

Latest Progress on Chemical Management in Korea

July 2025



환경부

Ministry of Environment



Contents



I.3 Chemical Laws

II. Manufacture/Import under CCA

III. Revised Safety Management System



化學物質, 化学物質, 化学物质, Chemicals

3 Chemical Laws

K-REACH, CCA, K-BPR

Hazard/Risk

All substances

Have information
& Prevent harm to the people

MOE

Occupational Safety and Health Act

Hazard/Risk

Except consumer product

Focus on
worker protection

MSDS, PSM

MOEL

High-pressure Gas Safety Control Act

Unique properties of high-pressure

ex) LPG, ammonia

Physical standards
(incl. container)

MOTIE

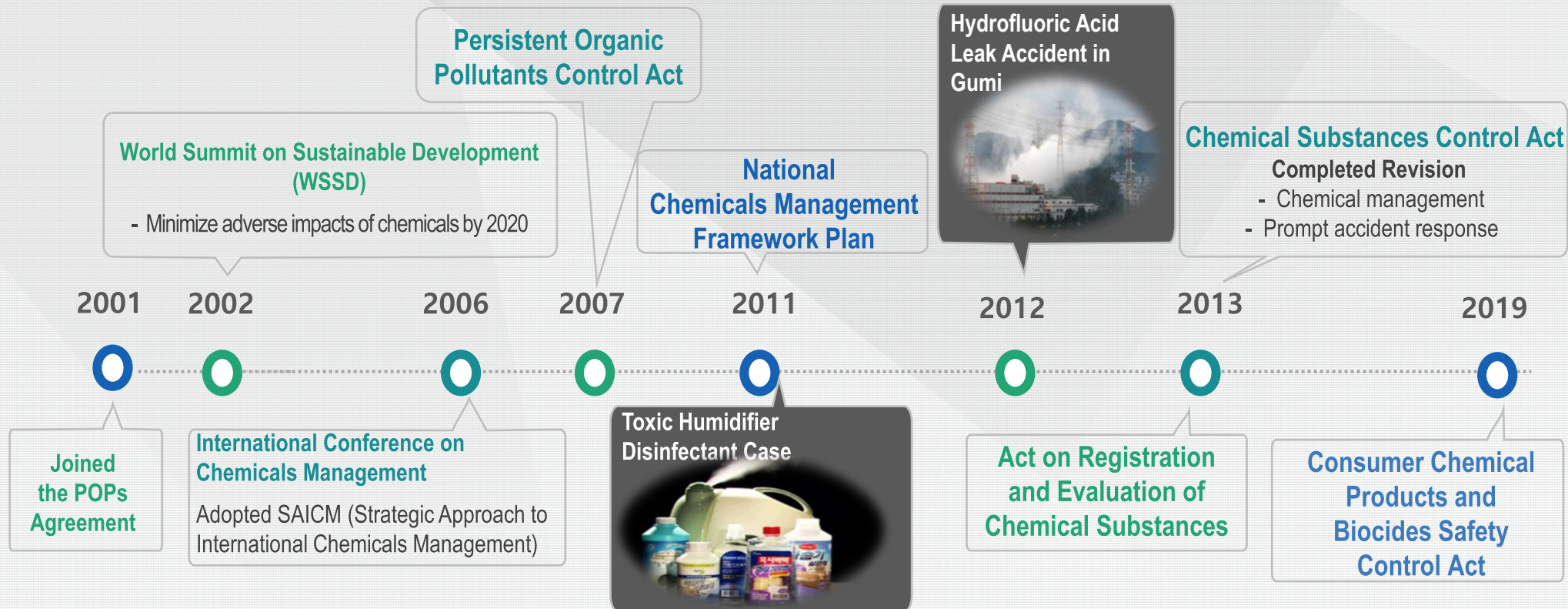
Act on Safety Control of Hazardous Substances

