

Necessity and Strategy of Mountain Environmental Management in China

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Abstract: With the development of ecological civilization construction and environmental protection consciousness, the pollution and resource destruction has been paid more and more attention by people. This paper analyzes the current situation of environmental governance in China, discusses the necessity of environmental governance, and then puts forward the Countermeasures of environmental governance in China.

Keywords: Mountain; Environmental management; Management system

1. Introduction

China is a country with many mountains and abundant resources. Including forest resources, land resources, mineral resources, and other all the renewable and non renewable resources attached to the mountain. According to the mountain environment, it should include five aspects: the geological environment, the water environment, the ecological environment, the atmosphere environment and the space environment. However, in the long-term development and utilization of mountain resources, because of the concept, legal system, system, management and many other reasons, resulting in a very serious environmental problems, the contradiction in some areas and areas is quite prominent, has become an important factor affecting the local economic development and social stability, to the point of non governance.

2. Overview of the Current Situation of China's Environmental Governance

In promoting the ecological civilization today, environmental protection is a basic administrative functions of the government, the Chinese government attaches great importance to environmental protection work. In 2014, the new environmental protection law has priority as the basic purpose of law, practice requires governments at all levels and environmental administrative organs to gradually carry out the work of land comprehensive improvement, increase the environmental management and governance, strengthen the coordination of geological disasters, to achieve the coordinated development of resource development and environmental protection. To speed up the mining ecological environment restoration and control. Especially the exploitation of mineral resources, to set up a new mining enterprises must be by the authority for examination and approval of the environmental protection measures are reviewed and qualified to be granted approval; mining must comply with the relevant envi-

ronmental protection laws and regulations to prevent pollution of the environment, land conservation, on due to mining and the cultivated land, grassland, woodland and other damage, the mining enterprises shall timely adjust measures to local conditions in land reclamation, planting trees and grass or take other measures to carry out environmental restoration; closed pit must be carried out after land reclamation and restoration of the ecological environment. All relevant departments should work closely together to jointly do environmental protection law enforcement work, in the discharge of their respective environmental protection functions, while the guidance, coordination and supervision. The state has made great efforts in environmental protection and environmental protection, many places are taking active measures to reduce the environmental pollution caused by mining and logging enterprises in the production process.

3. Necessity of Environmental Governance

3.1. Mountain Environmental Management has a Promoting Effect on Economic Development

Mountain resources, especially mineral resources, as a basic industry of our national economy, not only have an important role in promoting the development of our national economy, but also for the country and the people to seek benefits. However, the blind development is not good, and more and more people are concerned about the environmental pollution and resource depletion due to unreasonable exploitation of mountain resources. Therefore, it should be in good condition to ensure that the environment is good.

3.2. Mining Industry to Destroy a Large Number of Mountain and Induce Geological Disasters

Our country due to mining and the destruction of the large area of the mountain, causing the mine area of the main reasons is the open pit mining field and all kinds of slag, tailings waste. At the same time, due to unreasona-

ble mining and mining, often induced geological disasters, resulting in a large number of casualties and economic losses. Because of the underground mining, the ground and the slope excavation, the stability of the mountain and the slope, the geological disasters, such as cracking, collapse and landslide, cause a lot of casualties and property damage. Often caused by mountain collapse, and the failure of land caused by the collapse, which further implicated residents living around. Collapse is not only in the coal mine, but also appear in the non-ferrous metals, ferrous metals, chemical and nuclear industry.

3.3. Damage and Impact of Groundwater and Surface Water, Produce a Variety of Mountain Water Environmental Problems

Due to the drainage of the mine drainage, the water level of the large area is decreased, and the water balance system of the mine is destroyed. Caused by large area thin stem funnel, the springs dried up, water resources gradually depleted, rivers drying up, surface water into the permeability or the collapse poured into underground, the impact of the ecological environment of the mining area, the original Jingquan or surface water as industrial and agricultural water supply factories, villages and towns occurrence of water shortages.

