

# 國家化學物質管理

## 政策綱領

National Chemical Substances  
Management Policy Guidelines

行政院環境保護署

Environmental Protection  
Administration Executive Yuan,  
R.O.C. (Taiwan)

中華民國107年4月2日

行政院院臺環字第1070008670號函核定

issued by Executive Yuan  
on April 2, 2018



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行政院環境保護署  
毒物及化學物質局

Toxic and Chemical Substances Bureau  
Environmental Protection Administration Executive Yuan, R.O.C. (Taiwan)

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## 前言

化學物質的製造與研發成就各國經濟發展與社會進步，惟不當的化學物質使用與管理將對造成對人類的危害及環境污染，其影響不可忽視。我國與化學物質管理相關部會有13個，每個部會均有各自掌管的法規與政策；國內已知既有化學物質共有10萬餘種，惟化學物質之管理係跨部會工作、其資訊匯流整合、檢驗分析技術提升與民眾對化學物質之正確認知，均須有一專責機關來統籌。行政院為展現化學物質管理制度之決心，參考聯合國「國際化學品管理策略方針」(Strategic Approach to International Chemicals Management，簡稱SAICM)，特集結各部會之力量及資源，訂定國家化學物質管理政策綱領（以下簡稱本綱領）。

### 綠色化學12項原則

-The 12 Principle of GREEN CHEMISTRY-

P



01 防廢

Prevent waste

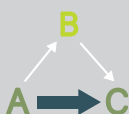
R



02 再生

Renewable materials

O



03 簡潔

Omit derivatization steps

D



04 可解

Degradable chemical products

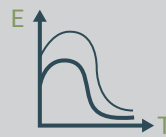
U



05 保安

Use safe synthetic methods

C



06 催化

Catalytic reagents



## Introduction

The production, research and development of chemical substances have facilitated worldwide achievement in economic development and social progress. Nevertheless, improper use and management of chemical substances must not be ignored as they can harm human health and pollute the environment. In Taiwan, there are 13 governmental departments and agencies related to chemical substances management, each with its respective regulations and policies. With over 100,000 types of known chemical substances in Taiwan, the management of chemical substances requires interdepartmental collaboration with a key actor in charge of information gathering and integration. This will help achieve objectives such as the enhancement of examination and analysis technology and elevation of the public's level of knowledge about chemical substances. To demonstrate its determination to promote the chemical substances management system, the Executive Yuan integrated the capacities and resources of all government departments and agencies and promulgated the "National Chemical Substances Management Policy Guidelines" (hereinafter referred to as the Guidelines).

### 綠色化學 12 項原則

-The 12 Principle of GREEN CHEMISTRY-

T



07 節能

Temperature,  
Pressure  
ambient

I



08 監測

In-Process  
Monitoring

V



09 降輔

Very few  
auxiliary  
substances

E



10 物盡

E-factor,  
maximize feed  
in product

L



11 低毒

Low toxicity  
of chemical  
products

Y



12 思危

Yes, it's safe



## 政策架構及施政目標

本綱領係參照國際間化學物質管理精神，以及整合我國各部會職掌中化學物質掌管法規與政策，並配合國情及本土之環境條件調和後，建構我國化學物質管理五大目標及相關策略，以達成實現我國化學物質安全使用與管理，保護人類健康和環境之願景。

為了有效管理並降低化學物質風險，參照聯合國頒布的國際化學品管理策略方針（SAICM）管理精神，研擬我國「國家化學物質管理政策綱領」，進行13個部會、17部法規跨部會協調運作，同時檢視十年以來我國針對化學物質管理各部會執行成果與效益，整合各部會、化學物質管理量能，包括食品安全、工安意外、公共安全或污染排放等方面，以短期務實、長期趨嚴的理念，維護民眾健康及生活環境；對外，能夠和國外接軌，對內，也能夠強化跨部會橫向聯繫，提升民眾健康的保護。

基於以上目的，本政策綱領以「有效管理化學物質，建構健康永續環境」為化學物質管理之願景，並就國家治理、降低風險、管理量能、知識建立，以及跨境管理等重要領域，建立化學管理五項關鍵能力為施政目標，期能透過政府政策引導及資源挹注，有效強化化學物質安全管理，保護人體健康與環境不受化學物質使用所產生的風險威脅；並與國際接軌，增進我國化學物質與商品在國際貿易安全面向的競爭力。





## Policy Framework and Administration Objectives

Based on the “UN Strategic Approach to International Chemicals Management” (SAICM), the Guidelines are shaped by international principles of chemical substances management. The five major objectives of chemical substances management and strategy related thereto are formulated according not only to regulations and policies of different governmental departments and agencies, but also according to national and local environmental conditions. The purposes of the Guidelines are to realize the vision of safe use and management of chemical substances in Taiwan, thereby protecting human health and the environment.

