



Toxic and Chemical Substance Management in Taiwan and Future Vision

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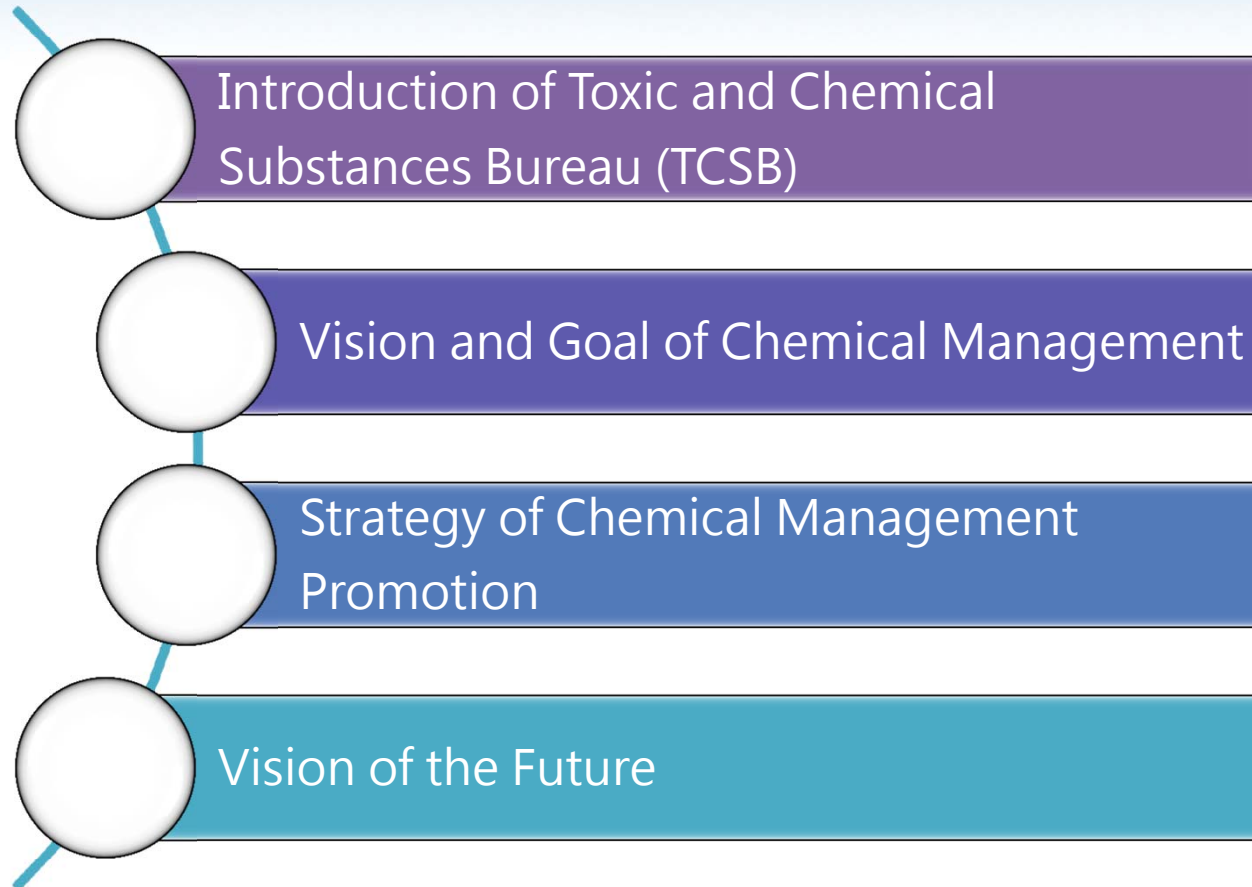
Division Chief of Comprehensive Planning Division

Taiwan Toxic and Chemical Substances Bureau (TCSB), Environmental Protection Administration Executive Yuan

Nov. 10th 2017



Overview



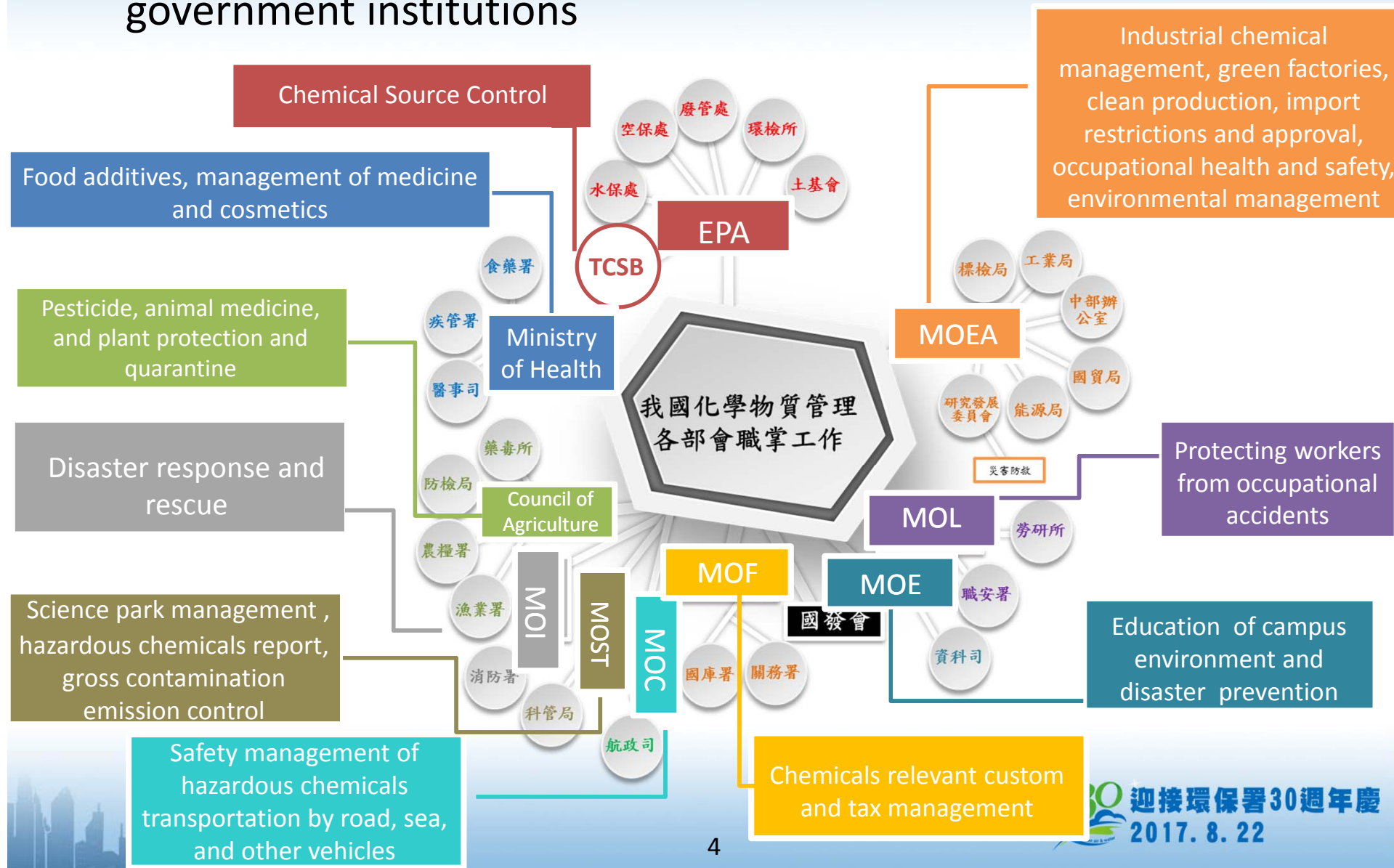
Introduction of TCSB

- Established on 2016.12.28
- Goals
 - Mainly focus on toxic substances management in the past.
 - After TCSB was established,
 - Source control management of chemical substances
 - Food safety
 - Prevention of food chemical contamination
 - Environment agents control
 - Prevention and response measures for hazardous chemicals



Introduction of TCSB

- Chemical Substance Management : involved 13 ministries and government institutions



