



Public Seminar on the Latest Trends in Chemical Management in China and Korea

Latest Progress of Chemicals Management in China

Solid waste and Chemicals management Center,
MEP, China
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Situation of China's chemicals management



Registration on the environmental management of hazardous chemicals
(MEP Order NO. 22) abolished in 2016

Regulations on safety management of hazardous chemicals
(revised, Decree NO. 591 of the State Council)

Registration on the environmental management of new chemicals (revised, MEP Order NO. 7)

Registration on the environmental management of new chemicals
(Former SEPA Order NO. 17)

Environment Management Regulations on the Import and Export of Toxic Chemicals for The First Time
(Issued by Former SEPA)

2012

2011

2009

2003

1994

History

New Era, New Tasks



The 19th National Congress of the Communist Party of China



Speeding up Reform of the System for
Developing an Ecological
Civilization, and Building a Beautiful China



- Promoting green development
- Solving prominent environment problems
- Intensifying the protection of ecosystem
- Reforming the environmental regulation system

Specific Requirements of the 13th Five-year Plan



- ❖ **Goal** : by 2020,
 - ❑ the database for chemicals hazard features is built,
 - ❑ the production and use of chemicals in China is well known,
 - ❑ the capacity for chemical hazard identification and risk assessment is initially formed,
 - ❑ basic regulation and standard system for chemical management are established,
 - ❑ the environmental and health risk of certain chemicals such as mercury and POPs are effectively controlled,
 - ❑ positive progress is made in the prevention and control of toxic and hazardous chemicals.

- ❖ **Main tasks: Develop strategies, promote legislation, establish and improve systems, and implement measures.**

Specific Requirements of the 13th Five-year Plan



Notice of the State Council on the issuance of the 13th five-year ecological environmental protection plan (2016 NO.65)

❖ Chapter 3: focus on the prevention and control of risks at their sources and strengthen the foundation for green development

Establish a the systems of methods, procedures and technical specification for the environmental and health risk assessment of chemicals.

❖ Chapter 6: Implement the whole process control, effectively prevent and reduce the environmental risk

...to improve the capacity for risk control by reforming the normalized management system a whole life-cycle risk prevention and control system for toxic and hazardous chemicals will be established...

❖ Chapter 6: Implement the whole process control, effectively prevent and reduce the environmental risk

■ Assess the environment and health risks of existing chemicals.

Initial screening and risk assessment of existing chemical will be carried out to assess the accumulation and risk of chemicals in the environment. By the end of 2017, the list of priority control chemicals will be released, and the production, use and import of high-risk chemicals will be severely restricted or banned.

■ Elimination of the Convention controlled chemicals. By 2020, POPs will be basically eliminated.

Latest Progress in China's Chemicals Management Legislation

Goal :

To establish a macro management system. By formulating macroscopic policies, identify the chemicals needed to be managed and the corresponding measures such as elimination, substitution and inclusion criteria. The "engine " for the entire management framework.

Tasks :

