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China's Endeavor to Promote Green Mining

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TOPICS

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China's Mining Geo-Environmental Situation

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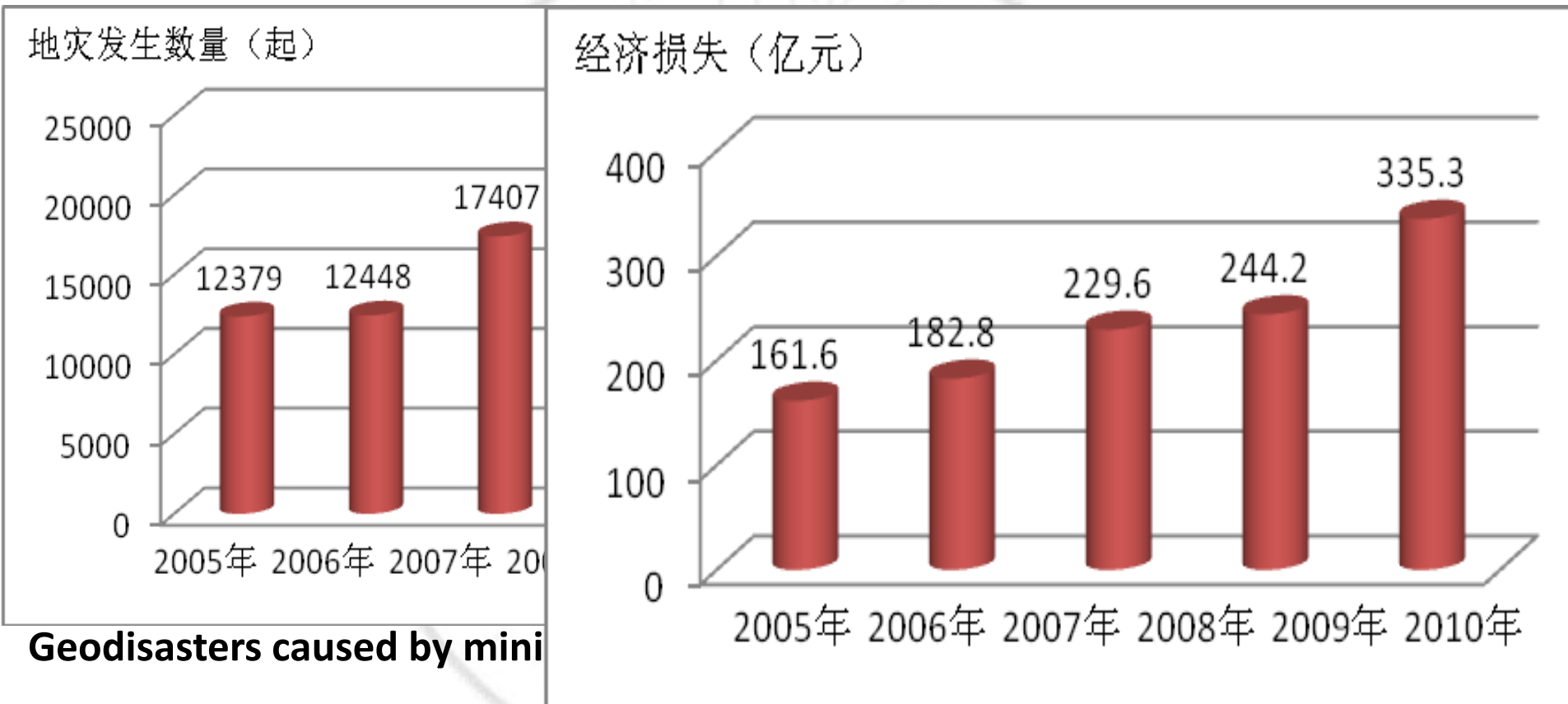
Building A Green Mining System

