



Safety First ,Prevention Prioritized



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**State
Council**

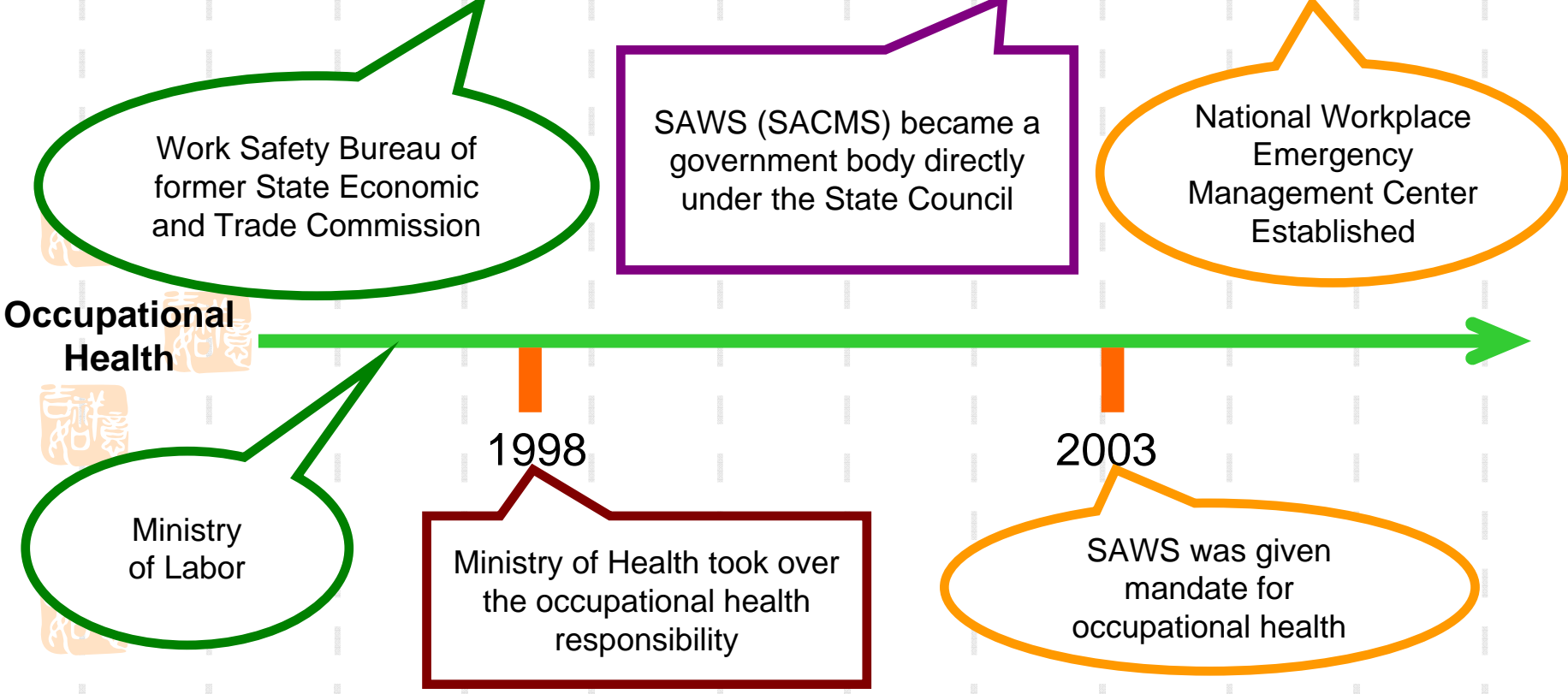
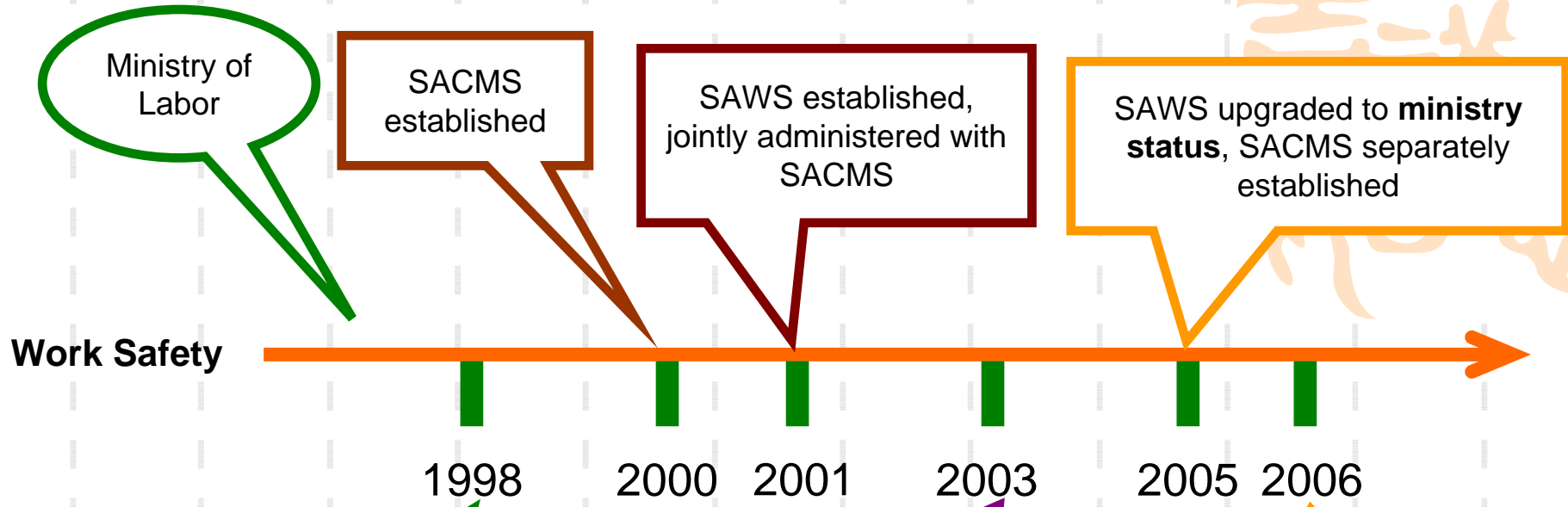
**SAWS
-
OSH**

