

# Chemical Safety and Security: The Legal Framework for Malaysia

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# PRESENTATION OUTLINE

INTRODUCTION

CHEMICAL INDUSTRIES IN MALAYSIA

CHEMICAL WEAPON CONVENTION &  
NAWCW

LEGAL FRAME WORK FOR CHEMICAL  
MANAGEMENT

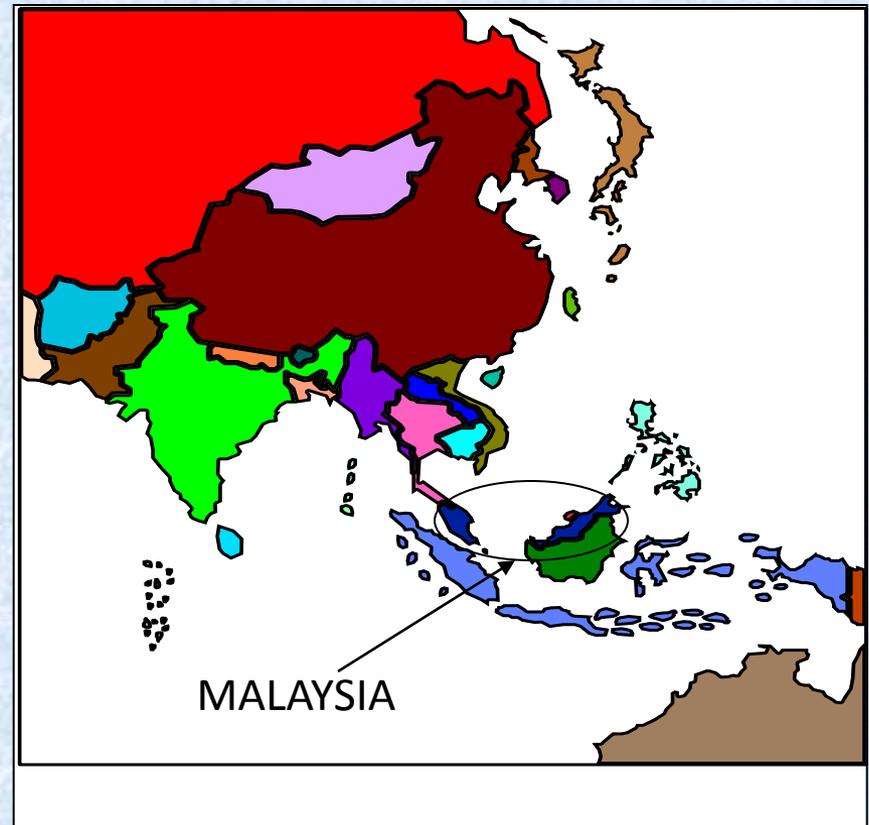
CHALLENGES

SUMMARY

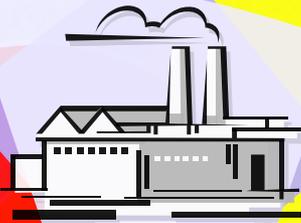


# MALAYSIA

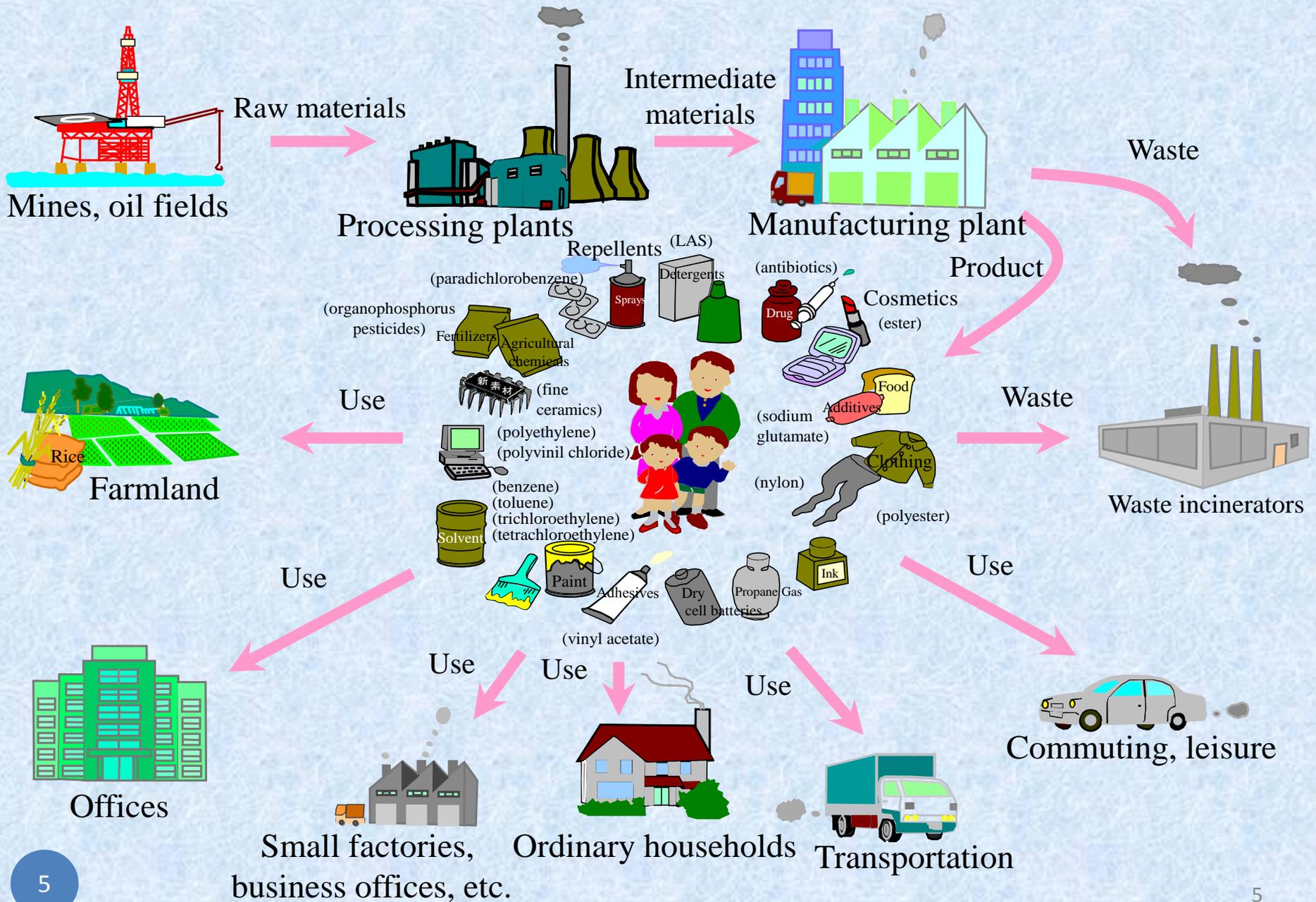
- Peninsular (West) & Island (East)
- Area covered :329, 758 sq. km
- Climate : largely tropical @ abundant rain
- Location: South East of Asia
- Flanked By:
  - Thailand, Brunei & Phillipines in the North
  - Indonesia & Singapore in the South



# CHEMICAL INDUSTRIES IN MALAYSIA



- Petrochemicals
- Agrochemicals
- Cosmetics & Toiletries
- Fertilizers & Pesticides
- Industrial Gas
- Oleo-chemicals
- Paint
- Pharmaceuticals
- Soap & Detergents



# CHEMICAL PRODUCTION

- About 1,000 chemicals enter market every year, mostly mixtures
- 15 million chemical substances are commercially available
- 60,000 to 70,000 substances are in regular use globally

# HOW POISONOUS ARE CHEMICALS?

- Whether a chemical is poisonous depends upon the type of organism **EXPOSED**, the **DOSE** of the substance, and the **ROUTE OF EXPOSURE** (*et.al. Stanley E*).



# Chemical Industries in Malaysia

Chemicals manufacturers - range from MNCs, large local companies and SMEs.

Second most exported goods after E&E.

Contributes about 6% of total Malaysian exports annually



