

# The 12th Occupational Safety & Health Program

To realize a society where safety and health  
are ensured for every worker.

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Ministry of Health, Labour and Welfare

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## Introduction

We all work for a living and spend most of our time at the workplace. Our labour supports the nation's economy and society. However, workers at some workplaces must handle hazardous articles that should never be used in daily life, while others must engage in operations in dangerous places. Overwork is another problem that may cause a heavy burden, both mentally and physically. During the 1960s when Japan's economy experienced dramatic growth, more than 6,000 precious lives were lost annually due to occupational accidents. Worker safety and health are invaluable. No society should allow any labour to endanger the lives of workers or damage their health.

In order to reduce such tragedies, the Japanese government has formulated 11 occupational safety & health programs since 1958, and enacted the Occupational Safety & Health Law in 1972, thus proactively implementing measures to prevent occupational accidents in cooperation with industrial circles and experts. As a result, occupational accidents have decreased dramatically; however, more than a thousand workers are still being killed year after year due to accidents and acute poisoning at work. Moreover, nearly 200 workers die each year of brain or heart disorders associated with overwork, or by suicide due to mental disorders associated with intense work stress. And nearly 110,000 workers take off at least four days from work due to injury or sickness every year.

Under such circumstances, and in the wake of the Great East Japan Earthquake that occurred in 2011, the most critical tasks facing the Japanese government at present include accelerating the restoration of the disaster-stricken areas, achieving a faster recovery from the accident at TEPCO's Fukushima Dai-ichi Nuclear Power Plant, and building a nation resilient to disasters through prior disaster prevention and reduction. In order to promote the smooth implementation of these measures, the prevention of occupational accidents (including these efforts) should be emphasized.

With these situations in mind, in order to minimize occupational accidents and realize a society where anyone can work safely and in good health, a new program—the 12th Occupational Safety & Health Program—was established to stipulate the issues that Japan should intensively address during the next five years, starting in 2013.

### 1. Aim of the Program

#### (1) Society targeted by the Program

In order to realize a society where anyone can work safely and in good health, the central government and occupational accident prevention organizations, employers that employ workers, workers who engage in operations, those who commission jobs, consumers who purchase and use products and services generated by work, and all others involved must share an awareness that, in principle, life should never be threatened and health never harmed by engaging in labour, properly understand that the cost for safety and health is indispensable, and establish a society where each one of us acts responsibly.

#### (2) Goals of the Program

In order to achieve “No occupational accidents,” the ultimate goal of a society where anyone can work safely and in good health, we aim to achieve the following goals during the period of the program.

- 1) In order to eradicate fatalities due to accidents, the number of fatalities due to occupational accidents should be reduced by at least 15% (relative to the level in 2012) by 2017.
- 2) The number of fatalities and injuries due to occupational accidents that required at least four days of sick leave should be reduced by at least 15% (relative to the level in 2012) by 2017.

#### (3) Evaluation and review of the Program

In order to steadily implement the efforts based on the program, the status of implementation will be confirmed and evaluated each year. The evaluation results will be reported to the Occupational Safety and Health Section, Deliberative Council on Labour, and then published. The program will be reconsidered for review as needed.

The program will not simply be evaluated based on changes in the number of fatalities and injured workers or the indicators selected as goals, but will entail analysis that includes social indicators and socioeconomic changes that may have been rooted in or affected the consequences.

\* The goals of the program are selected based on “reducing the number of occupational accidents by 30%”—one of the outcome goals to be achieved by 2020 under nominal economic growth exceeding 3% and substantial economic growth exceeding 2%, as estimated in the New Growth Strategy (adopted at the Cabinet meeting on June 18, 2010).

## 2. Social change and the direction of measures for safety and health

### (1) Increased number of tertiary industry workers and change in occupational accidents

During the period when Japan’s economy underwent dramatic growth, more than 40% of all workers were employed in the manufacturing and construction industries, where most occupational accidents occur. Efforts to prevent occupational accidents were thus focused on those industries. The Occupational Safety & Health Law enacted in 1972 clarified the responsibilities of employers, and promoted efforts for occupational safety and health. Those efforts resulted in significantly improving the level of workplace safety and health, as reflected in the major reduction seen in the occupational accident rate per 1000 persons (ratio of occupational accidents per 1000 workers) in the manufacturing and construction industries. In addition, the industrial structure was changed due to expanding service industries, resulting in a lower ratio of workers in the manufacturing and construction industries (as compared with all segments of industry), falling from 43.8% in 1970 to 25.6% in 2010 (Table 1). Thanks to ceaseless efforts to prevent occupational accidents, and due in part to the change in industrial structure, the ratio of occupational accidents in the manufacturing and construction industries dropped from 66.7% in 1976 to 41.3% in 2011 (as compared with all segments of industry).

<<Table 1>> Change in number of employees in the manufacturing and construction industries

	1960	1970	1980	1990	2000	2010
Number of employees	23.70 mil	33.06 mil	39.71 mil	48.75 mil	53.56 mil	54.63 mil
Manufacturing industry (Composition ratio)	7.99 mil (33.7%)	11.44 mil (34.6%)	11.35 mil (28.6%)	13.06 mil (26.8%)	12.05 mil (22.5%)	9.96 mil (18.2%)
Construction industry (Composition ratio)	1.98 mil (8.4%)	3.05 mil (9.2%)	4.27 mil (10.8%)	4.62 mil (9.5%)	5.39 mil (10.1%)	4.05 mil (7.4%)
Tertiary industry (Composition ratio)	12.11 mil (51.1%)	17.89 mil (54.1%)	23.50 mil (59.2%)	30.08 mil (61.7%)	35.45 mil (66.2%)	39.98 mil (73.2%)

(Source: Labour Force Survey)

The shift in labour force to tertiary industries, however, is causing a higher ratio of occupational accidents at wholesalers, retailers, restaurants, health and hygiene facilities, and in other tertiary industries year after year (Table 2). Among other things, more employees are expected to enter the field of medical and nursing care services (which has seen an alarming increase in occupational accidents), due to growing demand in our aging society. Unlike the manufacturing and construction industries where risks were reduced by improving machines/production facilities and taking measures focusing on specific operations and locations, in these service industries, workers falling due to slipping or tripping, or suffering back pain caused by carrying heavy articles account for the majority of accidents. Thus, there must be a focus on the behaviors of individual workers to prevent such accidents.

Changes are also seen in the measures taken to protect health. In the past, the main focus was placed on preventing health hazards, such as pneumoconiosis caused by dust generated during work, and acute poisoning and cancer due to various chemical substances used at manufacturing and construction sites. In addition to these issues, such problems as deteriorated mental health caused by various forms of stress in the workplace, health damage due to overwork, passive smoking in the office, and back pain associated with nursing care have become increasingly significant in recent years.

Given the focus on serious accidents, however, the manufacturing and construction industries are still considered occupations that require focus. Even though the ratio of all occupational accidents is decreasing, more than half of all fatal accidents still occur in the manufacturing and construction industries. Although the ratio has dropped from 43.4% in 1976 to 33.4% in 2011, the construction industry alone accounted for one-third of those fatal accidents. As for the manufacturing industry, the ratio among all employees shows a decreasing tendency, but the ratio of fatal accidents has remained steady at a little less than 20% for more than 20 years, with no decrease at all (Table 3). In order to prevent serious accidents that include accidents causing disabilities, continuous efforts must be focused on the manufacturing and construction industries.

<<Table 2>> Change in ratios of occupational accidents in the manufacturing, construction and tertiary industries

	1976	1981	1986	1991	1996	2001	2006	2011
Manufacturing industry (Accident rate per 1000 persons)	35.6% (11.4)	31.5% (9.8)	30.3% (6.9)	29.4% (5.0)	26.6% (3.8)	27.1% (3.5)	24.5% (3.2)	21.2% -
Construction industry (Accident rate per 1000 persons)	31.1% (23.1)	32.1% (20.2)	29.0% (14.7)	28.8% (10.4)	27.6% (7.2)	24.4% (6.2)	22.1% (5.7)	20.1% -
Manufacturing and construction industries	66.7%	63.6%	59.3%	58.2%	54.2%	51.5%	46.6%	41.3%
Tertiary industry	-	-	-	28.2%	33.1%	33.1%	38.4%	42.4%

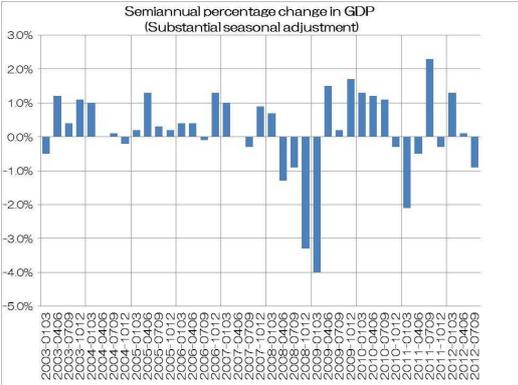
<<Table 3>> Change in ratios of fatal accidents in the manufacturing and construction

	1976	1981	1986	1991	1996	2001	2006	2011
Manufacturing industry	20.0%	20.0%	18.5%	18.0%	17.1%	18.2%	18.2%	17.8%
Construction industry	43.4%	40.3%	40.0%	42.1%	42.4%	36.0%	34.5%	33.4%
Total	63.4%	60.3%	58.5%	60.1%	59.5%	54.2%	52.7%	51.2%

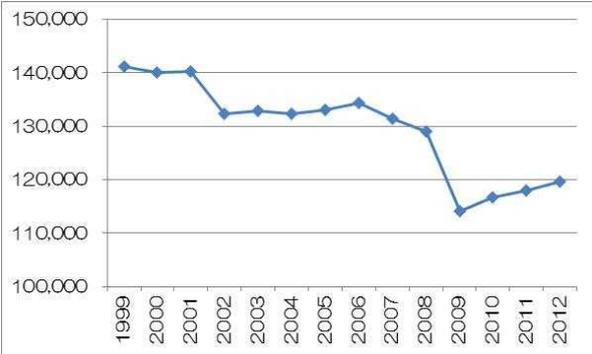
(2) Impact of Lehman's fall and the Great East Japan Earthquake

The so-called Lehman's fall in September 2008 and the Great East Japan Earthquake that occurred in March 2011 had serious impacts on the nation's economic activities, as evidenced by the sharp drop in GDP immediately after those events.

