



KEMENTERIAN SUMBER ASLI  
DAN KELESTARIAN ALAM  
JABATAN ALAM SEKITAR

# BUKU KOMPENDIUM 2024

JABATAN ALAM SEKITAR

A large graphic element consisting of several overlapping circles. The largest circle on the left shows a tropical coastline with turquoise water, a sandy beach, and a dense green forest. A smaller circle in the center shows a green field under a cloudy sky. Another circle on the right shows a sunset over a landscape. The bottom right corner shows a close-up of green rice stalks.

ALAM SEKITAR TANGGUNGJAWAB BERSAMA





KEMENTERIAN SUMBER ASLI  
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# BUKU KOMPENDIUM 2024

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JABATAN ALAM SEKITAR



ALAM SEKITAR TANGGUNGJAWAB BERSAMA

The background of the page is a blue-tinted night cityscape. In the foreground, there is a dark, semi-transparent vertical band on the left side. Overlaid on the top half of the page is a repeating geometric pattern of interconnected triangles, creating a mesh-like structure. The city lights are blurred, and the overall color palette is dominated by various shades of blue and black.

Department of Environment, Malaysia  
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# PRAKATA / PREFACE

Assalamu'alaikum Warahmatullahi Wabarakatuh dan Salam Sejahtera.

Saya mengucapkan setinggi-tinggi penghargaan atas kerjasama dan sumbangan yang telah diberikan oleh semua warga Jabatan Alam Sekitar yang membawa kepada penerbitan Buku Kompendium JAS 2024 ini.

Buku Kompendium JAS ini adalah himpunan maklumat mengenai aktiviti JAS yang telah dijalankan sehingga berakhir Disember 2024. Maklumat seperti kualiti udara, kualiti air sungai, kualiti air marin dan pulau-pulau, kualiti air tanah dan pengurusan bahan berbahaya boleh didapati dalam Buku Kompendium ini bagi tujuan kajian, rujukan atau pembelajaran.

Penerbitan kompendium merupakan salah satu inisiatif penting JAS bagi perkongsian maklumat dan pencapaian dalam pengurusan alam sekitar di Malaysia.

Adalah diharapkan agar kompendium ini dapat dimanfaatkan dan digunakan dengan sebaik mungkin oleh semua pihak.

Sekian, terima kasih.



Assalamu'alaikum Warahmatullahi Wabarakatuh and Greetings,

I would like to express my deepest appreciation to all the Department of Environment (DOE) Officers for their cooperation and contributions in the effort to publish the DOE Compendium Book 2024.

This Compendium Book is a compilation of information about DOE's activities and program which have been carried out until December 2024. Information on air quality, river water quality, marine and island water quality, groundwater quality, and scheduled wastes management can be found in this Compendium Book for research, reference, or learning purposes.

The publication of this compendium is a significant initiative by DOE in sharing information and achievements of the department in environmental management in Malaysia.

It is hoped that this compendium would benefit various government departments/ agencies, private sectors, academia, university/ school students and the general public who intend to gather information about our department.

Thank you.

A handwritten signature in black ink, appearing to be 'Wan Jaffar', written over a white background.

**Dato' Wan Abdul Latiff Bin Wan Jaffar**  
**Ketua Pengarah Kualiti Alam Sekeliling, Malaysia**  
**Director General of Environmental Quality, Malaysia**



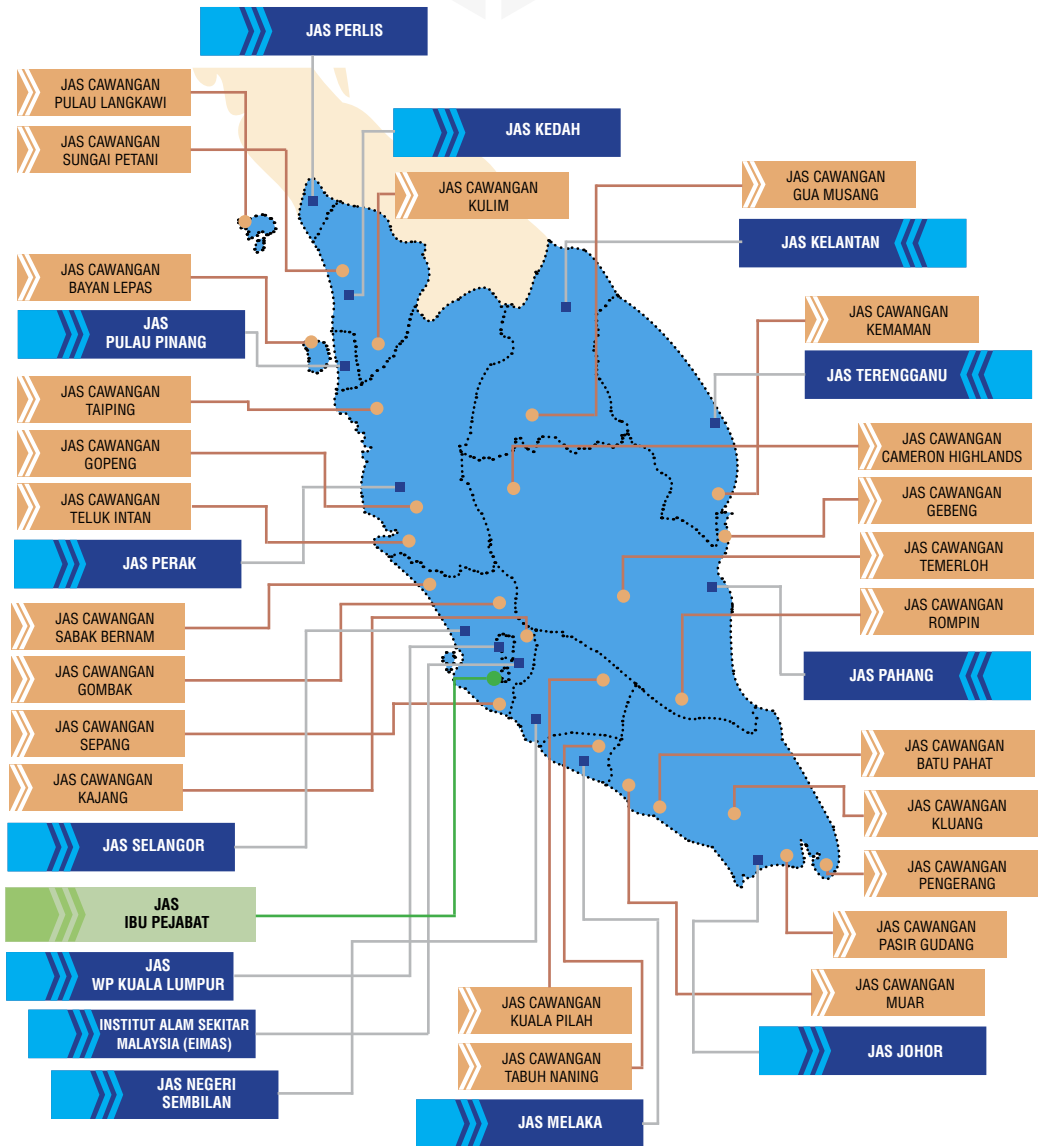
## JABATAN ALAM SEKITAR: PENGENALAN / DEPARTMENT OF ENVIRONMENT: INTRODUCTION

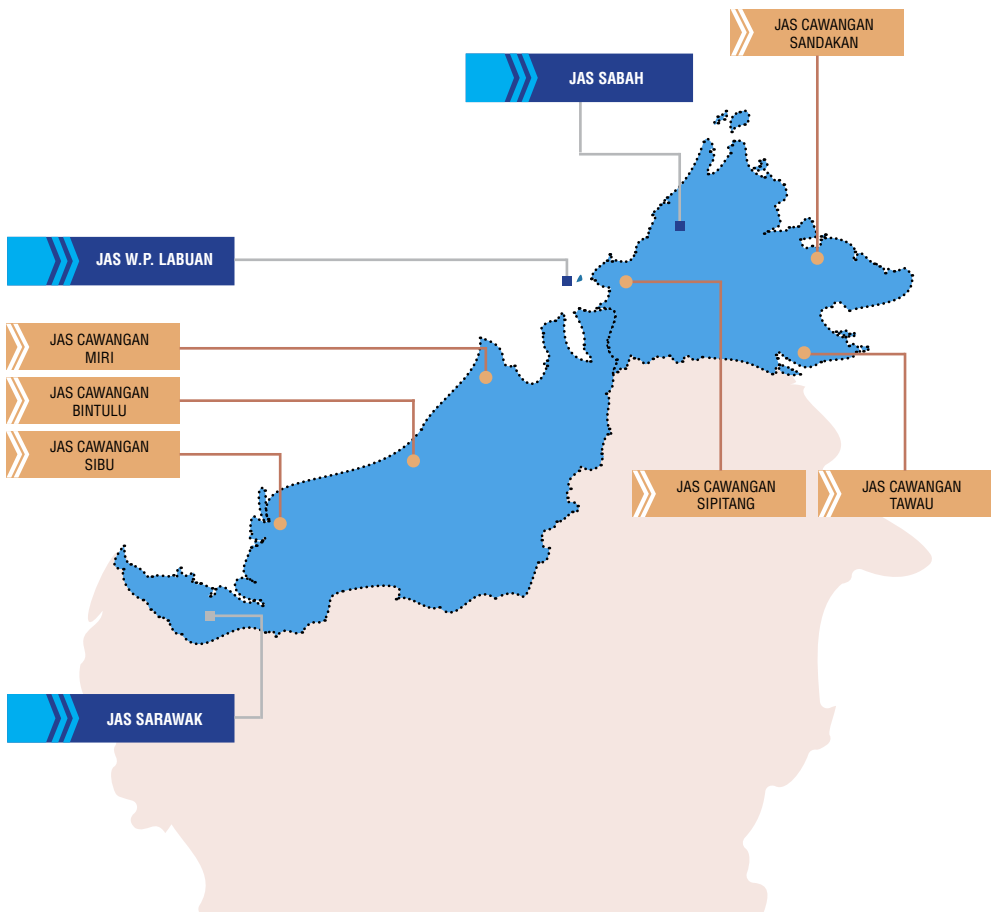
Pengurusan alam sekitar di Malaysia telah menjadi lebih sistematik apabila Akta Kualiti Alam Sekeliling (AKAS) 1974 diwartakan pada 14 Mac 1974. Turutan daripada itu, sebuah agensi penguatkuasa, Bahagian Alam Sekitar (mula dikenali sebagai Jabatan Alam Sekitar pada tahun 1983) telah ditubuhkan pada tahun 1975. Berakhir 2024, Jabatan Alam Sekitar (JAS) mempunyai 1527 tenaga kerja yang ditempatkan di Ibu Pejabat, 16 buah Pejabat Negeri dan 30 buah Pejabat Cawangan di seluruh negara. Fungsi utama JAS ialah untuk mencegah, menghapus, mengawal dan membaiki alam sekeliling melalui penguatkuasaan AKAS 1974 dan peraturan-peraturan di bawahnya.

Environmental management in Malaysia became more systematic with the gazettelement of the Environmental Quality Act (EQA) 1974 on 14 March 1974. From thereon, an enforcement agency named Environment Division (known as Department of Environment (DOE) in 1983) was institutionalized in 1975. At present (2024), the Department is empowered with 1527 staffs, extending its operation through Headquarters, 16 States Offices dan 30 Branch Offices. The Department's main role is to prevent, control and abate pollution through the enforcement of the EQA 1974 and its subsidiary legislations made there under.

# Ibu Pejabat, Pejabat Negeri dan Cawangan JAS Seluruh Malaysia

## Head Offices, State Offices and DOE Branches Through out Malaysia





IBU PEJABAT JAS



PEJABAT JAS NEGERI



PEJABAT CAWANGAN JAS

# VISI, MISI & STRATEGI

## VISION, MISSION & STRATEGIES



### VISI / VISION

Pemuliharaan Alam  
Sekitar untuk  
Kesejahteraan Rakyat  
Environmental  
Conservation for the  
Well-Being of the People



### MISI / MISSION

Memastikan Pembangunan  
Lestari di dalam Proses  
Memajukan Negara  
To Ensure Sustainable  
Development in the Process  
of Nation Building





## SENARAI PERATURAN-PERATURAN, PERINTAH & KAEDAH DI BAWAH AKTA KUALITI ALAM SEKELILING 1974

### KAWALAN PENCEMARAN UDARA/ AIR POLLUTION CONTROL

- ▶ Peraturan-Peraturan Kualiti Alam Sekeliling (Kawalan Kepekatan Plumbum Dalam Gasolin Motor) 1985/ [Environmental Quality \(Control of Lead Concentration in Motor Gasoline\) Regulations 1985](#)
- ▶ Peraturan-Peraturan Kualiti Alam Sekeliling (Bunyi Bising Kenderaan Motor) 1987/ [Environmental Quality \(Motor Vehicle Noise\) Regulations 1987](#)
- ▶ Perintah Kualiti Alam Sekeliling (Larangan ke Atas Penggunaan Klorofluorokarbon dan lain-Lain Gas Sebagai Propelan dan Agen Pengembang) 1993/ [Environmental Quality \(Prohibition on The Use of Chlorofluorocarbons and Other Gases as Propellants and Blowing Agents\) Order 1993](#)
- ▶ Peraturan-Peraturan Kualiti Alam Sekeliling (Kawalan Pelepasan Daripada Enjin Diesel) 1996/ [Environmental Quality \(Control of Emission from Diesel Engines\) Regulations 1996](#)
- ▶ Peraturan-Peraturan Kualiti Alam Sekeliling (Kawalan Pelepasan Daripada Enjin Petrol) 1996 / [Environmental Quality \(Control of Emission from Petrol Engines\) Regulations 1996](#)
- ▶ Peraturan-Peraturan Kualiti Alam Sekeliling (Pengurusan Refrigeran) 1999/ [Environmental Quality \(Refrigerant Management\) Regulations 1999](#)
- ▶ Peraturan-Peraturan Kualiti Alam Sekeliling (Pengurusan Halon) 1999/ [Environmental Quality \(Halon Management\) Regulations 1999](#)
- ▶ Kaedah-Kaedah Kualiti Alam Sekeliling (Mengkompaun Kesalahan)(Pembakaran Terbuka) 2000/ [Environmental Quality \(Compounding of Offences\)\(Open Burning\) Rules 2000](#)
- ▶ Perintah Kualiti Alam Sekeliling (Perwakilan Kuasa)(Penyiasatan Pembakaran Terbuka) 2000 / [Environmental Quality \(Delegation of Powers\)\(Investigation of Open Burning\) Order 2000](#)
- ▶ Perintah Kualiti Alam Sekeliling (Perwakilan Kuasa)(Pengurusan Halon) 2000/ [Environmental Quality \(Delegation of Powers\)\(Halon Management\) Order 2000](#)
- ▶ Perintah Kualiti Alam Sekeliling (Aktiviti Yang Diisytiharkan)(Pembakaran Terbuka) 2003/ [Environmental Quality \(Declared Activities\)\(Open Burning\) Order 2003](#)
- ▶ Peraturan-Peraturan Kualiti Alam Sekeliling (Kawalan Pelepasan Daripada Motorsikal) 2003/ [Environmental Quality \(Control of Emission from Motorcycles\) Regulations 2003](#)
- ▶ Peraturan-Peraturan Kualiti Alam Sekeliling (Kawalan Kandungan Petrol dan Diesel) 2007/ [Environmental Quality \(Control of Petrol and Diesel Properties\) Regulations 2007](#)
- ▶ Peraturan-Peraturan Kualiti Alam Sekeliling (Udara Bersih) 2014 / [Environmental Quality \(Clean Air\) Regulations 2014](#)
- ▶ Peraturan-Peraturan Kualiti Alam Sekeliling (Pengurusan Refrigeran) 2020/ [Environmental Quality \(Refrigerant Management\) Regulations 2020](#)



## LIST OF REGULATIONS, ORDERS & RULES UNDER THE ENVIRONMENTAL QUALITY ACT 1974

### KAWALAN PENCEMARAN AIR/ WATER POLLUTION CONTROL

- ▶ Perintah Kualiti Alam Sekeliling (Perwakilan Kuasa Kawalan Pencemaran Marin) 1993 / [Environmental Quality \(Delegation of Powers on Marine Pollution Control\) Order 1993](#)
- ▶ Perintah Kualiti Alam Sekeliling (Perwakilan Kuasa Kawalan Pencemaran Marin) 1994 / [Environmental Quality \(Delegation of Powers on Marine Pollution Control\) Order 1994](#)
- ▶ Perintah Kualiti Alam Sekeliling (Larangan Terhadap Penggunaan Bahan Terkawal di dalam Sabun, Bahan Cuci Sintetik dan Agen Pencuci Lain) 1995 [Environmental Quality \(Prohibition on The Use of Controlled Substance in Soap, Synthetic Detergent and Other Cleaning Agents\) Order 1995](#)
- ▶ Peraturan-Peraturan Kualiti Alam Sekeliling (Kumbahan) 2009 / [Environmental Quality \(Sewage\) Regulations 2009](#)
- ▶ Peraturan-Peraturan Kualiti Alam Sekeliling (Kawalan Pencemaran daripada Stesen Pemindahan Sisa Pepejal dan Kambus Tanah) 2009 [Environmental Quality \(Control of Pollution from Solid Waste Transfer Station and Landfill\) Regulations 2009](#)
- ▶ Peraturan-Peraturan Kualiti Alam Sekeliling (Efluen Perindustrian) 2009 [Environmental Quality \(Industrial Effluent\) Regulations 2009](#)
- ▶ Perintah Kualiti Alam Sekeliling (Perwakilan Kuasa) (Penyiasatan ke atas Kawalan Hakisan dan Kelodakan) 2012 [Environmental Quality \(Delegation of Powers\) \(Investigation on Erosion and Sediment Control\) Order 2012](#)

# SENARAI PERATURAN-PERATURAN, PERINTAH & KAEDAH DI BAWAH AKTA KUALITI ALAM SEKELILING 1974 /

## LIST OF REGULATIONS, ORDERS & RULES UNDER THE ENVIRONMENTAL QUALITY ACT 1974



### PENGURUSAN BUANGAN TERJADUAL / SCHEDULED WASTE MANAGEMENT

- ▶ Peraturan-Peraturan Kualiti Alam Sekeliling (Pelesenan) 1977 / *Environmental Quality (Licensing) Regulations 1977*
- ▶ Perintah Kualiti Alam Sekeliling (Premis yang Ditetapkan)(Kemudahan Pengolahan dan Pelupusan Buangan Terjadual) 1989 / *Environmental Quality (Prescribed Premises)(Scheduled Wastes Treatment and Disposal Facilities) Order 1989*
- ▶ Peraturan-Peraturan Kualiti Alam Sekeliling (Premis yang Ditetapkan) (Kemudahan Pengolahan dan Pelupusan Buangan Terjadual) 1989 / *Environmental Quality (Prescribed Premises)(Scheduled Wastes Treatment and Disposal Facilities) Regulations 1989*
- ▶ Perintah Kualiti Alam Sekeliling (Pembawa yang Ditetapkan)(Buangan Terjadual) 2005 / *Environmental Quality (Prescribed Conveyance)(Scheduled Wastes) Order 2005*
- ▶ Peraturan-Peraturan Kualiti Alam Sekeliling (Buangan Terjadual) 2005 / *Environmental Quality (Scheduled Wastes) Regulations 2005*

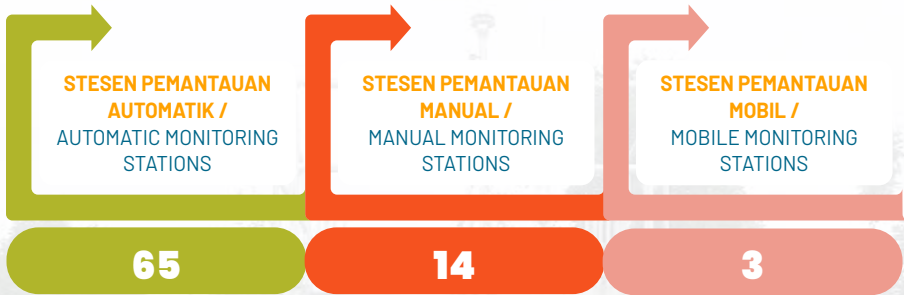
### LAIN-LAIN/ OTHERS

- ▶ Perintah Kualiti Alam Sekeliling (Premis yang Ditetapkan)(Minyak Kelapa Sawit Mentah) 1977 / *Environmental Quality (Prescribed Premises)(Crude Palm Oil) Order 1977*
- ▶ Peraturan-Peraturan Kualiti Alam Sekeliling (Premis yang Ditetapkan)(Minyak Kelapa Sawit Mentah) 1977 / *Environmental Quality (Prescribed Premises)(Crude Palm Oil) Regulations 1977*
- ▶ Perintah Kualiti Alam Sekeliling (Premis yang Ditetapkan)(Getah Asli Mentah) 1978 / *Environmental Quality (Prescribed Premises)(Raw Natural Rubber) Order 1978*
- ▶ Peraturan-Peraturan Kualiti Alam Sekeliling (Premis yang Ditetapkan)(Getah Asli Mentah) 1978 / *Environmental Quality (Prescribed Premises)(Raw Natural Rubber) Regulations 1978*
- ▶ Kaedah-Kaedah Kualiti Alam Sekeliling (Mengkompaun Kesalahan-Kesalahan) 1978 / *Environmental Quality (Compounding of Offences) Rules 1978*
- ▶ Peraturan-Peraturan Kualiti Alam Sekeliling (Lembaga Rayuan) 2003 / *Environmental Quality (Appeal Board) Regulations 2003*
- ▶ Perintah Kualiti Alam Sekeliling (Perwakilan Kuasa) 2005 / *Environmental Quality (Delegation of Powers) Order 2005*
- ▶ Perintah Kualiti Alam Sekeliling (Aktiviti yang Ditetapkan)(Penilaian Kesan kepada Alam Sekeliling) 2015 / *Environmental Quality (Prescribed Activities)(Environmental Impact Assessment) Order 2015*



# SEKSYEN 1: KUALITI UDARA SECTION 1: AIR QUALITY

## ➤ PENGAWASAN KUALITI UDARA AIR QUALITY MONITORING



SEKSYEN  
SECTION

1

Indeks Pencemar Udara (IPU) adalah dikira berdasarkan kepekatan enam (6) bahan pencemar utama / The API is calculated based on concentration of six (6) major pollutants:

- Ozon di Permukaan Bumi ( $O_3$ ) / Ground Level Ozone ( $O_3$ )
- Karbon Monoksida (CO) / Carbon Monoxide (CO)
- Nitrogen Dioksida ( $NO_2$ ) / Nitrogen Dioxide ( $NO_2$ )
- Sulfur Dioksida ( $SO_2$ ) / Sulphur Dioxide ( $SO_2$ )
- Habuk Halus Bersaiz Kurang dari 10 Mikron ( $PM_{10}$ ) / Particulate Matter of Less than 10 Microns in Size ( $PM_{10}$ )
- Habuk Halus Bersaiz Kurang dari 2.5 Mikron ( $PM_{2.5}$ ) / Particulate Matter of Less than 2.5 Microns in Size ( $PM_{2.5}$ )

### ▶ 1(a): Indeks Pencemar Udara (IPU)

1(a): Air Pollutant Index (API)

IPU / API	STATUS KUALITI UDARA / AIR QUALITY STATUS
0 – 50	Baik / Good
51 – 100	Sederhana / Moderate
101 – 200	Tidak Sihat / Unhealthy
201 – 300	Sangat Tidak Sihat / Very Unhealthy
> 300	Berbahaya / Hazardous

Indeks Pencemar Udara (IPU) bagi keseluruhan Malaysia pada tahun 2024 telah menunjukkan peningkatan bagi peratus IPU berstatus baik berbanding tahun 2023.

The Air Pollutant Index (API) for the whole of Malaysia in 2024 has shown an increase in the percentage of good API status compared to 2023.

#### 4 Jenis Pengelasan Stesen Kualiti Udara Mengikut Guna Tanah 4 Types of Classification of Air Quality Stations According to Land Use



Industri /  
Industrial



Bandar /  
Urban



Pinggir Bandar /  
Suburban



Luar Bandar /  
Rural

**35.2%**

IPU baik pada 2024 untuk seluruh Malaysia /  
Good API in 2024 throughout Malaysia

**64.1%**

IPU sederhana pada tahun 2024 untuk seluruh  
Malaysia / Moderate API in 2024 throughout Malaysia

**0.7%**

IPU tidak sihat pada tahun 2024 untuk seluruh  
Malaysia / Unhealthy API in 2024 throughout Malaysia

► **1(b): Standard Kualiti Udara Ambien Malaysia**  
 1(b): Malaysian Ambient Air Quality Standard

PARAMETER	MASA PURATA / TIME AVERAGING	UNIT	GARIS PANDUAN SEDIA ADA/ EXISTING GUIDELINES	STANDARD KUALITI UDARA AMBIEN MALAYSIA / MALAYSIAN AMBIENT AIR QUALITY		
				IT-1 (2015)	IT-2 (2018)	IT-3 (2020)
PM <sub>10</sub>	1 Tahun	µg/m <sup>3</sup>	50	50	45	40
	24 Jam	µg/m <sup>3</sup>	150	150	120	100
PM <sub>2.5</sub>	1 Tahun	µg/m <sup>3</sup>	-	35	25	15
	24 Jam	µg/m <sup>3</sup>	-	75	50	35
SO <sub>2</sub>	1 Jam	µg/m <sup>3</sup>	350	350	300	250
		ppm	0.135	0.135	0.115	0.095
	24 Jam	µg/m <sup>3</sup>	105	105	90	80
		ppm	0.040	0.040	0.035	0.030
*CO	1 Jam	mg/m <sup>3</sup>	35	35	35	30
		ppm	30.6	30.6	30.6	26.2
	8 Jam	mg/m <sup>3</sup>	10	10	10	10
		ppm	8.75	8.75	8.75	8.75
NO <sub>2</sub>	1 Jam	µg/m <sup>3</sup>	320	320	300	280
		ppm	0.170	0.170	0.160	0.150
	24 Jam	µg/m <sup>3</sup>	75	75	75	70
		ppm	0.040	0.040	0.040	0.037
O <sub>3</sub>	1 Jam	µg/m <sup>3</sup>	200	200	200	180
		ppm	0.100	0.100	0.100	0.090
	8 Jam	µg/m <sup>3</sup>	120	120	120	100
		ppm	0.060	0.060	0.060	0.050

Nota: \*mg/m<sup>3</sup> IT-Interim Tier (tahun)  
 Note: \*mg/m<sup>3</sup> IT-Interim Tier (year)

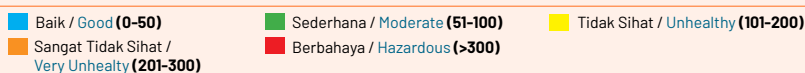
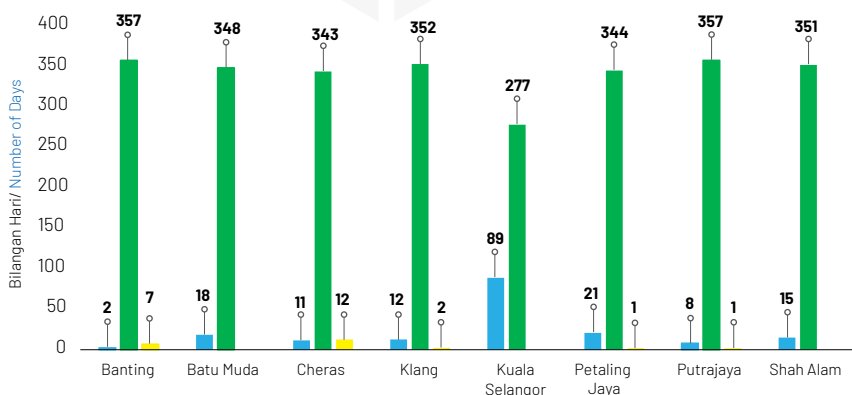
SEKSYEN  
SECTION

1



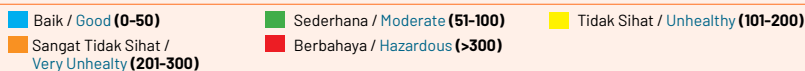
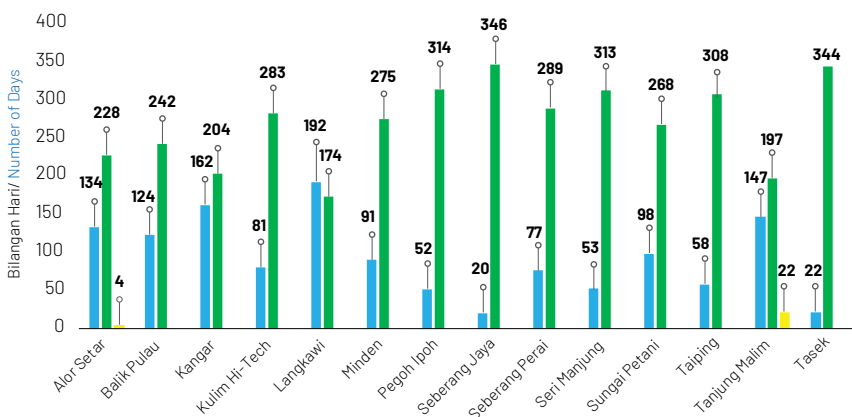
► 1(c): Status Kualiti Udara, Lembah Klang 2024

1(c): Air Quality Status, Klang Valley 2024

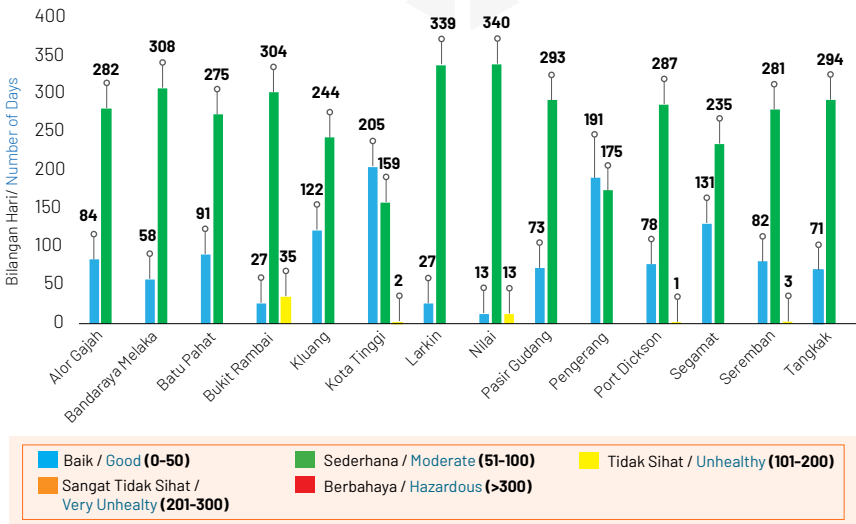


► 1(d): Status Kualiti Udara, Wilayah Utara Pantai Barat Semenanjung Malaysia, 2024

1(d): Air Quality Status, Northern Region of the West Coast of Peninsular Malaysia, 2024