# Chemicals Trade – The Ninth Malaysia Plan Report

## EXPORTS OF MANUFACTURED GOODS, 2000-2010

Industry	RM million			% of Total			Average Annual Growth Rate (%)	
	2000	2005	2010	2000	2005	2010	8MP	9MP
<b>Resource-Based</b>	<b>44,321</b>	<b>77,280</b>	<b>122,625</b>	<b>13.9</b>	<b>18.0</b>	<b>18.3</b>	<b>11.8</b>	<b>9.7</b>
Food	4,509	8,488	14,627	1.4	2.0	2.2	13.5	11.5
Beverages & Tobacco	1,207	1,701	2,406	0.4	0.4	0.4	7.1	7.2
Wood Products	6,801	8,860	12,503	2.1	2.1	1.9	5.4	7.1
Paper & Paper Products	1,397	2,073	2,913	0.4	0.5	0.4	8.2	7.0
Petroleum Products	8,131	16,729	26,342	2.6	3.9	3.9	15.5	9.5
Chemical & Chemical Products	15,011	29,718	48,678	4.7	6.9	7.3	14.6	10.4
Rubber Products	4,695	6,777	11,261	1.5	1.6	1.7	7.6	10.7
Non-Metallic Mineral Products	2,571	2,934	3,895	0.8	0.7	0.6	2.7	5.8
<b>Non-Resource-Based</b>	<b>252,383</b>	<b>317,449</b>	<b>491,515</b>	<b>79.4</b>	<b>73.8</b>	<b>73.3</b>	<b>4.7</b>	<b>9.1</b>
Textiles, Clothing & Footwear	10,433	10,520	13,715	3.3	2.4	2.0	0.1	5.4
Manufactures of Metal	8,618	17,157	27,678	2.7	4.0	4.1	14.8	10.0
Electrical & Electronic Products	230,429	282,779	439,626	72.5	65.8	65.5	4.2	9.2
Transport Equipment	2,903	6,993	10,496	0.9	1.6	1.6	19.2	8.5
<b>Others</b>	<b>21,205</b>	<b>35,144</b>	<b>56,627</b>	<b>6.7</b>	<b>8.2</b>	<b>8.4</b>	<b>10.6</b>	<b>10.0</b>
<b>Total</b>	<b>317,908</b>	<b>429,873</b>	<b>670,767</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>6.2</b>	<b>9.3</b>
Total (USD) <sup>1</sup>	83,660	113,124	176,518					
% of Total Gross Exports	85.2	80.5	83.4					