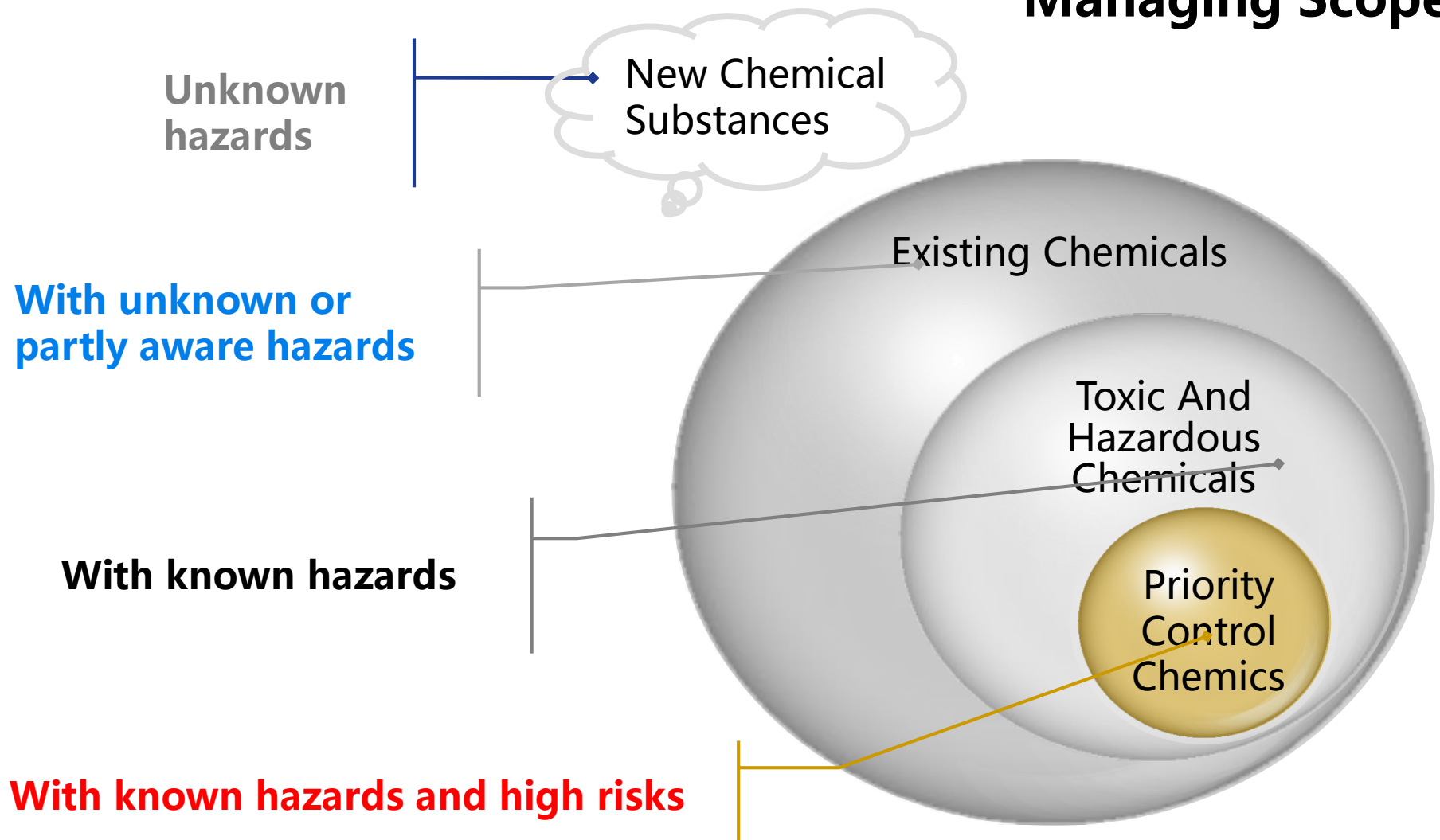
- By following the risk prevention principle, a legal framework covering the whole life cycle of the hazardous chemicals will be built.
- Establish and improve the chemical hazard identification, risk assessment, the elimination and restriction mechanism, and the whole life cycle risk management system.

