## 3rd Five-Year Occupational Injury Prevention Plan (2010~2014)

## 2010.3

### Appendix

- ••• Major projects implementation plan for 2010
- Strengthening occupational injury prevention for the Hope Work Project 2010
- Implementation plan for the 「campaign for reducing the number of accidents by half」
- Safety management measures for the 「4 Major Rivers Restoration Project」
- ••• Workplace no smoking campaign and the campaign for making healthy minds for



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### Background

- □ In the past, the government has established and implemented integrated plans to reduce occupational injuries.
  - Article 8 of the Occupational Safety and Health Act requires the Minister of Labor to establish mid- to long-term occupational injury prevention plans.
    - % Chronology for mid- to long-term plans
      - ▲ 1st six-year occupational injury prevention plan ('91~'96)
      - ▲ 3-year occupational safety promotion plan ('97~'99)
      - ▲ 1st five-year occupational injury prevention plan ('00~'04)
      - ▲ 2nd five-year occupational injury prevention plan ('05~'09)
- □ During the period of the 2nd five-year plan ('05~'09), the government has achieved the expected results by improving the laws and systems, expanding infrastructures, and building an occupational injury prevention system.
  - With the current occupational injury prevention systems, polices, and project implementation systems, however, effectively coping with the environmental changes, e.g., changes in industrial structures, low birth rates, entry into an aged society, and generation of new harmful and hazardous factors is difficult.
- O Therefore, there is a need to build and improve the system to a delivery system that can promote the field applicability of the project, diverging from the approach that just parade project plans and programs.
- Accordingly, the government needs to establish mid- to long-term visions and strategic tasks that can adequately cope with the new political environment and prepare and execute systematic implementation programs.
- O Draw up a master plan (draft) after undertaking studies, conducting the examination session by field (operated by the Ministry of Labor and Korea Occupational Safety and Health Agency [KOSHA]), and collecting opinions from labor, management, and related professionals.

### Evaluation of past plans and examination of current situation

- 1 Evaluation of the past 5-year plan
- The 2nd five-year occupational injury prevention plan was implemented to realize a "Safe and Welfare Society" where safety and health are guaranteed for all workers.
  - The foundation for the construction of an occupational injury prevention system was built by focusing administrative competence on areas vulnerable to occupational injuries including the industry where fatal accidents frequently occur and other small workplaces.
  - Note, however, that there are certain restraints on the actual support provided to establish the system and ensure internal stability of it, improvement of the level of national awareness on occupational safety and health, and expansion of participation.

### (1) Results

- □ mproving systems to prevent accidents
  - The number of major occupational accidents was reduced and stabilized through the operation of the major occupational accident prevention center (operated in Ulsan, Yeosu, Cheonan, and Ansan; installed in March 2005)
    - \* Major occupational accidents (unit: cases): ('04) 11  $\rightarrow$  ('05) 5  $\rightarrow$  (' 06) 3  $\rightarrow$  ('07) 4  $\rightarrow$  ('08) 6  $\rightarrow$  ('09) 4
    - \* EU Statistics on chemical accidents: 3 cases /1,000 workplaces ('08)
  - O The number of injuries in the construction industry was reduced by streamlining related systems, e.g., improvement of the bidding prequalifications (PQ) system, and adjusting the occupational safety and health management expenses to a practical level.
    - \* Injury rate in the construction industry (%): ('04) 0.95  $\rightarrow$  ('05) 0.76  $\rightarrow$  ('06) 0.72  $\rightarrow$  ('07) 0.67  $\rightarrow$  ('08) 0.64  $\rightarrow$  ('09) 0.65
- Support provided for preventing injuries through a professional technical consultant to small construction sites with contract amount of less than KRW 300 million, wherein appointing a safety manager is not compulsory ('06.2)
- Prior and follow-up monitoring activities were strengthened by introducing the 「safety certification system」 under which the production system and technical ability for the manufacturing process of dangerous machinery, equipments, and facilities are examined. ('07.7)

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- □ Foundation built for the construction of a health management system
- O The internal stability of the working environment measurement system was promoted by introducing a reliability assessment system wherein the accuracy and precision of the working environment measurements are evaluated.
- A harmful factor tolerance standard system\* was newly introduced ('07.7) to strengthen the obligations of business owners to protect the health of workers.
  - \* A system wherein exposure is kept below the specified level, covering harmful factors that might induce serious health problems among workers
- O The foundation for upgrading chemical management systems was laid down ('07.6) by improving the chemical classification and labeling system ('06.9) befitting the global standard (GHS) and by revising the exposure standard (86 types).
- □ Supporting safety and health activities suitable for workplaces
- Financial and technical support was reinforced to improve the working environment of small workplaces employing less than 50 workers; thus contributing to the reduction of injuries.
  - \* Effects of reducing the injury rate by year of clean workplaces (unit: %): (' 05) 48.1  $\rightarrow$  ('06) 23.8  $\rightarrow$  ('07) 27.2  $\rightarrow$  ('08) 34.6  $\rightarrow$  ('09) 33.6
- Business owner's voluntary participation induced by introducing a win-win agreement system ('05) to prevent injuries between the parent company and subcontractors
- Voluntary safety management revitalized by introducing the voluntary labor-management injury prevention programs at large construction sites ('07.7)
- □ Safety culture activities
  - Zero injury campaign at workplaces (approximately 120,000 workplaces participated, with some 30,000 workplaces certified), safety inspection day event (approximately 15,200 workplaces), and campaign week event (every first week of July) being held continuously
  - Training materials developed and supplied to ensure internal stability of the school safety culture
    - \* Operation of model schools (265 schools), cultivating safety instructors (approximately 17,510 persons), and study meetings of educational personnel (approximately 200 times)

### (2) Limitations

- □ Civilian competence is low due to government-led implementation of projects.
- Lack of opportunities of participating by industrial personnel, regional residents, and civilians during the process of establishing occupational safety and health policies and decision making
- O The expansion of injury prevention beneficiaries is limited, and the diversification of projects, insufficient, because projects were implemented centered on the Ministry of Labor and KOSHA.
- O The evaluation of service agencies aimed at improving the quality of safety and health service agencies and the activation of the occupational safety and health consulting system are being delayed because civilians' ability and compatibility vis-à-vis systems were not fully considered.
- □ Revitalization of voluntary prevention activities inadequate
- O The effects of operating the occupational safety and health committee and the honorary occupational safety supervisor have deteriorated because they were operated perfunctorily.
- Attempts at strengthening the status of safety and health managers and abolishing the safety and health manager outsourcing system are being delayed because realistic circumstances have not yet matured; moreover, there are no alternative programs.
- Reliance on outsourced agencies on-site has consistently increased, with the rate of appointment of own safety and health manager by the workplace decreasing.
  - \* Trends of increased outsourcing by workplaces employing 300 or more workers (unit: places): ('00) 45  $\rightarrow$  ('03) 405  $\rightarrow$  ('09) 892
  - Lack of overall safety management atmosphere on-site because the voluntary safety management system is operated centered on large sites

- □ Project effectiveness deteriorated due to the execution of separated project implementations.
- Synergy effects are insufficient since the occupational injury prevention projects such as financial and technical support, training, guidance, and inspections are not systematically carried out in linkage.
- Effects were reduced because focus is on the partial improvement of each project while maintaining the frame of existing systems.
- □ Performance assessment and feedback systems are unsatisfactory.
  - For most technical support projects being executed by the Ministry of Labor and KOSHA, checking and analyzing the performance of the supported workplaces by year are difficult.
  - Feedback system inadequate because projects were established or abolished with the aim of achieving the short-term goals rather than based on the objective assessment of the results
- □ Low level of manifestation of the effects of projects at the site
  - Efforts needed to build a safety culture ignored since efforts are focused on the technical approaches concentrated on the improvement of harmful and dangerous facilities at workplaces.
  - O The safety and health training gap between large enterprises and small and medium enterprises is widened, and the efforts made to promote the level of safety and health awareness on the part of labor-management are insufficient.
    - \* Compliance rate of conducting safety and health training according to the size of manufacturers (2006 surveys on the occupational safety and health trends)

Size	5~49 employees	50~99 employees	100~299 employees	300~499 employees	500 or more employees
Compliance rate (%)	37.8	71.4	75.6	77.0	86.9

Realizing project results is being delayed due to the failure of labor, management, and government and other related institutions subject to injury prevention to join hands and the nonexistence of strategies in making occupational safety and health a social issue.

### (1) Status of injuries

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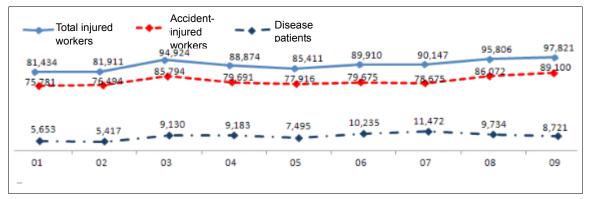
 Injury rate was less than 1% in 1995. After posting an all-time low of 0.68% in 1998, the rate gradually increased, maintaining a 0.7% level from 1999 to present.

Trends of changes in the number of injured workers, dead workers, and injury rate

Injured workers	81,434	81,911	94,924	88,874	85,411	89,910	90,147	95,806	97,821
(1,000 persons)	2,748	2,605	2,923	2,825 • • • - •	2,493	2,453	2,406	2,422	2,181
Dead workers (persons)	0.77	0.77	0.90	0.85	0.77	0.77	0.72	0.71	0.70
Injury rate (%)	2001 2	2002	2003	2004	2005	2006	2007	2008	2009

 The number of occupational diseases has been on the decline since 2007; note, however, that the number of accident injuries remains at the level of 80,000 per year after 2003.

