厚生労働省 ひと、くらし、みらいのために Ministry of Health, Labour and Welfare

Novel Approach to Chemical Hazard Control; Case of Japan

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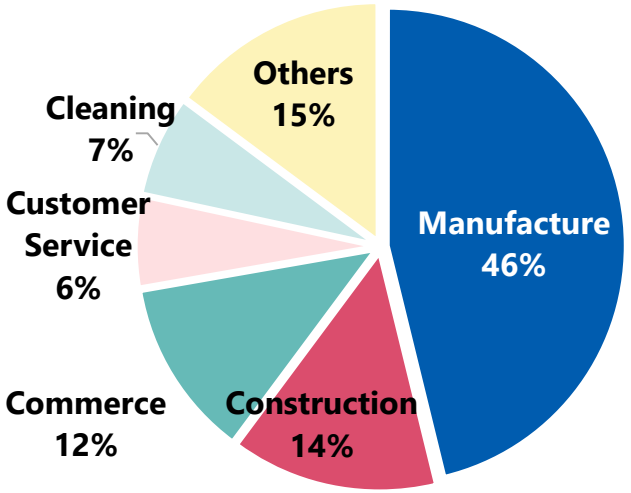
Background: Issues on Chemical Hazard Control at Work

80% of chemical hazard accidents are out of Special Regulation Substances

<Status of Chemical Hazard Incidents (2021)>

Causative agent	#
Hazardous material	156
Explosive material	29
Flammable gas	38
Other chemicals (not identify)	249
Sum	**472**



	Incidents (2018)	Health disorders		
		poisoning	Eye injury	Skin disorder
Special Regulation Substances (123)	77 (18.5%)	38 (42.2%)	18 (20.0%)	34 (37.8%)
SDS required substances other than above	114 (27.4%)	15 (11.5%)	40 (30.8%)	75 (57.7%)
Other chemicals	63 (15.1%)	5 (7.5%)	27 (40.3%)	35 (52.2%)
Not identified	162 (38.9%)	10 (5.8%)	46 (26.7%)	116 (67.4%)
合計	416	68 (14.8%)	131 (28.5%)	260 (56.6%)

500 cases of work-related chemical accidents annually

Chemical accidents occurs not only **manufacture** industry, but also **construction and tertiary industry.**

Type of Hazardous Work	Results of working environment measurement Ratio of **"Category III"** workplace				
	1996	2001	2006	2014	2019
Dust work	5.7%	5.6%	7.4%	7.7%	6.6%
Organic solvents related work	3.8%	3.3%	4.3%	5.0%	3.7%
Specified chemicals related work	1.2%	1.2%	2.9%	5.7%	4.2%

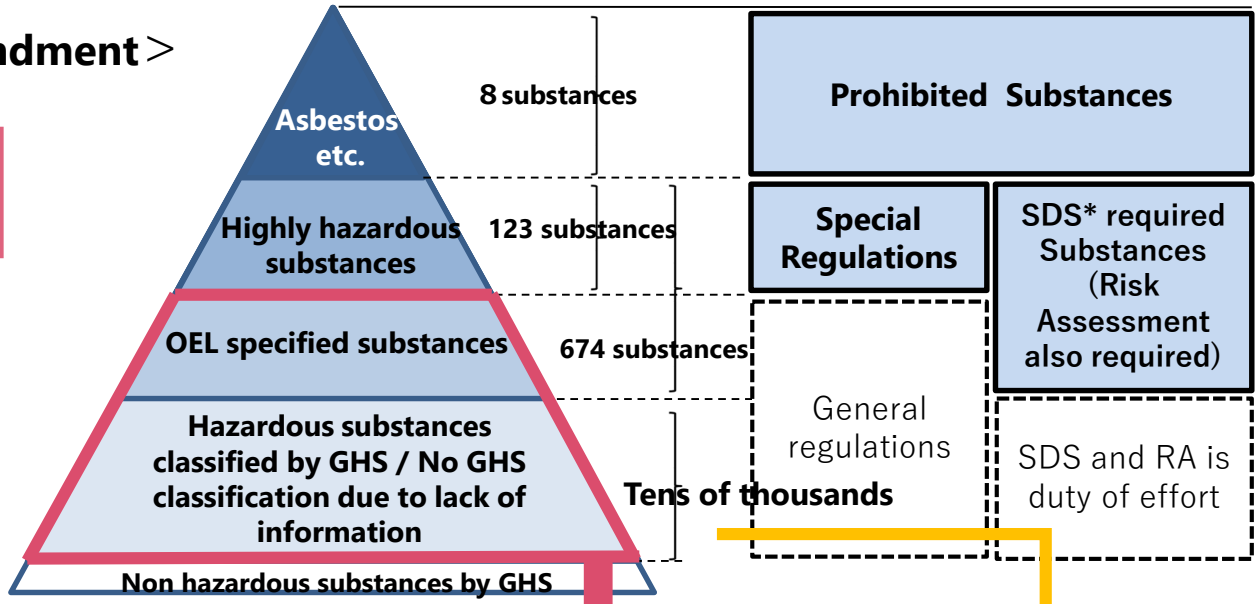
Increasing the ratio of "**Category III workplaces**", which need immediate improvement of working environment