Legislative Goals and Control Objectives

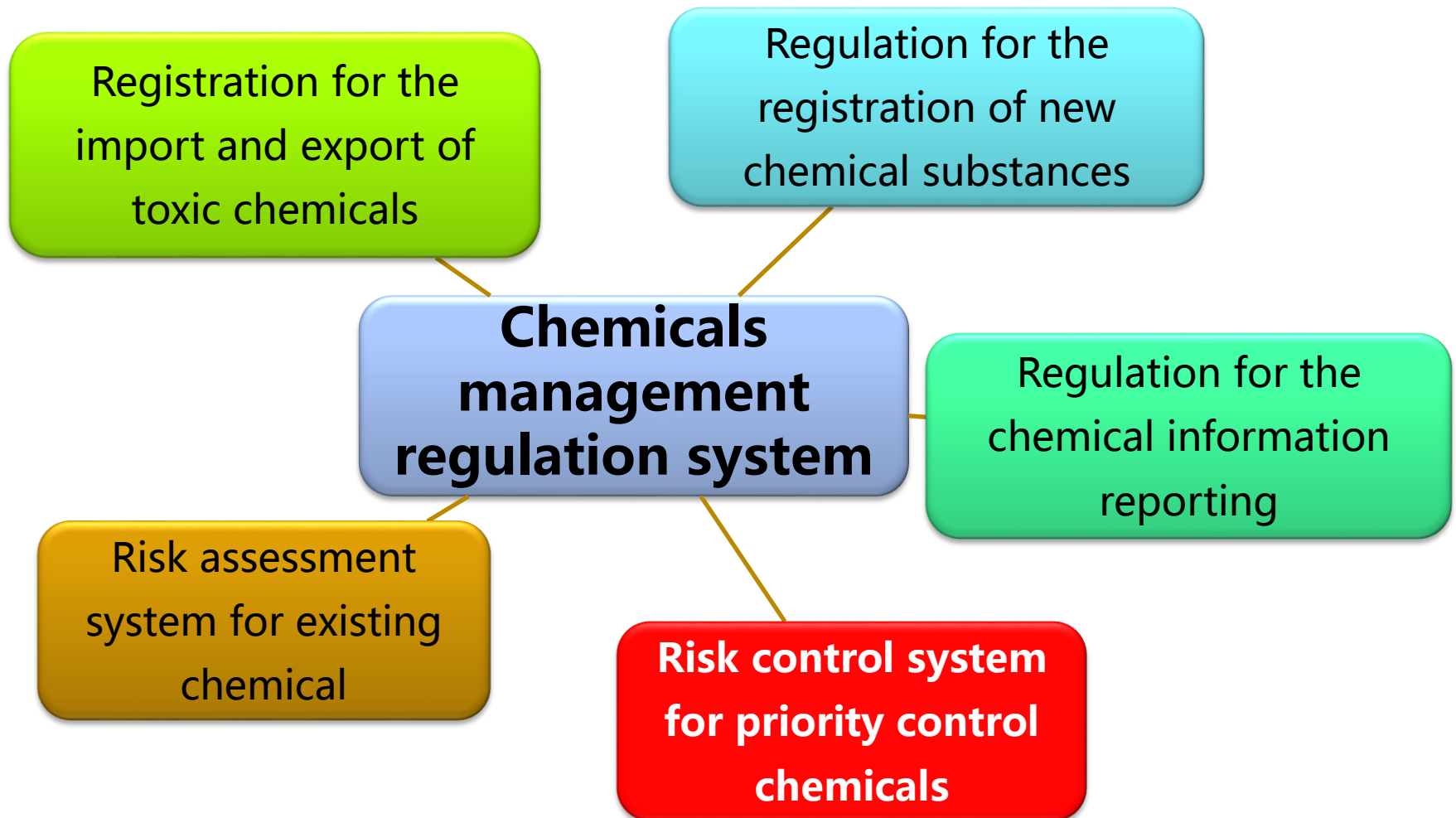
- To prevent the long-term, potential environmental pollution and risks from the hazardous chemicals, protect the ecological environment and public health, and promote the green development.
- Focus on chemicals that have been or may be in China's environment for a long time, with biological accumulation and toxicity.
 - Exposure to the environment in a certain amount or concentration can pose an unacceptable risk to organisms (humans, plants, animals, etc.)
 - With persistency and potential bioaccumulation ability that can cause negative effects on human body or other organisms.

