



**DEPARTMENT OF OCCUPATIONAL SAFETY AND HEALTH
(MINISTRY OF HUMAN RESOURCE)**

**SUMMARY REPORT
HAZARDOUS CHEMICAL INVENTORY 2017**

PREPARED BY
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DEPARTMENT OF OCCUPATIONAL SAFETY AND HEALTH MALAYSIA

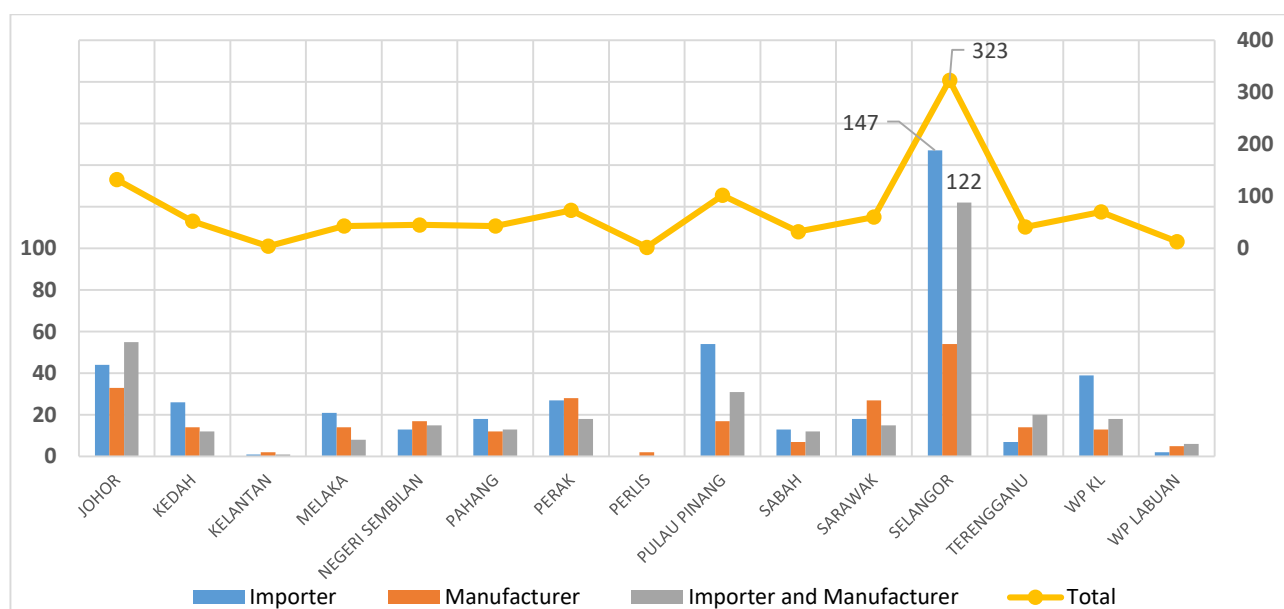
1. Inventory Submissions 2017

1.1 Number of Accounts

Up until December 2018, 1035 accounts have been created across all three types of accounts. The breakdown of accounts according to states and types of accounts are as follow:

State	Importer	Manufacturer	Importer and manufacturer	Total	
				Number	(%)
Johor	44	33	55	132	12.8
Kedah	26	14	12	52	5.0
Kelantan	1	2	1	4	0.4
Melaka	21	14	8	43	4.2
Negeri Sembilan	13	17	15	45	4.3
Pahang	18	12	13	43	4.2
Perak	27	28	18	73	7.1
Perlis	0	2	0	2	0.2
Pulau Pinang	54	17	31	102	9.9
Sabah	13	7	12	32	3.1
Sarawak	18	27	15	60	5.8
Selangor	147	54	122	323	31.2
Terengganu	7	14	20	41	4.0
Wp KL	39	13	18	70	6.8
Wp Labuan	2	5	6	13	1.3
Total	430	259	346	1035	100.0