Trends of occupational accidents and diseases by year

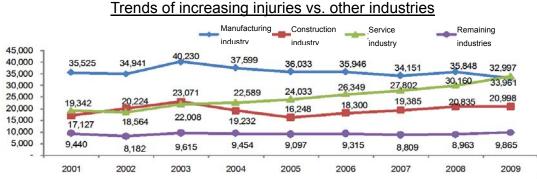


- The number of injured workers has been on a decreasing trend annually in the case of large enterprises; in contrast, that of small workplaces has been increasing every year, thereby widening the injury rate gap between large enterprises and small and medium enterprises.
  - \* Small workplaces employing less than 50 workers account for approximately 98% (1,523,000 workplaces) of the total workplaces (1,561,000 workplaces) and make up 79.5%% (77,762 cases) of the total injuries (97,821 cases).

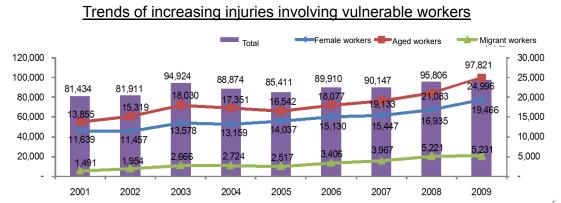
#### Number of injured workers by corporate size (unit: persons)

	<u>'05</u>	<u>'06</u>	<u>'07</u>	<u>'08</u>	<u>'09</u>
▲ 50 ~ 299 employees:	14,899	14,760	13,731	13,709	13,661
less than 50 employees:	59,742	66,072	68,774	75,051	77,762

- Since industrial structures are being changed to service industry from the manufacturing industry, the proportion of injuries in the service industry is on a continuous increase trend.
  - \* The service industry accounts for 59% of the total workplaces and 42% of the total workers; the proportion to the total injured workers has increased to 35% (33,961 workers) in 2009 from the 23% (19,342 workers) posted in 2001.



I he number of the injured among vulnerable workers (female, aged, or migrant workers) increases every year due to the reasons such as unskilled labor, highly dangerous works, and the high job turnover.



○ The economic loss resulting from occupational injuries is 18 times the production loss caused by labor-management disputes in 2008; the level of loss is growing every year.

#### Comparison of economic loss for the past 5 years

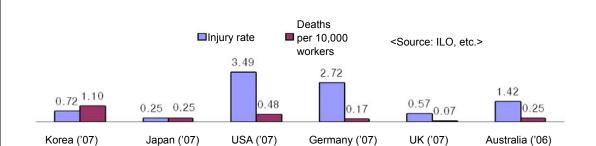
Item	'04	'05	'06	'07	'08
Economic loss resulting from occupational injuries	142,996	151,289	158,188	162,114	171,094
Occupational injury compensation paid	28,600	30,258	31,638	32,423	34,219
Production loss resulting from labor- management disputes	16,578	12,899	30,324	14,395	9,513

#### (Unit: KRW 100 million)



#### Comparison of injuries with those of advanced countries

Oirect comparison is difficult due to the difference in the calculation method; note, however, that the injury rate is slightly low despite that the fatal accidents per 10,000 workers is quite high.



O ccupational injury mortality that can be compared internationally is approximately 6~10 times those of advanced countries

(2004 International Statistics Almanac; Occupational injury mortality is highest in the world)

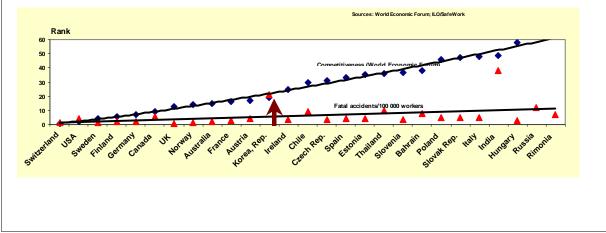
<u>Comparison of occupational injury deaths per 100,000 workers</u> <a href="https://www.example.com"></a>

Lowest	UK 0.7 Norway 1.3 Switzerland 1.4 Sweden 1.6 Australia 2.0 Finland 2.2
Medium	Italy 5.0 Canada 5.9
Highest	Mexico 10.0 Thailand 10.1 Russia 12.4 Korea 21.0

O This occupational injury mortality is extremely high even when compared with countries having low national competitiveness.

Ranking of national competitiveness ('08~'09 WEF) and occupational injury mortality ('06, ILO)

(◆ National competitiveness, ▲ Occupational injury mortality)



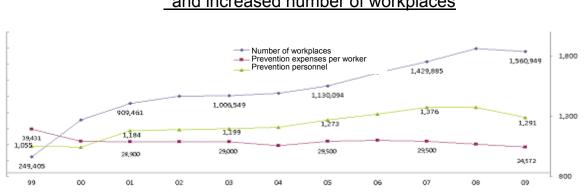
### (1) Status of injuries

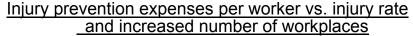
- □ (Political aspect) Even though the causes and types of injuries are being diversified due to the changing industrial structures and employment forms, systematic responses leave a lot to be desired.
- Government's efforts to develop policies regarding the part vulnerable to occupational injuries are insufficient.
  - Investment in small workplaces employing less than 50 workers, which account for 79.5% (77,762 cases) of the total injuries, is insufficient.
  - \* Small workplaces employing less than 50 workers account for approximately 98% (1,523,000 places) of the total workplaces (1,561,000 places) and make up 79.5% (77,762 cases) of the total injuries (97,821 cases).
  - There are limitations in preventing occupational injuries in the ever-increasing service industry with only technical support provided for facility improvement centered on the manufacturing and construction industries.
  - \* The service industry is characterized by lots of moving and irregular working hours; hence the difficulty in providing technical support focused on facility improvement. As such, it was excluded from technical support.
  - The number of the injuries among vulnerable workers (female, aged, or migrant workers) increases every year due to the reasons such as unskilled labor, highly dangerous works, and the high job turnover. Nonetheless, government interest and investment in these matters are at the minimal levels.
- O The current working environment measurement system is not enough to detect problems early; there are limits to determining workers carrying occupational diseases even in special medical examinations.
- Establishing and executing plans suitable for each region are unsatisfactory due to uniform project execution without considering the regional and industrial characteristics.

Item	Nationwide average	Busan office	Seoul office
Percentage of injuries in the manufacturing industry (workplace percentage)	34% (17%)	26% (18%)	12% (21%)
Percentage of injuries in the service industry (workplace percentage)	35% (62%)	15% (13%)	34% (40%)

Injury characteristics by area ('09)

- □ (Legal and systematic aspect) Problems regarding the scope of applying the Occupational Safety and Health Act, responsible body, and method of regulation were revealed.
- There are constraints in protecting non-regular workers, special workers, and other vulnerable workers because protection is focused on regular workers.
- Large enterprises pass on the occupational injury risks to small workplaces owing to the diversified production methods including multilevel contracting.
- O The sentencing system of punishment and fines is realistically insufficient to act as an effective law enforcement strategy; even the criteria for punishment such as determining whether it is intentional or fault are unclear.
- □ (Financial aspect) Reducing the injury rate using the current level of budgets and project implementations focused on financial support is difficult.
- For the past 10 years since 1998, the number of workplaces that are targets of the occupational injury prevention projects has increased; however, that related budgets and number of prevention personnel remain stationary.
  - ▲ Number of workplaces: ('99) 249,405 → ('09) 1,522,607, increase to 6.1 times
  - ▲ Number of prevention personnel: ('99) 1,055 → ('09) 1,291, increase to 1.2 times
  - ▲ Occupational injury prevention expenses per worker: ('99) KRW 39,431 → ('09) KRW 24,572, reduction to 0.7 times





- While the financial support budget including loans and subsidies account for 50% of the total budget, direct supporting budgets are being relatively reduced.
  - \* Financial projects constitute approximately 49.1% (KRW 170.1 billion, '09) of the total budget, but only approximately 0.4% (loans: 728 places; clean workplaces: 4,831 places) can benefit from the support out of the total number of workplaces (1,560,000 places).

### Evaluation of past plans and examination of current situation

- Outlook on future political circumstances
- □ Service industry-centered structures
  - Industrial structures are being changed centered on the third industry the service industry -from the manufacturing and construction industries influenced by the informatization, etc.
    - As the economy progresses based on the service industry while the knowledge-based industry is being expanded, the percentage of the service industry is on a continuous increase trend.
    - \* Percentage in GDP (%): ('95) 51.8  $\rightarrow$  ('00) 54.4  $\rightarrow$  ('06) 59.7  $\rightarrow$  ('07) 60.0  $\rightarrow$  ('08) 60.3
    - \* Percentage in employment (%): ('95) 54.8 → ('00) 61.2 → ('06) 66.2 → ('07) 66.9 → ('08) 67.6
- New Safety and health problems including new occupational diseases and occupational stress are expected to occur due to the increased injuries in the service industry.
- □ Advent of low birth rate and aged society
  - Stagnant economic growth and increase in financial burdens are highly likely due to the rapid entry into a low birth rate, aged society.
    - The total birth rate for 2009 was 1.21, the lowest level among OECD member countries; people aged 65 or older account for 9.3% of the total population.
    - \* '00 7.2% (Aging society)  $\rightarrow$  '18 14.3% (Aged society)  $\rightarrow$  '26 20.8% (Super aged society)

#### Outlook on changes in population structures

(Unit: 1,000 persons, %)

				•	1 ,
Item	'10 p	'13 p	'15 p	'18 p	'20 p
15 years and older	15,226	15,634	16,146	16,723	16,689
15~29 years old	10,235	9,776	9,606	9,267	8,909
55~64 years old	4,991	5,858	6,540	7,456	7,780

Note) "p" denotes a projection <Source: Statistics Korea, Estimated future population, '09>

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- In the future, the average age of productive population is expected to increase in all industries, whereas the key worker group (25~49 years old) will shrink.
- \* Percentage of key worker groups vs. total population: ('05) 42.8%  $\rightarrow$  ('20) 36.6%  $\rightarrow$  ('50) 25.5%
- In connection with this, there may be an increasing need to establish measures reflecting the diverse labor force and employment structures and launch occupational injury prevention activities.
- □ New harmful and hazardous factors increased due to the development of technologies.
  - New harmful and hazardous factors are expected to increase due to the development of technologies and new chemicals; new occupational diseases are expected to increase as well.
    - \* Chemical substance circulation (unit: million kg): ('01) 254  $\rightarrow$  ('03) 324  $\rightarrow$  ('05) 331  $\rightarrow$  ('07) 369
    - \* Chemical substance consumption (unit: million tons): ('98) 234.1 → ('02) 248.5 → ('06) 363.9
       <Source: '08, Surveys on the amount of circulation by the Ministry of Environment >
    - Effectively countering occupational injuries related to the use of new technologies and new materials became necessary, e.g., large–scale national projects such as the 4 major rivers restoration project and fostering of the green growth engine industry.
  - Therefore, building a cooperative system between related departments is essential to discover new harmful and hazardous factors early and establish integrated countermeasures.
- □ Changing circumstances such as demand for easing of safety and health regulations
  - Enterprises can hardly be expected to increase their interest and investment in safety and health due to the growing market competition and aftermath of the financial crisis.
    - Demand for market- and site-friendly regulations has increased; hence the need to change the quantitative supplier-oriented policies to a qualitative user-oriented one.
  - On the other hand, demand is increasing for the government to provide active support that can resolve the stagnant injury rate and widening gap between divisions.