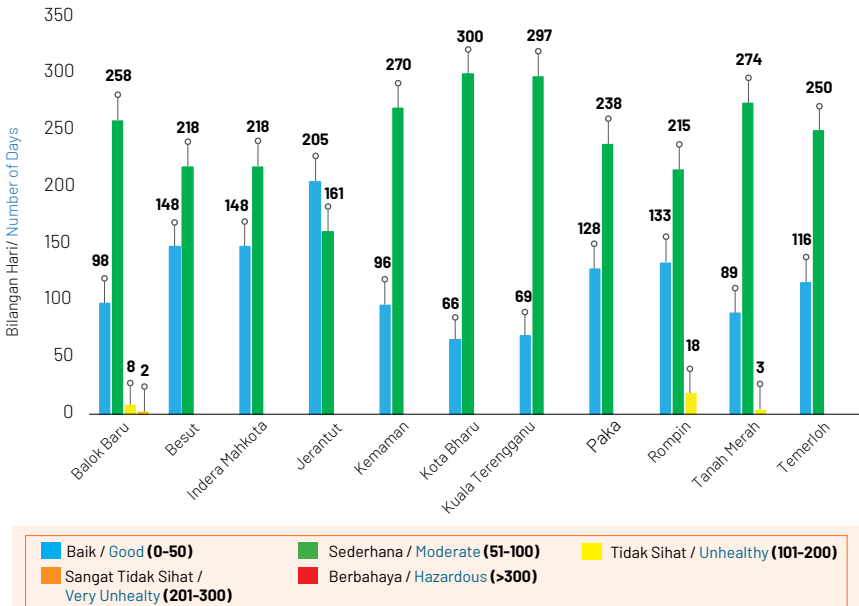
► **1(e): Status Kualiti Udara, Wilayah Selatan Pantai Barat Semenanjung Malaysia, 2024**  
 1(e): Air Quality Status, Southern Region of the West Coast of Peninsular Malaysia, 2024



SEKSYEN  
SECTION

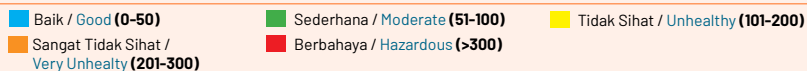
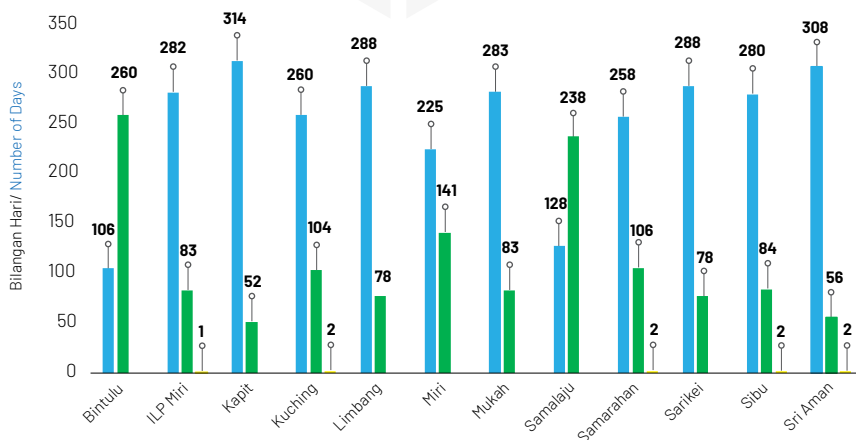
1

► **1(f): Status Kualiti Udara, Pantai Timur Semenanjung Malaysia, 2024**  
 1(f): Air Quality Status, East Coast of Peninsular Malaysia, 2024



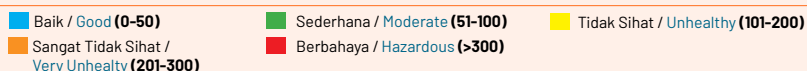
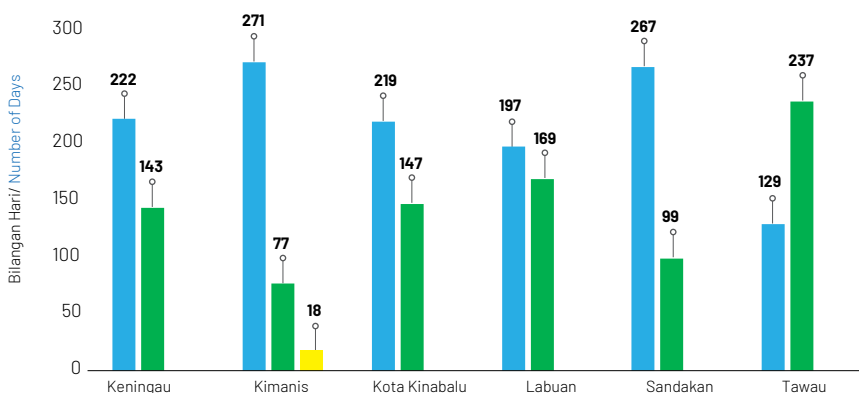
► 1(g): Status Kualiti Udara, Sarawak, 2024

1(g): Air Quality Status, Sarawak, 2024



► 1(h): Status Kualiti Udara, Sabah dan Wilayah Persekutuan Labuan, 2024

1(h): Air Quality Status, Sabah and Federal Territory Labuan, 2024





## SEKSYEN 2: KUALITI AIR SUNGAI SECTION 2: RIVER WATER QUALITY

### PENGAWASAN KUALITI AIR SUNGAI MANUAL MANUAL RIVER WATER QUALITY MONITORING

672

SUNGAI /  
RIVERS



DIPANTAU OLEH  
JABATAN ALAM  
SEKITAR  
MONITORED BY THE  
DEPARTMENT OF  
ENVIRONMENT

55

STESEN /  
STATIONS



PEMANTAUAN  
DI HULU MUKA  
SAUK  
UPSTREAM WATER  
INTAKES MONITORING

1353

STESEN /  
STATIONS



PENGAWASAN  
KUALITI AIR  
SUNGAI MANUAL  
MANUAL RIVER  
WATER QUALITY  
MONITORING

8118

PERSAMPELAN /  
SAMPLING



PERSAMPELAN  
KUALITI AIR SUNGAI  
SAMPLING OF RIVER  
WATER QUALITY

SEKSYEN  
SECTION

2

## PENGAWASAN KUALITI AIR SUNGAI AUTOMATIK CONTINUOUS RIVER WATER QUALITY MONITORING

**26**  
SUNGAI/ RIVERS

DIPANTAU OLEH JABATAN ALAM SEKITAR  
Monitored By the  
Department of Environment



**30**  
STESEN/ STATIONS

PENGAWASAN KUALITI AIR SUNGAI AUTOMATIK  
Continuous Monitoring  
Stations



**17**  
PARAMETER/ PARAMETERS

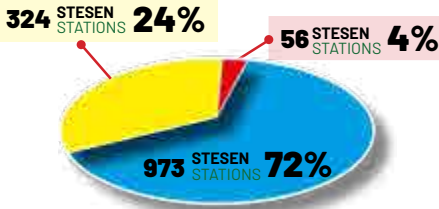
DIPANTAU OLEH JABATAN ALAM SEKITAR  
Monitored By the Department  
of Environment



### STATUS KUALITI AIR MENGIKUT STESEN / WATER QUALITY STATUS BY STATION

SEKSYEN  
SECTION

2



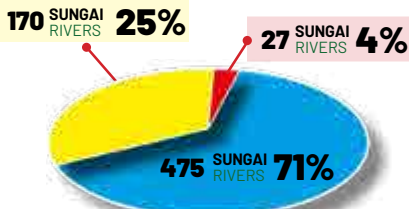
Kategori IKA / WQI Category

<span style="color: blue;">■</span> B / C	Bersih / Clean
<span style="color: yellow;">■</span> ST / SP	Sederhana Tercemar / Slightly Polluted
<span style="color: red;">■</span> T / P	Tercemar / Polluted

INDEKS KUALITI AIR MENGIKUT STESEN  
WATER QUALITY INDEX BY STATION

<span style="color: blue;">■</span> Kelas I / Class I	<b>328</b> Stesen / Stations	<b>(24%)</b>
<span style="color: green;">■</span> Kelas II / Class II	<b>729</b> Stesen / Stations	<b>(54%)</b>
<span style="color: yellow;">■</span> Kelas III / Class III	<b>272</b> Stesen / Stations	<b>(20%)</b>
<span style="color: orange;">■</span> Kelas IV / Class IV	<b>24</b> Stesen / Stations	<b>(2%)</b>
<span style="color: red;">■</span> Kelas V / Class V	<b>0</b> Stesen / Stations	<b>(0%)</b>

### STATUS KUALITI AIR MENGIKUT SUNGAI / WATER QUALITY STATUS BY RIVER



Kategori IKA / WQI Category

<span style="color: blue;">■</span> B / C	Bersih / Clean
<span style="color: yellow;">■</span> ST / SP	Sederhana Tercemar / Slightly Polluted
<span style="color: red;">■</span> T / P	Tercemar / Polluted

INDEKS KUALITI AIR MENGIKUT SUNGAI  
WATER QUALITY INDEX BY RIVERS

<span style="color: blue;">■</span> Kelas I / Class I	<b>157</b> Sungai / Rivers	<b>(24%)</b>
<span style="color: green;">■</span> Kelas II / Class II	<b>365</b> Sungai / Rivers	<b>(54%)</b>
<span style="color: yellow;">■</span> Kelas III / Class III	<b>136</b> Sungai / Rivers	<b>(20%)</b>
<span style="color: orange;">■</span> Kelas IV / Class IV	<b>14</b> Sungai / Rivers	<b>(2%)</b>
<span style="color: red;">■</span> Kelas V / Class V	<b>0</b> Sungai / Rivers	<b>(0%)</b>

► **2 (a): Kelas Air dan Penggunaan**  
2 (a): Water Classes and Usage



**Kelas I /  
Class I**

Pemeliharaan untuk persekitaran semulajadi

- Bekalan Air I - Secara praktiknya tidak memerlukan rawatan
- Perikanan I - Untuk spesis akuatik yang sangat sensitif
- Conservation of natural environment
- Water Supply I - Practically no treatment necessary
- Fishery I - Very sensitive aquatic species



**Kelas IIA/  
Class IIA**

- Bekalan Air II - Memerlukan rawatan konvensional
- Perikanan II - Untuk spesis sensitif
- Water Supply II - Conventional treatment required
- Fishery II - Sensitive aquatic species



**Kelas IIB /  
Class IIB**

Sesuai untuk aktiviti rekreasi yang melibatkan sentuhan badan  
Recreational use with body contact



**Kelas III /  
Class III**

- Bekalan Air III - Memerlukan rawatan yang intensif
- Perikanan III - Untuk minuman haiwan ternakan
- Water Supply III - Extensive treatment required
- Fishery III - Common of economic value and tolerant species; livestock drinking



**Kelas IV /  
Class IV**

Pengairan  
Irrigation



**Kelas V /  
Class V**

Selain daripada yang di atas  
None of the above

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SECTION

**2**

► 2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024  
2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
Perlis	Sg. Perlis	Sg. Arau	83	89	88	89	90	B/C
		Sg. Empangan Timah Tasoh	93	95	96	95	95	B/C
		Sg. Jarum	88	91	89	88	90	B/C
		Sg. Jernih	91	93	95	94	95	B/C
		Sg. Kok Mak	88	87	88	86	85	B/C
		Sg. Korok	75	76	74	79	75	ST/SP
		Sg. Ngulang	90	92	93	88	87	B/C
		Sg. Pelarit	94	96	96	96	97	B/C
		Sg. Perlis	76	77	78	81	70	ST/SP
		Sg. Serai	82	86	90	86	89	B/C
		Sg. Terusan Mada	88	91	91	92	90	B/C
Sg. Wang Kelian	95	97	97	97	97	B/C		
Kedah	Sg. Kedah	Sg. Ahning	92	96	95	94	97	B/C
		Sg. Changlun	87	88	87	86	87	B/C
		Sg. Janing	93	97	97	97	97	B/C
		Sg. Kedah	70	77	76	73	67	ST/SP
		Sg. Napoh	82	89	90	88	87	B/C
		Sg. Padang Terap	86	93	91	92	95	B/C
		Sg. Pedu	91	95	94	95	94	B/C
		Sg. Pendang	81	82	85	85	82	B/C
		Sg. Sintok	92	96	95	92	90	B/C
		Sg. Tekai	88	94	93	91	92	B/C
		Sg. Temin	84	89	89	87	86	B/C
		Sg. Terusan Lengkuas	86	92	92	93	95	B/C
		Sg. Terusan Mada Selatan	89	92	90	91	90	B/C
		Sg. Terusan Tengah	88	93	93	94	96	B/C

► 2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024  
2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY	
			2020	2021	2022	2023	2024		
Kedah	Sg. Kicap	Sg. Kicap	95	97	97	96	97	B/C	
	Sg. Kuah	Sg. Kuah	81	79	81	69	79	ST/SP	
	Sg. Merbok	Sg. Bakar Arang	56	69	66	58	60	ST/SP	
		Sg. Batu	70	64	59	65	52	T/P	
		Sg. Bongkok	71	75	71	74	69	ST/SP	
		Sg. Bukit Merah	92	92	89	95	92	B/C	
		Sg. Bukit Nanas	95	97	97	98	97	B/C	
		Sg. Korok	65	71	66	64	70	ST/SP	
		Sg. Merbok	79	81	81	82	83	B/C	
		Sg. Petani	63	68	64	53	65	ST/SP	
		Sg. Tok Pawang	90	95	94	96	94	B/C	
		Sg. Tupah	94	97	97	98	98	B/C	
	Sg. Muda	Sg. Chepir	89	91	92	90	93	B/C	
		Sg. Gunung Inas	93	93	95	96	89	B/C	
		Sg. Jerong	68	78	71	74	75	ST/SP	
		Sg. Karangan	85	91	83	87	84	B/C	
		Sg. Ketil	87	93	91	93	96	B/C	
		Sg. Muda	87	92	91	92	94	B/C	
		Sg. Pegang	95	97	97	97	97	B/C	
		Sg. Sedim	89	92	92	93	94	B/C	
	Sg. Ulu Melaka	Sg. Tawar	88	89	94	91	89	B/C	
		Sg. Chenang	78	84	77	84	76	ST/SP	
		Sg. Melaka	90	92	93	93	92	B/C	
		Sg. Petang	96	97	98	97	97	B/C	
		Sg. Saga	81	92	88	85	90	B/C	
	Sg. Tuba	94	96	97	96	96	B/C		
	P.Pinang/ Kedah	Sg. Perai	Sg. Air Melintas	58	57	60	64	59	T/P
			Sg. Jarak	73	73	72	73	74	ST/SP
			Sg. Keladi	78	81	82	82	78	ST/SP

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► 2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024  
2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
P.Pinang/ Kedah	Sg. Perai	Sg. Kereh	55	62	57	60	55	T/P
		Sg. Kubang Semang	64	66	68	74	63	ST/SP
		Sg. Kulim	89	92	92	88	92	B/C
		Sg. Perai	66	70	62	66	65	ST/SP
		Sg. Pertama	65	69	52	63	63	ST/SP
		Sg. Seluang	64	67	65	64	57	T/P
		Sg. Seluang Bawah	61	71	67	63	61	ST/SP
P.Pinang	Sg. Bayan Lepas	Sg. Bayan Lepas	64	74	69	71	74	ST/SP
		Sg. Tiram	73	74	76	68	70	ST/SP
	Sg. Jawi	Sg. Chempedak	47	41	36	55	42	T/P
		Sg. Jawi	55	52	57	54	52	T/P
		Sg. Junjong	66	60	63	66	64	ST/SP
		Sg. Machang Bubok	76	72	68	73	65	ST/SP
		Sg. Tengah	49	58	47	63	55	T/P
	Sg. Juru	Sg. Ara	67	77	75	77	75	ST/SP
		Sg. Juru	68	69	68	63	62	ST/SP
		Sg. Kilang Ubi	70	71	72	65	70	ST/SP
		Sg. Pasir	65	75	66	63	63	ST/SP
		Sg. Permatang Rawa	59	75	77	74	70	ST/SP
		Sg. Rambai	57	59	56	57	53	T/P
	Sg. Kluang	Sg. Ara	82	90	88	89	87	B/C
		Sg. Dua Besar	64	68	67	63	63	ST/SP
		Sg. Kluang	65	68	52	58	45	T/P
		Sg. Relau	66	68	69	65	73	ST/SP
	Sg. Pinang	Sg. Air Itam	77	79	69	69	76	ST/SP
		Sg. Air Terjun	95	97	97	97	97	B/C
		Sg. Batu Feringghi	92	94	92	94	95	B/C
Sg. Dondang		73	77	65	66	70	ST/SP	
Sg. Jelutong		63	65	68	63	72	ST/SP	

SEKSYEN  
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► **2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024**  
 2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
P.Pinang	Sg. Pinang	Sg. Pinang	69	71	64	50	58	T/P
		Sg. Satu	96	97	97	97	98	B/C
		Sg. Titi Kerawang	68	75	63	57	57	T/P
P.Pinang/ Kedah/ Perak	Sg. Kerian	Sg. Kechil	86	89	89	89	88	B/C
		Sg. Kerian	86	88	88	87	88	B/C
		Sg. Selama	88	89	89	90	91	B/C
		Sg. Semang	81	80	81	72	80	ST/SP
		Sg. Serdang	71	80	83	89	92	B/C
		Sg. Terusan Bagan Serai	93	93	93	94	94	B/C
		Sg. Bruas	90	94	95	95	96	B/C
Sg. Bruas	Sg. Dandang	91	94	95	95	95	B/C	
	Sg. Licin	96	97	97	97	97	B/C	
	Sg. Rotan	89	93	92	93	93	B/C	
	Sg. Kurau	Sg. Air Hitam	95	98	97	96	97	B/C
Sg. Ara		93	96	96	96	97	B/C	
Sg. Kurau		86	87	85	85	87	B/C	
Perak	Sg. Perak	Sg. Batang Padang	88	90	90	91	91	B/C
		Sg. Behrang	97	97	98	97	98	B/C
		Sg. Berok	96	97	97	96	97	B/C
		Sg. Bidor	84	87	89	88	90	B/C
	Sg. Chenderiang	93	94	94	91	96	B/C	
	Sg. Chepor	96	97	96	97	97	B/C	
	Sg. Cuar	87	96	95	95	96	B/C	
	Sg. Ibol	94	97	96	97	97	B/C	
	Sg. Kampar	92	95	95	93	94	B/C	
	Sg. Kangsar	91	93	94	96	96	B/C	
	Sg. Kepayang	79	84	78	84	86	B/C	
	Sg. Kerbau	94	96	95	96	95	B/C	
	Sg. Kerdah	80	82	81	82	79	ST/SP	

SEKSYEN  
SECTION

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► 2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024  
2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
Perak	Sg. Perak	Sg. Kinta	83	85	83	85	85	B/C
		Sg. Klah	91	95	90	92	94	B/C
		Sg. Klian Baru	81	84	77	79	85	B/C
		Sg. Klian Gunung	96	97	96	97	97	B/C
		Sg. Kuang	81	88	85	88	87	B/C
		Sg. Manong	95	97	97	98	98	B/C
		Sg. Nyamok	76	77	74	73	72	ST/SP
		Sg. Pari	80	82	86	89	86	B/C
		Sg. Pelus	88	90	88	89	87	B/C
		Sg. Perak	89	92	94	93	94	B/C
		Sg. Pinji	73	76	77	79	80	ST/SP
		Sg. Pulau	95	97	97	97	97	B/C
		Sg. Raia	86	90	90	91	91	B/C
		Sg. Rui	94	95	89	92	95	B/C
		Sg. Seluang	72	62	62	66	68	ST/SP
		Sg. Serokai	73	77	81	83	85	B/C
		Sg. Sintang	72	72	67	64	68	ST/SP
		Sg. Sungkai	91	94	92	90	92	B/C
		Sg. Sungkai Mati	81	81	84	87	74	ST/SP
		Sg. Tapah	96	97	96	97	97	B/C
		Sg. Teja	82	88	85	81	83	B/C
		Sg. Tesong	96	97	97	97	97	B/C
		Sg. Tumboh	73	73	76	76	78	ST/SP
	Sg. Woh	96	97	98	97	97	B/C	
	Sg. Raja Hitam	Sg. Derhaka	77	79	75	74	77	ST/SP
		Sg. Manjong	86	87	86	88	86	B/C
		Sg. Nyior	96	97	97	98	98	B/C
Sg. Raja Hitam		72	80	75	73	81	B/C	
Sg. Sepetang	Sg. Batu Tegoh	90	93	91	91	92	B/C	

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► **2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024**  
 2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
Perak	Sg. Sepetang	Sg. Jana	83	84	84	88	87	B/C
		Sg. Lidin	84	86	84	86	84	B/C
		Sg. Limau	91	96	96	96	96	B/C
		Sg. Malai	76	80	76	74	77	ST/SP
		Sg. Nyior	95	97	97	97	95	B/C
		Sg. Sepetang	79	81	79	79	82	B/C
		Sg. Temerloh	88	95	94	94	91	B/C
		Sg. Trong	95	96	97	97	96	B/C
	Sg. Wangi	Sg. Deraik	73	74	74	75	75	ST/SP
		Sg. Wangi	81	76	69	82	81	B/C
Selangor/ Perak	Sg. Bernam	Sg. Bernam	83	91	88	90	89	B/C
		Sg. Dusun	91	95	95	95	95	B/C
		Sg. Gelinting	92	96	96	97	92	B/C
		Sg. Inki	94	97	97	97	97	B/C
		Sg. Slim	88	94	92	92	92	B/C
		Sg. Trolak	92	96	95	96	95	B/C
Selangor	Sg. Buloh	Sg. Buloh	60	56	51	54	67	ST/SP
	Sg. Selangor	Sg. Air Hitam	75	80	77	73	75	ST/SP
		Sg. Batang Kali	90	96	93	91	90	B/C
		Sg. Guntong	80	81	83	82	78	ST/SP
		Sg. Kanching	90	96	93	94	94	B/C
		Sg. Kerling	94	97	96	97	97	B/C
		Sg. Kundang	70	71	77	77	77	ST/SP
		Sg. Rangkap	95	96	97	97	96	B/C
		Sg. Rawang	77	81	81	82	82	B/C
		Sg. Selangor	85	91	91	90	91	B/C
		Sg. Sembah	75	83	82	81	83	B/C
	Sg. Serendah	90	96	95	95	95	B/C	
	Sg. Sepang	Sg. Sepang	78	82	84	88	84	B/C
Sg. Tenggi	Sg. Tenggi	87	91	89	88	88	B/C	

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SECTION

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► 2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024  
2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
Selangor/ W.P.Kuala Lumpur	Sg. Klang	Sg. Air Busuk	41	40	52	42	46	T/P
		Sg. Ampang	64	66	72	70	73	ST/SP
		Sg. Anak Air Batu	81	89	80	81	82	B/C
		Sg. Batu	68	71	79	73	73	ST/SP
		Sg. Belongkong	69	73	65	78	74	ST/SP
		Sg. Bunos	70	76	71	68	70	ST/SP
		Sg. Damansara	65	76	69	66	69	ST/SP
		Sg. Gombak	73	74	83	82	74	ST/SP
		Sg. Jinjang	64	71	70	68	67	ST/SP
		Sg. Kerayong	58	62	59	58	57	T/P
		Sg. Keroh	64	69	68	65	70	ST/SP
		Sg. Klang	61	67	70	69	63	ST/SP
		Sg. Kuyoh	62	69	68	68	66	ST/SP
		Sg. Penchala	60	80	76	71	68	ST/SP
		Sg. Pusu	71	80	78	75	74	ST/SP
		Sg. Rasau	83	87	93	94	91	B/C
		Sg. Rumput	92	97	95	97	97	B/C
		Sg. Semelah	83	87	90	91	84	B/C
		Sg. Toba	61	69	63	53	60	ST/SP
		Sg. Untut	64	73	78	64	65	ST/SP
Selangor/ W.P. Putrajaya/ N.Sembilan	Sg. Langat	Sg. Anak Chuau	89	94	94	94	94	B/C
		Sg. Balak	71	70	71	74	68	ST/SP
		Sg. Batang Benar	74	74	76	84	63	ST/SP
		Sg. Batang Labu	79	82	84	82	80	ST/SP
		Sg. Batang Nilai	78	81	79	80	77	ST/SP
		Sg. Beranang	82	87	85	84	82	B/C
		Sg. Buan	80	83	85	82	78	ST/SP
		Sg. Chuau	91	94	94	94	94	B/C
		Sg. Jijan	85	82	88	88	86	B/C

SEKSYEN  
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► **2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024**  
 2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
Selangor/ W.P. Putrajaya/ N.Sembilan	Sg. Langat	Sg. Langat	77	82	82	83	78	ST/SP
		Sg. Limau Manis	71	75	82	75	82	B/C
		Sg. Pajam	73	68	74	72	74	ST/SP
		Sg. Rinching	88	94	90	95	89	B/C
		Sg. Semenyih	83	87	86	86	84	B/C
		Sg. Sering	69	72	80	81	83	B/C
N.Sembilan	Sg. Lukut	Sg. Lukut	74	73	80	79	79	ST/SP
N.Sembilan/ Selangor	Sg. Sepang	Sg. Rambai	25	25	60	64	61	ST/SP
N.Sembilan/ Melaka/	Sg. Baru	Sg. Baru	74	70	75	79	78	ST/SP
	Sg. Linggi	Sg. Batang Penar	89	93	90	90	86	B/C
		Sg. Batu Hampar	93	91	93	92	91	B/C
		Sg. Chembong	93	88	89	92	94	B/C
		Sg. Empangan Terip	80	82	85	83	83	B/C
		Sg. Jelai	89	86	88	87	89	B/C
		Sg. Kayu Ara	77	80	84	81	78	ST/SP
		Sg. Kenaboi	83	87	85	89	81	B/C
		Sg. Kepadang	88	89	85	93	90	B/C
		Sg. Kundur Besar	91	92	92	93	95	B/C
		Sg. Linggi	79	84	85	84	82	B/C
		Sg. Muar	88	93	91	93	94	B/C
		Sg. Ngoi Ngoi	76	80	83	80	80	ST/SP
		Sg. Paroi	78	80	85	80	83	B/C
		Sg. Pedas	90	94	93	95	92	B/C
		Sg. Rembau	91	92	91	91	86	B/C
		Sg. Senawang	73	77	81	83	84	B/C
		Sg. Simin	82	85	87	84	80	ST/SP
		Sg. Simpang Ampat	83	87	84	87	87	B/C
		Sg. Siput	87	90	90	89	90	B/C
Sg. Temiang	78	71	83	78	82	B/C		

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SECTION

2

► 2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024  
2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
N.Sembilan/ Melaka/	Sg. Linggi	Sg. Tuang	57	62	70	74	69	ST/SP
	Sg. Tuang	Sg. Tuang	59	63	75	75	74	ST/SP
	Sg. Melaka	Sg. Batang Melaka	88	91	91	92	92	B/C
		Sg. Durian Tunggal	79	86	88	85	85	B/C
		Sg. Dusun	93	94	94	96	95	B/C
		Sg. Kemunting	92	92	91	96	93	B/C
		Sg. Malim	67	68	71	68	66	ST/SP
		Sg. Melaka	78	80	83	84	82	B/C
		Sg. Putat	60	72	67	67	63	ST/SP
		Sg. Rembia	73	77	77	76	77	ST/SP
Sg. Tampin	92	94	87	93	92	B/C		
Melaka	Sg. Duyong	Sg. Duyong	65	71	74	76	81	B/C
		Sg. Gapam	88	92	93	93	91	B/C
		Sg. Punggur	51	63	58	60	69	ST/SP
	Sg. Kesang	Sg. Chin-Chin	78	84	80	84	84	B/C
		Sg. Chohong	88	92	93	94	94	B/C
		Sg. Kesang	77	87	85	86	87	B/C
		Sg. Tangkak	67	77	74	71	75	ST/SP
	Sg. Merlimau	Sg. Merlimau	56	59	61	63	67	ST/SP
	Sg. Seri Melaka	Sg. Air Salak	62	79	78	67	68	ST/SP
		Sg. Seri Melaka	65	66	69	67	67	ST/SP
Sg. Sg.Udang		87	86	91	94	88	B/C	
Johor/ N.Sembilan/ Pahang	Sg. Muar	Sg. Air Panas	94	97	96	97	97	B/C
		Sg. Belemang	94	95	94	96	96	B/C
		Sg. Gemas	72	83	82	83	80	ST/SP
		Sg. Gemencheh	82	91	85	92	92	B/C
		Sg. Jelai	88	92	91	94	93	B/C
		Sg. Jementah	93	96	95	96	97	B/C
		Sg. Juasseh	94	95	94	94	95	B/C

► 2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024  
2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
Johor/ N.Sembilan/ Pahang	Sg. Muar	Sg. Kelamah	71	88	79	84	85	B/C
		Sg. Labis	88	88	86	86	87	B/C
		Sg. Meda	82	85	80	85	85	B/C
		Sg. Merbudu	63	77	72	85	81	B/C
		Sg. Merlimau	70	66	73	72	67	ST/SP
		Sg. Muar	83	87	85	88	87	B/C
		Sg. P.Mengkuang	89	92	91	89	93	B/C
		Sg. Pagoh	66	74	76	76	78	ST/SP
		Sg. Palong	85	87	83	88	85	B/C
		Sg. Pendol	90	95	93	95	95	B/C
		Sg. Sarang Buaya	58	60	60	67	69	ST/SP
		Sg. Segamat	90	93	89	91	93	B/C
		Sg. Senarut	75	77	79	75	76	ST/SP
		Sg. Serom	63	63	63	67	67	ST/SP
Sg. Simpang Loi	77	84	73	81	66	ST/SP		
Sg. Tenang	79	76	81	78	85	B/C		
Johor	Sg. Air Baloi	Sg. Air Baloi	60	55	58	67	64	ST/SP
	Sg. Batu Pahat	Sg. Amran	75	81	80	82	86	B/C
		Sg. Bantang	96	97	97	97	97	B/C
		Sg. Batu Pahat	66	64	61	63	68	ST/SP
		Sg. Bekok	81	88	83	84	87	B/C
		Sg. Berlian	78	77	79	82	82	B/C
		Sg. Chaah	88	93	90	90	87	B/C
		Sg. Kahang	90	92	82	86	90	B/C
		Sg. Lenik	82	91	90	90	91	B/C
		Sg. Merek	88	89	88	92	90	B/C
		Sg. Merpo	91	90	91	94	94	B/C
		Sg. Panchor	59	63	59	62	68	ST/SP
Sg. Semberong	58	71	66	77	72	ST/SP		

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► 2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024  
2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
Johor	Sg. Batu Pahat	Sg. Semberong Dam	89	91	89	93	91	B/C
		Sg. Simpang Kanan	59	62	59	62	67	ST/SP
		Sg. Simpang Kiri	67	71	75	69	74	ST/SP
		Sg. Temehel	57	54	59	62	64	ST/SP
	Sg. Benut	Sg. Benut	75	78	77	81	78	ST/SP
		Sg. Machap Dam	92	94	93	90	94	B/C
		Sg. Parit Hj.Yassin	85	81	81	83	84	B/C
		Sg. Pinggan	60	59	63	67	67	ST/SP
		Sg. Ulu Benut	89	90	86	90	91	B/C
	Sg. Danga	Sg. Danga	57	61	64	57	69	ST/SP
	Sg. Endau	Sg. Anak Sg. Semberong	84	85	84	82	71	ST/SP
		Sg. Dengar	84	91	90	90	91	B/C
		Sg. Empangan Labong	89	91	91	91	92	B/C
		Sg. Endau	87	92	91	92	94	B/C
		Sg. Jasin	94	97	96	97	96	B/C
		Sg. Jebong	74	82	75	86	88	B/C
		Sg. Kahang	90	91	90	92	93	B/C
		Sg. Lenga	68	69	74	78	73	ST/SP
		Sg. Lenggor	81	89	89	89	92	B/C
		Sg. Mamai	87	88	89	86	89	B/C
		Sg. Melatai	70	71	73	71	75	ST/SP
		Sg. Mengkibol	77	84	82	81	83	B/C
		Sg. Paloh	82	85	85	90	86	B/C
		Sg. Pamol	72	76	73	69	81	B/C
		Sg. Selai	92	94	94	90	94	B/C
	Sg. Semberong	84	87	83	88	91	B/C	
	Sg. Singol	79	83	87	84	85	B/C	
Sg. Tamok	91	90	91	87	92	B/C		