Source: Economic Planning Unit

Note: <sup>1</sup>Based on the exchange rate of RM3.80 to USD1

# Major Import Chemicals(2010-2011)

Table 16: Major Imports of Manufactured Goods from Top Five Suppliers, 2010-2011

Products	2011 <sup>P</sup>			2010	
	Country	RM million	Share (%)	RM million	Share (%)
<b>Total</b>		<b>574,232.0</b>	<b>100.0</b>	<b>528,828.2</b>	<b>100.0</b>
<b>Manufactured Goods</b>		<b>447,841.8</b>	<b>78.0</b>	<b>430,279.7</b>	<b>81.4</b>
<b>Electrical &amp; electronics products</b>	<b>Total</b>	<b>177,889.3</b>	<b>31.0</b>	<b>189,398.8</b>	<b>35.8</b>
	People's Rep. of China	32,736.0	5.7	30,832.2	5.8
	USA	26,627.2	4.6	29,564.1	5.6
	Singapore	24,872.9	4.3	21,126.8	4.0
	Japan	19,927.1	3.5	22,005.9	4.2
	Chinese Taipei	14,540.3	2.5	12,854.4	2.4
<b>Chemicals &amp; chemical products</b>	<b>Total</b>	<b>51,116.3</b>	<b>8.9</b>	<b>45,047.8</b>	<b>8.5</b>
	Singapore	6,539.0	1.1	6,200.3	1.2
	People's Rep. of China	6,223.6	1.1	5,178.2	1.0
	Japan	5,066.9	0.9	4,722.3	0.9
	USA	4,417.4	0.8	4,646.3	0.9
	Thailand	3,542.2	0.6	3,003.0	0.6

Source : MITI  
Report 2011

# Chemicals Investment Project – Ninth Malaysia Plan Report

## APPROVED MANUFACTURING PROJECTS BY INDUSTRY, 2001-2005

Industry	Number of Projects	Capital Investment							
		RM million			% of Total By Ownership		% of Total By Industry		
		Domestic	Foreign	Total	Domestic	Foreign	Domestic	Foreign	Total
<b>Resource-Based</b>	<b>1,948</b>	<b>25,612</b>	<b>23,903</b>	<b>49,516</b>	<b>51.7</b>	<b>48.3</b>	<b>46.2</b>	<b>31.0</b>	<b>37.3</b>
Food Manufacturing	369	3,469	2,303	5,772	60.1	39.9	6.3	3.0	4.4
Beverages & Tobacco	26	142	470	612	23.2	76.8	0.3	0.6	0.5
Wood & Wood Products	193	2,267	943	3,210	70.6	29.4	4.1	1.2	2.4
Furniture & Fixtures	233	1,363	297	1,659	82.1	17.9	2.5	0.4	1.3
Paper, Printing & Publishing	123	6,418	4,850	11,268	57.0	43.0	11.6	6.3	8.5
<b>Chemicals &amp; Chemical Products</b>	<b>288</b>	<b>5,004</b>	<b>3,025</b>	<b>8,029</b>	<b>62.3</b>	<b>37.7</b>	<b>9.0</b>	<b>3.9</b>	<b>6.1</b>
Petroleum Products	61	1,787	6,289	8,076	22.1	77.9	3.2	8.2	6.1
Natural Gas	2	50	0	50	100.0	0.0	0.1	0.0	0.0
Rubber Products	144	1,442	963	2,405	60.0	40.0	2.6	1.2	1.8
Plastic Products	358	2,050	1,760	3,810	53.8	46.2	3.7	2.3	2.9
Non-Metallic Mineral Products	151	1,620	3,005	4,625	35.0	65.0	2.9	3.9	3.5
<b>Non-Resource-Based</b>	<b>2,771</b>	<b>29,303</b>	<b>53,068</b>	<b>82,371</b>	<b>35.6</b>	<b>64.4</b>	<b>52.8</b>	<b>68.8</b>	<b>62.1</b>
Textiles & Textile Products	178	1,171	947	2,117	55.3	44.7	2.1	1.2	1.6
Leather & Leather Products	12	57	17	74	76.8	23.2	0.1	0.0	0.1
Basic Metal Products	163	9,308	5,502	14,810	62.8	37.2	16.8	7.1	11.2
Fabricated Metal Products	487	2,059	2,177	4,236	48.6	51.4	3.7	2.8	3.2
Machinery Manufacturing	443	1,961	1,535	3,496	56.1	43.9	3.5	2.0	2.6
Electronics & Electrical Products	1,051	8,084	35,290	43,374	18.6	81.4	14.6	45.7	32.7
Transport Equipment	353	6,157	5,388	11,545	53.3	46.7	11.1	7.0	8.7
Scientific & Measuring Equipment	84	506	2,212	2,718	18.6	81.4	0.9	2.9	2.0
<b>Others</b>	<b>93</b>	<b>559</b>	<b>181</b>	<b>740</b>	<b>75.5</b>	<b>24.5</b>	<b>1.0</b>	<b>0.2</b>	<b>0.6</b>
<b>Total</b>	<b>4,812</b>	<b>55,474</b>	<b>77,152</b>	<b>132,626</b>	<b>41.8</b>	<b>58.2</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: Malaysian Industrial Development Authority (MIDA)