Flammability /Ignitability

ex) red phosphorus, petroleum

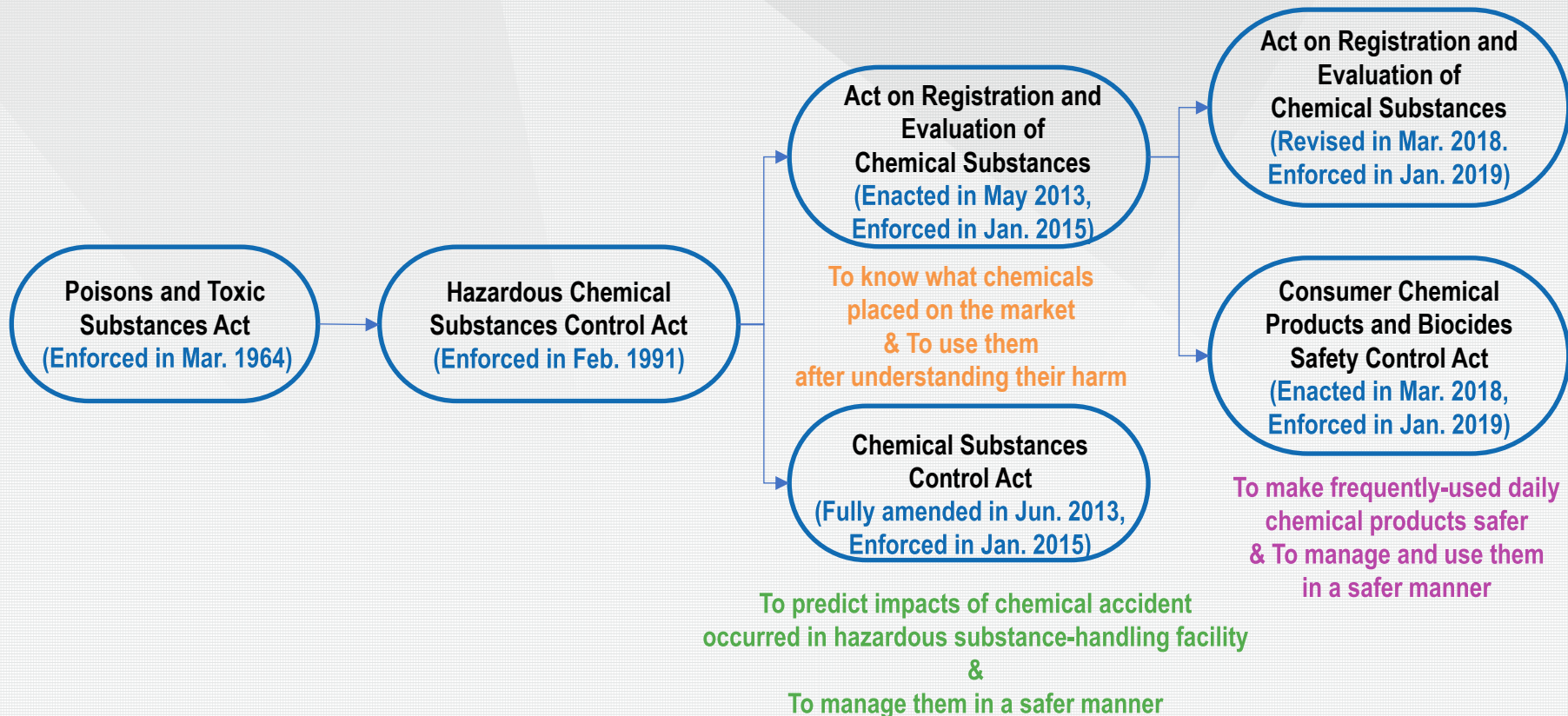
Focus on
fire prevention

National
Fire Agency



- ◇ **Poisons and Toxic Substances Act** (enacted in 1963)
 - Prevent health and hygiene harms by properly managing poisons and toxic substances
- ◇ **Hazardous Chemical Substances Control Act** (enacted in 1990)
 - Protect public health and the environment by reviewing hazard of chemical substance and managing hazardous substance appropriately
- ◇ Establish **advanced chemical management system** (2006-2014, by amending the Hazardous Chemical Substance Control Act)
 - Promote regulatory policies based on scientific evidence and risk assessment (e.g. restriction on handling, designation of prohibited substance)
- ◇ Strengthen **each stage of chemical accident management** such as prevention, response and recovery (by fully amending the Chemical Substances Control Act in 2015)

Following the 2011 humidifier disinfectant case and the 2012 Gumi hydrofluoric acid leakage accident, **Hazardous Chemical Substances Act was separated and amended into 3 laws, including the Act on Registration and Evaluation of Chemical Substances (K-REACH), to enhance accident prevention, and protect public health and safety.**



Act on Registration and
Evaluation of
Chemical Substances

Chemical Substances Control Act (CCA)

Consumer Chemical
Products and Biocides
Safety Control Act



- Chemicals registration & reporting
- Hazard assessment
- Designation of restricted/prohibited substances, substance subject to permission/intensive control
- Communication of hazard information, etc.

- Chemicals distribution management (e.g. verification and statistical surveys on chemicals)
- Management of hazardous chemical handlers (e.g. business permission)
- Management of hazardous chemicals handling facilities (e.g. plan for chemical accident prevention and management, inspection on handling facility)
- Immediate reporting of chemical accidents & Suspension of facility operation

- Risk assessment of daily use consumer chemical products
- Approval of biocidal substances and products
- Safety standards, etc.

Information Production

Safety and distribution management based on hazard information

Management of
daily use consumer
chemical products

Act on Registration^R and Evaluation^E of Chemical Substances (K-REACH)

- ✓ (Objective) To produce and utilize the information on chemicals distributable on the Korean market
- ✓ (Measure) Registration/Reporting of chemicals manufactured in or imported to Korea → information provision
to the Gov., downstream user (i.e. transferee)
- ✓ (Designation) Toxic Substance/Prohibited Substance/Restricted Substance based on results of
hazard review, risk assessment, etc.

< Example : Data Requirements for Registration >

Differentiation
based on manufacture/import amount

Physicochemical Property

Substance's state
Water solubility
Boiling point
Vapor pressure

Human Health Hazard

Acute oral toxicity
Bacterial reverse mutation
Skin irritation/corrosion
Chromosomal abnormality

Environmental Hazard

Fish acute toxicity
Daphnia acute toxicity
Terrestrial plant acute toxicity
Fish chronic toxicity

Chemical Substances Control Act (CCA)

- ✓ (Objective) To manage every phases of distribution and accident prevention in business place handling hazardous/risky substance in Korea
- ✓ (Accident Prevention) Based on hazard information, processing stability, affected scope of outflow/leakage, technical installation criteria are applied.
- ✓ (Distribution Management) Permission → Business Place Handling Hazardous Substances : information acquisition, annual reporting of handling performance, statistical survey
Handling : manufacture, import, sell, keep/store, transport

