats and Local NGOs for implementation of local area development programmes, maintenance of community assets and creation of on-mine and off-mine employment opportunities.

- The State's Relief & Rehabilitation policy shall include mining-specific measures addressing issues of long-term impacts of loss of incomes due to mining activities and measures to recompense the loss in a sustainable way, by giving adequate opportunity to mine affected persons in the States' development opportunities.
- Particular attention shall be paid to rehabilitation of workers (wage earners as well as self-employed on-mine or off-mine) affected by mine closure events.

**19. Relief and Rehabilitation:-** The State shall follow an enlightened policy which shall:-

- Stress on avoiding displacement of host population due to mining related activities where possible.
- Provide an accessible platform for the registering and redressal of the grievances of the displaced communities and conscientiously address their concerns where displacement is unavoidable.

Where displacement does take place project assistance packages will be put in place in collaboration with the mining company which shall include a combination from amongst:-

- Employment assistance.
- Land-for-Land.
- Homestead assistance/housing.
- Relocation assistance, maintenance allowance, etc.

**20. Reclamation & Restoration:-** Mining activity will need to be done in a manner that does not permanently degrade the land. The State shall ensure that the mines in their Mining Closure Plans make adequate provision for reclamation and/or restoration of the land to the best possible potential in collaboration with local communities, and for their use. Land after closure shall be returned to the local Panchayat for management preferably as a Common Property Resource, particularly for the benefit of the rural poor.

Reclamation/restoration efforts shall specifically address issues of

- Bringing land into productive use;
- Reducing soil erosion through vegetative means;
- Dealing with chemical pollutants of soil and water;
- Improving the water regime and recharge potential; and
- Mitigating the adverse visual impact.

Mine closure including progressive mine closure processes will be closely monitored and it will be ensured that stakeholders are taken into confidence at all stages through a transparent process facilitated by the State Government.

Old and disused mines dating to prior to regulated Mine Closure shall be restored or rehabilitated using funds generated from royalties so as to enable local communities to regain the use of such lands.

**21. Infrastructure:-** It shall be ensured that mining activities not only build up local infrastructure, but also infrastructure for evacuation of excavated ore in the most efficient manner from the pit mouth to destination. The State Empowered Committee shall help coordinate the creation and management of rail, road and power infrastructure at the State Level and the District Planning Committee shall dovetail those programmes with District Plans.

**22. Employment Generation:-** Mining sector provides huge employment opportunities both at site and downstream. The State shall undertake a skill mapping study and strengthen the RITI and ITI network in mining districts in order to equip employable local population with basic skills enabling their absorption by the mining industry. Focus will be on excavation machinery management and repair, industry trades including welding, electrical repair, lathe works, road and civil construction skills, etc. Mining companies would be

encouraged to adopt RITI or it is in their area of operations for better absorption of skilled personnels.

**23. Cluster Deposit Mining:-** In many areas of the State mineral deposits occur in small clusters not amenable to scientific mining in the natural way. They include quarry and construction material, beach sand minerals and float ore deposits. Unscientific exploration of such local deposits can cause serious environmental problems.

In the interest of proper management of such deposits and to generate local employment, the State shall encourage the revival or creation of cooperatives for the extraction and processing of cluster deposits. Where cooperatives are not feasible such deposits shall put to auction in a cluster to consortia of miners under Panchayat supervision.

**24. Minor Minerals:-** The State shall frame a scheme for the proper exploitation of minor minerals addressing environmental concerns. In particular the scheme shall ensure that:-

- The licence or permit for minor minerals are given where possible to local bodies such as cooperatives or Panchayats.
- Mining is done in a way that does not cause environmental disturbance including water and air pollution or disturbance to natural ecological regimes.
- Revenues from the mining including proceeds of auction is used for local area development.
- Stakeholders concerns are met by activating higher level Panchayat monitoring mechanisms.

**25. Construction Industry:-** Construction industry in the State is a major demand generator for both major minerals like limestone and gypsum and minor minerals such as dimension stones, sand, gravel, etc. Proper mining practice can only be ensured if the linkage between the construction industry and mining

industry is regulated through a transparent market mechanism. It shall be ensured that:-

- Arms length is maintained between the construction industry and the mining of construction material.
- Transparent quality and pricing systems are put in place through the State Directorate.
- Enforcement, particularly to check illegal mining for construction material is carried out systematically.

**26. Prevention and Control of Illegal Mining:-** Illegal mining besides being a loss of State revenue has widespread negative impact including:-

- Environmental damage.
- Alienation of local population.
- Corruption, crime and lawlessness, etc.