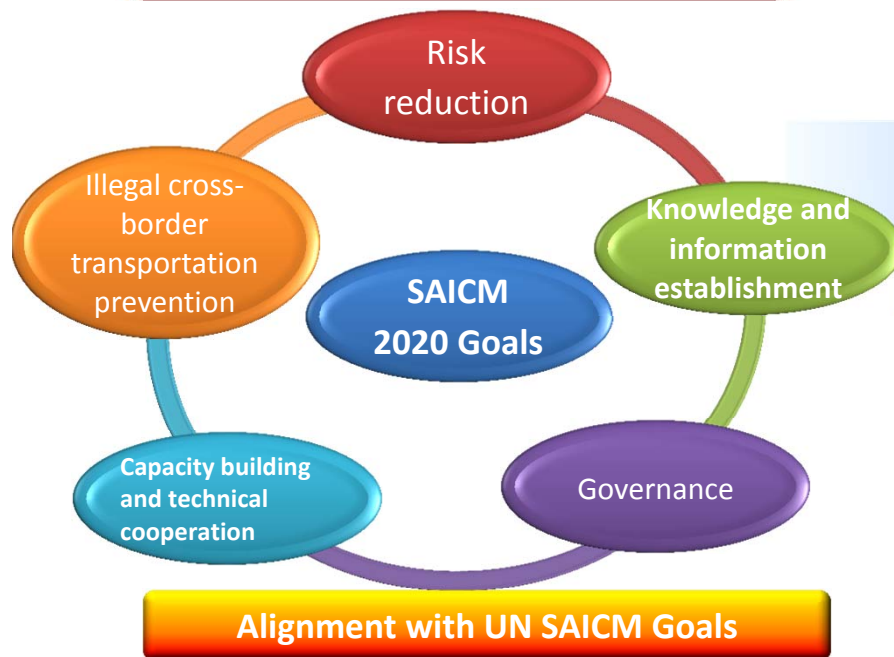
Introduction of TCSB

• Organization Structure



Goal and Vision of Chemical Management

- Create the vision of 「 effective management of chemical substances;
create safe and sustainable chemical environment
- Establish 9 indexes of national chemical management



- Governance
- Risk reduction
- Capacity-building and technical cooperation
- Knowledge and information
- Illegal international traffic



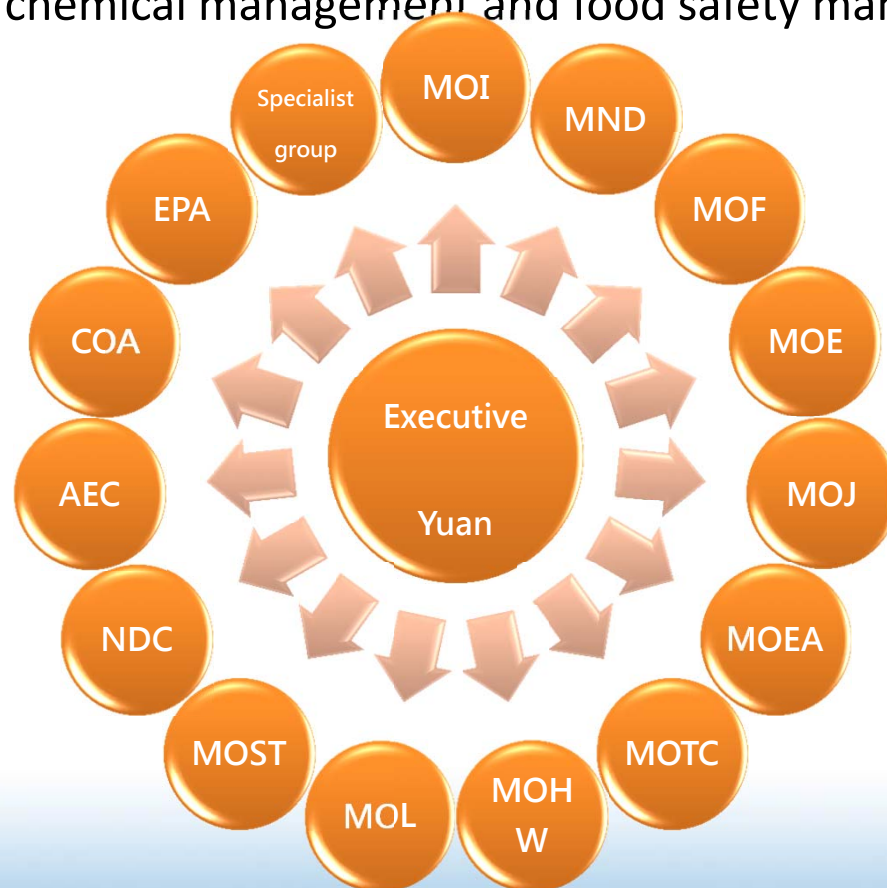
Strategic Approaches in Chemical Management



Strategic Approaches in Chemical Management

Revision of Toxic Chemical Substances Control Act to Strengthen Regulatory System

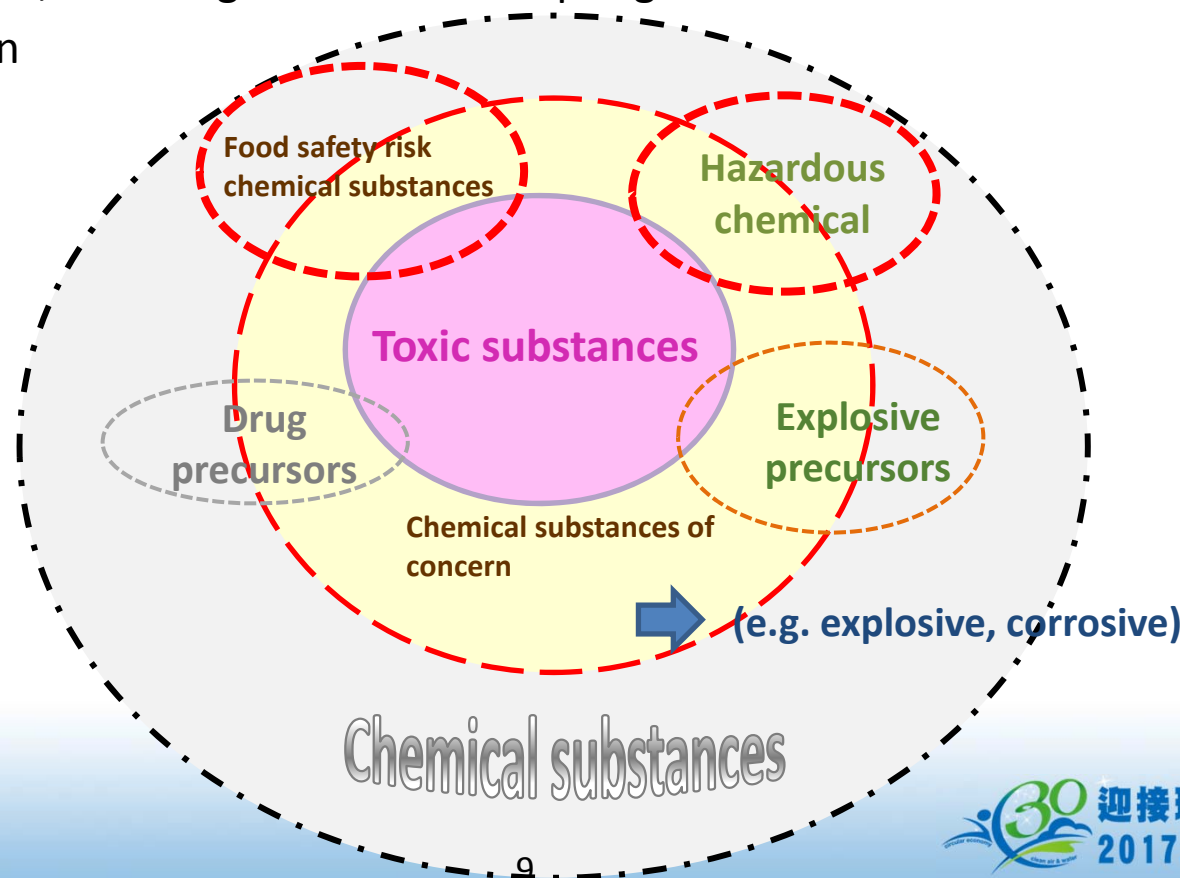
- Establish National Board of Chemical Management
 - Enhance the horizontal contacts on national chemical management policy
 - Coordinate chemical management and food safety management system



Strategic Approaches in Chemical Management

Revision of Toxic Chemical Substances Control Act to Strengthen Regulatory System

- Adding substance of concern
 - Designated 323 toxic chemical substances
 - Designated several non-toxic chemical substances with hierarchy of controls based on livelihood issues, including endocrine disrupting chemicals and those with other hazard concern



Strategic Approaches in Chemical Management

Revision of Toxic Chemical Substances Control Act to Strengthen Regulatory System