► **2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024**  
 2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY	
			2020	2021	2022	2023	2024		
Johor	Sg. Jemaluang	Sg. Jemaluang	81	88	86	91	91	B/C	
	Sg. Johor	Sg. Anak Sg. Sayong	80	90	79	84	83	B/C	
		Sg. Belitong	83	89	86	87	85	B/C	
		Sg. Berangan	71	82	81	82	84	B/C	
		Sg. Bukit Besar	75	82	77	68	75	ST/SP	
		Sg. Chemangar	70	73	77	79	80	ST/SP	
		Sg. Johor	84	89	89	88	89	B/C	
		Sg. Layang	93	93	93	94	95	B/C	
		Sg. Layau Kiri	87	92	89	87	93	B/C	
		Sg. Lebam	79	87	88	94	90	B/C	
		Sg. Linggiu	84	93	92	92	93	B/C	
		Sg. Panti	79	87	86	84	90	B/C	
		Sg. Papan	81	86	87	90	89	B/C	
		Sg. Pelepah	88	91	91	92	92	B/C	
		Sg. Peggeli	89	88	90	90	87	B/C	
		Sg. Remis	86	89	89	92	86	B/C	
		Sg. Santi	89	87	90	92	91	B/C	
		Sg. Sayong	82	85	87	88	86	B/C	
		Sg. Sebol	73	80	79	80	84	B/C	
		Sg. Seluyut	83	87	83	85	90	B/C	
		Sg. Semangar	81	92	90	89	90	B/C	
		Sg. Semenchu	66	85	86	86	78	ST/SP	
		Sg. Sening	89	93	96	94	96	B/C	
		Sg. Serai	67	60	62	64	74	ST/SP	
		Sg. Telor	88	89	93	92	93	B/C	
		Sg. Temoh	74	84	88	79	82	B/C	
		Sg. Tiram	76	85	82	87	87	B/C	
		Sg. Kaw. Pasir Gudang	Sg. Buluh	41	43	40	46	35	T/P

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► 2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024  
2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
Johor	Sg. Kaw. Pasir Gudang	Sg. Latoh	62	68	71	69	71	ST/SP
		Sg. Masai	63	60	63	73	69	ST/SP
		Sg. Perembi	57	47	59	69	56	T/P
		Sg. Tukang Batu	42	35	34	35	44	T/P
	Sg. Kempas	Sg. Kempas	32	42	41	38	40	T/P
	Sg. Kim-Kim	Sg. Kim-Kim	74	79	69	84	81	B/C
	Sg. Mersing	Sg. Empangan Congok	85	88	86	92	93	B/C
		Sg. Mersing	86	92	87	92	91	B/C
	Sg. Paloi	Sg. Paloi	89	90	90	91	91	B/C
	Sg. Pontian Besar	Sg. Air Hitam	71	74	73	82	80	ST/SP
		Sg. Ayer Merah	43	54	54	65	61	ST/SP
		Sg. Pontian Besar	73	71	74	81	78	ST/SP
	Sg. Pontian Kecil	Sg. Pontian Kecil	82	79	77	79	80	ST/SP
	Sg. Pulai	Sg. Pulai	80	80	85	80	76	ST/SP
		Sg. Pulai Dam	95	95	96	96	95	B/C
		Sg. Ulu Choh	72	72	74	74	83	B/C
	Sg. Rambah	Sg. Rambah	68	66	71	70	65	ST/SP
	Sg. Sanglang	Sg. Sanglang	59	57	51	66	63	ST/SP
	Sg. Sedili Besar	Sg. Ambat	86	84	76	88	84	B/C
		Sg. Dohol	89	90	86	89	86	B/C
		Sg. Mupur	67	73	73	60	78	ST/SP
		Sg. Pasir Panjang	88	87	76	71	83	B/C
		Sg. Sedili Besar	86	87	85	89	88	B/C
Sg. Temubor Kanan		93	95	93	95	93	B/C	
Sg. Sedili Kecil	Sg. Anak Sedili Kecil	64	63	75	80	75	ST/SP	
	Sg. Bahan	74	75	69	83	80	ST/SP	
	Sg. Sedili Kecil	82	80	82	84	83	B/C	
Sg. Segget	Sg. Segget	65	70	68	52	55	T/P	

► **2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024**  
 2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
Johor	Sg. Skudai	Sg. Melana	78	81	83	83	83	B/C
		Sg. Skudai	66	76	74	79	79	ST/SP
	Sg. Tebrau	Sg. Bala	55	47	55	60	63	ST/SP
		Sg. Pandan	46	43	58	44	45	T/P
		Sg. Plentong	56	66	67	63	71	ST/SP
		Sg. Sebulung	53	58	62	56	58	T/P
		Sg. Sengkuang	52	53	50	35	37	T/P
		Sg. Tampoi	52	60	58	54	48	T/P
Sg. Tebrau	58	71	65	62	65	ST/SP		
Pahang	Sg. Anak Endau	Sg. Anak Endau	87	90	89	90	89	B/C
	Sg. Balok	Sg. Balok	69	77	76	76	69	ST/SP
		Sg. Panjang	76	78	72	80	71	ST/SP
		Sg. Yior	62	75	74	72	65	ST/SP
	Sg. Bebar	Sg. Bebar	82	88	87	90	89	B/C
		Sg. Merba	85	91	88	88	86	B/C
		Sg. Serai	79	86	83	87	90	B/C
	Sg. Cherating	Sg. Cherating	81	86	85	86	82	B/C
	Sg. Kuantan	Sg. Belat	80	86	88	87	86	B/C
		Sg. Charu	93	96	95	96	96	B/C
		Sg. Galing Besar	64	67	76	76	77	ST/SP
		Sg. Kenau	94	97	96	97	97	B/C
		Sg. Kuantan	88	93	91	92	92	B/C
		Sg. Pandan	87	93	94	93	95	B/C
		Sg. Pinang	80	88	88	89	85	B/C
Sg. Reman		87	91	90	91	93	B/C	
Sg. Riau		84	88	88	87	82	B/C	
Sg. Talam	72	70	76	70	63	ST/SP		
Sg. Merchong	Sg. Merchong	87	92	87	89	85	B/C	
Sg. Rompin	Sg. Aur	86	91	90	91	88	B/C	

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► 2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024  
2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
Pahang	Sg. Rompin	Sg. Bakar	75	69	92	95	94	B/C
		Sg. Jekatih	87	90	91	91	90	B/C
		Sg. Jeram	88	93	90	90	90	B/C
		Sg. Kepasing	88	90	92	88	91	B/C
		Sg. Keratong	85	91	90	91	90	B/C
		Sg. Pontian	85	90	84	88	89	B/C
		Sg. Pukin	86	89	94	94	94	B/C
		Sg. Rompin	83	92	90	89	88	B/C
	Sg. Sepayang	77	84	86	85	85	B/C	
	Sg. Tonggok	Sg. Tonggok	76	81	73	80	73	ST/SP
Pahang/ N.Sembilan	Sg. Pahang	Sg. Anak Sg. Lepar	85	93	89	94	91	B/C
		Sg. Batu	84	92	91	94	90	B/C
		Sg. Belayar	94	94	92	93	91	B/C
		Sg. Bentong	89	94	93	92	91	B/C
		Sg. Benus	93	95	91	95	94	B/C
		Sg. Bera	84	86	86	87	84	B/C
		Sg. Berkelah	93	97	97	97	97	B/C
		Sg. Bertam	94	95	95	93	93	B/C
		Sg. Bilut	83	88	89	88	92	B/C
		Sg. Burung	96	96	95	93	90	B/C
		Sg. Chini	82	84	85	84	86	B/C
		Sg. Gapoi	94	97	96	97	97	B/C
		Sg. Habu	90	96	94	94	96	B/C
		Sg. Jelai	88	92	89	91	92	B/C
		Sg. Jempol	87	95	92	95	94	B/C
		Sg. Jengka	88	92	91	93	94	B/C
		Sg. Kecau	86	88	91	91	90	B/C
		Sg. Kelau	88	90	89	90	94	B/C
Sg. Kertam	91	91	93	93	92	B/C		

► **2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024**  
 2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
Pahang/ N.Sembilan	Sg. Pahang	Sg. Koyan	89	94	92	93	94	B/C
		Sg. Krau	92	94	92	94	92	B/C
		Sg. Kundang	79	82	85	86	81	B/C
		Sg. Lenggok	93	96	92	96	95	B/C
		Sg. Lepar	92	91	93	95	94	B/C
		Sg. Lipis	89	92	92	93	92	B/C
		Sg. Luit	91	93	92	89	92	B/C
		Sg. Maran	93	96	96	96	95	B/C
		Sg. Mentiga	84	86	88	91	90	B/C
		Sg. Pahang	87	91	90	90	90	B/C
		Sg. Penjuring	94	97	97	97	97	B/C
		Sg. Pertang	90	91	91	91	91	B/C
		Sg. Perting	94	96	97	97	96	B/C
		Sg. Raub	93	95	95	96	94	B/C
		Sg. Retang	92	93	94	94	92	B/C
		Sg. Ringlet	83	91	89	91	94	B/C
		Sg. Salak	87	91	91	92	94	B/C
		Sg. Semantan	88	91	88	90	91	B/C
		Sg. Serting	81	84	83	84	84	B/C
		Sg. T. Paya Bungor	91	91	92	92	92	B/C
		Sg. Tahan	91	92	94	96	94	B/C
		Sg. Tanglir	88	89	89	90	93	B/C
		Sg. Tasik Bera	91	88	89	89	88	B/C
		Sg. Tasik Chini	92	90	92	92	93	B/C
		Sg. Teh	93	94	94	96	96	B/C
		Sg. Tekal	85	89	87	90	86	B/C
Sg. Telang	91	94	93	93	93	B/C		
Sg. Telemong	93	96	94	94	96	B/C		
Sg. Telom	86	94	92	91	92	B/C		

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► 2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024  
2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
Pahang/ N.Sembilan	Sg. Pahang	Sg. Tembeling	91	90	94	95	94	B/C
		Sg. Teranum	95	96	96	97	96	B/C
		Sg. Teras	92	96	96	96	96	B/C
		Sg. Teris	91	94	94	94	95	B/C
		Sg. Terla	94	97	97	97	96	B/C
		Sg. Triang	88	91	85	87	87	B/C
		Sg. Tringkap	89	94	96	97	94	B/C
		Sg. Ulong	96	97	97	97	97	B/C
Terengganu	Sg. Besut	Sg. Besut	92	94	94	94	95	B/C
		Sg. Jertih	88	92	91	87	89	B/C
	Sg. Chukai	Sg. Bungkus	80	83	81	82	84	B/C
		Sg. Chukai	80	87	88	84	82	B/C
		Sg. Ibok	85	89	89	91	90	B/C
		Sg. Ruang	67	80	80	79	75	ST/SP
	Sg. Dungun	Sg. Dungun	90	96	92	93	95	B/C
		Sg. Telemboh	86	89	89	87	86	B/C
	Sg. Ibai	Sg. Ibai	83	80	82	80	79	ST/SP
	Sg. Kemaman	Sg. Cherul	90	91	91	93	94	B/C
		Sg. Kemaman	88	92	92	92	93	B/C
		Sg. Neram	75	86	85	88	77	ST/SP
		Sg. Perasing	82	92	94	90	90	B/C
		Sg. Ransan	81	87	87	90	90	B/C
	Sg. Kertih	Sg. Kertih	85	85	88	88	88	B/C
	Sg. Kluang	Sg. Kluang	88	84	84	85	84	B/C
	Sg. Marang	Sg. Kerak	79	82	85	82	82	B/C
		Sg. Marang	88	89	94	90	91	B/C
Sg. Temala		91	92	91	90	92	B/C	
Sg. Merang	Sg. Merang	82	77	77	80	84	B/C	
Sg. Merchang	Sg. Landas	71	87	87	84	87	B/C	

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► **2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024**  
 2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
Terengganu	Sg. Merchang	Sg. Merchang	71	80	73	76	81	B/C
	Sg. Paka	Sg. Besul	92	96	96	92	96	B/C
		Sg. Paka	87	90	90	90	90	B/C
		Sg. Rasau	82	84	83	83	81	B/C
		Sg. Rengat	84	91	91	89	89	B/C
	Sg. Setiu	Sg. Bari	92	95	95	93	94	B/C
		Sg. Chalok	86	92	90	91	91	B/C
		Sg. Setiu	89	93	93	93	96	B/C
		Sg. Tarom	89	94	95	92	91	B/C
	Sg. Terengganu	Sg. Berang	91	95	96	97	97	B/C
		Sg. Nerus	89	92	93	92	94	B/C
		Sg. Pueh	73	87	92	91	86	B/C
		Sg. Telemong	88	93	91	93	96	B/C
		Sg. Terengganu	87	91	92	92	91	B/C
	Kelantan	Sg. Golok	Sg. Golok	88	93	90	93	96
Sg. Jedok			90	95	95	93	95	B/C
Sg. Lanas			84	94	90	94	96	B/C
Sg. Tasik Garu			80	85	82	87	90	B/C
Sg. Kelantan		Sg. Aring	79	80	83	82	85	B/C
		Sg. Belatop	82	89	87	89	91	B/C
		Sg. Ber	87	91	91	91	89	B/C
		Sg. Berok	82	88	89	87	88	B/C
		Sg. Betis	86	93	92	92	93	B/C
		Sg. Chiku	88	89	91	87	94	B/C
		Sg. Galas	86	88	90	91	89	B/C
		Sg. Isos	73	73	78	74	80	ST/SP
		Sg. Kelantan	82	86	87	87	90	B/C
Sg. Kelesa	87	94	91	90	83	B/C		
Sg. Kenkren	92	93	94	94	93	B/C		

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► 2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024  
2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
Kelantan	Sg. Kelantan	Sg. Kerilla	91	94	94	95	93	B/C
		Sg. Ketil	90	97	90	92	95	B/C
		Sg. Lebir	87	92	90	91	92	B/C
		Sg. Muring	85	92	90	93	93	B/C
		Sg. Nal	88	91	89	91	91	B/C
		Sg. Nenggiri	81	82	87	87	88	B/C
		Sg. Pehi	86	91	91	92	94	B/C
		Sg. Pelaur	90	96	95	87	96	B/C
		Sg. Penangau	78	87	89	86	90	B/C
		Sg. Pergau	92	96	96	96	97	B/C
		Sg. Rasau	80	80	85	85	88	B/C
		Sg. Relai	90	91	90	87	91	B/C
		Sg. Sokor	86	89	89	88	93	B/C
	Sg. Tuang	90	94	91	97	96	B/C	
	Sg. Kemasin	Sg. Gali	79	75	83	81	89	B/C
		Sg. Kemasin	83	85	87	84	88	B/C
		Sg. Semerak	85	87	88	86	87	B/C
	Sg. Pengkalan Chepa	Sg. Alor B	65	63	59	63	63	ST/SP
		Sg. Alor Lintah	76	68	70	74	70	ST/SP
		Sg. Keladi	76	84	89	87	87	B/C
		Sg. Pengkalan Chepa	73	73	75	69	72	ST/SP
		Sg. Raja Gali	79	87	81	87	87	B/C
	Sg. Pengkalan Datu	Sg. Pasir Hor	73	77	75	77	82	B/C
Sg. Pengkalan Datu		85	86	85	87	86	B/C	
Sarawak	Sg. Balingian	Sg. Balingian	90	87	87	76	71	ST/SP
		Sg. Baram	84	85	86	81	76	ST/SP
	Sg. Kayan	Sg. Tutuh	90	-	87	79	78	ST/SP
		Sg. Kayan	82	83	82	78	77	ST/SP
	Sg. Kemena	Sg. Kemena	82	82	84	79	74	ST/SP

► **2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024**  
 2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
Sarawak	Sg. Kemena	Sg. Sibiu	81	79	83	76	77	ST/SP
	Sg. Kerian	Sg. Kerian	86	84	86	83	80	ST/SP
		Sg. Seblak	84	88	87	79	77	ST/SP
		Sg. Selalang	92	92	90	90	89	B/C
	Sg. Lawas	Sg. Lawas	89	89	91	92	87	B/C
	Sg. Limbang	Sg. Limbang	88	89	88	85	82	B/C
	Sg. Lupar	Sg. Ai	90	91	89	91	90	B/C
		Sg. Lupar	85	84	88	79	75	ST/SP
		Sg. Sekerang	92	88	87	90	90	B/C
		Sg. Seterap	82	86	89	80	76	ST/SP
		Sg. Undup	91	85	89	89	85	B/C
	Sg. Miri	Sg. Adong	83	78	57	54	51	T/P
		Sg. Dalam	84	83	80	70	71	ST/SP
		Sg. Lutong	78	82	79	74	67	ST/SP
		Sg. Miri	87	88	58	50	49	T/P
		Sg. Padang Liku	89	88	83	81	82	B/C
	Sg. Mukah	Sg. Mukah	88	82	86	75	73	ST/SP
	Sg. Niah	Sg. Niah	86	86	86	83	83	B/C
		Sg. Sekaloh	75	81	83	75	70	ST/SP
	Sg. Oya	Sg. Oya	86	84	86	73	67	ST/SP
	Sg. Rajang	Sg. Baloi	89	-	89	73	73	ST/SP
		Sg. Binatang	89	89	87	86	84	B/C
		Sg. Daro	80	62	66	53	53	T/P
		Sg. Jemoreng	80	63	66	55	52	T/P
		Sg. Julau	88	86	85	89	85	B/C
		Sg. Kanowit	89	87	87	88	86	B/C
		Sg. Meradong	80	82	85	78	70	ST/SP
Sg. Pakan		88	89	88	88	88	B/C	
Sg. Pila Parit	62	77	78	81	80	ST/SP		

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► **2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024**  
**2 (b): Water Quality Status by River, 2024**

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
Sarawak	Sg. Rajang	Sg. Rajang	85	85	86	83	81	B/C
		Sg. Salim	83	81	86	76	66	ST/SP
		Sg. Sarikei	85	89	88	83	82	B/C
	Sg. Sadong	Sg. Karangan	74	76	84	68	69	ST/SP
		Sg. Sadong	83	85	85	83	84	B/C
		Sg. Tarat	91	90	90	90	92	B/C
	Sg. Sarawak	Sg. Kelantan	74	59	68	66	60	ST/SP
		Sg. Kuap	87	88	89	79	77	ST/SP
		Sg. Maong Kiri	72	73	82	70	59	T/P
		Sg. Samarahan	74	71	79	72	69	ST/SP
		Sg. Sarawak	87	86	88	87	85	B/C
		Sg. Sarawak Kanan	82	84	85	83	80	ST/SP
		Sg. Sarawak Kiri	88	87	87	89	91	B/C
		Sg. Semadang	89	90	90	93	92	B/C
		Sg. Semenggoh	71	78	83	75	75	ST/SP
		Sg. Tabuan	77	76	78	64	61	ST/SP
	Sg. Tapah	Sg. Tapah	89	91	90	88	84	B/C
		Sg. Saribas	Sg. Layar	86	89	88	84	88
	Sg. Saribas	Sg. Saribas	74	79	87	75	67	ST/SP
		Sg. Semunsam	Sg. Semunsam	87	80	85	88	88
	Sg. Sibuti	Sg. Kabuloh	71	64	76	82	72	ST/SP
		Sg. Kejapil	88	89	85	86	79	ST/SP
		Sg. Satap	88	84	84	74	77	ST/SP
Sg. Sibuti		85	85	81	79	78	ST/SP	
Sg. Similajau	Sg. Similajau	90	85	87	83	83	B/C	
Sg. Suai	Sg. Suai	88	87	85	80	79	ST/SP	
Sg. Tatau	Sg. Tatau	88	85	86	84	81	B/C	
Sg. Trusan	Sg. Trusan	88	88	90	86	84	B/C	
Sabah	Sg. Apas	Sg. Apas	89	90	92	90	91	B/C

► 2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024  
2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
Sabah	Sg. Balung	Sg. Balung	87	91	92	90	92	B/C
	Sg. Bengkoka	Sg. Bengkoka	88	89	90	85	88	B/C
	Sg. Bingkongan	Sg. Bandau	91	92	92	94	92	B/C
		Sg. Bingkongan	91	94	93	94	94	B/C
		Sg. Menggaris	93	92	92	93	93	B/C
		Sg. Tandek	91	91	91	91	90	B/C
	Sg. Bongawan	Sg. Bongawan	87	87	88	87	88	B/C
	Sg. Brantian	Sg. Brantian	86	84	90	87	91	B/C
	Sg. Kalabakan	Sg. Kalabakan	84	83	86	81	86	B/C
	Sg. Kalumpang	Sg. Kalumpang	86	87	88	87	86	B/C
		Sg. Pang Burong 1	83	86	86	87	90	B/C
		Sg. Pang Burong 2	69	85	80	79	76	ST/SP
	Sg. Kedamaian	Sg. Kedamaian	90	93	92	95	96	B/C
		Sg. Tempasuk	91	92	91	92	94	B/C
		Sg. Wariu	91	93	93	94	94	B/C
	Sg. Kimanis	Sg. Kimanis	87	90	92	90	89	B/C
	Sg. Kinabatangan	Sg. Karamuak	91	92	92	91	94	B/C
		Sg. Kinabatangan	84	85	84	84	85	B/C
		Sg. Koyah	87	89	88	86	87	B/C
		Sg. Leepang	84	85	84	83	85	B/C
		Sg. Menanggul	81	86	86	82	81	B/C
		Sg. Pin	86	87	86	86	86	B/C
		Sg. Takala	85	88	87	85	84	B/C
	Sg. Labok	Sg. Kinipir	90	91	90	92	92	B/C
		Sg. Labok	87	86	88	87	89	B/C
		Sg. Liwagu	88	89	88	92	88	B/C
		Sg. Maliau	92	94	93	95	94	B/C
Sg. Tungud		88	91	85	87	90	B/C	
Sg. Lakutan	Sg. Lakutan	89	93	88	92	87	B/C	

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► 2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024  
2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
Sabah	Sg. Likas	Sg. Darau	80	83	83	81	81	B/C
		Sg. Inanam	84	88	89	88	87	B/C
		Sg. Likas	78	76	78	71	71	ST/SP
		Sg. Menggatal	85	89	91	94	89	B/C
	Sg. Lingkungan	Sg. Bukau	88	92	87	90	88	B/C
		Sg. Lingkungan	91	93	89	93	88	B/C
	Sg. Membakut	Sg. Membakut	85	87	89	89	89	B/C
	Sg. Menggalong	Sg. Menggalong	89	93	90	91	91	B/C
	Sg. Merotai	Sg. Merotai	89	91	91	92	91	B/C
	Sg. Mounad	Sg. Mounad	86	87	88	87	86	B/C
	Sg. Moyog	Sg. Moyog	89	92	92	93	90	B/C
	Sg. Padas	Sg. Bunsit	91	93	92	94	94	B/C
		Sg. Liawan	91	91	92	93	93	B/C
		Sg. Padas	86	88	87	86	84	B/C
		Sg. Pangatan	87	88	87	86	86	B/C
		Sg. Pegalan	88	88	87	90	90	B/C
		Sg. Tandulu	91	92	92	93	92	B/C
	Sg. Paitan	Sg. Paitan	85	91	90	88	86	B/C
	Sg. Papar	Sg. Papar	90	91	91	92	93	B/C
	Sg. Sapi	Sg. Sapi	85	87	84	85	85	B/C
		Sg. Sualong	92	92	93	95	95	B/C
	Sg. Segaliud	Sg. Segaliud	87	85	82	84	86	B/C
	Sg. Segama	Sg. Segama	85	87	86	86	88	B/C
	Sg. Sembulan	Sg. Sembulan	79	81	74	70	75	ST/SP
	Sg. Silabukan	Sg. Silabukan	89	89	87	93	91	B/C
	Sg. Sugut	Sg. Bongkud	91	92	93	93	93	B/C
Sg. Lohan		91	92	93	95	93	B/C	
Sg. Merali		88	91	90	95	92	B/C	
Sg. Sugut		88	91	91	94	93	B/C	

► **2 (b): Status Kualiti Air Sungai Mengikut Sungai, 2024**  
 2 (b): Water Quality Status by River, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NILAI IKA/ WQI VALUE					KATEGORI IKA/ WQI CATEGORY
			2020	2021	2022	2023	2024	
Sabah	Sg. Tawau	Sg. Tawau	85	91	91	92	91	B/C
	Sg. Telipok	Sg. Telipok	86	89	89	91	82	B/C
	Sg. Tenghilan	Sg. Tenghilan	92	92	90	92	92	B/C
	Sg. Tingkayu	Sg. Tingkayu	85	85	85	80	87	B/C
	Sg. Tuaran	Sg. Damit	89	87	89	92	91	B/C
		Sg. Song Sai	90	92	92	94	93	B/C
		Sg. Tuaran	92	93	93	94	94	B/C
	Sg. Tungku	Sg. Tungku	89	90	89	92	92	B/C
Sg. Umas-Umas	Sg. Umas-Umas	83	84	89	85	86	B/C	

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📍 Sungai Melaka, Melaka

► 2 (c): Stesen Sungai Tercemar dan Kelas Kualiti Air Berdasarkan Sub-Indeks BOD, AN dan SS, 2024  
2 (c): Polluted River Stations and Classes Based on BOD, AN and SS Sub-Index, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NOMBOR STESEN/ STATION NUMBER	2024			KELAS BERDASARKAN/ CLASS BASED ON		
				IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS	BOD	AN	SS
Kedah	Sg. Merbok	Sg. Batu	1KMBK002	52	T/P	IV	V	V	I
	Sg. Perai	Sg. Seluang	1KPRI021	57	T/P	III	IV	IV	I
P.Pinang	Sg. Juru	Sg. Rambai	1PJRU005	46	T/P	IV	V	V	I
		Sg. Permatang Rawa	1PJRU008	56	T/P	III	IV	V	I
		Sg. Juru	1PJRU012	53	T/P	III	IV	V	I
	Sg. Jawi	Sg. Jawi	1PJWI001	52	T/P	IV	IV	V	III
		Sg. Junjong	1PJWI002	59	T/P	III	IV	IV	III
		Sg. Chempedak	1PJWI003	42	T/P	IV	V	IV	III
		Sg. Junjong	1PJWI004	49	T/P	IV	IV	V	I
		Sg. Tengah	1PJWI005	55	T/P	III	IV	IV	III
	Sg. Kluang	Sg. Kluang	1PKLU001	45	T/P	IV	V	V	I
	Sg. Pinang	Sg. Titi Kerawang	1PPNG004	57	T/P	III	IV	IV	I
		Sg. Pinang	1PPNG008	51	T/P	IV	IV	V	I
		Sg. Dondang	1PPNG012	56	T/P	III	IV	IV	I
		Sg. Dondang	1PPNG013	58	T/P	III	IV	IV	I
		Sg. Pinang	1PPNG021	41	T/P	IV	V	V	I
	Sg. Perai	Sg. Kereh	1PPRI006	48	T/P	IV	V	V	II
		Sg. Air Melintas	1PPRI007	59	T/P	III	IV	V	II
Sg. Kereh		1PPRI008	55	T/P	III	IV	V	I	
Sg. Seluang Bawah		1PPRI010	58	T/P	III	IV	IV	I	

► **2 (c): Stesen Sungai Tercemar dan Kelas Kualiti Air Berdasarkan Sub-Indeks BOD, AN dan SS, 2024**  
 2 (c): Polluted River Stations and Classes Based on BOD, AN and SS Sub-Index, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NOMBOR STESEN/ STATION NUMBER	2024			KELAS BERDASARKAN/ CLASS BASED ON		
				IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS	BOD	AN	SS
Selangor	Sg. Buloh	Sg. Buloh	2BBLH003	53	T/P	III	V	IV	II
		Sg. Kerayong	2BKLG013	56	T/P	III	IV	V	I
		Sg. Klang	2BKLG022	59	T/P	III	III	V	III
		Sg. Klang	2BKLG023	57	T/P	III	IV	V	II
		Sg. Klang	2BKLG050	58	T/P	III	III	V	III
W.P. Kuala Lumpur	Sg. Klang	Sg. Kerayong	2BKLG051	54	T/P	III	V	V	I
		Sg. Klang	2WKLG001	58	T/P	III	IV	V	II
		Sg. Klang	2WKLG004	59	T/P	III	IV	V	I
		Sg. Bunos	2WKLG006	57	T/P	III	V	IV	I
		Sg. Air Busuk	2WKLG041	46	T/P	IV	V	V	II
Johor	Sg. Air Baloi	Sg. Air Baloi	3JABL002	57	T/P	III	II	I	I
		Sg. Kempas	Sg. Kempas	3JKPS001	37	T/P	IV	V	V
	Sg. Kempas		3JKPS002	40	T/P	IV	V	V	II
	Sg. Kaw. Pasir Gudang	Sg. Perembi	3JPGD001	56	T/P	III	V	IV	I
		Sg. Buluh	3JPGD002	35	T/P	IV	V	IV	I
		Sg. Tukang Batu	3JPGD003	44	T/P	IV	V	V	I
	Sg. Segget	Sg. Segget	3JSGT001	48	T/P	IV	V	V	I
		Sg. Segget	3JSGT002	47	T/P	IV	V	V	I
		Sg. Segget	3JSGT003	56	T/P	III	IV	V	II
		Sg. Segget	3JSGT005	58	T/P	III	V	V	I
	Sg. Tebrau	Sg. Tebrau	3JTRU001	57	T/P	III	III	V	II
Sg. Tebrau		3JTRU006	56	T/P	III	IV	V	II	
Sg. Pandan		3JTRU007	45	T/P	IV	V	V	I	
Sg. Sebulung		3JTRU009	58	T/P	III	IV	V	I	
Sg. Tampoi		3JTRU010	48	T/P	IV	V	V	I	
Sg. Sengkuang		3JTRU011	37	T/P	IV	V	V	II	

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► 2 (c): Stesen Sungai Tercemar dan Kelas Kualiti Air Berdasarkan Sub-Indeks BOD, AN dan SS, 2024  
2 (c): Polluted River Stations and Classes Based on BOD, AN and SS Sub-Index, 2024

NEGERI/ STATE	LEMBANGAN/ BASIN	SUNGAI/ RIVER	NOMBOR STESEN/ STATION NUMBER	2024			KELAS BERDASARKAN/ CLASS BASED ON		
				IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS	BOD	AN	SS
N.Sembilan	Sg. Langat	Sg. Pajam	3NLGT021	56	T/P	III	V	V	II
	Sg. Muar	Sg. Gemas	3NMUA041	55	T/P	III	IV	IV	II
Sarawak	Sg. Mukah	Sg. Mukah	60MKH002	58	T/P	III	II	II	I
	Sg. Miri	Sg. Adong	60MRI001	51	T/P	IV	II	III	I
		Sg. Miri	60MRI005	48	T/P	IV	II	III	I
		Sg. Miri	60MRI006	50	T/P	IV	II	III	I
	Sg. Rajang	Sg. Daro	60RJG021	53	T/P	III	II	II	I
		Sg. Jemoreng	60RJG022	52	T/P	IV	II	II	I
Sg. Sarawak	Sg. Maong Kiri	60SWK011	59	T/P	III	II	IV	I	

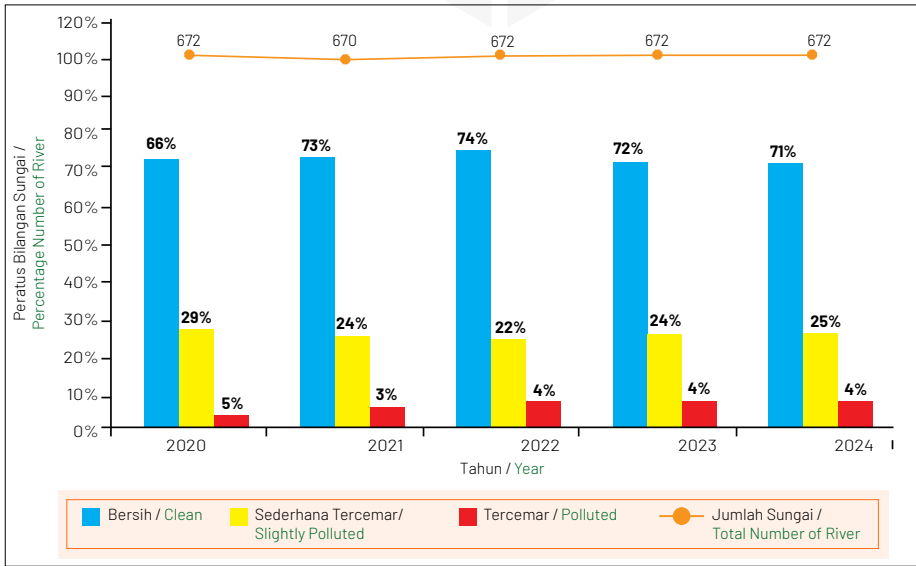
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📍 Kanching Falls, Rawang, Selangor