<<Figure 1>> Semiannual changes in Gross Domestic Product (GDP)



<<Figure 2>> Trend in occupational accidents



(Source: Cabinet Office national economic accounting (GDP Statistics))

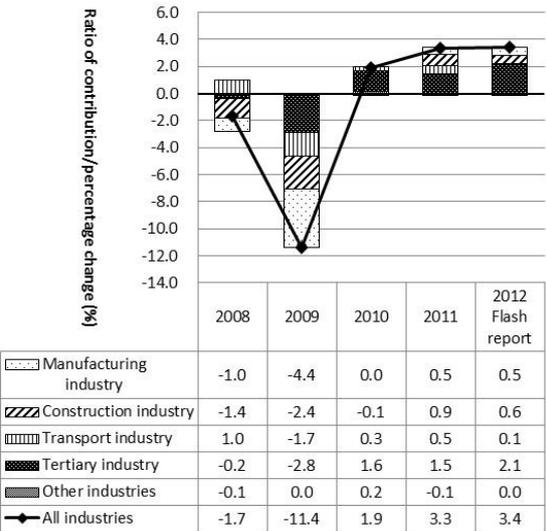
The number of occupational accidents in 2009 was significantly reduced, mainly in the manufacturing industry. Efforts taken by both labour and management to prevent occupational accidents possibly factored in this reduction. The staggering economic activities under the impact of Lehman's fall are considered to

have hugely influenced this reduction. However, occupational accidents subsequently increased over three consecutive years\* (Figure 2).

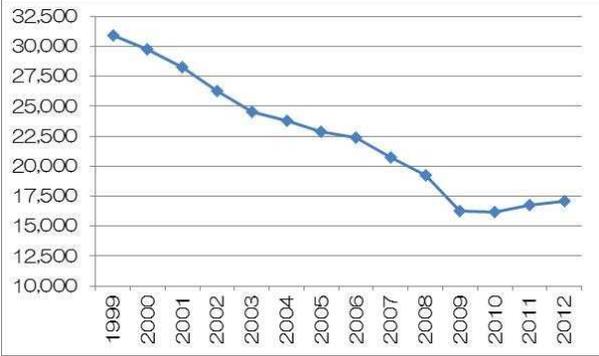
\* Figures for 2012 are taken from the flash report as of the end of December.

Look at the factors of change in the number of occupational accidents before and after Lehman's fall and the Great East Japan Earthquake by industry. In 2009 when the impact of Lehman's fall was seen most significantly, occupational accidents decreased equally in all industries. From 2010 onward, the increased number of occupational accidents in tertiary industries was the most significant factor (Figure 3). And from 2011 onward, the increased number of occupational accidents in the construction industry has also had an impact (Figures 3 and 4).

<<Figure 3>> Ratio of contribution to change in the number of occupational accidents by industry



<<Figure 4>> Trend in occupational accidents in the construction industry



Occupational accidents in the construction industry increased as various construction projects got fully underway for restoration and reconstruction in the areas struck by the Great East Japan Earthquake on March 11, 2011. The construction industry endured a situation of having fewer skilled workers due to dwindling demand for a long period. Given the huge demand for construction work in restoration efforts following the Great East Japan Earthquake, there was soon a nationwide shortage of skilled workers. Consequently, there are rising concerns over a possible deterioration of quality management in terms of human resources, and work site management, and thus a possible increase in occupational accidents. At TEPCO's Fukushima Dai-ichi Nuclear Power Plant (where a major accident linked to the Great East Japan Earthquake occurred), operations are also underway to shut down the nuclear reactor. Decontamination operations are also required for a vast area. No one has ever experienced such operations before. In such a severe environment, there are grave concerns over the possible occurrence of operation-related accidents.

Meanwhile, occupational accidents are significantly decreasing in the manufacturing industry due to efforts made by labour and management, as well as the influence of a slowing economy. The mass retirement of the generation of workers born in the 1940s who possess the know-how regarding safety and health management, severe cost competition, and personnel rationalization may negatively impact future safety and health activities at production work sites.

**(3) Increased number of non-regular employees and more outsourcing**

Japan's Ministry of Internal Affairs and Communications (MIC) conducted the Labour Force Survey. The results showed major changes in employment patterns in addition to changes in the number of employees by industry. The ratio of non-regular employees in the entire workforce remained at about 20% by the 1990s, and then rapidly increased, reaching 34.3% in 2010 (Table 4). Part-time workers occupy the

majority and account for 68.0% of non-regular employees, followed by contract employees at 18.8%, and dispatch workers at 5.5%.

<<Table 4>> Change in ratio of regular and non-regular employees

	1985	1990	1995	2000	2005	2010
Regular employees	83.6%	79.8%	79.1%	74.0%	67.4%	65.6%
Non-regular employees	16.4%	20.2%	20.9%	26.0%	32.6%	34.3%
Male employees alone	28.1%	26.7%	25.6%	26.6%	31.0%	30.7%
Female employees alone	71.9%	73.3%	74.4%	73.4%	68.9%	69.4%

(Source: Labour Force Survey)

<<Table 5>> Composition ratios of non-regular employees by industry

All industries	Manufacturing industries	Construction industry	Tertiary industries (industries other than agriculture, forestry and fishery, mining and quarrying, construction, and manufacturing)			
			Wholesalers/retailers	Hotels/restaurants	Medical/welfare service	
100%	11.2%	3.2%	83.9%	21.9%	12.0%	30.7%

(Source: 2010 Labour Force Survey)

Female workers account for 70% of non-regular employees. Tertiary industries employ more than 80% of these women (Tables 4 and 5). Since safety and health should be ensured for all employees regardless of their attributes, in principle, the Occupational Safety & Health Law does not include stipulations regarding differences in working conditions or employment status. However, as social situations change, one out of every three workers is now a non-regular employee. The ratio of occupational accidents is increasing in tertiary industries where non-regular employees account for the majority. The current Occupational Safety & Health Law should thus be reexamined in terms of whether it suits the reality of work sites.

Increasing numbers of persons with disabilities are being employed. The number of employees with disabilities increased from 246,000 in 2002 to 382,000 in 2012. A further increase is expected due to regulations that stipulate a higher ratio of disabled employees. Appropriate assignment should be ensured according to the degree of one's mental and physical disabilities. And appropriate safety and health measures should also be adopted according to the type and severity of disability.

In addition to these changes, outsourcing through contracts is viewed as another change in various fields. The current Occupational Safety & Health Law stipulates that employers are responsible, in principle, for protecting the safety and health of their employees. An employer responsible for contracted employees may not be clearly specified, or the contracting employers fully authorized to take adequate measures to prevent occupational accidents. Several employers may dispatch their employees to the same work site to share operations. In order to prevent accidents under the circumstances above, a system has been introduced where the master contractor (i.e., the highest tier) should also assume certain responsibility in the construction and shipbuilding industries, which generally adopt a multi-layered contract system. However, outsourcing is becoming more common, and industries other than construction and shipbuilding should also survey the current status for reexamining the responsibility for safety and health measures and that to be shouldered by clients, such as securing the expenses necessary for safety and health measures.

In order to prevent occupational accidents due to machinery and equipment, the following measures have been promoted: checking the risk of hazards at the manufacturing stage, improving the safety of machinery and equipment, and providing information to users regarding any remaining risks. And hazard information is being more proactively provided as a measure to prevent occupational accidents due to chemical substances. As machinery and equipment (as well as chemical substances) continue to cause frequent accidents, further efforts should be promoted.

Based on the major changes in socioeconomic situations as stated above, we should review our efforts made thus far, and then make those efforts more rational and effective.

#### (4) Impact of a dwindling birthrate and aging population

The nation's rapidly dwindling birthrate and aging population are affecting occupational accidents, in addition to the changes in social structure and employment environment. The population of those aged 60 and older has doubled in the past 20 years. As employment is promoted for elderly citizens, we see an increasing number of elderly workers, with more elderly workers being involved in occupational accidents (Table 6). The incidence of occupational accidents involving workers aged 60 and older is higher than any other age bracket (Table 7). And elderly workers need longer sick leave to recover in case of an accident. More elderly workers are also suffering from such underlying disorders as hypertension. There are also concerns about acute illness during work possibly causing occupational accidents (Table 8).

As our aging society continues to expand along with a higher ratio of elderly workers, the possibility of additional risks due to the aging population should be kept in mind when implementing efforts to prevent occupational accidents.