Table 1: Breakdown of accounts according to states



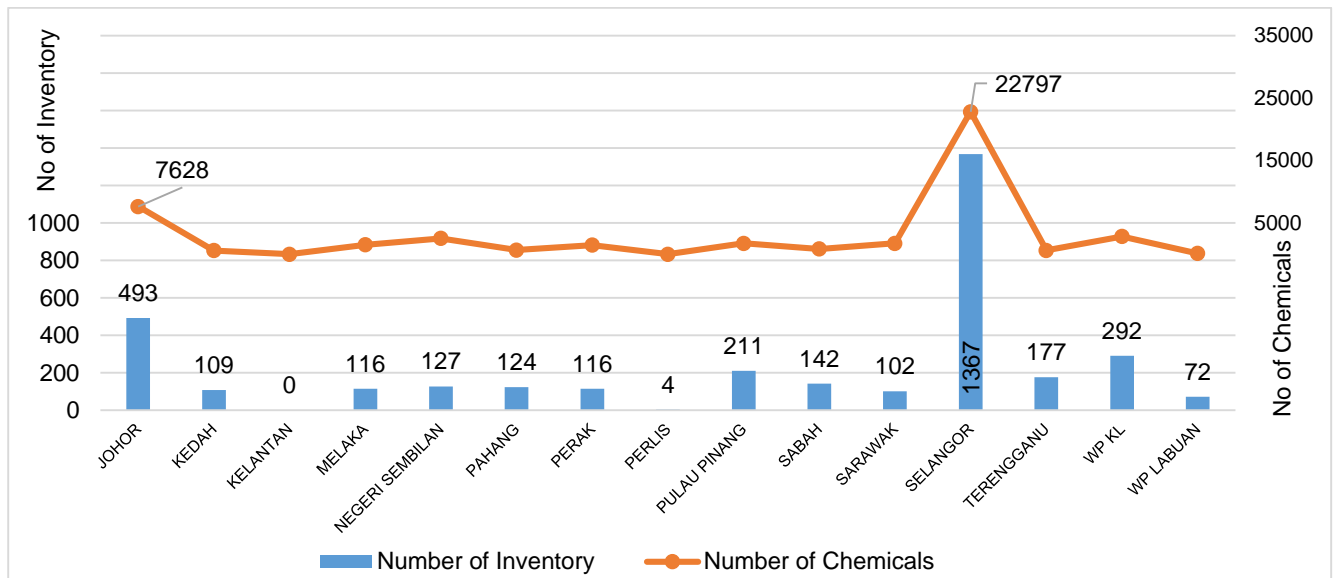
Graph 1 : Number of CIMS accounts according to states

1.2 Total of Submission and Number of Chemicals

Until 31st March 2018, a total of 3995 inventory submissions for 2017 was received by the Department through CIMS. Out of these submissions, only 3452 submissions were acknowledged and the rest were rejected.

	Number of submissions acknowledged	Number of chemicals submitted
TOTAL	3452	45075