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Effects and Outlooks

1. China's Mining Geo-Environmental Situation

- 1.1 Geodisasters Caused by Mining



Geodisasters caused by mining

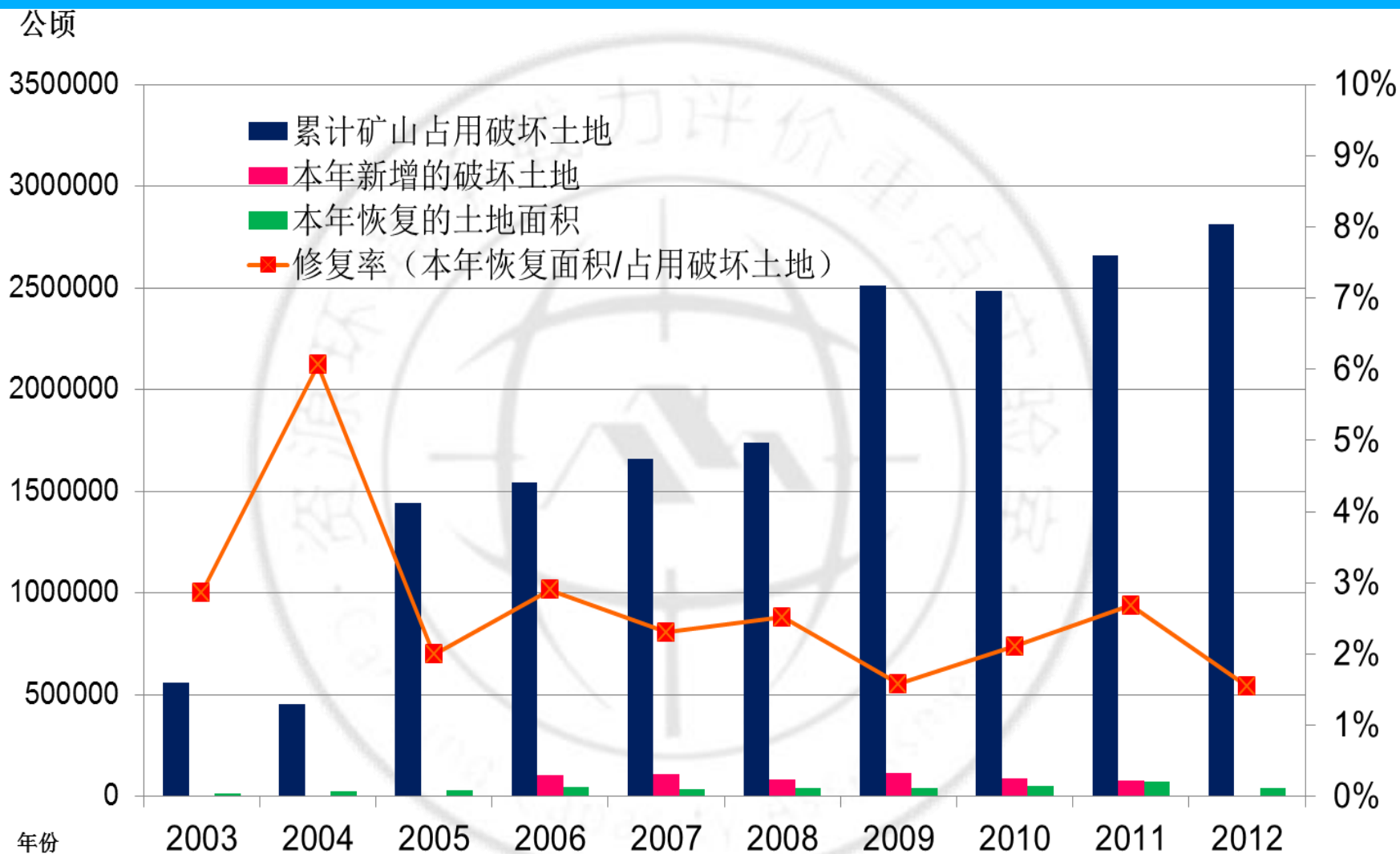
Economic loss of geodisasters caused by mining 2005-2010