< Business Place Management System for Accident Prevention >



Consumer Chemical Products and Biocides Safety Control Act (K-BPR)

- ✓ (Objective) To protect public health and the environment by setting up management and safety standards of chemical products used frequently in our daily life.
- ✓ (Reporting) 35 product types : Out of daily use consumer chemical products that their risks are admitted (i.e. those subject to Safety Verification), product types that safety standards can be developed. (e.g. what prohibited/restricted substances shall not be contained in.) **Compliance with safety standards, checked by the designated testing and inspection agency (validation period of 3yrs)**
- ✓ (Approval) 8 product types : Difficult to develop safety standards. Therefore, NICS reviews the information (i.e. contained substance, manufacture method, risk, etc.) that is submitted by manufacturer or importer, and then issue an approval, if appropriate.

< Example : Daily Use Consumer Chemical Product subject to Safety Verification >

Product Type
subject to Reporting
(35 types)

Detergent
Fabric softener
Air freshener

Product Type
subject to Approval
(8 types)

Daily use consumer chemical product for humidifier
(e.g. fragrance)
Repellent for health protection

e.g. Content-restricted substance
: Benzene in detergent ≤10ppm
(spray and non-spray types for
general use/for car interior)

Chemicals Verification

- ✓ (Objective) To ensure that manufacturer/importer of chemical substance or product confirms by themselves whether the substance is subject to regulations under CCA before manufacture/import
- ✓ (Subject) All substances, including hazardous and even general substances, irrelevant to manufacture or import amount
- ✓ (Information) Product name, exporting country, use, ingredient specification
(incl. chemical names and contents in product, CAS No.)

< Registration/Reporting (K-REACH) & Chemicals Verification (CCA) >

Registration/Reporting of Chemicals

Single substance

To know hazard/risk information
of unknown substance

Relevant to distribution amount

Subject

Objective

Differentiation

Chemicals Verification

Chemical product
(incl. many mixtures)

To confirm whether regulated substance
is contained or not.

Irrelevant to distribution amount

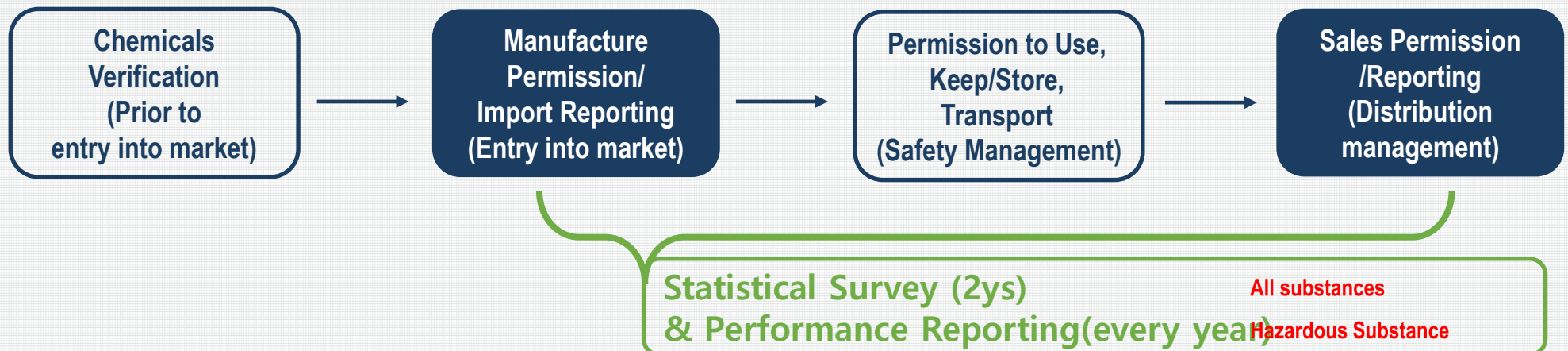
< Exemption >

- Natural materials
(e.g. minerals, LPG)
- Impurities
- Substance
embedded
in a machine

Import Reporting of Toxic Substance

- ✓ (Objective) To know distribution information of imported hazardous substance (e.g. contents, importer) by obliging importer to report it prior to the import, aiming to enhance emergency response and take appropriate management measures.
- ✓ (Info.) Exporting country, product use, information on toxic substance (e.g. chemical name, CAS No., content)
- ✓ (Exemption) Reagent for experiments, research or testing
Standard gas used for correction or measurement of measuring instruments
Imported toxic substance not exceeding 100 kg/y