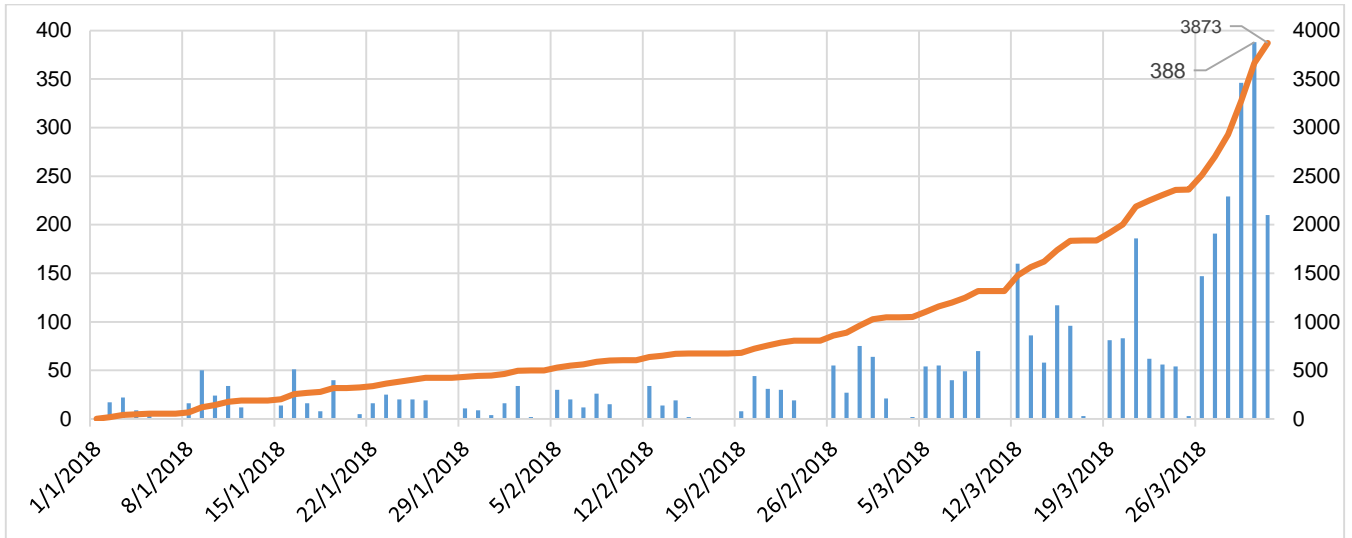
Table 2: Number of submissions acknowledged and number of chemicals submitted.



Graph 2: Number of inventory submissions and chemicals according to states.

1.3 Trend of Inventory Submission

The first inventory was submitted was recorded on the 1st January 2018. The number of submissions increased day by day and the highest number of submission was recorded in the weeks towards the end of the submission period.

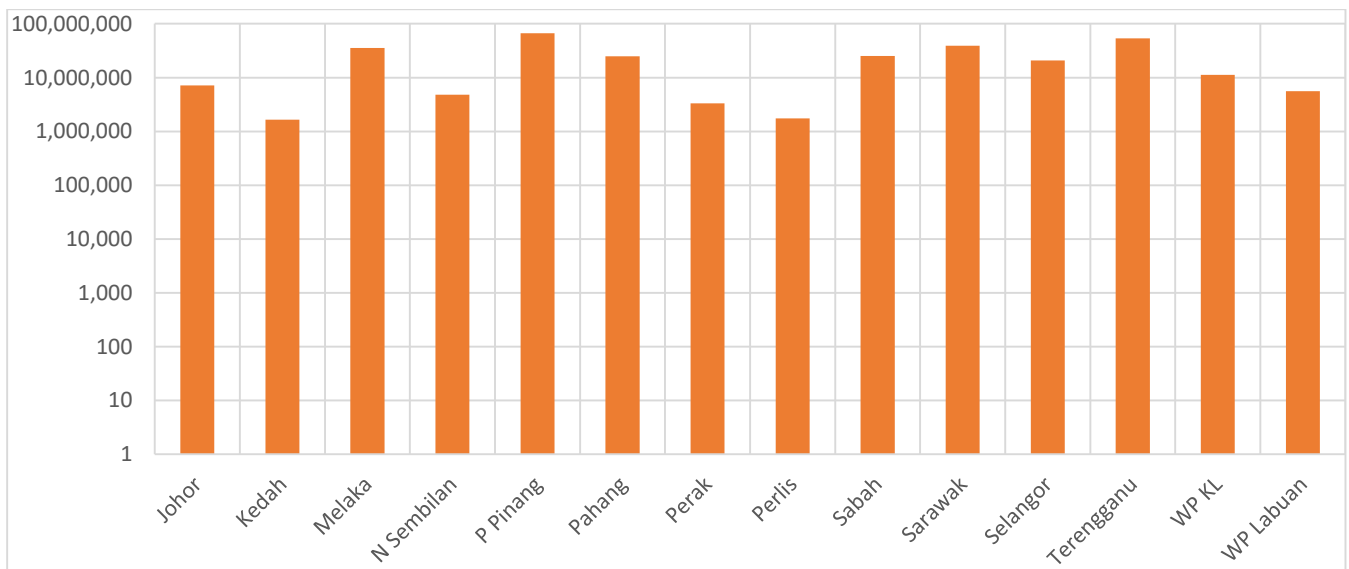


Graph 3: Trend of inventory submissions.