# CHEMICAL WEAPONS CONVENTION

- Malaysia signed the CWC on 13 January 1993 and ratified it on 20 April 2000.
- CWC Act 2005
  - Gazetted on 16 June 2005
  - Enforced on 1 September 2006
- CWC Regulations 2007
  - Gazetted on 1 November 2007
- NACWC established in September 2006.





# NATIONAL AUTHORITY CHEMICAL WEAPONS CONVENTION

- Established body to oversee the implementation of the Convention at the national level.
- Serves as the national focal point for effective liaison with the OPCW and other States Parties.
- Members: 14 Ministries and Agencies

# Ministries & Government Agencies (cont)

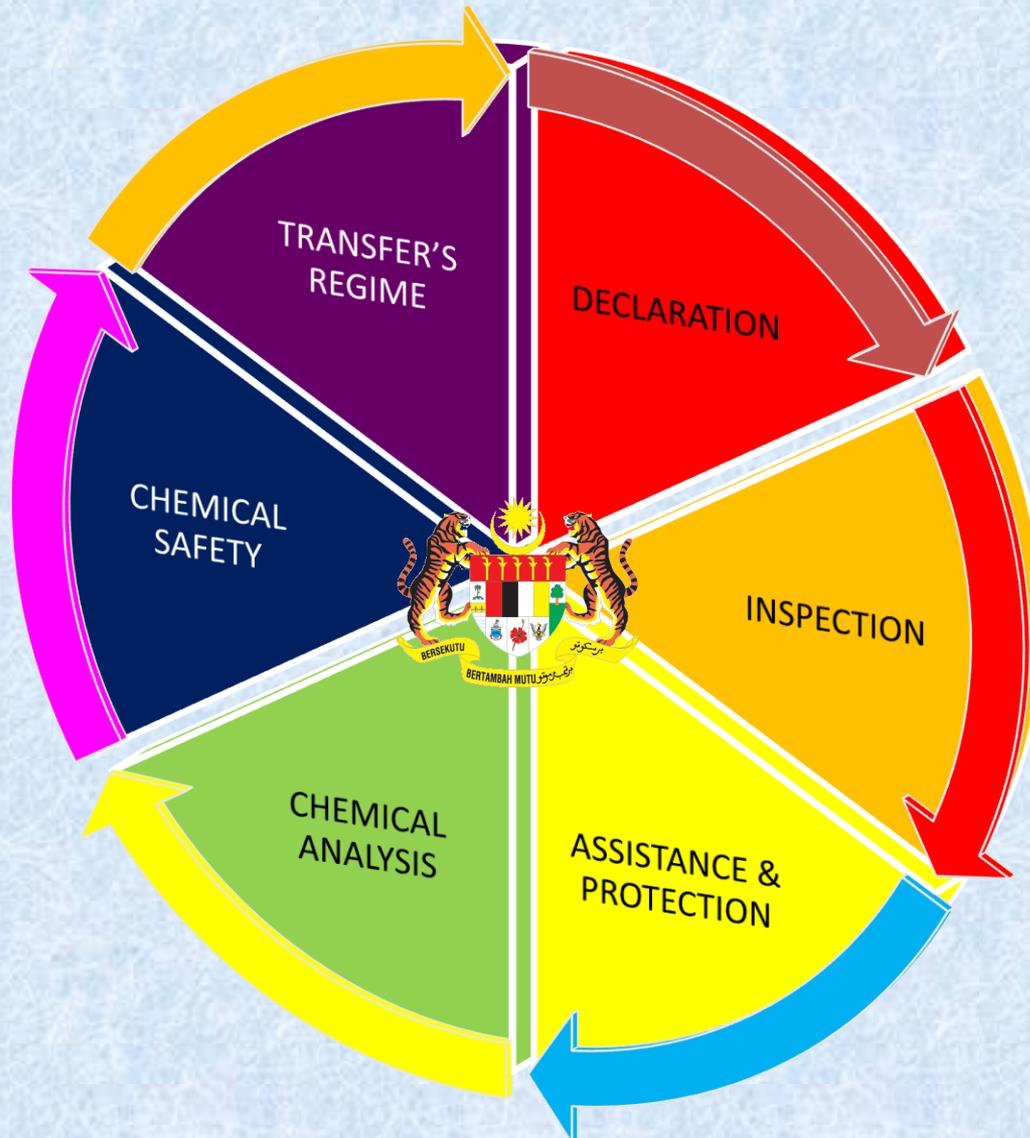
<b>Ministry of Foreign Affairs (LEAD AGENCY)</b>	Ministry of Defense
Ministry of International Trade & Industry (MITI)	Ministry of Home Affairs
Ministry of Science, Technology and Innovation (MOSTI)	Ministry of Natural Resources and Environment (NRE)
Department of Chemistry (DOC)	Department of Environmental (DOE)
Department of Occupational Safety and Health (DOSH)	Royal Malaysian Customs
Royal Malaysian Police	Pesticides Board
Pharmaceutical Services Division, Ministry of Health	Science and Technology Research Institute for Defense (STRIDE)



