



KEMENTERIAN EKONOMI
JABATAN PERANGKAAN MALAYSIA



AES

STATISTIK EKONOMI TAHUNAN

Annual Economic Statistics

2022

BEKALAN AIR; PEMBETUNGAN,
PENGURUSAN SISA DAN AKTIVITI PEMULIHAN

*Water Supply; Sewerage,
Waste Management and Remediation Activities*



JABATAN PERANGKAAN MALAYSIA
DEPARTMENT OF STATISTICS MALAYSIA



KEMENTERIAN EKONOMI
JABATAN PERANGKAAN MALAYSIA

STATISTIK EKONOMI TAHUNAN *ANNUAL ECONOMIC STATISTICS* **2022**

BEKALAN AIR; PEMBETUNGAN, PENGURUSAN SISA DAN AKTIVITI PEMULIHAN *WATER SUPPLY; SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES*

Pemakluman

Jabatan Perangkaan Malaysia (DOSM) akan menjalankan Banci Ekonomi pada tahun 2023. DOSM amat menghargai kerjasama daripada responden untuk memberikan maklumat kepada DOSM serta menjayakan banci ini. Sila layari www.dosm.gov.my untuk maklumat lanjut.

DOSM telah melancarkan OpenDOSM NextGen sebagai platform yang menyediakan katalog data dan visualisasi bagi memudahkan pengguna menganalisis pelbagai jenis data. OpenDOSM NextGen ialah medium perkongsian data sumber terbuka dan boleh diakses melalui portal <https://open.dosm.gov.my>.

Dimaklumkan bahawa Kerajaan Malaysia telah mengisytiharkan Hari Statistik Negara (MyStats Day) pada 20 Oktober setiap tahun. Tema sambutan MyStats Day adalah “*Connecting the World with Data We Can Trust*”.

Announcement

The Department of Statistics Malaysia (DOSM) will conduct the Economic Census in 2023. DOSM greatly appreciates the cooperation from respondents to provide information with DOSM and make this census a success. Please visit www.dosm.gov.my for more information.

DOSM has launched OpenDOSM NextGen as a platform that provides a catalogue of data and visualisation that facilitates users in analysing various types of data. OpenDOSM NextGen is an open source data sharing medium and accessible through <https://open.dosm.gov.my> portal.

*Please be informed that the Government of Malaysia has declared National Statistics Day (MyStats Day) on October 20 each year. MyStats Day theme is “*Connecting the World with Data We Can Trust*”.*

JABATAN PERANGKAAN MALAYSIA
DEPARTMENT OF STATISTICS MALAYSIA

Diterbitkan dan dicetak oleh / *Published and printed by:*

Jabatan Perangkaan Malaysia

Department of Statistics Malaysia

Blok C6, Kompleks C,

Pusat Pentadbiran Kerajaan Persekutuan

62514 Putrajaya,

MALAYSIA

Tel. : 03-8885 7000

Faks : 03-8888 9248

Portal : <https://www.dosm.gov.my>

Facebook / Twitter / Instagram / YouTube : StatsMalaysia

Emel / *Email* : info@dosm.gov.my (pertanyaan umum / *general enquiries*)

data@dosm.gov.my (pertanyaan & permintaan data / *data request & enquiries*)

Harga / *Price* : RM20.00

Diterbitkan pada Februari 2023 / *Published in February 2023*

Hakcipta terpelihara / *All rights reserved.*

Tiada bahagian daripada terbitan ini boleh diterbitkan semula, disimpan untuk pengeluaran atau ditukar dalam apa-apa bentuk atau alat apa jua pun kecuali setelah mendapat kebenaran daripada Jabatan Perangkaan Malaysia. Pengguna yang mengeluarkan sebarang maklumat dari terbitan ini sama ada yang asal atau diolah semula hendaklah meletakkan kenyataan berikut:

“Sumber: Jabatan Perangkaan Malaysia”

No part of this publication may be reproduced or distributed in any form or by any means or stored in data base without the prior written permission from Department of Statistics Malaysia. Users reproducing content of this publication with or without adaptation should quote the following:

“Source: Department of Statistics Malaysia”

ISSN 2637-1391

KATA PENGANTAR

Penerbitan Statistik Ekonomi Tahunan 2022, Bekalan Air; Pembetulan, Pengurusan Sisa dan Aktiviti Pemulihan memaparkan statistik utama bagi pekhidmatan bekalan air; pembetulan, pengurusan sisa dan aktiviti pemulihan yang diperoleh daripada Survei Ekonomi Tahunan 2022 bagi tahun rujukan 2021. Liputan industri yang digunakan adalah berdasarkan Seksyen E; Bekalan Air, Pembetulan, Pengurusan Sisa dan Aktiviti Pemulihan, Klasifikasi Industri Malaysia (MSIC) 2008 Versi 1.0, selaras dengan *International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4*.

Statistik yang dilaporkan dalam penerbitan ini adalah nilai output kasar, nilai input perantara, nilai ditambah, bilangan pekerja, gaji & upah dan nilai harta tetap. Statistik ini juga boleh digunakan sebagai sumber rujukan oleh kerajaan, ahli ekonomi, ahli akademik, pihak swasta serta individu.

Penerbitan ini mengandungi tiga bahagian utama. Bahagian pertama membentangkan infografik dan ringkasan penemuan. Bahagian kedua memuatkan jadual terperinci manakala di bahagian ketiga menerangkan aspek teknikal bagi skop & liputan, konsep & definisi untuk memudahkan pengguna memahami statistik yang diterbitkan.

Jabatan Perangkaan Malaysia merakamkan setinggi-tinggi penghargaan atas kerjasama dan sumbangan yang diberikan oleh semua pihak dalam menjayakan survei ini. Setiap maklum balas dan cadangan untuk penambahbaikan penerbitan ini pada masa akan datang amatlah dihargai.

DATO' SRI DR. MOHD UZIR MAHIDIN

Ketua Perangkawan Malaysia

Februari 2023

PREFACE

The Annual Economic Statistics 2022, Water Supply; Sewerage, Waste Management and Remediation Activities presents main statistics on water supply; sewerage, waste management and remediation activities services of Annual Economic Survey, 2022 for the reference year 2021. The statistics represent industry as classified in Section E: Water Supply; Sewerage, Waste Management and Remediation Activities, Malaysia Standard Industrial Classification (MSIC) 2008 Version 1.0, in accordance with the International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4.

Statistics reported in this publication are value of gross output, intermediate input, value added, numbers of persons engaged, salaries & wages and value of fixed assets. These statistics are also useful as a source of reference by government agencies, economists, academicians, private sectors and individuals.

This publication is divided into three main parts. The first part displays the infographic and summary of findings. The second part shows the detailed statistical table, meanwhile the third part describes technical aspects on scope & coverage and concepts & definitions to assist users in understanding the published statistics.

Department of Statistics Malaysia (DOSM) gratefully acknowledges the co-operation and contribution rendered by all parties in making this publication a success. Every feedback and suggestion towards improving future publications is highly appreciated.

DATO' SRI DR. MOHD UZIR MAHIDIN
Chief Statistician, Malaysia

February 2023

	Muka surat Page
Kata pengantar <i>Preface</i>	i
Kandungan <i>Contents</i>	iii
BAHAGIAN 1 : Infografik <i>PART 1 : Infographic</i>	3
Ringkasan Penemuan <i>Summary of Findings</i>	5
BAHAGIAN 2 : Jadual Statistik <i>PART 2 : Statistical Tables</i>	

Jadual Table	Senarai Jadual List of Tables	
1	Statistik Utama Perkhidmatan Bekalan Air; Pembetulan, Pengurusan Sisa dan Aktiviti Pemulihan, 2015, 2017-2021 <i>Principal Statistics of Water Supply; Sewerage, Waste Management and Remediation Activities Services, 2015, 2017-2021</i>	21
1.1	Statistik Utama Perkhidmatan Bekalan Air; Pembetulan, Pengurusan Sisa dan Aktiviti Pemulihan mengikut Kumpulan Industri, 2021 <i>Principal Statistics of Water Supply; Sewerage, Waste Management and Remediation Activities Services by Industry Group, 2021</i>	22
2	Statistik Utama Perkhidmatan Bekalan Air; Pembetulan, Pengurusan Sisa dan Aktiviti Pemulihan mengikut Negeri, 2021 <i>Principal Statistics of Water Supply; Sewerage, Waste Management and Remediation Activities Services by State, 2021</i>	23
3	Bilangan Pekerja dan Gaji & Upah Perkhidmatan Bekalan Air; Pembetulan, Pengurusan Sisa dan Aktiviti Pemulihan mengikut Kategori Pekerja, 2021 <i>Number of Persons Engaged and Salaries & Wages of Water Supply; Sewerage, Waste Management and Remediation Activities Services by Category of Workers, 2021</i>	24

Jadual <i>Table</i>	Senarai Jadual <i>List of Tables</i>	Muka surat <i>Page</i>
4	Bilangan Pekerja dan Gaji & Upah Perkhidmatan Bekalan Air; Pembetulan, Pengurusan Sisa dan Aktiviti Pemulihan mengikut Kategori Kemahiran dan Jantina, 2021 <i>Number of Persons Engaged and Salaries & Wages of Water Supply; Sewerage, Waste Management and Remediation Activities Services by Category of Skills and Sex, 2021</i>	25
5	Perbelanjaan Modal dan Nilai Harta Tetap Perkhidmatan Bekalan Air; Pembetulan, Pengurusan Sisa dan Aktiviti Pemulihan mengikut Kumpulan Industri, 2021 <i>Capital Expenditure and Value of Fixed Assets of Water Supply; Sewerage, Waste Management and Remediation Activities Services by Industry Group, 2021</i>	26
BAHAGIAN 3	: Nota Teknikal	29
<i>PART 3</i>	<i>: Technical Notes</i>	
Lampiran		51
<i>Appendix</i>		