**MOHRSS
-
Labour**

**MOH
-
Health**

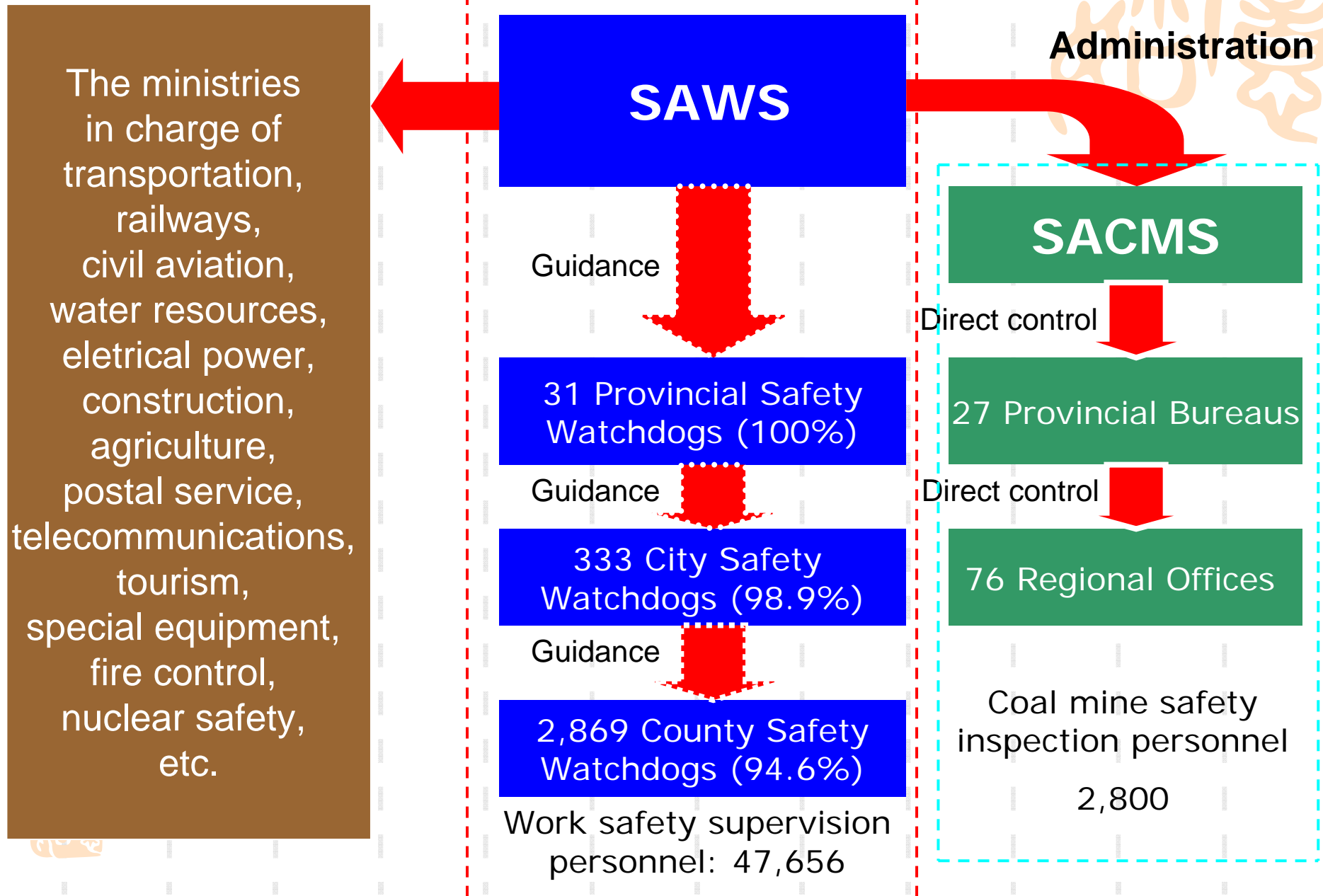
**Other
Ministries**

Note: Labour issues governed by Ministry of Human Resources and Social Security (MOHRSS) include: employment, wages, working hours, labour contracts, labour insurances, etc.



Guidance and supervision on work safety

Note: Figures last updated in 2009



Top-level Political Commitment

President Hu Jintao spoke on the importance of work safety and advocated the guiding principle of safe development during a group study session of the Political Bureau of the CPC Central Committee on Mar. 27th, 2006



Guiding Principle of “Safe Development”

- Safety is a prerequisite to economic and social development
- Work safety should be planned, programmed and advanced simultaneously with other aspects of economic and social development
- The effective approach to safety regulation is to actively screen and comprehensively rectify hazards, so that accidents can be avoided in the first place

The Guiding Principle of “Safe Development” and Work Safety Policy

The guiding principle of “safe development”

- It was, for the first time, integrated into China’s 11th 5-year national economic and social development programme (2006-2010)

China’s work safety policy

- Put safety first, give priority to prevention and conduct comprehensive rectification

Work safety as an indicator for economic and social development

- Work safety is listed as an indicator to assess the job performance of major government officials at different levels
- Work safety is listed as an indicator to evaluate the developmental conditions of each locality, industry and sector in China

National Work Safety Programme

Major Targets for 2010 vs. 2005

Coal Mines: deaths per million tons of coal production down 25%
& death toll in accidents each causing ten deaths or more down 20%

Non-coal Mines: death toll down 10%

Hazardous Chemicals: death toll down 10%

Fireworks and firecrackers: death toll down 10%

Construction: death toll down 10%

Special Equipment: deaths per 10 thousand equipment to 0.8

Fires: death toll down 4%

Road Traffic: deaths per 10 thousand road vehicles down 30%
& death toll in accidents each causing ten deaths or more down 20%