China's Mining Geo-Environmental Situation

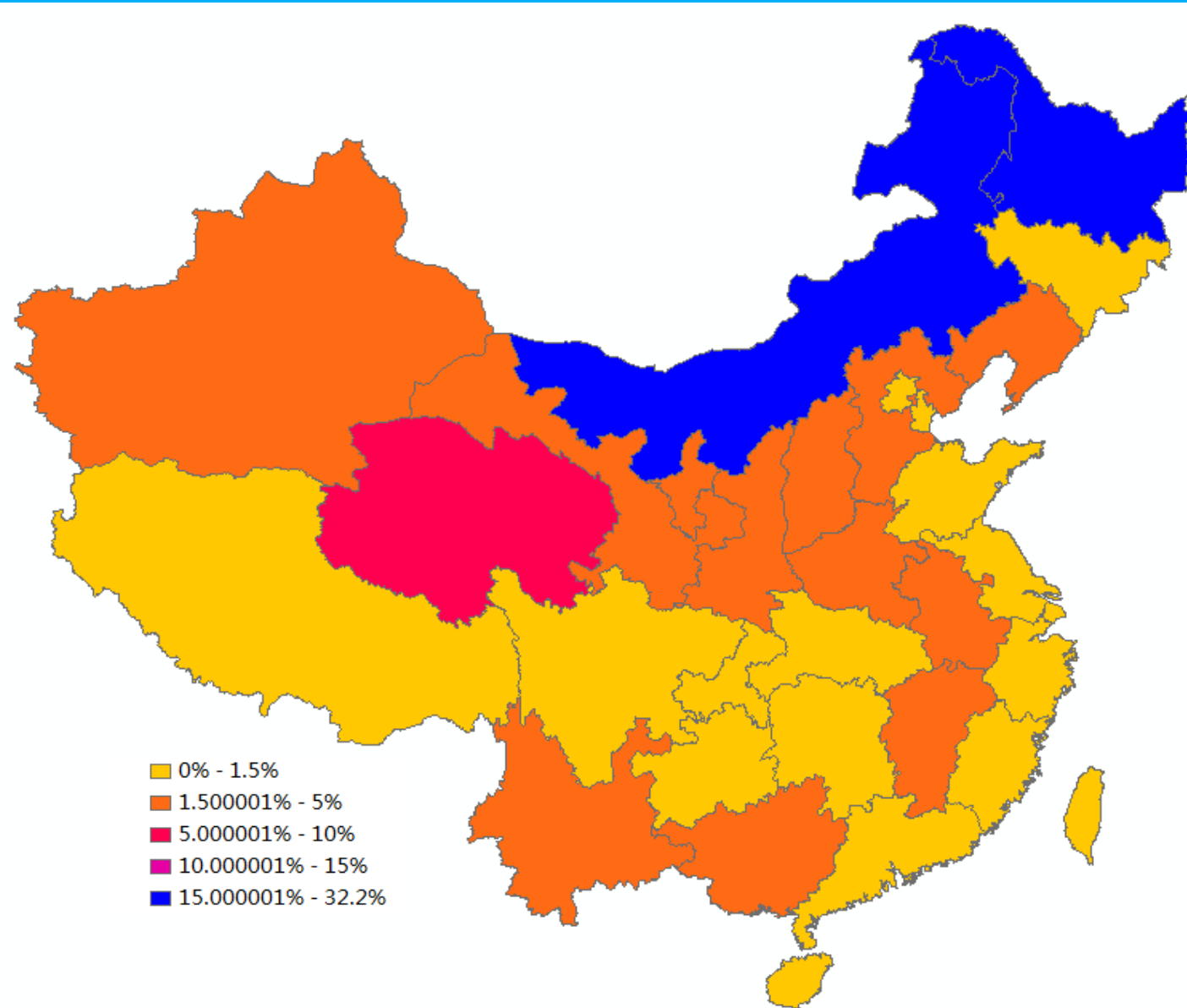
- 1.2 Land Damage by Mining

The acreage of damaged and occupied land has been increased during 2004-2012. The annually added damaged land exceeds rehabilitated, and the rehabilitation ratio decreases.

China's Mining Geo-Environmental Situation



Mining Damaged Land Ratio by Province (2012)



2. Building A Green Mining System



To tighten entry rules in order to reduce geo-environmental damage from origin.



Increase the mine geo-environmental restoration, and introduce social capital



Actively carry out various pilot constructions and action plans

To tighten entry rules in order to reduce geo-environmental damage from source

Regulations implemented:

- *Mine geological environment protection regulations*
- *National mine geological environment protection and management plan (2009-2015)*
- *Guidance on the gradual establishment of mining environmental management and ecological restoration accountability mechanisms*
- *On the Implementation of the mine geological environment governance of key projects by MLR and MOF*
- *Compiling specification of mine geological environment protection and restoration*

National Mine Rehabilitation Plan (2009-2015)

- Setup a series of goals of rehabilitation planning for the period till 2015, with focus on establishing a **technical support system** for mining geoenvironment protection, completing a number of **key rehabilitation projects**, improving and perfecting the mine **geoenvironment management system**,
- raising the level of **supervision and monitoring** of mining geoenvironment, reducing the **environmental damage and impact** caused by exploitation effectively, harnessing **legacy mine geoenvironment** gradually,
- controlling the **worsening trend** of geoenvironment effectively, and improving the overall quality of geoenvironment.