New Mission

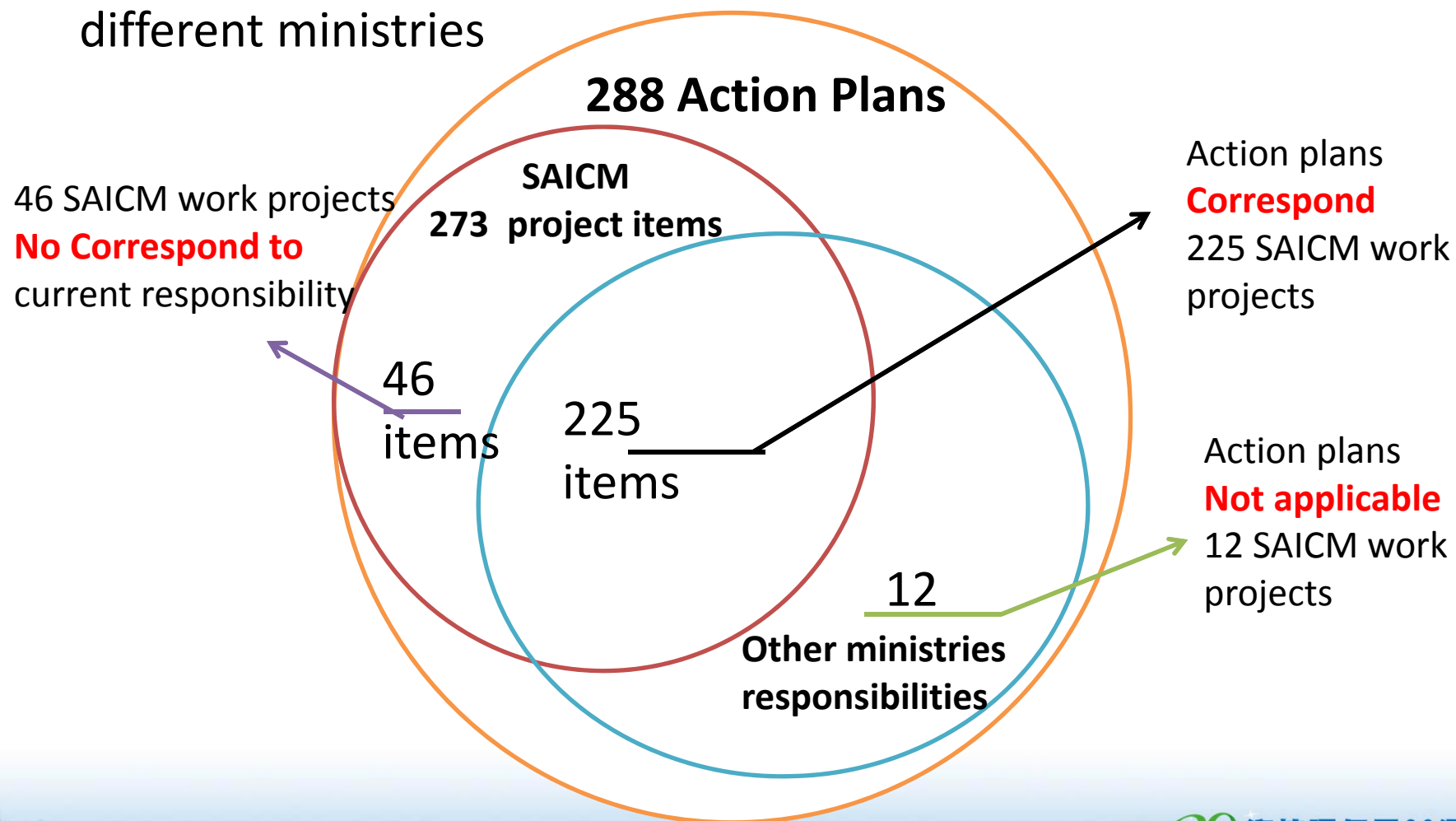
- Initiate Funding Levy System
 - From Risk Response to Risk Prevention
 - Expend budget for management (e.g. designated substance of concern, registration management, audit and inspection, chemical cloud)
 - Chemical safety and accident prevention, response measure, and disaster rescue
 - No repeated charge as principle



Strategic Approaches in Chemical Management

Coordinate Inter-ministerial Action Plan

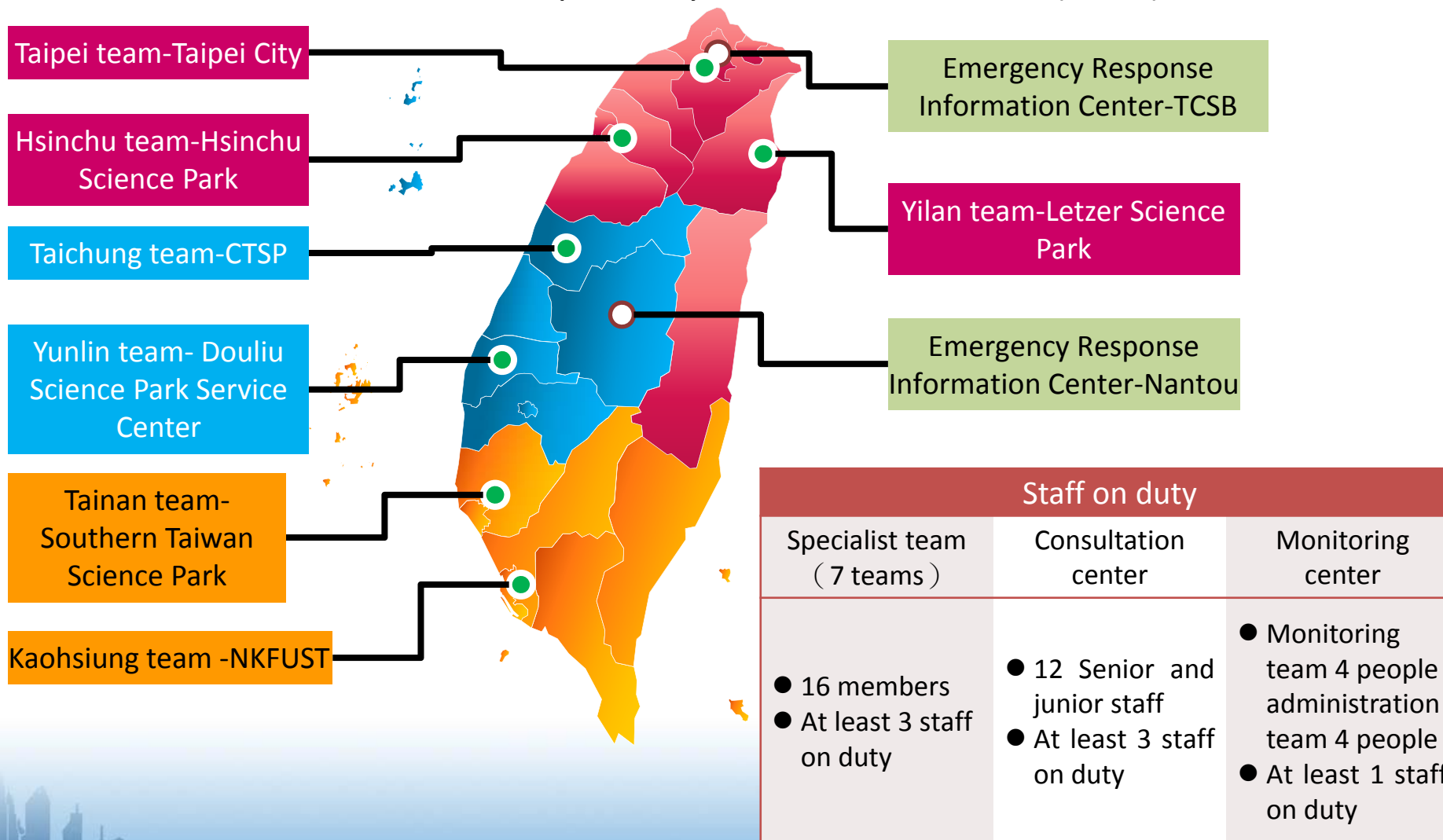
- 288 action plans related to chemical management cross different ministries



Strategic Approaches in Chemical Management

Improve Toxic Chemical Disaster Response System and Technique

- Toxic chemical disaster response system – Government (TSCB)