Waterway Traffic: dead or missing down 10%

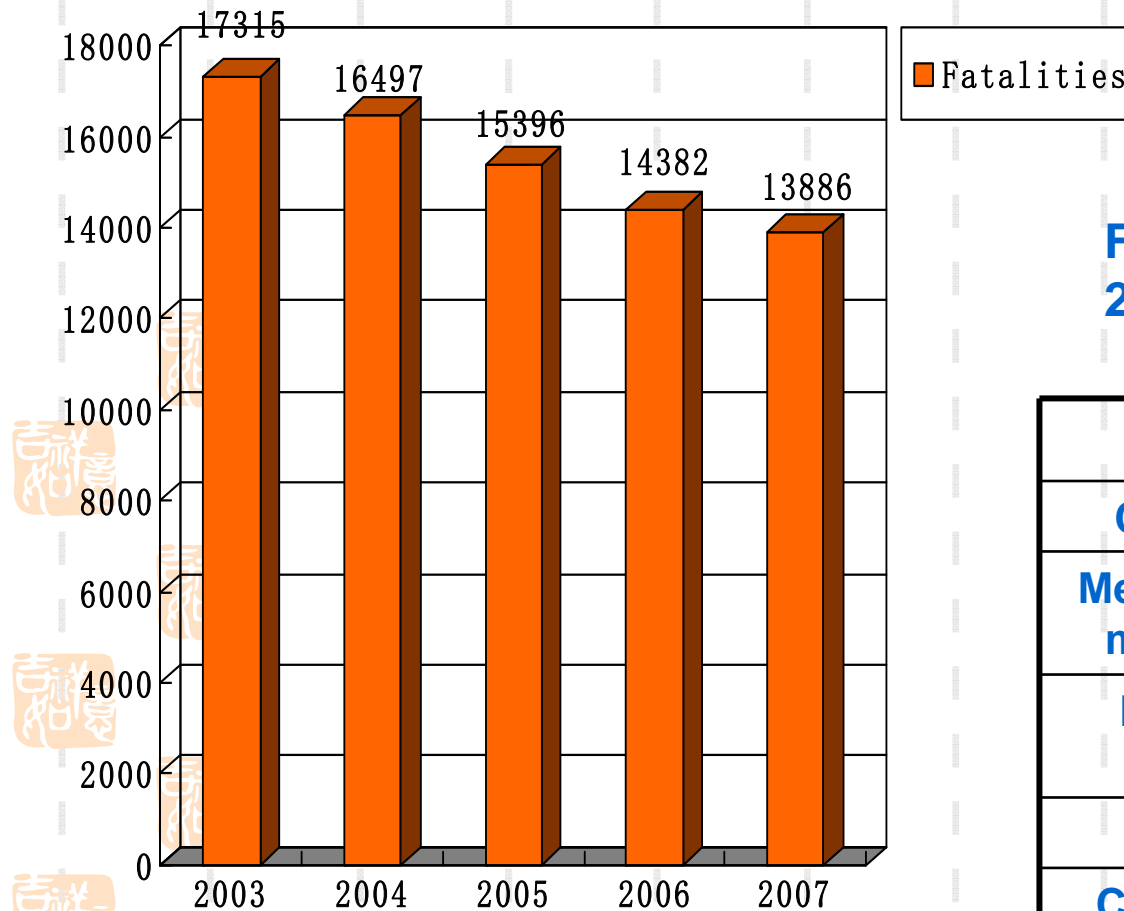
Railways: death toll down 10%

Civil Aviation: major accidents per million flight hours down to 0.3

Agricultural Machinery: death toll down 10%

Fishery Vessels: death toll down 10%

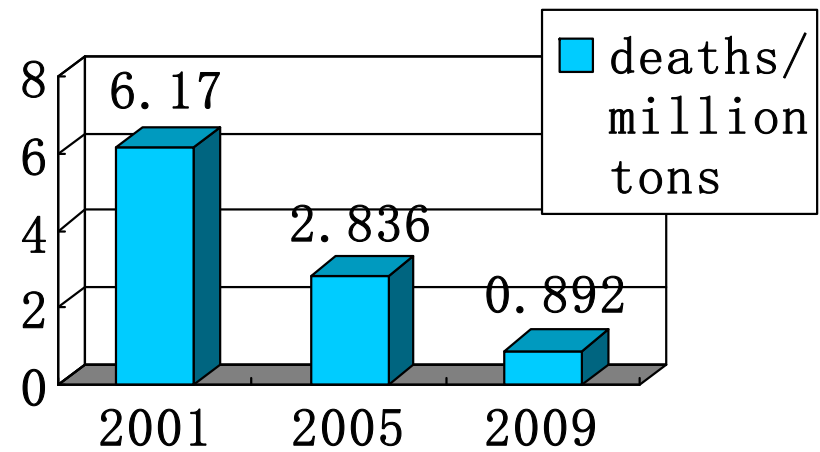
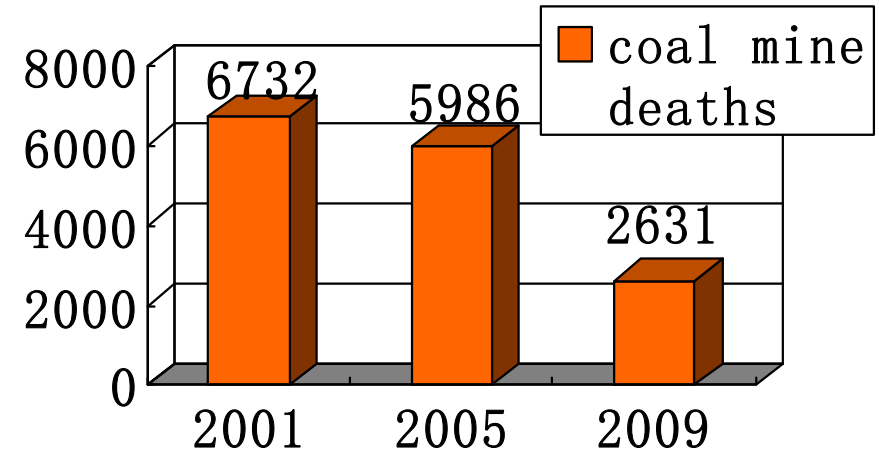
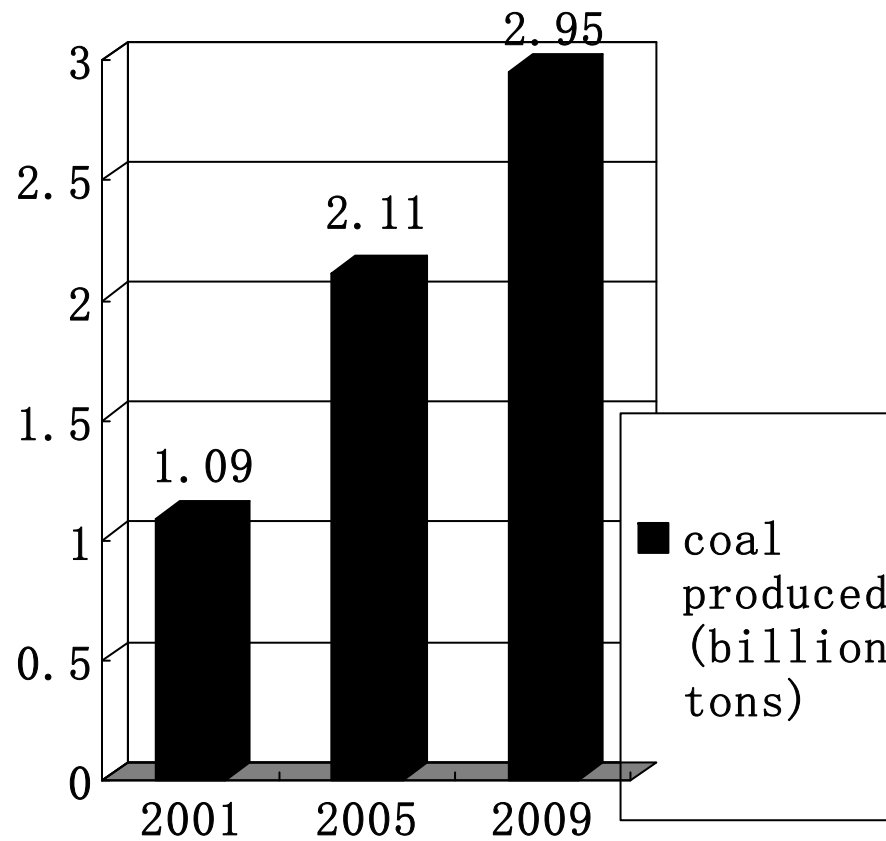
Fatalities in Industrial Accidents (including mining and trade sectors)



