

# A People-Oriented Approach to Development of Mine Rescue

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**I. The Chinese government  
attaches great importance to mine  
safety and emergency rescue and  
sees nothing more valuable than  
miners' lives**



# Mines in China

- In China, there are 17,000 coal mines and 100,000 metal and nonmetal mines.
- Due to complex geological conditions of mineral resources, thousands of accidents occur annually as a result of mining activities.
- In 2008, the number of accidents and fatalities in the mining sector dropped by 27% and 13% respectively.



## **(I) Follow the Principle of Putting People First to Achieve Safe Development**

- The concept of safe development means that the safety of people's lives and property must be ensured in the development of national and regional economies, of all industries and sectors, of all enterprises, and of all social undertakings.
- It has become a common understanding that development should be sustainable, without compromising people's interests, the environment, and most important of all, people's lives.

## (II) Pursue safe development with clear targets

- In early 2004, the Chinese government made a resolution to further enhance work safety. In the resolution, it listed three stages for work safety advancement and their goals respectively.
- The first stage is from 2004 to 2007 with the goal of building a good safety supervision system, stabilizing the nationwide work safety conditions, reversing the frequent occurrence of accidents in key industries and sectors, and moderately reducing industrial and mining accidents, coal mining fatalities and road traffic fatalities.

# Pursue safe development with clear targets

- The second stage is from 2007 to 2010 with the goal of shaping a sound legal order in work safety, improving the nationwide work safety conditions, curbing major accidents, and drastically reducing all kinds of accidents and fatalities.
- The third stage is from 2010 to 2020 with the goal of achieving fundamental improvement in the nationwide work safety conditions and reaching or approaching the level of the mid-ranking developed countries in terms of the number of accident fatalities per 100 million yuan worth of GDP and the number of accident fatalities per 100 thousand workers.

# **1. Strengthen supervision and inspection over mine enterprises**

- A mining license system has been carried out to regulate the development and utilization of mineral resources.
- A safety permit system has been enforced for construction projects in the mining sector.
- Safety standardization campaigns have been conducted to promote mechanized ventilation for underground mines and deep-hole blasting in opencast mines.
- Mining enterprises have been overseen to strengthen control of blasting, roof and flood, in a way to prevent accidents in such categories.
- In addition, special rectification campaigns have been organized to prevent flooding and collapse of mine tailing dams.

## **2. Conduct specialized campaigns for coal mine safety rectification**

- From 2005, the Chinese government has conducted two national campaigns, one for gas control in coal mines and the other for rectification and closure of small coal mines, in light of the situation that methane gas is the top killer in the Chinese coal mines and violations in small coal mines are rampant.



# gas control in coal mines

- To ensure gas drainage before mining, we developed economic policies to motivate mining enterprises to increase the ratio of gas drainage and utilization.
- We demanded all gassy mines to install monitoring and control systems over gas concentration, and ask key state-owned coal mines, as well as township coal mines in major coal-producing counties, to network their systems.
- We intensified hazard screening and control, eliminated outdated technology and equipment, and conducted safe quality standardization activities.
- We use treasury bonds to support the technological renovation of key state-owned coal mines, so as to transform them into intrinsically safe operations.
- We also strengthened management of mechanical and electric equipment in the mines, in a bid to guarantee electric safety and avoid accidents arising from irregular power supply or ventilation operation.



# rectification and closure of coal mines

- 16 types coal mines are subject to closure, including illegal or unsafe mines, as well as mines that develop resources wastefully, pollution the environment or contradict the national industrial policy.
- Mines of small scale are consolidated and renovated to improve safety conditions and management expertise.

### **3. Organize specialized campaigns for hazards screening and control**

- For coal mines, efforts have been made to prevent frequent occurrence of accidents such as gas explosions, fires, flooding and roof falling and to curb production in excess of production capacity, labor intensity and headcount.
- For metal and nonmetal mines, hazards are dealt with which may give rise to collapse, fall, flood, asphyxiation and object hitting, in addition to rectification of mine tailing dams. Violations such as unauthorized and excessive mining are harshly dealt with.

## 4. Build a sound legislative framework to the protection of miners' safety

- Laws and regulations have been developed such as the Work Safety Law, the Emergencies Response Law, the Labor Law, the Coal Law, the Mine Safety Law, the Law on Prevention and Control of Occupational Diseases, the Regulation on Work Safety Licenses, the Regulation on Coal Mine Safety Inspection, the Special Provisions on Prevention of Coal Mining Accidents, the Code of Practice on Coal Mine Safety, the Code of Practice on Mine Rescue.
- Various provincial, regional and municipal authorities have formulated a string of local regulations and rules to protect miners' safety and health.