1.4 Total Quantity of Chemical in the 2017's Inventory

State	Substance (Tonne)		Mixture (Tonne)		Total	
	Import	Manufacture	Import	Manufacture	Tonne	(%)
TOTAL	80,251,528	67,121,476	14,160,736	139,573,677	301,107,417	100

Table 3: Quantity of chemical according to types.



Graph 4: Quantity of chemicals imported/manufactured according to states.

2. Total Quantity of 2017's Inventory According to Categories

2.1 Physical Hazard

	Quantity (Tonne)	≤ 100	≤ 1,000	≤ 100,000	≤ 1 Million	≤ 100 Million	>100 Million
1.	Chemicals which, in contact with water, emit flammable gases				✓		
2.	Corrosive to Metals,					✓	
3.	Explosives			✓			
4.	Flammable Aerosols			✓			
5.	Flammable Gases						✓
6.	Flammable Liquids					✓	
7.	Flammable Solids				✓		
8.	Gases Under Pressure						✓
9.	Organic Peroxides			✓			
10.	Oxidizing Gases				✓		
11.	Oxidizing Liquids			✓			
12.	Oxidizing Solids				✓		
13.	Pyrophoric Liquids			✓			
14.	Pyrophoric Solids	✓					
15.	Self-heating Chemicals		✓				
16.	Self-reactive Chemicals			✓			

Table 4: Total quantity of chemicals with physical hazard according to categories.

2.2 Health Hazard

	Quantity (Tonne)	≤ 100	≤ 1,000	≤ 100,000	≤ 1 Million	≤ 100 Million	>100 Million
1.	Acute Toxicity Dermal					✓	
2.	Acute Toxicity Inhalation					✓	
3.	Acute Toxicity Oral					✓	
4.	Aspiration Hazard					✓	
5.	Carcinogenicity					✓	
6.	Germ Cell Mutagenicity					✓	
7.	Reproductive Toxicity					✓	
8.	Respiratory Sensitisation					✓	
9.	Serious Eye Damage/Eye Irritation					✓	
10.	Skin Corrosion/irritation					✓	
11.	Skin Sensitisation					✓	
12.	Specific Target Organ Toxicity-Repeated Exposure					✓	
13.	Specific Target Organ Toxicity-Single Exposure					✓	