Fatalities Y-o-y by sectors
2008 & 2009

Sector	2008	2009
Coal mines	-15.1%	-18.2%
Metal and non-metal mines	-5.8%	-25.4%
Hazardous chemicals	-2.5%	-5.1%
Fireworks	-20.7%	-2.1%
Construction	-0.7%	+2.1%

Coal Mine Safety Statistics (2001-2005-2009)



PREVENTION



1. Legislation Building

2. Law Enforcement

3. Economic Policy (Investment)

4. Safety Science & Technology

5. Training

6. Preventive Safety Culture Building

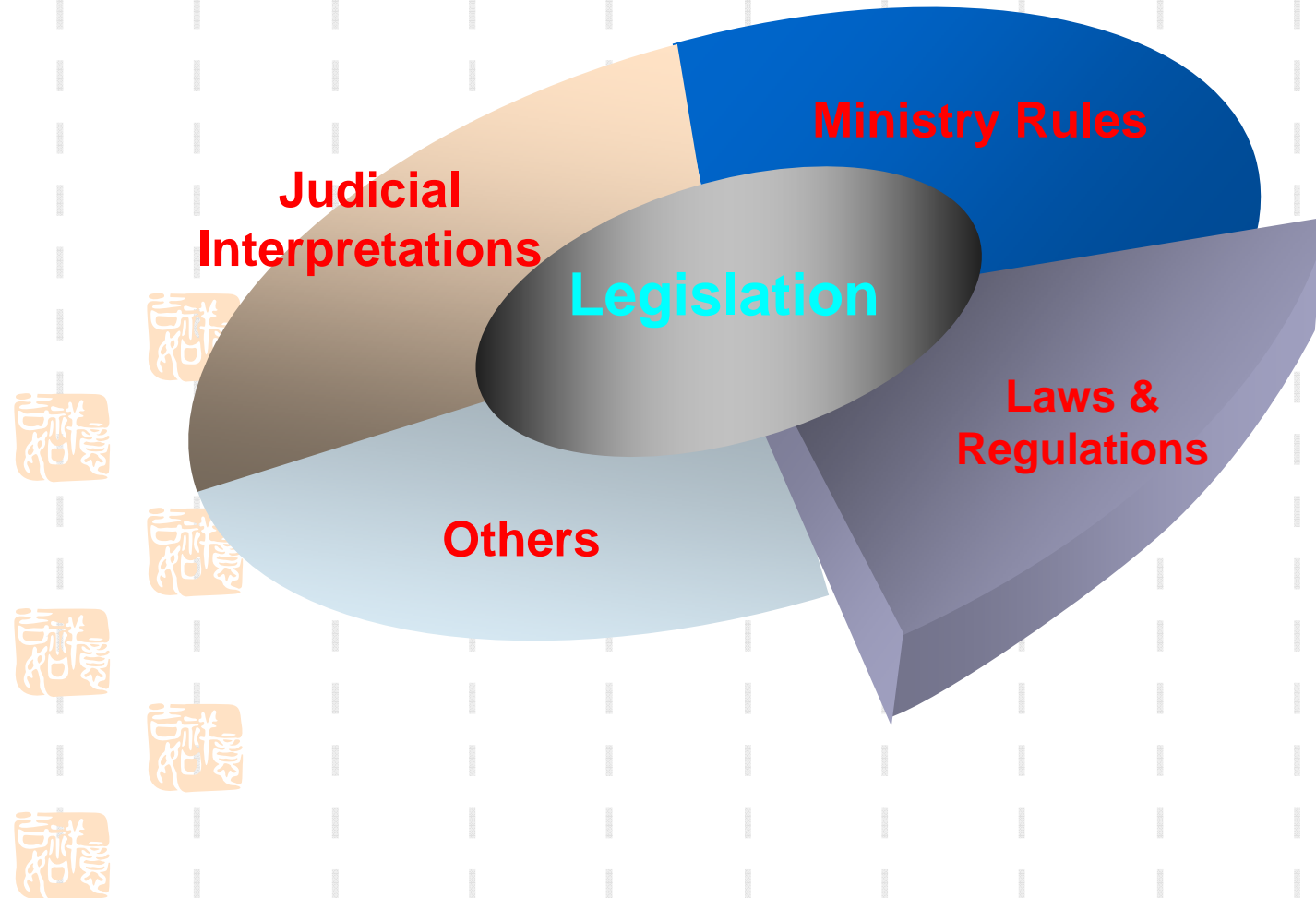
Risk Assessment (Project)



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1. Legislation Building

Legislative System on Work Safety



National Laws



- **Work Safety Law (2002):** safety first, prevention prioritized
- **Law on Prevention and Control of Occupational Diseases (2002):** combine prevention and treatment, but give top priority to prevention
- **Sixth Amendment to Criminal Law (2006):** redefine and add to the list of work safety liability crimes, with heavier criminal penalties
- **Emergency Response Law (2007):** Keep alert during normal times and put prevention first



Administrative Regulations

- Regulations on Coal Mine Safety Inspection (2000)
- Regulations on Safety Administration of Hazardous Chemicals (2002)
- Regulations on Safety Administration of Construction Projects (2004)
- Regulations on Work Safety Licenses (2004)
- Resolution of the State Council on Furthering Work Safety (2004)
- Special Provisions of the State Council on Prevention of Accidents Endangering Work Safety in Coal Mines (2005)
- Regulations on Safety Administration of Fireworks and Firecrackers (2006)