National Mine Rehabilitation Plan (2009-2015)

- To complete the **mine geoenvironment survey of main mineral development regions**, to complete the national survey of **abandoned mine geoenvironment** through 2015; and to complete the mine geoenvironment survey and assessment of the whole nation through 2020.
- To establish initially the central, local and enterprise level **mining geoenvironmental monitoring system** to 2015, and to establish the dynamic mining geoenvironmental monitoring system completely to 2020.

National Mine Rehabilitation Plan (2009-2015)

- Mining geomenvironment should be improved apparently. In **2015**, mining geoenvironmental problems be controlled effectively for **new built and producing mines**, mine geo-disasters be treated effectively, the rehabilitation rate of **legacy mines** be reached 35%.

And to 2015, mine geoenvironment be fundamentally reversed with better improved mine environmental quality.

National Mine Rehabilitation Plan (2009-2015)

- **Mining geoenvironmental survey:** to complete investigation area of 250,000 Km².
- **Mining geoenvironmental monitoring:** to establish 600 national mining geoenvironmental monitoring sites covering an area of 30,000 Km².
- **Mining geoenvironmental treatment (rehabilitation) programs:** to complete 1500 national mining geoenvironmental treatment programs in the key rehabilitation regions covering an area of 11,000 Km².

Mine Rehabilitation Security Fund

2.1 Establish mine geological environment restoration fund

Security fund

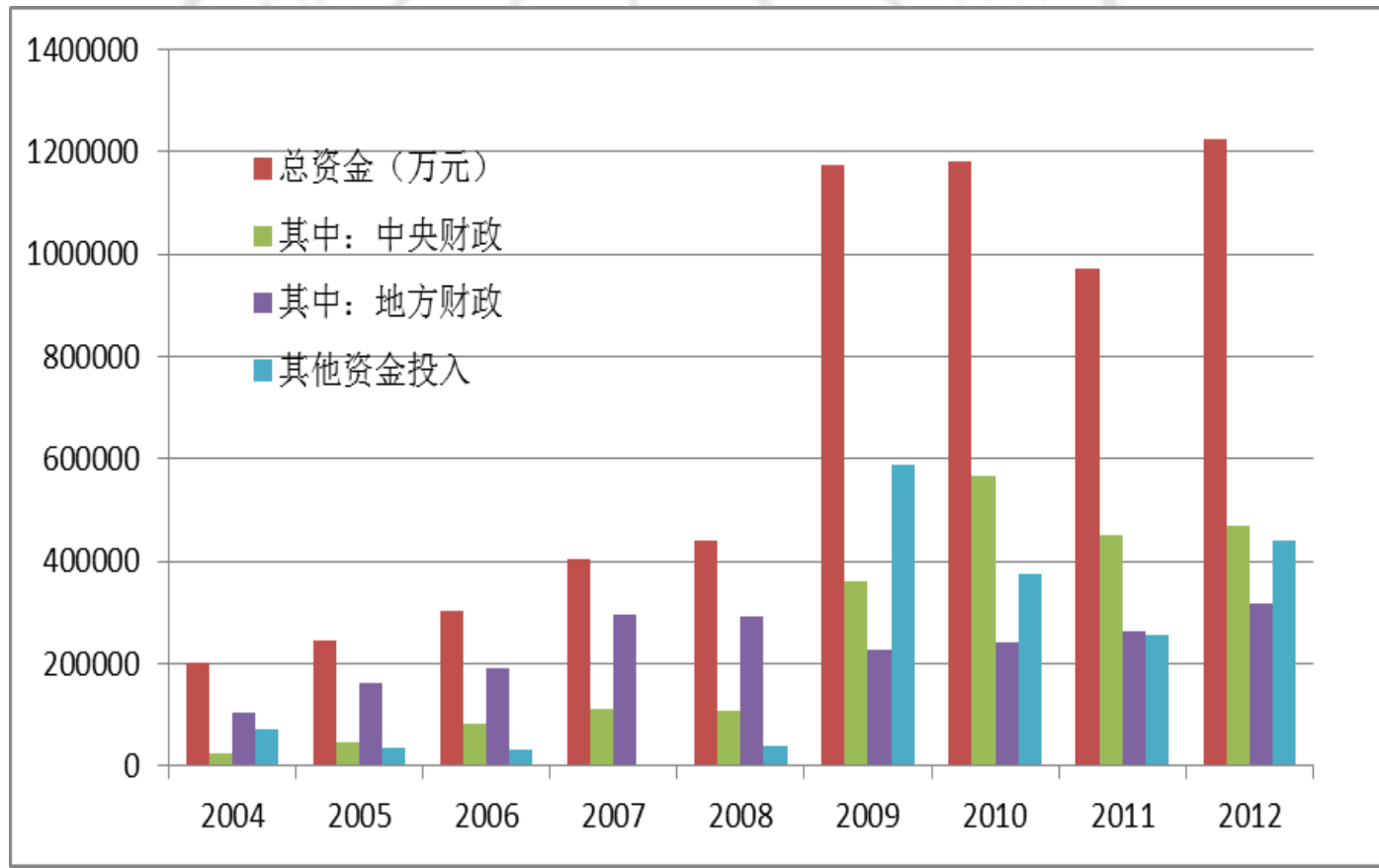
Provinces: 31 provinces

Mines: 71276 mines, account for 80% of mines

Amount: 61.25 B yuan, account for 74% of the due amount (end of 2012)

Increase the mine geo-environmental restoration, and introduce social capital

Central financed 25.756 B yuan, introduced local and enterprises financed more than 50 B yuan during 2004-2013.



Social capital encouraged to mine rehabilitation

- *Mine geological environment protection regulations*
 - *Views on further encourage and guide private capital investment in the field of land and resources by MLR and the National Association of Industry and Commerce, 2012*
- Encourage private capital to participate in land reclamation and mine geological environmental restoration.

Local Practices – Introduce Market Mechanism