BAHAGIAN *PART*

1

INFOGRAFIK & RINGKASAN PENEMUAN

*INFOGRAPHIC &
SUMMARY OF FINDINGS*



Muka surat ini sengaja dibiarkan kosong
This page is deliberately left blank



KEMENTERIAN EKONOMI
JABATAN PERANGKAAAN MALAYSIA



StatsMalaysia
f @ youtu
www.dosm.gov.my



MALAYSIA
MADANI

BEKALAN AIR; PEMBETUNGAN, PENGURUSAN SISA DAN AKTIVITI PEMULIHAN

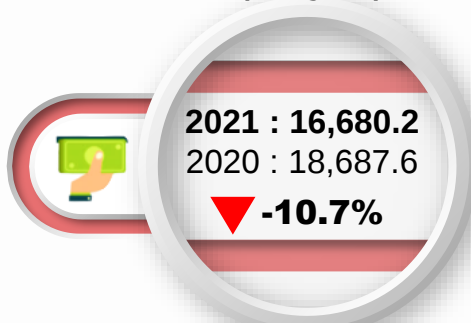
PENEMUAN UTAMA

AS 2022

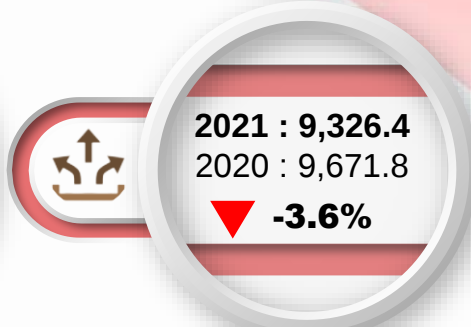
Kadar pertumbuhan
tahunan



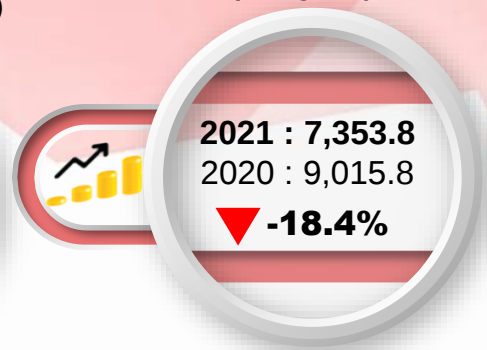
NILAI OUTPUT KASAR (RM juta)



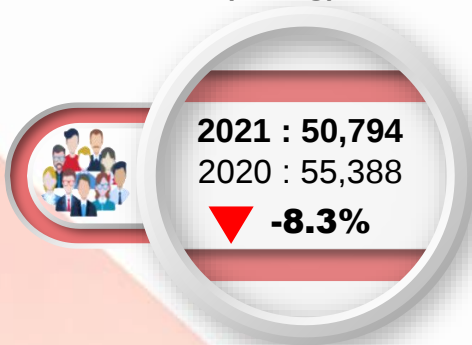
NILAI INPUT PERANTARAAN (RM juta)



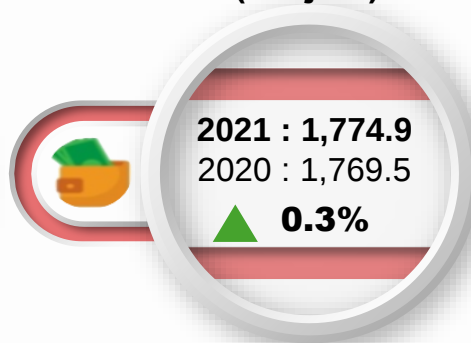
NILAI DITAMBAH (RM juta)



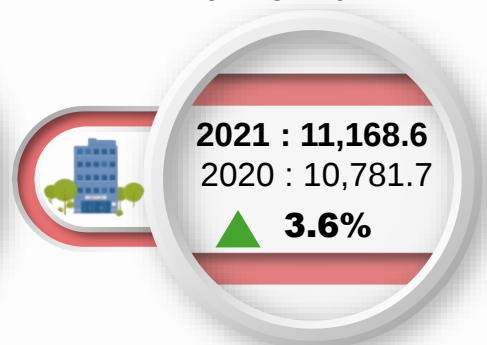
BILANGAN PEKERJA (orang)



GAJI & UPAH (RM juta)

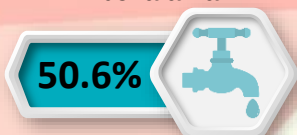


NILAI HARTA TETAP (RM juta)



SUMBANGAN NILAI OUTPUT KASAR MENGIKUT KUMPULAN INDUSTRI, 2021

Penakungan, perawatan &
bekalan air



Pembetulan



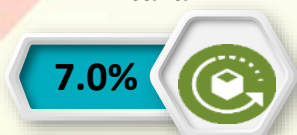
Pengumpulan sisa



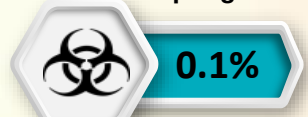
Rawatan & pelupusan sisa



Pemulihan semula
bahan



Aktiviti pemulihan & lain-lain
perkhidmatan pengurusan sisa

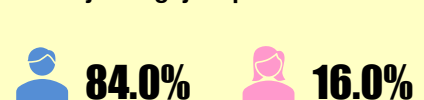


SUMBANGAN BILANGAN PEKERJA MENGIKUT JANTINA, 2021

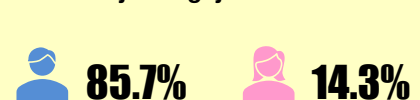
Pemilik yang bekerja dan pekerja
keluarga tidak bergaji



Pekerja bergaji sepenuh masa



Pekerja bergaji sambilan





KEMENTERIAN EKONOMI
JABATAN PERANGKAIAN MALAYSIA

B23
BANCI EKONOMI 2023
DATA PEMANDIRAN EKONOMI NEGARA



StatsMalaysia
f i t y v
www.dosm.gov.my



MALAYSIA
MADANI

WATER SUPPLY; SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES MAIN FINDINGS

AS 2022

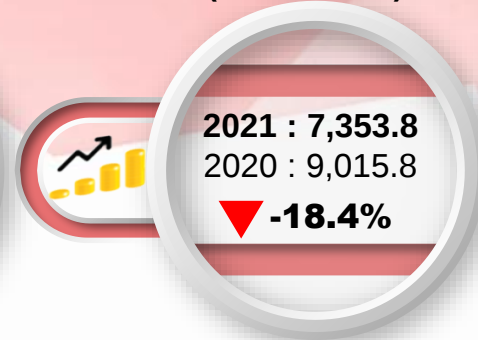
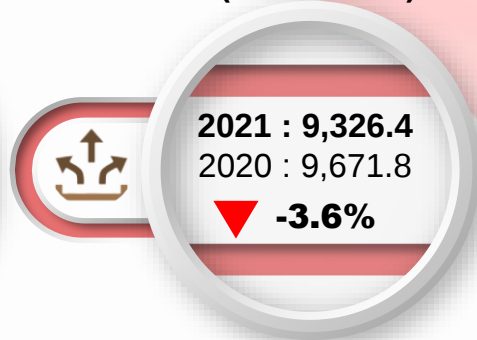
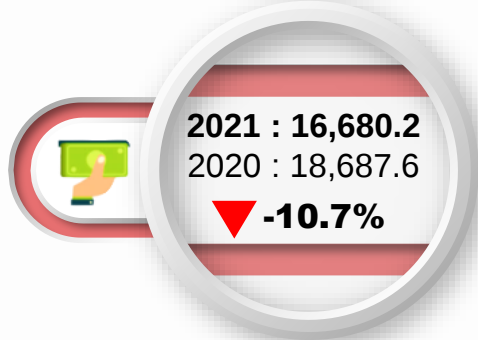
Annual growth rate



VALUE OF GROSS OUTPUT (RM million)

VALUE OF INTERMEDIATE INPUT (RM million)

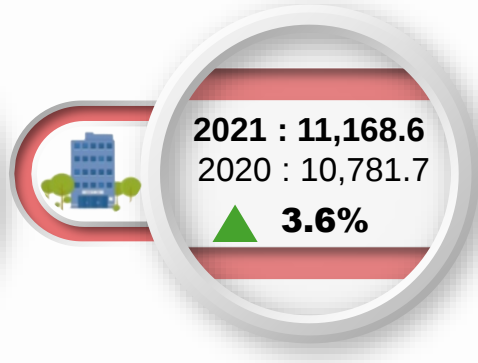
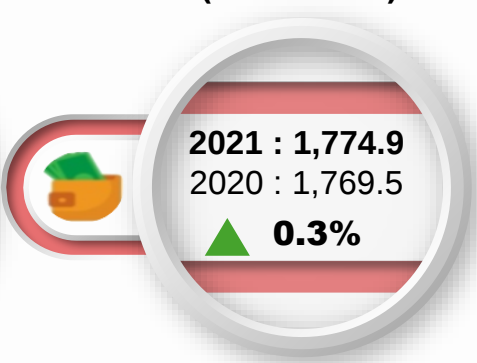
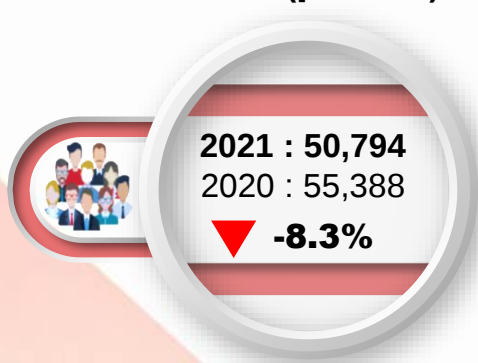
VALUE ADDED (RM million)



NUMBER OF PERSONS ENGAGED (persons)

SALARIES & WAGES (RM million)

VALUE OF FIXED ASSETS (RM million)

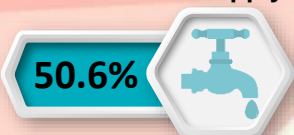


SHARE OF GROSS OUTPUT VALUE BY INDUSTRY GROUP, 2021

SHARE OF NUMBER OF PERSONS ENGAGED BY SEX, 2021

Water collection,
treatment & supply

Sewerage



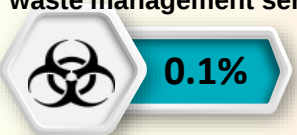
Waste collection

Waste treatment &
disposal

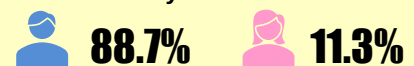


Material recovery

Remediation activities & other
waste management services



Working proprietors and unpaid
family workers



Full-time workers



Part-time workers



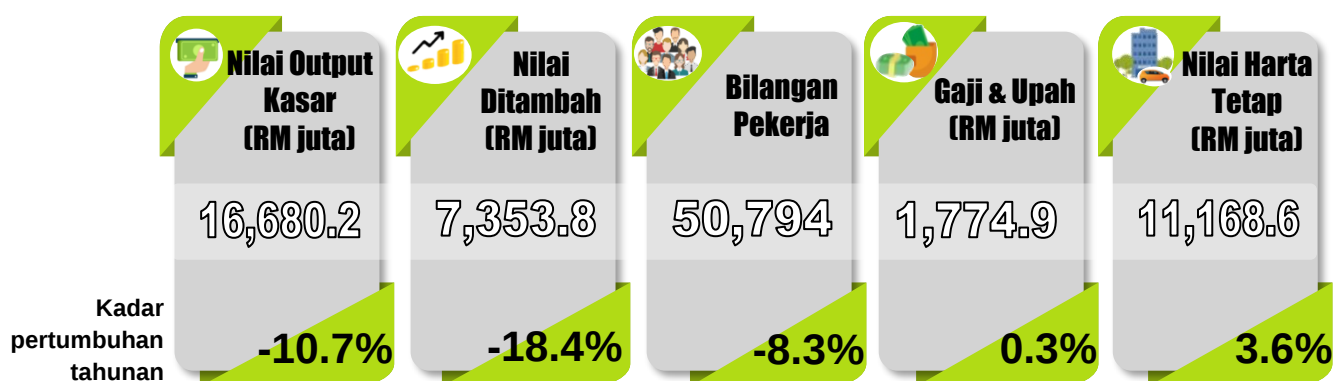
1. PENGENALAN

Penerbitan Statistik Ekonomi Tahunan 2022, Bekalan Air; Pembetulan, Pengurusan Sisa dan Aktiviti Pemulihan ini membentangkan perangkaan utama bagi Perkhidmatan Bekalan Air; Pembetulan, Pengurusan Sisa dan Aktiviti Pemulihan yang diperolehi daripada Survei Ekonomi Tahunan yang dijalankan pada tahun 2022 bagi tahun rujukan 2021.