Latest Progress in China's Chemicals Management Legislation

Managing Scope



Latest Progress in China's Chemicals Management Legislation





Latest Progress in China's Chemicals Management Legislation

Promote the establishment and improvement of the regulation system

Improve the regulation for the registration of new chemical substances

Improve the regulation for the chemical information reporting

Establish the risk assessment and control system for priority control chemicals

Improve the monitoring and evaluation system for the environmental investigation of chemicals

Latest Progress on Regulations in China



Regulation for the registration of new chemical substances

Announcement for adjusting the data requirements in the guidance for the registration of new chemical substances (MEP announcement 2017 NO. 42)

http://www.zhb.gov.cn/gkml/hbb/bgg/201709/t20170905_420903.htm

Principles :

- Streamline administration and delegate power to lower levels
- Enhance scientific and normative
- Reduce data requirements, lighten enterprise burden

Regulation for the registration of new chemical substances

➤ Adjustment range

- a) Toxicology minimum data requirements
- b) Ecotoxicology minimum data requirements
- c) Exemption conditions of physical and chemical data
- d) Exemption conditions of toxicology data
- e) Exemption conditions of ecotoxicology data

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Registration for the import and export of toxic chemicals

- *Announcement on publishing the list of China's severely restricted toxic chemicals (2018)* (MEP announcement 2017 NO. 74)

http://www.zhb.gov.cn/gkml/hbb/bgg/201712/t20171222_428499.htm

- a) The list of China's severely restricted toxic chemicals (2018)
- b) Notes on the application of the notification for import Clearance of toxic chemicals
- c) Notes on the application of the notification for export Clearance of toxic chemicals

Latest Progress on Regulations in China



The list of China's severely restricted toxic chemicals (2018)

| Serial Number | Chemicals | | CAS NO | HS Code | Permitted use |
|-----------------------------------|------------------------------------------------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chemicals in Stockholm Convention | | | | | |
| 1 | Lindane | | 58-89-9 | 2903810010 | use as a human health pharmaceutical to control head lice and scabies before March 25th.2019 |
| 2 | Perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOS-F) | Perfluorooctane sulfonic acid | 1763-23-1 | 2904310000 | 1. Before March 25th.2019, Photo masks in the semiconductor and liquid crystal display (LCD) industries, metal plating (hard metal plating, decorative plating), electric and electronic parts for some colour printers and colour copy machines, insecticides for control of red imported fire ant, and termites, chemically driven oil production, carpets, leather and apparel, textiles and upholstery, paper and packaging, coatings and coating additives, rubber and plastics. 2. Photo-imaging, photo-resist and anti-reflective coatings for semi-conductor, etching agent for compound semi-conductor and ceramic filter, aviation hydraulic fluids, metal plating (hard metal plating) only in closed-loop systems, certain medical devices (such as ethylene tetrafluoroethylene copolymer (ETFE) layers and radio-opaque ETFE production, in-vitro diagnostic medical devices, and CCD colour filters), fire-fighting foam, insect baits for control of leaf-cutting ants from Atta spp. and Acromyrmex spp. |
| | | Perfluorooctanesulphonate amine | 29081-56-9 | 2904320000 | |
| | | Perfluoro-1-octanesulfonyl fluoride | 307-35-7 | 2904360000 | |
| | | Potassium heptadecafluoro-1-octanesulfonate | 2795-39-3 | 2904340000 | |
| | | Heptadecafluoro-1-octanesulfonic acid lithium salt | 29457-72-5 | 2904330000 | |
| | | Other perfluorooctylsulfonate | 70225-14-8, 56773-42-3, 251099-16-8 | 2904350000 | |
| 3 | Hexabromocyclododecane | | 25637-99-4 3194-55-6 134237-50-6 134237-51-7 134237-52-8 | 2903890020 | used in EPS, XPS as fire retardant before December 25th. 2021 |