# Movements of major advanced countries and implications

- □ (EU) concentrate on building cooperative partnerships and expanding the risk assessment system.
- To reduce occupational injuries and occupational diseases occurring in EU, the  $\lceil$  '09 ~ '13 EU-OSHA safety and health strategies  $_{\perp}$  is established and implemented.
- Efforts are made to arrange a joint approach covering the entire European continent, satisfy the demand of information users, and secure the reliability, transparency, accuracy, and objectivity of information.
- Efforts focus on risk assessment during the period 2008~2009, and risk assessment shall be maintained and expanded during the period 2010~2011.
- □ (UK) promote connectivity between projects and strengthen support for small workplaces.
  - During the period 2000~2010, Health and Safety Executives (HSE) establishes the goals and details of the occupational safety and health strategies.
- New approaches\* are developed covering small workplaces to reduce the rate of occupational injuries and occupational diseases considerably.
  - \* Include small and medium enterprises in the group that is required to submit safety and health status reports, build a safety and health management certification system, apply occupational injury insurance premiums differentially in association with insurance companies, etc.
- Project effectiveness is promoted based on connectivity between occupational injuries, occupational diseases, and other government programs.
- □ (Germany) concentrate political competence through selection and concentration.
  - To reflect worldwide changes, the 「2008~2012 occupational safety and health strategies 」 is established and implemented as follow-up actions covering the 1st joint strategy for occupational safety and health.
  - Concentrate political competence through selection and concentration by establishing the order of priority for projects and harmful and hazardous factors.
- Efforts focus on establishing effective and economic occupational injury prevention policies for small and medium enterprises and on propagating a positive image with regard to occupational safety and health.

- □ (New Zealand) strengthen the government 's roles and promote participation by local communities.
- Occupational safety and health strategy 2015 will be established to improve safety and health awareness on-site, decide the order of priority between projects, and improve the occupational safety and health infrastructure.
- Government roles and responsibility regarding safety and health at workplaces is clarified and readjusted, and mutual cooperation between the local and central governments, strengthened.
- Appropriate support is provided to enable leaders local communities to improve safety and health in industries and local communities, concentrating on expanding awareness and understanding of safety and health in local communities.
- □ (Japan) settle the risk assessment system and strengthen the provision of information.
- O The worker injury prevention program is established and implemented during the period 2008~2012 to promote voluntary injury prevention activities by the government, business owners, and workers.
- Strengthen support for small and medium workplaces in order to settle the risk assessment system and promote provision of information.
- O The provision of information on examples of injuries and on harmful and hazardous factors is strengthened to ensure internal stability of the injury prevention program; aggressive injury prevention activities also are carried out by enhancing the awareness of the people and enterprises on the importance of injury prevention.
- 己
- Major advanced countries have already established mid- to long-term strategies to cope effectively with the changes in the political circumstances.
- Voluntary occupational injury prevention activities are systemized based on risk assessment, and support, increased to revitalize the institutions.
- An effective prevention system is built through the construction of networks and cooperation between the central government, local governments, and private and public sectors.
- Support for small workplaces and vulnerable group is strengthened.

### Vision and implementation strategies

Basic directions: Political paradigm shift

- Despite efforts made by the government to date, the injury rate remained stagnant, the gap in the safety and health level deepened, and the distribution of project results was delayed.
- The political paradigms need to be shifted to tackle effectively the environmental changes surrounding occupational safety and health culture that is on a par with that of advanced countries.
- $\Box$  (Policy goals) Improve the laws and systems  $\rightarrow$  Improve the laws and systems + Change of awareness
- Expand to the cultural viewpoint that converts the awareness of business owners and workers from mainly the technical approach, e.g., improvement and supplementation of the laws and systems.
- Focus on building a voluntary prevention system based on participation by business owners and workers.
- $\Box$  (Object of support) Support centered on large enterprises and regular workers.  $\rightarrow$  Support focusing on vulnerable divisions.
- O To prevent the results of occupational injury prevention projects from being focused on large enterprises, regular employees, and certain types of business, put more efforts on providing differentiated political support to divisions vulnerable to occupational injuries.
- While strengthening support to small workplaces employing less than 50 workers, expand investments so that various preventive activities can be promoted and supported.
- $\Box$  (Delivery system) Downward system centered on the central government  $\rightarrow$  Decentralization and diversification
- O To break away from the downward policy delivery system of the central government and public institutions, decentralize and diversify the system to reflect the field demand of the different regions and industries.
- Improve the delivery system to promote civilian participation by readjusting the roles of private sector and constructing a user-centered project performance system.
- Change government roles to those of strategic promoter, e.g., establishment of strategies, provision of information, and construction of infrastructure from concentrating on direct supply and regulation.

IV

Vision	Build a safe and happy community where workers enjoy safe living and happiness.							
Goals	<ul> <li>Reduce the number of injured workers to 60,000 by 2014 → Achieve a 0.5% injury rate.</li> <li>Establish a voluntary safety and health management system based on risk assessment.</li> </ul>							
Basic directi ons	<ul> <li>Systemize the voluntary injury prevention activities of labor and management.</li> <li>Build cooperative networks through civilian participation.</li> <li>Strengthen support for areas vulnerable to occupational injuries.</li> </ul>							
	Settle voluntary occupational injury prevention activities by building legal and systematic bases.							
Imple ment ation strate gies and tasks	Diversify service delivery systems through participation and cooperation. -Build occupational safety and health governance. -Revitalize injury prevention activities at the region and industry levels. -Promote civilians' participation in occupational injury prevention projects.							
	<ul> <li>Strengthen focused control of the businesses involved in large accidents and increased number of injuries.</li> <li>Increase support for the parts vulnerable to occupational injuries.</li> <li>Reinforce the safety of dangerous machines and apparatus.</li> </ul>							
	Build preemptive disease prevention management system. -Provide support to workplaces for building of disease prevention systems. -Build a system of preventing asbestos related problems and strengthen management.							
	Internalize and habitualize safety awareness through the expanded safety culture.							
	Strengthen administrative competence for encupational safety and health.							

### Key tasks

1

# Settling voluntary occupational injury prevention activities by building legal and systematic bases

- The current legal system is a standard compliance-centered risk management system that prescribes the management standards and methods for each type of risks designated.
- This makes effectively coping with the complicated new risks difficult, serving as contributing factors for business owners and workers to neglect their responsibility.
- Promote the voluntary occupational injury prevention activities of labor and management by reorganizing the laws and systems based on risk assessment and by introducing a compensation system in connection with prevention.

### (1) Building the bases for establishing the risk assessment system

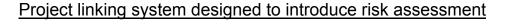
- Providing support for the settlement of a voluntary management system at workplaces
- O Build a voluntary prevention management system wherein the responsibility of comprehensive safety and health management is assigned to the business owner and activities are managed and supervised centering on the results of voluntary management.
  - \* Examine the system to determine whether the business owner conducts risk assessment and keeps related records, whether practical safety and health actions are taken, and whether the voluntary efforts and motivation including labor and management participation are secured.

Current risk management system	New risk management system
<ul> <li>Comply the prescribed technical standard.</li> <li>Manage by item.</li> <li>Inflexible provisions and uniform regulations</li> <li>Passive attitude and perfunctory actions</li> <li>Government-led management</li> </ul>	<ul> <li>Performance-based risk management</li> <li>Program management</li> <li>Flexible provisions and workplace- tailored regulations</li> <li>Active attitude and voluntary actions</li> <li>Management based on business owner's responsibility</li> </ul>

 Implement pilot projects of the risk assessment system and develop and supply risk assessment techniques and procedures so that the system can gradually be expanded as a whole.

V

- (Stage 1) Select special districts and model workplaces by industry and by size and conduct training on the risk assessment techniques and procedures.
- O (Stage 2) Prepare measures for linking, improving, and supplementing the Occupational Safety and Health Act, safety and health management system, and instruction and inspection systems through pilot operation.
- (Stage 3) Pursue the revision of related laws to expand and settle the system throughout the nation.





□ Building a technical support system by risk level

- Assign risk levels\* according to the type of injury and injury risk group and differentiate the methods and details of support for injury prevention by risk level.
  - \* Evaluate the injury probability by industry and size of the workplace and assign risk levels.
  - Diversify support methods and details to suit the type of industry, size of workplace, and site situation instead of providing technical support centered on the improvement of facilities.
- Provide centralized technical, financial, and training support for 3~5 years to the selected workplaces.