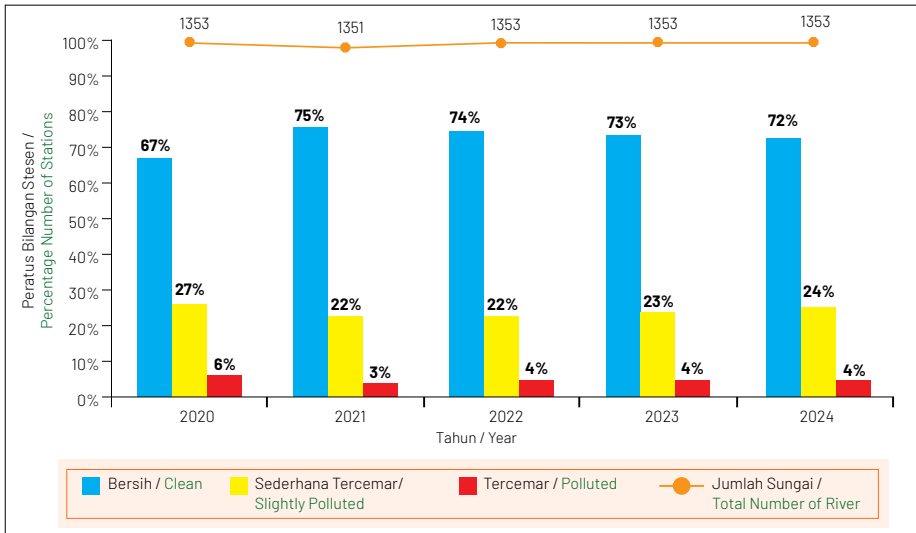
► **2 (d): Trend Kualiti Air Sungai, 2020-2024**  
 2 (d): River Water Quality Trend, 2020-2024



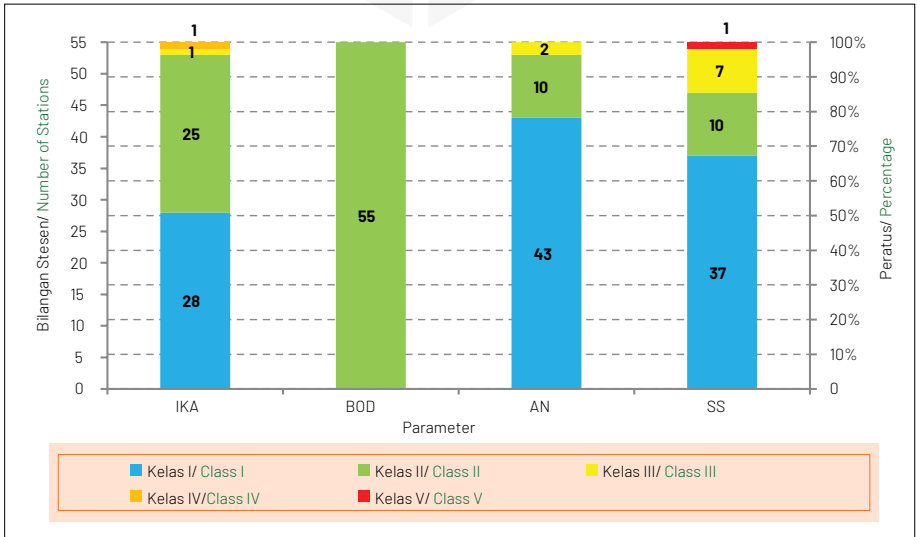
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► **2 (e): Trend Stesen Kualiti Air Sungai, 2020 - 2024**  
 2 (e): River Water Quality Stations Trend, 2020 - 2024



► **2 (f): Kualiti Air Sungai di Stesen Hulu Muka Sauk, 2024**  
2 (f): River Water Quality at Upstream Water Intake Stations, 2024



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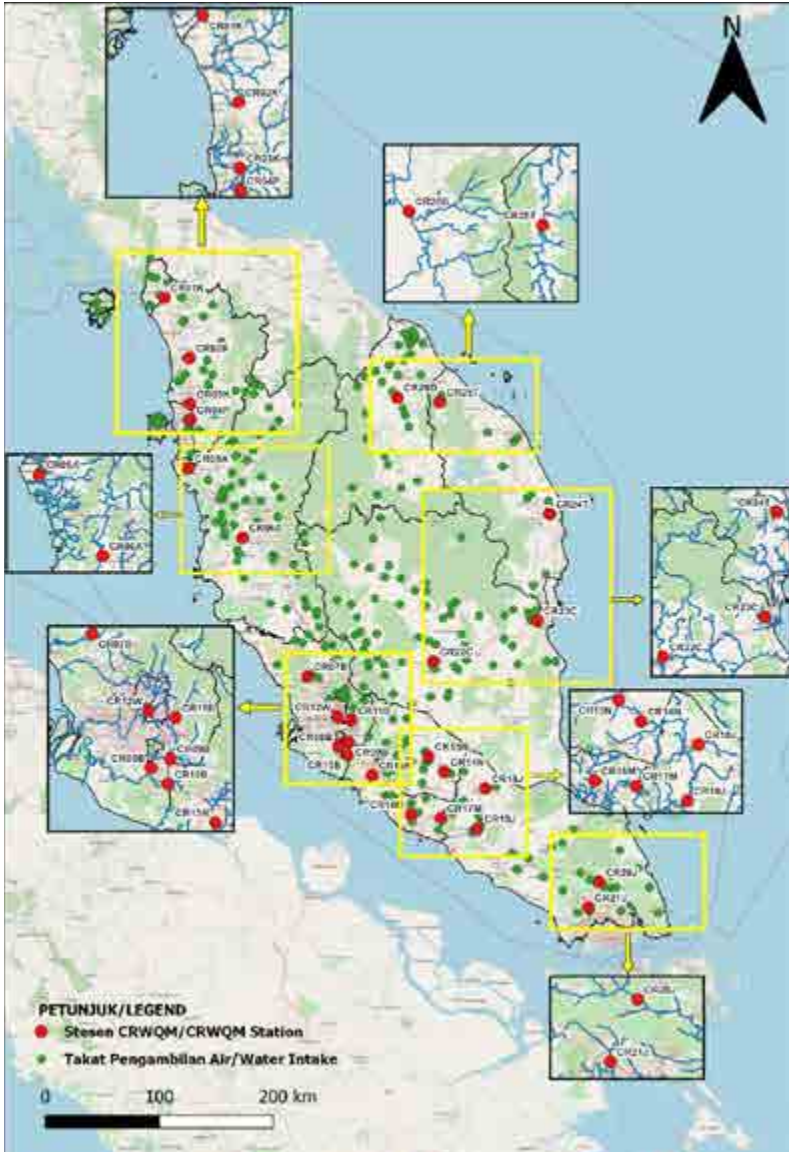
2



📌 Ladang Ikan Terapung, Pulau Langkawi

► 2 (g): Stesen Pengawasan Kualiti Air Sungai Automatik dan Takat Pengambilan Air (Semenanjung Malaysia)

2 (g): Continuous River Water Quality Monitoring Stations and Water Intakes (Peninsular Malaysia)



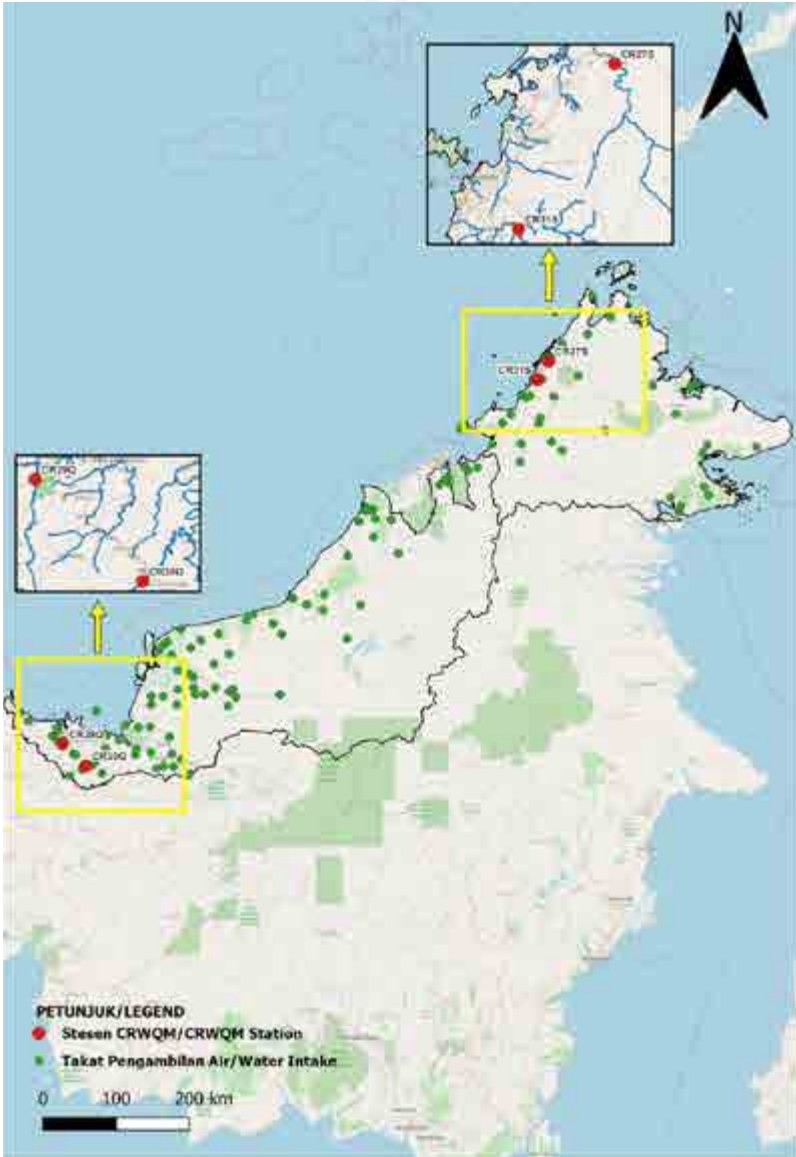
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► 2 (h): Stesen Pengawasan Kualiti Air Sungai Automatik dan Takat Pengambilan Air (Sabah dan Sarawak)

2 (h): Continuous River Water Quality Monitoring Stations and Water Intakes (Sabah and Sarawak)



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## SEKSYEN 3: KUALITI AIR MARIN SECTION 3: MARINE WATER QUALITY

**PENGAWASAN KUALITI  
AIR MARIN MANUAL**  
MANUAL MARINE WATER  
QUALITY MONITORING (MMWQM)

**29**

**PARAMETER DIPANTAU /  
PARAMETERS MONITORED**



**188**

**STESEN PANTAI**  
COASTAL STATIONS



**85**

**STESEN MUARA SUNGAI**  
ESTUARY STATIONS



**95**

**STESEN MUARA PULAU**  
ISLAND STATIONS

**1128**

**PERSAMPELAN  
STESEN PANTAI**  
COASTAL STATION  
SAMPLING

**510**

**PERSAMPELAN  
STESEN MUARA SUNGAI**  
ESTUARY STATION  
SAMPLING

**570**

**PERSAMPELAN  
STESEN PULAU**  
ISLAND STATION  
SAMPLING

**PENGAWASAN KUALITI  
AIR MARIN AUTOMATIK**  
CONTINUOUS MARINE  
WATER QUALITY  
MONITORING (CMWQM)

**STESEN AUTOMATIK**  
CONTINUOUS STATIONS

**10**

**PARAMETER DIPANTAU**  
PARAMETERS MONITORED

**11**

SEKSYEN  
SECTION

**3**

**STESEN TERBAIK AIR MARIN 2024 /  
EXCELLENT MARINE WATER STATION 2024**

**STESEN PANTAI / COSTAL STATION**

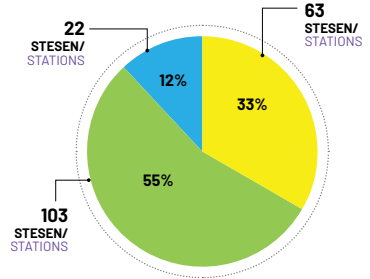
BIL. / NO.	NEGERI / STATE	LOKASI / LOCATION
1	Pahang	Pantai Cherating (Club Med B)
2	Pahang	Pantai Cherating (Legend B)
3	Pahang	Pantai Batu Hitam B
4	Kelantan	Pantai Cahaya Bulan
5	Terengganu	Pantai Batu Buruk
6	Terengganu	Pantai Rhu 10
7	Terengganu	Pantai Teluk Kalong
8	Terengganu	Pantai Tanjung Bidara
9	Perak	Pantai Tanjung Batu
10	Perak	Pantai Teluk Rubiah

SEKSYEN  
SECTION

3

**STATUS KUALITI AIR MARIN 2024  
MARINE WATER QUALITY STATUS 2024**

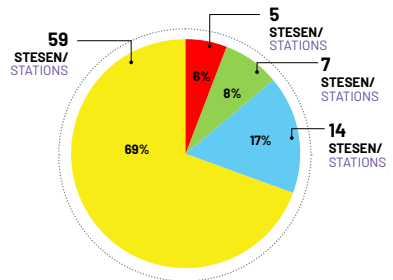
**STESEN PANTAI / COSTAL STATION**



**STESEN MUARA SUNGAI / ESTUARY STATION**

BIL. / NO.	NEGERI / STATE	LOKASI / LOCATION
1	Terengganu	Tioxide Utara (Kg. Bukit Kuang, Kijal)
2	Terengganu	Tioxide Tengah (Pupuk Semangat Kijal)
3	Terengganu	Tioxide Selatan (KSB, T. Kalong)
4	Perak	Kuala Sungai Manjung
5	Terengganu	Kuala Sungai Ibai
6	Terengganu	Kuala Sungai Setiu
7	Kelantan	Kuala Sungai Semerak

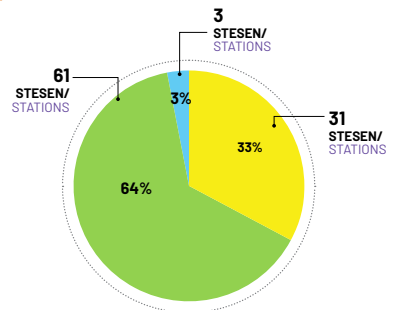
**STESEN MUARA SUNGAI / ESTUARY STATION**



**STESEN PULAU / ISLAND STATION**

BIL. / NO.	NEGERI / STATE	LOKASI / LOCATION
1	Pahang	Cebeh
2	Pahang	Sepui
3	Pahang	Sembilang
4	Johor	Nanga Besar
5	Johor	Setindan
6	Johor	Babi Tengah
7	Kedah	Kaca
8	Terengganu	Perhentian Besar (West)
9	Terengganu	Perhentian Kecil
10	Terengganu	Redang (North)

**STESEN PULAU / ISLAND STATION**



► **3 (a): Parameter Kualiti Air Marin, 2024**

3 (a): Marine Water Quality Parameters, 2024

BIL/ NO.	PARAMETER / PARAMETERS	KOD / CODE	UNIT / UNIT
<b>PENGUKURAN IN-SITE / IN-SITU MEASUREMENTS</b>			
1.	Oksigen Terlarut / Dissolved Oxygen	DO mg/l	mg/l
2.	pH	pH	-
3.	Kemasinan / Salinity	Sal	ppt
4.	Suhu / Temperature	Temp	°C
5.	Kekeruhan / Turbidity	Turb	NTU
6.	Konduktiviti / Conductivity	Cond	mS/cm
<b>PENGUKURAN MAKMAL / LABORATORY MEASUREMENTS</b>			
1.	Jumlah Pepejal Terampai / Total Suspended Solid	TSS	mg/l
2.	Minyak dan Gris / Oil and Grease	O&G	mg/l
3.	Bebola Tar / Tarball	Tar	g/100m
4.	Merkuri / Mercury	Hg	µg/l
5.	Kadmium / Cadmium	Cd	µg/l
6.	Kromium (VI) / Chromium (VI)	Cr <sup>6+</sup>	µg/l
7.	Kuprum / Copper	Cu	µg/l
8.	Arsenik / Arsenic	As	µg/l
9.	Plumbum / Lead	Pb	µg/l
10.	Zink / Zinc	Zn	µg/l
11.	Sianida / Cyanide	CN	µg/l
12.	Ammonia Tidak Terion / Unionized Ammonia	NH <sub>3</sub>	µg/l
13.	Amoniakal Nitrogen / Ammoniacal Nitrogen	NH <sub>3</sub> -N	µg/l
14.	Nitrit / Nitrite	NO <sub>2</sub>	µg/l
15.	Nitrat / Nitrate	NO <sub>3</sub>	µg/l
16.	Fosfat / Phosphate	PO <sub>4</sub>	µg/l
17.	Fenol / Phenol	Phenol	µg/l
18.	Tributiltin / Tributyltin	TBT	µg/l
19.	Total Coliform	TC	cfu/100ml
20.	Faecal Coliform	FC	cfu/100ml
21.	Escherichia coli	E. coli	cfu/100ml
22.	Enterococci	-	cfu/100ml
23.	Polycyclic Aromatic Hydrocarbons	PAHs	µg/l

SEKSYEN  
SECTION

3

► **3 (b): Standard Kualiti Air Marin Malaysia**

3 (b): Malaysian Marine Water Quality Standards

PARAMETER (BG/L) MELAINKAN DINYATAKAN SEBALIKNYA / PARAMETERS (BG/L) UNLESS OTHERWISE STATED	KLASIFIKASI / CLASSIFICATION					
	KELAS 1 / CLASS 1	KELAS 2 / CLASS 2	KELAS 3 / CLASS 3	INTERIM KELAS E1/ INTERIM CLASS E1	INTERIM KELAS E2/ INTERIM CLASS E2	INTERIM KELAS E3/ INTERIM CLASS E3
	HABITAT MARIN SENSITIF / SENSITIVE MARINE HABITATS	PERIKANAN (TERMASUK MARIKULTUR)/ FISHERIES (INCLUDING MARIKULTURE)	INDUSTRI, AKTIVITI KOMERSIAL & KAWASAN KEDIAMAN PESISIR PANTAI / INDUSTRIAL, COMMERCIAL ACTIVITIES & COASTAL SETTLEMENTS	MUARA SUNGAI / ESTUARIES		
			DATARAN PANTAI / COASTAL PLAIN	LAGUN / LAGOON	RANGKAIAN KOMPLEKS/ COMPLEX DISTRIBUTARY NETWORK	
Oksigen Terlarut / Dissolved Oxygen (mg/l)	>6.0	>5.0	>3.0	>5.0	>5.0	>5.0
Jumlah Pepejal Terampai/ Total Suspended Solids (mg/l)	25.0	50.0	100.0	30.0	30.0	30.0
Fosfat / Phosphate	5.0	75.0	670.0	100.0	180.0	180.0
Nitrat / Nitrate	10.0	60.0	700.0	200.0	570.0	430.0
Ammonia	35.0	50.0	320.0	5.0	10.0	10.0
Merkuri / Mercury	0.04	0.04	0.04	0.04	0.04	0.04
Kadmium / Cadmium	0.50	2.00	3.00	1.00	1.00	1.00
Kromium(VI) / Chromium(VI)	0.14	10.00	20.00	10.00	10.00	10.00
Kuprum / Copper	1.30	2.90	8.00	1.00	1.00	1.00
Sianida / Cyanide	2.00	7.00	14.00	5.00	5.00	5.00
Plumbum / Lead	2.20	8.50	12.00	1.30	2.00	2.00
Zink / Zinc	7.00	50.00	100.00	16.00	5.00	5.00
Arsenik (III) / Arsenic (III)	1.00	3.00	3.00	3.00	1.00	1.00
Aluminium	27.00	27.00	55.00	27.00	27.00	27.00
Tributyltin (TBT)	0.001	0.010	0.050	0.002	0.002	0.002
Polycyclic Aromatic Hydrocarbons (PAHs)	100.0	200.0	1000.0	5.0	5.0	5.0
Jumlah Fenol / Total Phenol	1.0	10.0	100.0	10.0	10.0	10.0
Minyak & Gris / Oil & Grease (mg/l)	0.01	0.14	5.00	1.00	1.00	1.00
Faecal Coliform (cfu/100ml)	70	70	70	70	70	70
Suhu / Temperature (°C)	≤ 2 °C bertambah melebihi ambien maksimum / ≤ 2 °C increase over maximum ambient					
pH	6.5 - 9.0					
Marine Litter	Bebas dari marine litter / Free from marine litter					

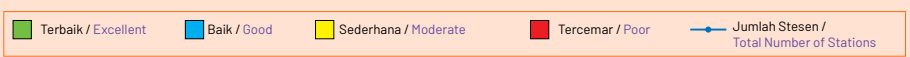
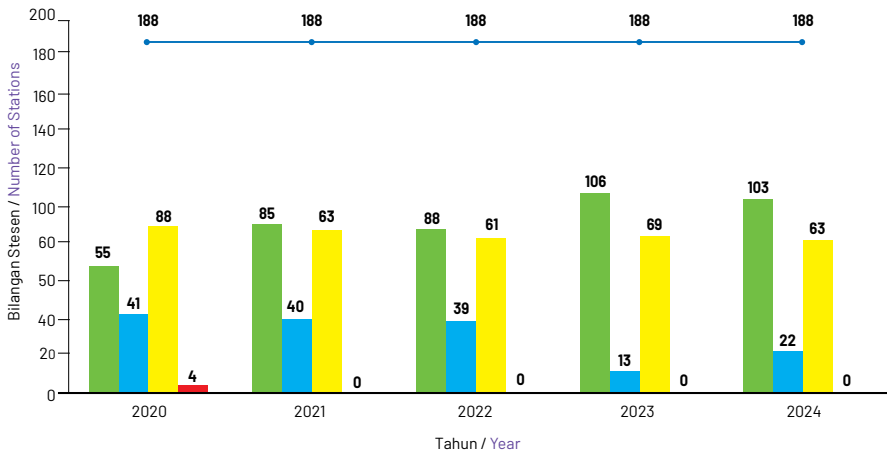
SEKSYEN  
SECTION

3

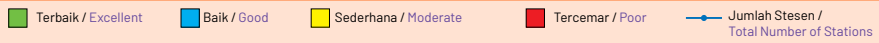
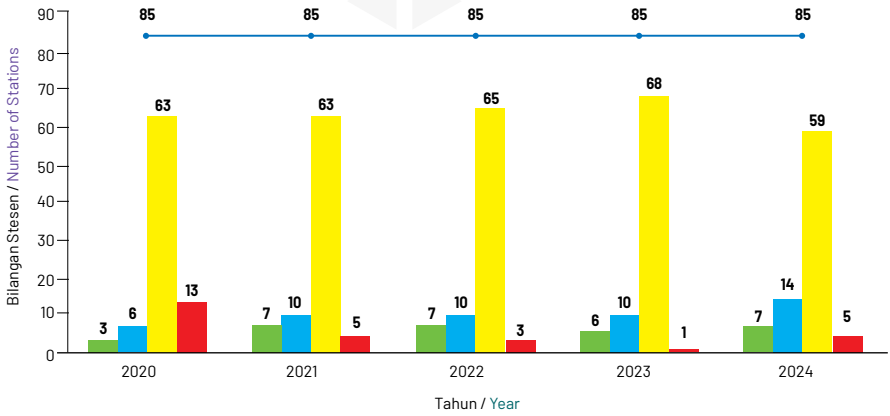
► **3 (c): Klasifikasi Indeks Kualiti Air Marin Malaysia (IKAMM)**  
 3 (c): Malaysian Marine Water Quality Index (MMWQI) Classification

KATEGORI / CATEGORY	NILAI INDEKS / INDEX VALUE
Terbaik / Excellent	90 - 100
Baik / Good	80 - <90
Sederhana / Moderate	50 - <80
Tercemar / Poor	0 - <50

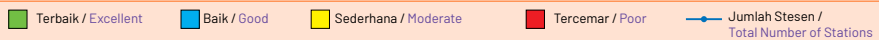
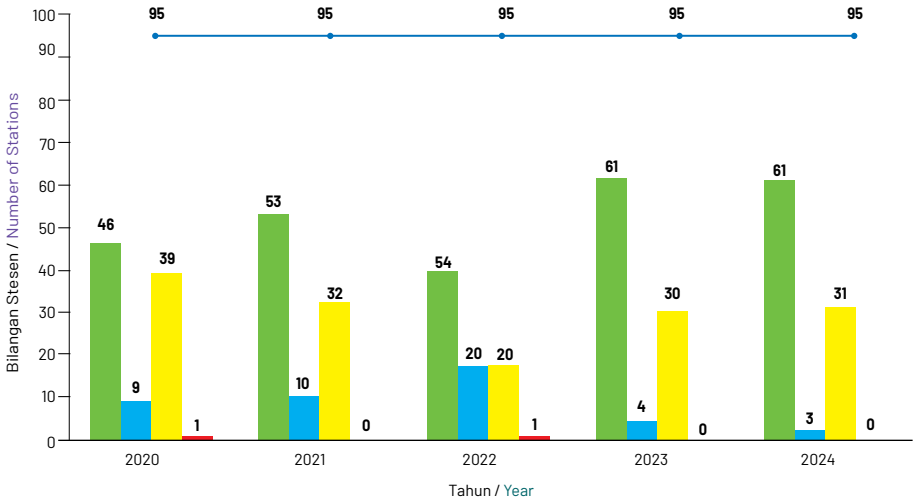
► **3 (d): Trend Status Kualiti Air Marin bagi Kawasan Pantai, 2020 -2024**  
 3 (d): The Marine Water Quality Status Trend for Coastal Area, 2020 -2024



► **3 (e): Trend Status Kualiti Air Marin bagi Muara Sungai, 2020 -2024**  
3 (e): The Marine Water Quality Status Trend for Estuary, 2020 -2024



► **3 (f): Trend Status Kualiti Air Marin bagi Pulau, 2020-2024**  
3 (f): The Trend of Marine Water Quality Status for Island, 2020-2024



► **3 (g): Senarai Stesen Pengawasan Kualiti Air Marin dengan Status Kategori Poor dan Sub-Indeks Mengikut Parameter, 2024**  
 3 (g): List of Marine Water Quality Monitoring Stations under the Category of Poor Status and their Sub-Index by Parameter, 2024

NEGERI/ STATE	KLASIFIKASI STESEN / STATION CLASSIFICATION	LOKASI / LOCATION	STESEN ID / ID STATION	IKAMM / MMWQI	STATUS / STATUS	SUB-INDEKS / SUB-INDEX					
						OKSIGEN TERLARUT/ DISSOLVED OXYGEN	AMMONIA TIDAK TERION/ UNIONIZED AMMONIA	FAECAL COLIFORM	JUMLAH PEPEJAL TERAMPAI/ TOTAL SUSPENDED SOLID	NITRAT/ NITRATE	FOSFAT/ PHOSPHATE
Pahang	Muara Sungai/ Estuary	Kuala Sungai Balok	MMCE005	41	Poor	91	88	8	92	46	75
P. Pinang	Muara Sungai/ Estuary	Kuala Sungai Juru	MMPE002	47	Poor	96	87	8	86	87	51
P. Pinang	Muara Sungai/ Estuary	Kuala Sungai Pinang	MMPE004	47	Poor	65	90	8	92	91	60
Selangor	Muara Sungai/ Estuary	Kuala Sungai Selangor	MMBE008	49	Poor	98	100	8	84	55	86
Melaka	Muara Sungai/ Estuary	Kuala Sungai Lereh	MMME008	49	Poor	97	45	8	88	87	91

► **3 (h): Senarai Stesen Pengawasan Kualiti Air Marin bagi Pantai dengan Status Kategori Terbaik, 2024**

3 (h): List of Marine Water Quality Monitoring of Coastal Stations with Status of Excellent, 2024

BIL/ NO	NEGERI/ STATE	LOKASI/ LOCATION
1	Pahang	Pantai Cherating (Club Med B)
2	Pahang	Pantai Cherating (Legend B)
3	Pahang	Pantai Batu Hitam B
4	Kelantan	Pantai Cahaya Bulan
5	Terengganu	Pantai Batu Buruk
6	Terengganu	Pantai Rhu 10
7	Terengganu	Pantai Teluk Kalong
8	Terengganu	Pantai Tanjung Bidara
9	Perak	Pantai Tanjung Batu
10	Perak	Pantai Teluk Rubiah

● Nota / Notes:

● Senarai menunjukkan sepuluh (10) stesen teratas dengan status kategori terbaik / The list shows the top ten (10) stations in the excellent category

► **3 (i): Senarai Stesen Pengawasan Kualiti Air Marin bagi Muara Sungai dengan Status Kategori Terbaik, 2024**

3 (i): List of Marine Water Quality Monitoring of Estuary Stations with Status of Excellent, 2024

BIL/ NO	NEGERI/ STATE	LOKASI/ LOCATION
1	Terengganu	Tioxide Utara (Kg. Bukit Kuang, Kijal)
2	Terengganu	Tioxide Tengah (Pupuk Semangat, Kijal)
3	Terengganu	Tioxide Selatan (KSB, T. Kalong)
4	Perak	Kuala Sungai Manjung
5	Terengganu	Kuala Sungai Ibai
6	Terengganu	Kuala Sungai Setiu
7	Kelantan	Kuala Sungai Semerak

● Nota / Notes:

● Senarai menunjukkan tujuh (7) stesen teratas dengan status kategori terbaik / The list shows the top tujuh (7) stations in the excellent category

► **3 (j): Senarai Stesen Pengawasan Kualiti Air Marin bagi Pulau dengan dengan Status Kategori Terbaik, 2024**

3 (j): List of Marine Water Quality Monitoring of Island Stations with Status of Excellent, 2024

BIL/ NO	NEGERI/ STATE	LOKASI/ LOCATION
1	Pahang	Cebeh
2	Pahang	Sepui
3	Pahang	Sembilang
4	Johor	Nanga Besar
5	Johor	Setindan
6	Johor	Babi Tengah
7	Kedah	Kaca
8	Terengganu	Perhentian Besar (West)
9	Terengganu	Perhentian Kecil
10	Terengganu	Redang (North)

**Nota / Notes:**

Senarai menunjukkan sepuluh (10) stesen teratas dengan status kategori terbaik / The list shows the top ten (10) stations in the excellent category



📍 Langkawi Island, Kedah, Malaysia



# SEKSYEN 4: KUALITI AIR TANAH

## SECTION 4: GROUNDWATER QUALITY

### ➤ PENGAWASAN KUALITI AIR TANAH

#### GROUNDWATER QUALITY MONITORING

SEKSYEN  
SECTION

4

**STESEN DI SELURUH  
NEGARA**  
STATIONS (WELLS)  
NATIONWIDE

**119**

**JENIS GUNA TANAH**  
LAND USE CATEGORY

**12**

**BILANGAN SAMPEL AIR  
TANAH DIANALISA**  
NUMBER OF GROUNDWATER  
SAMPLES ANALYSED

**440**



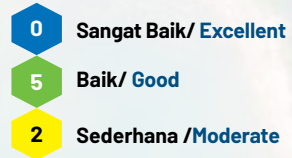
**BEKAS LOMBONG EMAS**  
USED GOLD MINES