Latest Progress on Regulations in China



| Chemical in Mercury Convention | | | | | | |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------------|
| 4 | Mercury | | | 7439-97-6 | 2805400000 | Comply with Mercury Convention |
| Chemicals in Rotterdam Convention | | | | | | |
| 5 | lead tetramethide | | 75-74-1 | 2931100000 | Industrial use (except for the use of explosion-proof agents other than aviation gasoline and other vehicles | |
| 6 | lead tetraethyl | | 78-00-2 | 2931100000 | Industrial use (except for the use of explosion-proof agents other than aviation gasoline and other vehicles | |
| 7 | polychlorinated terphenyl (PCT) | | 61788-33-8 | 2903999030 | Industrial use | |
| 8 | tributyl tin compound | | 56-35-9 1983-10-4 2155-70-6 4342-36-3 1461-22-9 24124-25-2 85409-17-2 | 2931200000 | Industrial use | |
| 9 | short-chain chlorinated paraffins | | 85535-84-8 | 3824999990 (liquid) 3404900000 (Solid with artificial wax characteristics) | Industrial use | |
| 10 | Perfluorooctane sulfonic acid, perfluorooctane sulfonates, perfluorooctane sulfonamides and perfluorooctane sulfonyls | Perfluorooctane sulfonic acid | 1763-23-1 | 2904310000 | Industrial use | |
| | | Perfluorooctanesulpho nate amine | 29081-56-9 | 2904320000 | Industrial use | |
| | | Perfluoro-1-octanesulfonyl fluoride | 307-35-7 | 2904360000 | Industrial use | |
| | | Potassium heptadecafluoro-1-octanesulfonate | 2795-39-3 | 2904340000 | Industrial use | |
| | | Heptadecafluoro-1-octanesulfonic acid lithium salt | 29457-72-5 | 2904330000 | Industrial use | |
| | | Other perfluorooctylsulfonate | 70225-14-8 56773-42-3 251099-16-8 4151-50-2 31506-32-8 | 2904350000 | Industrial use | |

Industrial use (except for the use of explosion-proof agents other than aviation gasoline and other vehicles)

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Latest Progress on Regulations in China



Changes in the list of China's severely restricted toxic chemicals (2018)

Former version- *The list of China's toxic chemicals with severely restriction on the import and export (2014)*

"Severely restricted chemicals" refer to chemicals that are prohibited for their negative effects to health and environment, but are permitted to use under some special circumstances.

"Toxic chemicals" refers to chemicals that can cause harm to health and the environment through environmental accumulation, bioaccumulation, biological transformation or chemical reaction, or those can bring serious harm or potential danger to human body.

Latest Progress on Regulations in China



Changes in the list of China's severely restricted toxic chemicals (2018)

□ Fewer chemicals

- The chemicals in the new version is reduced to 10 (categories) from 162 (categories) in the 2014 version.
- Stockholm Convention, Mercury Convention and Rotterdam Convention are main basis.

□ Permitted use

- Permitted uses of each chemical are provided.
- The import and export of these chemicals can be applied only under permitted uses, otherwise are not allowed.

□ Management requirements

Notes on the application of the notification for export/import clearance of toxic chemicals are also provided.

Latest Progress on Regulations in China



Minamata Convention on Mercury comes into effect in China

- In July 2017, the State Council approved the establishment of the work coordination group of the MEP and other 17 ministries.
- In August 2017, *Announcement on the Minamata Convention on Mercury comes into effect in China* was issued by MEP and other 17 ministries.