### Support method and details by risk level (example)

Item	Target workplaces	Support method	Support details
Special management	_	Local offices	Supervision and administrative guidance
High risks	30,000~50,000 places	Direct visit by KOSHA	Technical, financial, training, and material support
Medium risks	60,000~100,000 places	Visit by civilian service agencies	Technical, financial, training, and material support
Low risks	200,000~300,000 places	Visit by injury prevention organizations, occupational organizations, or etc.	Measures to be taken for common types of injuries and related material
General	1,100,000 places	-	Enhance the safety culture by providing PR materials.

- □ Supply and expansion of the safety and health management system
  - Expand the voluntary safety management foundation at workplaces through the supply of the 「safety and health management system\*」 on the basis of risk assessment.
    - \* If labor and management introduce a safety and health management system to the management policy, e.g., management of organizations/personnel/production to prevent occupational injuries voluntarily, certification may be issued through assessment.
    - Operate a safety and health management certification system and increase support so that labor and management can voluntarily promote safety and health activities.
    - \* Introduce the 2010 safety and health management consulting support system and expand the workplaces receiving support on a continuous basis.
  - Develop and supply technical codes used to support voluntary safety and health management at workplaces.
    - Develop and supply risk assessment manuals according to the size of workplaces, type of business, and harmful factors and provide consulting services to small and medium enterprises.

### (2) Reorganizing the legal system and promoting its effectiveness

- □ Reorganizing the legal system for conversion into risk assessment
- Convert the current Occupational Safety and Health Act system to the labor-management voluntary prevention management system on a gradual basis in order to apply and disseminate the risk assessment system.
  - Examine the conversion of the current single law system into the basic law (applicable to all types of business and risk factors in common) and individual laws (applicable only to the specific types of business and risk factors).
  - \* Example: Legislate each system independently and divide the safety and health regulations into▲workplace safety and health regulations, ▲ general machinery safety regulations, and ▲construction machinery safety regulations.
  - Readjust the safety and health standards that have deviated from the delegation range of the parent law and classify them into those to be regulated strictly and those to be regulated through guidance, training and supervision as the political means.
- In addition to punishments, apply diversified regulation methods capable of enhancing the level of awareness with regard to the safety and health of interested parties through training and campaigns.
- □ Promoting the effectiveness of law execution
  - Arrange an practical methods for law compliance by introducing new administrative duty performance promotion means, e.g., imposition of compulsory performance fines.
  - Differentiate the level of punishment according to whether it is intentional or fault and examine the measures such as immediate administrative and/or judicial disposition for the business owner repeating the law violation.
  - Abolish the pre-notice inspection system and unify inspection and supervision into supervision to promote law compliance and upgrade the level of performance.

- □ Strengthening the responsibility of parties carrying rights and/or obligations
  - Expand and strengthen the worker protection obligations of principal contractors and ordering bodies, which have actual authority to instruct and/or control workers, so that the party creating risks bears them.
  - Expand the range of workers from employees having employment and subordinate relations with business owners to workers performing duties under the control of business owners.
  - Gradually reduce the outsourcing system by making the appointment of safety and health managers compulsory for workplaces larger than the specified size.
    - \* Gradually introduce systems and expand application considering the size of workplaces and characteristics of the industry.

#### (3) Introducing a compensation system in relation to prevention

- Arranging a compensation program in connection with prevention activities
- Consider introducing the 「prevention premium rate system」 that induces the voluntary safety and health management\* of small workplaces by connecting the occupational injury insurance premium rates with occupational injury prevention activities.
  - \* Example of voluntary injury prevention activities: Partnership agreement between the parent enterprise and subcontractors, workplaces that have joined the KOSHA 18001, zero injury workplaces, etc.
  - Consider establishing the basis for reducing the occupational injury insurance premiums for workplaces that aggressively carry out voluntary injury prevention activities by introducing the risk assessment system.

# Diversifying service delivery systems through participation and cooperation

2

- Market demand is limited, with the expertise and competence of civilians extremely weak due to the supplier-oriented operation focusing on the Ministry of Labor and KOSHA.
- Build occupational safety and health governance to systemize the participation of various interested parties and strengthen cooperation.
- Launch various injury prevention projects at the region and industry levels.
- Encourage participation in projects related to occupational safety and health, diversify suppliers, and improve service quality by expanding civilian roles and promoting competence.

### (1) Building occupational safety and health governance

- □ Building the occupational safety and health network by area
  - Build and operate 「 RSHC: Regional Safety & Health Center for small business network」 (provisional name).
    - Launch a participatory safety and health campaign participated in by safety and health-related entities in each area.

#### Project implementation system and roles (example)



 Network oversees projects including overall training, PR activities, research, equipment, and technical support related to safety and health management.

- Strengthen relations and cooperation between the central and local governments.
  - Strengthen the regional relations of the policies related to occupational safety and health using the existing employment policy council and local employment councils.
    - Establish the regional injury prevention specialization policy, create jobs related to occupational safety and health, expand the safety culture to regions, and revitalize discussions.
  - Build a cooperative system with the national/regional industrial complexes and the human resources development councils for each sector and use it as an occupational safety and health policy delivery system at the industry level.
  - Expand the regional industry health centers (Ministry of Labor and Ministry of Health and Welfare) on a gradual basis in major industrial complex zones and establish linking cooperative programs with health clinics in areas other than industrial complexes.
- □ Support the construction of joint labor-management occupational safety and health cooperative systems.
- Support ensuring internal stability for the operation of the honorary occupational safety supervisor system.
  - Improve the system so that the number of honorary supervisors can be adjusted according to the size of the workplaces; thus expanding workers' participation in safety and health activities.
  - Arrange a program for operating and revitalizing training courses conforming to the characteristics of each industry and enhance internal stability by promoting information exchange through establishing central councils.
- Expand the participation of the occupational safety and health committee to introduce a risk assessment system at workplaces and search for ways of providing support.
- Strengthen the participation of labor and management in establishing and develop projects wherein the Occupational Safety and Health Committee and the Korea Labor Foundation become the main bodies.

## (2) Revitalizing injury prevention activities at the region and industry levels

- □ Implementing regional occupational injury prevention projects
  - Establish project plans that conform to the characteristics of each region and consider converting it into a support system.
    - Establish regional injury prevention project plans wherein all regional bodies responsible for injury prevention\* participate. Cooperate and coordinate with the headquarters.
    - \* Bodies responsible for injury prevention: Local offices, local governments, KOSHA regional headquarters, civilian injury prevention institutions, injury prevention organizations, etc.
- Establishing prevention measures at the industry level
- Establish injury prevention programs at the level of each industry and use the human resources development councils for each sector (sector councils) as the central axis of delivery.
  - Jointly develop training programs and courses by industry and by type of business and support injury prevention activities.
  - \* Sector councils: A civilian-led human resources development councils consisting of business organizations, representative enterprises, related academic circle, and professional research institutions. There are sector councils for 19 major industries including shipbuilding, electrics and electronics, steel, machinery, automobile, and textile.
- Pursue effective preventive projects in association with the national industrial complexes (47 places).
  - Organize a council wherein the civilian institutions and small workplaces take part and provide packaged support for government outsourcing projects and consulting services.
  - \* Status of industrial complexes ('09.8): No. of complexes (47 places), No. of workplaces (37,093 places), No. of workers (783,213 persons)

## (3) Promoting civilians' participation in occupational injury prevention projects

- □ Readjusting the functions and roles
- O To promote civilian participation, gradually reorganize the projectexecuting system by readjusting the functions and roles of the Ministry of Labor, KOSHA, and civilian injury prevention institutions.

- Consider transferring to civilians the duties and functions that compete with civilians or those that can effectively be performed by civilians and arrange cooperative programs between projects.
- □ Promoting the competence of civilian injury prevention institutions
  - Find ways such as limiting the size and range of projects and providing differentiated incentives by introducing an institution evaluation and announcement system and based on the results of evaluation.
    - \* Develop the tools used to assess facilities, experts, and user satisfaction level and to measure the injury prevention effects; cancel the designation of institutions or provide differentiated incentives based on the assessment results.
    - Encourage M&A or strategic alliance between civilian organizations to strengthen the professionalism and competence of civilian organizations.
    - \* Example: Plimsoll, a British research company, provides management analysis data required for M&A between occupational safety and health-related civilian organizations.
  - Establish and operate technical training courses (KOSHA Training Center) to cultivate civilian experts in each field, e.g., safety, health, construction, and sanitation.
    - \* Evaluate the technical support project (Star-index) regarding governmentsubsidized safety and health management. Consider the record of training received when selecting service agencies to be commissioned by the government.
  - Establish training courses or introduce the qualification system to introduce risk assessment.
  - Expand financial support including R&D expenses to facility and equipment manufacturers to ensure that safe and good products can be widely supplied to industrial sites.
    - \* Approximately 47% of all protective devices and personal protective equipment makers (605 makers) are small workplaces employing less than 10 workers; the status of their R&D engineers and financial standing are extremely poor.
- □ Supporting the creation of jobs by expanding the number of personnel participating in occupational injury prevention activities
  - Find ways of providing support to workplaces hiring new safety and health managers.
  - Develop and execute new injury prevention project models using retirees as well as the unemployed who worked as safety/health managers or majored in safety/health.

## Enhancing project effectiveness through specialized preventive measures

3

- The injuries of traditionally "injury-prone" businesses, e.g., construction and manufacturing, have not yet been reduced.
- The injuries of the service industry is on a gradual increase trend due to external growth.
- Establish and implement injury prevention programs conforming to the characteristics of the industry, e.g., construction, manufacturing, chemicals, and service, and strengthen government support for small workplaces vulnerable to occupational injuries.