- Jiangsu: *Notice on Strengthening Abandoned Opencast Mining Environmental Remediation Work*
 - Residual hills, free of compensation fund
 - Restored land, exchange for construction land quota
 - Landuse rights, Who restores, who invests, who benefits

Actively carry out various pilot constructions and action plans

- Mine Afforestation Initiative (National Mine Park)
- Green Mine Pilot Projects
- Harmony Mine Pilot Projects

Mine Afforestation Initiative

- Feb 2012, *national conference of land and resources started the initiative.*
- **Objects:**
 - To rehabilitate the mines along the “three regions and two lines” till 2015.

Three regions: main natural protection regions, landscape regions and resident regions.

Two lines: railways and roads, rivers and lakes and reservoirs

Green Mine Pilot Project

- *Guidance on the implementation of the national mineral resources planning and development of green mines, 2010*
- **Objects:**
 - **To build more than 600 green mines and formulate accompanying standards and policies.**
 - National Green Mine Basic Requirements

Green Mine Pilot Projects

Batch	Approval time	Mines
1st	2011	37
2nd	2012	183
3rd	2013	242
4th	2014	209
total		671

Harmony Mine Pilot Projects

- In April, 2012, MLR and Inner Mongolia Gov initiated **Harmony Mine Pilot Project**.
- **Objects:**
- Develop a mine to benefit and protect the locality, and harmonize the related parties (stakeholders) for scientific development.
- Regulations: *Guidance on actively promoting harmony mine construction, Harmony mine construction standards, Guidelines for Mining Corporate Social Responsibility Report* (in prep)

Harmony Mine Pilot Projects

- **Four mechanisms:**
 - Regulatory mechanisms for intensive resource use and conservation;
 - Mine ecological compensation mechanism for recovery and rehabilitation;
 - Resource development interests shared distribution mechanism;
 - Mediation to resolve disputes coordination mechanism.

3. Effects and Outlooks

- Rehabilitation of historical mine has achieved great results. **496,000 ha** severely damaged mine area of the total 2,804,000 ha has restored.
- **Security fund** has been installed and capital invested has been increasing with more social inputs.
- **Workable rules** and coordinated mechanism established.
- Social awareness of green mining.