Management on Existing Chemicals



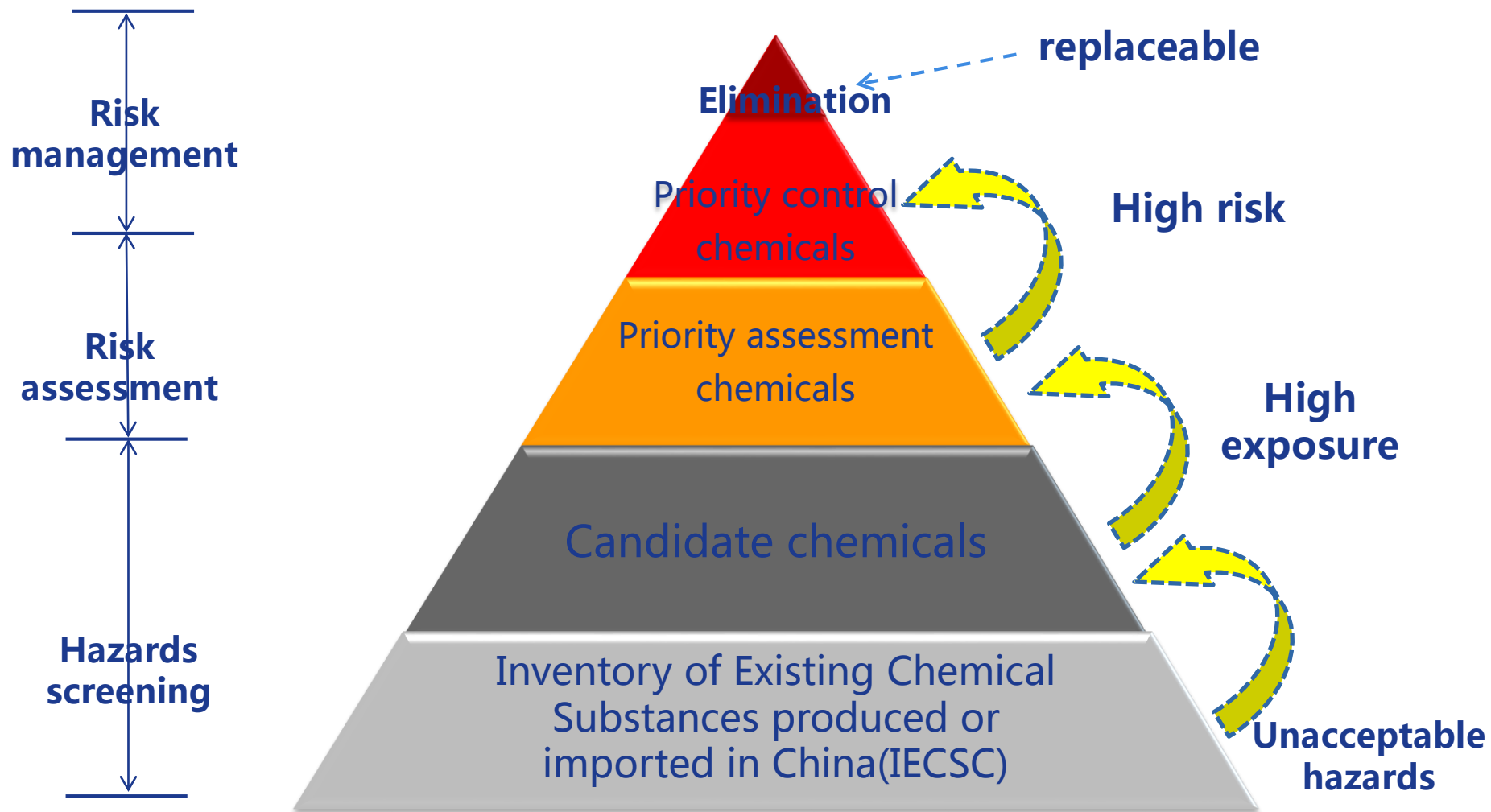
Goal :

- **Risk management.** The risk of chemicals are managed through screening and risk assessment.
- **Improve the technology support capability.** Form a team, establish a risk assessment system, and provide long-term and stable support for decision-making.

Tasks :

- The hazard screening and risk assessment of existing chemicals (nearly 45,000 chemicals) in China will be carried out, and the priority control chemical list will be published.
- To eliminate and replace the priority control chemicals, and measures will be taken to prevent and control risks in the whole life cycle of chemicals, from production, use, consumption to waste disposal

Screening Principles for Existing Chemicals



Priority Control Chemical List



Priority Control Chemical List

- Action Plan on Water Pollution Prevention

- Evaluate the environmental and health risks of the existing chemicals, publish the priority control list of chemicals before the end of 2017, strictly restraint on the product and use of high risk chemicals, and drive the substituting and phasing out of these chemicals gradually.