## (1) Strengthening focused control of the businesses involved in large accidents and increased number of injuries

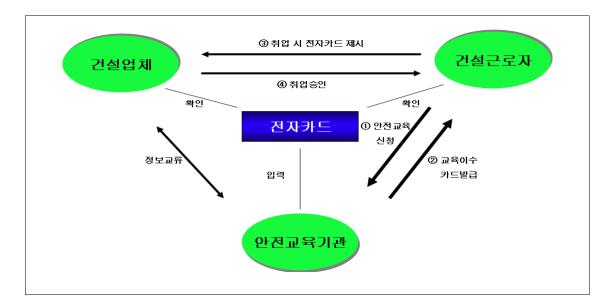
- □ (Construction industry) Strengthen phased safety management and responsibility in construction works.
- Strengthen safety management during the stage of ordering, design, supervision, and building to assure the fundamental safety of construction works.
  - Recommend the introduction of a management system related to safety and quality for public enterprises and semi-government institutions and operate a system for the calculation and notification of the injury rate for each public ordering institution.
  - Make the submission of harm and hazard prevention plans covering the works using new technologies and/or new methods compulsory and subdivide the works subject to the submission of harm and hazard prevention plans.
  - \* (Class 1: KOSHA headquarter) Super-large works, e.g., super high-rise structures, deep excavation, and long and large bridge works, (Class 2: Consulting engineers, certified technical consultants, etc.) Works other than class 1 works
- Consider changing the method of selecting consultants to improve the system of providing technical consulting service through the civilian injury prevention institutions at construction sites and establish performance management programs.
  - \* Works eligible for technical consulting service: Construction works with contract amount of KRW 300 million or more but not less than KRW 12 billion (KRW 15 billion in the case of civil engineering works)
  - Since the current method of directly selecting contractors induces problems, e.g., winning orders at low prices and limits in independently performing work, consider changing the selection system (ordering bodies or separate management bodies).

- Clarify the responsibility and roles of the contractors, ordering bodies, and other participants in the construction work.
  - Discriminate safety manager qualifications to strengthen safety management in response to changes in the construction environment, e.g., trends of buildings becoming higher, larger, and more composite.
  - \* Discriminate the qualifications of safety managers based on experience, degree of difficulty, scale of construction work, and risks in the same way as the technical degree classification of construction engineers as prescribed in the Construction Technology Management Act.
  - Make the appointment of supervisors in charge of safety management compulsory and include occupational safety and health in the training subjects.
- Clarify and rationalize the calculation and management of safety and health management expenses.
  - Consider introducing the calculation method that takes into account the construction amount, degree of difficulty, and risk level.
  - \* Consider and subdivide factors that directly affect the risk level of construction, e.g., types of structures, height, excavation depth, and spans.
  - Strengthen the inspections conducted by the Ministry of Labor or other related agencies on the details of the occupational safety and health management incurred.
  - \* Examine the details of safety and health management expenses incurred instead of just checking whether safety and health management expenses were incurred. Likewise, examine the safety and health management expenses in detail to determine the appropriateness of the expenses incurred if certain workplaces show unsatisfactory expense management.
- ☐ (Manufacturing industry) Provide discriminating support by type and cause of injury.
  - Differentiate injury prevention support methods and details by risk level in connection with risk assessment.
    - Diversify the support methods and details to suit the type of business, scale, and field situation of the workplace from the existing facility improvement-centered technical support.

- Distribute appropriate budgets by sector and increase support considering the injury rate by subdivided business type.
  - \* Since the amount of support for the machine and apparatus manufacturing accounts for 23.29% (KRW 30.4 billion) of the total funds for the manufacturing industry (including financial support), there is a need to expand support to other types of business.
- □ (Service industry) Specialize the technical support system.
  - Establish a support program (conclude MOU, public offering, etc.) that conforms to the characteristics of the service industry wherein the percentage of injuries is increasing.
    - Pursue joint projects with councils for each business type or etc. to develop visiting training program and standard training materials and courses and to provide the necessary training support.
    - \* Since the service industry involves frequent movements and irregular working hours, promoting safety awareness through training, PR activities, and campaigns is important rather than providing technical support related to facility improvement.
  - Develop and supply the injury prevention project model covering each business type by understanding the accurate status of the service industry (check related systems, status of safety and health management, and degree of project requirements).
- □ (Chemical industry) Expand the application of PSM and improve the systems.
- Adjust the PSM-applying business types and materials to a reasonable level to suit the reality; expand the PSM-applying materials to the level of advanced countries.
  - Expand the PSM-applying materials for the domestically handled materials and amount using the work environment survey data.
  - \* Types of material subject to PSM application: Korea (21 types), USA (137 types), EU (38 types)
  - \* Even the USA and EU, which had introduced PSM early, tend to apply PSM centered on the materials.
- Improve the system continuously to promote the effectiveness of operating PSM.
  - Streamline the standards for major occupational accidents and take the necessary actions, e.g., stopping facility operation before the examination for PSM is completed.

## (2) Increasing support for the parts vulnerable to occupational injuries

- □ Implementing strategies considering the characteristics of employment
- O (Non-regular workers) Consider conducting safety and health training conforming to the characteristics of construction day workers at the business type level, not at each individual workplace.
  - Have construction workers receive safety training before they are hired and record the details of training in the card. (provisional name: 『Green card』 system )



#### Basic safety training system

- Conduct pilot training starting from large enterprises' construction sites to implement the system effectively and gradually expand the training to small construction sites. Likewise, consider revising laws\*.
- \* Consider using part of the standard safety management expenses (1.24~2.48% of the total construction costs) for the basic safety training.
- To promote participation in safety and health training by small and medium workplaces, gradually expand the training depending on the training targets and business types.

- (Migrant workers) Address the problems in obtaining safety and health information caused by language barriers.
  - Distribute the special medical report and technical data written in the native language, build a safety and health Internet site, and expand the interpreter service for special medical examinations.
  - \* Work in association with the Job Centers (55 places), job training institutes (Suhyup (National Federation of Fisheries Cooperatives), Nonghyup (National Agricultural Cooperative Federation), Construction Association of Korea, and Korea Federation of Small and Medium Businesses), Migrant Workers' Centers (5 places), NGOs, and etc.
- (Aged workers) Develop and supply working process improvement technique and safety and health standards considering the physical characteristics.
- (Female workers) Develop and distribute safety and health manuals for the jobs which female workers are mainly employed and health care programs for persons engaged in the service business.
- Pursuing consortium projects on safety and health management at small and medium workplaces
- Support safety and health management at small and medium workplaces in the form of consortiums using the safety and health infrastructures of large enterprises (subcontractors) and business owner organizations (member enterprises).
  - \* Operate preventive management programs, provide safety and health trainings, and provide frequent consulting services and maintain channels for occupational safety and health. Carry out special management for high-risk groups.
- □ Increasing safety and health management support for parent enterprises and subcontractors
  - Organize a council consisting of the business owners of parent enterprise and subcontractors and help designate safety and health managers and conduct regular touring inspections at workplaces.
    - \* The parent enterprise shall establish and manage annual injury reduction goals for subcontractors. Reward good workplaces and especially manage unsatisfactory ones.
  - Consider the financial support provided by the parent enterprise in case subcontractors invest in safety and health facility improvement and provide guarantees when subcontractors try to obtain loans.

### (3) Reinforcing the safety of dangerous machines and apparatuses

- □ Expanding subjects eligible for safety certification or inspection and enhancing the effectiveness
  - Introduce the 「safety assessment system」, which makes conducting risk assessment on general industrial machines and apparatuses compulsory.
    - Classify\* products into those subject to compulsory safety certification and risk assessment according to the risk level of the products as in the case of the European CE Mark.
    - \* ① Specific dangerous machines such as presses: Manufacturer's compulsory safety certification (current system)
      - ② Other industrial machines: Manufacturer conducts own risk assessment.
  - Currently, only users are required to install safety and protective devices.
     Consider the imposition of the same requirements on manufacturers.
- Consider a program wherein the inspection judgment criteria and action criteria are differentiated according to the degree of importance of safety.
- □ Globalization of the criteria for safety certification and inspection
  - Pursue the conformity of the criteria between that of the safety certification as prescribed in the Occupational Safety and Health Act, Korean Standards (KS), and international standards (ISO, IEC, etc.).
  - Introduce the inspector qualification system conforming to international standards to secure the fairness and reliability of the inspection results.
    - Promote the effectiveness and status of the domestic system and provide the needed support so that domestically certified products can acquire overseas certification (CE, etc.) easily.

# 4 Building preemptive disease prevention management systems

- The use of harmful chemicals and development of new materials and new methods covering the entire industry are on an increase trend.
- Note, however, that effectively responding to environmental changes with only the current legal system and health management system at workplaces is difficult.
- Build a preemptive occupational disease prevention system by installing systematic management infrastructure on occupational diseases.
- Upgrade the harms and hazard management system, expand support in the form of basic safety and health service for small workplaces, and strengthen the guidance on asbestos.

### (1) Upgrading the management system

- Building a harmful factor full-time management system
- Organize an expert committee consisting of related experts to classify and manage systematically the harmful factors to suit the domestic reality.
  - \* Depending on the results of the harmful and hazardous material assessment and exposure surveys, classify and manage harmful factors and consider establishing the carcinogen control level and exposure standard.
- O Establishment and operation of chronic inhalation toxicity test center
  - Research and analyze how the health of workers is affected in case they are exposed to low concentration of harmful materials for a long time (2 years) and strengthen the ability to assess the harmfulness of materials with unknown toxicity.
  - \* Exchange technologies with the US's NTP program, Bio Assay research center of Japan, and other toxicity assessment specialty institutions and progress for an OECD SIDS partner institution.