3.4. Mining Produces a Large Number of "Three Wastes"

The "three wastes" refers to waste gas, waste water, waste residue. Waste gas is generally derived from the coal mining, coal mining in general there will be coal, coal gangue, tailings, etc., these products will produce spontaneous combustion of dust, dust and some very easy to volatile gas, which formed the mine exploitation of air pollution sources. Due to the interaction between the waste gas and dust, the formation of condensation nuclei in the atmosphere, and then produce rain, the general of such a strong acid is very strong, so that the environment has a great pollution. Mine production of the most waste, that is, the solid waste, also known as the mine waste". Air pollution sources mainly from coal, coal gangue, tailings and other spontaneous combustion of dust, dust and some volatile gas. Because of the waste gas, dust and waste gas emissions caused by air pollution and acid rain. Mine solid waste mainly coal gangue, open pit stripping, tailings. China's industrial solid waste emissions per year, more than 85% from the mining. China every year due to the production of waste water, waste water, waste water emissions of about 70% of the total emissions of industrial wastewater, and the treatment rate is only about 4%.

3.5. Problems Such as Soil Erosion, Land Desertification and Mine Earthquake

Due to exfoliation of the surface material, disturbance, transportation and accumulation, a lot of damage to the vegetation and soils on slopes, loose generated waste, waste and other substances is extremely easy to make soil erosion. Unreasonable mining is extremely easy to cause ground subsidence, according to different levels of different risk levels. I level hazard area refers to the impact of ground subsidence assessment Pits, cracks, surface deformation is strong. Serious hazard, assessment area- Produce obvious surface deformation, the stress of the staff, the building is a serious tilt Or damaged, surface water loss, vegetation destruction. II level the danger zone refers to the ground subsidence condition level impact assessment within the scope of my See the collapse pit, cracks, the surface deformation is not obvious. Serious harm Heavy, the assessment of the area under the threat of more, the building part of the crack or vegetation Damage. III level stable zone of the ground collapse pit, no crack, Little or no change in surface morphology. Basically no threat personnel, construction There is no damage to the buildings, and the ground vegetation is not destroyed.

The ground subsidence in mining area is the result of many factors, Through a detailed investigation of the impact of the ground subsidence and the ground Collapse of the form of failure of the study and the actual production of the work Experience, selecting 6 factors as a reference for the prediction of the risk of ground subsidence The evaluation of sub factors, that is, the roof lithology, loose layer thickness, mining depth, terrain Slope, hydro geological conditions, mining degree.

Table 1. The weight distribution and the quantitative value of each factor

Factor	Weight	Quantitative grades and values		
		I(10)	II(5)	III(0)
Loose layer thickness	0.15	<5 m	5~20 m	>20 m
Mining depth	0.25	<80 m	80~200 m	>200 m
Terrain gradient	0.20	>45	10~45	<10
Hydrogeological condition	0.15	Complex	Medium	Simple
Mining degree	0.10	Full recovery	Part	None
Roof lithology	0.15	Soft	Soft	Hard

4. The Experience of Foreign Environmental Management

4.1. System of the United States Environmental Protection

The US mine environment management is mainly implemented by the open pit Mining Reclamation law enforcement office, while the land administration bureau, the Mining Administration Bureau and the environmental

protection bureau are involved in the business scope of the mine geological environment management.

(1) Mountain environment restoration permit system

Environmental permit is a legal procedure that must be used before the mining exploitation. If there is no license issued by the Ministry of the interior or the state government administration, no mine can be developed. Environmental permit is the main responsibility of the mining industry in the environment protection, and its related activities in the development of mining, such as, for example, the discharge of waste, the layout of buildings, land reclamation, and so on are put forward specific requirements.

(2) Mountain environment restoration deposit system

Margin system is the basic system to ensure the recovery of the mining environment for the destruction of the mine environment. The owner must pay a certain amount of deposit to the government in accordance with the prescribed time and quantity to ensure the restoration of the mine environment. The payment of the full cost calculation method can be different from the specific circumstances of the mining area, and the final amount is determined by the administrative agency.

(3) Environmental monitoring system

Mine environmental supervision and inspection by the open pit mining office and the State Bureau of natural resources bureau of mineral resources, the two agencies with special supervision inspectors, every 4 months to carry out a comprehensive assault inspection, inspection of mining enterprises to comply with environmental protection and implementation of environmental restoration situation, the inspection report will be a copy of the inspection, when necessary, can be used for illegal mining enterprises to take coercive measures until criminal punishment.