Strategic Approaches in Chemical Management

Improve Toxic Chemical Disaster Response System and Technique

- Toxic chemical disaster response system – industry association

Enhance industry's prevention and response capacity

103 groups, 4,605 companies



Inspection without notice Educational training and practice



summon up

Command system

Mission allocation



Response action

Decontamination

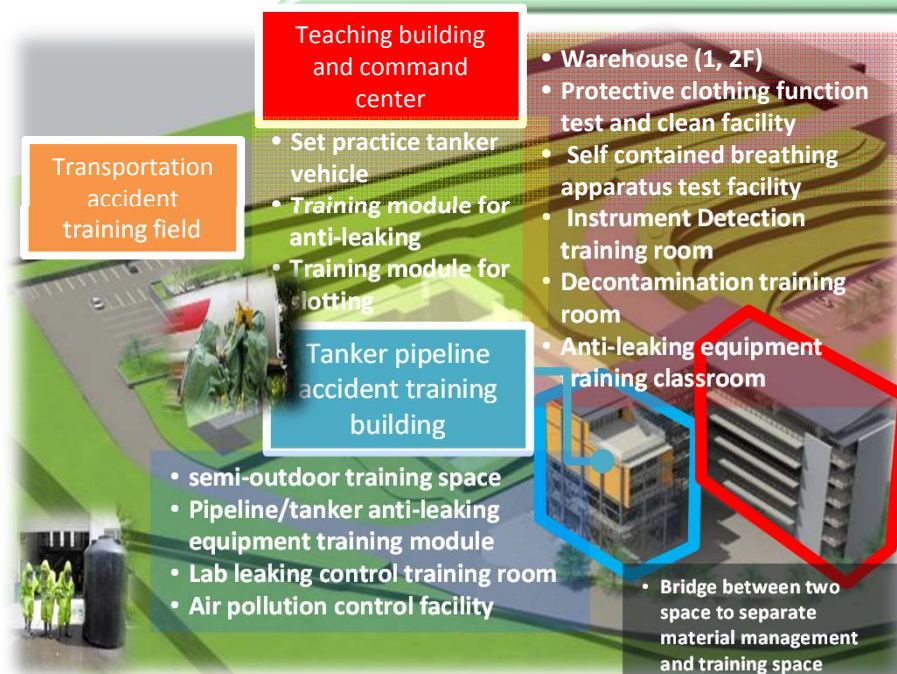
Suggestion

Strategic Approaches in Chemical Management

Improve Toxic Chemical Disaster Response System and Technique

- Approved by Executive Yuan, established training center and resource command center for toxic chemical disaster

Strengthen toxic chemical disaster professional field training



Southern Taiwan transportation and laboratory toxic chemical substance disaster training

Working with NKFUST and expected to finish in 2019



Central Taiwan toxic chemical disaster training building and resource command center

Working with NFA Zhushan training center, operated and managed by EPA. Expected to finish in 2019

Strategic Approaches in Chemical Management

Improve Toxic Chemical Disaster Response System and Technique

- Mobile simulated training equipment

10 simulation units, 28 courses

Storage and transportation of low hazardous chemicals under atmospheric pressure and response training modules

Personal protective equipment and decontamination training module



atmospheric tank(bulk) training module



atmospheric tank(nonbulk) training module



Environment detection training module



Disaster monitor and analysis command module



Disaster recovery training module



High hazard and high pressure storage and transportation response training module

High pressure tanker (bulk) training module



High pressure container (nonbulk) training module



High pressure vessel drainage training module



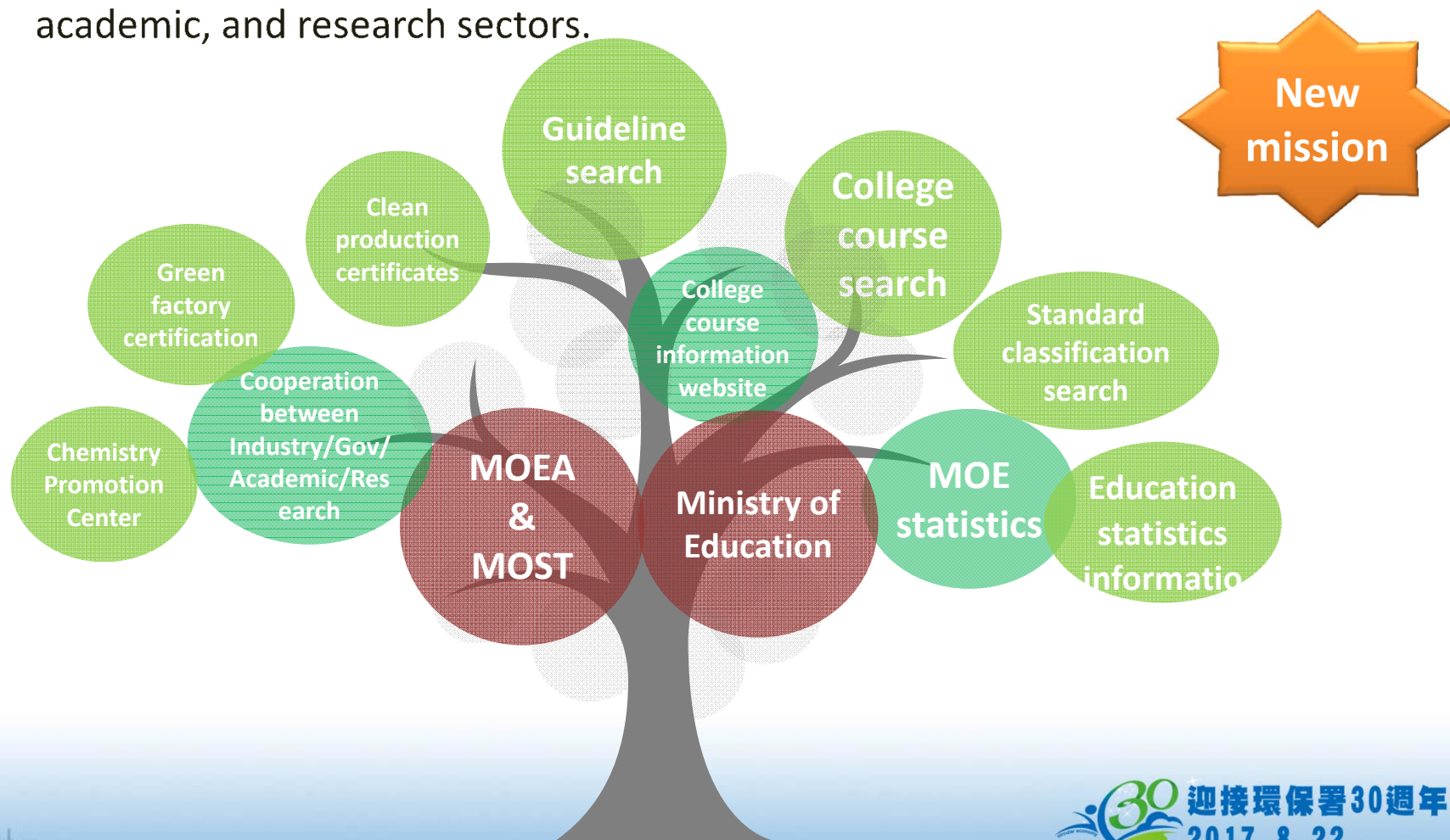
High pressure tanker and uprighting and hanging training module



Strategic Approaches in Chemical Management

Implementing Green Chemistry

- Develop and implement green chemistry education materials and guidelines
- Develop localized cooperation models between industrial, government, academic, and research sectors.



Strategic Approaches in Chemical Management

Establish Registration Regulation

- Based on REACH regulation, established Taiwan national registration regulation and rules
- Including **existing** and **new** chemical substances registration
 - **Registration** Substances ≥ 1 ton/year
 - **Evaluation** Implementing by member states
 - **Authorization** Sunset dates for phasing out substances of high hazard
 - **Restrictions** Restrict specific uses

REACH

European Chemicals Agency
(ECHA)



