



IMPACT OF COAL MINES ON ENVIRONMENT WITH RELATION TO ALGAE

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ABSTRACT:

Due to repeated exaction of coal in underground area large number of dust particle spread in this mining sites. That directly related to growth of algae and resulted environmental pollution. Repeated assertions of Government lead to environmental changes to a large extent such as degradation in quality of air, water and change in land cover and vegetation. That's why it becomes necessary to study impact of coal mines on environment with relation to algae in water body. This investigation was done near the villages which was present in coal mines sites. It involves methodological field site investigation and laboratory analysis. This study of investigation carried out in two divided parts. The first part induces the exploration of coal mines pollution. And seen whether large number dust particle gathered in air and as a result being polluted. In second part observation done. In this part it is seen that environment and resulted water body being polluted by water which was discharged during coal mines operations. That affects the growth of algae and comes in conclusion of impact of coal mines pollution on environment and algae.

Key words: -Coal mines, Water body, environmental pollution, sites, Algae.

INTRODUCTION:

The present study was done in Chandrapur district. For that investigation different coal mines places was selected. Ballarpur, Sasti, Gauri like that different coal mines sites was selected. The Chandrapur district is the largest polluted district. Vast pollution found in this district. It has coal mines and also various types of factories, like cement factories, paper mill. The sustainability in coal mining achieved by developing and integrating practices. From environmental point of view coal mining is major habitate. Due to practices in various factories the environment become polluted. Associated activities are solely responsible for atmospheric particulate pollution level in coal mining complexes, [3].

Water generated in various industrial units discharged into nearby water bodies [7].

Globally human health risks associated with pollution level in surface mining and in cities have been reported for USA and China [1]. Geographical Information system has distinct advantages over conventional method. It has become variable tool for assessing and monitoring environmental impact as a result of

natural and manmade activities India is the third largest coal produce In the world after China and USA [6].

MATERIAL AND METHODS:

For the Present investigation the area near coal mines has taken into consideration, for to get reliable results. The area of coal mines sites that is Gauri ,Sastti , wirur and Rajura has taken. In this study also noticed village's population affected by coal mines pollution. The aquatic pollution in water bodies also noticed and taken observation by simple calculation process, and seen the relative negative results of mining. The strata decided on the basis of distance from mine. The population of village and aquatic pollution or aquatic polluted environment affected by mining operation and repeated coal exploration Finally comes in conclusion on the basis of comparison between area closes to coal mine and area present long way distance from coal mines and affected algae in water bodies.

Discussion:- Coal mining has its impact on water and respected algae which was grown in that water bodies coal mining effects on environment particularly soil water [5]. The algal environment claimed with coal- related waste

and coal sludge after affected. During the field study, it was found that mining operation exploited huge acres of land. Such environment causes erosion normally dust particles and sediments which was chemical pollutants cause variety of environmental issues and also affected the algal vegetation. The worst thing that occurs during this process is of course production of green house gases mostly carbon dioxide emissions by burning coal involved varied harmful compounds released during burning coal and resulted reduction of algal growth. Besides burning process impact of coal mining associated with transportation, storage and disposal loading, uploading and blasting. The mining and burning of coal, effects on health and environment [6].

Data collected show suspended particulate matter concentration in environment and algal composition.

CONCLUSION :

The long term and continuous mining of coal operations deteriorates the natural environment as it sheds negative effects on water bodies nearly which was present on that area. It is the main cause of environment pollution. The coal mines pollution shows hazardous effect on land vegetation and algal growth of that respective water bodies of aquatic environment. Repeated extraction of coal cause dust erosion and deposition of coal particles on environments, results negative impact on relative environment and algal growth and also land vegetation.

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REFERENCES :

- Aneja "Characterization of particulate matter (PM10) related to surface coal mining operations in Appalachia" 2012.
- Castleden WM shearman D crisp, G Finch p. The Mining and burning of coal; effects on health and environment Med J Aust.
- Ghose R. study of drainage profiles in Jharia Coalfield eastern India from aerial photographs. Indian Soc Remote Sens 1989;17:55-62.
- Ghose R. environmental impacts of mining on ground water resources in Jharia coalfield : a mitigation strategy. Coal Minor Resour Bihar Jharkhand, 2 . Patna IGE monograph : 2000. P. 325-30.
- Guha D. A case study on the effects of coal mining in the environment particularly in relation to soil water and air causing a socio- economic hazard in AsansolRaniganj Area, India In Res J. Soc sci. 2014; 3: 39-42.
- India is the largest coal produce in world after China and U.S.A. Coal dictionary 2012,2013.
- Singh G. Environmental impacts of mine fires- an overview. In: Proceedings of all India workshop of underground mine fires prevention, control and their impact on coal production: 2004.