Priority Control Chemical List(first batch) was launched on December 28th, 2017.

- *Announcement on publishing the Priority Control Chemical List(first batch)* (MEP 2017 NO. 83)

http://www.zhb.gov.cn/gkml/hbb/bgg/201712/t20171229_428832.htm

Priority Control Chemical List(first batch)

| No | Chemicals | Cas No | No | Chemicals | Cas No |
|-------|-------------------------------------------|--------------|-------|------------------------------------------------------------------------------------------------|--------------|
| Pc001 | Trichlorobenzene | 120-82-1 | Pc013 | Naphthalene | 91-20-3 |
| Pc002 | 1,3-butadiene | 106-99-0 | Pc014 | Lead Compound | |
| Pc003 | Musk Xylene | 81-15-2 | Pc015 | Perfluorooctane Sulfonic Acid (PFOS), Its Salts And Perfluorooctane Sulfonyl Fluoride (PFOS-F) | 1763-23-1 |
| Pc004 | N,n'-bis(methylphenyl)-1,4-benzenediamine | 27417-40-9 | | | 307-35-7 |
| Pc005 | Short-chain Chlorinated Paraffins | 85535-84-8 | | | 2795-39-3 |
| | | 68920-70-7 | | | 29457-72-5 |
| | | 71011-12-6 | | | 29081-56-9 |
| | | 85536-22-7 | | | 70225-14-8 |
| | | 85681-73-8 | | | 56773-42-3 |
| | | 108171-26-2 | | | 251099-16-8 |
| Pc006 | Dichloromethane | 1975-9-2 | Pc016 | Nonylphenol And Nonylphenoxypoly(ethyleneoxy)ethanol | 25154-52-3 |
| Pc007 | Cadmium And Cadmium Compounds | 7440-43-9(镉) | | | 84852-15-3 |
| Pc008 | Mercury And Mercury Compounds | 7439-97-6(汞) | | | 9016-45-9 |
| Pc009 | Formaldehyde | 50-00-0 | Pc017 | Trichloromethane | 67-66-3 |
| Pc010 | Chromium VI Compounds | | Pc018 | Trichloroethylene | 1979-1-6 |
| Pc011 | Hexachlorocyclopentadiene | 77-47-4 | Pc019 | Arsenic And Arsenic Compounds | 7440-38-2(砷) |
| Pc012 | Hexabromocyclododecane | 25637-99-4 | Pc020 | Decabromodiphenyl Ether | 1163-19-5 |
| | | 3194-55-6 | Pc021 | Tetrachloroethylene | 127-18-4 |
| | | 134237-50-6 | Pc022 | Acetaldehyde | 75-07-0 |
| | | 134237-51-7 | | | |
| | | 134237-52-8 | | | |

Chemical Investigation and Capacity Building

□ Chemical investigation

- Since 2013, China has actively promoted domestic chemical investigation in key industries.
- As of 2017, two rounds of investigation have been carried out, data audit and investigation report have been completed, and the investigation methods and standard system have been formed.

□ Database

- The chemical database contains environmental protection standard, product content standard, hazard, and the production and use of more than 40,000 chemicals in China

□ Technical specification system

- The technical department has developed a series of technical documents, such as guidelines, guidances and specifications for the hazard screening and risk assessment, and some has been tested in the formulation of the first batch of priority controlled chemicals. Technical guidance for exposure assessment of pollutants (HJ 875-2017) has been published (MEP Announcement 2017 NO.58)

Future of China's Chemicals Management



- ◆ Legislation for chemicals management
- ◆ Establishment and improvement of regulations
- ◆ Risk assessment and control of chemicals
- ◆ Prevention and control of toxic and hazardous pollutants
- ◆ Capacity building for chemicals management



Thanks for listening

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