Ministry Rules



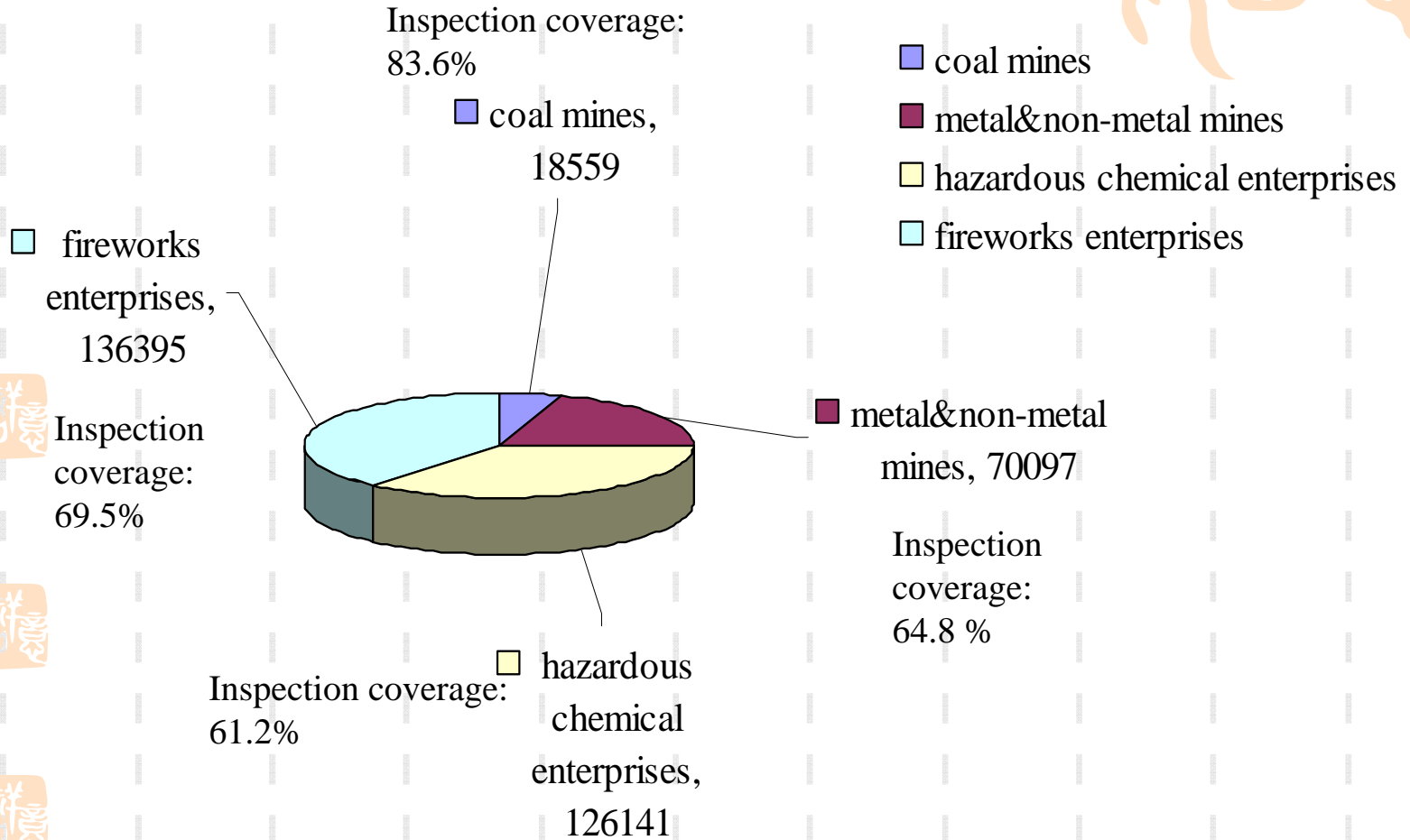
■ Order No. 1 – 29 of the Minister of SAWS

■ Examples:

- No. 1 --- Rules for Supervision of Labour Protection Equipment
- No. 4 --- Rules for Safety of Off-shore Oil Operations
- No. 6 --- Rules for Safety Supervision of Mine Tailing Dams
- No. 11 --- Rules for Administration of Certified Safety Engineers
- No. 16 --- Provisional Rules for Screening and Control of Work Safety Hazards
- No. 17 --- Rules for Management of Emergency Plans Against Accidents
- No. 19 --- Rules for Prevention of Coal and Gas Outburst
- No. 23 --- Provisional Rules for Occupational Health Supervision at Workplaces
- No. 26 --- Rules for Safety Supervision of Metallurgical Enterprises
- No. 27 --- Rules for Reporting of Occupational Hazards at Workplaces
- No. 28 --- Rules for Prevention of Flooding at Coal Mines



2.Enforce Law (Inspections in 2006)



Inspection by Work Safety Watchdogs in 2006



Example: Law Enforcement (2006)

1,839,542 hazards were spotted and handled,
94.3% corrected

64,731 administrative punishment were given,
including 18,362 enterprises were ordered to
suspend production/operation, 8,812 enterprises
were referred for closure

Fines amounted to 783.33 million yuan (115 million
US dollars), 85.5% paid

Example: Nationwide Hazard Screening and Control Campaign (2009)

- 5,592,000 enterprises nationwide conducted hazard screening and control activities, with 7,353,000 accident hazards spotted (7,079,000 of them, or 96.3%, were corrected). Among these hazards, 38,400 were classified as major hazards (35,700 of them, or 92.9%, were corrected).

3. Economic Policy (Investment)

SAWS developed standards on minimum amount of money spent on safety by enterprises engaged in the high-risk industries.

For large and medium-sized coal mines:

High-gassy, outburst-prone, spontaneous combustible, flooding-possible: 8 yuan / ton

Low-gassy: 5 yuan / ton

Open-cast: 3 yuan / ton

For small coal mines:

High-gassy, outburst-prone, spontaneous combustible, flooding-possible: 10 yuan/ ton

Low-gassy: 6 yuan / ton

For fireworks enterprise with annual sales of less than 2 million yuan: 3.5%

2 – 5 million yuan: 3%

5 – 10 million yuan: 2.5%

over 10 million yuan: 2%

For construction enterprises:

1% – 2% of business revenues



Accident Blacklist

SAWS established a blacklist condemning enterprises with poor work safety records.

All enterprises where serious accidents occur enter into the blacklist, which is regularly publicized through national media.

The authorities for industry and commerce, financial institutions, insurance companies and certification agencies jointly give sanctions against such enterprises.

The move is to urge enterprises to be more aware of their corporate social responsibility and do their utmost to prevent accidents.

A mechanism offers chance for such enterprises to be taken off from the blacklist.



4. Safety Sci & Tech



- **1. Projects under the National S&T Plan**

--- SAWS is currently undertaking 12 programmes, consisting of 63 study projects, covering mine safety, chemical safety, fireworks safety, occupational hazards, safe production of oil and gas fields, etc.