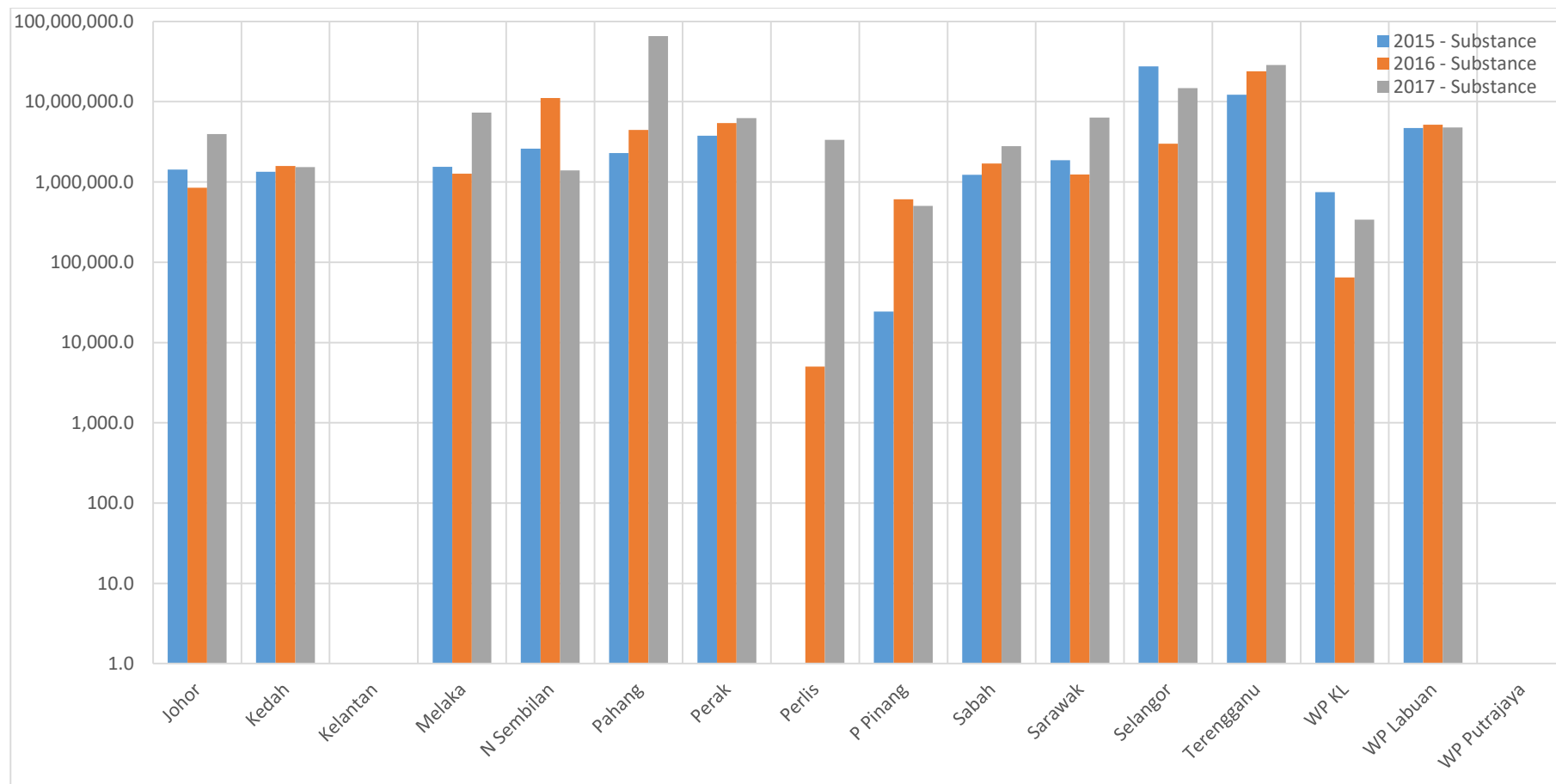
Table 5: Total quantity of chemicals with health hazard according to categories.

