

Mining Residents' Response to Rare Earth Mining And Environmental Protection

LU Jing-hong^{1,a} and WU Ze-bin^{2,b,*}

¹ Jiangxi University of Science and Technology, Economics and Management Dept, Ganzhou 341000, Jiangxi, Peoples R China

² Jiangxi University of Science and Technology, Economics and Management Dept, Ganzhou 341000, Jiangxi, Peoples R China

^a 1356807536@qq.com, ^b wuzebingz@sina.com

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Abstract: This document investigated mining residents' response to the relationship between rare earth mining and environmental protection. Research shows that the vast majority of the interviewees consider that the rare earth mining will have a serious impact on the local ecological environment and the relationships should be correctly handled, the interests of the demands of the mining area residents should be fully respected, and the rare earth resources sustainable use should be strengthened, and the mining companies must effectively implement ecological restoration governance responsibilities, and make mining area residents realize the value of rare earth resources' economic, ecological and social value and inter-generational equity.

1. Introduction

GanZhou rare earth supplied enough raw materials for the development of China's high-tech industry in the world, and make great contribution to the economic development in China, while the rare earth mine after forty years of mining, especially large-scale use of early immersion pool and heap leaching, etc. the traditional production process, the mine ecological environment caused serious damage, serious threat to the mining basin and water security, land mines contradiction.

The research area is LongNan ZuDong mining field in GanZhou of Jiangxi. With Ionic heavy rare earth reserves account for 70% of the world's Elution-deposited heavy rare earth reserves, the quality ranking first in the world, LongNan county is known as "heavy rare earth hometown".

2. Research method

The research applies the method of PRA(participatory Rural Appraisal). It understands the actual condition of the study area by informal interviews with local residents. PRA emphasizes the existence of diversification. This research made random access to the residents in LongNan county ZuDong mining field in December 2015, visiting 121 households in all and receiving 107 effective questionnaires.

3. Results and discussions

3.1 Basic residents surveyed. Among 107 residents surveyed, Basic information of interviewee showed like Table 1.

Table 1 Basic information of interviewee

	Category	Frequency	%
Gender	male	76	71.0
	female	31	29.0
Education level	can 't read or read very little	30	28.0
	primary school	40	37.4
	junior high school	21	19.6
	Senior high school	14	13.1
	College graduate and higher	2	1.9
The industry they engaged	planting industry	77	72.0
	animal husbandry	5	4.7
	service industry	2	1.9
	The occupations engaged in rare earth	10	9.3
Family size	others	13	12.1
	<4	31	29.0
	[4-6]	64	59.8
	>6	12	11.2
Labor	<2	9	8.4
	=2	66	61.7
	>2	32	29.9
Work outside	do	51	47.7
	don 't	56	52.3
Life satisfaction	satisfied	30	28.0
	general	46	43.0
	unsatisfied	31	29.0

3.2 The impact of the rare earth' exploit on the mining residents' source of income. Among the survey about “The impact of the rare earth' exploit on the mining residents' source of income”, 7.1% of respondents believe that the development of rare earth mine has an important impact on their family income; 23.0% of respondents think it has a little impact, 69.9% of respondents think there is no impact. It illustrates that a few people made a fortune in the development of rare earth mine, but most of the mining areas residents' living conditions have not changed much, the Development of the local mines on local resident's income contribution is not big, and there is no significant influence on the development of local economy and society.

3.3 Mining area residents' attitude towards the state shall ensure protective mining rare earth. At present the country tone in rare earth resource development policy is: front for resource protection, expand downstream applications. In the survey of mining area residents' attitude towards the state shall ensure protective mining rare earth. Only 4.7% of the residents expressed support, willing to accept; 9.8% of residents said doesn't matter, listen to the government. 8.6% of residents expressed nonsupport, 76.9% expressed support, but the government needs to increase its efforts to support local economic development. This finding suggests that, more than 80% of respondents supported countries implementing the protective mining policy, but at the same time same time, the government needs to provide more preferential policies to help local residents to enhance professional development ability.

Table2 Mining area residents' attitude towards the state shall ensure protective mining rare earth

Category	Frequency	Proportion %
Support, willing to accept	5	4.7%
It does not matter, listen to government	10	9.8%
Not support	9	8.6%
Support, but need the government to increase efforts to support local economic development	82	76.9%

3.4 Mining area residents ' awareness of the impact on extent rare earth mining. In the survey of "Mining area residents ' awareness of the impact on extent rare earth mining", when they are asked whether the ecological environment is important in their manufacture and life, the vast majority of residents (over 70%) consider important, it shows that the environmental awareness of famers have increased. But in sharp contrast, the mining area residents few consider the impact of its mining activities on the ecological environment in the mining process. Nearly half of the respondents do not consider the effect on the ecological environment at all, only 28.0% think they will consider the impact on the ecological environment in mine rare earths. Compared with the former 10a, nearly 42.1% of respondents believe that the local ecological environment has improved a lot, and it owes to country Intensify efforts to the recovery and management of mine geological environment. And in the investigation of the rare earth mining impact on the local ecological environment, 82.2% of respondents believe that the impact is large, we can draw a conclusion that rare earth mining definitely cause a relatively severe influence to the local ecological environment, especially in a large area of abandoned historical rare earth mine, and it cause a serious damage to land and vegetation.

4. Research conclusion and Policy response

4.1 Research conclusion. Mining area residents is the main force of harmonious mine and green mining, the mining and the environmental impact of cognitive cognition and participation intention of rare earth mining protective policy implementation and its effect has an important influence. Research shows that although the development of the rare earths on the local residents' income growth contribution is not big, but mining area residents express understanding and support for the relevant national implementation of the current policy. The vast majority of the access object that rare earth mining will cause serious influence to the local ecological environment, but it comes to mining, less than thirty percent of people will consider taking measures to prevent the destruction of ecological environment.

4.2 Policy Response. Fully respect the interests of the residents in the mining area, increase the intensity of the government's fiscal transfer payment of mining area, hit the black rare earth interests of the chain, and guarantee enough funding for the transformation of resource-based mining area development and the improvement of mining area residents ' s ability .

Strengthen the mining area residents' awareness of environmental protection; strengthen the rare earth resources sustainable use of propaganda and education, make mining area residents realize the economic, ecological and social value of rare earth resources and inter-generational equity.

Mining companies must effectively implement ecological restoration of governance Responsibility, adhere to the principle of "whoever pollute, govern by him ", the principle of "whoever damage, restore by him", establish and improve accountability mechanisms of governing the ecological environment in mining restoration, strive to "developing while governing", and control the mining damage to the ecological environment to a minimum range.

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