<<Table 6>> Change in the number of employees by age

	Aged 15-24	Aged 25-34	Aged 35-44	Aged 45-54	Aged 55-64	Aged 65 or older	Total
1990	6.70 mil (14.3%)	10.32 mil (22.0%)	12.52 mil (26.7%)	10.62 mil (22.6%)	<b>5.50 mil (11.7%)</b>	<b>1.23 mil (2.6%)</b>	46.90 mil
1995	7.49 mil (14.5%)	11.64 mil (22.5%)	11.47 mil (22.2%)	12.48 mil (24.1%)	<b>6.76 mil (13.1%)</b>	<b>1.85 mil (3.6%)</b>	51.69 mil
2000	6.15 mil (11.7%)	13.06 mil (24.8%)	10.91 mil (20.7%)	12.83 mil (24.4%)	<b>7.69 mil (14.6%)</b>	<b>2.03 mil (3.9%)</b>	52.67 mil
2005	5.23 mil (9.8%)	13.31 mil (25.0%)	11.82 mil (22.2%)	11.68 mil (21.9%)	<b>9.97 mil (18.7%)</b>	<b>2.21 mil (4.2%)</b>	53.24 mil
2010	4.61 mil (8.4%)	11.97 mil (21.9%)	13.48 mil (24.6%)	11.53 mil (21.1%)	<b>10.04 mil (18.3%)</b>	<b>3.12 mil (5.7%)</b>	54.77 mil

(Source: Labour Force Survey (Figures in February were used for the period from 1990 to 2000; mean values of the period from January to March were used for 2005 and 2010.))

<<Table 7>> Incidence rate of accidents by age

	Aged 19 or younger	Aged 20-29	Aged 30-39	Aged 40-49	Aged 50-59	Aged 60 or older	Total
Number of employees	0.8 mil	9.82 mil	13.09 mil	12.36 mil	11.02 mil	7.54 mil	54.63 mil
Number of casualties (accident rate per 1000 persons)	2,357 (2.95)	16,542 (1.68)	23,017 (1.76)	23,414 (1.89)	28,178 (2.56)	23,225 (3.08)	116,733 (2.14)
Number of fatalities (accident rate per 10000 persons)	18 (0.23)	127 (0.13)	185 (0.14)	191 (0.15)	302 (0.27)	357 (0.47)	1,180 (0.22)

(Source: 2010 Labour Force Survey; Report on occupational casualties)

<<Table 8>> Underlying diseases by age

		Aged 30-39	Aged 40-49	Aged 50-59	Aged 60-69	Aged 70 or older
Ratio of morbidity of hypertension	Male	19.4%	33.5%	57.8%	64.4%	80.6%
	Female	4.0%	12.7%	36.3%	60.0%	73.2%
Ratio of persons with strongly suspected diabetes	Male	3.1%	8.0%	15.6%	22.1%	22.4%
	Female	0.9%	3.6%	5.6%	13.5%	16.5%
Ratio of persons with suspected hyperlipemia	Male	11.1%	13.7%	20.1%	25.5%	27.6%
	Female	1.2%	1.9%	11.0%	23.4%	34.3%

(Source: 2010 National survey on health and nutrition)

### **(5) Ideal regulations responding to technological innovation**

Directives have been issued under the Occupational Safety & Health Law to prevent similar accidents, as based on surveys on the causes of past occupational accidents to identify such hazard factors as chemical substances harmful to the human body, machines with uncovered rotating parts, and openings without fences. Hazard factors have become more diverse, however, as technological innovation advances, thus making it more difficult to issue specific regulations focusing on the individual factors of various hazards. Issuing regulations in such a manner would result in numerous regulations.

To avoid such inconvenience, one possible idea is to leave employers freedom to decide how to control risks of occupational accident to a certain extent, while clarifying “what must be achieved” in goal-setting form to fulfill occupational accident prevention. Ideal regulations for occupational safety and health should be explored from a long-term perspective. In addition, human development should be considered to ensure personnel with high expertise who can offer technical support for employers that are relegated the selection of efficient and effective measures. A system to help utilize human resources should also be considered on a long-term basis.

Along with ongoing technological innovation, health risks may be posed by new technologies and substances. When said health risk has yet to be scientifically elucidated and the risks remain uncertain, precautionary measures, including methods of evaluating these risks and how to take account of uncertainty, should also be discussed on a long-term basis.

### **(6) Change in the environment that surrounds the government**

We have seen an increasing number of tasks that must be addressed in view of socioeconomic changes. While at the same time, the nation’s finances face a tough time, and the government needs to be further streamlined and made more efficient.

Under such situations, in order to prevent occupational accidents effectively, measures to be taken by the central government should be carefully selected and centralized for rational prioritization. Further consolidation with industrial groups and occupational accident prevention organizations is also necessary to support and promote activities for preventing occupational accidents through the voluntary efforts of industry.

### **(7) Measures for safety and health open to society**

Measures against poor mental health, overwork, and back pain are becoming more important for safety and health. These problems are now widely seen in various fields including tertiary industries. We should recognize that occupational accidents are not limited to workers engaged in hazardous operations, and that any worker could be subject to risks.

To address this issue, companies should initiate voluntary activities. And society should visualize and become more familiar with the problems regarding safety and health. To visualize the problems, our society as a whole should share various kinds of information regarding occupational accidents, such as frequency, the kinds of occupational accidents that occur, what consequences would result from insufficient efforts, and what must companies and workers do in order to prevent accidents. Our society should also share information regarding corporate standards for safety and health. The visualized information should be shared as mentioned above to enhance public awareness of safety and health. Various efforts will be necessary to achieve this goal.

## **3. Priority measures**

Based on the previously mentioned social change and direction of measures for safety and health, the following six priority measures have been selected.

- (1) Prioritize measures in response to changes in the tendency of occupational accidents and the onset of occupational diseases.
- (2) Make efforts to prevent occupational accidents in collaboration with the government, occupational accident prevention organizations, and industrial groups.
- (3) Promote reforms of safety and health awareness in society, companies and workers.

- (4) Promote measures based on scientific grounds and international trends.
- (5) Enhance the efforts made by clients, manufacturers, and the managers of facilities.
- (6) Take necessary measures in response to the Great East Japan Earthquake and the accident at TEPCO's Fukushima Dai-ichi Nuclear Power Plant.

#### 4. Specific efforts by priority measures

- (1) Prioritize measures in response to changes in the tendency of occupational accidents and the onset of occupational diseases

Occupational accidents in the construction and manufacturing industries have accounted for the majority. Conventional occupational diseases such as pneumoconiosis and disorders related to noise/vibration are still major concerns. However, recent tendencies regarding the onset of occupational accidents also suggest the growing importance of such new tasks as measures taken against occupational accidents in tertiary industries, and mental health. In response to these new tendencies, priority measures must be reconsidered. The following priority measures for safety and health have been selected for the next five years.

##### A. Measures for prioritized industries

- (a) Measures for prioritized industries to reduce the number of occupational accidents

##### (Current status and problems)

- The onset of occupational accidents showed a dramatic reduction in the past ten years (2002 to 2011) in the construction and manufacturing industries, where efforts were prioritized. In contrast, occupational accidents increased by 16.7% in tertiary industries where governmental efforts for safety and health were not necessarily focused. Among tertiary industries, occupational accidents increased at retailers, social welfare facilities, and restaurants (hereinafter referred to as “retailers, etc.”). Social welfare facilities underwent a rapid increase in the number of employees, doubling in the past ten years. The increase ratio of accidents exceeded the increase in employees, by nearly 2.5 times in the past ten years. The land transportation industry accounts for about 10% of all occupational accidents, although there are fewer traffic accidents each year. Conversely, the casualties (i.e., workers injured) suffered in cargo-handling operations have remained at about 10,000 a year since 2000, and thus show no decreasing tendency. Therefore, focused efforts are required at “retailers, etc.” as well as in cargo-handling operations to reduce the number of occupational accidents.

<<Change in the number of casualties by industry>>

Industry	2002	2007	2008	2009	2010	2011	Percentage change in accidents
Construction industry	26,299	20,764	19,280	16,268	16,143	16,773	-36.2%
Manufacturing industry	38,323	36,196	34,464	27,995	28,643	28,457	-25.7%
Tertiary industry	43,053	50,076	51,099	48,172	49,320	50,243	+16.7%
Retailers	12,187	12,453	12,657	11,914	12,329	12,680	+4.1%
Social welfare facilities	2,411	4,338	4,829	5,065	5,533	5,900	+144.7%
Restaurants	3,725	4,055	4,055	4,015	4,021	4,150	+11.4%
Land transportation industry	15,319	15,579	15,443	13,233	13,815	13,820	-9.8%

(Source: Report on occupational casualties (The number of casualties in 2011 does not include those associated with the Great East Japan Earthquake.))

\* Percentage change in accidents is the figure in 2011 relative to 2002.

- Retailers are characterized by a high percentage of falling accidents having less severity than those in

the construction and manufacturing industries. A new method focusing on the behaviors of individual workers is thus required. The medical/nursing care industry is expected to grow in line with the growing elderly population. Attention should therefore be paid to the possibility that such a factor, along with changes in the national demand structure, will increase the number of employees at retailers, etc.

- In the land transportation industry, traffic accidents account for less than 10% of all occupational accidents, while accidents in cargo-handling operations account for about 70%. In addition, about 70% of the accidents in cargo-handling operations occurred on the premises of the sender or recipient of the cargo (hereinafter referred to as “cargo owners, etc.”). Among the accidents in cargo-handling operations, falling from the loading platform or the top of cargo accounts for the largest ratio of nearly 30%. The tools and equipment used for loading operation, such as forklifts and roll box pallets, also cause more than a few accidents. Upon due consideration of these situations, measures against occupational accidents in the land transportation industry require concerted efforts with the cargo owners, etc. that manage cargo-handling work sites.