**KAWASAN PERTANIAN**  
AGRICULTURAL AREA



**AKUAKULTUR**  
AQUACULTURE



**BEKAS TAPAK  
PELUPUSAN SAMPAH**  
USED SOLID WASTE LANDFILL



**BANDAR & PINGGIR BANDAR**  
URBAN & SUBURBAN AREA



**PADANG GOLF**  
GOLF COURSES





### TAPAK PERINDUSTRIAN INDUSTRIAL SITES

- 0** Sangat Baik/ Excellent
- 13** Baik/ Good
- 8** Sederhana /Moderate



### BEKALAN AIR WATER SUPPLY

- 0** Sangat Baik/ Excellent
- 4** Baik/ Good
- 0** Sederhana /Moderate



### LUAR BANDAR RURAL

- 0** Sangat Baik/ Excellent
- 4** Baik/ Good
- 1** Sederhana /Moderate



### KAWASAN PERANGINAN RESORTS

- 0** Sangat Baik/ Excellent
- 2** Baik/ Good
- 0** Sederhana /Moderate



### BEKAS TAPAK PELUPUSAN BANGKAI HAIWAN USED ANIMAL BURIAL SITES

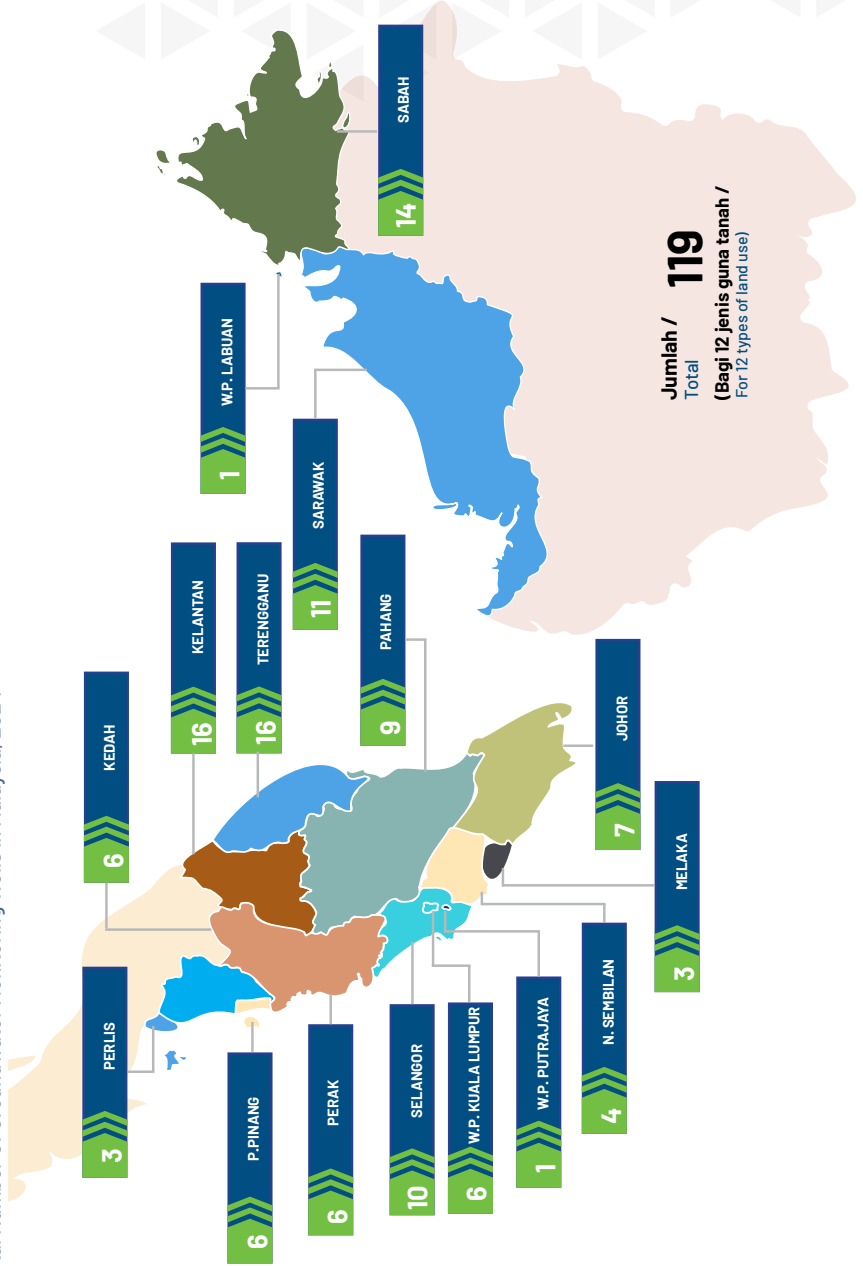
- 0** Sangat Baik/ Excellent
- 7** Baik/ Good
- 6** Sederhana /Moderate

SEKSYEN  
SECTION

4

📍 Saujana Golf & Country Club, Subang

Jumlah Telaga Pengawasan Kualiti Air Tanah di Seluruh Malaysia, 2024  
Total Number Of Groundwater Monitoring Wells In Malaysia, 2024



**Jumlah /**  
Total  
**119**  
(Bagi 12 jenis guna tanah /  
For 12 types of land use)

► 4 (a): Taburan Stesen Pengawasan Kualiti Air Tanah di Seluruh Negeri di Malaysia mengikut Jenis Kategori Guna Tanah, 2024

4 (a): Distribution of Groundwater Quality Monitoring Stations Throughout the States in Malaysia based on Land Use, 2024

KATEGORI / CATEGORY	BILANGAN STESEN/ NUMBER OF WELLS	NEGERI / STATE	BILANGAN TELAGA / NUMBER OF WELLS
Kawasan Pertanian / Agricultural Area	15	Sabah	2
		Terengganu	5
		Pahang	1
		Kedah	3
		Perlis	1
		Kelantan	2
		Selangor	1
Bandar & Pinggir Bandar / Urban & Suburban Area	13	Sabah	1
		Terengganu	2
		Pahang	1
		Kedah	1
		Perlis	2
		Kelantan	3
		Selangor	2
		W.P. Putrajaya	1
Tapak Perindustrian / Industrial Sites	21	W.P. Labuan	1
		Terengganu	5
		Johor	2
		Kedah	1
		Kelantan	2
		Melaka	1
		Selangor	3
		P. Pinang	3
		N. Sembilan	1
		Perak	1
		Pahang	1

SEKSYEN  
SECTION

4

► **4 (a): Taburan Stesen Pengawasan Kualiti Air Tanah di Seluruh Negeri di Malaysia mengikut Jenis Kategori Guna Tanah, 2024**

4 (a): Distribution of Groundwater Quality Monitoring Stations Throughout the States in Malaysia based on Land Use, 2024

KATEGORI / CATEGORY	BILANGAN STESEN/ NUMBER OF WELLS	NEGERI / STATE	BILANGAN TELAGA / NUMBER OF WELLS
Bekas Tapak Pelupusan Sampah / Used Solid Waste Landfill	26	Sabah	7
		Sarawak	2
		Terengganu	2
		Johor	2
		Kelantan	3
		Perak	1
		W.P. Kuala Lumpur	5
		N. Sembilan	3
		Melaka	1
Padang Golf / Golf Courses	7	Sabah	2
		Kelantan	4
		W.P. Kuala Lumpur	1
Luar Bandar / Rural	5	Terengganu	1
		Kelantan	2
		Melaka	1
		Selangor	1
Bekas Lombong Emas / Used Gold Mine	3	Sarawak	3
Bekalan Air / Water Supply	5	Sabah	1
		Sarawak	4
Bekas Tapak Pelupusan Bangkai Haiwan / Used Animal Burial Sites	14	Sarawak	2
		Johor	3
		Perak	3
		Selangor	3
		P. Pinang	3
Akuakultur / Aquaculture	7	Pahang	6
		Terengganu	1
Tapak Pelupusan Radioaktif / Radioactive Landfills	1	Perak	1
Kawasan Peranginan / Resorts	2	Sabah	1
		Kedah	1
<b>JUMLAH / TOTAL</b>			<b>119</b>

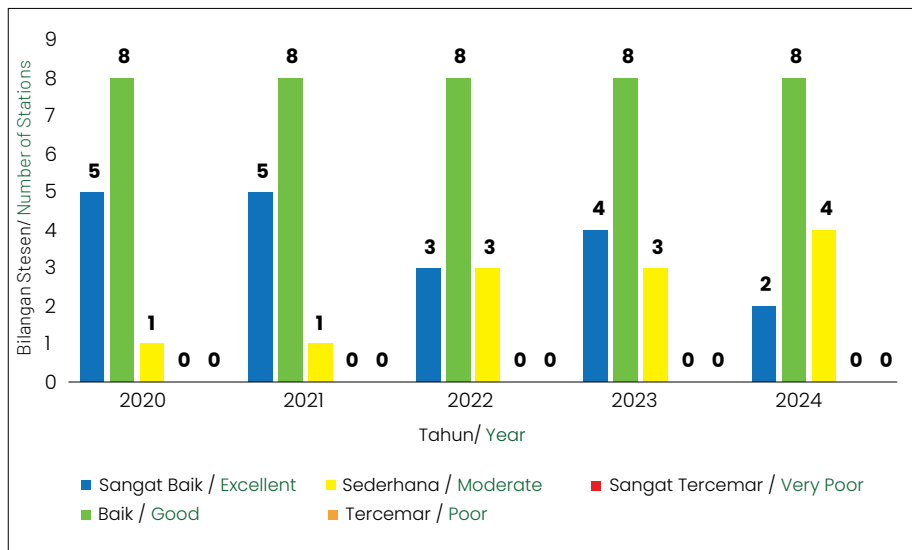
► **4 (b): Klasifikasi Indeks Kualiti Air Tanah**  
 4 (b): Groundwater Quality Index Classification

KATEGORI / CATEGORY	IKAT / GWQI	POTENSI KEGUNAAN / POTENTIAL USE
Sangat Tercemar / Very Poor	0-15	Kajian air terperinci sebelum digunakan / Detailed investigation before use
Tercemar / Poor	16-39	Pengairan atau pertanian / Irrigation or agriculture
Sederhana / Moderate	40-69	Penggunaan industri / Industrial use
Baik / Good	70-89	Berpontensi sebagai air minuman / Potential use as drinking water
Sangat Baik / Excellent	≥90	Air berkualiti untuk semua kegunaan / High quality water for all purpose

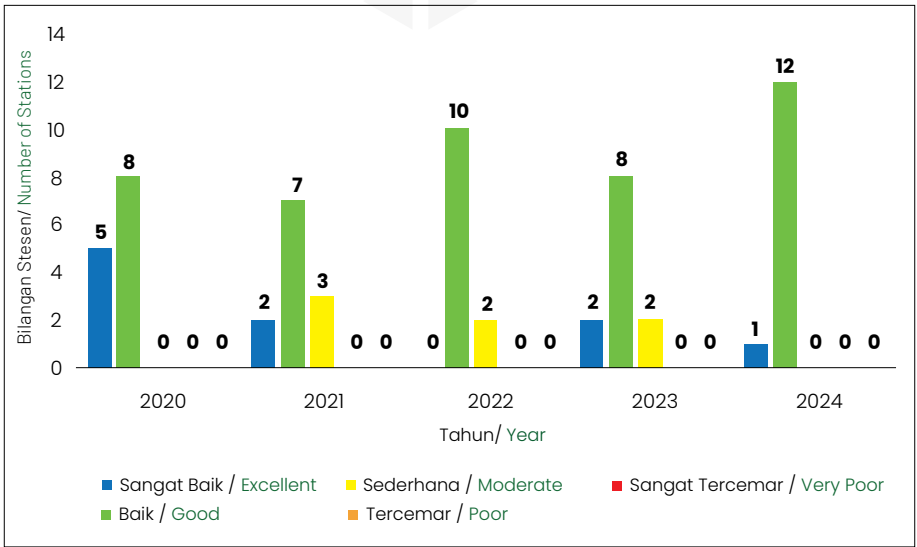
SEKSYEN  
SECTION

4

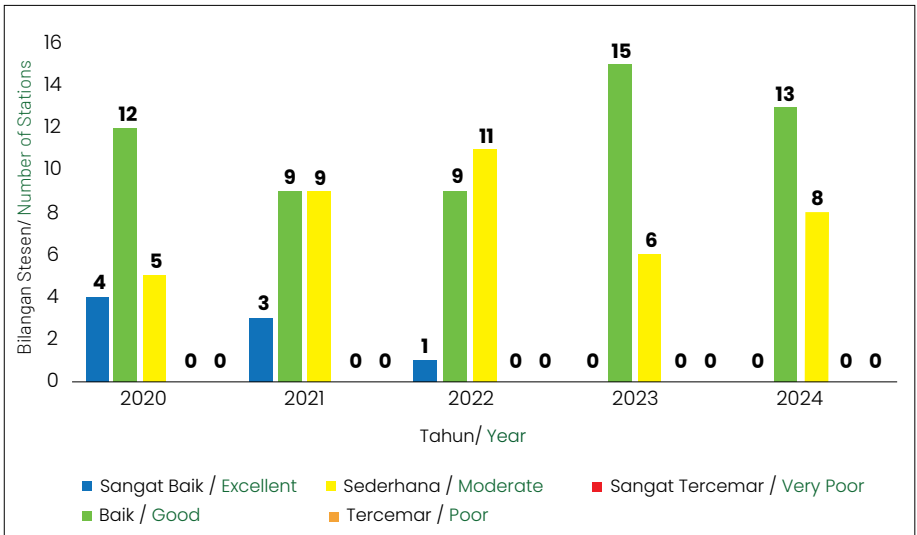
► **4 (c): Trend Indeks Kualiti Air Tanah Kawasan Pertanian, 2020-2024**  
 4 (c): Trends of Groundwater Quality Index for Agriculture, 2020 -2024



► **4 (d): Trend Indeks Kualiti Air Tanah bagi Bandar dan Pinggir Bandar, 2020 -2024**  
4 (d): Trends of Groundwater Quality Index for Urban and Suburban, 2020 -2024

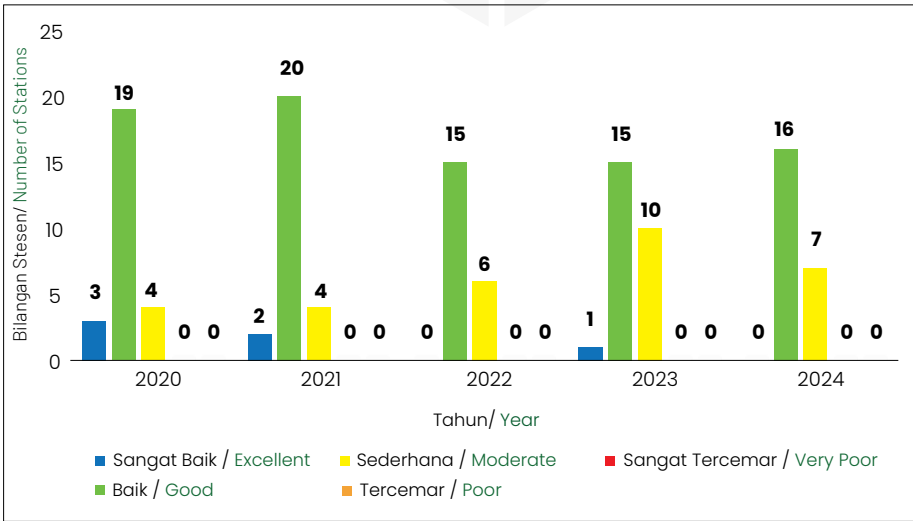


► **4 (e): Trend Indeks Kualiti Air Tanah bagi Tapak Perindustrian, 2020 - 2024**  
4 (e): Trends of Groundwater Quality Index for Industrial Sites, 2020 -2024



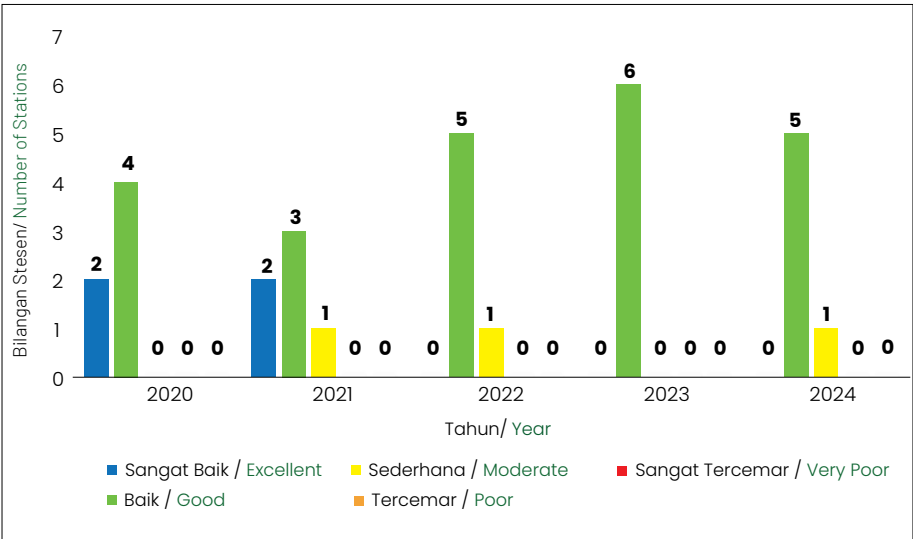
► **4 (f): Trend Indeks Kualiti Air Tanah bagi Bekas Tapak Pelupusan Sampah, 2020 -2024**

4 (f): Trends of Groundwater Quality Index for Used Solid Waste Landfills, 2020 -2024



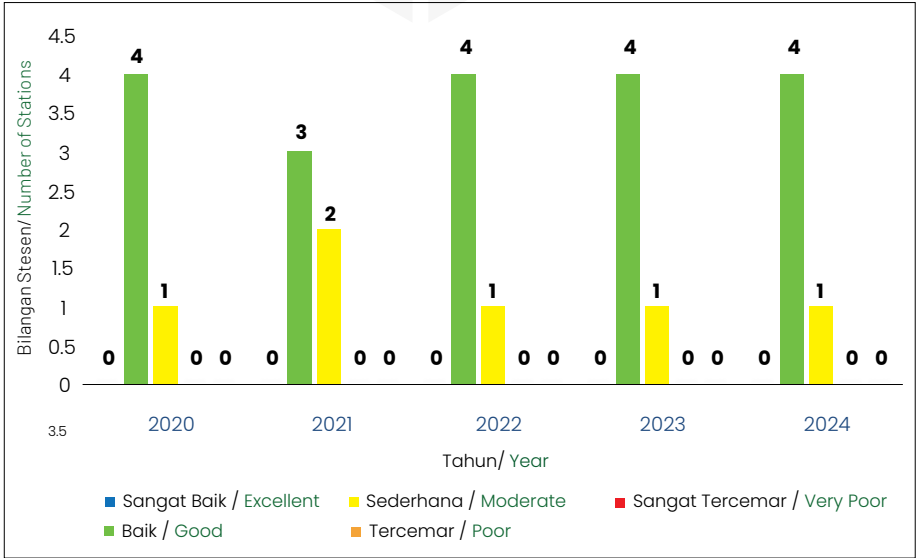
► **4 (g): Trend Indeks Kualiti Air Tanah bagi Padang Golf, 2020 -2024**

4 (g): Trends of Groundwater Quality Index for Golf Courses, 2020 -2024



► **4 (h): Trend Indeks Kualiti Air Tanah bagi Luar Bandar, 2020 -2024**

4 (h): Trends of Groundwater Quality Index for Rural, 2020 -2024

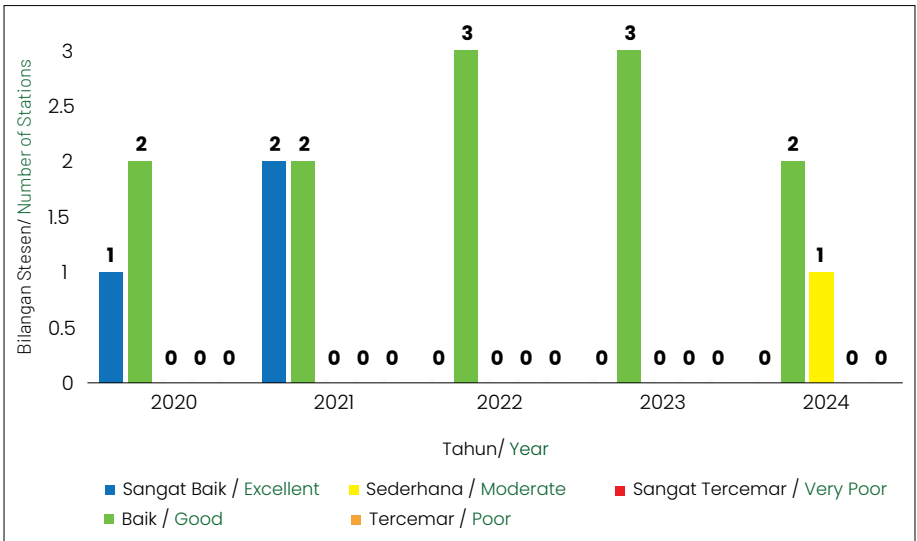


SEKSYEN  
SECTION

4

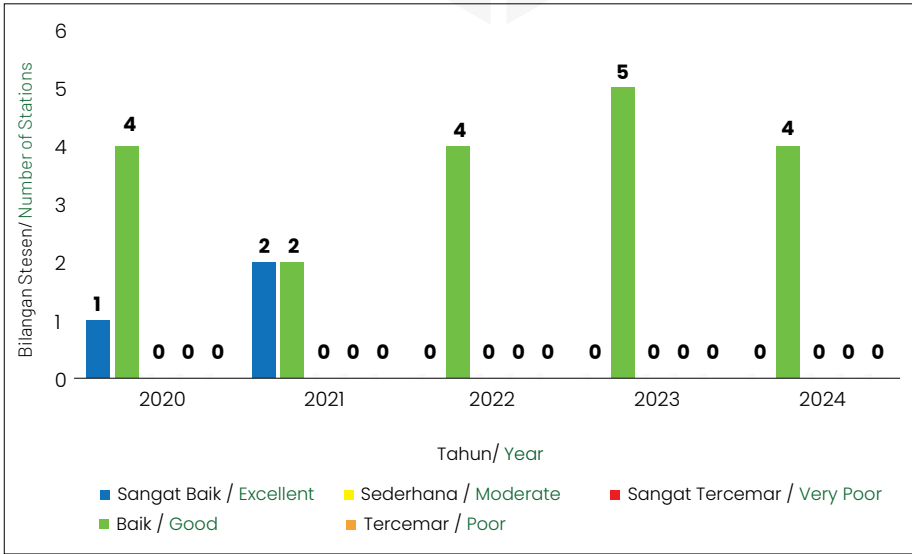
► **4 (i): Trend Indeks Kualiti Air Tanah bagi Bekas Lombong Emas, 2020 -2024**

4 (i): Trends of Groundwater Quality Index for Used Gold Mine, 2020 -2024



► **4 (j): Trend Indeks Kualiti Air Tanah bagi Bekalan Air, 2020 -2024**

4 (j): Trends of Groundwater Quality Index for Water Supply, 2020 -2024

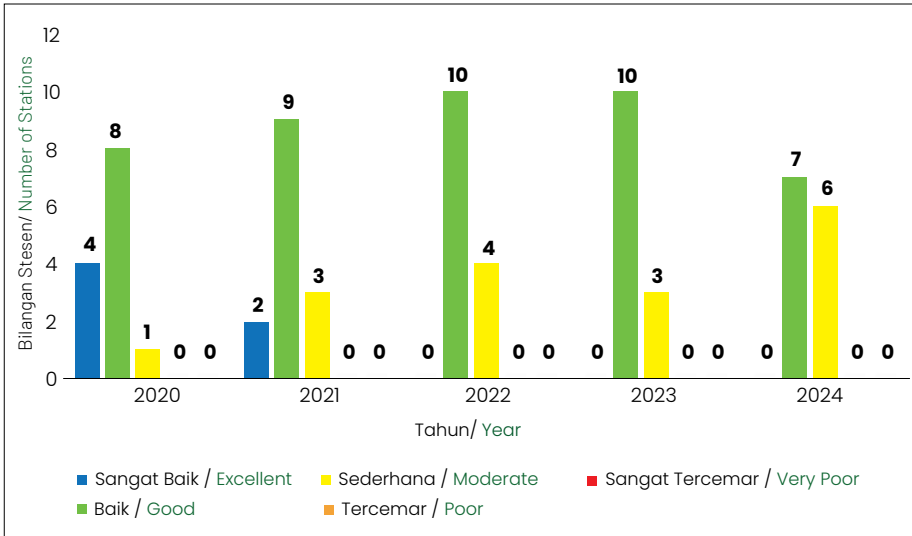


SEKSYEN SECTION

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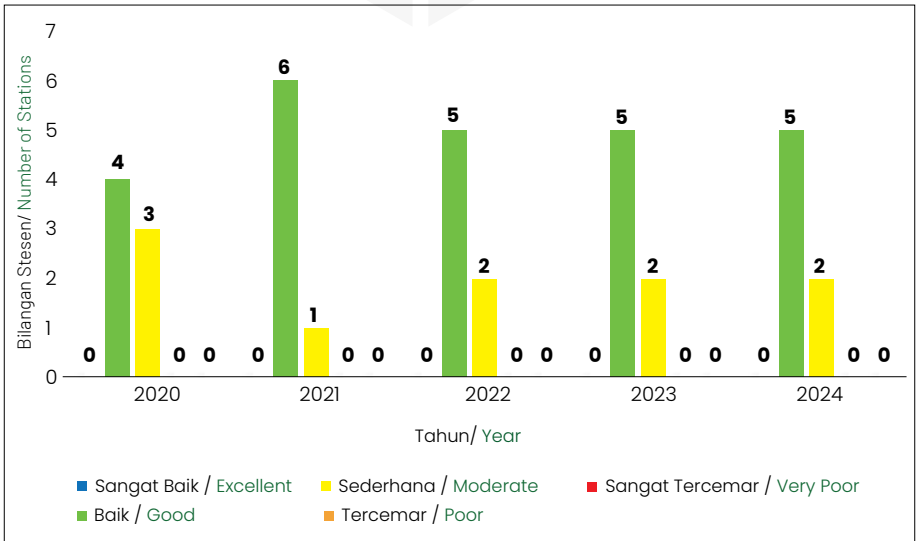
► **4 (k): Trend Indeks Kualiti Air Tanah bagi Bekas Tapak Pelupusan Bangkai Haiwan, 2020-2024**

4 (k): Trends of Groundwater Quality Index for Used Animal Burial Sites, 2020 -2024



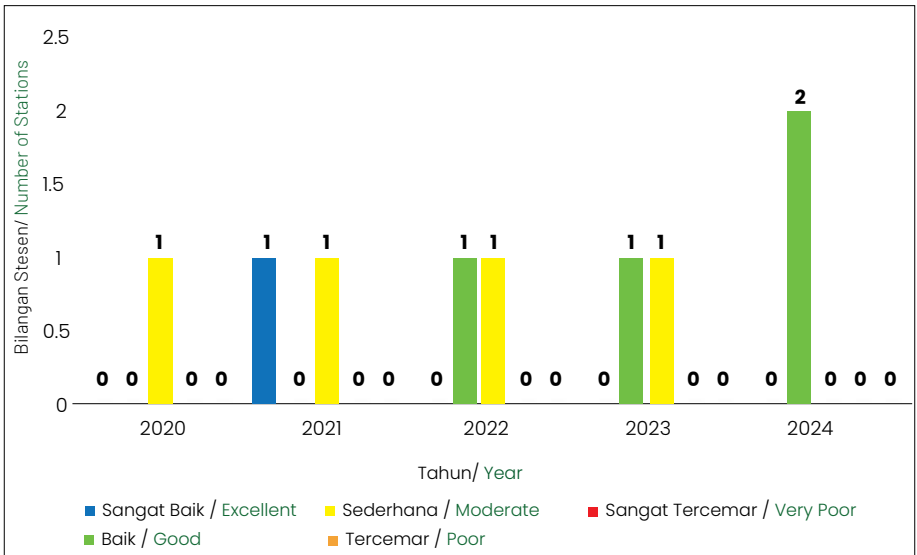
► **4 (l): Trend Indeks Kualiti Air Tanah bagi Akuakultur, 2020-2024**

4 (l): Trends of Groundwater Quality Index for Aquaculture, 2020 -2024



► **4 (m): Trend Indeks Kualiti Air Tanah bagi Kawasan Peranginan, 2020 -2024**

4 (m): Trends of Groundwater Quality Index for Resorts, 2020 -2024



► **4 (n): Standard Kualiti Air Tanah bagi Rawatan Air Mentah Secara Konvensional (Air Minuman) Merujuk kepada Parameter Utama dalam Penilaian Status Kualiti Air Tanah**

4 (n): Groundwater Quality Standards for Conventional Treatment of Raw Water (Drinking Water) with Reference to Significant Parameters in Assessing Groundwater Quality Status

PARAMETER / PARAMETER	SIMBOL / SYMBOL	STANDARD / STANDARD	UNIT / UNIT
Jumlah Koliform / Total coliform	-	5000	MPN/100 ml
Pepejal Terlarut/ TDS	-	1500	mg/l
Klorida / Chloride	Cl	250	mg/l
Besi / Iron	Fe	1.0	mg/l
Keliatan / Hardness	CaCO <sub>3</sub>	500	mg/l
Mangan / Manganese	Mn	0.2	mg/l
Nitrat / Nitrate	NO <sub>3</sub>	10	mg/l
Raksa / Mercury	Hg	0.001	mg/l
Kadmium / Cadmium	Cd	0.003	mg/l
Arsenik / Arsenic	As	0.01	mg/l
Plumbum / Lead	Pb	0.05	mg/l
Kromium / Chromium	Cr	0.05	mg/l
Kuprum / Copper	Cu	1.0	mg/l
Zink / Zinc	Zn	3.0	mg/l
Sulfat / Sulphate	SO <sub>4</sub> <sup>2-</sup>	250	mg/l
Selenium / Selenium	Se	0.01	mg/l
Fenol / Phenol	-	0.002	mg/l

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► **4 (o): Peratusan Julat Nilai Pematuhan, 2024**

4 (o): Percentage of Compliance, 2024

PERATUSAN JULAT NILAI PEMATUHAN(%) / PERCENTAGE OF COMPLIANCE (%)	KATEGORI / CATEGORY
0% - 49%	Rendah / Low
50% - 79%	Sederhana / Moderate
80% - 100%	Tinggi / High

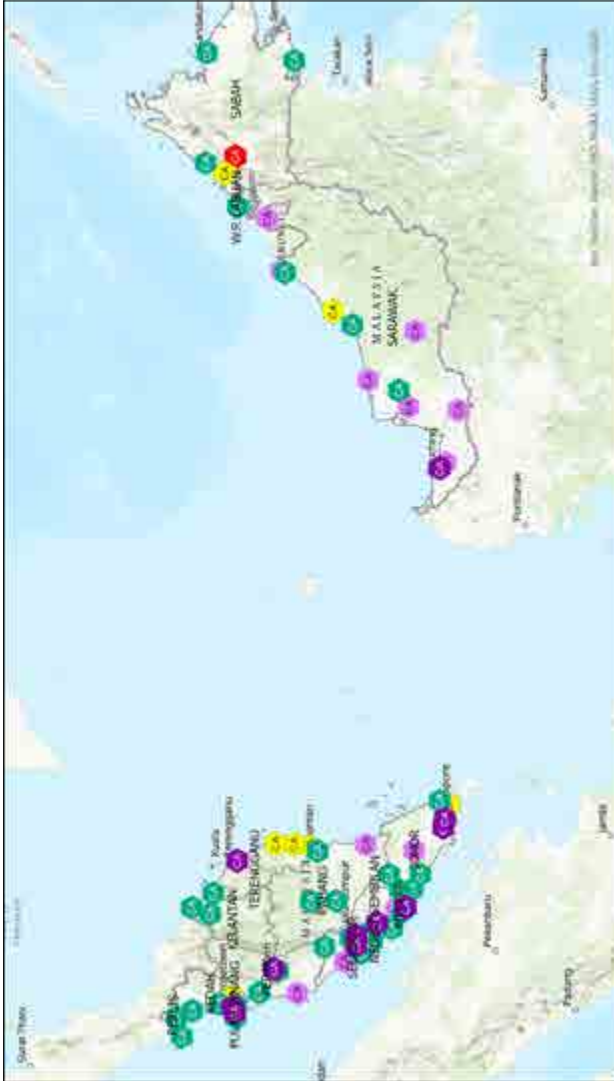


# SEKSYEN 5: PROGRAM PENGAWASAN ALAM SEKITAR (EQMP) SECTION 5: ENVIRONMENTAL QUALITY MONITORING PROGRAM (EQMP)

SEKSYEN  
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5

► 5 (a): Taburan Lokasi Stesen Automatik bagi Pengawasan Kualiti Udara, 2024  
5 (a): Distribution of the Locations for Air Quality Monitoring Automatic Stations, 2024