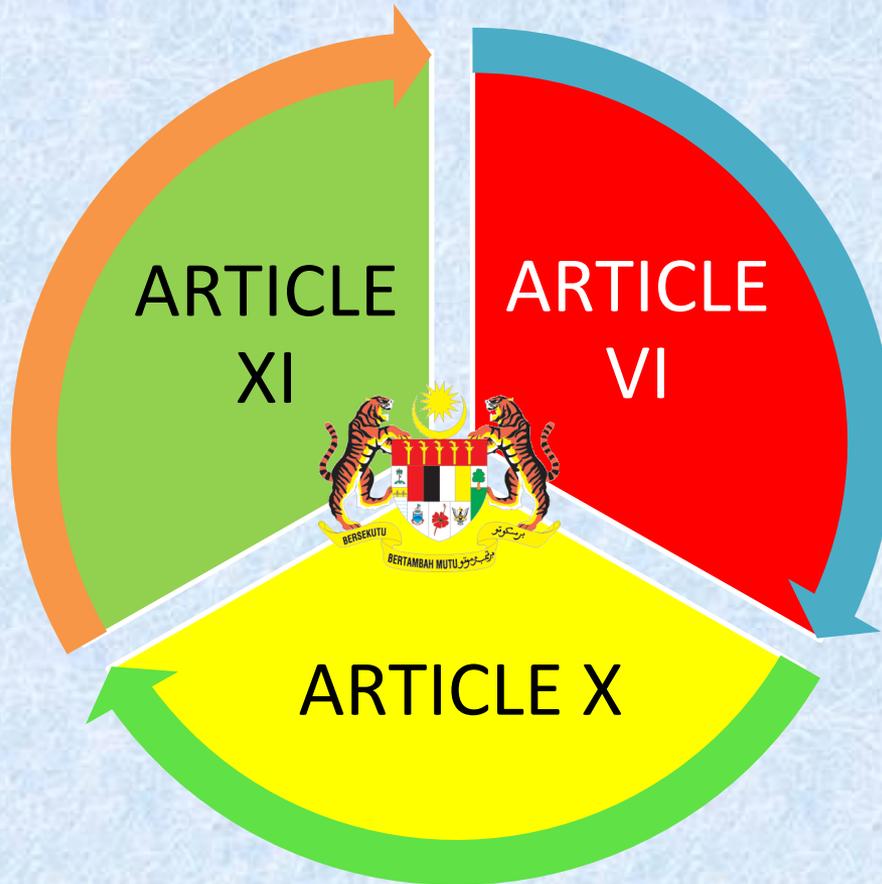
# ROLES OF NACWC

1. Serves as the national focal point for liaison with
  - the OPCW and other States Parties
  - stakeholders in Malaysia
2. Ensuring effective implementation of CWC
  - Actively participating in domestic & international outreach programmes
  - Advising domestic stakeholders on CWC obligations such as declarations and inspection requirements
  - Facilitates international inspection