(4) Mine environment protection incentive system

The United States Bureau of mines from 1986 began to set up a model coal mine environment restoration award, in 1992 the establishment of outstanding achievements in the mineral company award. The establishment of these two awards, is to encourage mineral company to carry out active mining environment protection and successful exchange and transfer of technology.

4.2. Australian Environmental Management System

Australia is very rich in mineral resources, mining environmental management to implement the federal government and state control of the system, the federal government to determine the legislative framework and develop a variety of management system, each state according to their different circumstances to set up a professional management department, independent development of law enforcement. The Australian mining sector and the environmental protection department to develop the relevant laws and regulations, and the protection of

the ecological system to be included in other laws and regulations.

(1) Annual report on environmental performance

According to the Australian mine environmental management standards, the mineral company must submit an annual environmental performance report to the competent department of the annual environmental performance report, a review of the annual work. The reclamation work done by mineral company must be recorded in the form of documents, computer management, and then, by the computer system to notify the submission of the report. In the form of the report of the environmental performance of the non submission / annual report, the competent department of mines will be notified again. If it is not submitted, the mining authorities will consider the right to notify the mining authority to recover the right of mining.

(2) Mine inspector inspection tour system

Government departments in charge of the mining / annual environmental report review is by the inspector in charge to mining companies on-site spot checks. Found mine environment is not good governance, local residents dissatisfied, rectification has little effect on the verbal or mail notification; such as the refusal to accept and in severe environmental impact, written instruction, field supervisors directly written notice without superiors; problems such as serious to reflect the higher authorities, ordered to mining companies to stop work, and fines and regain the mining right.

5. Coping strategies of China's environmental governance

5.1. To Develop Special Laws and Regulations for the Protection of Mountain Environment

At present, the number of laws and regulations on the protection of the environment a lot, but for special laws and regulations on the mountain environmental protection, only in Liaoning Province and Hubei Province Wuhan city has appeared in the relatively complete, according to the regulations, provisions on the protection of the mountain environment is scattered in the relevant laws and decrees of the, the mountain environmental protection special understanding insufficiency, the pertinence is not strong, resulting in "who develop, who protects, polluter, who control, who destroyed, who restored the policy can not effectively implemented. So it is necessary to research and develop the mountain environmental protection special regulations, establish conforms to the situation of China mountain environment protection system of laws and regulations and technical standards, make the environmental problems related to the mountain in the practical application of the laws and rules.

5.2. Rationalize the Environmental Management System, a Clear Law Enforcement Body

Due to the environmental protection management of the main body is not clear, the mountain environmental protection related to environmental protection, water conservancy, forestry, safety monitoring, mine management and other departments coordination is not enough, mine environmental protection is seriously affected. Therefore, the need to further clarify the responsibility of environmental protection, water conservancy, forestry, agriculture, land and resources, etc., to rationalize the environmental management system.

5.3. To Explore and Study the Technology of Environmental Control of Mountain

To solve the problem of environmental pollution and resource protection, the most effective way is one of the two laws. Only by exploring and studying a variety of techniques, can we solve the problem of mountain environment. The combination of laws and regulations and technology, this has brought a lot of convenience for the work of environmental governance, so as to provide a reliable evidence for the implementation of the transaction, in order to avoid unnecessary disputes and accidents.

5.4. Learn from the Experience of Foreign Environmental Management

Our country's mountain environment management is not yet mature, therefore, this need according to the special situation of our country's mining environment, the experience of the foreign mountain environment management. As the United States has done a lot of work on the system of environmental governance, it has set up the environmental review and evaluation system, the environment restoration margin system and mine environmental permit system, etc., Australia has taken an effective approach, that is, while mining side to open the end of mining. These systems and principles are the need to learn

and reference in the process of environmental governance in our country.

6. Conclusion

Mountain environmental governance is a allow to weigh and the shoulder heavy responsibilities, is a matter of public welfare shall regulate the government and the environmental administrative subject of environmental regulation, government and enterprises should Qiangqiang jointly, with each other actively cooperate with the unified coordination based on perfect relevant laws and regulations system construction also continued to increase research investment, stimulate people's enthusiasm for study, so as to provide adequate power and guarantee for the development of green mountain, and fundamentally promote sustainable development of mountain environment and resources.

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