**Petunjuk / Legend**

CAQM Stations



Background



Industry



Rural



Sub Urban

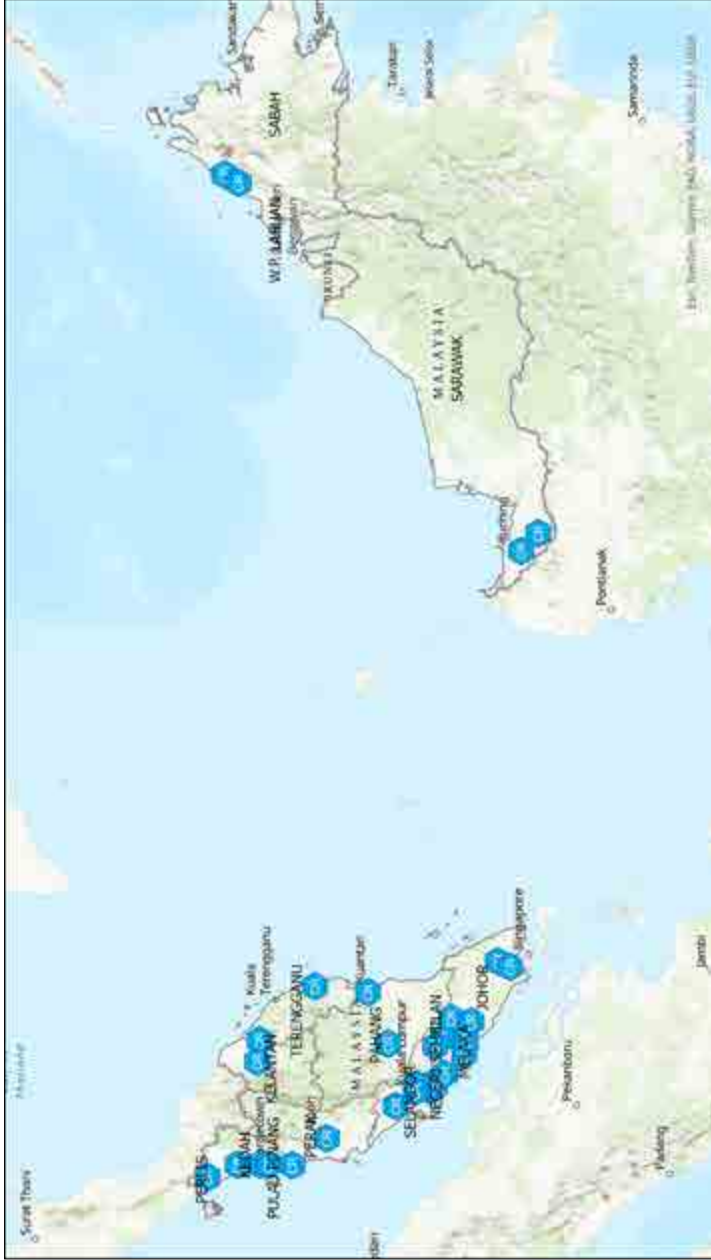


Urban



State Boundary

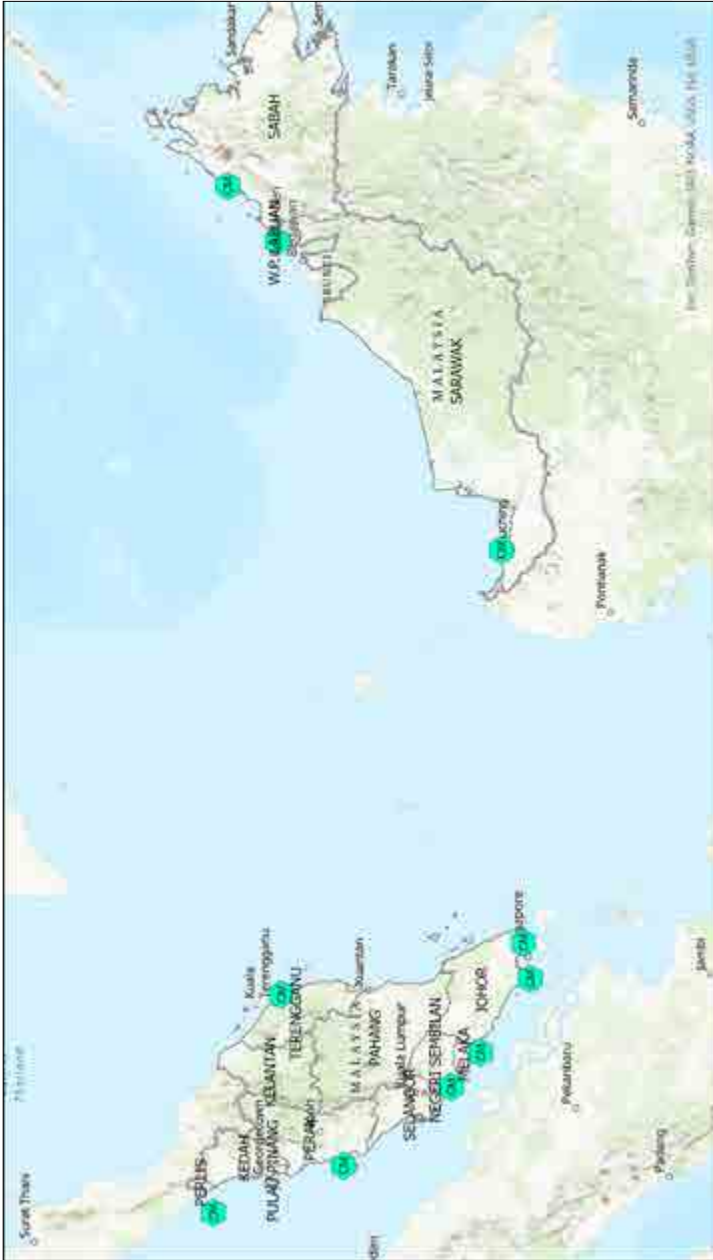
- ▶ 5 (b): Taburan Lokasi Stesen Automatik bagi Pengawasan Kualiti Air Sungai, 2024
- 5 (b): Distribution of River Water Quality Monitoring Automatic Stations in 2024



Petunjuk / Legend

- CRWQM Stations
- Water Body
- State Boundary

► 5 (c): Taburan Lokasi Stesen Automatik bagi Pengawasan Kualiti Air Marin, 2024  
5 (c): Distribution of Marine Water Quality Monitoring Automatic Stations in 2024



Petunjuk / Legend

-  CMWQN Stations
-  Water Body
-  State Boundary

► **5 (d): Bilangan Stesen Pengawasan Kualiti Alam Sekitar di Malaysia**

5 (d): The Number of Environmental Quality Monitoring Station in Malaysia

KOMPONEN/ COMPONENT	STESEN AUTOMATIK/ AUTOMATIC STATION	STESEN MANUAL/ MANUAL STATION	STESEN BERGERAK/ MOBILE STATION
Udara/ Air	65	14	3
Air Sungai/ River Water	30	1,353	7
Air Marin/ Marine Water	10	388	4
Jumlah Stesen/ Total No. of Stations	105	1,755	14

► **5 (e): Bilangan Persampelan Manual Tahun 2024**

5 (e): The Number of Manual Samplings in Year 2024

KOMPONEN/ COMPONENT	STESEN MANUAL/ MANUAL STATION	FREKUENSI PERSAMPELAN/ SAMPLING FREQUENCY	BILANGAN PERSAMPELAN/ TOTAL NO. OF SAMPLING
Udara/ Air	14	Setiap 6 hari/ Every 6 days	2,158
Air Sungai/ River Water	1353	6 kali setahun/ 6 times a year	8,118
Air Marin/ Marine Water	388	6 kali setahun/ 6 times a year	2,268

# SEKSYEN 6: PENGURUSAN BUANGAN TERJADUAL

## SECTION 6: SCHEDULED WASTE MANAGEMENT

▶ **6(a): Lesen-Lesen yang Dikeluarkan bagi Kemudahan Pemerolehan Kembali, Pengolahan & Pelupusan Buangan Terjadual yang Diluluskan oleh Jabatan Alam Sekitar, 2024**

6(a): Licences Issued for Recovery Facilities Processing Hazardous Waste Disposal Approved by the Department of Environment, 2024

KEMUDAHAN/ FACILITIES	JUMLAH LISEN DIKELUARKAN MENGIKUT NEGERI / NUMBER OF LICENCES ISSUED BY STATE															JUMLAH TOTAL
	Johor	Kedah	Kelantan	Melaka	N. Sembilan	Pahang	Perak	Perlis	P.Pinang	Sabah	Sarawak	Selangor	Terengganu	W.P. KL	W.P. Labuan	
Pembawa yang Diterapkan/Prescribed Conveyance	66	22	4	23	22	7	36	3	69	10	31	78	9	5	6	379
Penstoran Luar Tapak/ Off Site Storage	2	0	1	3	1	2	3	0	1	7	24	1	1	0	5	51
Pemerolehan Pemerolehan Kembali Luar Tapak (bukan e-waste) / Off Site Recovery (none e-Waste)	37	12	1	15	17	8	26	1	27	4	5	51	5	0	2	211
Pemerolehan Kembali Luar Tapak (genuh e-Waste) / Off Site Recovery (full e-Waste)	1	0	0	0	2	0	1	0	7	0	1	5	0	0	0	17
Pemerolehan Kembali Luar Tapak (separa e-Waste) / Off Site Recovery (partial e-Waste)	25	9	3	7	6	0	3	2	22	1	4	19	3	5	0	109
Penuwu Buangan Terjadual / Scheduled Waste Incinerator	7	0	0	0	2	2	2	0	1	0	4	2	2	0	1	23
Pengolahan di Tanah/ Land Treatment Facilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Pengolahan Luar Tapak/ Off Site Treatment Facilities	0	1	0	1	5	0	3	0	0	2	4	2	0	0	1	19
Tapak Pelupusan Selamat / Secured Landfill	1	1	0	0	1	1	0	0	0	0	2	1	1	0	0	8
Bill Lesen/ No. of Licence	135	47	9	49	56	20	73	6	117	24	75	159	21	10	16	818
Bill Premis/ No. of Premises	70	24	4	22	16	14	27	3	50	10	37	77	9	5	9	377

► **6 (b): Jumlah Buangan Terjadual yang Dihasilkan mengikut Kod Kategori Buangan Terjadual, 2024**  
**6 (b): Quantity of Scheduled Wastes Generated by Scheduled Waste Category Code, 2024**

BIL/ NO.	NAMA BUANGAN/ WASTE NAME	KOD KATEGORI BUANGAN / WASTE CATEGORY CODE	KUANTITI BUANGAN / QUANTITY OF WASTE	
			(MT / TAHUN) / (MT / YEAR)	PERATUSAN (%) / PERCENTAGE (%)
1	Debu, sanga, dros atau abu yang mengandungi arsenic, raksa, plumbum, kadmium, kromium, nikel, kuprum, vanadium, berilium, antimony, tellurium, talium, atau selenium, tidak termasuk sanga daripada kilang besi dan keluli / Dust, slag, dross or ash containing arsenic, mercury, lead, cadmium, chromium, nickel, copper, vanadium, beryllium, antimony, tellurium, thallium or selenium excluding slag from iron and steel factory	SW 104	2,546,939.56	47.35
2	Buangan gypsum yang terhasil daripada proses industri kimia atau loji janakuasa / Waste gypsum arising from chemical industry or power plant	SW 205	546,530.42	10.16
3	Enap cemar yang mengandungi satu atau beberapa logam termasuklah kromium, kuprum, nikel, zink, plumbum, kadmium, aluminium, timah vanadium dan berilium / Sludges containing one or several metals including chromium, copper, nickel, zinc, lead, cadmium, aluminium, tin, vanadium and beryllium	SW 204	366,108.89	6.81
4	Buangan atau enap cemar getah atau lateks yang mengandungi pelarut organik atau logam berat / Rubber or latex wastes or sludge containing organic solvents or heavy metals	SW 321	330,367.47	6.14
5	Campuran buangan terjadual dan buangan tidak terjadual / Mixture of scheduled waste & non-scheduled waste	SW 422	257,494.67	4.79
6	Minyak pelincir terpakai / Spent lubricating oil	SW 305	187,252.39	3.48
7	Buangan pelarut organik bukan terhalogen / Waste of non-halogenated solvent	SW 322	167,899.85	3.12
8	Buangan mangkin / Waste catalyst	SW 202	140,473.86	2.61
9	Enap cemar yang mengandungi fluoride / Sludge containing fluoride	SW 207	92,425.63	1.72
10	Asid tidak organik terpakai / Spent inorganic acids	SW 206	89,275.12	1.66

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► **6 (b): Jumlah Buangan Terjadual yang Dihasilkan mengikut Kod Kategori Buangan Terjadual, 2024**  
6 (b): Quantity of Scheduled Wastes Generated by Scheduled Waste Category Code, 2024

BIL/ NO.	NAMA BUANGAN/ WASTE NAME	KOD KATEGORI BUANGAN / WASTE CATEGORY CODE	KUANTITI BUANGAN / QUANTITY OF WASTE	
			(MT / TAHUN) / (MT / YEAR)	PERATUSAN (%) / PERCENTAGE (%)
11	Bekas, beg atau kelengkapan yang dilupuskan yang dicemari dengan bahan kimia, racun makhluk perosak, minyak mineral atau buangan terjadual / Disposed containers, bags or equipment contaminated with chemicals, pesticides, mineral oil or scheduled wastes	SW 409	89,090.55	1.66
12	Apa-apa sisa daripada pengolahan atau pemerolehan kembali buangan terjadual/ Any residues from treatment or recovery of scheduled wastes	SW 501	82,890.57	1.54
13	Emulsi minyak mineral-air terpakai / Spent mineral oil-water emulsion	SW 307	58,479.46	1.09
14	Buangan daripada pemasangan elektrikal dan elektronik yang mengandungi komponen seperti akumulator, suis raksa, kaca daripada tiub sinar katod dan kaca teraktif atau kapasitor bifenil terpoliklorin yang lain, atau yang dicemari dengan kadmium, raksa, plumbum, nikel, kromium, kuprum, litium, perak, mangan, atau bifenil terpoliklorin / Waste from electrical and electronic assemblies containing components such as accumulators, mercury-switches, glass from cathode-ray tubes and other activated glass or polychlorinated biphenyl-capacitors, or contaminated with cadmium, mercury, lead, nickel, chromium, copper, lithium, silver, manganese or polychlorinated biphenyl	SW 110	55,470.10	1.03
15	Kain buruk, plastik, kertas atau turas yang dicemari dengan buangan terjadual / Rags, plastics, papers or filters contaminated with scheduled wastes	SW 410	48,465.86	0.90
16	Buangan patogenik, buangan klinikal atau bahan yang dikuarantinkan / Pathogenic wastes, clinical wastes or quarantined materials	SW 404	46,734.86	0.87
17	Buangan dakwat, cat, pigmen, lakuer, perwarna atau varnis / Waste of inks, paints, pigments, lacquer, dye or varnish	SW 417	46,439.37	0.86
18	Produk dakwat, cat, pigmen, lakuer, perwarna atau varnish yang terbuang atau yang tidak mengikut spesifikasi yang mengandungi pelarut organik / Discarded or off-specification inks, paints, pigments, lacquer, dye or varnish products containing organic solvent	SW 418	36,065.16	0.67

► **6 (b): Jumlah Buangan Terjadual yang Dihasilkan mengikut Kod Kategori Buangan Terjadual, 2024**  
**6 (b): Quantity of Scheduled Wastes Generated by Scheduled Waste Category Code, 2024**

BIL/ NO.	NAMA BUANGAN/ WASTE NAME	KOD KATEGORI BUANGAN / WASTE CATEGORY CODE	KUANTITI BUANGAN / QUANTITY OF WASTE	
			(MT / TAHUN) / (MT / YEAR)	PERATUSAN (%) / PERCENTAGE (%)
19	Campuran minyak-air seperti air ballast / Oil-water mixture such as ballast water	SW 309	26,579.19	0.49
20	Enap cemar mineral termasuklah enap cemar kalsium hidroksida, enap cemar pemfosfatan, enap cemar kalsium sulfid dan enap cemar karbonat / Mineral sludges including calcium hydroxide sludges, phosphating sludges, calcium sulphite sludges and carbonates sludges	SW 427	21,906.36	0.41
21	Larutan pemprosesan terpakai, bahan kimia fotografi terbuang atau buangan fotografi terbuang / Spent processing solution, discarded photographic chemicals or discarded photographic wastes	SW 423	20,892.73	0.39
22	Enap cemar dakwat, cat pigmen, lakuer, perwarna atau varnis / Sludges of inks, paints, pigments, lacquer, dye or varnish	SW 416	19,660.40	0.37
23	Bahan kimia yang terbuang atau tidak mengikut spesifikasi / Chemicals that are discarded or off-specification	SW 429	16,660.91	0.31
24	Alkali terpakai yang mengandungi logam berat / Spent alkalis containing heavy metals	SW 401	9,447.79	0.18
25	Buangan pelarut organik terhalogen / Waste of halogenated organic solvents	SW 323	7,219.33	0.13
26	Sisa berminyak dari bengkel automotif, stesen servis minyak atau perangkap gris/ Oily residue from automotive workshop, service station, oil or grease interceptor	SW 312	6,996.38	0.13
27	Alkali terpakai dengan pH yang lebih daripada atau sama dengan 11.5 yang mengakis atau berbahaya / Spent alkalis with pH more or equal to 11.5 which are corrosive or hazardous	SW 402	6,026.96	0.11
28	Buangan bateri asid plumbum dalam bentuk sempurna atau hancur / Waste of lead acid batteries in whole or crushed form	SW 102	5,882.08	0.11
29	Minyak hidraulik terpakai / Spent hydraulic oil	SW 306	5,739.89	0.11
30	Buangan pelekat atau glu yang mengandungi pelarut organik tidak termasuk bahan polimer pepejal / Adhesive or glue waste containing organic solvents excluding solid polymeric materials	SW 303	4,659.95	0.09

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► **6 (b): Jumlah Buangan Terjadual yang Dihasilkan mengikut Kod Kategori Buangan Terjadual, 2024**  
6 (b): Quantity of Scheduled Wastes Generated by Scheduled Waste Category Code, 2024

BIL/ NO.	NAMA BUANGAN/ WASTE NAME	KOD KATEGORI BUANGAN / WASTE CATEGORY CODE	KUANTITI BUANGAN / QUANTITY OF WASTE	
			(MT / TAHUN) / (MT / YEAR)	PERATUSAN (%) / PERCENTAGE (%)
31	Buangan cecair terma (pemindahan haba) seperti glikol etilena / Waste of thermal fluids (heat transfer) such as ethylene glyco	SW 327	4,623.38	0.09
32	Campuran buangan terjadual / A mixture of scheduled wastes	SW 421	4,584.89	0.09
33	Klinker, sanga, abu, dari penunu buangan terjadual / Clinker, slag and ashes from scheduled wastes incinerator	SW 406	4,526.38	0.08
34	Tanah, puing, atau bahan tercemar yang terhasil daripada membersihkan tumpahan bahan kimia, minyak mineral, atau buangan terjadual / Contaminated soil, debris or matter resulting from cleaning-up of a spill of chemical, mineral oil or scheduled wastes	SW 408	4,078.21	0.08
35	Karbon teraktif yang terpakai tidak termasuk karbon daripada pengolahan air boleh diminum dan proses industri makanan dan penghasilan vitamin / Spent activated carbon excluding carbon from the treatment of potable water and processes of the food industry and vitamin production	SW 411	3,670.13	0.07
36	Buangan resin tidak matang yang mengandungi pelarut organik atau logam berat termasuklah resin epoksi dan resin fenolik / Uncured resin waste containing organic solvents or heavy metals including epoxy resin and phenolic resin	SW 325	3,129.34	0.06
37	Minyak atau enap cemar daripada operasi penyenggaraan loji penapisan minyak / Oil or sludge from oil refinery plant maintenance operation	SW 314	2,304.14	0.04
38	Buangan yang mengandungi raksa atau sebatianannya / Waste containing mercury or its compound	SW 109	1,558.94	0.03
39	Larutan alkali berair terpakai yang mengandungi sianida / Spent aqueous alkaline solution containing cyanide	SW 414	1,479.05	0.03
40	Enap cemar dari tangki penyimpanan minyak mineral / Sludge from mineral oil storage tank	SW 310	1,250.68	0.02
41	Buangan minyak atau enap cemar berminyak / Waste oil or oily sludges	SW 311	1,250.68	0.02

► **6 (b): Jumlah Buangan Terjadual yang Dihasilkan mengikut Kod Kategori Buangan Terjadual, 2024**  
**6 (b): Quantity of Scheduled Wastes Generated by Scheduled Waste Category Code, 2024**

BIL/ NO.	NAMA BUANGAN/ WASTE NAME	KOD KATEGORI BUANGAN / WASTE CATEGORY CODE	KUANTITI BUANGAN / QUANTITY OF WASTE	
			(MT / TAHUN) / (MT / YEAR)	PERATUSAN (%) / PERCENTAGE (%)
42	Buangan bateri yang mengandungi kadmium dan nikel atau raksa atau litium / Waste of batteries containing cadmium and nickel or mercury or lithium	SW 103	1,065.80	0.02
43	Asid organik terpakai dengan pH yang kurang daripada atau sama dengan 2 yang mengakis atau berbahaya / Spent organic acids with pH less or equal to 2 which are corrosive or hazardous	SW 301	798.24	0.01
44	Dadah terbuang yang mengandungi bahan psikotropik atau yang mengandungi bahan yang bertoksik berbahaya, karsinogenik, mutagenik atau teratogenik / Discarded drugs containing psychotropic substances or containing substances that are toxic, harmful, carcinogenic, mutagenic or teratogenic	SW 403	713.03	0.01
45	Buangan yang mengandungi formadehid / Waste containing formaldehyde	SW 320	697.39	0.01
46	Buangan yang terhasil daripada penyediaan dan pengeluaran barangan farmaseutikal / Waste arising from the preparation and production of pharmaceutical product	SW 405	564.70	0.01
47	Tar atau sisa bertar dari loji penapisan minyak atau loji petrokimia / Tar or tarry residues from oil refinery or petrochemical plant	SW 315	424.42	0.01
48	Buangan sisa penyulingan tidak berair terhalogen atau bukan terhalogen yang terhasil daripada proses permeolehan kembali pelarut organik / Waste of halogenated or unhalogenated non aqueous distillation residues arising from organic solvents recovery process	SW 324	411.86	0.01
49	Bahan kimia makmal yang usang / Obsolete laboratory chemicals	SW 430	347.31	0.01
50	Buangan asbestos dalam bentuk enap cemar, debu atau gentian / Asbestos wastes in sludges, dust or fibre forms	SW 201	305.96	0.01
51	Tanah yang dicemari minyak daripada penapisan semula minyak pelincir terpakai / Oil contaminated earth from re-refining of used lubricating oil	SW 313	259.49	0.00

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► **6 (b): Jumlah Buangan Terjadual yang Dihasilkan mengikut Kod Kategori Buangan Terjadual, 2024**  
6 (b): Quantity of Scheduled Wastes Generated by Scheduled Waste Category Code, 2024

BIL/ NO.	NAMA BUANGAN/ WASTE NAME	KOD KATEGORI BUANGAN / WASTE CATEGORY CODE	KUANTITI BUANGAN / QUANTITY OF WASTE	
			(MT / TAHUN) / (MT / YEAR)	PERATUSAN (%) / PERCENTAGE (%)
52	Buangan fluks yang mengandungi campuran asid organik, pelarut atau sebatian ammonium klorida / Flux waste containing mixture of organic acids, solvents or compounds of ammonium chloride	SW 302	182.58	0.00
53	Buangan terjadual tidak boleh bergerak termasuklah enap cemar yang ditetapkan secara kimia, dikapsulkan, dipejalkan atau distabilkan / Immobilized scheduled wastes including chemically fixed, encapsulated, solidified or stabilized sludges	SW 203	179.75	0.00
54	Enap cemar dari tangki minyak / Oil tankers sludges	SW 308	122.08	0.00
55	Sisa daripada pemerolehan kembali likuor penjerukan asid / Residues from recovery of acid pickling liquor	SW 106	99.57	0.00
56	Buangan yang mengandungi arsenic atau sebatianannya / Waste containing arsenic or its compound	SW 101	63.44	0.00
57	Diisiosianat terpakai dan sisa sebatian isosianat tidak termasuk bahan berpolimer pepejal daripada proses pengilangan busa / Spent di-isocyanates and residues of isocyanate compounds excluding solid polymeric material from foam manufacturing process	SW 419	59.68	0.00
58	Buangan daripada pengeluaran, formulasi, perdagangan atau penggunaan racun makhluk perosak, racun herba atau biosid/ Wastes from the production, formulation, trade or use of pesticides, herbicides or biocides	SW 425	50.07	0.00
59	Produk yang tidak mengikut spesifikasi daripada pengeluaran, formulasi, perdagangan, atau penggunaan racun makhluk perosak, racun herba, atau biosid/ Off-specification products from the production, formulation, trade or use of pesticides, herbicides or biocides	SW 426	27.73	0.00
60	Buangan yang mengandungi, yang terdiri daripada, atau yang dicemari dengan peroksida / Waste containing, consisting of or contaminated with, peroxides	SW 432	25.77	0.00

► **6 (b): Jumlah Buangan Terjadual yang Dihasilkan mengikut Kod Kategori Buangan Terjadual, 2024**  
**6 (b): Quantity of Scheduled Wastes Generated by Scheduled Waste Category Code, 2024**

BIL/ NO.	NAMA BUANGAN/ WASTE NAME	KOD KATEGORI BUANGAN / WASTE CATEGORY CODE	KUANTITI BUANGAN / QUANTITY OF WASTE	
			(MT / TAHUN) / (MT / YEAR)	PERATUSAN (%) / PERCENTAGE (%)
61	Enap cemar asid / Acid sludges	SW 316	17.18	0.00
62	Agen pengoksidaan terpakai / Spent oxidizing agent	SW 424	14.53	0.00
63	Buangan fenol atau sebatian fenol termasuklah klorofenol dalam bentuk cecair atau enapcemar / Waste of phenols or phenol compounds including chlorophenol in the form of liquids or sludges	SW 319	11.09	0.00
64	Sisa larutan resap daripada pemprosesan zink dalam bentuk debu dan enap cemar / Leaching residues from zinc processing in dust and sludges form	SW 108	1.06	0.00
65	Sanga daripada pemprosesan kuprum bagi pemprosesan lanjut atau penapisan yang mengandungi arsenik, plumbum, atau kadmium / Slags from copper processing for further processing or refining containing arsenic, lead or cadmium	SW 107	1.01	0.00
66	Garam terpakai yang mengandungi sianida/ Spent salt containing cyanide	SW 413	0.96	0.00
67	Buangan sebatian fosforus organik / Waste of organic phosphorus compound	SW 326	0.89	0.00
68	Enap cemar yang mengandungi sianida/ Sludges containing cyanide	SW 412	0.28	0.00
69	Sebatian organologam terpakai termasuklah plumbum tetraetil, plumbum tetrametil dan sebatian organotinmah/ Spent organometallic compounds including tetraethyl lead, tetramethyl lead and organotin compounds	SW 317	0.10	0.00
70	Buangan yang mengandungi dioksin dan furan / Waste containing dioxins or furans	SW 407	0.02	0.00
71	Enap cemar galvanik / Galvanic sludges	SW 105	0.00	0.00
72	Kek tekan daripada prapengolahan lai sabun gliserol / Press cake from pretreatment of glycerol soap lye	SW 304	0.00	0.00
73	Buangan, bahan dan artikel yang mengandungi atau yang dicemari dengan bifenil terpoliklorin (BFT) atau trifenil terpoliklorin (TFT)/ Waste, substances and articles containing or contaminated with polychlorinated biphenyls (PCB) or polychlorinated triphenyls (PCT)	SW 318	0.00	0.00

► **6 (b): Jumlah Buangan Terjadual yang Dihasilkan mengikut Kod Kategori Buangan Terjadual, 2024**  
6 (b): Quantity of Scheduled Wastes Generated by Scheduled Waste Category Code, 2024

BIL/ NO.	NAMA BUANGAN/ WASTE NAME	KOD KATEGORI BUANGAN / WASTE CATEGORY CODE	KUANTITI BUANGAN / QUANTITY OF WASTE	
			(MT / TAHUN) / (MT / YEAR)	PERATUSAN (%) / PERCENTAGE (%)
74	Minyak pelindapan terpakai yang mengandungi sianida / Spent quenching oils containing cyanides	SW 415	0.00	0.00
75	Larutan resap dari tapak pelupusan buangan terjadual / Leachate from scheduled waste landfill	SW 420	0.00	0.00
76	Buangan daripada operasi pengawetan kayu yang menggunakan garam tidak organik yang mengandungi kuprum, kromium, atau arsenik daripada sebatian fluoride atau yang menggunakan sebatian yang mengandungi fenol berklorin atau kresot / Wastes from wood preserving operation using inorganic salts containing copper, chromium or arsenic of fluoride compounds or using compound containing chlorinated phenol or creosote	SW 428	0.00	0.00
77	Buangan daripada pengilangan atau pemprosesan atau penggunaan bahan letupan / Waste from manufacturing or processing or use of explosives	SW 431	0.00	0.00
<b>JUMLAH/ TOTAL</b>			<b>5,378,977.55</b>	<b>100.00</b>