Novel Approach to Chemical Hazard Control under Industrial Safety Act

＜Before Amendment＞

Special regulations apply to **limited number of materials**

Focus on **non-regulated substances** by Special Regulations



*SDS: Safety data sheet

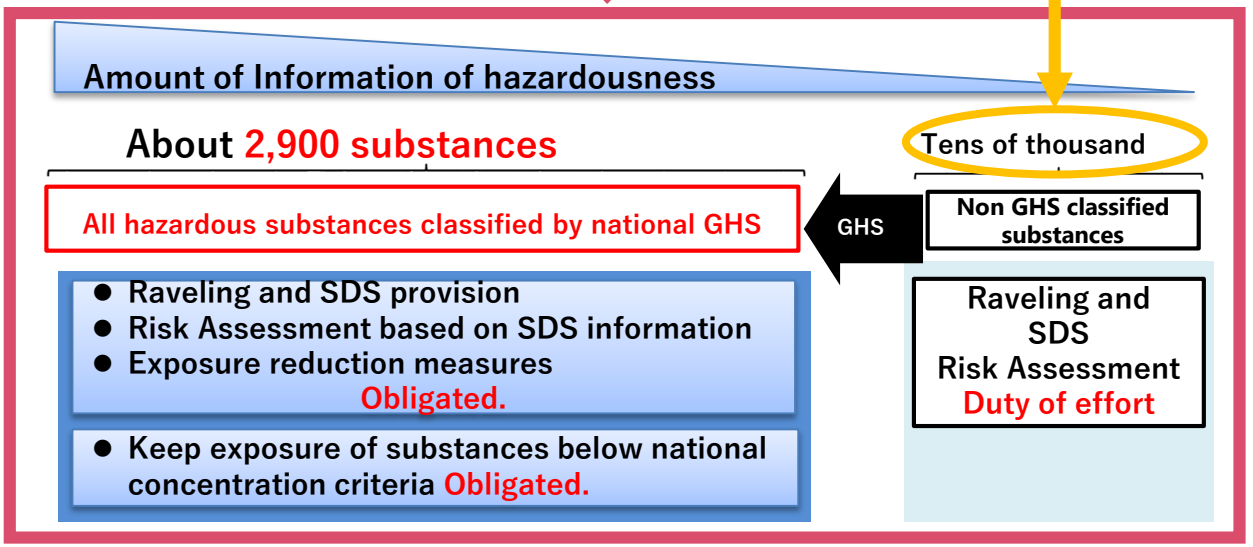
＜After Amendment＞

Obligate the followings for **all hazardous substances** classified by national GHS*.