四、加强矿产资源
同级国民经济和社会发
扩大规划的民主决策和



中华

Minis

评论 | 通知公告 | 土地新闻

财政部 国土

各省、自治区、直辖市、
土资源局：

为了加快解决历史遗留问题，促进重点地区矿山地质环境恢复治理，

DZ

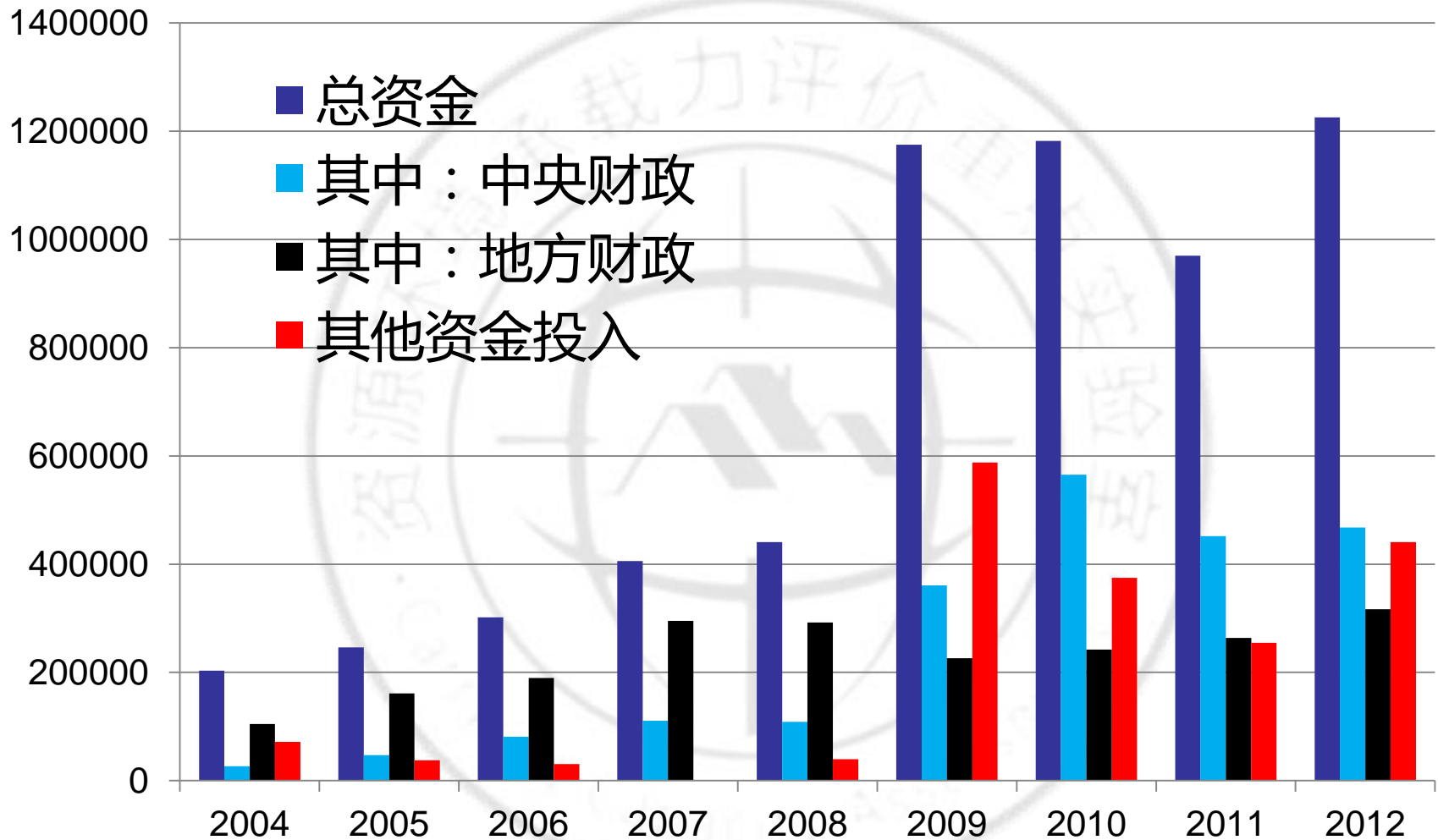
中华人民共和国地质矿产行业标准