**(Targets)**

Achieve the following targets by prioritized industries by 2017 relative to the status in 2012.	
■ <b>Retailers:</b>	Reduce the number of casualties requiring at least four days of sick leave due to occupational accidents by at least 20%.
■ <b>Social welfare facilities:</b>	Reduce the number of casualties requiring at least four days of sick leave due to occupational accidents by at least 10%. The target is the figure that includes a substantial increase in nursing care staff (i.e., level equivalent of at least 25% in case of no increase in nursing care staff).
■ <b>Restaurants:</b>	Reduce the number of casualties requiring at least four days of sick leave due to occupational accidents by at least 20%.
■ <b>Land transportation industry:</b>	Reduce the number of casualties requiring at least four days of sick leave due to occupational accidents by at least 10%.

**(Measures to be taken)**

Occupational accidents have not decreased or decreased only by a small margin at retailers and in the land transportation industry. The ratio of retailers is increasing in industry as a whole. Thus, retailers should be prioritized in terms of measures to reduce occupational accidents.

**1) Measures for tertiary industries (especially retailers, social welfare facilities, and restaurants)**

Regarding tertiary industries, efforts will be focused on retailers, social welfare facilities (nursing homes), and restaurants where the number of occupational accidents is particularly high.

**1)-1 Enhanced management system for safety and health**

- In order to promote measures to prevent occupational accidents from the standpoint of clarifying the persons responsible, establishing an effective safety management system that suits the actual status of retailers, etc. should be considered in reference to the existing safety management system.
- The ratio of non-regular employees such as part-time workers is relatively high at retailers, etc. Given this situation, the activities for safety and health regarding non-regular employees at the work site should be assessed. Based on the assessment results, instructions should be given so that appropriate activities for safety and health will be steadily conducted at the work site, regardless of regular or non-regular employees.

**1)-2 Intensive efforts for retailers**

**a. Enhance the awareness of occupational accident prevention mainly at large-scale retailers and chain stores.**

- Falling accounts for about 30% of all occupational accidents that occur at retailers, etc. Falling could easily occur in our daily lives, and is thus not limited to work sites. That is why both employers and

employees have little awareness about the prevention of falling and other occupational accidents. This may make it difficult to nurture an awareness of safety at the workplace. With that in mind, and from the standpoint of occupational accident prevention leading to rationalization and better management/work efficiency, we will begin by disseminating and promoting a greater awareness of preventing occupational accidents, mainly at large-scale retailers and chain stores.

**b. Ensure safety in the back yard and other work sites.**

- Most occupational accidents occur in the back yards of retailers. We will focus on operations in the back yard, visualize hazard sites (by posting a hazard map), conduct risk assessment, and encourage employers to reduce hazards through KY (hazard prediction) activities.
- With regard to the safety management practiced by retailers, good examples should be collected within and outside Japan for use in raising awareness and for instruction. Based on such examples, a model should be prepared by incorporating safety management into both business and operational management. The model should then be widely utilized.
- To prevent frequent falling accidents and cuts/abrasions, we will promote the development and adoption of safety shoes, safety gloves, and other protective gear, so as to ensure excellent workability, safety, and economic efficiency at the work site.

**1)-3 Intensive efforts for social welfare facilities (nursing homes)**

- In cooperation with prefectural or municipal training and seminars for nursing care business operators, the following will be provided for social welfare facilities (nursing homes): comprehensive safety and health education for employees, thorough dissemination of 4S to prevent falling accidents at work, the introduction of nursing care equipment to prevent back pain, and the introduction and dissemination of health examinations for back pain as stipulated by the guideline on measures to prevent back pain at work. Occupational safety and health consultants and other specialists should be dispatched to nursing-care settings, so as to give instructions on specific ways of carrying injured persons, other methods of aid to avoid back pain, and how to utilize nursing care equipment at the work site.
- Based on the good examples and information collected through the seminars and training mentioned above, manuals should be reviewed, put into practice at the work site, and utilized for instructing business establishments.
- Employers should be trained to teach methods of preventing back pain to their employees at the work site. Ask industrial groups and training organizations for nursing care workers to disseminate such training.

**1)-4 Intensive efforts for restaurants**

- Falling and cuts/abrasions account for the majority of occupational accidents at restaurants. Preventive measures should be focused on these accidents by type. Examples of activities to prevent occupational accidents should also be collected. Moreover, a manual on safety and health should be prepared, put into practice at the work site, and utilized for instructing business establishments.

**1)-5 Categorizing and disseminating measures**

- With support from Japan's National Institute of Occupational Safety and Health, categorize the measures to be conducted at business establishments according to each industry and the specific factors of occupational accidents. The categorized data should be used for raising awareness and training, etc.

**2) Measures for the land transportation industry**

**a. Disseminate and thoroughly practice measures to prevent occupational accidents in cargo-handling operations.**

- Occupational accidents in cargo-handling operations account for about 70% of all accidents in the land transportation industry. In line with the Land Transportation Industry Safety & Health Association, we will promote the dissemination of safety guidelines on cargo-handling operations to ensure good compliance.

**b. Enhance safety and health education for truck drivers.**

- In cases where truck drivers are responsible for loading cargo as a result of sharing roles with cargo

owners, etc., safety and health education for truck drivers should focus on measures to prevent falling to a lower level during cargo-handling operations, and on occupational accidents during transportation. These measures should also be enhanced. Measures should also be taken to support the preparation of work procedures for cargo-handling operations.

c. Enhance efforts made by cargo owners, etc.

- In addition to the preventive measures taken against occupational accidents at facilities managed by cargo owners, etc., introduce the regular use of model transportation contracts in order to clarify the role sharing between land transportation operators in charge of transporting cargo and the cargo owners who order transportation, and promote the measures to be taken by each party according to the shared roles. In cases where the recipient of cargo is a customer of the sender and has no relationship with the land transportation operator in terms of signing a transportation contract, it is appropriate for the sender to coordinate role sharing and unloading operation with the recipient in advance, and include the content in the contract to be signed with the land transportation operator. Such points should also be considered when promoting measures.

(b). Measures for prioritized industries to reduce the number of occupational accidents with high severity

(Current status and problems)

- Although fatal accidents have decreased significantly, more than a thousand workers are still being killed each year in occupational accidents year. In order to prevent serious accidents, we must take drastic measures to prevent “falling to a lower level” (accounting for nearly 30%) and getting “caught or trapped” (accounting for 15%). More than half of all “falling to a lower level” accidents occur in the construction industry, while nearly 40% of all getting “caught or trapped” accidents occur in the manufacturing industry. These accidents may not be fatal, but are highly likely to cause disability. The construction and manufacturing industries also need efforts focusing on preventing serious accidents.
- Occupational accidents in the construction industry have tended to increase since 2011. This is because various construction projects entered full-scale operation for restoration and reconstruction in the areas struck by the Great East Japan Earthquake. The drastically rising demand for restoration and reconstruction is drawing construction firms, engineers, and skilled workers to the disaster-stricken areas, causing a shortage of such human resources in areas not affected by the disaster. There are thus concerns that this situation may make it difficult to maintain the quality of human resources and work site management throughout Japan. Given the lessons learned through the experience of the Great East Japan Earthquake, we face the task of building a nation resilient to disasters based on the concept of prior prevention of disasters and reducing the impact of disasters. Infrastructure should be reinforced throughout Japan. Efforts should also be made to prevent an increased number of occupational accidents when responding to a growing demand for construction work with insufficient human resources. Other important tasks include measures to prevent occupational accidents in demolition and repair work that are expected to increase due to aging infrastructure, and measures to prevent exposure to asbestos.

<<Change in number of fatalities in the construction and manufacturing industries>>

Industry	2002	2007	2008	2009	2010	2011
Construction industry	607	461	430	371	365	342
Manufacturing industry	275	264	260	186	211	182

(Source: Report on Fatal Accidents (The number of casualties in 2011 does not include those associated with the Great East Japan Earthquake.))

(Targets)

Achieve the following target by prioritized industries by 2017 relative to the status in 2012.

- **Construction industry:** Reduce the number of fatalities due to occupational accidents by at least 20%.
- **Manufacturing industry:** Reduce the number of fatalities due to occupational accidents by at least 5%.

## **(Measures to be taken)**

Take measures focusing on “falling to a lower level” for the construction industry, and measures on being “caught or trapped” for the manufacturing industry. Occupational accidents have tended to increase since 2011 in the construction industry. Various construction projects entered full-scale operation for restoration and reconstruction in the wake of the Great East Japan Earthquake. The subsequent shortage of human resources throughout Japan may make it difficult to maintain the quality of human resources and work site management, thereby raising concerns about a possible increase in the number of occupational accidents nationwide. Measures should be also taken in consideration of such situations.

### **1) Measures for the construction industry**

#### **a. Measures to prevent falling to a lower level**

##### **(a) Promote measures to prevent falling to a lower level from various locations.**

- Falling from scaffolding accounts for about 15% of falling accidents, while falling from ladders and roofs accounts for about 40%. In addition to the measures to prevent falling from scaffolding, equipment and ways to prevent falling from ladders and roofs should be developed and disseminated, in cooperation with the National Institute of Occupational Safety and Health.

##### **(b) Promote the use of harness-type safety belts.**

- The widely used safety belt wrapped around one’s waist has a significant impact on the wearer in case falling occurs. With due consideration given to work efficiency, promote the use of safety belts with less impact in case of falling, such as the harness-type safety belts subject to mandatory use under certain conditions.