- □ Improving the harmful and hazardous material information delivery system
- Establish and operate the 「KOSHA Chemical Information Center (KCIC) 」 so that the information needed for work environment management can be accessed and used easily.
  - Continuously expand the GHS MSDS DB of major harmful chemicals and ensure internal stability of the MSDS information by updating the MSDS information systematically.
- Diversify the harmful and hazardous material information delivery methods so that workers can easily understand them.
- Strengthening occupational disease early discovery and tracing systems
- Build a 「central monitoring system」 that is capable of continuously monitoring the onset trends of specified occupational diseases.
  - Strengthen the monitoring of occupational diseases and conduct epidemiologic tests based on the results of the medical examination and identify the onset of diseases early in connection with other health projects.
  - \* '08 Mesothelioma, etc. (4 types)  $\rightarrow$  '09 Sudden death, etc. (2 types)  $\rightarrow$  Diseases requiring monitoring added thereafter
- Strengthen the comparison and analysis function to forecast diseases.
  - Strengthen connectivity with the disease statistical data issued by related institutions to conduct nationwide surveys.
  - \* Establish the linking and comparison system with data related to the occupational injury treatment provided by the Korea Labor Welfare Corporation, medical examination data issued by the National Health Insurance Corporation, cancer-related data issued by the National Cancer Center, cancer-related data issued by Korea Statistics, etc.
- O Reorganizing the occupational cancer prevention management system
  - Strengthen control over the carcinogen generated during the work in addition to those materials that are used and handled.

- Manage workplaces handling carcinogen in 3 stages\* according to the exposure level (excess rate), number of workers handling carcinogen, and status of occupational diseases that occurred.
- \* (Stage 1: High risks) Frequently check the health measures taken, (Stage 2: Medium risks) Provide technical support, (Stage 3: Low risks) Voluntary management by workplace

### (2) Providing support to workplaces for building of disease prevention systems

- Providing active support in managing disease prevention conforming to the characteristics by type and size of business
- Support small workplaces employing less than 50 workers with basic occupational health services on a continuous basis.
  - While expanding support for special medical examination expenses, promote accessibility by operating mobile medical service cars and granting options to workers in terms of selecting hospitals.
  - Expand support for working environment measurement expenses and promote the internal stability of system operation by arranging ways of enhancing the reliability of the test results.
- Adjust the cycle and methods of working environment measurements and special medical examination to a reasonable level; strengthen evaluation and incentive to promote service quality.
  - Provide related information through the use of DB related to working environment measurement and special medical examination; thus promoting interest in health management.
  - \* Provide data related to working environment measurement and special medical examination to business owners and health management agencies; provide the individual result of special medical examination to workers.
- Develop and supply the preventive technique model by type and size of business.
  - Summarize and distribute the essential preventive measures in an easy manner according to the characteristics of major diseases and harmful factors by type and size of business.
- Select the target materials every year among 10 acute toxic materials and strengthen technical support to workplaces having major processes regarding highly possible exposure to such materials.

- □ Streamlining systems to build a voluntary health management system
- Improve the health manager qualification standards and working methods.
  - Readjust the health manager qualifications to the level of those carrying high connectivity with the health management service prescribed in the Occupational Safety and Health Act.
- \* Air pollution environmental engineers having low job connectivity account for 25% of the self-appointed health managers.
  - Strengthen workers' health management based on organic linkage with industrial sanitation, industrial nursing, and industry medicine.
  - Strengthen instructions on follow-ups of medical examination of workplaces carrying no obligation to appoint health managers.
- \* To enable workers to receive follow-up care, e.g., physical exercise, health training, and medical consulting, consider using the infrastructure of the health promotion center of National Health Insurance Corporation and case management projects.
- Expand the range of workplaces requiring the appointment of health managers.
  - Even the transportation, wholesale and retail, and construction industries which currently have no obligation to appoint health managers will be included as industries requiring the appointment of health managers.
- Revitalizing the health promotion campaign at workplaces.
- $\bigcirc$  To prevent smoking-related diseases and occupational diseases, launch a  $\ulcorner$  workplace no smoking campaign  $\lrcorner$  .
  - \* Reduce the workers' smoking rate (54%), the highest level among OECD countries, by half the current level for the next 5 years.
  - Prepare support measures such as strengthening supervision over no smoking at harmful material handling workplaces, establishing no smoking programs at workplaces and providing related support, and training no smoking instructors.
- Establish action plans for 「healthy mind」 issues, e.g., increased jobrelated stress resulting from intensified competition and changes in industrial structures.
  - Establish plans for making healthy minds at workplaces, provide the needed support for operation, establish job stress prevention guidelines, and reinforce support for the management of high-risk groups.

# (3) Building a system of preventing health problems resulting from asbestos and strengthening management

- □ Building a systematic and comprehensive asbestos related injury prevention infrastructure
  - Construct related infrastructure, e.g., <sup>「</sup> integrated asbestos analysis facility 」 for scientific and systematic access regarding the asbestos problem.
  - Install asbestos dismantlement training sites in each area (6 places) and provide intensified training for asbestos dismantlement and removal business owners, workers, and supervisors.
  - Develop and supply <sup>「</sup> asbestos map preparation and management manuals」 to workplaces having asbestos-contained buildings; induce the self-preparation of asbestos maps.
  - Include the asbestos-related unit prices in the 「Construction Standard Estimating」 to ensure that the appropriate construction costs can be reflected on the asbestos dismantlement work; supplement it on a continuous basis.
- □ Reinforcing cooperation with the local governments and strengthening guidance and supervision
- Strengthen control over asbestos dismantlement and removal work by cooperating with the local governments.
  - Have each local office operate the <sup>¬</sup>redevelopment site asbestos task force\*<sub>¬</sub>, jointly inspect the redevelopment site, and share related information by building a joint response system.
  - \* Consists of persons in charge from the local offices, KOSHA, and local governments, the task force will be operated on a quarterly basis.
  - Strengthen training on the harmfulness of asbestos and asbestos dismantlement work standards for the managers and supervisors of contractors and dismantlers involved in redevelopment, e.g., construction of new towns.
- Strengthen supervision over asbestos dismantlement and removal work.
  - Check whether the work schedule was submitted prior to dismantling asbestos. Reinforce judicial actions on companies subject to focused management including those had violated laws.

#### 5 Internalizing and habitualizing safety and health awareness through the expanded safety and health culture

- Due to long customs and practices and nonexistence of early safety training, changing the awareness is difficult; the effectiveness of the safety culture policy is also low.
- Large accidents occur due to failure to observe the basic safety rules; reducing occupational injuries is impossible without safety awareness and without the safety culture taking root.
- Engage in various activities so that safety awareness and behavior can take root as safety culture at a level equivalent to that of advanced countries.

# (1) Launching a safety and health culture campaign in connection with NGOs and labor-management

- Induce the nationwide spread of the safety and health culture by launching a joint campaign with NGOs, labor-management organizations, press, and professional organizations.
  - Launch a safety culture propagation campaign for each social class to promote safety awareness and pursue safety culture expansion programs in daily life.
- Promote the expansion of voluntary injury prevention activities at workplaces through cooperation between labor and management.
  - Operate <sup>r</sup>occupational safety and health certification system<sup>a</sup> to enable that labor and management jointly evaluate and improve the level of the safety and health culture in each workplace.
  - \* Grant incentives to workplaces receiving certification, including the provision of financial support for clean projects with a goal of facility improvement.
  - Induce members of labor-management organizations to launch a voluntary safety and health campaign\* conforming to the characteristics of the workplaces.
  - \* Launch the <sup>[]</sup>1 company, 1 safety rule<sup>\_]</sup> campaign, campaign of reducing injuries by half for large workplaces, workplace no smoking campaign, etc.

# (2) Establishing and implementing specialized training, PR, and campaign strategies

- Expanding support for the safety and health training
  - Revitalize the safety and health training by inducing participation by business owners.
    - Consider ways of reducing fines in case business owners, supervisors, or workers receive training after violating the Occupational Safety and Health Act.
    - \* Example: According to the Road Traffic Act, if violators complete the training, the traffic violation demerit points are reduced.
    - Operate special training courses to promote the safety management mindset of business owners. Consider ways of granting incentives, e.g., exemption from the compulsory safety and health manager training for the year if the business owner completes the special training courses.
  - Develop and supply training programs and methods considering the characteristics of the trainees and expand the safety and health training support.

Details of the specialized training for each type of trainees (example)

- (Workers) Identify individual problems through the program that can measure the safety awareness level; conduct training to correct such problems.
  - \* Revitalize training at workplaces using the workplace managers and supervisors as in-house instructors.
- (Business owners) Analyze the occupational injury prevention expenses and benefits for each workplace and promote the safety awareness through introducing (training) the best practices of safe management.
- (Students) To ensure that training can be included in the regular class of the elementary, middle, and high schools, supplement the training contents and help develop and supply training materials.
  - \* Develop and supply textbooks and lecture materials (5~10 minutes) for safety training and conclude an MOU with the city and provincial Education Offices to support and revitalize the safety training.
  - Allow councils for each business type and industrial trade unions to conduct training; support the operation of specialized training courses for each sector.
  - Consider ways of providing financial support in case professional educational institutes conclude an agreement with small workplaces to develop and operate training courses and to provide consulting services.

- □ Reinforcing specialized PR activities and campaigns
  - (PR activities) Seek harmony between labor and management to expand the PR contact point and promote the sentimental index at site; establish and execute local PR strategies.
    - Appoint workers as regional safety monitoring teams or field reporters and support PR activities on/offline.
    - Strengthen joint PR activities between labor and management to promote the safety and health awareness of labor-management. Expand and strengthen locally based PR activities.
  - O (Campaign) Expand the occupational safety campaign week event to regional units so that more workers can take part through the regional expansion of the safety culture.
- □ Promoting the accessibility and sentimental index of safety and health information
- Expand the development and supply of materials in the form of storytelling based on specific examples.
  - \* Induce change in actions by stimulating the sentiment of workers.
  - Build a website for the workplace delivery system and PR activities to use the developed data effectively and reinforce the search function.
- Consider ways of including items related to occupational safety and health in the qualification tests, textbooks, and training courses in connection with the qualification examination conducted by the Human Resources Development Service of Korea.
- Expand empirical training facilities and programs for occupational safety and health in each area to enhance national training, PR, and safety awareness.