2. PRESTASI KESELURUHAN

Nilai output kasar bagi Perkhidmatan Bekalan Air; Pembetulan, Pengurusan Sisa dan Aktiviti Pemulihan mencatatkan penurunan sebanyak 10.7 peratus kepada RM16,680.2 juta pada tahun 2021 berbanding 2020. Bilangan pekerja juga berkurang sebanyak 8.3 peratus kepada 50,794 orang bagi tahun 2021 (2020: 55,388). Walau bagaimanapun, nilai gaji dan upah yang dibayar merekodkan peningkatan marginal sebanyak 0.3 peratus kepada RM1,774.9 juta. Nilai harta tetap pada 2021 pula ialah sebanyak RM11,168.6 juta, meningkat sebanyak 3.6 peratus berbanding tahun sebelumnya.

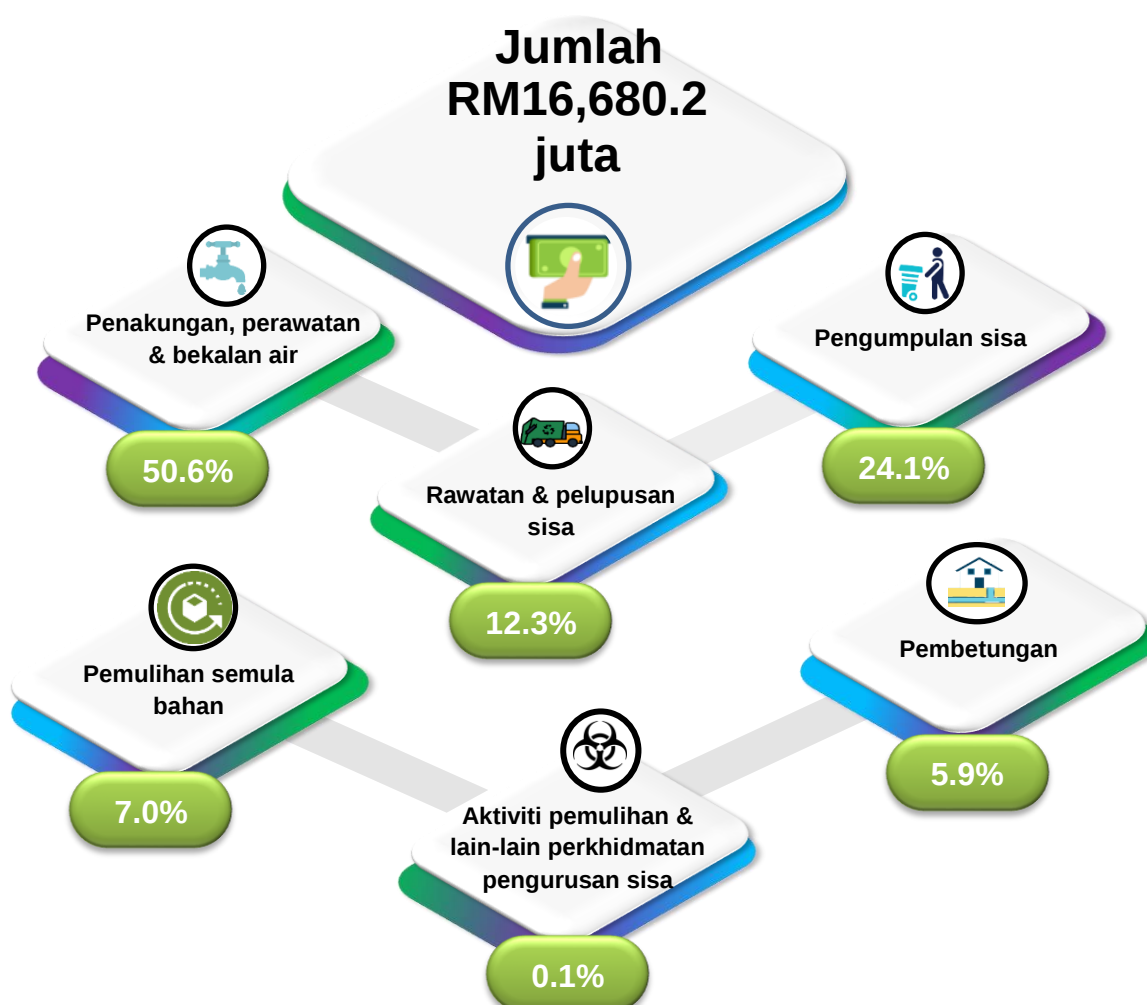
Paparan 1: Perangkaan Utama Perkhidmatan Bekalan Air; Pembetulan, Pengurusan Sisa dan Aktiviti Pemulihan, 2021



3. NILAI OUTPUT KASAR

Nilai output kasar pada 2021 mencatatkan RM16,680.2 juta dengan penurunan sebanyak 10.7 peratus berbanding tahun sebelumnya. Industri penakungan, perawatan & bekalan air merupakan penyumbang utama dengan RM8,443.8 juta atau dengan sumbangan 50.6 peratus. Manakala, industri pengumpulan sisa RM4,016.8 juta (24.1%) dan rawatan dan pelupusan sisa RM2,057.1 juta (12.3%). Tiga industri ini telah menyumbangkan 87.0 peratus daripada keseluruhan nilai output kasar pada 2021. Selain itu, industri pemulihan semula bahan, pembetulan dan aktiviti pemulihan dan lain-lain perkhidmatan pengurusan sisa masing-masing menyumbangkan sebanyak 7.0 peratus, 5.9 peratus dan 0.1 peratus.

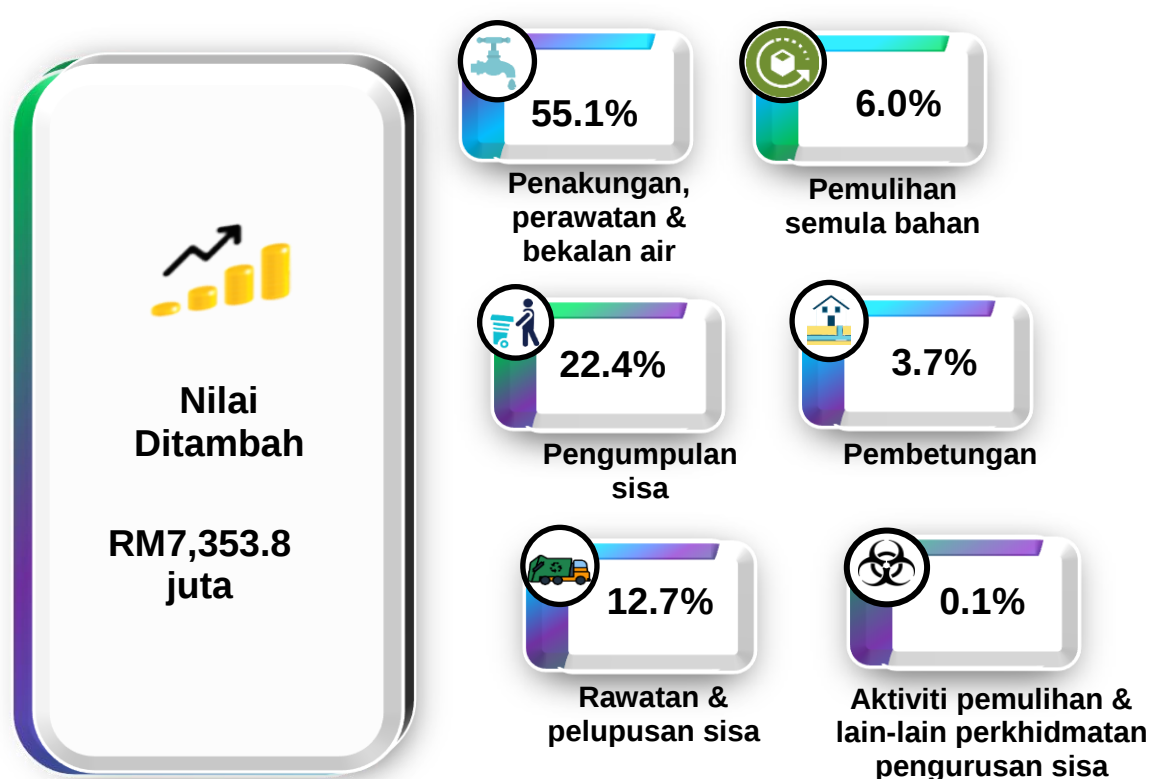
Paparan 2: Sumbangan Nilai Output Kasar mengikut Kumpulan Industri, 2021



4. NILAI DITAMBAH

Nilai ditambah bagi 2021 menurun 18.4 daripada RM9,015.8 juta pada 2020 kepada RM7,353.8 juta. Industri penakungan, perawatan & bekalan air merupakan penyumbang utama iaitu RM4,055.4 juta dengan sumbangan 55.1 peratus. Sementara itu, industri pengumpulan sisa dengan RM1,643.8 juta (22.4%) dan rawatan & pelupusan sisa RM937.4 juta (12.7%).