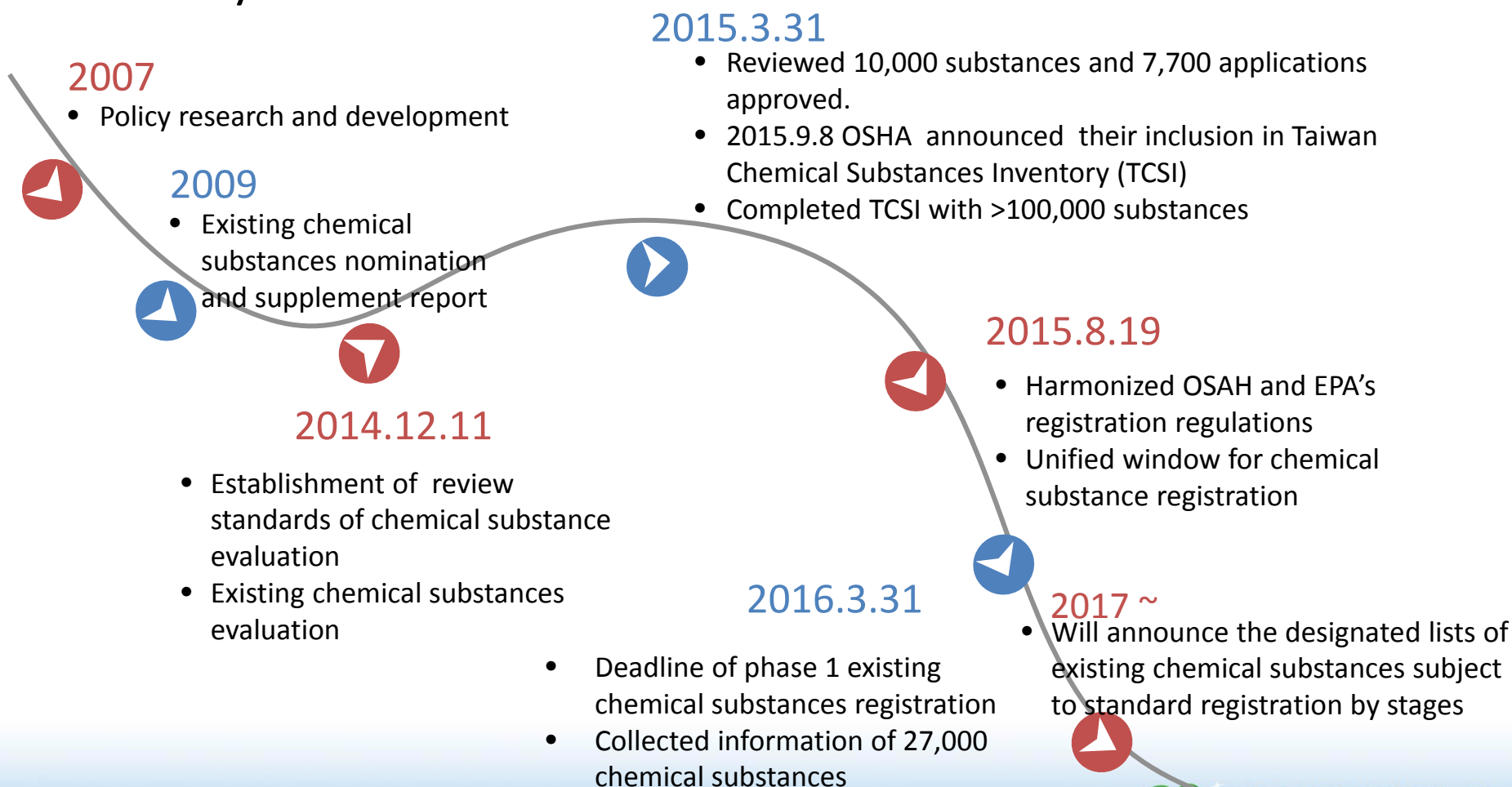
REACH (EC Regulation No.1907/2006, concerning Registration, Evaluation, Authorization and Restriction of Chemicals)

環境保護署30週年慶
2017. 8. 22

Strategic Approaches in Chemical Management

Establish Registration Regulation

• History



Strategic Approaches in Chemical Management

Establish Registration Regulation

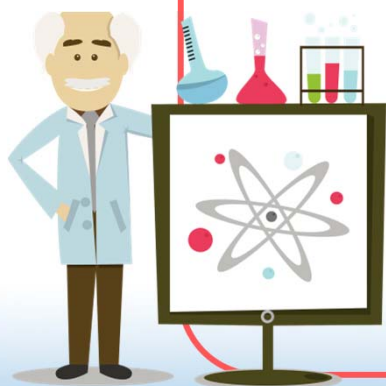
- Current chemical substance registration



Phase 1 existing chemical substance registration

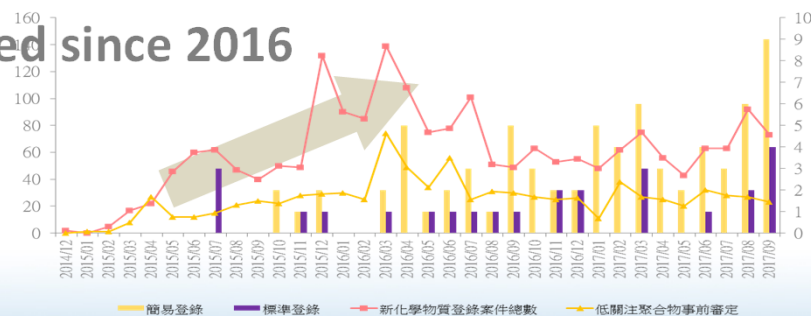
Number of active chemical substances

~27,000



New chemical substance registration

Rapidly increased since 2016



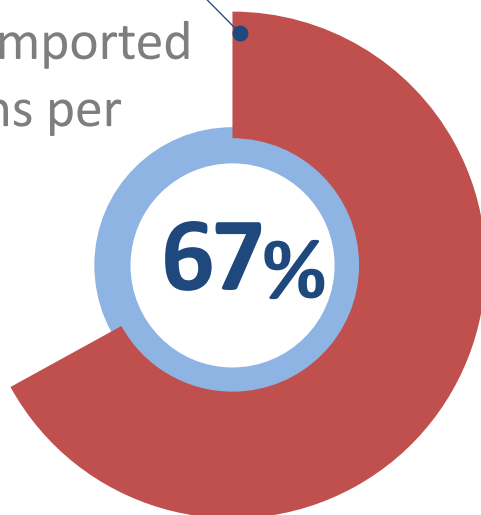
Strategic Approaches in Chemical Management

Establish Registration Regulation

- New chemical substances registration

Small quantity registration

Manufactured/imported less than 0.1 tons per year



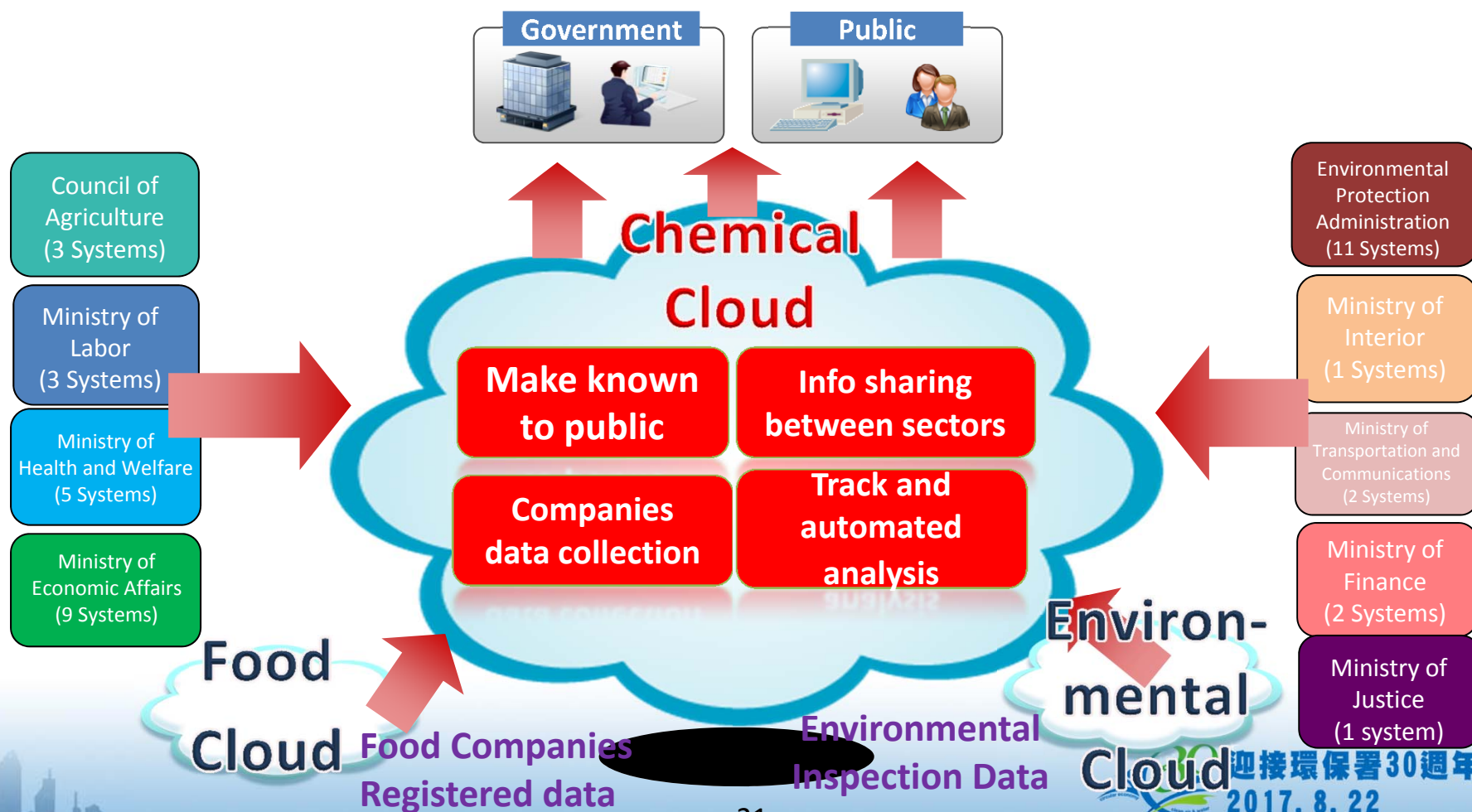
Registration Type	Number of Applications
Polymer of Low Concern for prior verification	886
Small quantity registration	1,997
Simplified registration	78
Standard registration	26

From 2014.12.11 to 2017.10.30

Strategic Approaches in Chemical Management

Established and Strengthen function of Chemical Cloud

- Inter-ministerial Integration- coordinated 9 sectors and completed data integrity and normalization for 43 chemical substances systems. To date, around 25,000,000 data have been collected from 102,305 chemical substances.