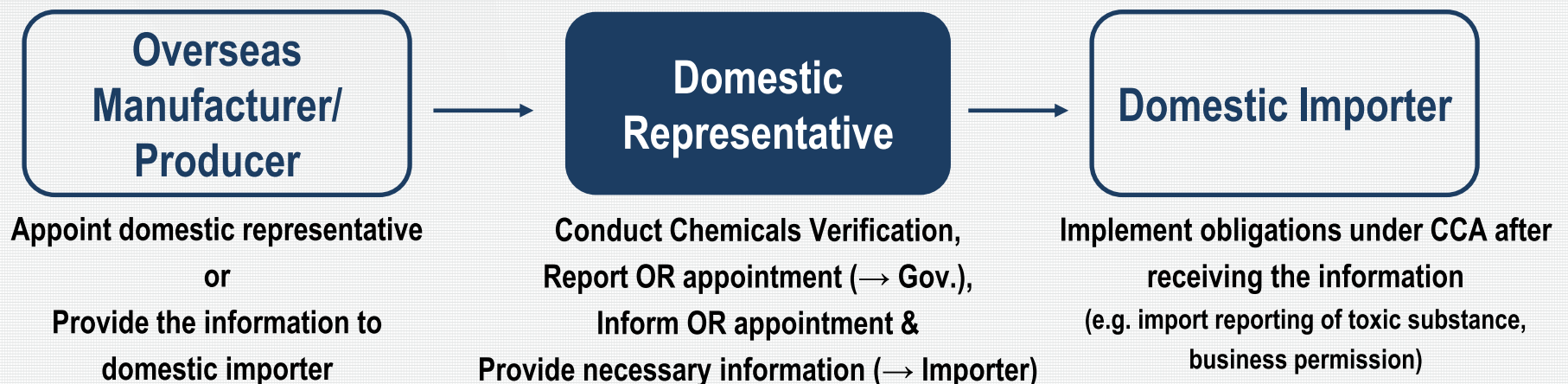
< Overall Management of Hazardous Substance >



Entry into force on 7 Aug.

Domestic Representative (OR) appointed by Overseas Manufacturer/Producer 2025

- ✓ (Objective) To prevent confidential business information (CBI) from be disclosed to domestic importer when importing overseas-manufactured or produced chemical substances to Korea
- ✓ (Issue) Overseas manufacturer/producer hands over the information on components and contents of its product to Korean importer due to the Chemicals Verification system.
- ✓ (Domestic Representative) Overseas manufacturer or producer may appoint an OR (e.g. Korean corporation), and entrust their obligations (e.g. chemicals verification) to OR so that Korean importer can access the information only needed for other obligations under CCA (e.g. For import reporting of toxic substance, accessible to chemical name and content of hazardous substance)



Background

Increasing social burden

- Keep designating “Toxic Substance” → When handling toxic substance, single approach is applied regardless different hazards of each substance.

Issue

Need a differentiated management system

- Single approach management → hazard-based differentiated management

Progress

Improvement based on social consensus (e.g. the Chemical Safety Policy Forum)

- Study on improvement direction of “Toxic Substance” designation and management system
- Study on draft amendment of relevant laws for improvement of “Toxic Substance” designation and management system
- Submit draft amendments of K-REACH and CCA to the National Assembly (Aug. 2023)
- The draft amendment was passed and promulgated by the National Assembly (Feb. 6, 2024)
- ※ It will come into effect after 1.5 years. (Aug. 7, 2025)

✓ (Designation) human acute/human chronic/ecologically hazardous substance based on hazards

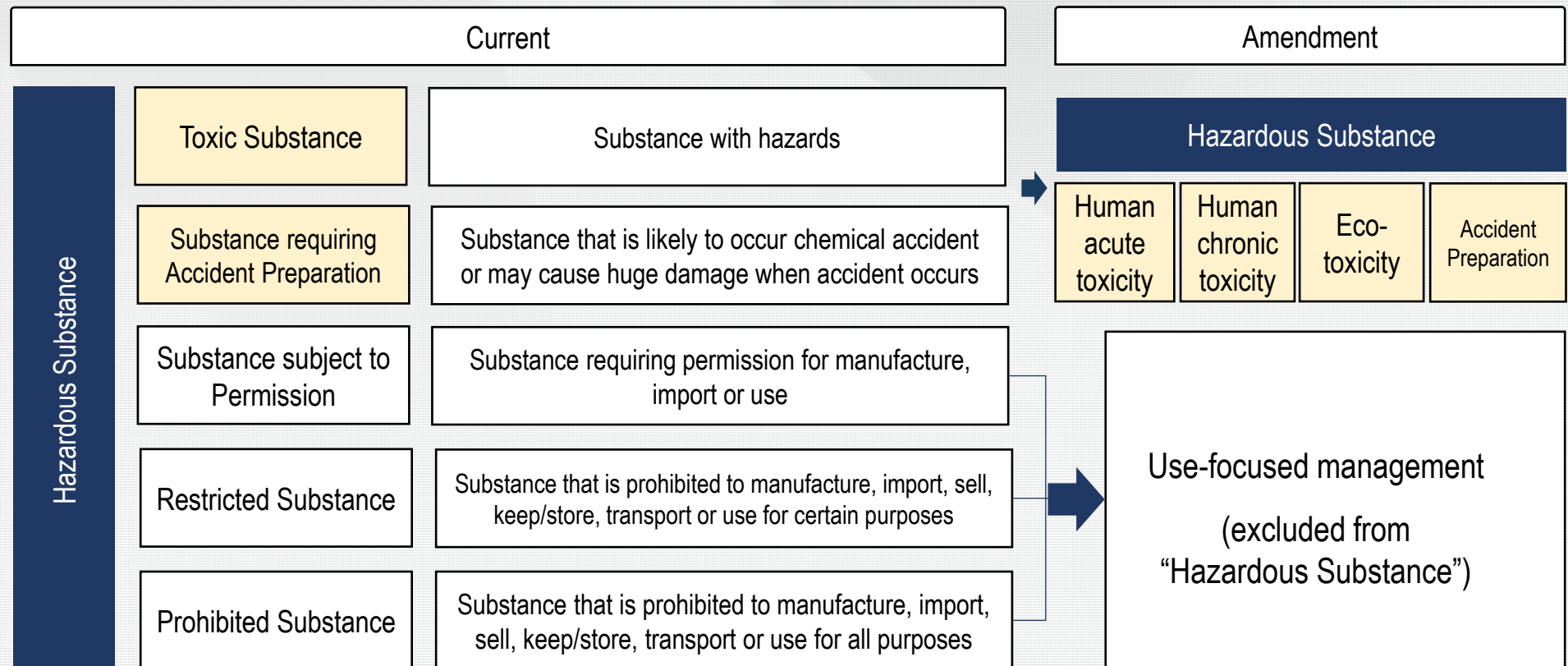
Current		Amendment		
Designation System	Toxic Substance (sulfuric acid, lead, copper oxide, etc.)	Hazardous Substance w/ human acute toxicity (sulfuric acid, etc.)	Hazardous Substance w/ human chronic toxicity (lead, etc.)	Ecologically-Hazardous Substance (copper oxide, etc.)
	Designation regardless of hazardous properties of substance	Immediate damage after exposure	Even low concentration and small amount can harm human when exposed for a long time	Damage to aquatic life when enter water system
Management System	Same standard for all handling facilities, business permission, etc.	Focus on Accident prevention And response	Focus on reducing human exposure	Focus on minimizing environmental emissions (e.g. water, soil)
		ex. Differentiated ratio of non-destructive testing on pipe joints (20% / 5% / 5%)		