Total spending: 490 million yuan (280 million yuan allocated by central government).

- **2. Projects guided by the SAWS' own plan**

--- From 2003 to 2009, SAWS guided and listed a total of 2,887 S&T projects conducted by local governments, NGOs and enterprises



Safety Sci &Tech



- **3. Biennial Awards for Safety S&T Achievements**

- Since 2002, 577 project achievements and 306 outstanding projects have been honoured.

- **4. Safety S&T Demonstration Projects**

- Major hazard control technology for gas, fire and roof at coal mines

- Chemical accident response and decision-making information support system

- Urban safety planning information system, etc.

- **5. National Work Safety Experts Team**

- The current team has 284 experts, 20 of whom are academicians. Divided into 7 groups covering different industry sectors.

- **6. Safety Science Publicity Campaign**

- Annual Safety S&T Week since 2006



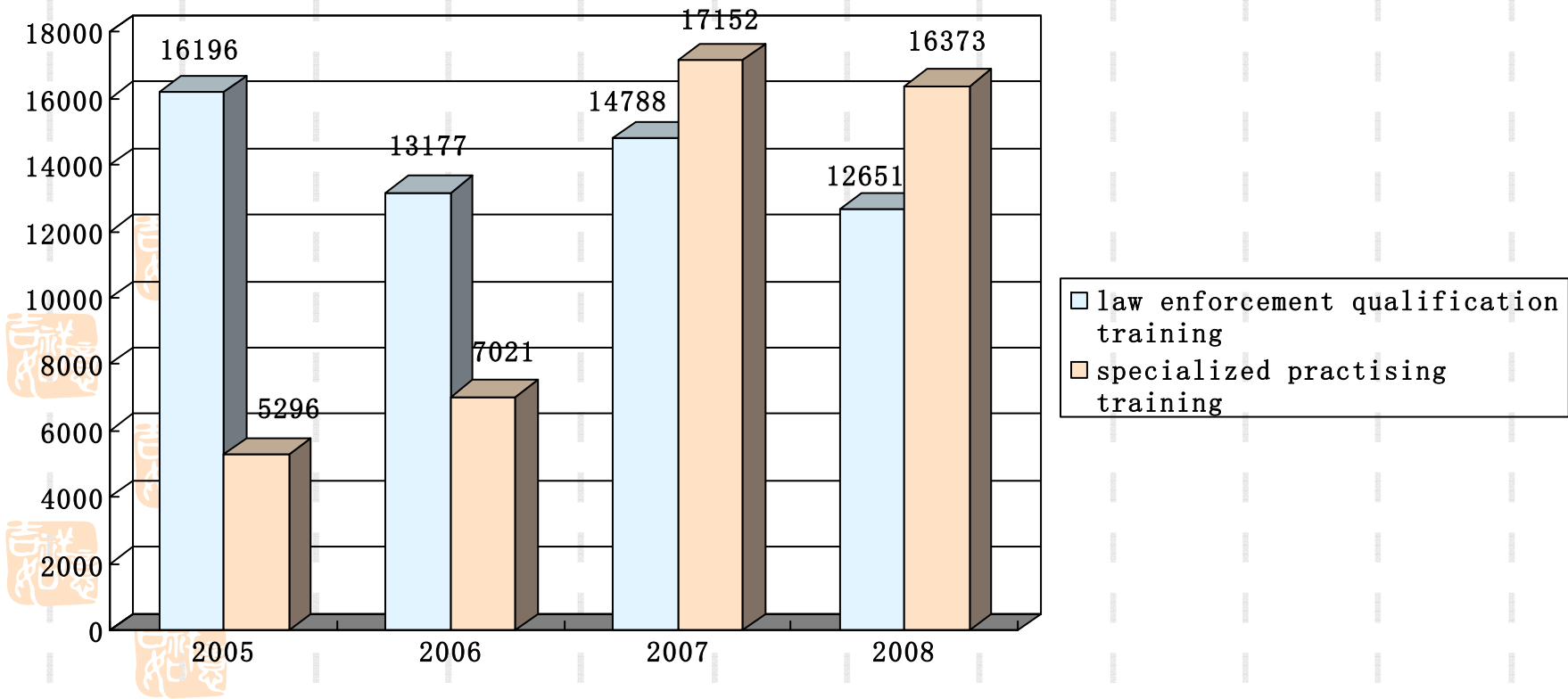
5. Work Safety Training



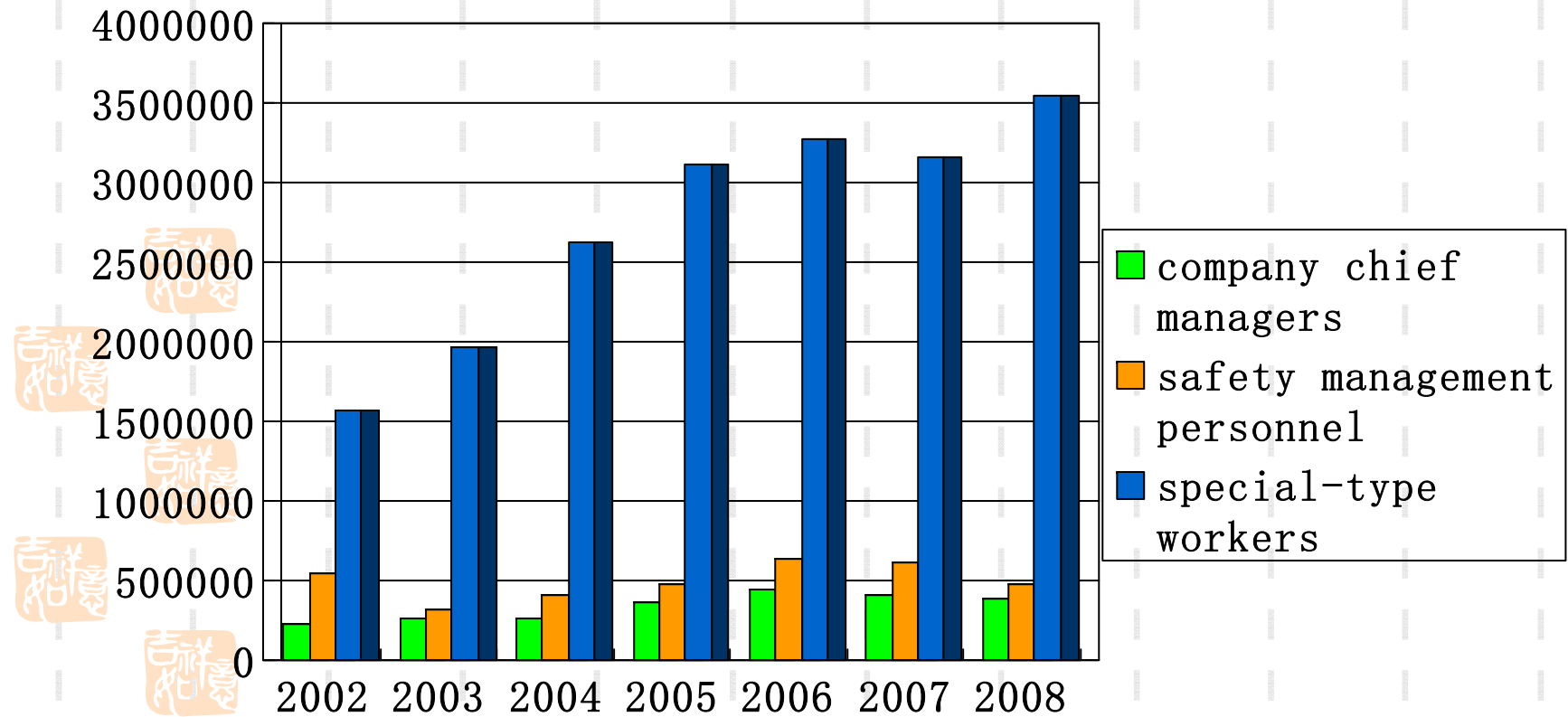
- From 2003 to 2009, SAWS organized 11 work safety training sessions for city (prefecture) mayors, with 605 mayors trained
- 24 provincial authorities organized work safety training sessions for county and township chiefs
- About 85.3% of 9 million domestically migrant workers in mines, chemical plants and fireworks workshops were trained (2008 figure)