Strategic Approaches in Chemical Management

Chemical Cloud Development and Data Application

Basic information search

- Chemical substance search
(basic information 、operation tonnage 、distribution data)
- Company information search
(chemicals used 、tonnage 、distribution data)
- Government data search
- Multiple substances search



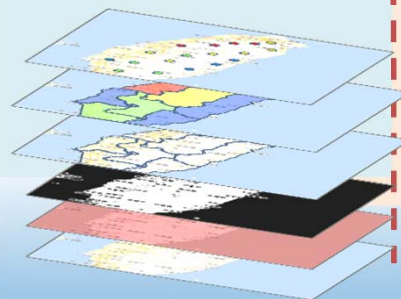
Alert function

IED & Drug precursors

Food substances with safety concern

Cross-region/GIS information

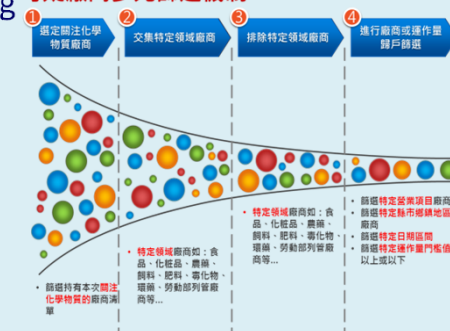
- The distribution of chemicals in rivers
- Company locations
- Quantity distribution



Company screening

- Suspicious company screening
with multiple conditions
(high risk, non-reported
industrial substance for food
manufacture)

可疑廠商多元篩選機制



Chemical substance knowledge map

- Chemical products used in daily life
(Categories 、Name 、
Ingredient 、Chemical
characteristics...)
- Test standard
- Green mark



Strategic Approaches in Chemical Management

Strengthen Source Control

Up-stream Control

1st Ring
Source Control



2nd Ring
Rebuild
Production Management
SAFE



- Control food production and process
- Problem prevention

Down-stream Firewall

3rd Ring
Strengthen
Inspection

4th Ring
Increase in the
severity of the
penalty

5th Ring
Supervised
by public



- Solve problems and prevent situation from getting worse
- Implement persistently and see the impact

Strategic Approaches in Chemical Management

Strengthen Source Control

**57 chemicals with
potential risk in food
safety**

**11 Chemicals have
been regulated**

**Food Additives
Assessment**

**46 Chemicals shall be
enforced the control**

8

**Toxic Chemical
Substances
Control Act**

3

**Agro-pesticides
Management Act**

**Evaluate whether to announce as
Toxic Chemicals or Substances of
Concern**

**13 are announced as
toxic chemicals**

**(not legalized food
additives)**

2017.4.25

Regulation Draft Intimation

2017.9.26

Regulation Announced

**33 are under
assessment**

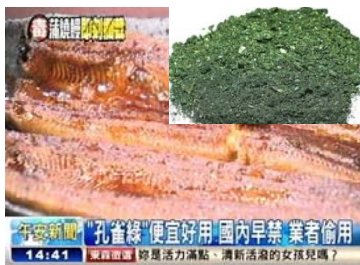


Strategic Approaches in Chemical Management

Strengthen Source Control

- 2017.9.26- 13 newly announced toxic chemicals for enforcing control

Malachite Green



Maleic Acid



Maleic anhydride



Dulcin



Potassium Bromate



DMF



Benzyl Violet 4B



Metanil Yellow



Sodium

hydroxymethanesulfinate



Melamine



Coumarin



Butter Yellow



Rhodamine B



30週年慶

Strategic Approaches in Chemical Management

Strengthen Source Control

Operation Record and Release Quantities Reporting §8

The handler shall produce reports and regularly report records concerning the handling of toxic chemical substances and their release quantities; such records shall be preserved properly for future reference.

Fine : NTD 60,000~300,000

NTD 100,000~500,000

Transaction Permission §23

Handlers of toxic chemical substances shall not sell or transfer the toxic chemical substances at issue to those that have not obtained a permit, registration or approval pursuant.

Fine : NTD 100,000~500,000

Operation Permission §7

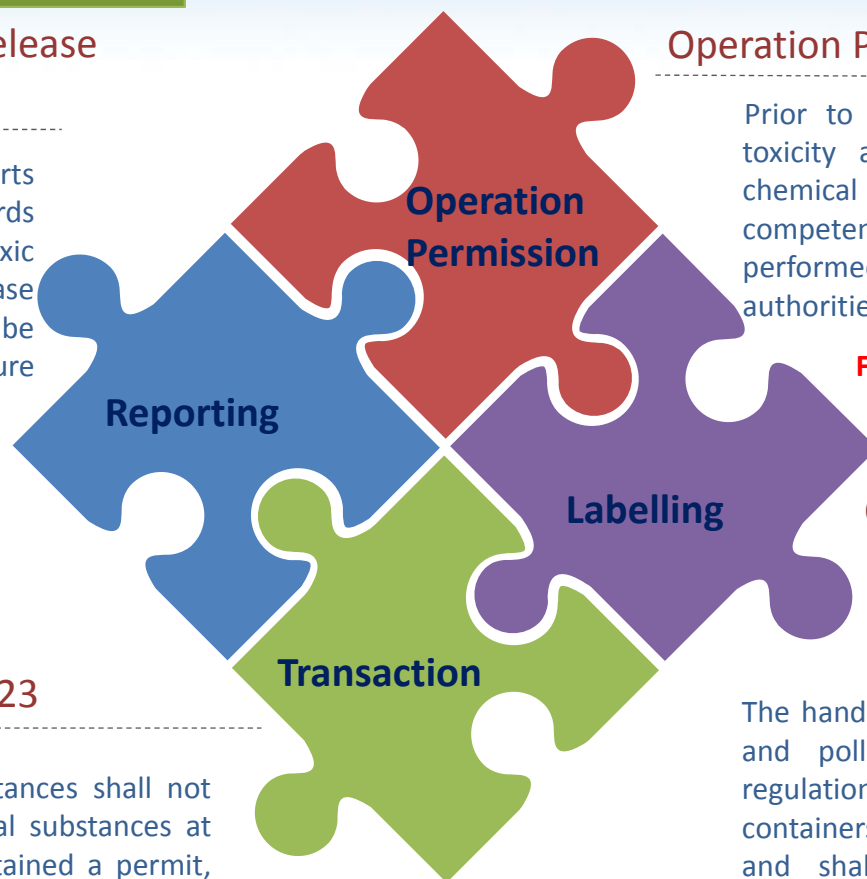
Prior to handling of toxic chemical substances, toxicity and relevant information of the toxic chemical substances shall be reported to competent authorities. Such handling shall be performed upon permission of the competent authorities in accordance with authorized items.

Fine : NTD 100,000~500,000

Container Labelling and Identification in Handling Facilities §17

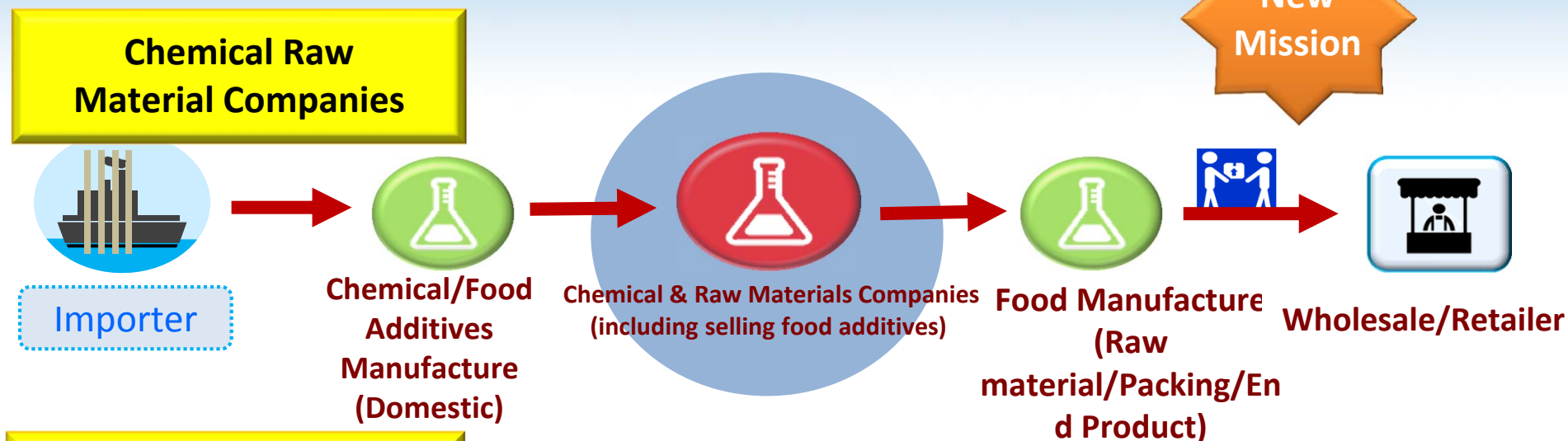
The handler shall mark matters related to toxicity and pollution control measures pursuant to regulations on toxic chemical substance on containers, packaging, handling sites, and facilities, and shall keep safety data sheets for the corresponding toxic chemical substances.