# NACWC ACTIVITIES



# COMMITTEES





# ARTICLE VI COMMITTEE (proposed membership)

National Authority  
on the Chemical  
Weapons  
Convention

Royal Malaysian  
Customs

Ministry of  
International Trade  
and Industry

Department of  
Occupational  
Safety and Health

Pharmaceutical  
Services Division

Pesticide Board

Science and  
Technology  
Research Institute  
for Defence

Department of  
Environment

Term of Reference: Will be finalised



# ARTICLE X COMMITTEE

National Security  
Council

National Authority  
on the Chemical  
Weapons  
Convention

Ministry of Foreign  
Affairs

Ministry of  
Defence

Ministry of Health

Ministry of Higher  
Education

Ministry of  
Housing and Local  
Government

Ministry of  
Information  
Communications  
and Culture

Ministry of  
Science,  
Technology and  
Innovation

Army  
Headquarters,  
Engineer  
Directorate

Department of  
Chemistry

Fire and Rescue  
Department

Kuala Lumpur  
Hospital

Malaysian  
Meteorological  
Department

National Poison  
Centre

Royal Malaysian  
Police

Science and  
Technology  
Research Institute  
for Defence

Southeast Asia  
Regional Center  
for Counter  
Terrorism

Selayang Hospital



# ARTICLE XI COMMITTEE

Department of  
Occupational  
Safety and Health

National Authority  
on the Chemical  
Weapons  
Convention

Ministry of Higher  
Education

Ministry of  
International Trade  
and Industry

Ministry of  
Science,  
Technology and  
Innovation

Ministry of  
Transportation

Department of  
Chemistry

Department of  
Environment

Science and  
Technology  
Research Institute  
for Defence

Chemical  
Industries Council  
of Malaysia

Ministry of  
Defence

Ministry of Foreign  
Affairs

Ministry of Health

Fire and Rescue  
Department

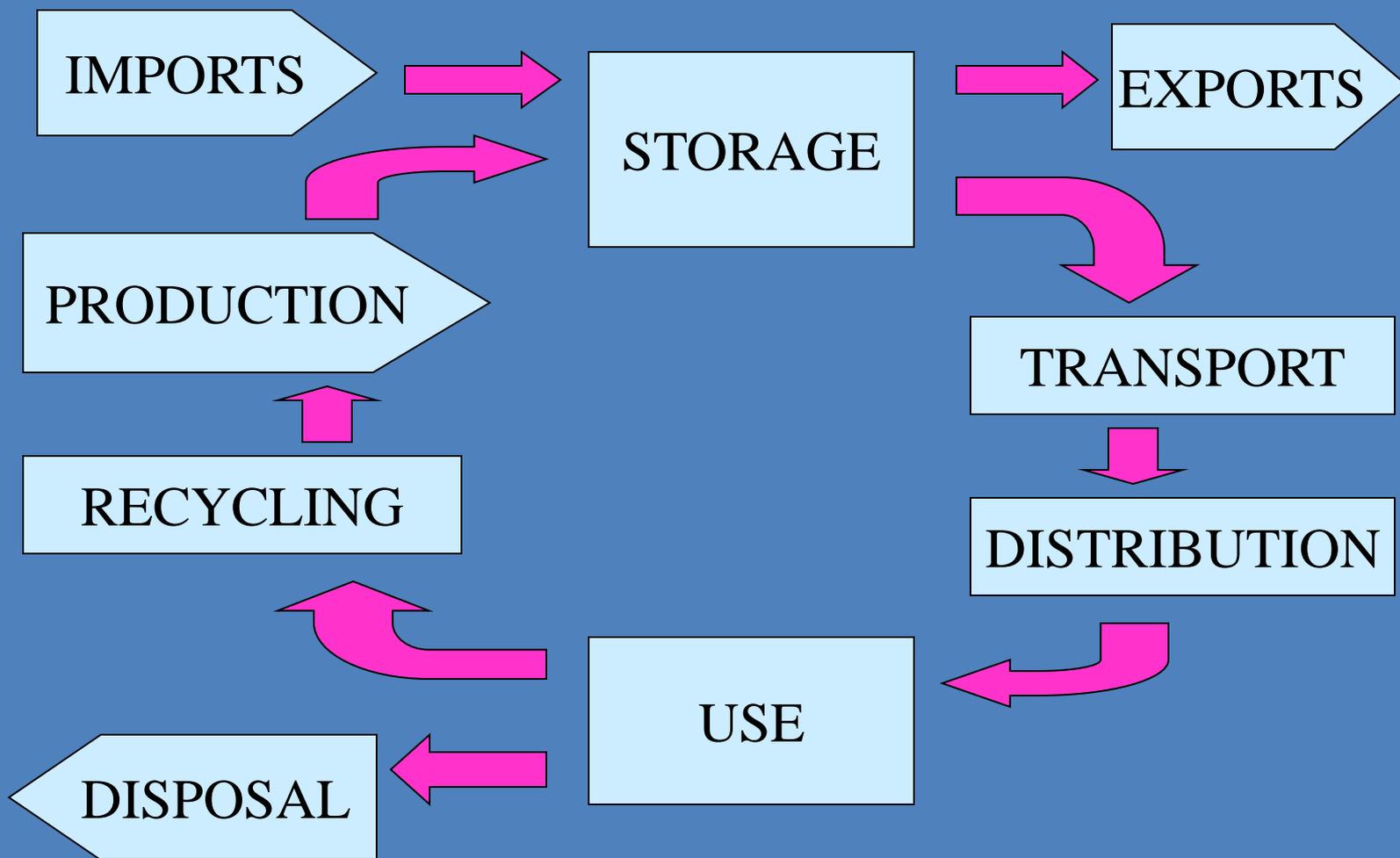
Royal Malaysian  
Police

Pharmaceutical  
Services Division

# Legal Framework for Chemical Management in Malaysia



# LIFE CYCLE MANAGEMENT OF CHEMICALS: CRADLE TO THE GRAVE



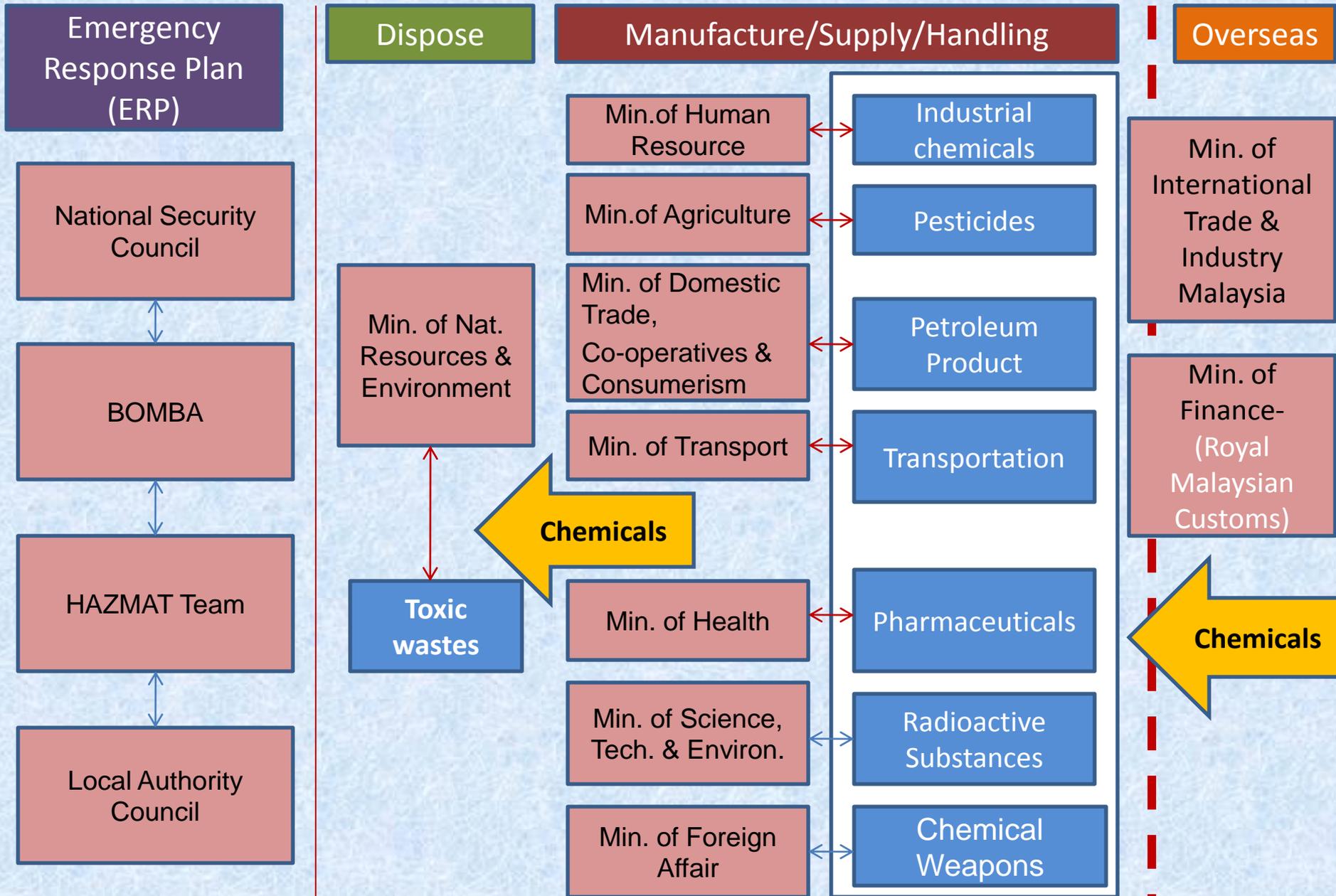
# Chemical Legislation and Enforcement Agencies