Number of supervisors and inspectors trained from 2005-2008



Training for high-risk industries from 2002 to 2008



6. Build preventive safety culture

- **Work safety month (since 2001)**
- **10000-Li work safety tour (11 times)**
- **Work safety exhibition (2005)**
- **Signature drive with 1 million people in 100 cities**
- **Workers' entertainment performance**
- **Work safety consultancy day (since 2001, second Sunday of June every year as law prescribes)**
- **TV Programs**
- **Training**
- **Books and publications**
- **Activities in commemoration of the World Day for Safety and Health at Work (April 28)**
- **Safe community**



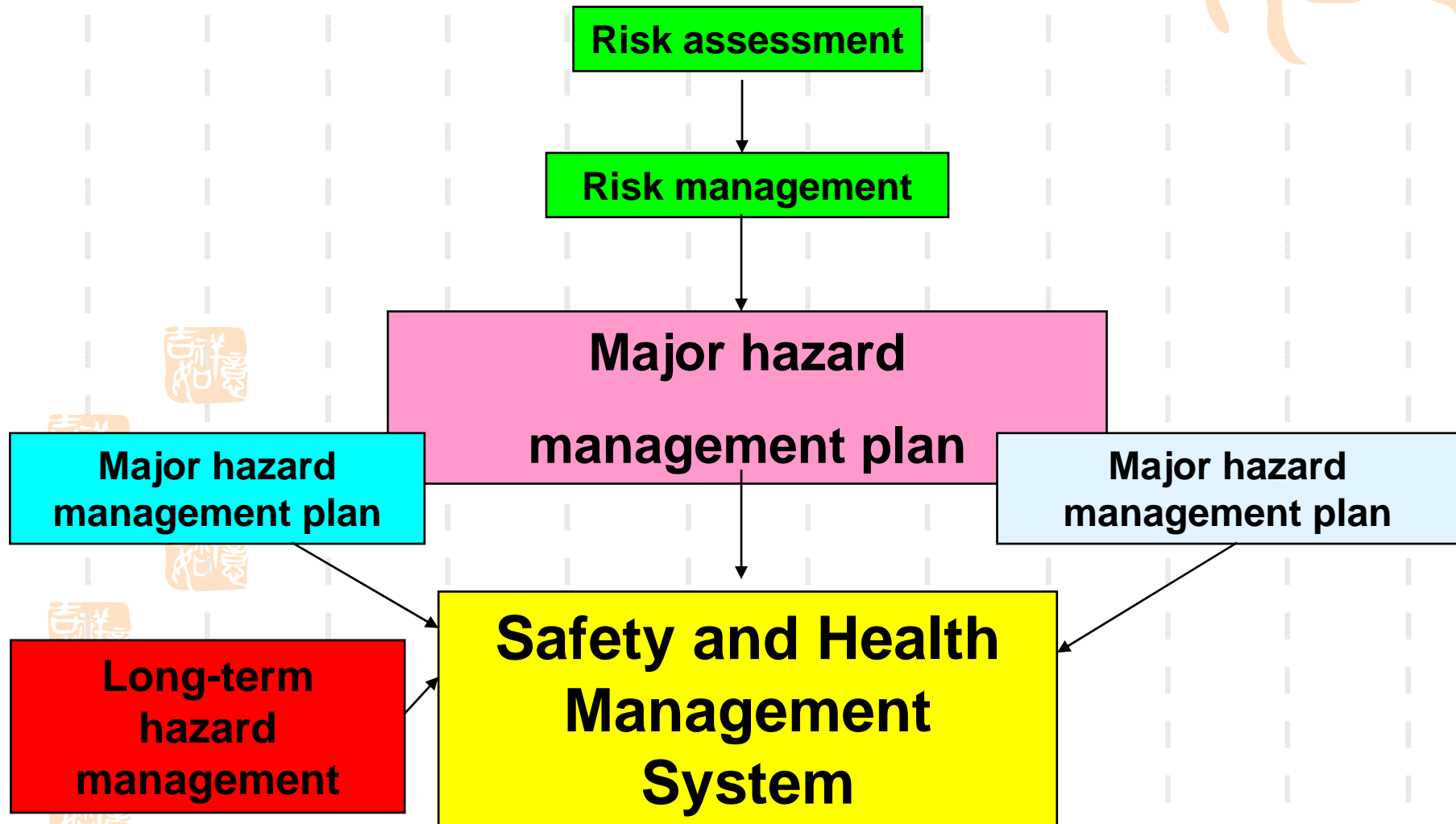
China-Australia Cooperation



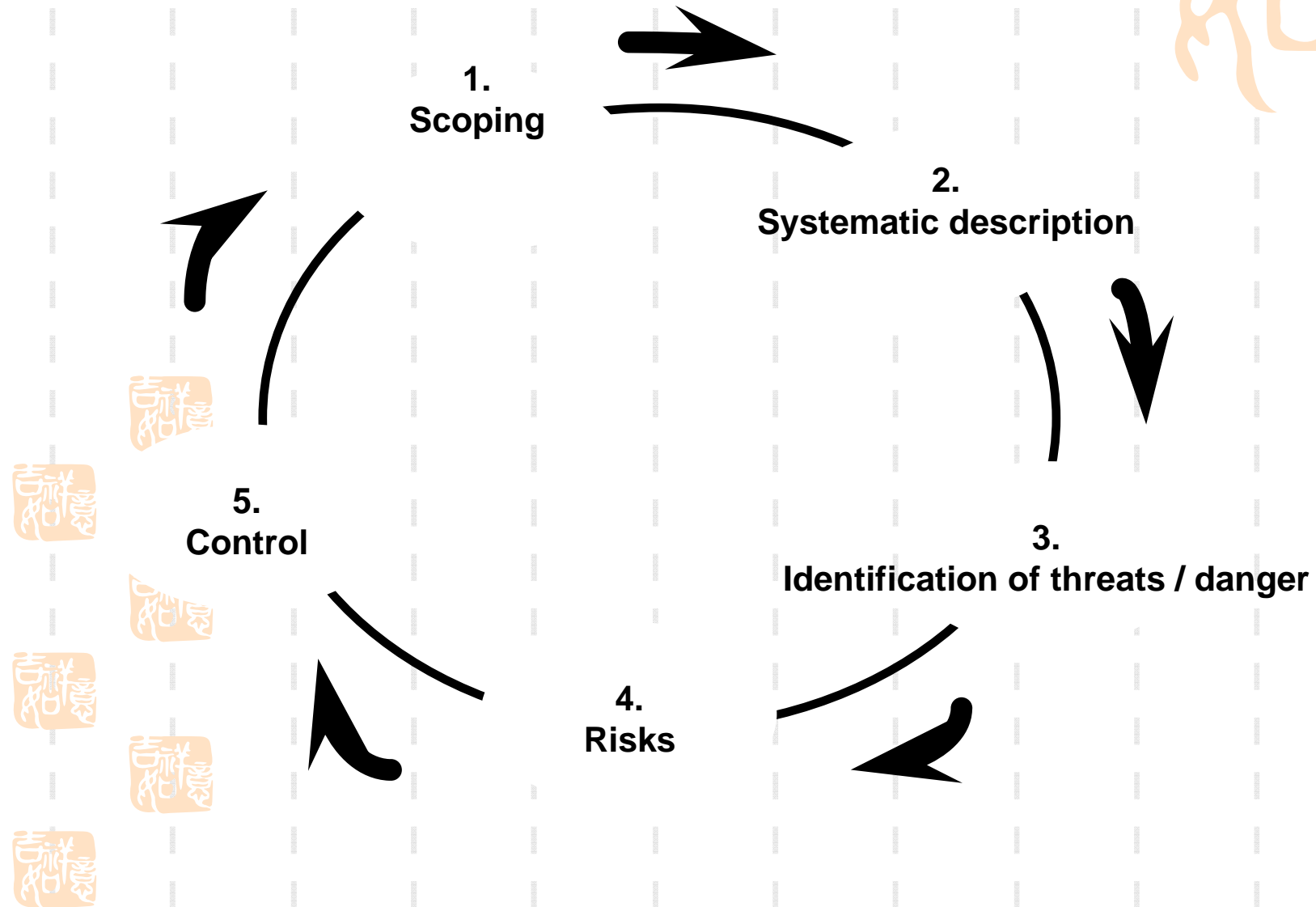
- China-Australia: April 2006-Memorandum signed between two governments: Memorandum of Understanding Between SAWS of PRC and the Dept.of Industry, Tourism and Resources of Australia on Cooperation on Coal Mine Safety

Objective: Learn advanced safety management concept and method (**Risk Assessment**), introduce to China advanced safety technology and equipment, set up an accident prevention system to build a safety demonstration coal mine.

Risk Assessment Summary of Experience



Risk Assessment Process



Risk Assessment



- **First stage – scoping**
- **Second stage – risk assessment**
- **Third stage – client review**



Risk Sequencing



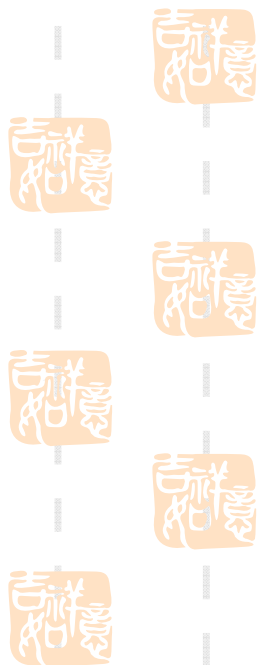
可能性

PROBABILITY

CONSEQUENCES

结果

	A	B	C	D	E
1	1	2	4	7	11
2	3	5	8	12	16
3	6	9	13	17	20
4	10	14	18	21	23
5	15	19	22	24	25



China-Australia Coal Mine Safety Demonstration Project Risk Assessment of Xuandong Mine

- **First stage: Scoping**