Fine : NTD 60,000~300,000

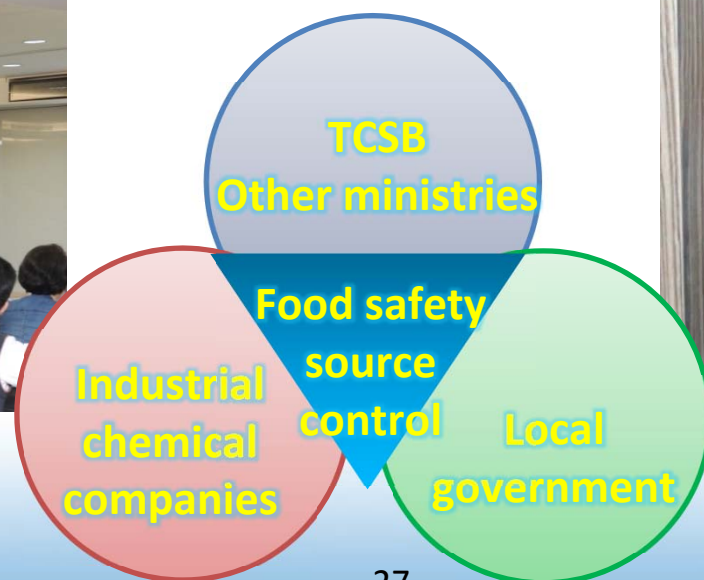


Strategic Approaches in Chemical Management

Inspection and consultation



Establishing Partnerships



Strategic Approaches in Chemical Substance Management

Inspection and consultation

Industry Guidance

Companies

Association

Four management principles

Encourage self-management



Industry Self-management

Thorough Visit

- ◆ 2017.2 – Initiate plan to visit handlers and provide guidance.
- ◆ 2017.5 - started to visit and consult 2,196 handlers
- ◆ Until 10/25, has visited 4 associations, around 2,000 companies, and held 11 seminars.