Designation & Management of “Substance Requiring Accident Preparation”

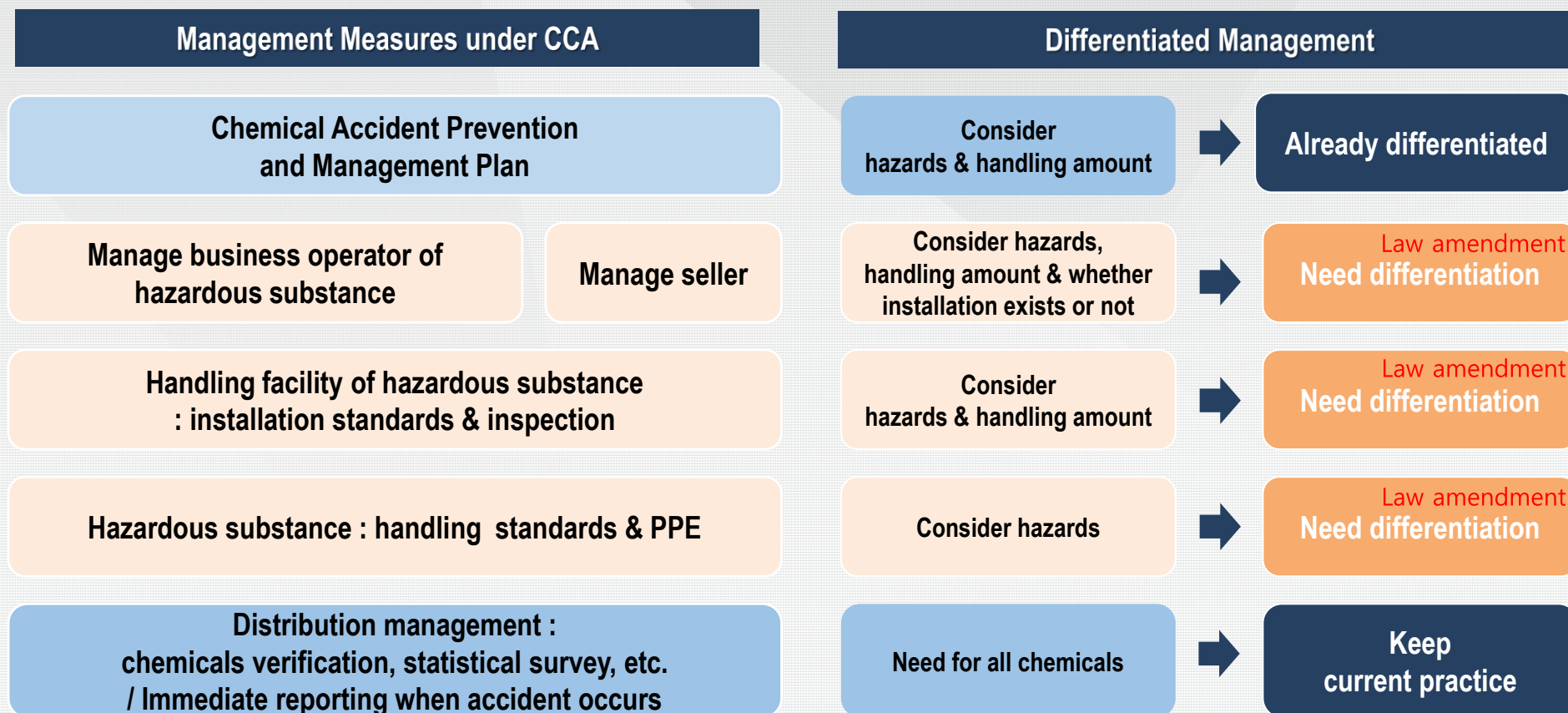
✓ Hazardous Substance (main regulatory issue in CCA) : Revised Scope

(Hazardous Substance) Existing toxic substances and substances requiring accident preparation, which is managed with inspection on handling facility, business permission, etc.