To effectively manage and reduce risks related to chemical substances, the Guidelines set objectives of launching interdepartmental coordination and collaboration among 13 governmental departments/agencies, along with 17 regulations. The government also reviewed past chemical substances management outcomes and the effectiveness of governmental departments/agencies over the last decade. It then integrated the chemical substances management capacities of governmental departments/agencies by outlining practical (short-term) and strict (long-term) strategies. For example, food safety, occupational accidents, public safety and pollution are key issues that must be managed in order to maintain the health of our citizens and quality of our living environment. Moreover, these strategies enable us not only to enhance internal, horizontal interdepartmental connections, but also to connect internationally. The Guidelines have the visions of “effectively managing chemical substances” and “constructing a healthy and sustainable environment”. Also, five key capabilities for the management of chemical substances were stated – governance, risk reduction, management capacity, knowledge establishment and cross-border management – as administrative objectives. With the guidance of the government's policies and investment of resources, the safety management of chemical substances is expected to be effectively strengthened, safeguarding human health and our environment from the risks and threats of chemical substances. At the same time, we connect to the world to enhance the competitiveness of our chemical substances and commodities in the world market.



本綱領勾勒出全方位的國家化學物質管理政策架構（如附圖所示），以作為實現化學物質管理發展願景之施政藍圖。本綱領之施政目標如下：



### 一、國家治理

制定國家目標、健全法規制度：將配合國際趨勢建立本土化之目標。



### 二、降低風險

落實正確使用、打造無毒環境：預防化學物質不當使用造成之災害與健康風險，以提升勞工作業安全、食品安全與公共安全，並強化國家廢棄物處理管理方法，提升化學物質危害之救治。



### 三、管理量能

推動部會合作、強化資訊整合：將建立部會協調合作機制，以提升化學物質管理之技術與設備能力。



### 四、知識建立

提高全民意識、共同監測管制：將強化國民對化學物質之正確認知，以發揮公民監督機制。



### 五、跨境管理

推動國際合作、監管跨境運輸：將積極配合國際公約與協定，有效管控化學物質之輸出（入）。

The Guidelines also outlined the framework National Chemical Substances Management Policy as the blueprint for the future development of chemical substances management. The administrative objectives of the Guidelines are as follows:



### 1. Governance

Set a national vision and build the regulatory system: Follow international trends to develop localized goals and indicators.



### 2. Risk Reduction

Ensure correct usage and develop a toxic-free environment: Prevent incidents and health risks caused by the misuse of chemical substances by enhancing occupational safety, food and public safety; reinforce national waste handling and management methods to enhance the control of hazards due to chemical substances.



### 3. Capacity

Building and Technical Cooperation: Demonstrate the effectiveness of a multi-sector mechanism that responds to defined needs, and use the practice of securing wide stakeholder ownership of projects and initiatives that have broader implications for chemical management. Raise the level of attention paid to such issues at national, regional and global levels which will result in enhanced synergies, policy responses, formal networks among stakeholders, and the identification of appropriate implementation mechanisms.



### 4. Knowledge and Information

Contribute to an enhanced knowledge of the chemicals management situation of relevant countries, by developing policy and legal frameworks, strengthening institutional capacity, and by mainstreaming and fostering enhanced coordination and cooperation among intergovernmental organizations so as to expand stakeholder participation in the sharing of knowledge and information on the sound management of chemicals.



### 5. Illegal International Traffic

Actions and cooperation among national, regional and global levels are needed to prevent and detect illegal trafficking of chemicals and hazardous wastes, including efforts towards more effective enforcement of international conventions related to the transboundary movement of chemicals and hazardous waste.