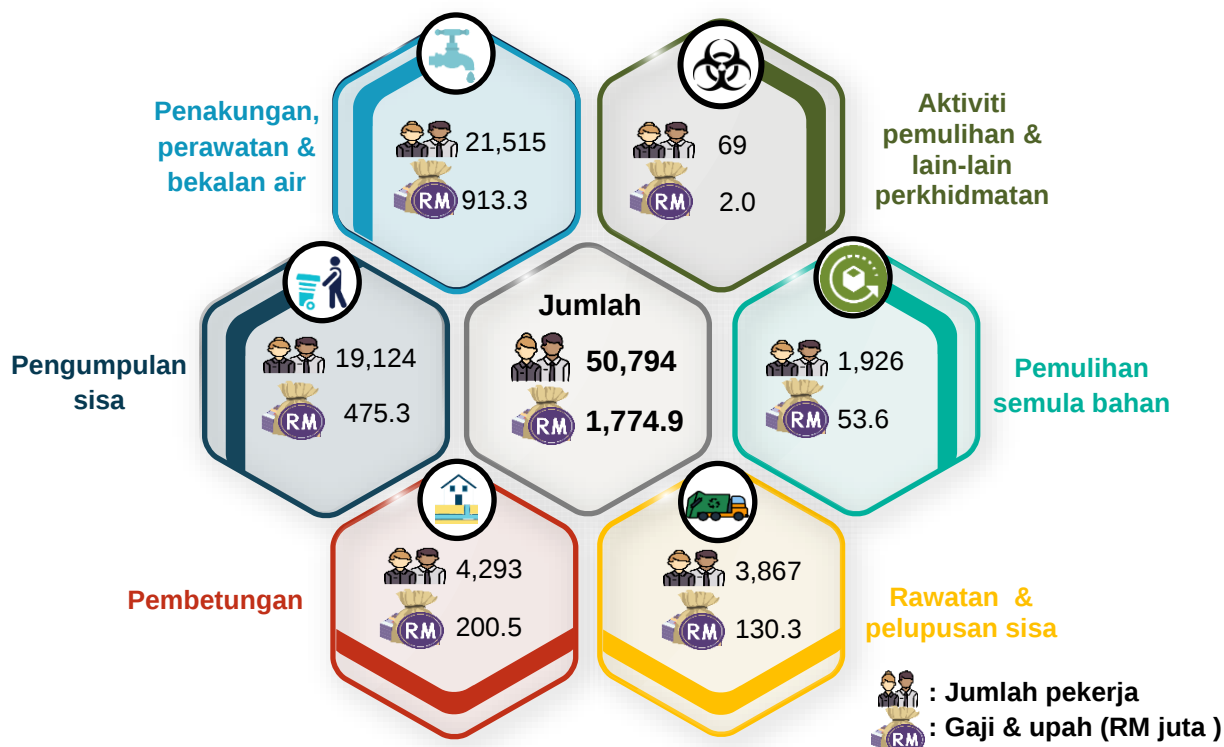
Paparan 3: Sumbangan Nilai Ditambah mengikut Kumpulan Industri, 2021



5. BILANGAN PEKERJA DAN GAJI & UPAH

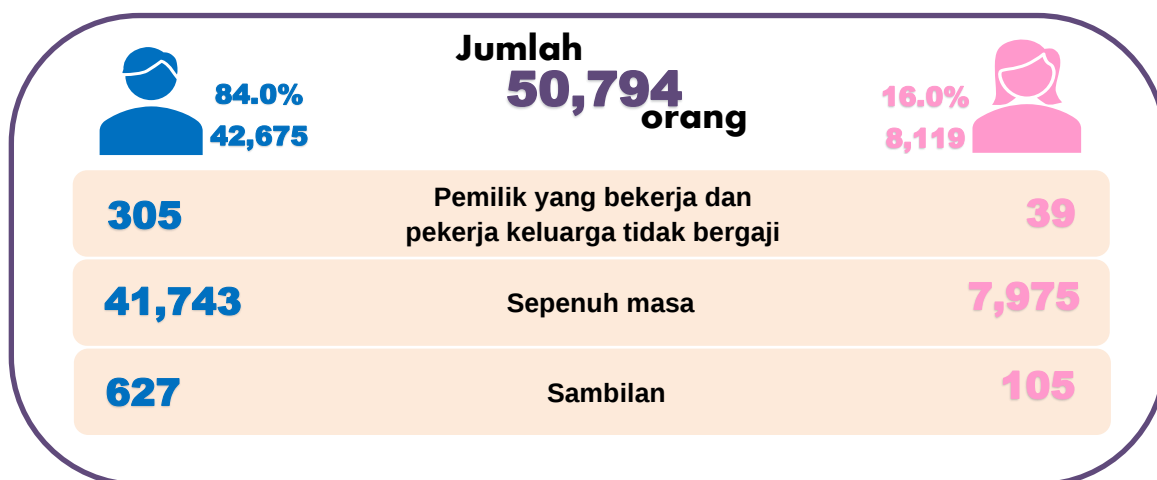
Bilangan pekerja pada 2021 mencatatkan 50,794 orang, menurun 8.3 peratus berbanding tahun sebelumnya. Sementara itu, pertumbuhan tahunan gaji & upah meningkat 0.3 peratus kepada RM1,774.9 juta seperti di Paparan 4. Industri penakungan, perawatan & bekalan air adalah penyumbang utama kepada bilangan pekerja dengan 21,515 orang (42.4%). Pada masa yang sama, industri ini juga merupakan penyumbang utama bagi gaji & upah dengan RM913.3 juta (51.5%).

Paparan 4: Bilangan Pekerja dan Gaji & Upah mengikut Kumpulan Industri, 2021



Jumlah keseluruhan pekerja direkodkan adalah 50,794 orang dan 97.9 peratus daripadanya adalah disumbangkan oleh pekerja bergaji sepenuh masa. Pekerja lelaki mendominasi dengan jumlah 42,675 orang dan pekerja wanita 8,119 orang.

Paparan 5: Bilangan Pekerja mengikut Kategori Pekerja dan Jantina, 2021



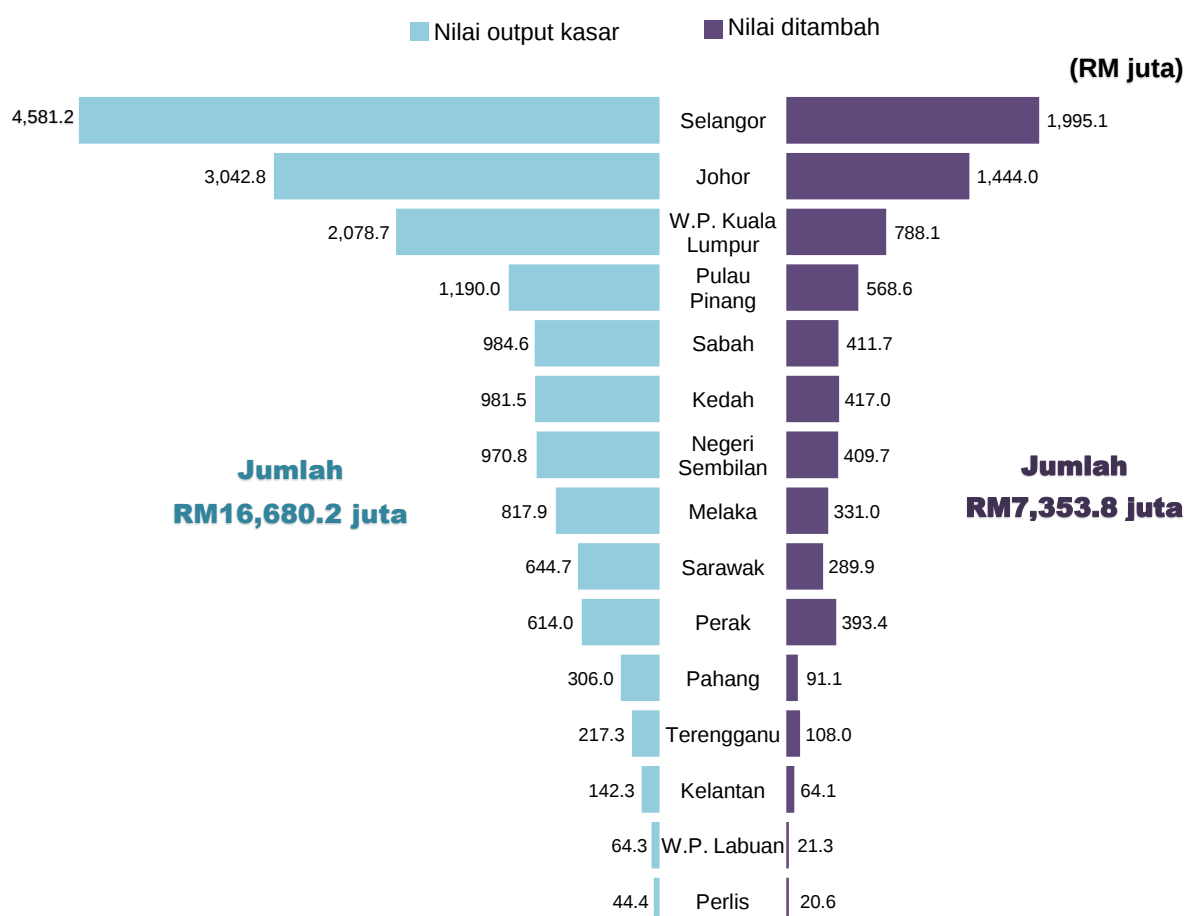
6. PRESTASI NEGERI

6.1 Nilai Output Kasar dan Nilai Ditambah

Prestasi negeri bagi nilai output kasar menunjukkan Selangor, Johor dan W.P.Kuala Lumpur menjadi penyumbang utama dengan 58.2 peratus atau RM9,702.6 juta. Selangor merekodkan nilai output kasar tertinggi berjumlah RM4,581.2 juta atau 27.5 peratus. Johor dan W.P. Kuala Lumpur merekodkan dengan nilai masing-masing sebanyak RM3,042.8 juta (18.2%) dan RM2,078.7 juta (12.5%).

Ketiga-tiga negeri ini juga turut menjadi penyumbang utama bagi nilai ditambah iaitu RM4,227.2 juta atau dengan sumbangan 57.5 peratus. Selangor mencatatkan sumbangan nilai ditambah tertinggi iaitu 27.1 peratus atau RM1,995.1 juta. Johor dan W.P.Kuala Lumpur masing-masing dengan 19.6 peratus (RM1,444.0 juta) dan 10.7 peratus (RM788.1 juta).