Collected historical data and information through initial site study by expert teams, and formulated site study reports, with 100 issues identified, 19 of which were referred initially for risk assessment.

China-Australia Coal Mine Safety Demonstration Project Risk Assessment of Xuandong Mine

- **Second stage: Risk Assessment**
- In light of the goals, members were selected for the risk assessment team.
- Overall analysis and assessment of Xuandong Mine. In light of the prioritized risks identified in site study, overall assessment was divided into three areas (design, production and transport) and 16 sub-areas, with risk levels assigned to each of them. 6 high-risk issues were determined. The Fault Tree Analysis (FTA) model was established for coal dust explosion at the mine.

China-Australia Coal Mine Safety Demonstration Project Risk Assessment of Xuandong Mine

Emergency situation analysis was conducted of 15 key risk factors including coal dust explosion, gas explosion, roof collapse, flooding, etc., among the 6 high-risk issues.

China-Australia Coal Mine Safety Demonstration Project Risk Assessment of Xuandong Mine

- Conducted fault tree analysis of fire risks, with the model of FTA for fires established at the mine.

China-Australia Coal Mine Safety Demonstration Project Risk Assessment of Xuandong Mine

- **Third stage: Client Review**

Submitted to Xuandong Mine:

Broad Brush Risk Assessment (BBRA)

Emergency

Response plans for all emergency situations

Fire prevention and control plan

“Song of Life” --- Safety Songs Competition



The Gold Prize Song: Safety is a Blessing



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Thank you !