SEKSYEN  
SECTION

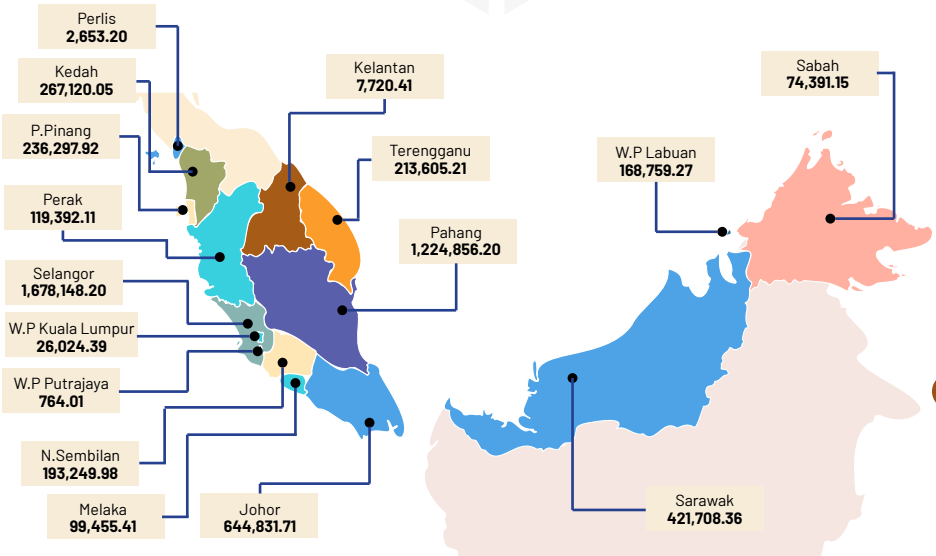
6



📍 Stesen Janakuasa Sultan Azlan Shah, Perak

► **6 (c): Penghasilan Buangan Terjadual (Tan Metrik) Mengikut Negeri 2024**

6 (c): Distribution of Scheduled Waste (Metric Tonnes) Generated by State 2024

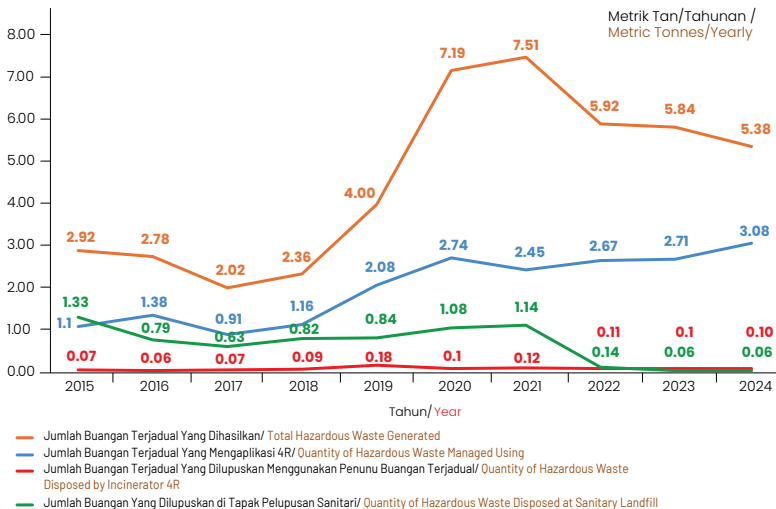


SEKSYEN  
SECTION

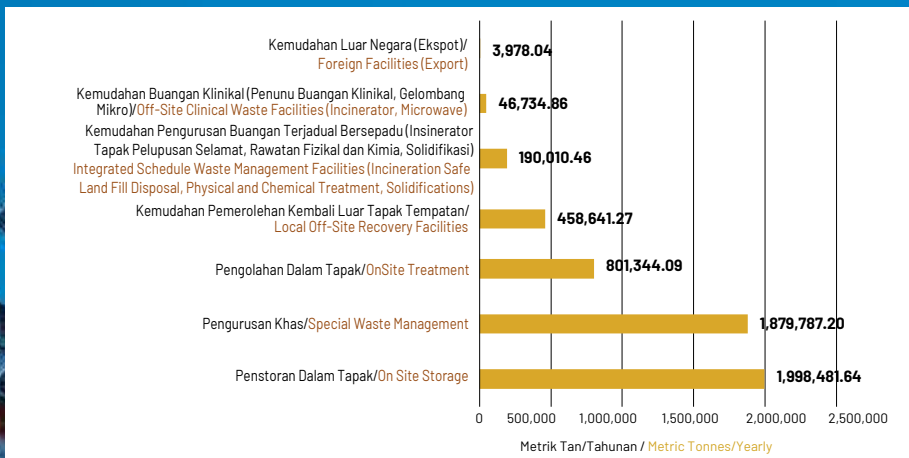
6

► **6 (d): Trend Pengurusan Buangan Terjadual, 2013-2024**

6 (d): Scheduled Waste Management Trend, 2013-2024



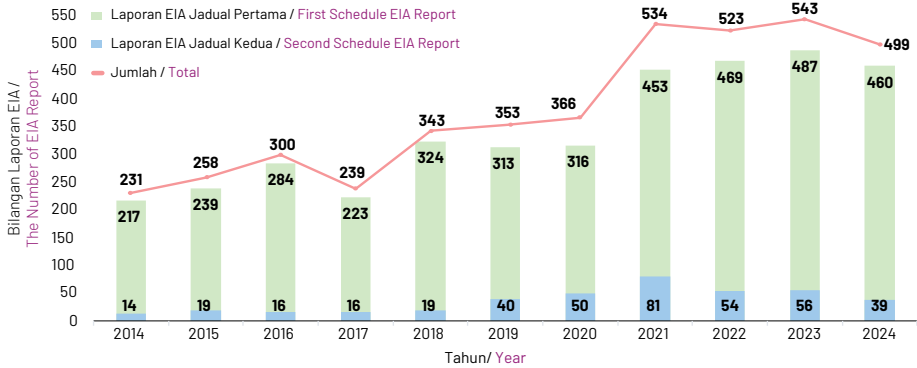
► **6 (e): Kemudahan yang Mengendalikan Buangan Terjadual, 2024**  
6 (e): Facilities Handling Scheduled Wastes, 2024



📍 Kuala Langat Power Plant, Selangor

# SEKSYEN 7: PEMBANGUNAN SECTION 7: DEVELOPMENT

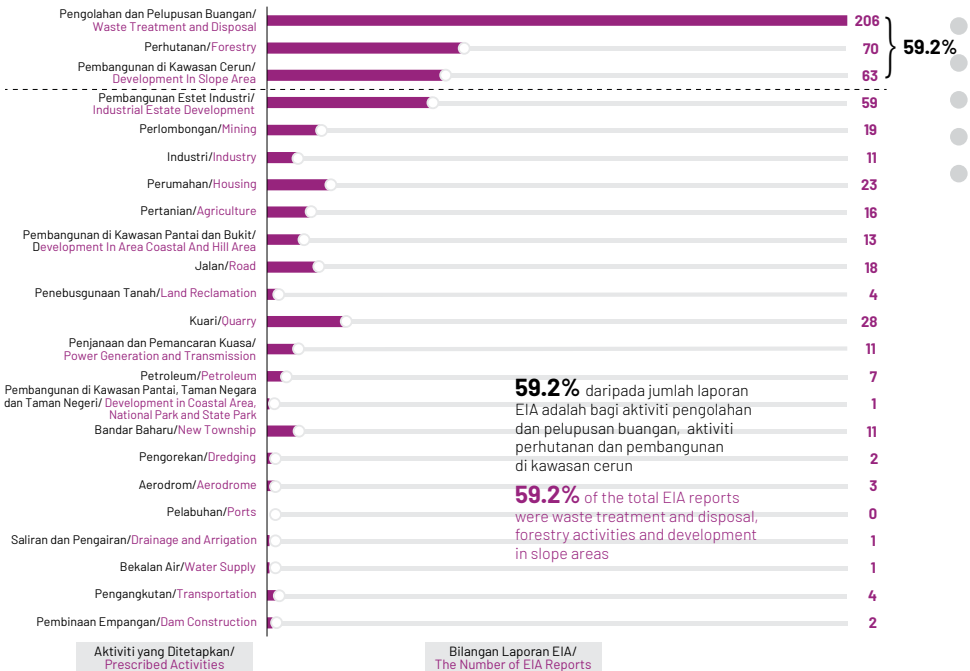
► 7 (a): Bilangan Laporan EIA yang Diterima mengikut Tahun bagi 10 Tahun Terkini  
7 (a): The Number of EIA Reports Received by Years for the Last 10 Years



SEKSYEN  
SECTION

7

► 7 (b): Bilangan Laporan EIA yang Diterima mengikut Aktiviti yang Ditetapkan, 2024  
7 (b): Number of EIA Reports Received by Prescribed Activities, 2024



► **7 (c): Bilangan Jururunding EIA**  
7 (c): Number of EIA Consultants

BIL./ NO.	KATEGORI/ CATEGORY	BILANGAN JURURUNDING/ NUMBERS OF CONSULTANT	PERATUSAN/ PERCENTAGE
1.	Jururunding EIA / EIA Consultant (C)	164	21.5
2.	Jururunding Subjek / Subject Consultant (CS)	91	11.9
3.	Pakar Subjek / Subject Specialist (SS)	250	32.7
4.	Pembantu Jururunding / Assistant Consultant (AC)	248	32.5
5.	Pembantu Jururunding & Pakar Subjek / Assistant Consultant & Subject Specialist (ACS)	11	1.4
<b>JUMLAH/ TOTAL</b>		<b>764</b>	<b>100</b>

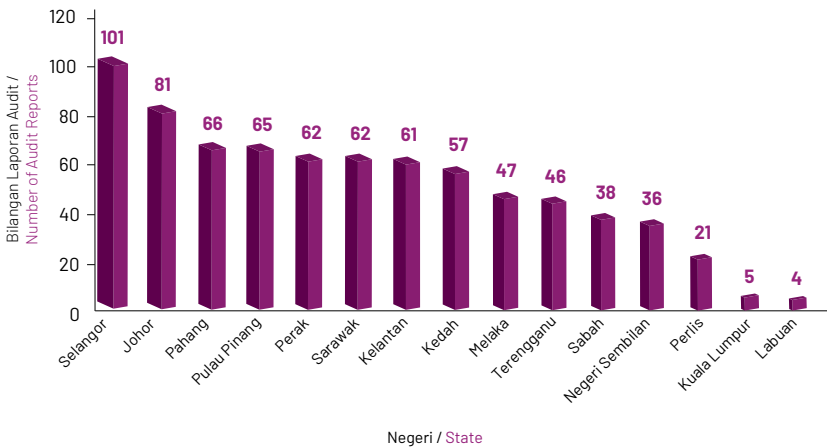
SEKSYEN  
SECTION

7

► **7 (d): Jumlah Permohonan Juruaudit Alam Sekitar yang Diluluskan bagi Tahun 2024**  
7 (d): Number of Approved Environmental Auditor Applications in 2024

JENIS PERMOHONAN/ TYPES OF APPLICANTS	JUMLAH PERMOHONAN/ NO. OF APPLICANTS	JUMLAH LULUS/ NO. OF APPLICATIONS APPROVED	PERATUSAN LULUS/ PERCENTAGE APPROVED
Baharu / New	15	14	93.3 %
Pembaharuan / Renew	22	19	86.4 %

► **7 (e): Bilangan Audit Alam Sekeliling bagi Projek EIA mengikut Negeri, 2024**  
7 (e): Number of Environmental Audits for EIA Projects by State, 2024

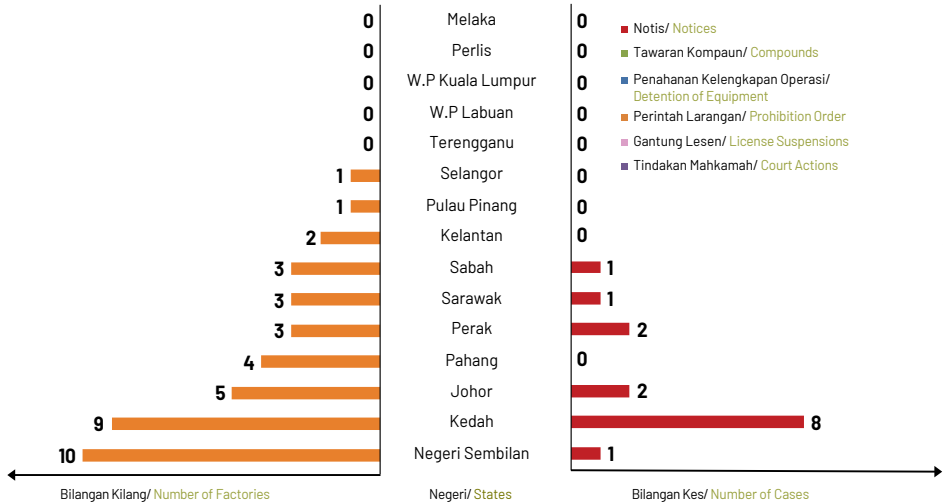




# SEKSYEN 8: PENGUATKUASAAN SECTION 8: ENFORCEMENT

## ▶ 8 (a): Bilangan Kilang Getah Asli Mentah yang Dilesenkan dan Tindakan Undang-Undang Terhadap Kilang Getah Asli Mentah, 2024

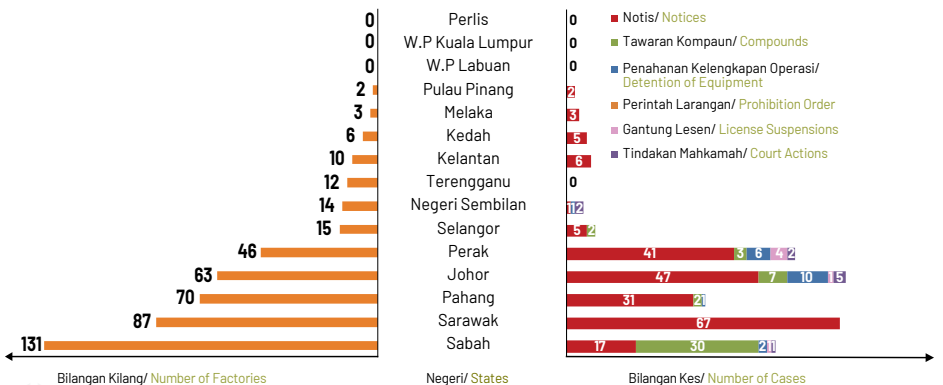
8 (a): Number of Licensed Raw Natural Rubber Factories and Legal Actions Against Raw Natural Rubber Factories, 2024



SEKSYEN  
SECTION  
8

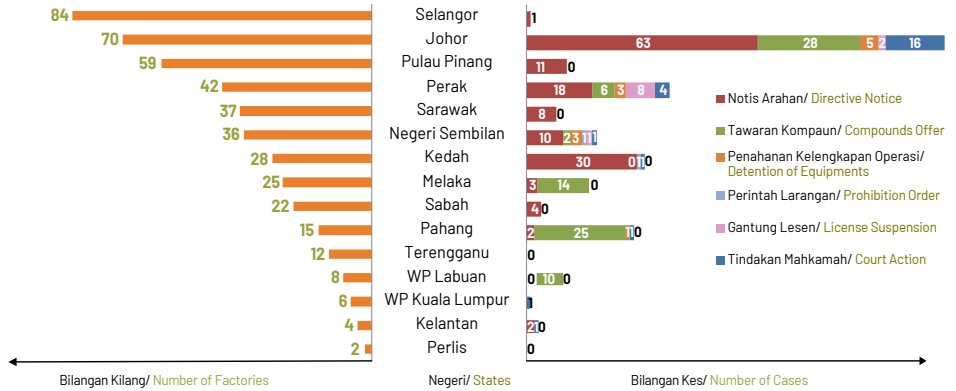
## ▶ 8 (b): Bilangan Kilang Minyak Kelapa Sawit Mentah Yang Dilesenkan dan Tindakan Undang-Undang Terhadap Kilang Minyak Kelapa Sawit Mentah, 2024

8 (b): Number of Licensed Crude Palm Oil Mills Factories and Legal Actions Against Crude Palm Oil Mills, 2024



► **8 (c): Bilangan Kemudahan Pengolahan dan Pelupusan Buangan Terjadual dan Tindakan Undang-Undang terhadap Kemudahan Pengolahan dan Pelupusan Buangan Terjadual, 2024**

8 (c): Number and Legal Actions Againsts Facilities for the Treatment and Disposal Facilities of Scheduled Wastes, 2024

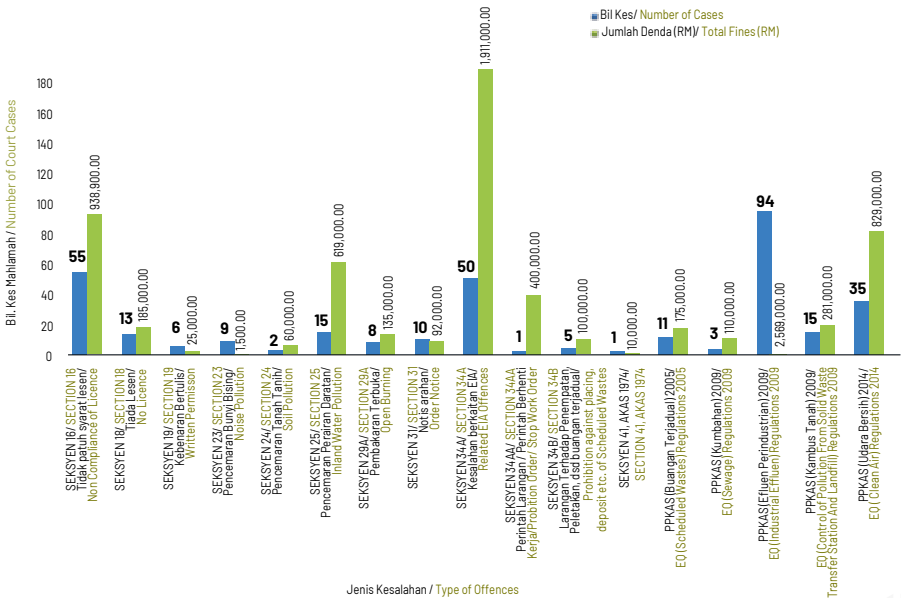


SEKSYEN  
SECTION

8

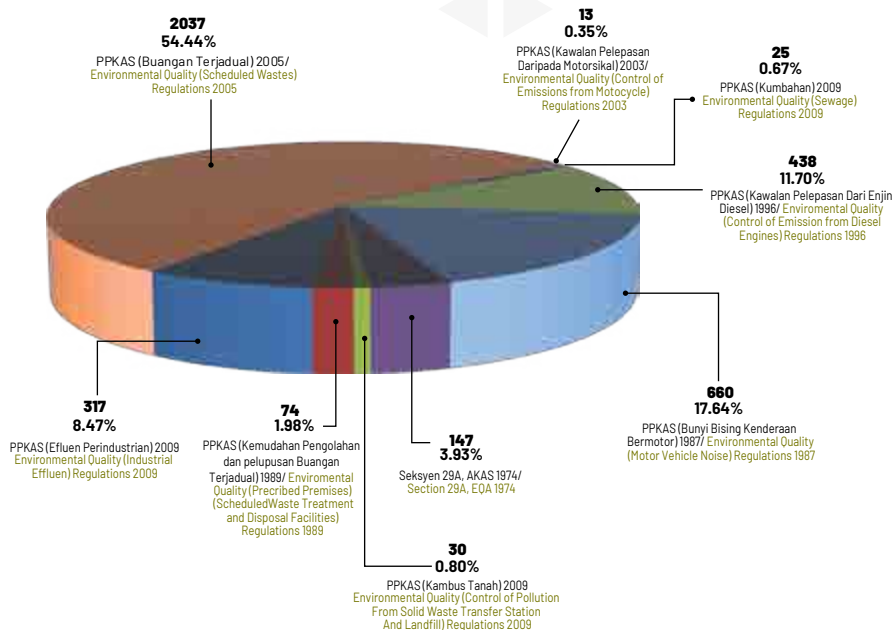
► **8 (d): Bilangan Kes Mahkamah dan Denda, 2024**

8 (d): Number of Court Cases and Fines, 2024



## ► 8 (e): Bilangan Kes Kompaun Mengikut Kesalahan, 2024

8 (e): Number of Compound Cases According to Offence, 2024

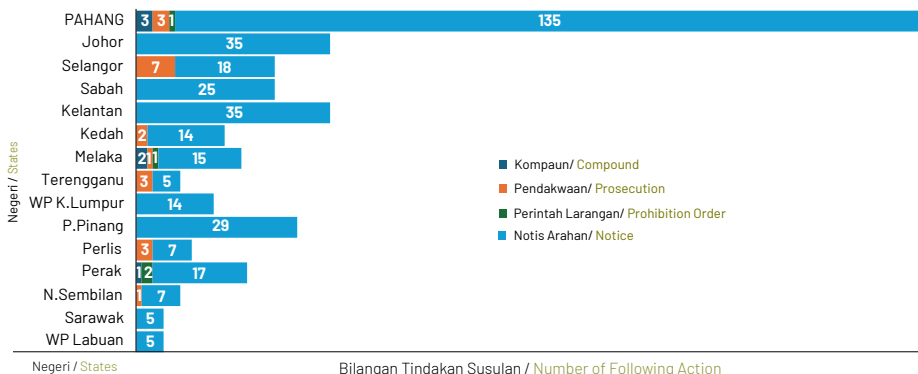


SEKSYEN  
SECTION

8

## ► 8 (f): Tindakan Susulan Penguatkuasaan Projek EIA, 2024

8 (f): Follow Up Action of EIA Project Enforcement in 2024



Negeri / States

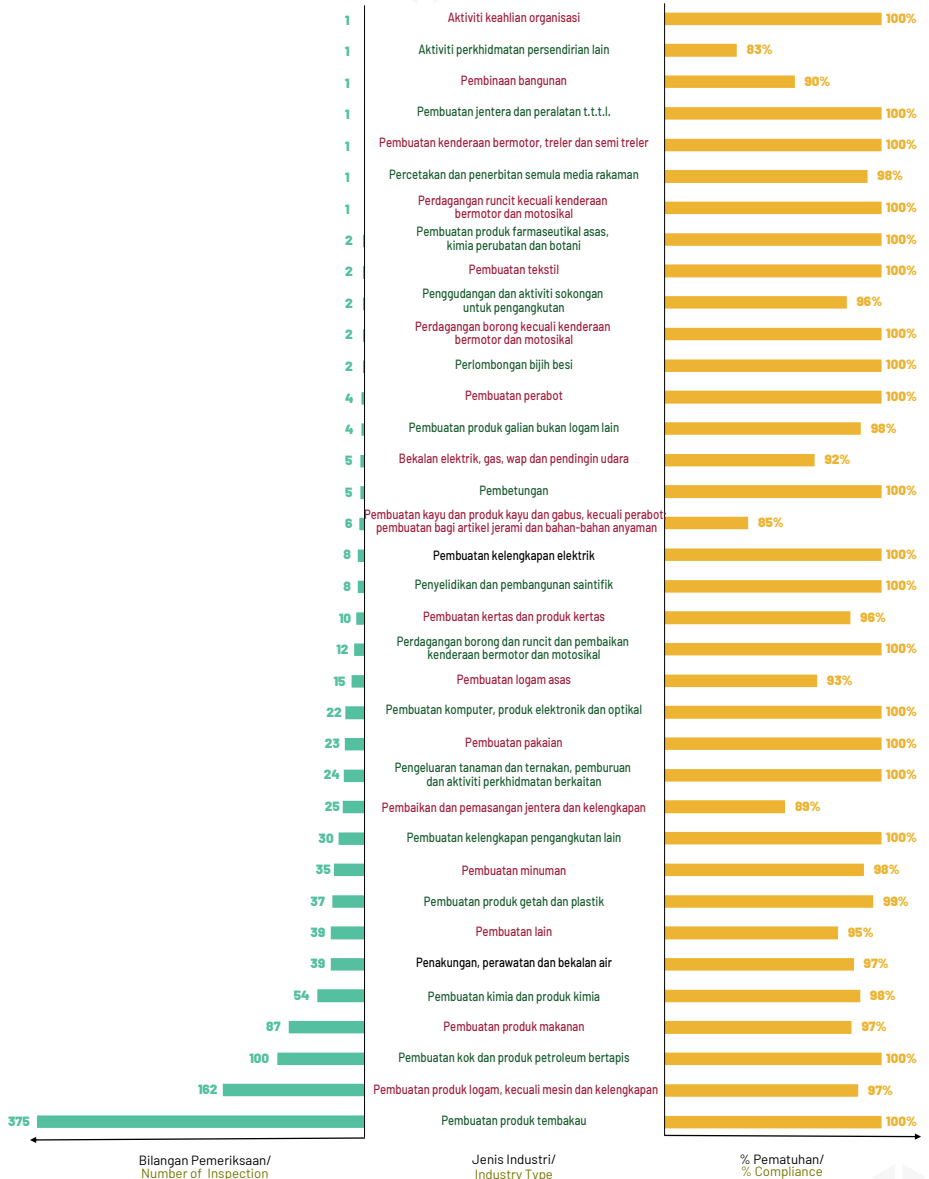
Bilangan Tindakan Susulan / Number of Following Action

► 8 (g): Status Pematuhan Industri terhadap Peraturan-Peraturan Kualiti Alam Sekeliling (Efluen Perindustrian) 2009, 2024

8 (g): Compliance Status to the Environmental Quality (Industrial Effluent) Regulations 2009, 2024

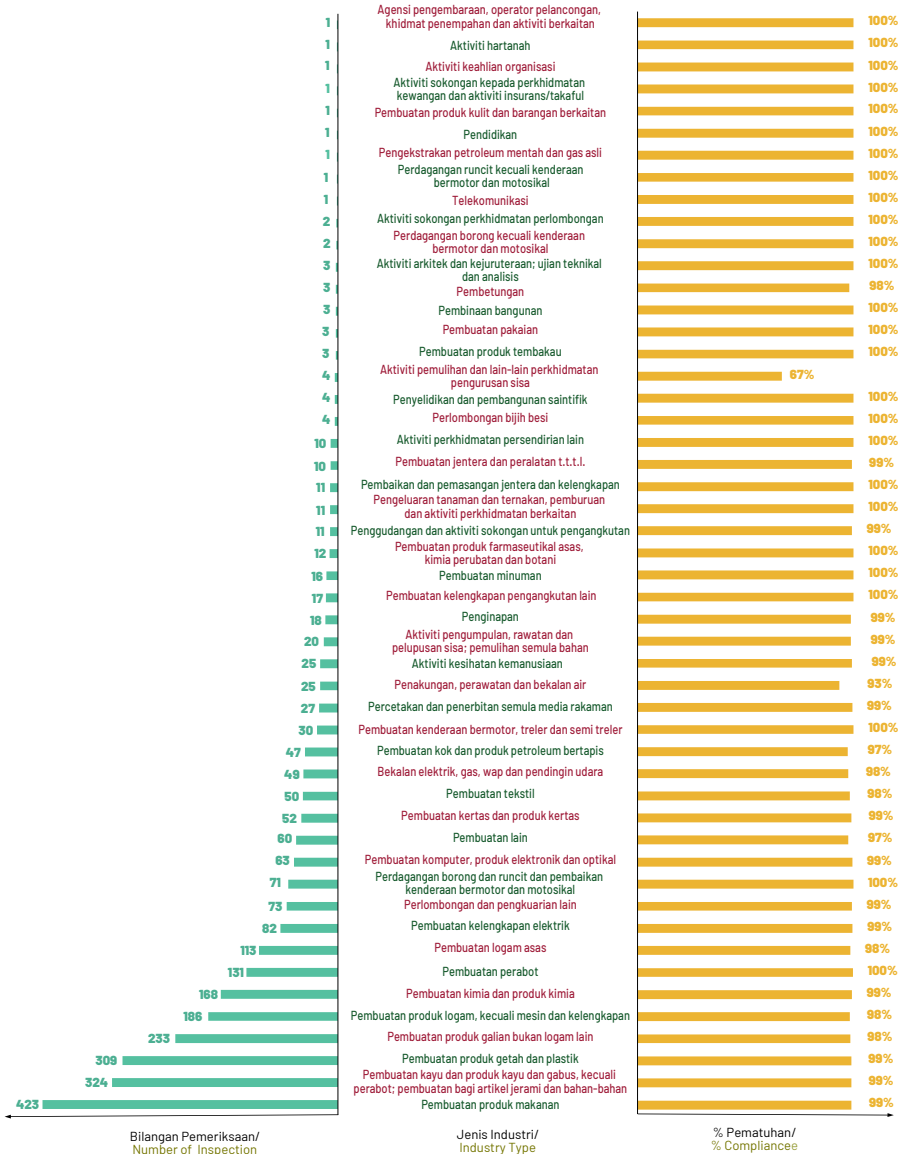
SEKSYEN  
SECTION

8



## ► 8 (h): Status Pematuhan Industri terhadap Peraturan-Peraturan Kualiti Alam Sekeliling (Udara Bersih) 2014, 2024

### 8(h): Compliance Status to the Environmental Quality (Clean Air) Regulations 2014, 2024



SEKSYEN SECTION

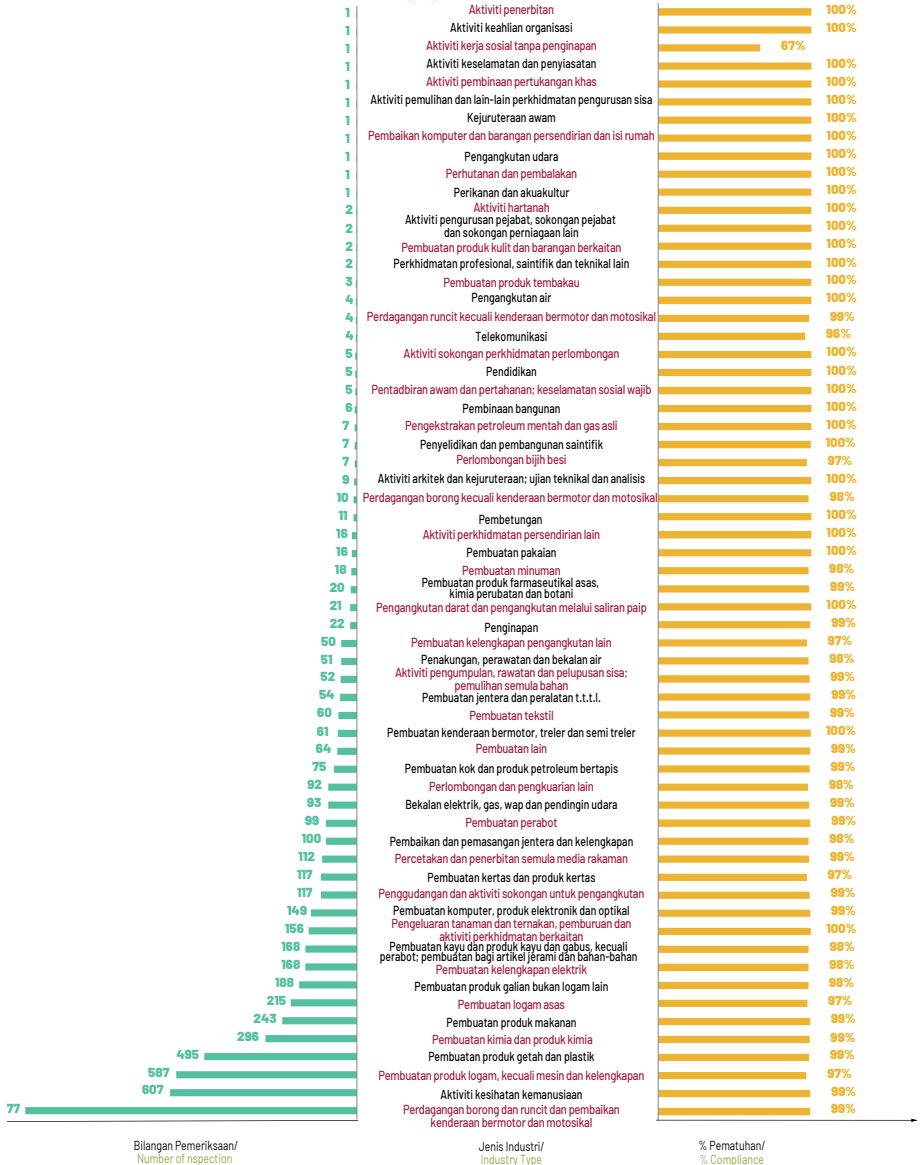
8

► 8 (i): Status Pematuhan Industri terhadap Peraturan-Peraturan Kualiti Alam Sekeliling (Buangan Terjadual) 2005, 2024

8 (i): Compliance Status to the Environmental Quality (Scheduled Wastes) Regulations 2005, 2024