(Restriction/Prohibition Substance & Substance subject to Permission) Exclude from “Hazardous Substance”, and then manage them focusing on their uses, rather than prevention of outflow or leakage.



- ✓ The Gov. differentiates the safety management system according to **business place categories (i.e. Group 1, 2 and Exempted Group)** and **risk levels (i.e. Class A, B and C)** of the Chemical Accident Prevention Management Plan.
(e.g. regular inspection on handling facility, safety diagnosis cycle, business permission and reporting)

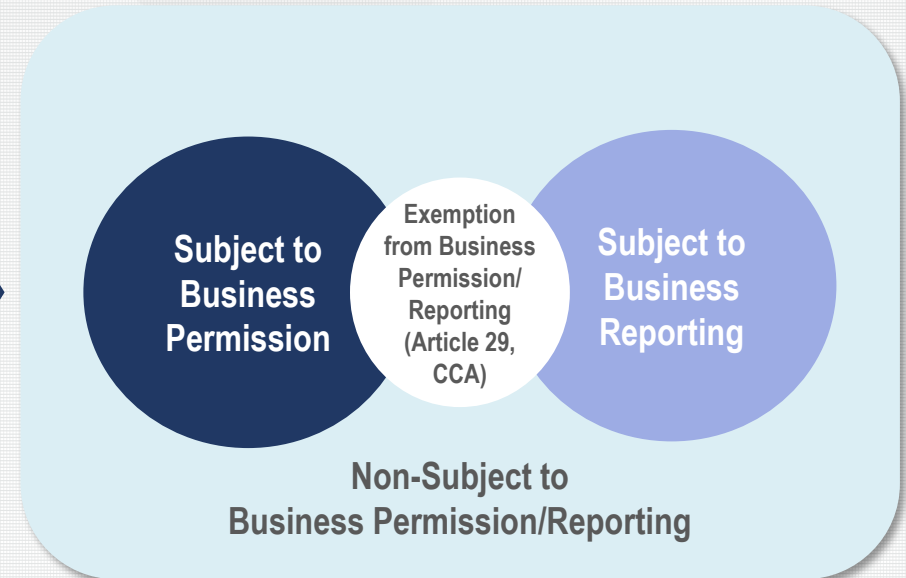


- ✓ **Change subject to business operators management (i.e. those subject to business permission/reporting)**
 - (Current) **All** of the persons who intend to run a business of hazardous substance (i.e. handler) is subject to business permission, except those exempted from it.
 - (Amendment) Person who intends to run a business of hazardous substance exceeding certain criteria is subject to business permission or reporting.

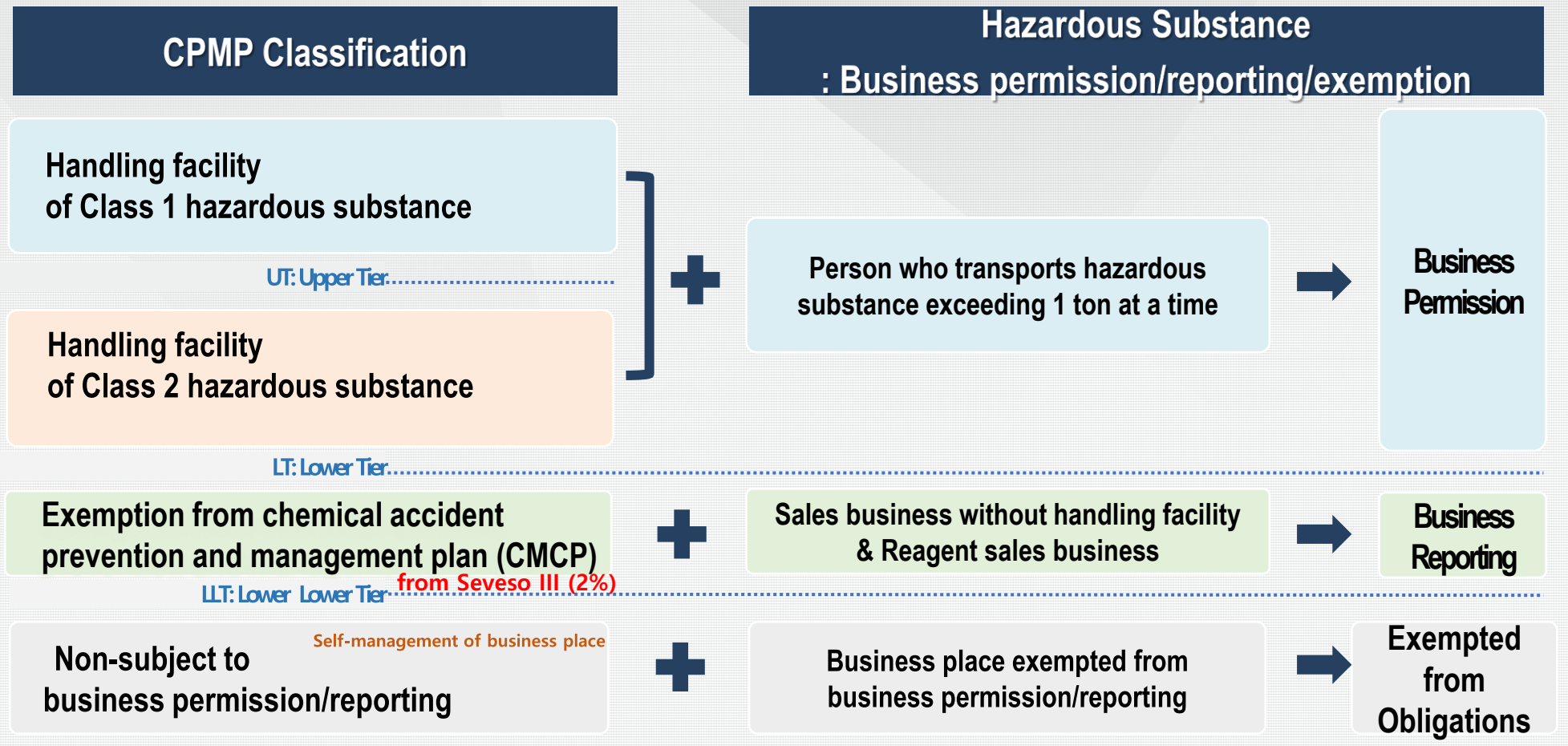
Current : Handler of Hazardous Substance