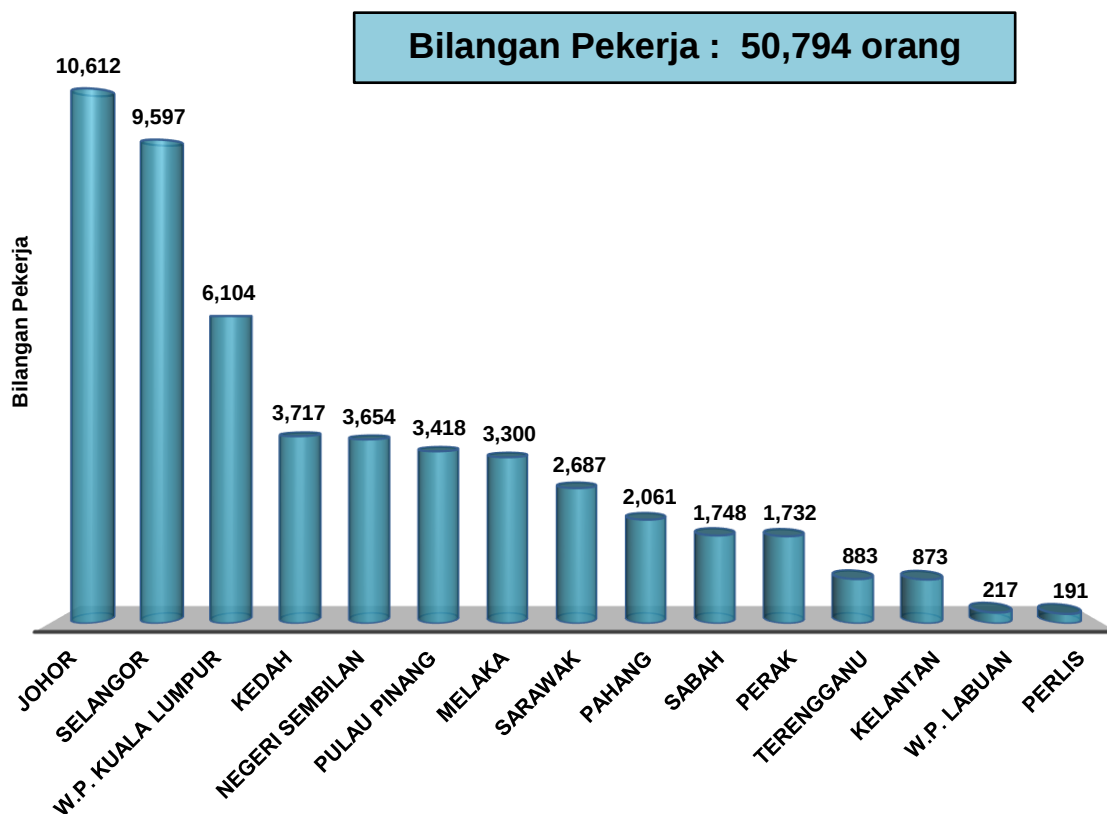
Paparan 6: Nilai Output Kasar dan Nilai Ditambah mengikut Negeri, 2021



6.2 Bilangan Pekerja

Johor mencatatkan bilangan pekerja tertinggi pada 2021 iaitu 10,612 orang dengan sumbangan sebanyak 20.9 peratus. Ini diikuti oleh Selangor dan W.P. Kuala Lumpur dengan masing-masing mencatatkan 9,597 orang (18.9%) dan 6,104 orang (12.0%). Bilangan pekerja bagi ketiga-tiga negeri ini adalah 26,313 orang (51.8%) daripada jumlah keseluruhan pekerja pada 2021.

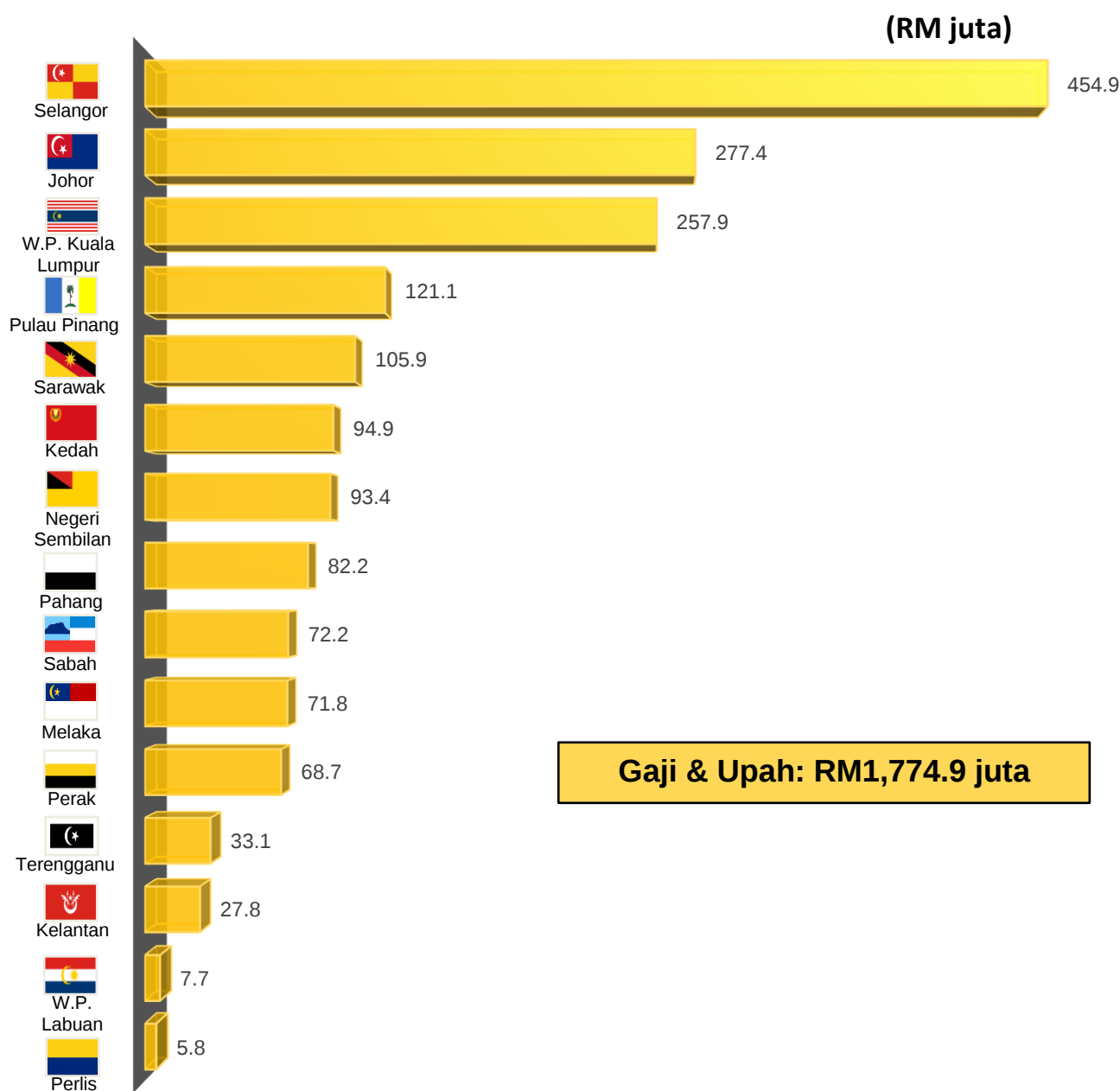
Carta 1: Bilangan Pekerja mengikut Negeri, 2021



6.3 Gaji & Upah

Selangor merekodkan pembayaran jumlah gaji & upah tertinggi iaitu RM454.9 juta atau sumbangan sebanyak 25.6 peratus. Negeri kedua tertinggi adalah Johor dengan RM277.4 juta (15.6%) dan diikuti dengan W.P. Kuala Lumpur dengan RM257.9 juta (14.5%). Jumlah gaji & upah bagi ketiga-tiga negeri ini adalah RM990.3 juta yang menyumbang 55.8 peratus kepada keseluruhan nilai gaji & upah pada 2021.

Carta 2: Gaji & Upah mengikut Negeri, 2021



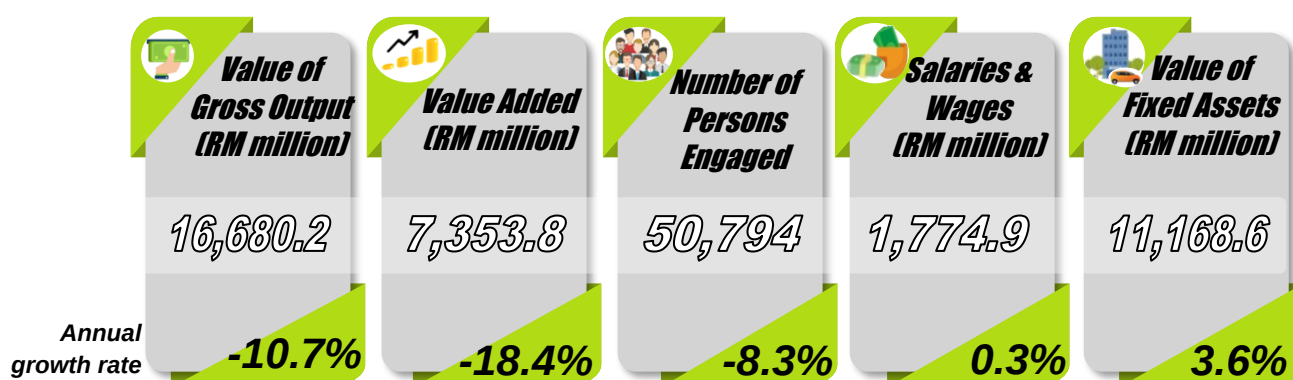
1. INTRODUCTION

The Annual Economic Statistics 2022, Water Supply; Sewerage, Waste Management and Remediation Activities presents main statistics on Water Supply; Sewerage, Waste Management and Remediation Activities Services from Annual Economic Survey, 2022 for the reference year 2021.

2. OVERALL PERFORMANCE

The Water Supply; Sewerage, Waste Management and Remediation Activities Services gross output fell by 10.7 per cent to RM16,680.2 million in 2021 as compared to 2020. The number of persons engaged also showed a decrease of 8.3 per cent to 50,794 persons for 2021 (2020: 55,388 persons). However, the value of salaries & wages paid marginally increased by 0.3 per cent to reach RM1,774.9 million. The value of fixed assets was RM11,168.6 million, an increase of 3.6 per cent as compared to the previous year.