SEKSYEN  
SECTION

8





# SEKSYEN 9: PROGRAM KESEDARAN DAN PENDIDIKAN ALAM SEKITAR

## SECTION 9: ENVIRONMENTAL EDUCATION AND AWARENESS PROGRAM

### ► 9 (a): Pencapaian Program CEPA JAS Tahun 2024

#### 9 (a): Achievements of the DOE CEPA Program in 2024

Ceramah Alam Sekitar	Jumlah Sasaran	300	Jumlah Sasaran	15	Sumbangan Artikel
	Jumlah Pencapaian	437	Jumlah Pencapaian	22	
	Jumlah Outreach	86,982	Jumlah Outreach	22	
Pendaftaran Ahli RAS	Jumlah Sasaran	12,000	Jumlah Sasaran	30	Program Book Review
	Jumlah Pencapaian	14,989	Jumlah Pencapaian	37	
	Jumlah Outreach		Jumlah Outreach		
Program Kesedaran Bersama Ahli RAS	Jumlah Sasaran	80	Jumlah Sasaran	15	Content VR
	Jumlah Pencapaian	462	Jumlah Pencapaian	26	
	Jumlah Outreach		Jumlah Outreach		
Seminar/Bengkel/Taklimat/Webinar/Bicara Eksklusif/Temubual	Jumlah Sasaran	80	Jumlah Sasaran	32	Penerbitan Video
	Jumlah Pencapaian	262	Jumlah Pencapaian	412	
	Jumlah Outreach	97,800	Jumlah Outreach		
Hebah Media Massa (Elektronik & Cetak)	Jumlah Sasaran	384	Jumlah Sasaran	60	Aktiviti Kesedaran Menegah Pencemaran
	Jumlah Pencapaian	1,070	Jumlah Pencapaian	215	
	Jumlah Outreach		Jumlah Outreach	280,466	
Hebah Media Sosial (FB, X, IG, TikTok, YouTube)	Jumlah Sasaran	768	Jumlah Sasaran	32	Hari Ozon
	Jumlah Pencapaian	2,638	Jumlah Pencapaian	118	
	Jumlah Outreach		Jumlah Outreach	76,814	

SEKSYEN  
SECTION

9

► 9 (a): Pencapaian Program CEPA JAS Tahun 2024

9 (a): Achievements of the DOE CEPA Program in 2024

SEKSYEN  
SECTION

9

Sambutan Hari  
 Alam Sekitar  
 Sedunia

Jumlah Sasaran	48
Jumlah Pencapaian	167
Jumlah Outreach	207,823

Sambutan  
 Hari Bumi

Jumlah Sasaran	48
Jumlah Pencapaian	146
Jumlah Outreach	140,258

Pengumpulan  
 BEE /  
 E-Waste

Jumlah Sasaran	180
Jumlah Pencapaian	835
Jumlah Outreach	176,875
Kuantiti	529,369.08 KG

Sekolah  
 Lestari  
 Anugerah  
 Alam Sekitar

Jumlah Sasaran	435
Jumlah Pencapaian	364
Jumlah Outreach	148,400

Pameran  
 Alam Sekitar

Jumlah Sasaran	80
Jumlah Pencapaian	386
Jumlah Outreach	386,982

Jumlah Sasaran	96
Jumlah Pencapaian	524

Kerjasama  
 dengan Rakan  
 Strategik

Jumlah Sasaran	576
Jumlah Pencapaian	1,784

Muat naik  
 Bahan /  
 Maklumat  
 dalam EKMC/  
 EDL

Jumlah Sasaran	1,920
Jumlah Pencapaian	2,992

Muat naik  
 Bahan /  
 Maklumat dalam  
 eMuseum

Jumlah Sasaran	80
Jumlah Pencapaian	247
Jumlah Outreach	377,145

Sambutan  
 Hari Alam  
 Sekitar  
 Negara

► **9 (b): Pencapaian Program CEPA JAS Ibu Pejabat Tahun 2024**  
**9 (b): Achievements of the DOE Headquarter CEPA Program in 2024**

**JAS IBU PEJABAT**

**AKTIVITI KESEDARAN**

- Hari Alam Sekitar Negara
- Hari Alam Sekitar Sedunia
  - Hari Bumi
  - Hari Ozon
- Pameran Alam Sekitar
  - Webinar
  - Ceramah Alam Sekitar
- Seminar / Bengkel / Taklimat
- Bicara Eksekutif / Bicara Santai / Temu Bual



**107**

Jumlah Aktiviti



**532,724**

Jumlah Outreach



**MUAT NAIK BAHAN/MAKLUMAT ALAM EKMC/ EDL DAN EMUSEUM/GALERI GAMBAR**



**639**

EKMC/EDL

**546**

EMuseum/  
Galeri Gambar

**PENDAFTARAN AHLI DAN PROGRAM KESEDARAN BERSAMA AHLI RAS**



**78**

Jumlah Orang



**8**

Jumlah Program Kesedaran

**HEBAHAN MELALUI MEDIA MASSA DAN MEDIA SOSIAL**



**78**

Jumlah Hebahan

**KERJASAMA DENGAN RAKAN STRATEGIK**

**8**

Jumlah Rakan Strategik



**PENERBITAN VIDEO**



**194**

Jumlah Video Pendek

SEKSYEN SECTION

9

► 9 (c): Pencapaian Program CEPA JAS Negeri Tahun 2024  
9 (c): Achievements of the DOE State CEPA Program in 2024

**JAS NEGERI**

**AKTIVITI KESEDARAN**

- Hari Alam Sekitar Negara
- Hari Alam Sekitar Sedunia
  - Hari Bumi
  - Hari Ozon
- Program Pengumpulan BEE / e-Waste
- Aktiviti Kesedaran Mencegah Pencemaran
  - Pameran Alam Sekitar
  - Ceramah Alam Sekitar
- Seminar / Bengkel / Taklimat



**2,745**

Jumlah Aktiviti



**1,590,516**

Jumlah Outreach

**MUAT NAIK BAHAN/MAKLUMAT ALAM EKMC/  
EDL DAN EMUSEUM/GALERI GAMBAR**

**1,145**

EKMC/EDL



**2,446**

EMuseum/  
Galeri Gambar

**SUMBANGAN ARTIKEL ILMIAH**



**22**

Jumlah Artikel

**CONTENT VR**



**26**

Jumlah Content

**PROGRAM BOOK REVIEW**



**37**

Jumlah Book Review

**PENYERTAAN SEKOLAH DALAM PROGRAM  
SEKOLAH LESTARI ANUGERAH ALAM SEKITAR**



**364**

Bilangan Sekolah



**148,400**

Jumlah Program  
Kesedaran

**PENDAFTARAN AHLI DAN PROGRAM  
KESEDARAN BERSAMA AHLI RAS**



**14,911**

Jumlah Orang



**454**

Jumlah Program  
Kesedaran

**HEBAHAN MELALUI MEDIA MASSA  
DAN MEDIA SOSIAL**



**3,278**

Jumlah Hebahan

**KERJASAMA DENGAN  
RAKAN STRATEGIK**

**516**

Jumlah Rakan Strategik

**PENERBITAN VIDEO**



**62**

Jumlah Video  
Pendek

**115**

Jumlah Video  
Dokumentari



# SEKSYEN 10: PENGURUSAN SUMBER MANUSIA, PENGURUSAN ASET, LATIHAN DAN KOMPETENSI

## SECTION 10: HUMAN RESOURCE, ASSET MANAGEMENT, TRAINING & COMPETENCY

### ► 10 (a): Maklumat Pengurusan Sumber Manusia JAS 2024 10 (a): DOE Human Resources Management Information 2024

#### PERATUSAN PENGISIAN PERJAWATAN THE PERCENTAGE OF OCCUPANCY **92.47%**

Perjawatan JAS sehingga 31 Disember 2024/ Occupancy as at of 31 <sup>st</sup> December 2024	Jumlah perjawatan: Positions: <b>1,527</b>	Kekosongan yang diisi: Occupied: <b>1,412</b>	Kekosongan: Vacancy: <b>115</b>
--	--	---	---------------------------------------

#### PERATUSAN PEGAWAI MENGHADIRI KURSUS / THE PERCENTAGE OF OFFICERS WHO ATTENDED COURSES **100%**

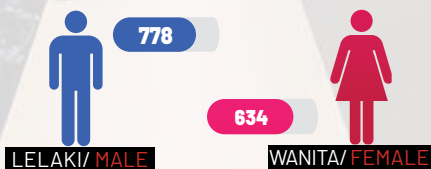
Semua pegawai JAS telah menghadiri kursus selama 5 hari dan lebih pada tahun 2024 /  
All DOE officers attended courses for 5 days or more in 2024

#### ANUGERAH PERKHIDMATAN CEMERLANG / EXCELLENT SERVICE AWARDS (ESA)

112 orang pegawai JAS menerima APC pada tahun penilaian 2023 / 112 DOE officers received ESA in the evaluation year of 2023

Majlis APC Jabatan Alam Sekitar 2023 telah diadakan pada 28 Mei 2024 /  
The Department of Environment ESA 2023 event was held on 2<sup>nd</sup> May 2024

#### PECAHAN PEGAWAI JAS MENGIKUT JANTINA BREAKDOWN OF DOE OFFICERS BY GENDER



#### PECAHAN MENGIKUT PERJAWATAN PEGAWAI BREAKDOWN OF POSITIONS



► **10 (b): Belanja Mengurus 2024**  
10 (b): Operating Expenditure 2024

OBJEK AM (OA) GENERAL OBJECT	PERIHAL OBJEK AM DESCRIPTION OF GENERAL OBJECT	PERUNTUKAN DILULUSKAN APPROVED ALLOCATION (RM)	PERUNTUKAN DIPINDA AMENDED ALLOCATION (RM)
10000	Emolumen / <i>Emolument</i>	99,166,000.00	101,065,485.78
20000	Perkhidmatan & Bekalan / <i>Services and Supplies</i>	32,761,400.00	31,742,600.59
30000	Aset / <i>Assets</i>	1,250,000.00	1,210,320.85
40000	Pemberian dan Kenaan Bayaran Tetap / <i>Grants and Fixed Charges</i>	1,230,000.00	1,229,888.06
<b>JUMLAH KESELURUHAN / OVERALL TOTAL</b>		<b>134,407,400.00</b>	<b>135,248,295.28</b>

SEKSYEN  
SECTION

10

► **10 (c): Perbelanjaan Pembangunan JAS 2024**  
10 (c): Development Expenditure of DOE in 2024



**RM**  
**98,009,000.00**

◀ **PERUNTUKAN/  
BUDGET ALLOCATION**



**RM**  
**98,009,000.00**

◀ **PERBELANJAAN/  
EXPENDITURE**

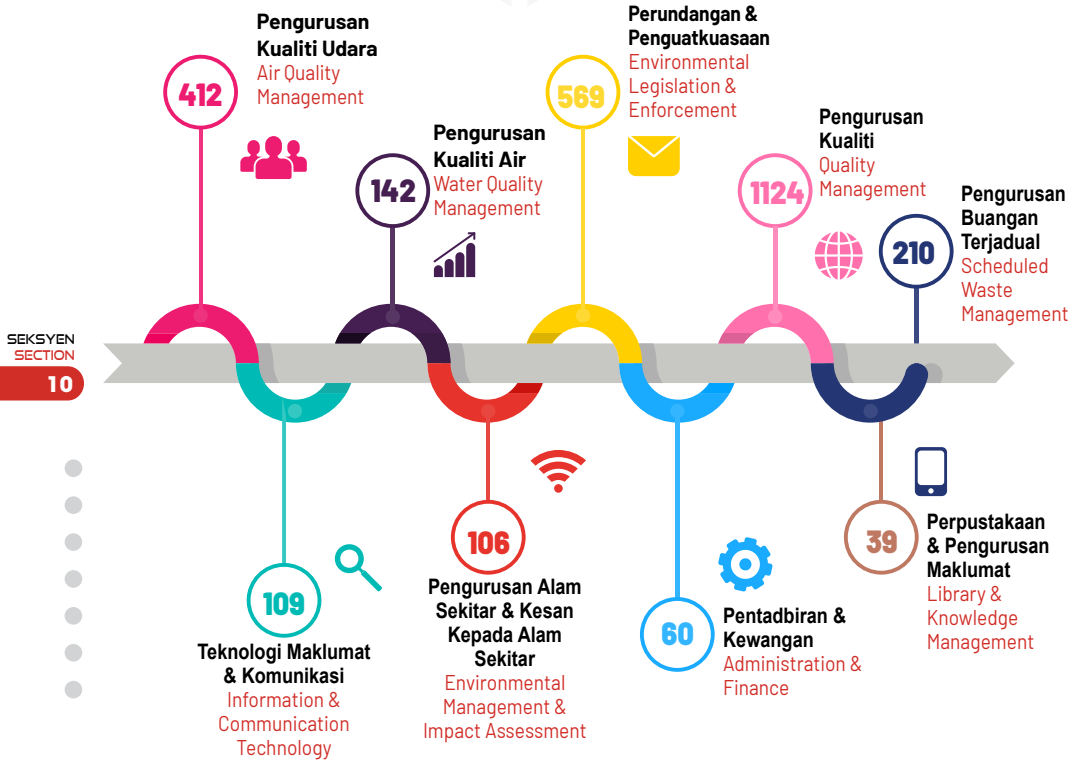
► **10 (d): Program Latihan EiMAS kepada Pegawai dan Kakitangan JAS 2024**  
 10 (d): EiMAS Training Programmes for DOE Staff 2024



SEKSYEN SECTION  
**10**

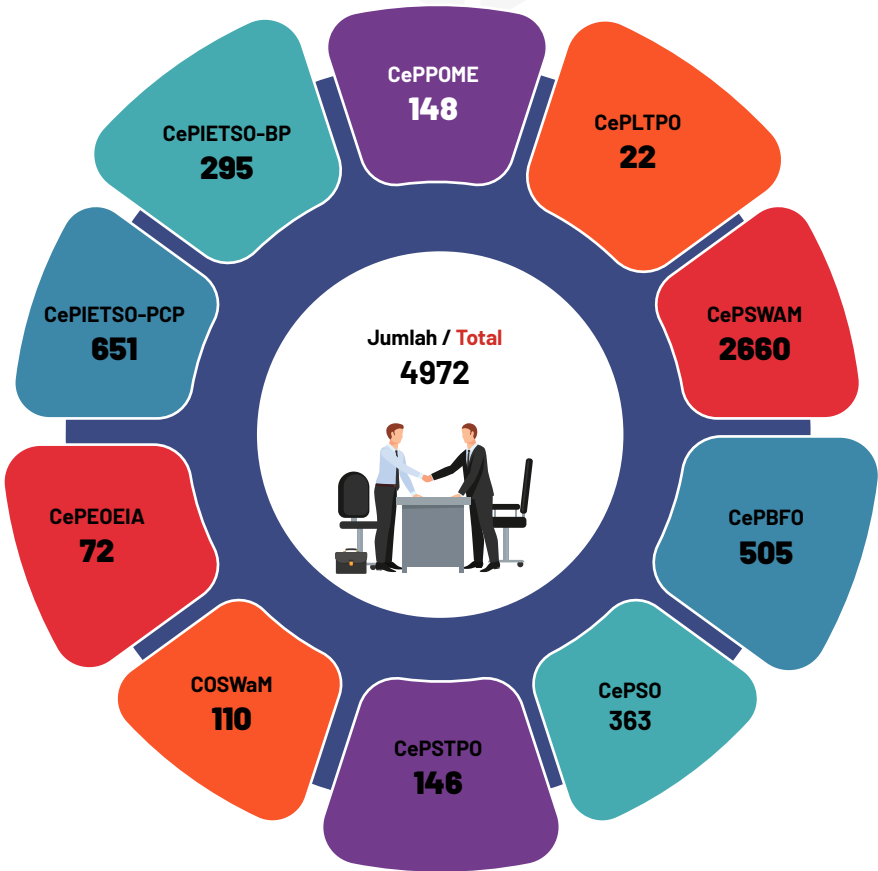


► 10 (e): Bilangan Peserta JAS mengikut Kategori Kursus  
10 (e): Number of DOE Participants by Course Category



► 10 (f): Pegawai Industri Dilatih mengikut Kursus Kompetensi, 2024

10 (f): Number of Industry Personnel Trained According to Types of Competency Courses, 2024



SEKSYEN  
SECTION

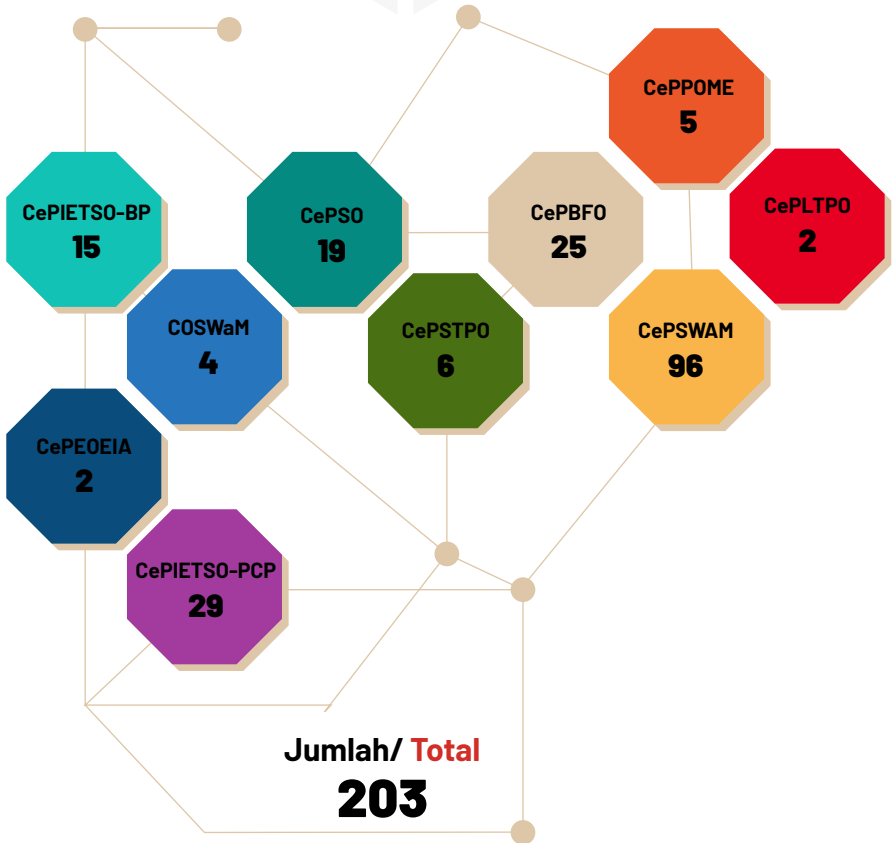
10



**Petunjuk / Legend**

CePBFO - Course For Certified Environmental Professional in Bag Filter Operation  
 CePSO - Course For Certified Environmental Professional in Scrubbers' Operation  
 CePIETS0 BP - Course For Environmental Professional in The Opera- tion of Industrial Effluent Treatment Systems (Biological Treatment Process)  
 CePLTPO - Course For Certified Environmental Professional in Leachate Treatment Plant Operation  
 CePIETS0 - PCP - Course For Certified Environmental Professional in The Operation of Industrial Effluent Treatment System (Physical Chemical Treatment Process)  
 CePSWaM - Course For Certified Environmental Professional in Scheduled Waste Management  
 CePSTPO - Course For Certified Environmental Professional in Sewage Treatment Plant Operation  
 CePPOME - Course For Certified Environmental Professional in The Treatment Palm Oil Mill Effluent  
 CePEOEIA - Certified Professional Environmental Officer in EIA Project

► **10 (g): Bilangan Kursus Pensijilan Industri yang Dianjurkan, 2024**  
10 (g): Number of Industry Certification Courses Conducted, 2024



SEKSYEN  
SECTION

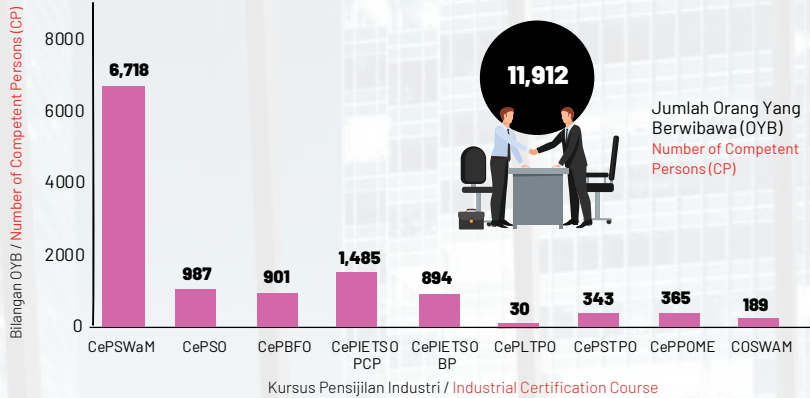
10

**Petunjuk / Legend**

- CePBFO - Course For Certified Environmental Professional in Bag Filter Operation
- CePSO - Course For Certified Environmental Professional in Scrubbers' Operation
- CePIETSO BP - Course For Environmental Professional in The Opera- tion of Industrial Effluent Treatment Systems (Biological Treatment Process)
- CePLTPO - Course For Certified Environmental Professional in Leachate Treatment Plant Operation
- CePIETSO - PCP - Course For Certified Environmental Professional in The Operation of Industrial Effluent Treatment System (Physical Chemical Treatment Process)
- CePSWaM - Course For Certified Environmental Professional in Scheduled Waste Management
- CePSTPO - Course For Certified Environmental Professional in Sewage Treatment Plant Operation
- CePPOME - Course For Certified Environmental Professional in The Treatment Palm Oil Mill Effluent
- CePEOEIA - Certified Professional Environmental Officer in EIA Project

▶ **10 (h): Bilangan Orang yang Berwibawa (OYB) Pegawai Industri di Malaysia Mengikut Jenis Pensijilan pada 31 Disember 2024**

10 (h): Number of Competent Persons of Industry Personnel in Malaysia according to Type of Certification as of 31 December 2024

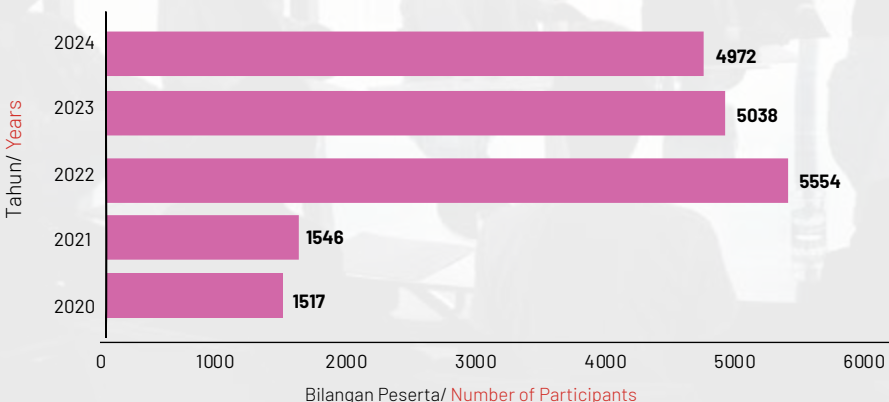


**Petunjuk / Legend**

- CePBFO - Course For Certified Environmental Professional in Bag Filter Operation
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- CePIETSO - PCP - Course For Certified Environmental Professional in The Operation of Industrial Effluent Treatment System (Physical Chemical Treatment Process)
- CePSWaM - Course For Certified Environmental Professional in Scheduled Waste Management
- CePSTPO - Course For Certified Environmental Professional in Sewage Treatment Plant Operation
- CePPOME - Course For Certified Environmental Professional in The Treatment Palm Oil Mill Effluent
- CePEOEIA - Certified Professional Environmental Officer in EIA Project

▶ **10 (i): Bilangan Kehadiran Peserta Kursus Pegawai Industri bagi 5 Tahun Terkini (2020 - 2024)**

10 (i): Attendance of Industry Personnel as Course Participants for the Last 5 Years (2020 - 2024)

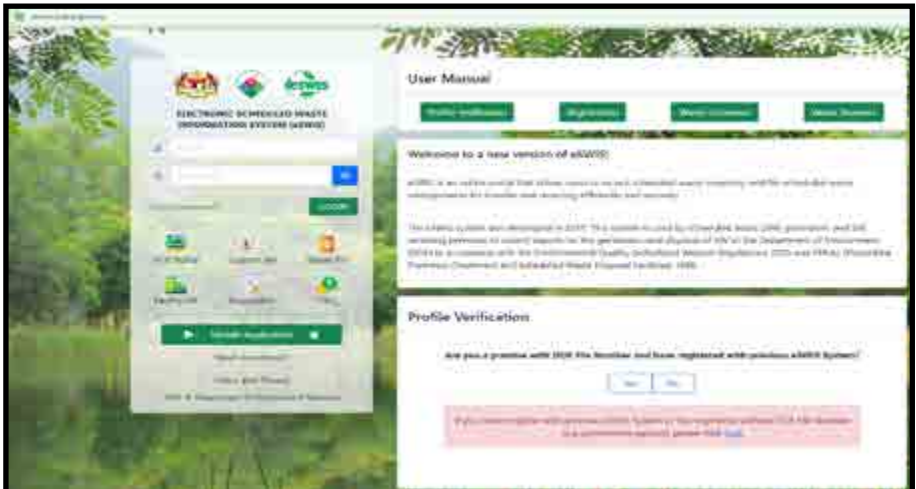




## SEKSYEN 11: SISTEM APLIKASI JAS SECTION 11: DOE APPLICATION SYSTEM

### ▶ 11 (a): Sistem Aplikasi Electronic Scheduled Waste Information System (eSWIS) 11(a): Electronic Scheduled Waste Information System (eSWIS) Application System

#### i. Halaman Utama Sistem Aplikasi Electronic Scheduled Waste Information System (eSWIS)/ Main Page Electronic Scheduled Waste Information System (eSWIS) Application System



#### ii. Pembangunan Aplikasi/ Application Development

Tahun/ Year: 2015

Dibangunkan oleh Jabatan Alam Sekitar (JAS), Malaysia/ Developed by the Department of Environment (DOE), Malaysia

### iii. Tujuan Aplikasi/ [Application Purpose](#)

Memudahkan penyerahan yang **cekap & selamat** bagi/  
[Facilitate efficient & secure](#) submission of:

- Inventory Buangan Terjadual/ [Scheduled Waste Inventory](#)
- Nota Konsinan Buangan/ [Waste Consignment Notes](#)
- Penjana Buangan Terjadual/ [Scheduled Waste Generators](#)
- Penerima Buangan terjadual (Kontraktor buangan Terjadual yang Dilesenkan)/ [Scheduled Waste Receiving Premises \(Licensed Scheduled Waste Contractor\)](#)

### iv. Pematuhan Undang-Undang/ [Legal Compliance](#)

- Peraturan-Peraturan Kualiti Alam Sekeliling (Buangan Terjadual) 2005/ [Environmental Quality \(Scheduled Wastes\) Regulations 2005](#)
- Peraturan Kualiti Alam Sekeliling (Premis Yang Ditetapkan) (Kemudahan Pengolahan Dan Pelupusan Buangan Terjadual) 1989/ [Environmental Quality \(Prescribed Premises\) \(Scheduled Wastes Treatment and Disposal Facilities\) Regulations 1989](#)

### v. Ciri-Ciri Aplikasi/ [Application Features](#)

- Pelaporan & Rekod Digital/ [Digital Reporting & Record-Keeping](#)
- Pemantauan Inventori/ [Inventory Monitoring](#)
- Penyerahan & Akses Data yang Selamat/ [Secure Submission & Data Access](#)
- Penjejakan Status Masa Nyata/ [Real-Time Status Tracking](#)

### ► 11 (b): Sistem Aplikasi Elektronik Kawalan Alam Sekitar (eKAS) [11\(b\): Environmental Control Electronics \(eKAS\) Application System](#)

#### i. Pembangunan Aplikasi/ [Application Development](#)

**Digunakan sejak/ [Used Since:](#)** 1999

**Versi terkini/ [Latest version:](#)** eKAS v4.0

**Kemaskini 2019/ [Update 2019:](#)**

- Penambahan modul Baharu/ [Addition of new modules](#)
- Naik taraf modul sedia ada/ [Upgrade existing modules](#)
- Integrasi dengan sistem dalaman & luaran/ [Integration with internal & external systems](#)

ii. Halaman Utama Sistem Aplikasi Elektronik Kawalan Alam Sekitar (eKAS)/  
Main Page Environmental Control Electronics (eKAS) Application System



iii. Fungsi Utama/ Main Functions:

- Penguatkuasaan Akta Kualiti Alam Sekeliling 1974 (AKAS 1974)/ Enforcement of the Environmental Quality Act 1974 (EQA 1974)
- Pengumpulan data premis/ Premises data collection:
  - Maklumat asas/ Basic information
  - Beban pencemaran/ Pollution load
  - Pengawasan/ Monitoring
  - Pelesenan/ Licensing
  - Penguatkuasaan & tindakan susulan/ Enforcement & follow-up
  - Pengurusan aduan/ Complaint management

iv. Modul SIMPAS & Integrasi Sistem myPremis Ke Sistem aplikasi eKAS/ SIMPAS  
Module & myPremis System Integration To eKAS Application System

- Dibenarkan kemaskini maklumat asas & operasi oleh premis/ Allowed to update basic information & operations by premises
- Disemak & disahkan oleh pegawai JAS sebelum disimpan ke eKAS/ Reviewed & verified by DOE officers before being saved to eKAS

► 11 (c): Sistem Aplikasi myPremis  
11 (c): myPremis Application System

i. Halaman Utama Sistem Aplikasi myPremis/ Main Page myPremis Application System



SEKSYEN  
SECTION

11



ii. Modul Utama & Fungsi/ **Main Modules & Functions**

<b>Modul/ Module</b>	<b>Fungsi/ Function</b>
Maklumat Premis/ Premises Information	Kemaskini maklumat asas & operasi premis/ Update basic information & premises operations
Permohonan Lesen Premis yang Ditetapkan/ Application for Designated Premises License	Permohonan lesen kilang, pengolahan & pelupusan/ Factory, processing & disposal license application
Lesen Pelanggaran Seksyen 22 & 25 AKAS 1974/ Contravention License Section 22 & 25 EQA 1974	Pelepasan udara & efluen/ Air emissions & effluents discharge
Notifikasi Efluen/ Effluent Notification	Penyeragaman Sistem Pengolahan Efluen Perindustrian & dokumen sokongan/ Standardization of Industrial Effluent Treatment Systems & supporting documents

iii. Impak Sistem myPremis/ **Impact of the myPremis System kepada JAS/ To DOE**

- Maklumat premis lebih tepat & terkini/ **More accurate & up-to-date premise information**
- Memudahkan penguatkuasaan AKAS 1974/ **Facilitate the enforcement of AKAS 1974**

**Kepada Premis/ To the Premises**

- Kemudahan kemaskini maklumat secara sendiri/ **Self-update information facility**
- Permohonan & pembaharuan lesen lebih cepat/ **Faster license application & renewal**
- Mudahkan penghantaran dokumen efluen/ **Facilitate the delivery of effluent documents**



## ► 11 (d): Sistem Aplikasi ePejabat

11 (d): ePejabat Application System

i. Halaman Utama Sistem Aplikasi ePejabat / Main Page ePejabat Application System



SEKSYEN  
SECTION

11

ii. Pembangunan Aplikasi/ Application Development

- Digunakan Sejak/ Used Since : 2022
- Tujuan/ Purpose: Mendigitalkan proses pentadbiran manual di JAS Ibu Pejabat/ Digitizing manual administrative processes at DOE Headquarters.
- Penambahbaikan 2024/ 2024 Improvements: Diselaraskan dengan Prosedur Kualiti Penyelenggaraan ICT di bawah piawaian MS ISO 9001:2015/ Aligned with ICT Maintenance Quality Procedures under MS ISO 9001:2015 standards

iii. Modul Utama/ Main Module

- Tempahan Bilik Mesyuarat & Akaun Telesidang/ Meeting Room Booking & Teleconferencing Account
- Tempahan Kenderaan Jabatan/ Department Vehicle Reservation
- Pinjaman Peralatan ICT/ ICT Equipment Loan
- Aduan Kerosakan Peralatan ICT / ICT Equipment Damage Complaints







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