

RECLAMATION BOND

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ABSTRACT

The past history of mining in our country resulted in thousand of miles of streams clogged and polluted with sediments and acid mine drainage. Tens of thousands of acres of mined land without reclamation from surface mining, in addition to the legacies of unregulated national underground mining, which include containing subsidence of mined-out areas. With the help of MOEF surface mining and its reclamation are now developed so that effective and reasonable regulation of surface coal mining operations by the State and the Central Government in accordance with the requirements of this Act. This is an appropriate and necessary means to minimize so far as practicable the adverse social, economic and environmental effects of such mining operations. The post mine land use is not decided as per the legislation and laws incorporated by the government of India. Therefore, many thousand hectares of land has gone wasted due to unplanned and unscientific way of working. Some time the land is left after doing the preliminary reclamation works, as the fund is not available for further planning and the execution of developmental work. The beneficiary planning and execution of large developmental schemes were failure due to lack of finance and planned sectorial decisions. In India per capita land is 0.11 ha, as such every piece of land is precious for meeting the demand of growing population, therefore, the present Wasteland has to be planned properly in-order to minimize the other use of best land available (agriculture and forest land). In order to raise the fund for the development project on these above waste land the reclamation bond has been proposed through

Statutory Body or Govt. Organization. This may help to promote the development work through people participation by involving their money and sharing the profit.

INTRODUCTION

Areas where sequential extraction of minerals is in progress cause environmental degradation. The most important manifestations of which are loss of topsoil, vegetation cover and disorder of the land surface structure. The environmental pollution control, waste management, reclamation of overburden dumps and rehabilitation of affected lands are the major components of any surface mining management.

In case any one of the components is ignored, the surface mining management can not be an adequate but would cause very serious ecological unbalance and its sequential problems, whose restoration cost would be inaudible. It may not be elementary to reclaim and rehabilitate any disordered and degraded land surface with all its environment to the pre-mining status, it is quite possible to carry out mining in eco-friendly manner with suitable reclamation and rehabilitation measures.

Most of the rejects from the mining are being dumped in the nearby areas and little care has been paid to rehabilitate them. As far as the biological restoration is concerned, the composition of the dump materials along with the surface structure of the dump is an aspect to be optimized. Bioengineering and geo-textile approaches for reclaiming the degraded land are worth trying. Since the composition of the reject dumps varies place to place, the bio-reclamation processes has to be tuned accordingly for the successful reclamation drudgery. Having the background knowledge of the field information and tremendous research studies on natural vegetation succession around dump areas, many approaches have been developed by the researchers to demonstrate the progressive methodology to promote bioengineering rehabilitation in reject dump areas. Since some of the physico-chemical properties such as composition, moisture content, water holding capacity, bulk density and porosity have influence on the growth of the plants, biophysical treatments and its advantages are given priority for dump reclamation.

The bio-reclamation does not end with the task of dump re-vegetation only. In our country, the reclaimed dumps and the mined out or degraded lands lie as such without any fruitful applications after the re-vegetation. Some time these lands are kept as such due to 90 years lease period. During the lease period, the land can not be used for any beneficial use by either private or government. In order to overcome such a problem, a **Statutory Body** must be constituted to look after the land system management to device the future use of the reclaimed land for the sustainable development.

The abandon mining land after the preliminary reclamation work can be utilized by creating a fund source by floating "Reclamation Bond". By the help of this bond, the bondholder may involve for taking decision for the

future development of the left over land for sustainable development. After the completions of the development project for the sustainable of the mined out land, the bondholder may remain by taking the profit on their shares and continue for implementing other development programs like parks, stadiums, educational institutions, cinema theaters, dairy farms, aqua-culture, hotels, hospitals, sanatoriums, gyms and marketing complexes etc.. The bondholders also can have the liberty to take back their full money if they feel it.

Reclamation bond

The Reclamation Bond is nothing but a ligament for reutilization of the primarily reclaimed land in sustainable manner, floated publicly by the Statutory Body in order to generate income. The proposed bond must be framed in the following way.

1. The proposed project cost for the further development of primarily reclaimed land may be estimated by the Statutory Body and the bond may be floated publicly for the sale
2. The bond may be called as "Reclamation Bond" and issued to cooperative societies, industrial sectors, state financial corporations or any other recognized farms or company or individuals at their interest and request and
3. Floating Reclamation Bond may help in generating fund for the further reclamation and rehabilitation of the mined out land without giving much burden to the mining company or the government by motivating the public for the participation in developmental activities in order to rise the environmental and economical status of the nation

Legal issues

1. Leases are taken for 90 years for opencast mining activities and it is left for the clearance from the Ministry of Environment and Forest (MOEF) and DGMS for inclined way of underground mine as a further extension from the opencast pit
2. Before the completion of lease period, even after 20 years of mining activities, many mines have been closed but the land is still lying as such with many quarries and overburden dumps and kept for the completion of lease period. The state government or the concerned ministry is suppose to wait to take up the corrective measures for rehabilitation
3. After nationalization, thousands of hectares of the abandon mine lands were left as such. Some of the lands fall under both subsidence or fire area and other under pit or overburden dumps. Who will care for these wastelands? Who will take initiatives for rehabilitating them? and when?. These questions are still unanswered.
4. The lands, which have been left abandoned after mining with preliminary reclamation, must be brought back for reutilization. Consequently these wastelands should be planned with a long vision and made fit for the utilization by reclaiming according to the need and the future demand
5. The abandoned land must be immediately handed over by the concerned mining company to the Statutory Body if there is no further plan for ex-

pansion and

6. If the Statutory Board proposes the primarily reclaimed land for any development activity, Who will empower the Statutory Board to float the Reclamation Bond? Whether the state government or central government?

Process

1. The Statutory Body has to be formed legally by Department of Mining & Industry in the state and the Ministry of Mines to look after the Reclamation Bond
2. A team of expert has to be hired time to time for post mine land planning and development with its execution
3. Financial allocation and budgeting is required to be accordance with the development program.
4. Sectorial planning with post mine land use may not interfere with the State or Central scheme and fund generated by reclamation bond should not interfere with the fund allocated for different schemes.
5. The discussion for the post mine land use must be decided with the experts from all the field in order to save the proper compliance and duplicity.
6. The benefit or mines record must be placed to all bondholders to decide profit distribution or its reuse for the other development work.
7. The rules and regulations for the selling transfer repurchasing of the bond may be according to the Govt. of India rules and easy to access.
8. The people participation and involvement in all the sectorial plan must be ensure in order to face any misunderstanding.

Benifits

1. The post abandoned mine land use will be easy.
2. Large development scheme can be executed.
3. This type of land can be brought under some useful uses.
4. A big fund is available for execution of large development scheme in this wasteland.

CONCLUSION

Increase in population has put a lot of pressure on land for meeting food, shelter and fiber. More and more land is required to meet this purpose but unfortunately this may not be possible due to limited land resources. Only the alternative source is to utilize present wasteland. For this purpose Mining wasteland is one of the category of wasteland can fulfill to some extent.

If it is planned systematically, scientifically and administratively there is no doubt, the problem of requirement of more land for human use can't be solved. Reclamation Bond is likely as others bond floated for development work by the companies with the statutory norms of Central/State Govt. These Bond will be utilized for bringing mining affected wasteland to some fruitful purpose to generate benefit out of it and solving our needs in sustainable ways. For this legal framework and consent of Govt. is required. This is a concept which has to be developed and lot of exercises is still ahead to make this dream true. Suggestion & advice to make this idea more authentically viable is being invited.