Amendment : Handler of Hazardous Substance

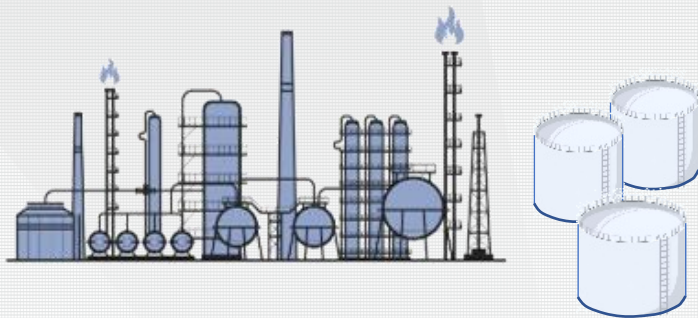


- ✓ Improved system for business permission management, considering risk of handling facility (e.g. handling amount)
- Business reporting system is newly established to ease burdens of the industry in fulfilling their obligations, and separately manage sellers who do not have handling facility.



✓ Total volume-based Management → Scale-based Management

- There is a little correlation between potential chemical accident and annual volume of hazardous substance used in business place. In the Amendment, business permission shall be issued by considering facility's scale that has more correlation with potential accident.
- Transition to a new system helps to intensify regulatory authorities' management competency to major business places.



**Annual amount of hazardous substance used in a facility
(i.e. consumed amount)**

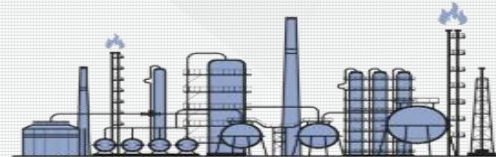
: 100 ton (<120ton), Exempted from business permission

Scale of metal processing facility where uses sulfuric acid

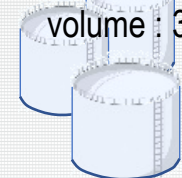
**: 5 tons of instantaneous maximum retention volume
(irrelevant to obtaining a permission or not)**



**Sulfuric acid's
instantaneous maximum retention
volume : 2 tons**



**Sulfuric acid's
instantaneous
maximum retention
volume : 3 tons**



Sulfuric acid-using metal processing facility's scale

: 5 tons of instantaneous maximum retention volume

In case of H₂SO₄,

Criteria (t) : 0.125 ~ 5 ~ 400

→ subject to business permission

- ✓ **Regular Inspection Cycle**
: (Current) 1~2 years, depending on whether it is subject to business permission → (Hereafter) 1~4 years, depending on business place's risk levels and handling amount
- ✓ **Safety Diagnosis Cycle**
: (Current) 4~12 years, depending on risk levels → (Hereafter) 4th regular inspection period, taking into account business place's risk levels and handling amount

CPR Classification		Regular Inspection	4 th regular inspection period Safety Diagnosis
Handling facility of Class I hazardous substance <i>UT: Upper Tier</i>	Group A	1y	4ys
	B	2ys	8ys
	C		
Handling facility of Class II hazardous substance <i>LT: Lower Tier</i>	Group A	3ys	12ys
	B		
	C		
Facility exempted from chemical accident prevention and management plan <i>LLT: Lower Lower Tier</i>		4ys	Exemption
Facility exempted from regular inspection & Vehicle transportation/shipping facility (*no maximum amount) <i>Laboratory, school, substance embedded in machine, etc. : exempted from installation/regular/irregular inspections</i>		Within maximum 3ys-cycle for shipping/.transportation facility <i>1~3ys cycle based on transported substances or transportation facility type</i>	

Laboratory, school, substance embedded in machine, etc.
: exempted from installation/regular/irregular inspections.
Facility that handles substance with human chronic toxicity
: exempted from regular inspection
Facility of less than LLT : exempted from installation/regular inspection

Business place's self-management

For more information, please see the MOE Public Notice .

- ✓ **Seller of hazardous substance, including transferrer, has an obligation to inform relevant information to purchaser, including transferee and consumer.**

Current : Reagent Seller's Obligation to Inform

- ✓ **Subject : Hazardous substance used as reagent**
- Toxic Substance, Restricted Substance, Prohibited Substance, Substance subject to Permission, Substance requiring Preparation for Accidents
- ✓ **Information to be provided**
- This shall be used only for reagent of experiments, research or testing as initially intended.
 - When handling this substance as reagent, handler shall comply with the handling standards of hazardous substance.