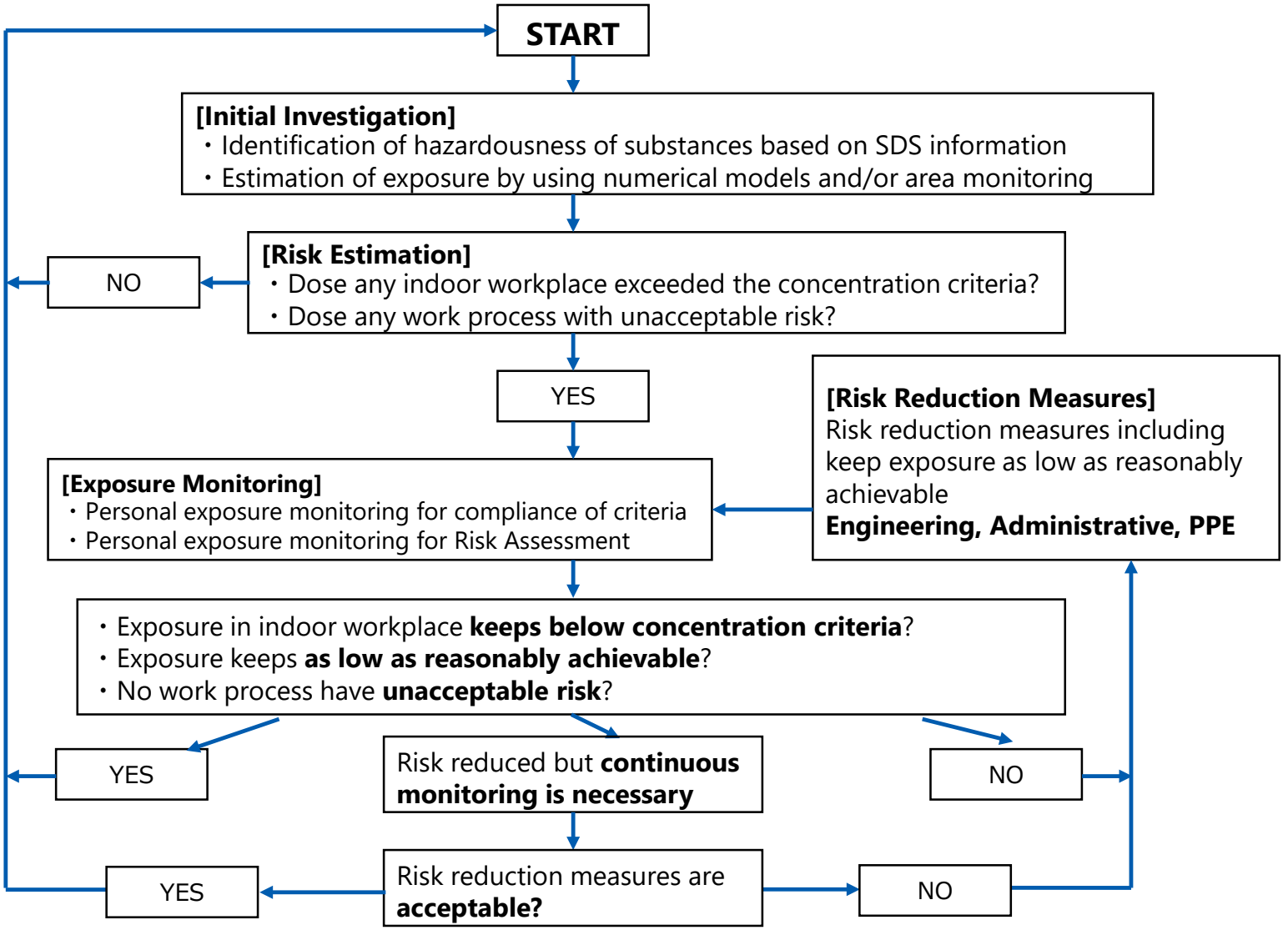
- **Keep exposure as low as reasonably achievable**
- Keep exposure below **national concentration criteria**

Measures to achieve those goals are **left to employers**, based on the results of risk assessment

***GHS** (Globally Harmonized System of Classification and Labelling of Chemicals)



A Structured Approach for Chemical Hazard Control (Flow-chart)



Establishment of chemical hazard management system
Human resources development for chemical hazard officers and experts

Chemical substance control manager

- ✓ Identify **Raveling and SDS** information
- ✓ Implement **Risk assessment of chemical substances**
- ✓ Take **Risk reduction measures** based on the results of RA
- ✓ Record keeping
- ✓ **Training/Education** for workers
- ✓ Management of **provision of SDS and raveling**
- ✓ **Emergency response** to chemical accidents