DZ/T 0223—2011
代替 DZ/T 0223—2007

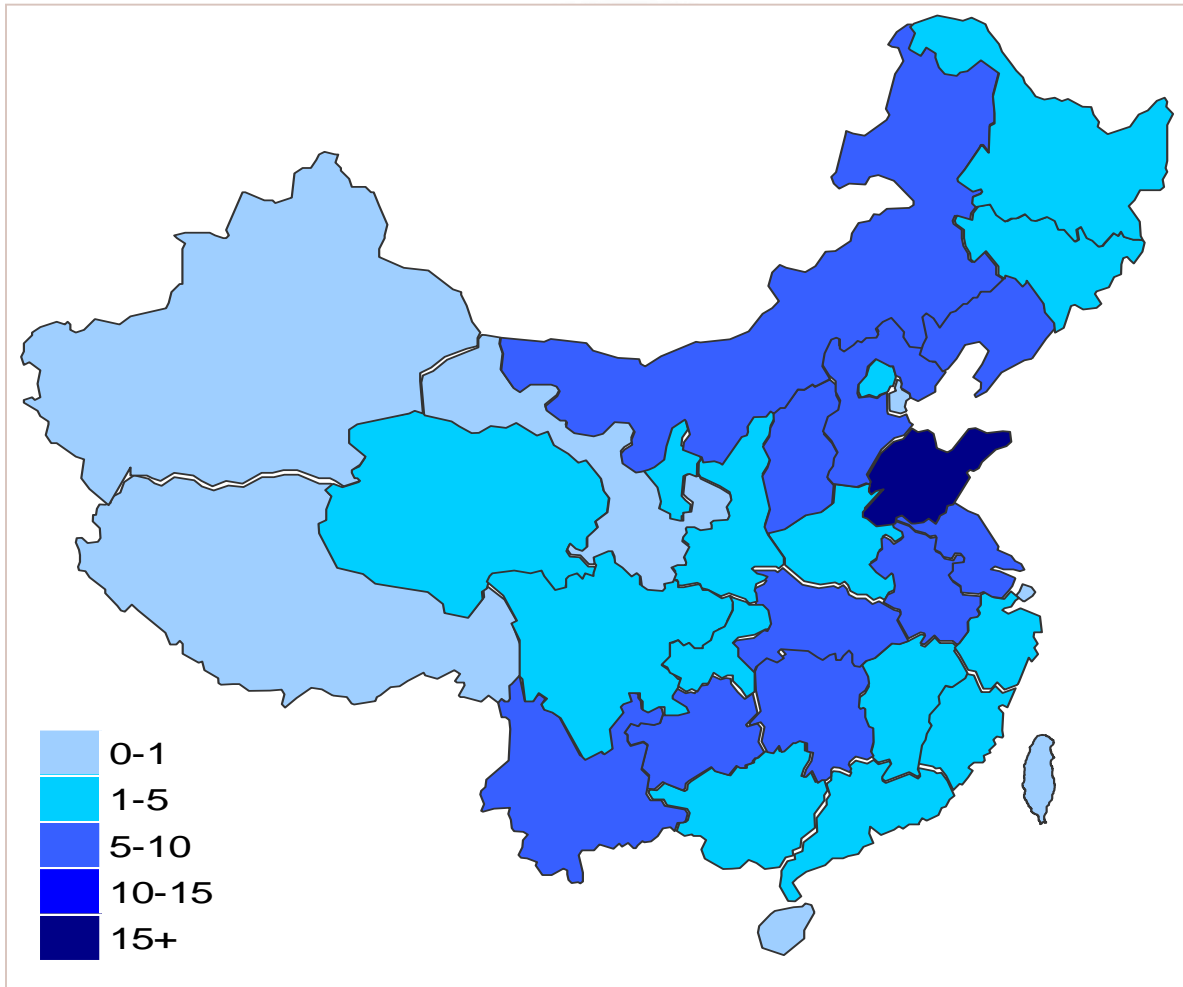
矿山地质环境保护与恢复治理 方案编制规范

Compiling code on the project of mining geo-environmental protection and integrated renovation