Stages	Agencies	Relevant Legislation
<b>IMPORT</b>		
Pesticides	Pesticides Board	Pesticides Act 1974
Industrial Chemicals	Royal Malaysia Customs	Customs Act 1967
Drugs	Ministry of Health	Poison Act 1952
Food	Ministry of Health	Food Act 1983
<b>PRODUCTION</b>		
Emissions to air and water	Department of Environment	Environmental Quality Act 1974
Workers health and safety	Department of Occupational Safety and Health	Occupational Safety and Health Act 1994
Food industry	Ministry of Health	Food Act 1983

# Chemical Legislation and Enforcement Agencies

Stages	Agencies	Relevant Legislation
<b>TRANSPORT OF HAZARDOUS GOODS</b>		
By air, road, marine and rail	Ministry of Transport	Civil Aviation Act 1969; Road Transport Act 1987
<b>USE / HANDLING</b>		
Pesticides	Pesticides Board	Pesticides Act 1974
Cosmetics	Ministry of Health	Control of Drugs and Cosmetics Regulations 1984
Workers health and safety	Department of Occupational Safety and Health	Occupational Safety and Health Act 1994
Consumer chemicals	Ministry of Domestic Trade and Consumer Affairs	Consumer Protection Act 1999
<b>DISPOSAL</b>		
Scheduled Wastes	Department of Environment	Environmental Quality Act 1974; Environmental Quality (Scheduled Wastes) Regulations, 2005

# Chemical Management in Malaysia



# OTHER LEGAL FRAMEWORK

## 1. Strategic Trade Act (STA)

- Being a member of United Nations (UN), Member States is obliged to adopt United Nations Security Council Resolution 1540 (UNCSR 1540) on non-proliferation of weapons of mass destruction (WMD).
- It is to enforce effective measures to establish domestic controls to prevent the proliferation of nuclear, chemical, or biological weapons and their means of delivery, including by establishing appropriate controls over related materials.
- STA gazetted on 31 December 2010 and enforced on 1 April 2011.





# OTHER LEGAL FRAMEWORK (cont)

- 5 main elements in ICP:

**Management  
Commitment**

**Screening  
Process**

**Record-  
keeping**

**Training**

**Audit**

# VOLUNTARY PROGRAMS

1. Chemicals Industries Council of Malaysia (CICM)
  - Established and incorporated in 1982. Has 105 members comprising manufacturers, traders, distributors & companies providing services to the chemical industry.
  - Serve as the umbrella body & affiliated to the various sub-sector chemical groups.
  - To serve as a channel of communication between chemical industry and Government.

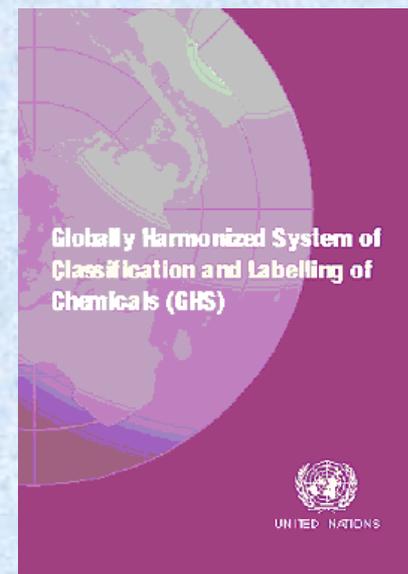
# VOLUNTARY PROGRAMS (cont)

## 2. Responsible Care (RC)

- CICM's flagship activity in promoting continuous improvements in safety, health and environmental performance is the voluntary initiative of Responsible Care.
- The scope of RC covers the HSE of a chemicals product from cradle to grave of the whole life cycle of the product.
- CICM is the main steward for RC in Malaysia and it's began in 1994.

# Globally Harmonized System of Classification and Labelling (GHS)

- The goal of GHS is to **identify intrinsic hazards** found in chemical substances & mixtures and to **convey hazard information** about these hazards
- Four sectors were identified in GHS implementation:
  - Industrial workplace
  - Pesticides
  - Transport
  - Consumer products



# IMPLEMENTATION OF GHS IN MALAYSIA

- National Coordinating Council for GHS Implementation (NCC) formed in 2006 led by the Ministry of International Trade and Industry (MITI) and represented by various ministries, government departments, industry associations and civil societies

# IMPLEMENTATION OF GHS IN MALAYSIA

	<b>SECTOR</b>	<b>LEAD AGENCY</b>
1.	Industrial Workplace	Department of Occupational Safety and Health (DOSH)
2.	Pesticides	Pesticides Board, Ministry of Agriculture
3.	Transport	Ministry of Transport
4.	Consumer Products	Ministry of Domestic Trade, Co-Operatives and Consumerism

## Challenges in Managing Chemicals in Malaysia

- Perception towards chemical related risks among employers and employees.
- Cost of compliance to the regulatory requirements is relatively high especially for SMEs.
- Limited number of testing facilities
- Limited number of expertise
- Decentralized of Regulatory Requirements

## CONCLUSION

Generally Malaysia is having proper system of management of chemicals however current system need to be further strengthen to meet with current global trend and demand



**Thank You**