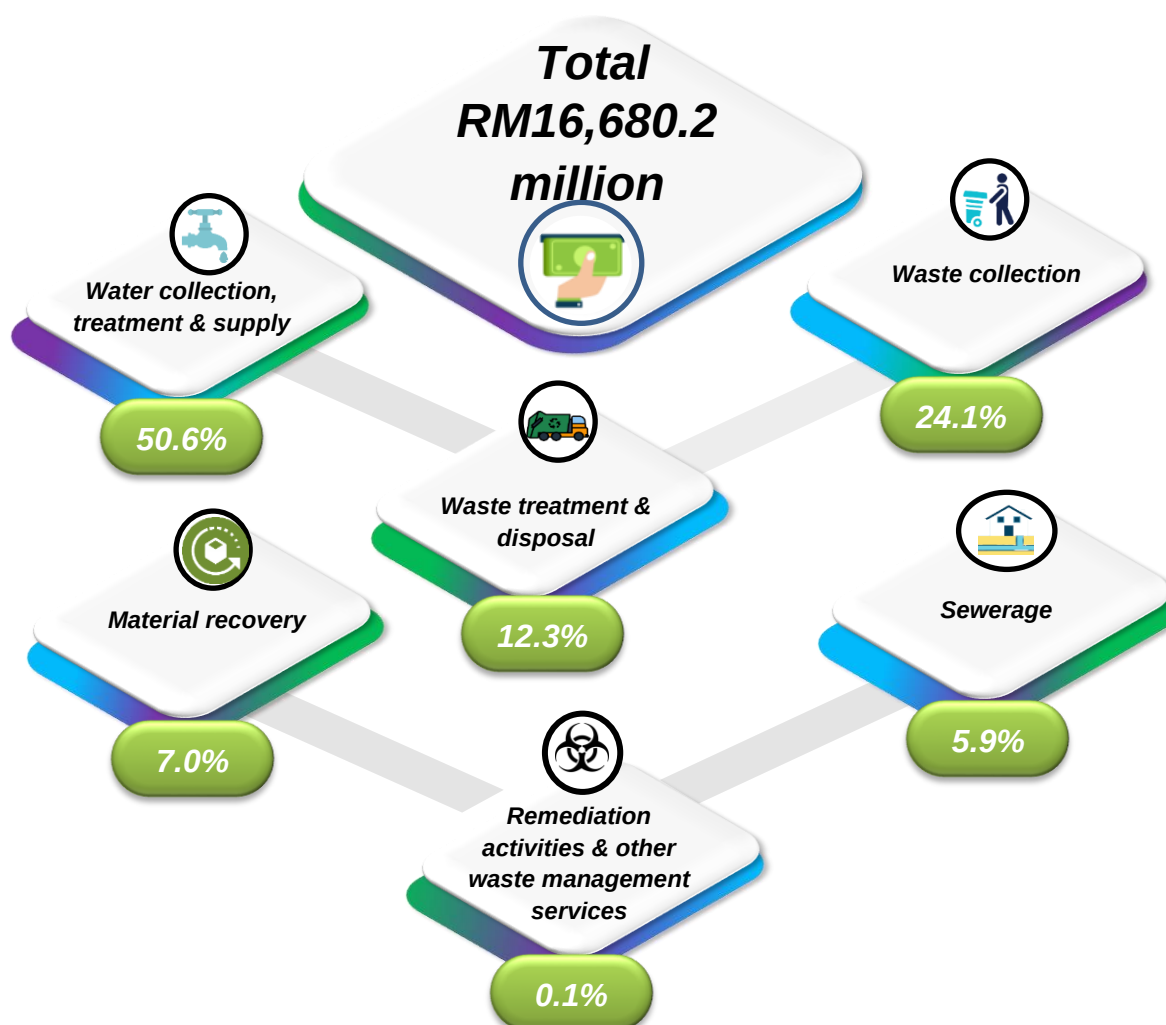
Exhibit 1: Key Statistics of The Water Supply; Sewerage, Waste Management and Remediation Activities Services, 2021



3. VALUE OF GROSS OUTPUT

The value of gross output in 2021 recorded RM16,680.2 million with a decrease of 10.7 per cent as compared to the previous year. The water collection, treatment & supply industry was the main contributor with RM8,443.8 million or a share of 50.6 per cent. Meanwhile, the waste collection industry with RM4,016.8 million (24.1%) and waste treatment & disposal with RM2,057.1 million (12.3%). These three industries represent 87.0 per cent of the total gross output value in 2021. On top of that, the industry of material recovery, sewerage and remediation activities & other waste management services contributed 7.0 per cent, 5.9 per cent and 0.1 per cent respectively.

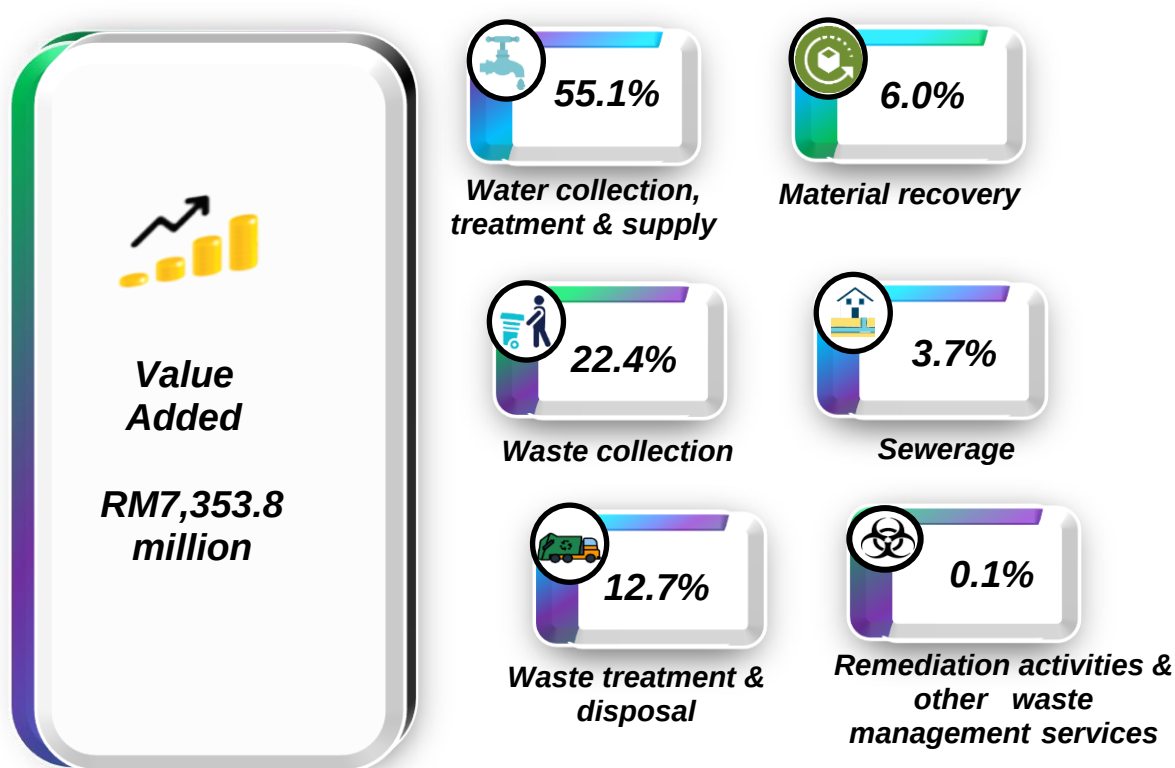
Exhibit 2: Value of Gross Output and Contribution by Industry Group, 2021



4. VALUE ADDED

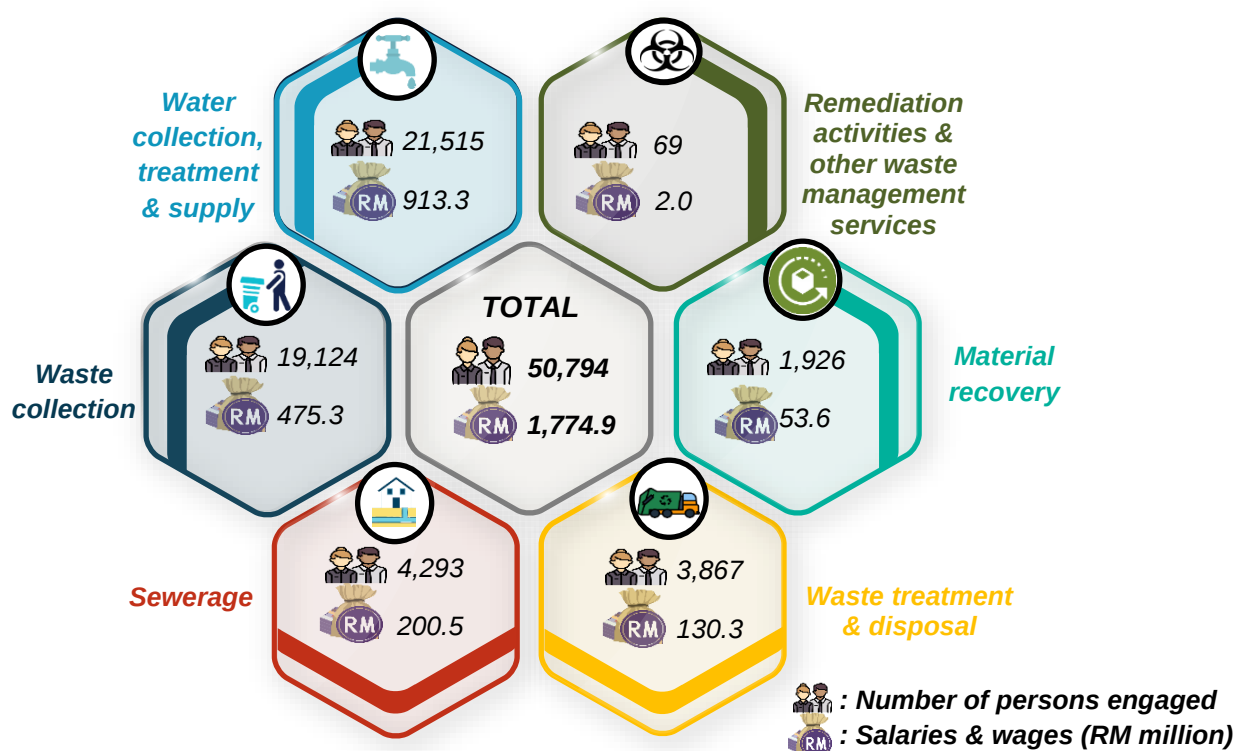
The value added in 2021 declined by 18.4 per cent from RM9,015.8 in 2020 to RM7,353.8 million. The water collection, treatment & supply industry contributed RM4,055.4 million with a share of 55.1 per cent. Meanwhile, the waste collection industry with RM1,643.8 million (22.4%) and waste treatment & disposal RM937.4 million (12.7%).

Exhibit 3: Value Added Contribution by Industry Group, 2021

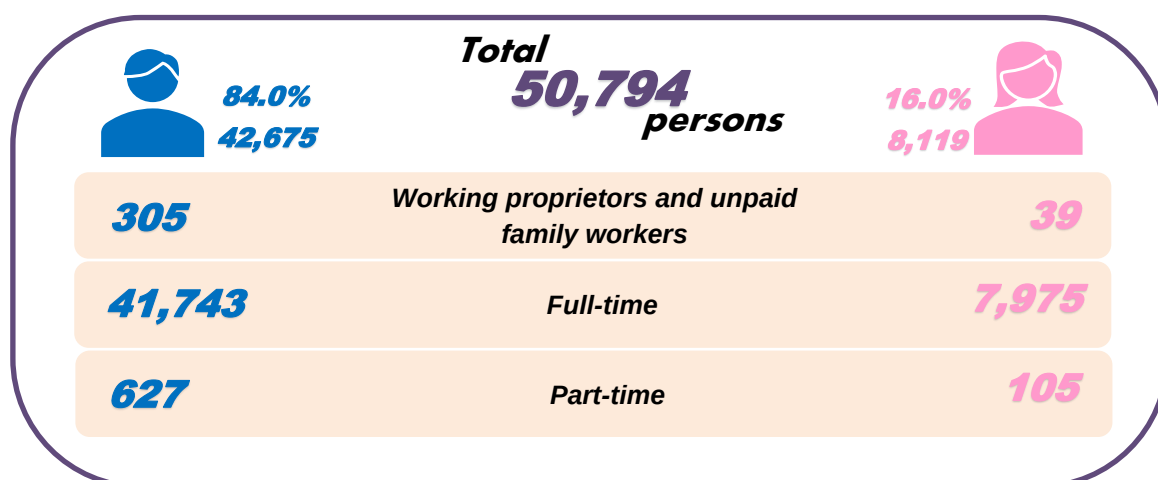


5. NUMBER OF PERSONS ENGAGED AND SALARIES & WAGES

The number of persons engaged in 2021 were 50,794 with a decline of 8.3 per cent as compared to the previous year. Meanwhile, the annual growth of salaries & wages rose 0.3 per cent to RM1,774.9 million as shown in Exhibit 4. The water collection, treatment & supply industry was the main contributor to the number of persons engaged with 21,515 persons (42.4%). At the same time this industry also contributed the most in salaries & wages with RM913.3 million (51.5%).