## 推動策略

依據本綱領五大施政目標之各推動策略分別如下：

### 一、國家治理

- (一) 建立化學物質管理相關制度，包括管制、賠償與保護制度等。
- (二) 完備化學物質管理相關法規。
- (三) 制定國家化學物質管理行動方案。
- (四) 成立國家化學物質管理會報或平台，建立跨部會協調機制。
- (五) 健全化學物質管理相關財源。

### 二、降低風險

- (一) 訂定化學物質對於勞工作業安全，及食品與民生用品健康風險、公共安全之管控措施。
- (二) 推動綠色化學，鼓勵業界研發低化學風險製程。
- (三) 配合循環經濟，提高化學物質使用效率，強化國家廢棄物處理管理方法，減少化學物質之排出及對民眾健康及環境的化學衝擊。
- (四) 建立化學物質風險及危害評估機制與工具，防範與緩解化學物質對健康與環境之危害。
- (五) 訂定受化學物質危害及污染事故之通報應變機制與復原補救措施。

# III

## Promotion Strategy

The promotion strategies are categorized according to the five administrative objectives of the Guidelines.

1.

### Governance

- (1) Establish systems related to chemical substances management, including control, compensation and protection systems
- (2) Complete regulations on chemical substances management
- (3) Develop a national action plan for chemical substances management
- (4) Establish or create a national chemical substances management platform or reports; set up an interdepartmental coordination mechanism
- (5) Improve chemical substances management related financial resources

2.

### Risk Reduction

- (1) Establish control measures with respect to labor safety, daily food commodities, and public health
- (2) Promote green chemistry and encourage industry to develop low-chemical risk production processes
- (3) In coordination with circular economy enhance the efficiency of chemical substances and management methods of waste to minimize the discharge of chemical substances and mitigate chemical impacts on human health and the environment
- (4) Establish mechanisms and instruments for chemical risk and hazard assessment to prevent and mitigate the impacts of chemical substances on human health and the environment
- (5) Establish notification and emergency response mechanisms and recovery processes for chemical hazards and pollution incidents



### 三、

#### 管理量能

- (一) 強化化學物質資訊整合平臺。
- (二) 健全化學物質登錄制度，落實化學物質流向與追蹤查核管制。
- (三) 建置國家級檢驗單位與檢驗標準，強化檢驗與勾稽能力。
- (四) 推動國際關注之新興污染物質環境調查。

### 四、

#### 知識建立

- (一) 強化企業社會責任，導正媒體與利害相關者對危害化學物質之認知。
- (二) 強化社區知情權，促進資訊交流與協調合作，建立培訓和基礎設施。
- (三) 落實社區與學校之全民教育，建立對化學物質之正確認識。
- (四) 提升民間社會與公眾利益，促進非政府組織參與。

### 五、

#### 跨境管理

- (一) 配合國際化學物質管理相關公約，執行國際協定。
- (二) 訂定防制、偵察及控制有害與高風險化學物質之非法販運措施。
- (三) 管理化學物質跨境運輸。
- (四) 確保貿易與環境政策之協調。
- (五) 積極參與國際性化學物質管理相關組織與會議。

**3.**

### **Capacity**

- (1) Strengthen the chemical information integration platform
- (2) Improve the chemical substances registration system; implement chemical flow and related tracking, audit and control measures
- (3) Establish national analytical labs and standards to enhance analytical and examination abilities
- (4) Promote environmental surveys of emerging pollutant substances to which the world pays close attention

**4.**

### **Knowledge and Information**

- (1) Strengthen social responsibilities of enterprises; improve media and stakeholder knowledge of hazardous chemical substances
- (2) Strengthen the Community Right to Know to facilitate the exchange of information, collaboration and cooperation; establish trainings and infrastructure
- (3) Implement education for all in communities and schools; build accurate knowledge of chemical substances
- (4) Advance the interests of civil society and the public; encourage the participation of NGOs

**5.**

### **Illegal International Traffic**

- (1) Coordinate in accordance with international conventions on chemical substances management; implement international agreements
- (2) Establish measures to prevent, inspect and control the illegal trading and transportation of hazardous and high-risk chemical substances
- (3) Manage cross-border transportation of chemical substances
- (4) Ensure coordination between trading and environmental policy
- (5) Actively participate in international organizations and meetings related to chemical substances management



# 願景

## 有效管理化學物質 建構健康永續環境



### 01 國家治理

- (一) 建立化學物質管理相關制度，包括管制、賠償與保護制度等。
- (二) 完備化學物質管理相關法規。
- (三) 制定國家化學物質管理行動方案。
- (四) 成立國家化學物質管理會報或平台，建立跨部會協調機制。
- (五) 健全化學物質管理相關財源。