2.3 Environmental Hazard

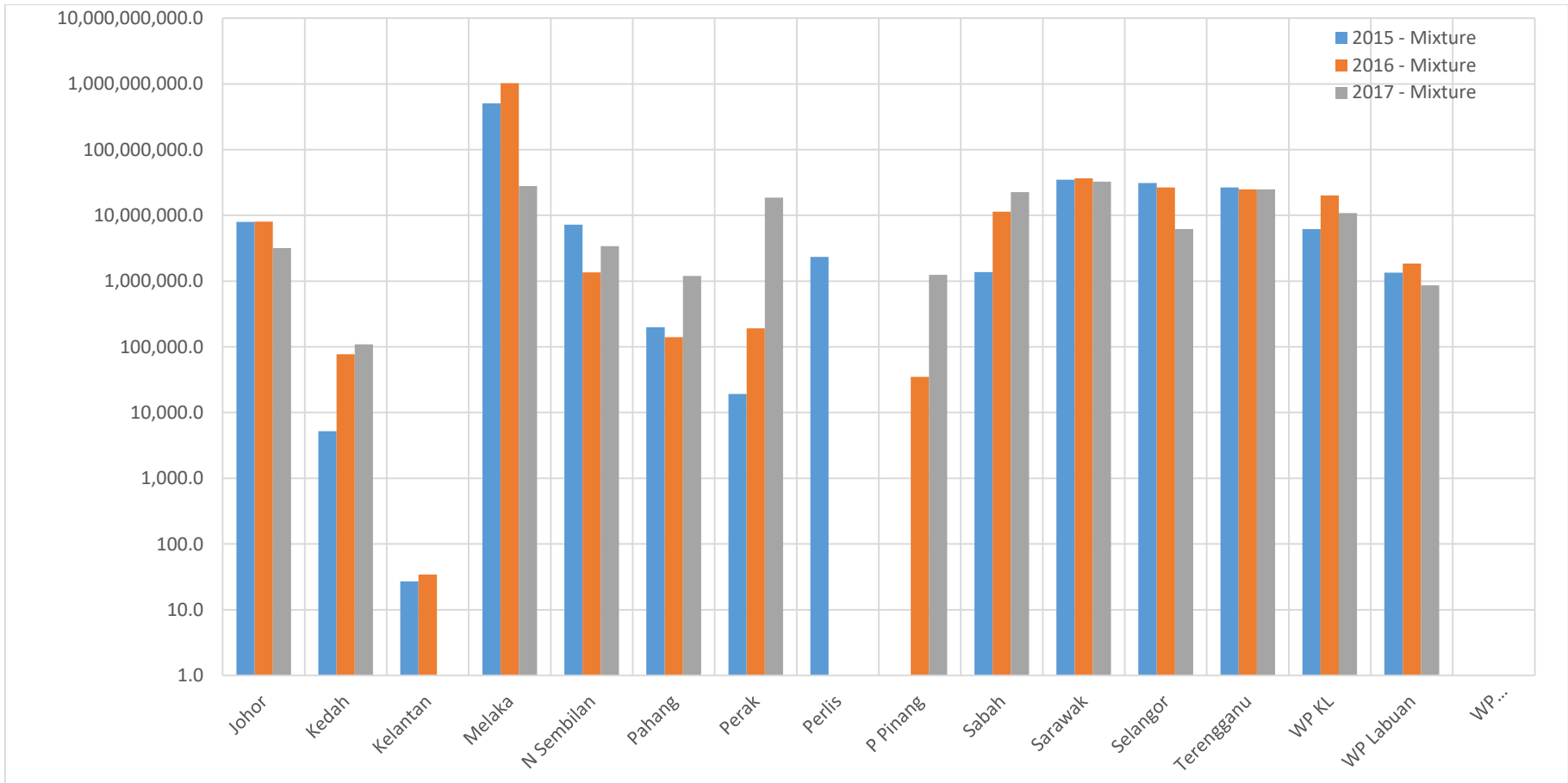
	Quantity (Tonne)	≤ 100	≤ 1,000	≤ 100,000	≤ 1 Million	≤ 100 Million	>100 Million
1.	Hazardous to the Aquatic Environment-Acute Hazard					✓	
2.	Hazardous to the Aquatic Environment-Chronic Hazard					✓	
3.	Hazardous to the Ozone Layer			✓			

Table 6: Total quantity of chemicals with environmental hazard according to categories.