#### **b. Measures in consideration of the nationwide shortage of human resources in the wake of the Earthquake**

##### **(a) Request for the clients of construction work**

- Request the clients of construction work, in coordination with the Ministry of Land, Infrastructure, Transport and Tourism, to include safety and health issues in the specifications, secure the expenses necessary to ensure safety and health in construction work, and provide expenses to the relevant contractors without fail. Moreover, request the relevant parties to convey that the same request is also applicable to public works ordered by governmental agencies.
- In particular, intensive measures should be taken (in collaboration with the Ministry of the Environment and local governments) for demolition work conducted on buildings that contain asbestos, in order to prevent the ordering of work where insufficient expenses and a shorter work period make it difficult to take preventive measures against asbestos exposure and dust.

##### **(b) Conduct comprehensive safety and health control at construction sites.**

- Conduct comprehensive safety and health control at construction sites by providing safety and health education for new workers (newcomers) who have just entered the construction industry.

#### **c. Measures for demolition work**

The following measures should be taken as demolition work for aging infrastructure and repair work for buildings are expected to increase in the future.

##### **(a) Measures to prevent asbestos exposure**

- As demolition work for aging infrastructure and repair work for buildings are expected to increase in the future, comprehensive measures to prevent asbestos exposure and dust should be further conducted. Business operators should be instructed on how to conduct a prior survey and proper notification in collaboration with the Ministry of the Environment and local governments. Inappropriate operations should be subject to strict punishment. The following issues should also be promoted: conducting a survey prior to the demolition of buildings, improving the capacity of workers engaged in asbestos removal work, and providing the information necessary to procure dust collection/exhaust equipment.

##### **(b) Safety measures for demolition work**

- Consider safety measures for demolition work for aging infrastructure and repair work for buildings, and then provide guidelines.

**d. Measures for restoration/reconstruction work in the wake of natural disasters**

- Typhoons, heavy rain, heavy snowfall, tornadoes, and other natural disasters have frequently occurred in recent years. Since such natural disasters will also occur in the future, measures should be ensured to prevent occupational accidents in restoration/reconstruction work in the disaster-stricken areas.

**2) Measures for the manufacturing industry**

**a. Promote measures to prevent machinery accidents.**

- Measures should be focused on the prevention of caught or trapped accidents that could result in fatal injury or disability. And the causes of machinery accidents at work sites should be elucidated. The structural and functional safety of machinery and equipment should also be promoted. In cases of questionable machinery and equipment safety, facilitate improvement by those supplying the machinery and equipment, such as the manufacturers.

**b. Measures in collaboration with occupational accident prevention organizations**

As the baby-boom generation begins to retire and the management environment subsequently deteriorates, even manufacturers with a long history and much experience in safety and health activities may find it difficult to maintain and ensure safety and health systems. In order to boost the level of safety and health activities in small-scale business establishments with weak systems, support the instruction/aid activities provided by the Japan Industrial Safety and Health Association.

**B. Prioritized measures to ensure health and prevent occupational diseases**

**(Current status and problems)**

- With regard to health, intensive efforts are continuously required for mental health measures to prevent mental disorders that are increasingly recognized as occupational accidents, as well as measures against overwork to prevent prevailing brain or heart disorders recognized as occupational accidents. In order to prevent a further increase of persons with mental health disorders, the early detection and treatment of such persons should be promoted by self-care given by the workers themselves, as well as care provided by management personnel and industrial health staff. It is also important to improve the work environment so that mental health disorders are less likely to develop. Today's severe socioeconomic situation requires more complicated, sophisticated, and faster operations. In such a work environment, the health hazards associated with overwork should be prevented in order to maintain and promote good mental and physical health for workers. From the standpoint of the balance between work and personal life, long work hours should be avoided.

<<Change in the number of brain/heart disorders and mental disorders recognized as occupational accidents >>

Disease	2002	2007	2008	2009	2010	2011
Brain/heart disorders	317 (160)	392 (142)	377 (158)	293 (106)	285 (113)	310 (121)
Mental disorders	100 (43)	268 (81)	269 (66)	234 (63)	308 (65)	325 (66)

(Source: survey conducted by the Ministry of Health, Labour and Welfare)

\* Figures in parentheses indicate the number of fatalities.

- Given the widespread and collective development of biliary tract cancer among workers in the printing industry, measures to prevent occupational cancer caused by chemical substances have become an urgent task to be enhanced. An important task is to take measures that effectively prevent health hazards due to chemical substances not regulated by the Ordinance on Prevention of Hazards due to Specified Chemical Substances.
- Back pain accounts for about 60% of all occupational injuries, and contributes to the increased number of occupational accidents seen at social welfare facilities, retailers, and land transportation operators. Social welfare facilities, where back pain has sharply increased in the past ten years, account for 20% of all cases of back pain, and need intensive efforts in particular. Heat stroke still frequently occurs, especially in summer. Thus, the enhancement of measures against heat stroke is an urgent task.

<<Change in the number of back pain cases (recognized as occupational accidents) >>

	2002	2007	2008	2009	2010	2011
Number of occupational injury cases	7,502	8,684	8,874	7,491	8,111	7,779
Number of back pain cases	4,404 (58.7%)	5,287 (60.9%)	5,556 (62.6%)	4,870 (65.0%)	5,018 (61.9%)	4,822 (62.0%)

(Source: Report on occupational casualties (Figures in parentheses for the number of back pain cases indicate the ratio relative to the number of occupational injury cases.))

<<Change in the number of heat stroke cases (total number of cases in five years) >>

	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011
Number of heat stroke cases	1,066	1,211	1,354	1,267	1,733	1,886

(Source: Report on occupational casualties)

**1) Measures for mental health  
(Targets)**

Increase the number of business establishments taking measures for mental health to at least 80% by 2017.
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**(Measures to be taken)**

**a. Efforts to improve the workplace for preventing mental health disorders**

- In order to prevent mental health disorders, self-care given by the workers themselves is the most important. It is also important that management personnel who regularly see the workers provide appropriate support. Along with promoting worker self-care, encourage employers to proactively provide educational training and information for both management personnel and the workers.
- From the standpoint of preventing mental disorders, in reference to the “Recommendations to prevent/solve power harassment at work,” report and publicize the current status, any problems and ongoing efforts through the portal site “Cheering squad to cultivate a happy workplace,” and promote measures against power harassment.
- Making efforts to improve and make the work environment more comfortable can help prevent mental health disorders. From this standpoint, consider such new methods as risk assessment that identifies and evaluates risk factors that might cause excessive stress in the workplace, so as to take necessary measures to reduce the risks.

**b. Promote the identification of stress and measures against it.**

- Promote such efforts as a stress check to facilitate the identification of stress in workers. Also encourage the establishment of a counseling system in the workplace.

**c. Support for business establishments that do not know what measures to take**

- Measures for mental health at the workplace must comprehensively include educational training for workers to promote identifying stress and support for returning to work. However, some business establishments do not know what measures to take for mental health (accounting for 20.1% as per the 2011 survey focusing on measures to prevent occupational accidents). Provide support for those business establishments to take appropriate measures. In particular, support for small-scale business establishments should be enhanced.

**d. Promote measures for returning to work.**

- In order to help business establishments facilitate the return to work of workers with mental health problems, collect cases of support for returning to work through projects that support measures for mental health, and compile the collected cases as a collection. Analyze the collected cases to prepare a model program regarding support for returning to work according to the scale of business establishments. The collected cases and analysis should be widely provided for those who need such support through “Kokoro No Mimi”—the portal site for the mental health of workers.
- Consider specific types of support for employers in order to proactively provide support to help employees with poor mental health return to work. These types of support should be appropriately enhanced.

## 2) Measures against overwork

### (Targets)

Reduce the number of employees working at least 60 hours per week by at least 30% by 2017 relative to the status in 2011.

### (Measures to be taken)

#### a. Reduce the risk of health hazards for workers through comprehensive health management.

- Promote labour management that prevents chronic long hours of work by ensuring that employers conduct health examinations for workers, along with health management that includes follow-up in consideration of the appropriate assessment and management of working hours. In addition, substantially reduce the risk of health hazards for workers due to overwork.
- In order to improve the quality of health management provided by employers, develop effective ways of utilizing health examination and follow-up results, and promote such utilization.

#### b. Promote a review of work style and how to spend free time.

- Focus on industries and job types with irregular work shifts and late-night work, and promote mandatory days off, which are effective in relieving fatigue.
- Focus on industries and job types where many workers engage in chronic long hours of labour, and promote the effective efforts of labour and management. Also promote the reduction of overtime work in compliance with the “Standard regarding the limit of extension of work hours stipulated by the agreement stipulated in Article 36, Section 1 of the Labour Standards Act.”

## 3) Measures to prevent health hazards due to chemical substances

### (Targets)

In order to improve the management of chemical substances at the workplace, at least 80% of chemical substance manufacturers shall apply hazard labels and issue Safety Data Sheets (SDS) regarding all hazardous chemical substances according to the GHS classification by 2017.

### (Measures to be taken)

#### a. Accelerate the regulation of chemical substances by focusing on carcinogenicity.

Regarding chemical substances whose toxicity has yet to be clarified, establish a framework to evaluate toxicity and necessary regulations based on evaluation focusing on carcinogenicity.

##### (a) Accumulate toxicity information relative to chemical substances.

- Not limited to information from toxicity surveys conducted by governmental agencies, establish a framework to widely collect toxicity information owned by employers, and then accumulate and share the information. Concerning the collection of such information, consider setting certain criteria that requires employers to provide information.

##### (b) Evaluate the toxicity of chemical substances based on toxicity information focusing on carcinogenicity, and then accelerate responses.