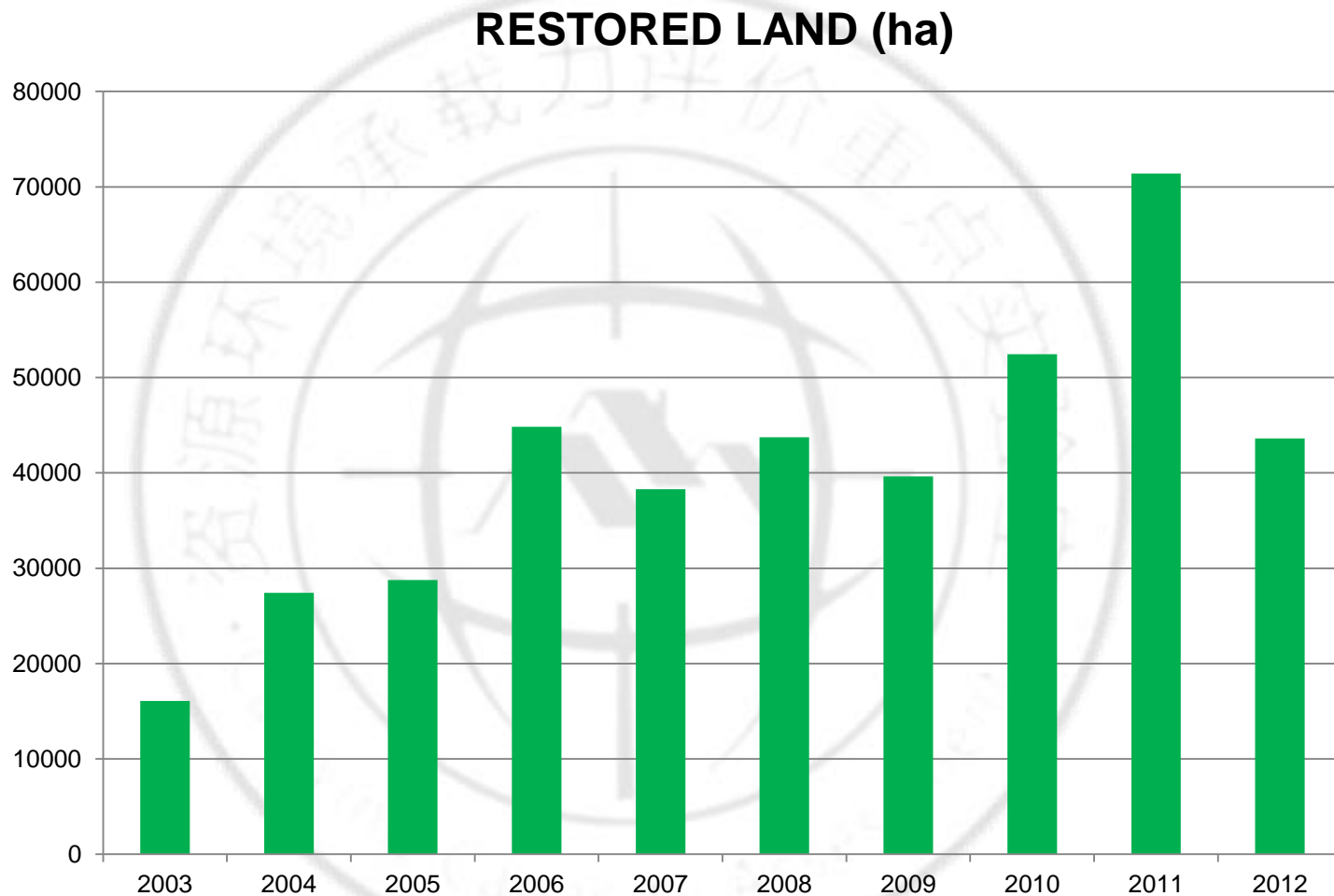
Rehabilitation Fund Increased Significantly since 2009



Rehabilitation Fund Invested



Restored Land Acreage



National Mine Park (72)



Batch	Approval time	Mine park
1 st	2005	28
2 nd		
3 rd		
total		



Pingshuo Opencast Mining of China Coal



**4.3 B yuan has been invested in land reclamation,
with rehabilitation ratio over 50% and afforestation**

ratio over 90% of the dump area

Effects and Outlooks

- Outlooks
 - Green Mining is the only way for China's sustainable mining industry.
 - Still long way to go for green mine construction.
 - Supervision on green mine construction must be strengthened and stricter rules should be implemented.
 - Long-term mechanism as the key for Green Mine Construction must be established and the ecological environment compensation mechanism should be improved.



Thank you all!

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