## 5. Create a sound mine rescue system

- After years of efforts, China has built a full-time mine rescue system, with 98 brigades, 609 battalions and 1,831 squads, consisting of 24,500 professionals.
- Various mining enterprises have established their own full-time or part-time rescue teams.
- Investment in mine rescue has been increasing constantly. Since 2006, over 3 billion yuan (or 440 million U.S. dollars) has been earmarked for mine rescue infrastructure development and capacity building.
- Different types of mine rescue teams have conducted skill contests and quasi-militarized trainings to raise their professional competence.

## 6. Carry out work safety and emergency rescue education and training programs

- Training has been provided to miners as well as mine company managers, emergency management personnel and other professionals on safety legislation and emergency services.
- Mine workers doing specialized jobs should go through training and appraisal and obtain corresponding qualification certificates before assumption of such jobs.
- Rescue personnel involved in mine rescue should receive training and re-training so as to be more capable of emergency rescue skills in practice.

## **7. Activate emergency plans immediately after accidents and save miners' lives at all costs**

- Whenever a major accident occurs, national leaders will immediately give instructions and raise specific requirements on emergency rescue.
- On July 29th, 2007, rescue operations lasted 76 hours to successfully save 69 trapped miners in the aftermath of a flooding at Zhijian Coal Mine in central China's Henan province.
- On July 14th, 2009, after continuous rescue attempts for 25 days in a spirit of no-give-up, 3 miners survived as a miracle in the aftermath of a flooding at Xinqiao Coal Mine in southwest China's Guizhou province.



**II. China has witnessed great development in mine rescue, with rescue teams playing important roles in accident prevention, emergency response and disaster relief**



## **(I) Mine rescue teams actively conduct preventive safety inspection**

- Mine rescue teams follow the principles of giving equal emphasis on emergency rescue and accident prevention and performing duties both in conventional and unconventional cases.
- They tap into professional expertise to conduct preventive safety inspection over the mines to which they provide services. Through such inspection, they help mine management spot different types of hazards to prevent accidents.
- According to statistics, in 2008, Chinese mine rescue teams conducted 45,542 safety inspections in total.

## **(II) Mine rescue teams provide cross-regional services**

- Mine rescue teams usually sign service contracts with surrounding enterprises. Once an accident occurs, they will start rescue operations immediately.
- At other times, they help enterprises develop emergency plans and train miners on rescue skills. They also conduct emergency rescue drills in cooperation with enterprises, so as to be more capable of cross-regional rescue operations.

### **(III) Mine rescue teams contribute to relief operation in natural disasters**

- Besides accident rescue, Chinese mine rescue teams also undertake missions for natural disaster relief and mitigation
- In early 2008, the snow storm led to suspension of coal production system in most south China provinces, with some of the mines flooded by freezing rain. In response, the State Administration of Work Safety sent mine rescue teams to conduct rescue operations.
- In May 2008, after a big earthquake occurred in Sichuan province, mine rescue teams actively participated in disaster relief. 44 mine and chemical rescue teams consisting of 1,057 professionals joined the mission, saving 1,113 trapped persons, recovering 567 dead bodies, and evacuating 14,860 persons.



**III. China is willing to strengthen exchanges and cooperation with the International Mine Rescue Body as well as the mining countries to promote development of mine rescue**

# **(I) Support by the International Mine Rescue Body and various national governments**

- In the course of developing mine rescue, China has received big support from the International Mine Rescue Body as well as the mine rescue agencies of many countries.
- The mine rescue agencies of the U.S., Poland and South Africa have shared best practices with and raised constructive suggestions to China.
- On behalf of the State Administration of Work Safety, I would like to extend my sincere gratitude to those who have given care and support in the field of mine rescue to China.

## **(II) China has benefited from international exchanges and cooperation on mine rescue**

- China sent delegations to the previous three conferences and was inspired with new ideas each time.
- Through discussions, exchanges and exhibitions, we get to know the latest development of mine rescue technology and equipment as well as new concepts and experiences.
- We also make a lot of friends who help expand our cooperation channels.

### **(III) We wish to play a bigger role and make greater contribution in cooperation with other countries**

- As a member of the International Mine Rescue Body, China is determined to play a responsible role in the field of mine rescue.
- Despite of the achievements, gaps remain for China in comparison to the developed countries.
- It is very important for us to strengthen exchanges and cooperation with other countries.
- China will host the next conference in 2011.



**Thank you for your  
attention!**