Amendment : Hazardous Substance Seller's Obligation to Inform

- ✓ **Subject : Reagent or product that falls under hazardous substance, etc.**
- Substance with human health acute/chronic toxicity, ecological toxicity, Substance requiring Preparation of Accidents, Restricted/Prohibited Substance, Substance subject to Permission
- ✓ **Information to be provided**
- This shall be used only for reagent of experiments, research or testing as initially intended.
 - When handling this substance as reagent, handler shall comply with the handling standards of hazardous substance.
 - The sold substance falls under "Hazardous Substance", etc.
 - When uses of the sold substance is restricted, seller shall inform that the substance can or cannot be used for certain restricted use.
- ✓ **Provided, That it is deemed to fulfill an obligation to inform pursuant to Article 29(2) of CCA when the information is already provided pursuant to Article 29 of K-REACH.**

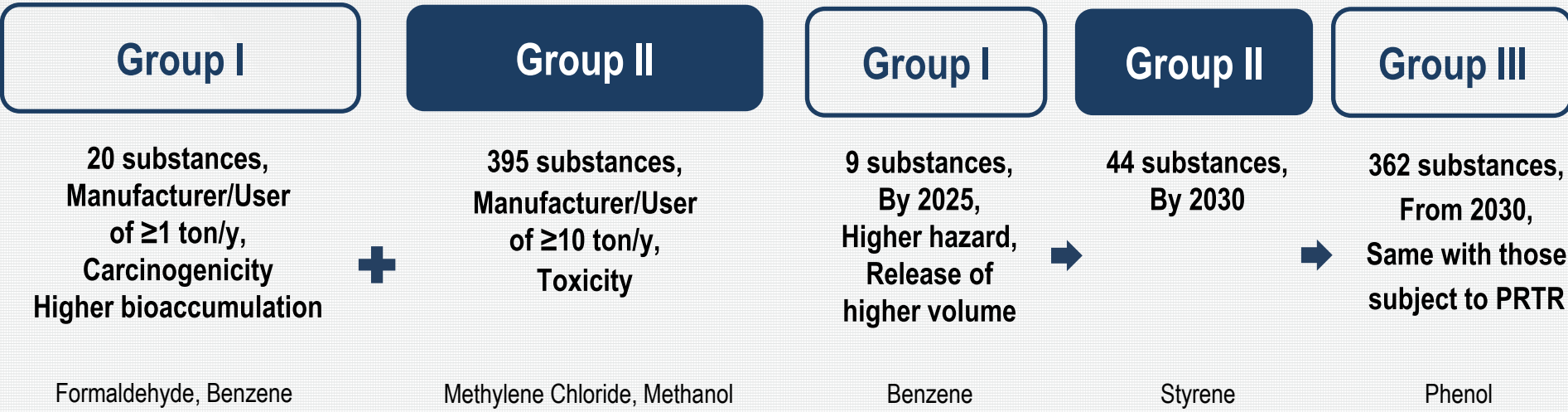
PRTR & Chemical Release Reduction Plan (CRRP)

- ✓ (PRTR) Every year, the Gov. surveys and discloses the amounts of pollutants released to the environment, waste water and wastes generated in the process of manufacturing or using chemical substances.
The survey is conducted by circulating questionnaires to business places, measuring them directly, measuring substances, taking emission factor approach, etc.
- ✓ (Release Reduction) Business place submits handling/release amounts of substance subject to release reduction, release reduction technologies and measures, and release reduction goals (5 years, voluntary) → Specialized agency reviews appropriateness of the submitted reduction measures and goals. → When meeting the goals, the Gov. gives an incentive to the business place.

Local community checks whether the business place implements reduction measures or not.

< Substance subject to PRTR >

< Substance subject to Release Reduction >



- ✓ Chemical release reduction plan (CRRP) is being implemented with voluntary participation of the industry. The Gov. will expand chemicals subject to such system in a stepwise manner.
(9 substances → 53 substances in 2025 → 415 substances in 2030)
- ✓ Need to increase public awareness on release reduction of hazardous substances, and to strengthen implementation capability, which highlights responsibility and self-management of the industry.

Current : Chemical Release Reduction Plan (CRRP)

- ✓ No legal basis of change submission/re-submission
 - No basis of change submission after once submitting CRRP
 - No basis of complementary submission about the matters that need to be modified or supplemented after the review.
- ✓ Disclosure scope
 - After the Gov. informs CRRP's appropriateness, the Plan is provided to the relevant local government .
- ✓ Development/Implementation confirmation/Support
 - No basis of establishing and operating a local consultative group for CRRP development/implementation confirmation/support therefor, which is a responsibility of local government.

Amendment : Chemical Release Reduction Plan (CRRP)

- ✓ Legal basis of change submission/re-submission is made, which enhances CRRP implementation.
 - When a change occurs in business place, a legal basis for change submission is made.
 - In case of inappropriate CRRP, clear legal ground that the Gov. requests to supplement CRRP and conduct complementary submission.
- ✓ Disclosure scope of CRRP (to the local government)
 - CRRP that appropriateness or inappropriateness is informed after the review
 - CBI protection can be requested. (same as current)
- ✓ Legal basis of operating local consultative group by local gov.
 - Basis of establishing/operating/supporting local consultative group to build local capacity for chemical management

Thank you