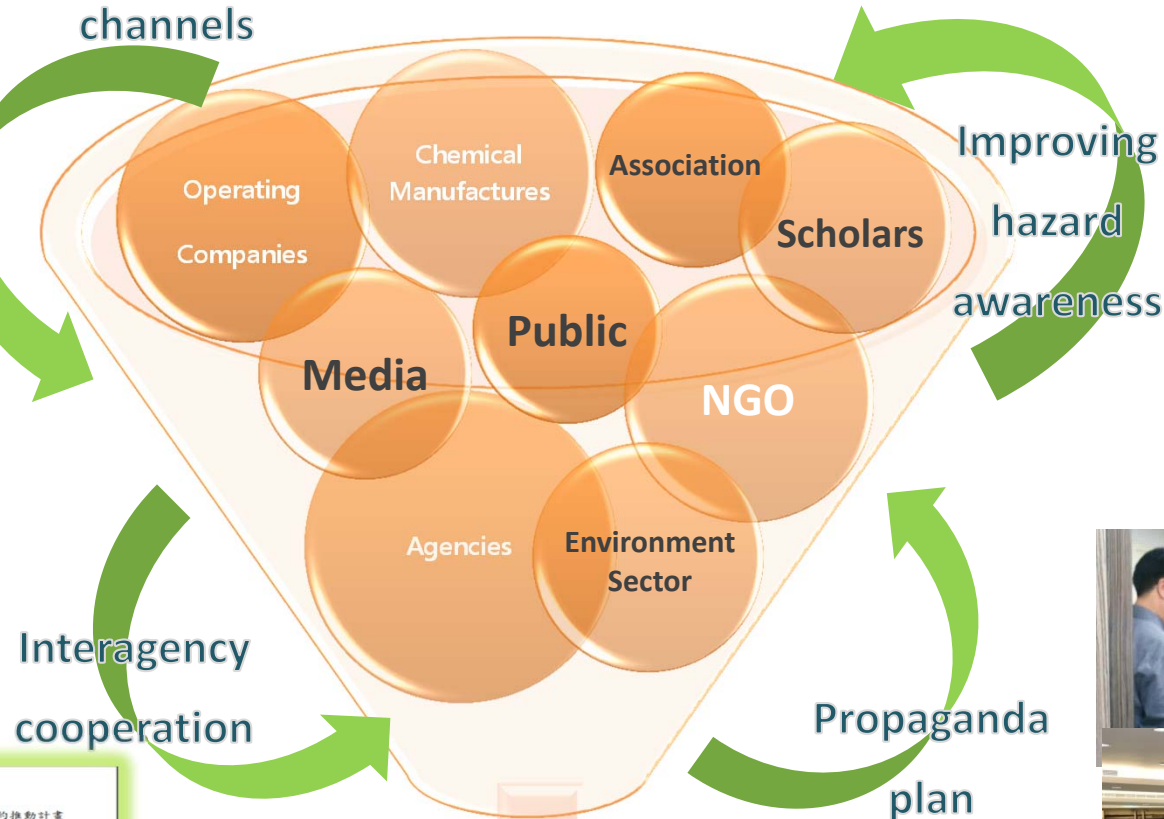


Strategic Approaches in Chemical Substance Management

Enhance Risk Communication



Using media
channels



Risk communication and
building partnership with
stakeholders



30 迎接環保署30週年慶
2017. 8. 22

Strategic Approaches in Chemical Management

Raise Awareness of Chemical Hazard to Stakeholders



生活中的化學物質 Chem Life



1

1 Topic in lunch time once a week

3

3 articles about chemical substance knowledge in life every day

5

Monday to Friday everyday with new stuff



Likes
7,157



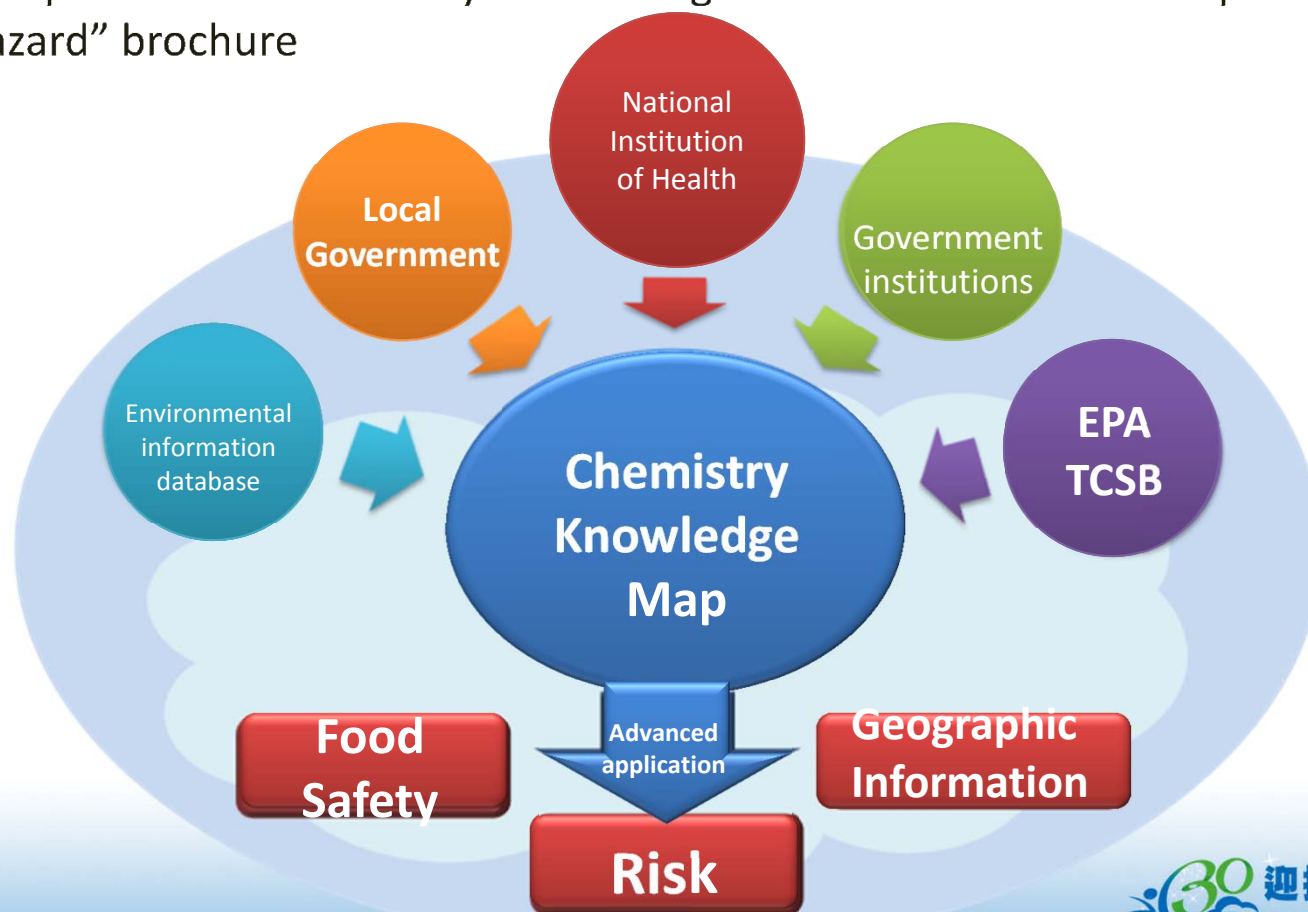
Articles
Interaction Rates
27,492

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2017. 8. 22

Strategic Approaches in Chemical Management

Develop Public Safety and Health Knowledge

- Building Knowledge Map
 - Local environmental chemical background concentration database
 - Compiled “Chemical Safety at Home” guideline and “Chemical Exposure Hazard” brochure



Strategic Approaches in Chemical Management

Develop Safety and Health Knowledge to People

- Established Asbestos Hazard Information website for guiding correct knowledge and concepts
- Compiled “Taiwan Asbestos Hazard Guidance” brochure

Established
Asbestos Hazard
Information
online-page



Compiling “Taiwan
Asbestos Hazard
Guidance”
brochure



「石綿危害資訊專區」由環保署會同勞動部、衛生福利部、經濟部及內政部營建署共同設立，提供民眾最完整直接之石綿資訊。在職責分工方面，環保署主管石綿之原料管理與廢棄處理，包括石綿原料用途、清除處理及環保法規等；經濟部主管石綿商品之國家標準、應施行檢驗商品項目之管理及建築板材抽驗成果；勞動部主管職場暴露評估，包括勞工健康檢查、作業環境測定、危害預防及職業病補償機制等；衛生福利部提供健康危害諮詢與石綿相關疾病之醫療資訊；內政部營建署主管包括建築物含石綿之拆除規定與拆除機構管理等；至於經濟部所屬臺灣自來水公司則是確保自來水管禁用石綿等規定。



Strategic Approaches in Chemical Management

Strengthen Cross-border Control

What's import regulation 801?

Regulation code for importation of pesticides, veterinary medicines, and environment agents, toxic chemicals

New Mission

Original regulation:

Allowed to import with approvals issued by customs based on good category, usage, Safety Data Sheets, and packaging

Revision:

A certificate issued by the TCSB is required for customs clearance

- Implementation commenced on 2017/8/15. Until 2017/10/25, 145 goods have been inspected (55 companies), and 134 certificates have been issued.

報到前

向化學局申請證明文件

有效
期限6
個月

檢查
裝備

通關比對

未申請
簽審編
號者無
法輸入

報到完成

通關放行

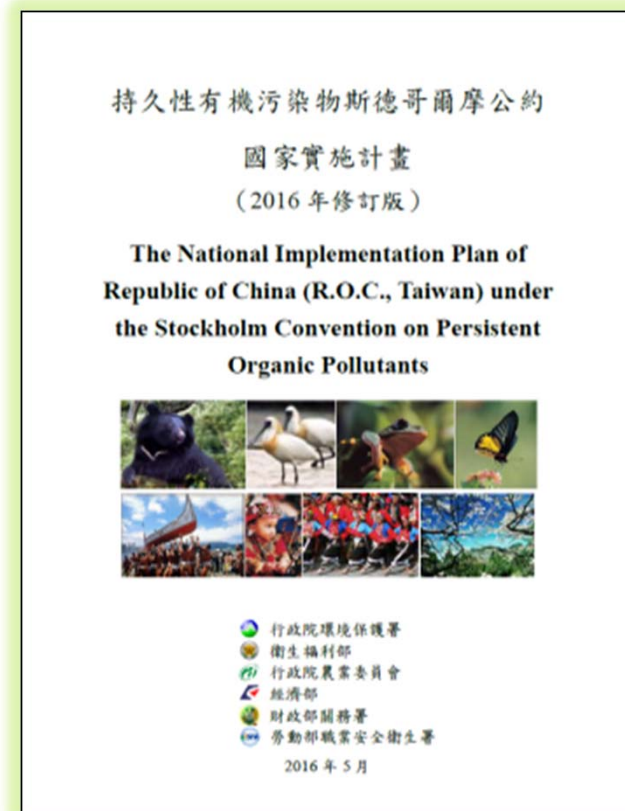
環保署30週年慶

2017. 8. 22

Strategic Approaches in Chemical Management

Execute International conventions and programs

- **National Implementation Plan under Stockholm Convention on Persistent Organic Pollutants (POP)**
 - Planed to push forward by Executive Yuan on 2008/7/3
 - Through cooperation between sectors, engaging in managing POP, and compiling outcome to Executive Yuan.
 - Following the updated convention and sharing to sectors as reference.



Strategic Approaches in Chemical Management

Execute International Conventions and Programs

- **Execute U.N. Minamata Convention on Mercury**
 - Planed to push forward by Executive Yuan on 2016/6/27
 - Through cooperation between sectors, engaging in managing Mercury, reducing Mercury contamination and compiling outcome to Executive Yuan.
 - Following the updated convention and sharing to sectors as reference.



Strategic Approaches in Chemical Management

Execute International
Conventions and Programs

- **Endocrine Disrupter Substance Management Plan**

- Planned to push forward by Executive Yuan on 2009/10/30
- Through cooperation between sectors, enhancing control and supervision to relevant product, and providing public guidance to reduce the risk of exposure to endocrine disrupter substances.
- Compiling outcome to Executive Yuan.

- Endocrine Disrupter
Substance Management Plan
2009.12~2015
- Endocrine Disrupter
Substance Management Plan
(Phase 2) (2016~2021)

Strategic Approaches in Chemical Management

Environmental Agents Safety

Environmental agents

- According to Environmental Agents Control Act to check enrollment of approved manufactures and import approval
- Currently 999 manufacture approvals, 238 import approvals, 20 natural insecticides, 1,014 pest control companies, and 340 retailers.

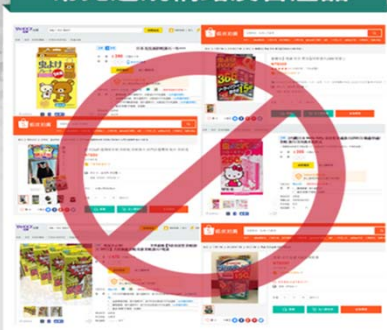
Investigate and enforcement

- Inspect bogus medicines, illegal drug, poor-quality medicine, advertising and labeling
- Active Ingredient with tolerant error, illegal medicine ingredient inspection
- Selling environmental agents on the Internet
- Custom inspection on illegal importation of environmental agents
- Implementation of Pest Control Operators Management Regulations

People selling environmental agents on the Internet without authorized certificate will be charged up to NTD 300,000

網拍防蚊掛片 當心違法受罰

常見違規網路廣告產品



廣告環藥相關規定

依環境用藥管理法 第32條規定

非持有環境用藥許可證、環境用藥販賣業或病媒防治業許可執照者，不得為環境用藥廣告，違者處新臺幣

6~30萬



Update government website with the information teaching public to use legal and safe environmental agents

安全選用環境用藥

1

確認防治的害蟲對象



認明環保署核准字號

環署衛輸字第○○○○號
環署衛製字第○○○○號

2

3

檢查產品有效期限

製造日期：○年○月○日
產品有效期限：2年

閱讀標示說明書，
依標示說明書使用



4



Rat medicine



Mosquito coils



Electronic mosquito coils

環保署30週年慶
7.8.22

Future Visions

- According to chemical management policy and guidelines, coordinate inter-ministerial responsibility and function.
- Amend relevant regulations and add concerned chemicals, enlarge the range of hierarchy of controls.
- Enforcing toxic chemical accident response system and relevant technical development.
- Promote green chemistry and enhance circular economy.
- Uncover chemical safety information and continue risk communication.
- Improve research and inspection capacity on toxicant and chemicals.
- Strengthen border control and international cooperation on toxicants and chemicals.



**THANK YOU FOR
YOUR LISTENING**