- Expansion of scientific and systematic safety culture
- (Scientific ways of measuring the safety awareness) Develop and supply examination/improvement programs to analyze the propensity of safety behavior and improve the safety awareness.
- (Survey on business owners' awareness level) Periodically conduct 「surveys on business owners' (managers) safety awareness level」 to select trainees, measure the educational effects, and build a monitoring system.
- (Mid- to long-term plan) Establish mid- to long-term plans to promote the safety awareness comprehensively and systematically and to induce behavioral changes.

# (3) Revitalizing domestic and global exchanges and provision of information related to occupational safety and health

- □ Promoting the national brand
  - Expand international contribution to occupational safety and health for the developing countries.
    - Promote the status of Korea in international organizations by expanding joint cooperative projects in the occupational safety and health sector with the International Labor Organization (ILO) and World Health Organization (WHO).
    - \* Expand the donation of occupational safety and health equipment and materials, provision of consulting services, and invited training projects to Central Asia from the Asia-Pacific region (16 countries → 20 countries).
  - Expansion and securing internal stability of hosting international events
    - Obtain and domestically supply advanced technologies and information by hosting international events related to occupational safety and health.
    - \* Plans to host the 31st International Congress on Occupational Health (scheduled to be held in Seoul in 2015)

- Create a turning point wherein Korea's status can be promoted and Koreans can play leading roles in international decision making in the occupational safety and health sector.
- Prepare a specific action program in cooperation with international organizations including the ILO so that the purpose of the Seoul Declaration can effectively be propagated.
  - During the 18th World Congress on Safety and Health at Work (June 2008), 46 representatives from world labor-management-government gathered and made and announced the 「Seoul Declaration on Safety and Health at Work」.
  - Induce domestic labor-management-government and workplaces to practice aggressively the purpose of the declaration and expand the advanced safety culture/awareness.
- □ Revitalizing domestic and global provision of information
  - Supply the latest information on international occupational safety and health movements.
    - Expand the provision of information on local safety and health to workplaces operating overseas and support the localization of the workplaces.
  - Launch and regularly publish an international-level occupational safety and health journal titled 「Safety & Health at Work」 (provisional name).
  - Publish the 「ICOH Newsletter」 for the web only to maintain regular and continuous information exchanges between ICOH members and strengthen cooperation.
    - \* To be distributed regularly to some 2,000 ICOH institution and individual members in 93 countries.

# Strengthening administrative competence for occupational safety and health

- To promote the reliability and effectiveness of the occupational safety and health administration, the government should establish the occupational injury prevention policies on a timely basis and execute strong supervision and guidance.
- Promote the effectiveness of policy execution by strengthening the professionalism of the responsible bodies, building a performance assessment system, and establishing strong basement for scientific and systematic accident prevention policies.

#### (1) Promoting supervisory competence

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- Reinforce guidance and supervision by specializing occupational safety supervisors into different areas including asbestos, construction, and harmful material, and etc.
  - In connection with this, organize the supervisor pool by major and introduce a system wherein persons who have completed technical training are dispatched to local occupational safety and health departments.
  - \* For each manufacturing industry, facility, and health field, 12 persons will be hired per year (total of 36 persons per year) for 5 years (from 118 persons as of September 2009 to approximately 300 persons in 2014).
- Plans to convert the job allocation of the supervisor into a system of functional managers\* from regional managers are underway.
  - \* Classify position by field of work, e.g., manufacturing industry, facility, and health, or by nature of work, e.g., workplace supervision, injury investigation, and handling of civil petitions.
- Operate a long-term on-the-job training program to promote the expertise of supervisors following the introduction of the risk assessment system.
  - \* Supervisors will be dispatched to universities, government-invested institutions, government employee training center, Korea Research Institute for Vocational Education and Training, and other related institutes for a 4~6-month training course.

#### (2) Building a performance assessment system

- Development of performance assessment system and performance index
- O Build systematic performance analysis and assessment systems regarding occupational injury prevention projects.
  - Integrate similar and/or repetitive projects and newly establish or abolish projects based on the scientific evaluation of performance.
- Develop and implement a new policy index wherein changes in the policy target index and safety and health level at workplaces can be objectively measured.
  - Plan to introduce the occupational injury impact assessment system so that items to be considered regarding the prevention of occupational injuries can be reflected during the stage of policy drafting.
- □ Project quality control program and construction of feedback system
- Secure the reliability of accuracy management related to the analysis ability of special medical examination institutions, working environment measurement institutions, and asbestos-investigating institutions and build an integrated quality control program.
  - Assessment items: Ability to measure the working environment and analyze samples, reliability of the measurement results, performance of facilities and equipments, training received by personnel, ability development, degree of computerization, etc.
- Establish management criteria standardized by type of project and periodically check the status of utilizing programs including tracing assessment; strengthen the feedback system.

#### (3) Upgrading the occupational injury statistics

- Pursue tailored investigation continuously such as investigation on the cause of injuries for groups experiencing frequent injuries and other vulnerable groups.
  - Analyze the causes of occupational injuries based on the individual characteristics of employees and results of investigating injuries that occurred in the previous year.

- Calculate the various injury indices by type of employment, e.g., non-regular workers, using the employment insurance statistics and health insurance DB and promote the accuracy of injury statistics.
- Consider converting\* the method of determining the size of occupational injuries into sample survey methods.
  - To estimate the scale of occupational injuries, collect records on company information, types of employment of the injured workers, types of injuries, degree of damage, and details of injuries.
- Promote statistics quality by preparing checklists covering each stage of preparing statistics, readjusting statistical production manuals, and reinforcing statistics production personnel.
  - \* Strengthen self-quality check regarding surveys and related statistics; reinforce the computer error checking system to promote the reliability of the statistics using administrative data.

#### (4) Building an integrated information system

- O Unify and integrate the workplace information scattered in injury prevention related institutions so that institutions can jointly use the system and establish a basis for organic linkage between institutions.
  - Process the information collected through the integrated workplace information management system and use it as the basis for establishing preventive policies.

Korea Occupational Korea Labor Welfare Safety and Health Ministry of Labor Corporation Agency Provide information on occupational injury insurance compensation and collection (workplace and injured worker information). New integrated DB Use integrated DB and (Status of safety collect/provide project Civilian safety inspection certification/inspection) performance information institutions (Joint use by KOSHA-(collection of information Ministry of Labor- related on injuries related to institutions) facilities, etc.). Provide safety inspection data (information on workplace and equipments owned).

#### Integrated information system building

#### follow-up measures and action plans for detailed tasks

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#### 1 Follow-up measures

- □ Consider the realistic circumstances, e.g., law revision and procuring funds; nonetheless, implement plans as soon as possible so that the results can be visualized early.
- Perform even projects wherein prior procedures (undertaking studies, arranging legal basis, etc.) are inevitable so that the political results can be displayed in 2011.
- Integrate similar and/or repetitive projects and provide full support from the 2010 budgets to key projects.
  - Arrange stabilized funding by increasing the expenditures related to occupational injury prevention through discussions with related departments and reflecting the increased expenditures to mid- to long-term financial plans ('11<sup>-</sup>'15).
- □ To perform projects successfully, check the results of performance based on the action plans.
  - Establish project plans every year centering on the practical action tasks considering the project implementation schedule of the 5-year plan.
    - \* Periodically check the results of project implementation through the professional committee under the control of the committee for the occupational injury compensation insurance and prevention.
  - Check performance on a quarterly basis and supplement and stimulate implementation of the projects with stagnant results .
  - If the 5-year plan is successfully implemented
  - The stagnant injury rate is expected to be reduced saliently to 0.5% by 2014; the deaths per 10,000 workers are also forecast to be reduced to 0.74.
    - •Injury rate and number of the injured workers:  $['09] 0.70\% (97,821) \rightarrow ['14] 0.50\% (69,420)$
    - •Deaths per 10,000 workers and number of deaths: ['09] 1.57 (2,181) → ['14] 0.74 (1,026)
  - Save on social expenses and contribute to the potential growth of the country by minimizing the loss of labor and promoting the qualitative level of human resources.
  - 2 Action plans for detailed tasks

Political tasks	'10	'11	'12	'13	'14		
1. Settling voluntary occupational injury prevention activities by building the legal and systematic bases							
(1) Establishing foundation for settling the risk assessment system							
1-1. Supporting the voluntary management system at workplaces							
<ul> <li>Perform a pilot project.</li> </ul>							
<ul> <li>Establish the improvement and supplementation measures.</li> </ul>							
Pursue law revision.							
1-2. Building the technical support system by risk level							
1-3 Expanding the safety and health management system							
(2) Reorganizing the legal system and promoting the effectiveness of execution							
2-1. Reorganizing the legal system for conversion into risk assessment							
2-2 Promoting the effectiveness of law execution							
2-3. Strengthening the responsibility of the rights and obligation holders							
<ul> <li>Strengthen obligations to protect workers.</li> </ul>							
<ul> <li>Expand the range of workers.</li> </ul>							
<ul> <li>Improve the outsourcing system for the safety and health manager.</li> </ul>							
(3) Introducing compensation systems in connection with	n preve	ention					
3-1. Establishing a program of linking preventive activities with compensation					•		