Exhibit 4: Number of Persons Engaged and Salaries & Wages by Industry Group, 2021

Out of 50,794 persons engaged, 97.9 per cent were full-time paid employees. Male employees dominated the workforce with 84.0 per cent with a total of 42,675 persons and 8,119 persons female employees.

Exhibit 5: Number of Persons Engaged by Category of Workers and Sex, 2021

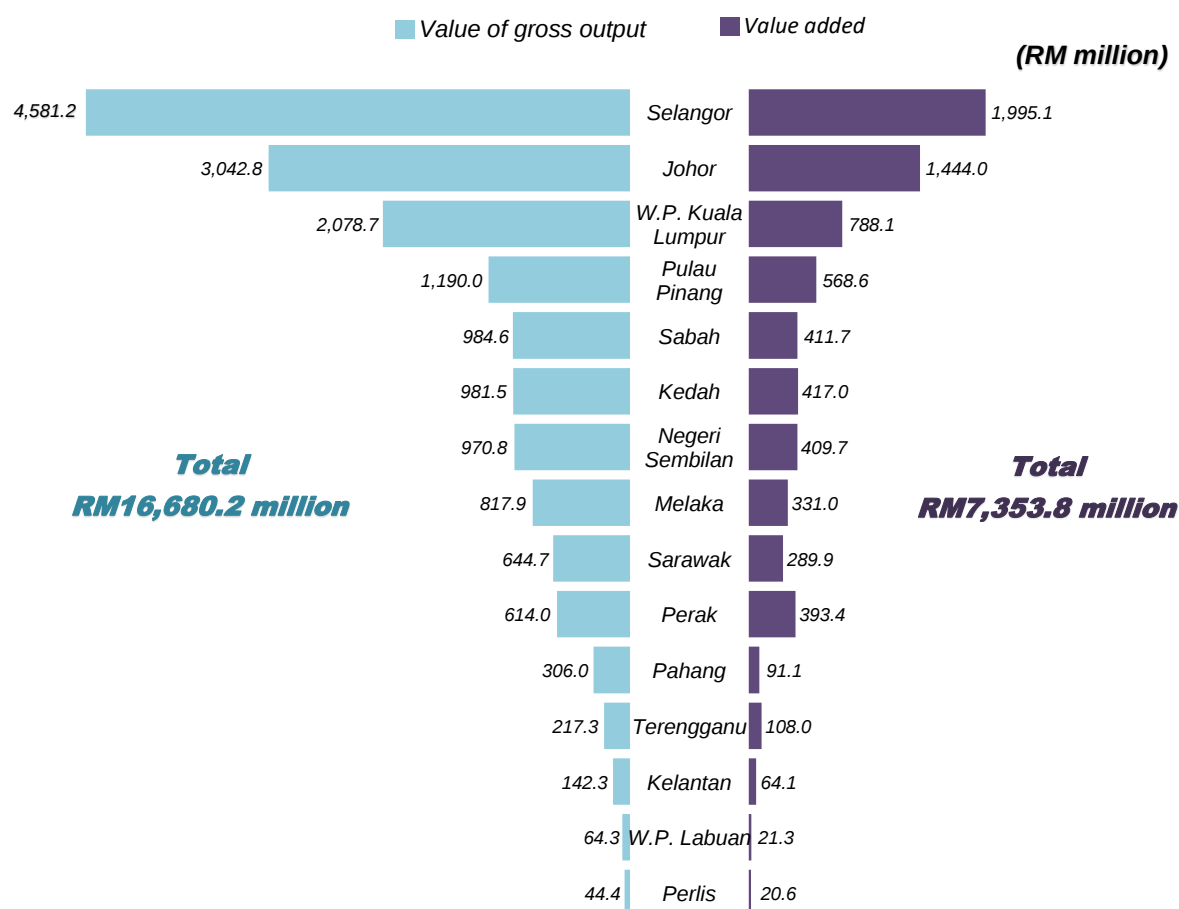
6. STATE PERFORMANCE

6.1 Value of Gross Output and Value Added

States performance for value of gross output showed Selangor, Johor and W.P. Kuala Lumpur were the top contributors with total share of 58.2 per cent or RM9,702.6 million. Selangor recorded the highest gross output value with RM4,581.2 million or 27.5 per cent. Johor and W.P. Kuala Lumpur recorded RM3,042.8 million (18.2%) and RM2,078.7 million (12.5%) respectively.

These three states were also the major contributors to the value added, which totals RM4,227.2 million and represents 57.5 per cent of the total. Selangor registered the highest value added RM1,995.1 million (27.1%). Johor and W.P. Kuala Lumpur with 19.6 per cent (RM1,444.0 million) and 10.7 per cent (RM788.1 million) respectively.

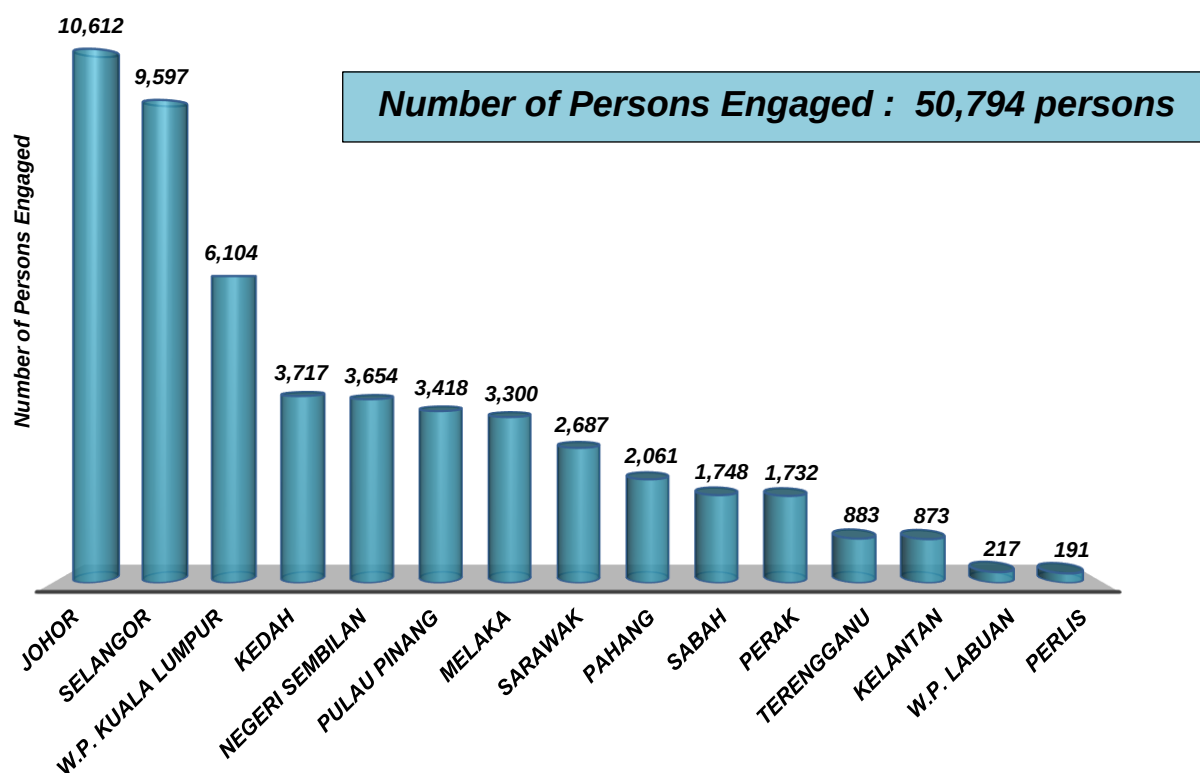
Exhibit 6: Value of Gross Output and Value Added by State, 2021



6.2 Number of Persons Engaged

Johor recorded the highest number of persons engaged in 2021 with 10,612 persons or a contribution of 20.9 per cent. This was followed by Selangor and W.P. Kuala Lumpur with 9,597 persons (18.9%) and 6,104 persons (12.0%) respectively. These three states accounted for 26,313 person (51.8%) of the total workforce in 2021.

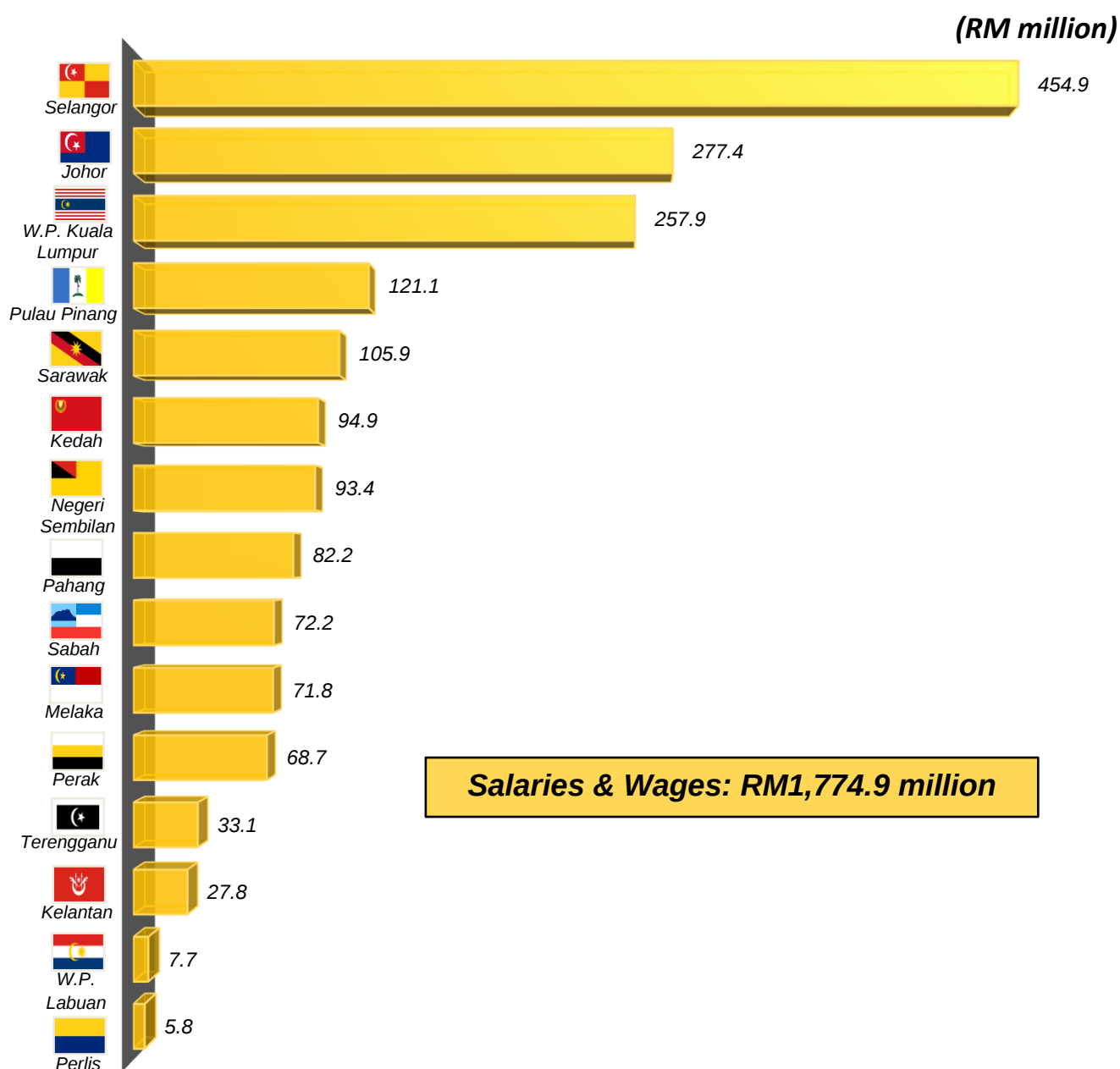
Chart 1: Number of Persons Engaged by State, 2021