Person in charge for personal protective equipment

* In case of using PPE for risk reduction only

- ✓ Selection of PPE (personal protective equipment)
- ✓ Maintenance of PPE

Foreman

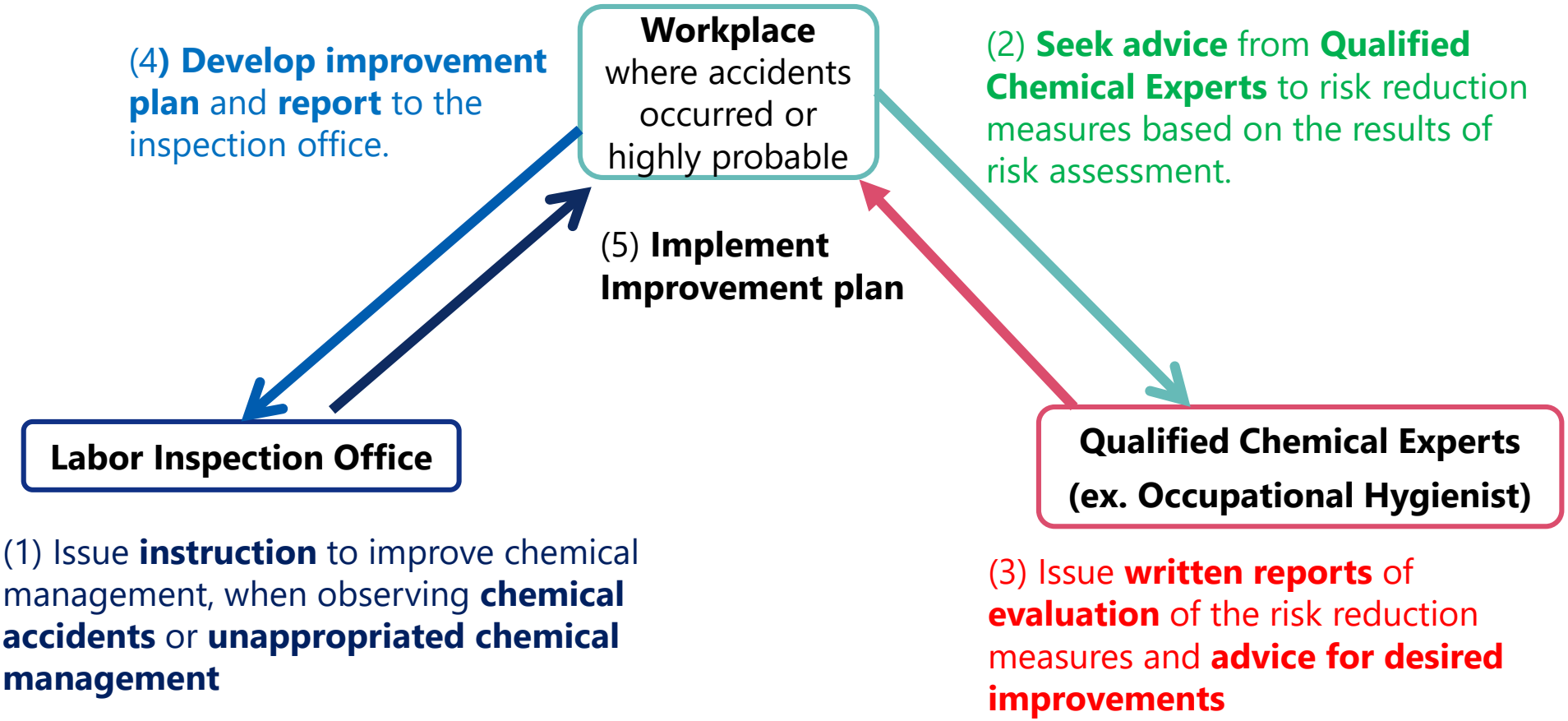
Workers **Workers**

Consultation, advice and instruction by Qualified Chemical management Experts

National qualification of Chemical Management Experts

Mechanism for Compliance and Improvement

Improvement Instruction by Labour Inspection Office, including requiring experts' advice



Must Items for National Chemical Hazard Control Program

- **Provision of Information of Hazards**
  - Ensure provision of **Safety Data Sheets (SDSs)** from manufactures and improvement of contents SDS
- **Improve In-house management**
  - Train in-house **chemical management officers**
  - Develop and disseminate simple **numerical models** and **risk assessment (RA) tools** for chemicals (ILO's control banding, Create Simple in Japan, etc.)
  - Develop **industry and work process specific manuals** for RA (especially for **Construction and Tertiary industry**)
- **Qualify External resources**
  - Qualify **chemical management experts** and facilitate small and medium enterprises (SME) to consult with experts
  - Qualify **exposure monitoring agencies** at work and other **occupational hygiene service agencies**