- Regarding chemical substances not regulated by the Ordinance on Prevention of Hazards due to Specified Chemical Substances, accelerate the evaluation of possible carcinogenicity by utilizing toxicity information, conducting mutagenicity tests, and improving the efficiency of carcinogenicity tests.
- Regarding the chemical substances evaluated as carcinogens, promptly assess the exposure to workers at the workplace in order to evaluate risks, and then decide on the need for regulations to prevent health hazards for workers.
- Regarding chemical substances that have become additionally subject to regulations, formulate measures for work environment control that include such emission prevention measures as local exhaust equipment and the formulation of a work environment measurement standard. Also, promptly formulate measures for operation control such as the use of gas masks. Ensure full compliance with these measures.

##### (c) Enhance measures at the stage of suspected carcinogenicity.

- Regarding chemical substances in which strong mutagenicity is confirmed and which may pose the risk of health hazards for workers, formulate technical guidelines to prevent health disorders. Those concerned should be fully informed of the guidelines and take measures accordingly.
- b. Promote risk assessment by properly reporting and providing hazard information.
- In order to ensure the use of hazardous or toxic chemical substances under appropriate control regardless of whether subject to regulations, promote the risk assessment of chemical substances. Small- and medium-sized business establishments should be fully informed of the control banding developed to enable the risk assessment of chemical substances without entailing the expertise accountable for such use.
  - In order to encourage employers to make voluntary efforts on chemical substance control, promote the application of hazard labels and the issuance of Safety Data Sheets (SDS).
  - In order to share hazard information over the course of the distribution route from the manufacturing, import, use, and final disposal of chemical substances, cross-ministerial efforts should be taken to establish a rational control system for chemical substances.
- c. Comprehensive management and improvement of the work environment
- Regarding chemical substances for which a method of measuring concentrations in the work environment has yet to be established, disseminate measures to prevent health disorders, such as utilizing a method of estimating concentrations in the work environment based on such information as the properties and quantities of chemical substances, without directly measuring the concentrations.
  - As part of the rational control of chemical substances according to the risk, promote the formulation of performance requirements on emission prevention measures. Consider introducing individual samplers to measure the concentrations of chemical substances in the work environment.

#### 4) Measures to prevent back pain and heat stroke

##### (Targets)

- **Back pain:** Reduce the number of casualties (injured workers) who took at least four days of sick leave due to occupational accidents (including back pain) at social welfare facilities by at least 10% by 2017 relative to the status in 2012.
- **Heat stroke:** Reduce the number of casualties who took at least four days of sick leave due to heat stroke at the workplace by at least 20% in five years from 2013 to 2017 relative to the status in five years from 2008 to 2012.

##### (Measures to be taken)

#### 4)-1 Measures to prevent back pain

##### a. Enhance education to prevent back pain.

- Focus on social welfare facilities (nursing homes), retailers, and the land transportation industry (where there are special concerns about back pain), and promote the inclusion of measures to prevent back pain in initial educational training.

##### b. Disseminate methods/education to prevent back pain in care workers (reposted).

- In cooperation with prefectural or municipal training and seminars for nursing care business operators, the following will be provided for social welfare facilities (nursing homes): comprehensive safety and health education for employees, thorough dissemination of 4S to prevent falling at work, the introduction of nursing care equipment to prevent back pain, and the introduction and dissemination of health examinations for back pain as stipulated by the guideline for measures to prevent back pain at work. Occupational safety and health consultants and other specialists should be dispatched to the nursing-care settings, so as to give instructions on specific ways of carrying injured persons, other aid methods of aid to avoid back pain, and how to utilize nursing care equipment at the work site.
- Based on the good examples and information collected through the seminars and training mentioned above, manuals should be reviewed, put into practice at the work site, and utilized for instructing business establishments.

- Employers should be trained to teach methods of preventing back pain to their employees at the work site. Ask industrial groups and training organizations for nursing care workers to disseminate such training.
  - c. Introduce regulations governing the handling of heavy materials.
    - From the standpoint of eliminating the risk factors of back pain, consider introducing regulations governing the handling of heavy materials to prevent back pain as based on the situations abroad.
- 4)-2 Measures against heat stroke
- a. Introduce regulations governing the outdoor operation
    - By reviewing the situations where heat stroke tends to occur, consider the mandatory measurement and evaluation of the work environment in taking necessary measures regarding outdoor operation during a certain period in summer.
  - b. Formulate objective evaluation criteria for anti-heat stroke products.
    - Some products used as measures against heat stroke at the work site may somewhat lower body temperature, but do not reduce the burden on the body. To evaluate products, formulate and disseminate functional evaluation criteria from the standpoint of the effect of reducing the WBGT (Wet-bulb globe temperature: index of high temperature) value.
- 5) Measures against passive smoking

(Targets)

Reduce the number of workers affected by passive smoking at work to 15% or less by 2017.

(Measures to be taken)

- a. Dissemination
  - Disseminate measures to prevent passive smoking by providing educational opportunities to promote a greater understanding of the health dangers of passive smoking, as well as effective support for employers.
- b. Enhance measures to prevent passive smoking.
  - Conduct thorough measures to prevent passive smoking, such as banning smoking in the workplace, setting a separate place for smoking, and providing ventilation to reduce the concentration of harmful substances at such business establishments as restaurants, hotels, and inns.

C. Cross-industrial approach

(Current status and problems)

- Risk assessment has been progressively introduced, while efforts have been delaying at small- and medium-scale business establishments. The concept of risk assessment should include all aspects of safety and health. However, the focus has been on safety alone, resulting in an inadequate approach to occupational health.

<<Progress in the introduction of risk assessment>>

Scale of business establishment	1000 or more persons	500-999 persons	300-499 persons	100-299 persons	50-99 persons	30-49 persons	10-29 persons
2005	69.5%	49.4%	34.1%	23.9%	26.6%	19.3%	19.3%
2010	86.6%	69.8%	64.7%	58.2%	45.6%	36.5%	29.7%

(Source: Basic Survey on Industrial Safety and Health)

- The number of elderly workers aged 60 and older has increased by nearly 60% from 4.76 million to 7.54 million in the ten years from 2001 to 2010. The ratio of workers aged 60 and older who were involved in occupational accidents also increased from 14.5% to 20.5% in the ten years from 2002 to 2011. Elderly workers aged 60 and older have a higher incidence rate of occupational accidents. As the number of elderly workers will continue to rise, there is a need to enhance the prevention of occupational accidents associated with physical functions deteriorated due to aging and underlying diseases.

<<Change in the number of elderly workers>> (Unit: 10,000 persons)

	2001	2003	2005	2007	2009	2010
Number of employees	5,369	5,335	5,393	5,523	5,460	5,463
Workers aged 60 and older	476 (8.9%)	510 (9.6%)	545 (10.1%)	624 (11.3%)	713 (13.1%)	754 (13.8%)

(Source: Labour Force Survey: The figures in parentheses for workers aged 60 and older indicate the ratio relative to all employees.)

- At least one out of every three workers is a non-regular employee. It is thus necessary to assess the current status of safety and health activities and occupational accidents regarding non-regular employees.

**(Measures to be taken)**

**1) Disseminate and promote risk assessment.**

**a. Promote the introduction of risk assessment and occupational safety and health management system at small- and medium-scale business establishments.**

- Promote the introduction of risk assessment to small- and medium-scale business establishments. Based on the progress of such introduction, promote the introduction of occupational safety and health management system at small- and medium-scale business establishments that have taken an advanced approach to risk assessment.
- In order to help small- and medium-scale business establishments introduce occupational safety and health management system, prepare a “manual to introduce a management system at small- and medium-scale business establishments” that gives explanations written in an easy-to-understand manner. Utilize occupational accident prevention organizations and occupational safety & health consultants to promote the introduction of occupational safety and health management system at small- and medium-scale business establishments.

**b. Promote risk assessment by principal employers and related contractors according to their roles.**

- For the construction industry, provide instructions in collaboration with the Construction Safety and Health Organization so that the principal employers and related contractors conduct risk assessment according to their roles (e.g., cases where principal employers conduct risk assessment on issues that contractors find difficult to deal with), and then take necessary measures based on the assessment.

**c. Promote risk assessment in the field of occupational health.**

- In order to ensure the use of toxic chemical substances under appropriate control regardless of being regulated by law, promote the risk assessment of chemical substances. Small- and medium-sized business establishments should be fully informed of the control banding developed to enable the risk assessment of chemical substances, without entailing the necessary expertise accountable for such use. (Re-posted).
- Promote the preparation of manuals, etc. in the field of occupational health that addresses back pain and heat stroke, for example, to promote risk assessment.

**2) Measures for elderly workers**

**a. Measures to prevent occupational accidents associated with deteriorated physical functions**

- The number of elderly workers is rising in line with our aging population and the promoted employment of elderly workers. The number of occupational accidents involving elderly workers is also rising. Instruct employers, in collaboration with occupational accident prevention organizations, to promote actions that reduce residual risks by eliminating uneven floor levels and installing handrails, and ensure appropriate lighting and physical exercise to prevent the deterioration of physical functions at workplaces with a high ratio of elderly workers, by referring to the collection of occupational accident cases.
- For elderly workers, provide education and publicize the danger of an increased risk of occupational

accidents in association with deteriorated physical functions and underlying diseases, as well as the issues to be addressed by the workers themselves.

**b. Prevent occupational accidents associated with underlying diseases, etc.**

- For workers with a high risk of health disorders such as underlying diseases, encourage those workers to pursue comprehensive health control by themselves. Raise caution so as to assess self-reported health conditions, and practice daily work management and labour control to avoid operations where one's health condition could result in an occupational accident.
- Regarding construction work where poor physical condition could cause serious occupational accidents, promote the checking of workers' health conditions before starting work, and then determine appropriate work assignments based on the check in cooperation with the Construction Safety and Health Organization.
- Health guidance and follow-up measures are provided based on the results of regular health examinations. Appropriate instructions and measures are necessary for the health management of workers, and also necessary from the standpoint of preventing occupational accidents, as underlying diseases could trigger accidents. Such an approach should be ensured and publicized through industrial doctors and regional occupational health promotion centers.