- (一) 訂定化學物質對於勞工作業安全，及食品與民生用品健康風險、公共安全之管控措施。
- (二) 推動綠色化學，鼓勵業界研發低化學風險製程。
- (三) 配合循環經濟，提高化學物質使用效率，強化國家廢棄物處理管理方法，減少化學物質之排出及對民眾健康及環境的化學衝擊。
- (四) 建立化學物質風險及危害評估機制與工具，防範與緩解化學物質對健康與環境之危害。
- (五) 訂定受化學物質危害及污染事故之通報應變機制與復原補救措施。



### 03 管理量能

- (一) 強化化學物質資訊整合平臺。
- (二) 健全化學物質登錄制度，落實化學物質流向與追蹤查核管制。
- (三) 建置國家級檢驗單位與檢驗標準，強化檢驗與勾稽能力。
- (四) 推動國際關注之新興污染物質環境調查。

- (一) 強化企業社會責任，導正媒體與利害相關者對危害化學物質之認知。
- (二) 強化社區知情權，促進資訊交流與協調合作，建立培訓和基礎設施。
- (三) 落實社區與學校之全民教育，建立對化學物質之正確認識。
- (四) 提升民間社會與公眾利益，促進非政府組織參與。

### 04 知識建立



- (一) 配合國際化學物質管理相關公約，執行國際協定。
- (二) 訂定防制、偵察及控制有害與高風險化學物質之非法販運措施。
- (三) 管理化學物質跨境運輸。
- (四) 確保貿易與環境政策之協調。
- (五) 積極參與國際性化學物質管理相關組織與會議。



### 05 跨境管理



# Vision

## Effectively Managing Chemical Substances, and Constructing a Healthy and Sustainable Environment



### 01 Governance

- (1) Establish control measures with respect to labor safety, daily food commodities, and public health
- (2) Promote green chemistry and encourage industry to develop low-chemical risk production processes
- (3) In coordination with circular economy enhance the efficiency of chemical substances and management methods of waste to minimize the discharge of chemical substances and mitigate chemical impacts on human health and the environment
- (4) Establish mechanisms and instruments for chemical risk and hazard assessment to prevent and mitigate the impacts of chemical substances on human health and the environment
- (5) Establish notification and emergency response mechanisms and recovery processes for chemical hazards and pollution incidents

- (1) Establish systems related to chemical substances management, including control, compensation and protection systems
- (2) Complete regulations on chemical substances management
- (3) Develop a national action plan for chemical substances management
- (4) Establish or create a national chemical substances management platform or reports; set up an interdepartmental coordination mechanism
- (5) Improve chemical substances management related financial resources

### 02

#### Risk Reduction



- (1) Strengthen the chemical information integration platform
- (2) Improve the chemical substances registration system; implement chemical flow and related tracking, audit and control measures
- (3) Establish national analytical labs and standards to enhance analytical and examination abilities
- (4) Promote environmental surveys of emerging pollutant substances to which the world pays close attention



### 03 Capacity

- (1) Strengthen social responsibilities of enterprises; improve media and stakeholder knowledge of hazardous chemical substances
- (2) Strengthen the Community Right to Know to facilitate the exchange of information, collaboration and cooperation; establish trainings and infrastructure
- (3) Implement education for all in communities and schools; build accurate knowledge of chemical substances
- (4) Advance the interests of civil society and the public; encourage the participation of NGOs

### 04

#### Knowledge and Information



- (1) Coordinate in accordance with international conventions on chemical substances management; implement international agreements
- (2) Establish measures to prevent, inspect and control the illegal trading and transportation of hazardous and high-risk chemical substances
- (3) Manage cross-border transportation of chemical substances
- (4) Ensure coordination between trading and environmental policy
- (5) Actively participate in international organizations and meetings related to chemical substances management



### 05 Illegal International Traffic



# 行政院環境保護署 毒物及化學物質局

Toxic and Chemical Substances Bureau  
Environmental Protection Administration Executive Yuan, R.O.C. (Taiwan)

2	13	90	39
He	Al	Th	Y

健康



Sustainable

永續



EPA

行政院環境保護署

Environmental Protection Administration  
Executive Yuan, R.O.C. (Taiwan)



43	51
Tc	Sb

毒物及化學物質局

Toxic and Chemical Substances Bureau