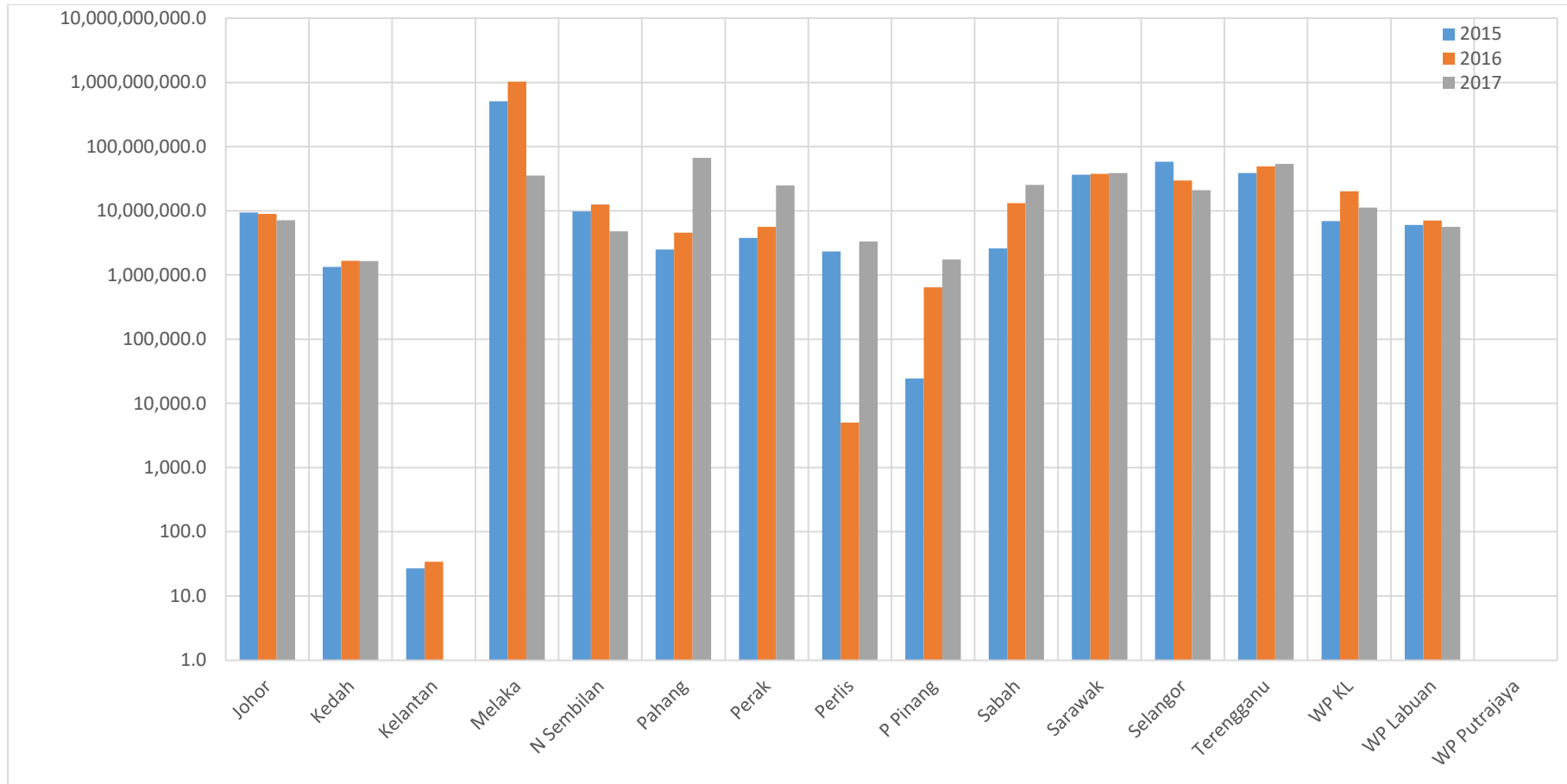
3. Inventory Comparison of 2015, 2016 and 2017



Graph 5: Total hazardous substances in 2015, 2016 and 2017 according to states (in tonnes)



Graph 6: Total hazardous mixtures in 2015, 2016 and 2017 according to states (in tonnes)



Graph 7: Total hazardous chemicals in 2015, 2016 and 2017 according to states (in tonnes)

4. Summary

From the statistics derived from CIMS, it can be inferred that the quantity of chemicals in Malaysia is high and has the potential of bringing significant impact to the safety and health of workers and the public. Since the inventory submission received through CIMS came from all states in Malaysia, it proves that hazards from chemicals exist all over Malaysia, and are not specific to states which are categorised as industrial states.

In line with that, suitable safety and health measures should be devised as to minimise the effect of hazardous chemicals on those involved. At the same time, the authorities should come up with drastic and practical measures including tightening the chemical import procedure in Malaysia.

The Department believe that the effort of controlling and managing hazardous chemicals is not an easy task that can be accomplished in a blink of an eye. Therefore, comprehensive measures involving multiple agencies need to be composed to face the challenges of chemical management in Malaysia. From a different point of view, data collection activities such as being done through CIMS needs to be streamlined to gain a more realistic statistics that can portray the import and manufacture of chemicals in Malaysia.