Political tasks	'10	'11	'12	'13	'14		
2. Diversifying the service delivery systems through	partic	ipation	and co	operat	ion		
(1) Building occupational safety and health governance							
1-1. Building regional occupational safety and health networks							
1-2. Strengthening cooperation between the central and local governments							
<ul> <li>Use the employment policy council to strengthen regional networks.</li> </ul>							
<ul> <li>Build delivery systems at the industry level.</li> </ul>							
<ul> <li>Establish cooperative systems linking with regional occupational health centers and health clinics.</li> </ul>							
1-3. Labor-management to build a cooperative occupational safety and health system jointly							
<ul> <li>Operate an honorary occupational safety supervisor system effectively.</li> </ul>							
<ul> <li>Strengthen support for the occupational safety and health committee.</li> </ul>							
<ul> <li>Discover and expand labor-management participation- based projects.</li> </ul>							
(2) Revitalizing injury prevention activities at the region and industry levels							
2-1. Implementing the occupational injury prevention project for each region							
2-2. Establishing preventive measures at the industry level							
<ul> <li>Operate the sector councils.</li> </ul>							
<ul> <li>Push through with preventive projects in connection with national industrial complexes.</li> </ul>							
(3) Promoting civilian participation in occupational injury	prever	ntion pr	ojects				
3-1. Readjusting the functions and roles							
3-2. Promoting the competence of civilian accident prevention institutions.				•			
<ul> <li>Introduce the institution assessment system.</li> </ul>							
<ul> <li>Operate technical training courses.</li> </ul>							
<ul> <li>Establish risk assessment training courses and introduce the qualifications system.</li> </ul>							
<ul> <li>Expand support for R&amp;D expenses.</li> </ul>							
3-3. Supporting job creation by expanding the number of persons participating in occupational injury prevention							
<ul> <li>Support workplaces that newly hire safety and health managers.</li> </ul>							
<ul> <li>Develop injury prevention project models.</li> </ul>							

Political tasks	'10	'11	'12	'13	'14		
3. Enhancing project effectiveness through specialized preventive measures							
(1) Strengthening focused management in workplaces having large accidents and increased number of injuries							
1-1. Strengthening safety management and responsibility in each stage of construction works							
<ul> <li>I ntroduce the safety and management system and calculate and announce the injury rate covering each public ordering institution.</li> <li>Improve the system of submitting harm and hazard provertion place.</li> </ul>							
<ul> <li>prevention plans.</li> <li>Change the system of selecting injury prevention consulting agencies</li> </ul>							
Differentiate the safety manager qualifications.							
<ul> <li>Make designating supervisors compulsory and strengthen training.</li> </ul>			-				
<ul> <li>Find ways of improving the calculations of safety management expenses.</li> </ul>							
1-2. Providing specialized support depending on the type and cause of injuries in the manufacturing industry							
1-3. Specializing the system of providing technical support to the service industry							
<ul> <li>Establish a service industry support program.</li> </ul>							
<ul> <li>Develop and supply the injury prevention project models by business type.</li> </ul>							
1-4. Expanding application of PSM in chemical industry and improving the system							
Expand PSM application.							
Improve the PSM system.							
(2) Expanding support to the parts vulnerable to occup	ationa	l injurie	S				
2-1. Implementing strategies considering the characteristics of employment							
<ul> <li>Introduce the basic safety training system.</li> </ul>							
<ul> <li>Distribute the results of the special medical examination and technical data.</li> </ul>							
<ul> <li>Develop and supply the work process improvement technique and safety and health standards.</li> </ul>							
<ul> <li>Develop and supply female workers' safety and health programs.</li> </ul>							
2-2. Operating safety and health management consortium projects							
2-3. Expanding support to parent enterprises and subcontractors for safety and health management							

Political tasks	'10	'11	'12	'13	'14		
(3) Reinforcing the safety of dangerous machines and apparatuses							
3-1. Expand enterprises eligible for safety certification and for safety inspection; enhance effectiveness.							
<ul> <li>Introduce and execute the safety assessment system.</li> </ul>					•		
<ul> <li>Consider imposing the same requirements on manufacturers.</li> </ul>							
<ul> <li>Differentiate the judgment criteria and action criteria.</li> </ul>							
3-2. Globalizing the safety certification and inspection							
<ul> <li>Pursue compatibility between the global safety standards and national standards.</li> </ul>							
<ul> <li>Introduce and apply the inspectors' qualification system.</li> </ul>					•		
4. Building preemptive disease prevention management systems							
(1) Upgrading the management system							
1-1. Building a harmful factor full-time management system							
<ul> <li>Organize and operate a professional committee.</li> </ul>							
Operate a chronic inhalation toxicity test center.					•		
1-2. Improving the harmful and hazardous material information delivery system							
<ul> <li>Build and operate the KOSHA Chemical Information Center.</li> </ul>							
<ul> <li>Diversify the harmful and hazardous material information delivery methods.</li> </ul>							
1-3. Strengthening occupational disease early discovery and tracing systems							
<ul> <li>Build a central monitoring system.</li> </ul>							
Conduct surveys on forecasting diseases.							
<ul> <li>Reorganize the occupational cancer prevention management system.</li> </ul>							

Political tasks	'10	'11	'12	'13	'14		
(2) Providing support to workplaces for building of disease prevention systems							
2-1. Strengthening disease prevention management conforming to the business type and size							
<ul> <li>Strengthen the financial support for the special medical examination expenses and improve the system.</li> </ul>				-			
<ul> <li>Strengthen the financial support for the working environment measurement expenses and improve the system.</li> </ul>							
<ul> <li>Strengthen the assessment of measurement and medical examination systems.</li> </ul>			-				
<ul> <li>Develop and supply prevention technique models by the business type and size.</li> </ul>							
<ul> <li>Strengthen technical support to workplaces having a major process.</li> </ul>					•		
2-2. Streamlining the system to build a voluntary health management system							
<ul> <li>Improve the health manager qualification standards and working methods.</li> </ul>							
<ul> <li>Expand the workplaces requiring the appointment of health managers.</li> </ul>							
2-3. Activating the health promotion campaign at workplaces							
<ul> <li>Launch a workplace no smoking campaign.</li> </ul>							
<ul> <li>Establish action plans for healthy mind issues.</li> </ul>							
(3) Building a system of preventing health pro asbestos and strengthening management	blems	s resu	Iting fro	m			
3-1. Building infrastructure for asbestos-related injury prevention							
<ul> <li>Build integrated asbestos analysis facilities.</li> </ul>							
<ul> <li>Install asbestos dismantlement training sites</li> </ul>							
<ul> <li>Develop and supply asbestos map preparation manuals.</li> </ul>							
<ul> <li>Continuously reflect the unit prices in Construction Standard Estimating.</li> </ul>							
3-2. Strengthening supervision in and cooperation with the local governments							
<ul> <li>Operate joint asbestos task forces for redevelopment sites.</li> </ul>			-				
<ul> <li>Strengthen guidance and supervision.</li> </ul>							

Political tasks	'10	'11	'12	'13	'14	
5. Internalizing and habitualizing the safety awareness through the expanded safety culture						
(1) Launching the safety culture campaign in a labor-management.	conne	ection	with NO	GOs a	nd	
<ul> <li>Launch a campaign in connection with related organizations.</li> </ul>						
<ul> <li>Operate an occupational safety and health culture certification system.</li> </ul>						
<ul> <li>Launch "1 company, 1 safety rule" campaign.</li> </ul>			-			
(2) Establishing specialized training, PR, and	camp	aign s	trategie	es		
2-1. Expanding support for the safety and health training						
<ul> <li>Establish policies for inducing participation by business owners.</li> </ul>						
<ul> <li>Develop and supply training programs and methods considering the characteristics of the trainees.</li> </ul>						
2-2. Strengthening the specialized PR activities and campaign						
<ul> <li>Establish and execute local PR activity strategies.</li> </ul>			-			
<ul> <li>Expand campaign week events to regional areas.</li> </ul>						
2-3. Promoting the access and sentimental index of safety and health information						
<ul> <li>Develop and supply materials.</li> </ul>						
<ul> <li>Find ways of linking with the qualifications.</li> </ul>						
<ul> <li>Expand empirical training facilities and programs in each area.</li> </ul>						
2-4. Expanding the scientific and systematic safety culture						
<ul> <li>Establish and implement mid- to long-term plans.</li> </ul>						
<ul> <li>Measure safety awareness scientifically.</li> </ul>						
<ul> <li>Survey on business owners' awareness level.</li> </ul>						

Political tasks	'10	'11	'12	'13	'14		
(3) Revitalizing domestic and global exchanges and provision of information							
3-1. Promoting national brands							
<ul> <li>Expand international contribution for developing countries.</li> </ul>							
<ul> <li>Expand and secure internal stability of the hosting of international events.</li> </ul>							
3-2. Revitalizing domestic and global provision of information							
<ul> <li>Publish an occupational safety and health journal.</li> </ul>			-				
<ul> <li>Publish a web journal.</li> </ul>			-				
6. Strengthening administrative competence for oc	cupati	onal sa	afety an	id heal	th		
(1) Promoting supervisory competence							
<ul> <li>Specialize by area.</li> </ul>							
<ul> <li>Consider changing to the functional manager system.</li> </ul>							
<ul> <li>Operate the on-the-job training program.</li> </ul>							
(2) Building the performance evaluation system	m						
<ul> <li>Develop performance evaluation system and performance index.</li> </ul>							
<ul> <li>Build project quality management programs and feedback system.</li> </ul>							
(3) Updating the statistics system			·				
2-2. Strengthening the specialized PR activities and campaign							
<ul> <li>Reorganize the statistical survey methods.</li> </ul>							
<ul> <li>Promote statistics quality.</li> </ul>							
(4) Building an integrated information system							
<ul> <li>Build an integrated information system.</li> </ul>							

3rd Five-Year Occupational Injury Prevention Plan (2010 ~ 2014)

# Appendix

Major projects implementation plan for 2010•55

Strengthening disaster prevention for the Hope Work Project 2010•81 Implementation plan for the

<sup>¬</sup>Campaign for reducing the number of accidents by half → 97 Safety management measures for the <sup>¬</sup>4 Major Rivers Restoration Project → 123

No Smoking Campaign for workplaces and the Campaign for making healthy minds for workers•145

Introduction to the risk assessment system pilot project •165