**3) Measures for non-regular workers**

**a. Assess the current status of safety and health activities and occupational accidents regarding non-regular employees, and then consider related measures.**

- Assess the actual safety and health activities (e.g., initial education and health examinations, occurrence of occupational accidents involving part-time workers and other non-regular employees). Discuss the necessary measures based on the results.

**b. Clarify responsibility based on diversified styles of employment.**

- The styles of employment are becoming increasingly diverse and complicated, such as self-employed contractors in the construction industry and contracted work in the manufacturing industry. In order to clarify who is responsible for preventing occupational accidents, promote the clarification of those responsible to prevent occupational accidents when giving instructions to work sites where various employment patterns coexist.

**(2) Efforts to prevent occupational accidents in coordination/collaboration with governmental agencies, occupational accident prevention organizations, and industrial groups, etc.**

**(Current status and problems)**

- Occupational accidents are decreasing over the longer term, but serious accidents still occur frequently in the construction and manufacturing industries. Occupational accidents have increased in tertiary industries, thereby raising the total number of occupational accidents for two consecutive years since 2010. In order to deal with such a tough situation, it is necessary for governmental agencies to collaborate and cooperate with occupational accident prevention organizations, industrial groups, and safety and health specialists from private organizations.
- Private companies are facing tough business conditions and encountering more difficulties in fostering sufficient human resources to be exclusively in charge of safety and health issues. In response to requests from those companies, it is necessary to consider establishing special organizations in charge of safety and health issues, as well as a framework whereby companies can utilize these special organizations.

**(Measures to be taken)**

The central government will intensively engage in measures as stipulated in (1) above. In addition, it will promote measures to prevent occupational accidents by coordinating with private organizations, specialists, and relevant governmental agencies, initiating private activities, and cooperating with relevant organizations.

**1) Utilize specialists and occupational accident prevention organizations.**

**a. Foster and utilize specialists in the field of safety and health.**

- Foster occupational safety & health consultants (i.e., specialists in the field of safety and health) and enhance their capacity. Regarding special technical operations, consider a framework to further utilize occupational safety & health consultants and other specialists with high expertise from private organizations, for the purpose of improving the standard of safety and health at the workplace.
  - Consider measures to effectively utilize human resources experienced in safety and health activities in various industries, in order to improve the level of safety and health at the workplace.
  - In order to promote regional safety and health measures by utilizing the knowledge and know-how of specialists, promote the utilization of a specialist conference for labour and management on safety and health.
- b. Vitalize the activities of occupational accident prevention organizations.**
- The situations surrounding occupational accidents are becoming more severe. Occupational accident prevention organizations are playing increasingly important roles as specialist groups with the most advanced know-how regarding the prevention of occupational accidents. Their roles include promoting activities to prevent occupational accidents in industry, collecting information on preventing occupational accidents, and serving as an educational organization. In order to enhance these roles, governmental agencies should proactively provide information on occupational accidents, and continuously provide necessary support for activities to prevent occupational accidents in consideration of the focused measures of this project.
  - As the baby-boom generation begins to retire and the management environment subsequently deteriorates, even manufacturers with a long history and experience in safety and health activities may find it difficult to maintain and ensure safety and health systems. In order to boost the level of safety and health activities in small-scale business establishments with weak systems, support the instruction/aid activities provided by the Japan Industrial Safety and Health Association (re-posted).
  - Encourage occupational accident prevention organizations to conduct the following activities in the spirit of the Occupational Accident Prevention Organizations Act:
    - (a) Formulate and implement specific plans at their own responsibility regarding technical instructions and aid for activities to prevent occupational accidents in the industry in charge.
    - (b) In order to encourage employers to voluntarily and systematically improve the level of safety and health, formulate various technical guidelines according to specific industries, and utilize safety and health managers to implement the guidelines.
- 2) Ensure that coordination with industrial groups is effective.**
- A cooperative relationship with industry groups is indispensable to promote safety and health measures. Especially focus on tertiary industries. Have discussions with the groups about forming relationships with major industry groups for each measure, and on how to promote measures for proceeding with cooperative efforts with the industries.
  - Support industry groups and labour unions at the national or local level for conducting a survey and research in the field of safety and health.
- 3) Foster and utilize external specialist organizations regarding safety and health management.**
- a. Foster and utilize industrial health organizations and specialists.**
- Regarding industrial health activities that include measures for mental health, promote improving the quality of industrial health organizations formed by industrial doctors and industrial health specialists, and promote the use of those industrial health organizations.
  - In order to ensure workers' health in small-scale business establishments with less than 50 workers, promote industrial health activities for small-scale business establishments by enhancing the support provided by the central government.
- b. Utilize external specialist organizations in safety and health operations at the workplace.**
- Gather human resources specializing in safety and health, including occupational safety & health consultants in charge of safety and health at companies, and then foster them as part of external specialist organizations that indirectly support safety and health managers at companies. Promote

establishing a system and environment where employers can easily utilize external specialist organizations to fulfill their responsibility as business operators. Provide necessary support for small-scale business establishments when they utilize such external specialist organizations.

**(3) Promote awareness reform toward safety and health in society, at companies, and among workers.**

**(Current status and problems)**

- Measures for safety and health are a problem that affects the safety and health of 53 million workers across Japan (and could be considered a national issue when including their families). However, the measures may not be fully shared in companies or even well recognized by society as a whole.
- In order for companies to proactively promote measures for safety and health, it is important for top management to maintain a strong commitment toward protecting the safety and health of workers.

**(Measures to be taken)**

In order to realize a society where all employers aim for a work environment and labour conditions in consideration of workers' safety and health, visualize the level of safety and health in industries and companies to establish a framework that allows social evaluation. Work directly on workers and all citizens to raise their awareness of safety and health measures throughout society.

**1) Raise top management's awareness of workers' safety and health.**

- Raise top management's awareness of workers' safety and health at companies that make no proactive efforts to prevent occupational accidents through various methods and opportunities.

**2) Proactively publicize industries and companies that achieve a high-level work environment.**

**a. Indicate the level of a work environment in the form of indicators.**

- Not limited to situations where occupational accidents occur and efforts are made to prevent occupational accidents, develop indicators to comprehensively and objectively evaluate items that may affect workers' health.
- Including the previously established outcomes, such as the comfortable workplace check sheet (software), visualize the developed indicators, and have them widely used.

**b. Proactively publicize industries and companies that achieve a high-level work environment.**

- Have occupational accident prevention organizations, occupational safety & health consultants, and other specialists evaluate industries and individual companies with their consent. Promote the proactive publication of companies evaluated highly on web pages, etc., so that job seekers can easily find companies with a good work environment.

**3) Measures for companies where serious occupational accidents occurred but improvement is yet to be seen**

- Regarding companies where serious occupational accidents have occurred repeatedly due to a violation of laws, consider setting a certain criteria and publicizing on a web page, etc. the company name and situations where the occupational accidents occurred, in order to promote a steady improvement of the work environment.

**4) Raise awareness of safety and health and improve hazard sensitivity among citizens throughout Japan to prevent occupational accidents.**

**a. Campaign activity to prevent unsafe behaviors and improve hazard sensitivity**

- Regarding the risks triggered by unsafe behaviors unconsciously demonstrated by workers and also seen in cases of occupational accidents, proactively provide information for workers and foremen as well to raise awareness of safety and hazard sensitivity among individual workers, and prevent occupational accidents.

**b. Raise awareness of safety and health among citizens throughout Japan.**

- Heighten the sensitivity of hazards among citizens throughout Japan so that communities, workplaces, and schools make collaborative efforts to comply with rules necessary to ensure safety and health at the workplace.
- Conduct a survey and research to explore ideal safety and health education at universities. Based on the

results, consider measures to include safety and health education in college education.

**(4) Promote measures based on scientific grounds and international trends.**

**(Current status and problems)**

- Measures for safety and health are based on scientific grounds, and require the promotion of scientific research. However, the resources for scientific research may not be sufficiently secured.
- Measures for safety and health should be promoted based on the knowledge obtained overseas and via trends in measures, and in consideration of compliance with regulations and standards.

**(Measures to be taken)**

**1) Promote measures based on scientific grounds in collaboration with the National Institute of Occupational Safety and Health, etc.**

**a. Concerted efforts with the National Institute of Occupational Safety and Health**

- Enhance the consistency and collaboration of safety and health measures with surveys and research conducted by the National Institute of Occupational Safety and Health, so as to promote measures based on scientific grounds.
- Regarding research in the field of safety and health, enhance the function of the National Institute of Occupational Safety and Health so that it may play a central role.

**b. Promote research associated with safety and health.**

- In order to expand the horizons of research in the field of safety and health, strive to secure budget for promoting safety and health research, and ensure that useful information can be utilized for safety and health research.

**2) Promote measures based on international trends.**

- Measures for safety and health should be promoted based on the knowledge obtained overseas and via trends in measures. Make efforts to obtain the latest knowledge and international trends through survey and research activities conducted by the National Institute of Occupational Safety and Health, and by communicating with specialists and other relevant parties overseas, in order to ensure consistency with international measures and regulations.