Though there are many reasons for illegal mining taking place, the main causes are:-

- Lax regulation and corruption.
- Delays and complex procedures in getting legal concessions, including forest clearance.
- Keeping known deposits without notifying to invite applications.
- Refusal to grant renewal for a mine that is not exhausted.
- Arbitrary reduction in lease area, particularly during renewal.
- Non-obtaining of surface rights in the case of large areas, particularly with PSUs.

The State Government shall take steps to improve the regulatory supervision of areas of potential mineralization and shall involve the local population in the process. A part of auction proceeds and royalties of local mining activities shall be credited to the Panchayats to create a stake and improve compliance.

Forest clearance and other regulatory approvals shall be fast tracked and monitored through the State Empowered Committee.

Transport of minerals through e-permits with security features incorporated, will be introduced in a time bound manner.

Village Panchayats will be incentivized to keep vigil on the mining of sand and boulders from streams in their jurisdiction and awareness generation programmes shall be organized for the purpose.

Indian Bureau of Mines will be requested to assist the State Directorate to identify mining irregularities in the leased areas.

High resolution satellite data will be used for detecting encroachments and illegal mining. Henceforth to ensure the accuracy of location of mining area, grid-based maps will be made mandatory for grant/renewal of mining leases. Mineral check posts will be modernized with sophisticated equipments to tract illegal transportation of minerals. Mobile squads will be formed to check illegal mining, transportation and storage of minerals.

Offenders will be booked under the strictest applicable provisions of various Acts and rules. Equipments and vehicles used in the offence will be seized and confiscated. Offenders shall not be considered for allotment of new mines or renewals and also made ineligible for any permissions and concessions from the State. Mining without permit and licence will be prosecuted under IPC as theft of public property as well as mining law and police, prosecution and judiciary will be sensitised to the evils of illegal mining.

**27. Royalties:-** Royalties are an important source of revenue to the State and the State shall manage its royalty in a manner that makes mining activity more sustainable and in the larger interest of the local population particularly those affected by mining related activities. To this end the State shall create a State Mineral Fund and credit all royalties and other mineral related revenues (after

due appropriation through the Legislature) to the Mineral Fund. The Mineral Fund shall be administered jointly by the State Directorate and the District Administration as per a District-wise earmarking made in an equitable manner in association with local institutions under the overall control and supervision of the State Empowered Committee. The proceeds in the Fund shall be applied for:-

- Development of capacity in the State Directorate to implement this policy, increase compliance and prevent illegal mining.
- Development of opportunities and infrastructure for host populations in mining areas.
- Maintenance of community assets and services for local population, etc.
- Geoinformatics including a Mining tenement registry and mineral concession management system.

**28. Geoinformatics:-** The State Government recognizes that the key to attracting investment in the mining sector is making available relevant information in a way most useful for investment decision making. The State Directorate shall create and constantly update a Website in order to ensure information regarding:-

- State policies, legislation and executive instructions to prospective investors and the mining community.
- Availability of areas for prospecting and mining through creation of a Mining Tenement Registry in collaboration with the State Department of Land Records.
- Geological and geophysical data in spatial as well as non-spatial formats including data gathered during reconnaissance and prospecting after lock-in period is over.
- A concession management system to provide for end-to-end management from application to mine closure.

The State Directorate will liaise with the GSI and IBM in order to ensure uniformity and standardization of applications and the best possible synergy from the databases.

## **29. HR Development and Training:-**

- Vocational education system will be reviewed to ensure that skills required in the mining sector are adequately addressed.
- College education system will also be reviewed in order to enable the adequate supply of Geologists, Geophysicists, Chemists and engineers not only to meet the State's own needs but also those of other States and of Central institutions and the private sector and thus increase employment opportunities for the educated youth of the State.
- A training institute will be developed under the Directorate to impart in-service training on regulatory and development aspects of mining to the State Government officers of the Geology & Mining, Environment, Forrest, Police, Prosecution and other relevant departments.
- Training facilities will also be made available for RQPs and private mining industry on payment basis in order to improve sectoral capacity.

**30. Implementation of the Policy:-** Implementation of the policy will be ensured through the twin mechanisms of the State Geological Programming Board (SGPB) (to ensure that appropriate development programmes are taken up) and the State Empowered Committee (SEC) (to ensure that the regulatory regime is adequate for the task). GSI will be associated with the SGPB and IBM with the SEC to ensure adequate coordination between Central and State implementation initiatives.