**(5) Enhance the efforts made by clients, manufacturers, and the managers of facilities.**

**(Current status and problems)**

- The Occupational Safety & Health Law and related regulations have introduced a system whereby the principal employers assume certain responsibility from said legal enactment. In the construction and shipbuilding industries, duties are imposed on the specified principal employers, and violations are subject to strict punishment. The responsibilities of clients in other industries are limited and more lenient. It is necessary to tighten the measures over clients so as to avoid situations where outsourcing contractors evade duties and the responsibility to consider measures for safety and health. Measures are also required to prevent clients from placing orders at extremely low prices that prevent contractors from securing the expenses for safety and health measures.
- Efforts have also been made to improve the structural/functional safety of machinery at industrial sites by setting comprehensive safety standards for machinery. A framework also should be considered where the suppliers of machinery and equipment, such as manufacturers, assume certain responsibility under the Occupational Safety & Health Law, just like employers who have their workers use machinery and equipment must assume responsibilities.
- Numerous construction codes have been stipulated as a technical standard for machinery under the system established by the Occupational Safety & Health Law. Continuous review is required to accommodate advanced technology. More prompt measures should be taken by citing the Japanese Industrial Standards (JIS), etc. as much as possible.
- There are workplaces where workers having various employment statuses coexist or where suppliers frequent without forming an employment relationship. In order to prevent occupational accidents at such workplaces, it is necessary to consider the responsibility of the facility manager, in addition to the legal system that stipulates the responsibility of individual employers.

### **(Measures to be taken)**

In addition to the responsibility of employers, enhance the upstream efforts made for safety and health, such as by clients and manufacturers.

#### **1) Enhance the efforts made for safety and health by clients, etc.**

##### **a. Enhance the efforts made for safety and health by clients, etc.**

- It is necessary to tighten the measures over clients so as to avoid situations where outsourcing contractors evade duties and the responsibility to consider measures for safety and health. Measures should also be tightened in industries other than construction to prevent clients from placing orders at extremely low prices that prevent contractors from securing expenses for safety and health measures.
- Explore ideal management responsibility for safety and health in cases where a facility manager allows a third party to use the facility.

##### **b. Enhance the efforts made by cargo owners (re-posted).**

- Including the preventive measures taken against occupational accidents at facilities managed by cargo owners, introduce the regular use of model transportation contracts in order to clarify the role sharing between land transportation operators in charge of transporting the cargo and cargo owners who order transportation, and then promote measures to be conducted by each party according to the shared roles.

##### **c. Request for the clients of construction work (re-posted)**

- Request the clients of construction work, in coordination with the Ministry of Land, Infrastructure, Transport and Tourism, to include issues on safety and health in the specifications, secure the expenses necessary to ensure safety and health in construction work, and provide the expenses to the relevant contractors without fail. Moreover, request the relevant parties to convey that the same request is also applicable to public works ordered by governmental agencies.
- In particular, intensive measures should be taken (in collaboration with the Ministry of Environment and local governments) for demolition work on buildings that contain asbestos, in order to prevent the ordering of work where insufficient expenses and a shorter work period make it difficult to take preventive measures against asbestos exposure and dust.

#### **2) Enhance the safety measures for machinery at its production stage.**

Serious occupational accidents due to machinery and equipment still frequently occur in the manufacturing industry. These accidents may cause disability. Retailers, etc. also suffer occupational accidents due to food processing machines, etc. Efforts should thus be made to improve the structural/functional safety of machinery and equipment.

##### **a. Promote measures to prevent machinery accidents (re-posted).**

- The causes of machinery accidents at work sites should be elucidated. The structural and functional safety of machinery and equipment should also be improved. In cases of questionable machinery and equipment safety, facilitate improvement by the suppliers of the machinery and equipment, such as the manufacturers.

##### **b. Promote improvement in the structural/functional safety of machinery.**

- In order to promote improvement in the structural/functional safety of machinery and further reduce occupational accidents due to machinery, risk assessment should be conducted at the stages of design, production, and remodeling. Measures to reduce risks and report hazards should be conducted without fail. Measures should be enhanced so that the suppliers of machinery and equipment (e.g., the manufacturers) follow these procedures regarding all machinery and equipment used at the work site.
- In collaboration with machinery-related industries, consider establishing a framework to evaluate and utilize safety standards and criteria by the type of machinery. Encourage the use of machinery that satisfies a certain level of safety standards and criteria.

##### **c. Introduce a system to publicize machinery accidents.**

- Based on information regarding occupational accidents due to machinery, consider a system to publish the details of occupational accidents as well as the manufacturers of the relevant machinery, and have the manufacturers collect and improve the machinery in case a serious defect in the machinery causes a

serious occupational accident, the seller of the relevant machinery cannot be identified, or when similar accidents must be prevented.

- Regarding cases where the method of use by the user is apparently problematic, and the problem cannot be dealt with at the production stage, publish specific details of occupational accidents that occurred due to wrong usage, so as to widely inform those concerned, and prevent similar accidents.

d. Review of the technical standards of machinery, etc.

- In order to prevent occupational accidents due to machinery, etc., reconsider the laws and regulations under the Occupational Safety & Health Law relevant to the technical standards of machinery, etc. In order to set a technical standard for construction code, proactively cite the Japanese Industrial Standards (JIS) so as to promote the consistency of technical standards.

3) Consider measures in view of human/social impact on other than workers.

- Some occupational accidents may cause an impact on nearby residents (e.g., asbestos damage suffered by nearby residents, residences damaged by a collapsing crane, passers-by harmed by collapsing scaffolding, neighboring area damaged by explosions and subsequent fire). The protection of workers as well as the prevention of human/social impact caused by accidents at industrial sites should also be considered. And further collaboration with the measures of other ministries and agencies should also be promoted.

(6) Measures in response to the Great East Japan Earthquake and the accident at TEPCO's Fukushima Dai-ichi Nuclear Power Plant

(Current status and problems)

- The Great East Japan Earthquake in March 2011 caused extensive and widespread damage. Various types of construction work have entered full-scale operation for restoration and reconstruction. It is thus necessary to ensure full compliance of measures to prevent occupational accidents in accordance with the situations in the disaster-affected areas.
- The drastically rising demand for restoration and reconstruction is drawing construction firms, engineers, and skilled workers to the affected areas, causing a shortage of human resources in areas not affected by the disaster. There are concerns that this may make it difficult to maintain the quality of human resources and work site management throughout Japan.
- A thorough radiation protection is required for decommission work at TEPCO's Fukushima Dai-ichi Nuclear Power Plant, which caused a major accident in association with the Great East Japan Earthquake. The radiation protection is also needed for decontamination work in the areas where radioactive materials have been scattered by the accident. Moreover, falling from roofs and other high places, and accidents due to heavy machinery and other occupational accidents must be thoroughly prevented in decontamination operations and restoration work for life-related infrastructure.

<<Occupational accidents related to restoration and reconstruction from the Great East Japan Earthquake>>

Type of accident Industry	Falling to a lower level	Falling	Crash	Falling objects	Collapse	Being crashed	Caught or trapped	Cuts/ abrasions	Other	Total
Construction (fatalities)	255 (15)	40 (0)	26 (0)	60 (2)	24 (2)	33 (2)	66 (5)	40 (1)	33 (3)	577 (30)
Manufacturing (fatalities)	14 (1)	3 (0)	1 (0)	5 (1)	0 (0)	4 (1)	7 (0)	0 (0)	6 (0)	40 (3)
Land transportation operators (fatalities)	4 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (0)	1 (0)	0 (0)	3 (0)	10 (0)
Commerce (fatalities)	5 (0)	1 (0)	0 (0)	4 (0)	1 (1)	0 (0)	1 (0)	1 (0)	6 (0)	19 (1)
Other (fatalities)	12 (0)	7 (0)	1 (0)	7 (0)	2 (0)	4 (0)	3 (0)	1 (0)	8 (3)	45 (3)
Total (fatalities)	290 (16)	51 (0)	28 (0)	76 (3)	27 (3)	43 (3)	78 (5)	42 (1)	56 (6)	691 (37)

\* Accumulated total in the period from March 11, 2011 (when the Great East Japan Earthquake occurred), to December 31, 2012

(Source: Report on Fatal Accidents and Report on occupational casualties)

**(Measures to be taken)**

**1) Measures for restoration/reconstruction from the Great East Japan Earthquake**

**a. Prevent occupational accidents in restoration/reconstruction work.**

- Steadily implement measures to prevent occupational accidents in restoration/reconstruction work conducted in areas damaged by the Great East Japan Earthquake. Also, steadily implement measures to prevent falling from high places and accidents due to heavy machinery in decontamination operation and restoration work for life-related infrastructure conducted in Evacuation Directive Lift Prepared Areas.

**b. Conduct comprehensive safety and health control at construction sites (re-posted).**

- Conduct comprehensive safety and health control at construction sites by implementing safety and health education for new workers (newcomers) who have just entered the construction industry.

**2) Measures to be taken in response to accidents in the nuclear power plant**

**a. Establish administrative structure to deal with nuclear power plant accidents.**

- Given the lessons learned through the experience of the accident at TEPCO's Fukushima Dai-ichi Nuclear Power Plant, regularly confirm the status of preparations, such as enforcement of management systems of radiation exposure control and stockpile of personal dosimeters to properly conduct exposure dose management in case of nuclear accidents.

**b. Radiation hazard prevention in decommission work of the affected nuclear power plant and decontamination work.**

- Ensure safety and health management to conduct radiation protection and special education for all workers engaged in decommissioning of TEPCO's Fukushima Dai-ichi Nuclear Power Plant.
- Implement proper long-term health care including mental health care for the emergency workers at TEPCO's Fukushima Dai-ichi Nuclear Power Plant.
- Conduct proper radiation hazard prevention for workers engaged in decontamination work and restoration/reconstruction work in designated decontamination areas.