6.3 Salaries & Wages

Selangor recorded the highest total salaries & wages paid with RM454.9 million or a contribution of 25.6 per cent. This was followed by Johor with RM277.4 million (15.6%) and W. P. Kuala Lumpur with RM257.9 million (14.5%). These three states contributed 55.8 per cent (RM990.3 million) to the overall salaries & wages paid in 2021.

Chart 2: Salaries & Wages by State, 2021



BAHAGIAN *PART*

2

JADUAL *TABLE*



Muka surat ini sengaja dibiarkan kosong
This page is deliberately left blank

Jadual 1: Statistik Utama Perkhidmatan Bekalan Air; Pembetulan, Pengurusan Sisa dan Aktiviti Pemulihan, 2015, 2017-2021
Table 1: Principal Statistics of Water Supply; Sewerage, Waste Management and Remediation Activities Services, 2015, 2017-2021

Tahun Year	Nilai output kasar Value of gross output	Nilai input perantaraan Value of intermediate input	Nilai ditambah Value added	Jumlah pekerja Total number of persons engaged	Gaji & upah Salaries & wages	Nilai harta tetap Value of fixed assets
	(RM'000)	(RM'000)	(RM'000)		(RM'000)	(RM'000)
2021	16,680,219	9,326,430	7,353,789	50,794	1,774,895	11,168,590
2020	18,687,612	9,671,783	9,015,829	55,388	1,769,476	10,781,688
2019	16,987,477	8,756,792	8,230,685	55,289	1,714,276	9,885,616
2018	15,600,779	8,028,295	7,572,484	54,708	1,695,931	9,078,647
2017	14,417,246	7,414,575	7,002,671	52,518	1,637,880	8,389,907
2015*	12,329,415	6,406,913	5,922,502	49,162	1,397,720	7,974,171

Nota / Note

* Merujuk kepada tahun banci

* Refers to census year

Jadual 1.1: Statistik Utama Perkhidmatan Bekalan Air; Pembetulan, Pengurusan Sisa dan Aktiviti Pemulihan mengikut Kumpulan Industri, 2021
 Table 1.1: Principal Statistics of Water Supply; Sewerage, Waste Management and Remediation Activities Services by Industry Group, 2021

Aktiviti <i>Activities</i>	Nilai output kasar <i>Value of gross output</i>	Nilai input perantaraan <i>Value of intermediate input</i>	Nilai ditambah <i>Value added</i>	Jumlah pekerja <i>Total number of persons engaged</i>	Gaji & upah <i>Salaries & wages</i>	Nilai harta tetap <i>Value of fixed assets</i>
	(RM'000)	(RM'000)	(RM'000)		(RM'000)	(RM'000)
Jumlah <i>Total</i>	16,680,219	9,326,430	7,353,789	50,794	1,774,895	11,168,590
Penakungan, perawatan dan bekalan air <i>Water collection, treatment and supply</i>	8,443,756	4,388,348	4,055,409	21,515	913,262	8,870,771
Pembetulan <i>Sewerage</i>	978,898	707,725	271,173	4,293	200,463	461,943
Pengumpulan sisa <i>Waste collection</i>	4,016,782	2,372,981	1,643,801	19,124	475,271	498,276
Rawatan dan pelupusan sisa <i>Waste treatment and disposal</i>	2,057,111	1,119,720	937,391	3,867	130,324	1,088,062
Pemulihan semula bahan <i>Material recovery</i>	1,168,636	726,814	441,822	1,926	53,569	246,773
Aktiviti pemulihan dan lain-lain perkhidmatan pengurusan sisa <i>Remediation activities and other waste management services</i>	15,036	10,843	4,194	69	2,005	2,765

Jadual 2: Statistik Utama Perkhidmatan Bekalan Air; Pembetungan, Pengurusan Sisa dan Aktiviti Pemulihan mengikut Negeri, 2021
Table 2: Principal Statistics of Water Supply; Sewerage, Waste Management and Remediation Activities Services by State, 2021

Negeri <i>States</i>	Nilai output kasar <i>Value of gross output</i>	Nilai input perantaraan <i>Value of intermediate input</i>	Nilai ditambah <i>Value added</i>	Jumlah pekerja <i>Total number of persons engaged</i>	Gaji & upah <i>Salaries & wages</i>	Nilai harta tetap <i>Value of fixed assets</i>
	(RM'000)	(RM'000)	(RM'000)		(RM'000)	(RM'000)
Jumlah <i>Total</i>	16,680,219	9,326,430	7,353,789	50,794	1,774,895	11,168,590
Johor	3,042,770	1,598,737	1,444,033	10,612	277,385	1,644,670
Kedah	981,536	564,530	417,007	3,717	94,947	278,731
Kelantan	142,262	78,191	64,071	873	27,819	986,025
Melaka	817,877	486,869	331,008	3,300	71,782	617,958
Negeri Sembilan	970,792	561,043	409,749	3,654	93,433	385,177
Pahang	305,979	214,922	91,057	2,061	82,157	60,970
Pulau Pinang	1,190,000	621,441	568,559	3,418	121,093	1,257,767
Perak	613,956	220,519	393,437	1,732	68,653	239,879
Perlis	44,357	23,749	20,607	191	5,862	4,584
Selangor	4,581,175	2,586,080	1,995,095	9,597	454,929	3,391,638
Terengganu	217,258	109,216	108,042	883	33,102	67,310
Sabah	984,632	572,886	411,746	1,748	72,212	402,536
Sarawak	644,667	354,720	289,948	2,687	105,903	592,828
W.P. Kuala Lumpur	2,078,664	1,290,555	788,109	6,104	257,955	1,182,440
W.P. Labuan	64,293	42,972	21,321	217	7,663	56,076
W.P. Putrajaya	-	-	-	-	-	-

Jadual 3: Bilangan Pekerja dan Gaji & Upah Perkhidmatan Bekalan Air; Pembetulan, Pengurusan Sisa dan Aktiviti Pemulihan mengikut Kategori Pekerja, 2021
Table 3: Number of Persons Engaged and Salaries & Wages of Water Supply; Sewerage, Waste Management and Remediation Activities Services by Category of Workers, 2021

Kategori pekerja <i>Category of workers</i>	Bilangan pekerja <i>Number of persons engaged</i>			Gaji & upah <i>Salaries & wages</i> (RM'000)
	Jumlah <i>Total</i>	Lelaki <i>Male</i>	Perempuan <i>Female</i>	
Jumlah <i>Total</i>	50,794	42,675	8,119	1,774,895
Jumlah pemilik yang bekerja dan pekerja keluarga tidak bergaji <i>Total working proprietors and unpaid family workers</i>	344	305	39	-
Jumlah pekerja bergaji (sepanjang masa) <i>Total paid employees (full-time)</i>	49,718	41,743	7,975	1,765,600
Pengurus, profesional dan penyelidik <i>Manager, professionals and researcher</i>	5,838	3,839	1,999	509,171
Juruteknik dan profesional bersekutu <i>Technicians and associate professionals</i>	4,637	4,140	497	197,279
Perkeranian dan pekerjaan yang berkaitan* <i>Clerical and related occupations</i>	28,103	23,332	4,771	821,879
Pekerja asas <i>Elementary occupations</i>	11,140	10,432	708	237,271
Pekerja bergaji (sambilan) <i>Paid employees (part-time)</i>	732	627	105	9,295

* Termasuk pekerja perkhidmatan & jualan, pekerja kemahiran & pekerja pertukangan yang berkaitan dan operator mesin & loji pemasangan
Includes service & sales workers, craft & related workers and plant & machine operators & assemblers

Jadual 4: Bilangan Pekerja dan Gaji & Upah Perkhidmatan Bekalan Air; Pembetulan, Pengurusan Sisa dan Aktiviti Pemulihan mengikut Kategori Kemahiran dan Jantina, 2021
Table 4: Number of Persons Engaged and Salaries & Wages of Water Supply; Sewerage, Waste Management and Remediation Activities Services by Category of Skills and Sex, 2021

Kategori kemahiran <i>Category of skills</i>	Bilangan pekerja <i>Number of persons engaged</i>			Gaji & upah <i>Salaries & wages</i> (RM'000)
	Jumlah <i>Total</i>	Lelaki <i>Male</i>	Perempuan <i>Female</i>	
Jumlah <i>Total</i>	49,718	41,743	7,975	1,765,600
* Mahir <i>Skilled</i>	10,475	7,979	2,496	706,450
** Separuh Mahir <i>Semi-Skilled</i>	28,103	23,332	4,771	821,879
*** Berkemahiran rendah <i>Low-Skilled</i>	11,140	10,432	708	237,271

* **Termasuk pengurus & profesional dan juruteknik & profesional bersekutu**
Includes managers & professionals and technicians & associate professionals

** **Termasuk pekerja sokongan perkeranian, pekerja perkhidmatan & jualan, pekerja kemahiran & pekerja pertukangan yang berkaitan dan operator mesin & loji pemasangan**
Includes clerical support workers, service & sales workers, craft & related trades workers and plant & machine operators & assemblers

*** **Termasuk pekerjaan asas**
Includes elementary occupations

Jadual 5: Perbelanjaan Modal dan Nilai Harta Tetap Perkhidmatan Bekalan Air; Pembetulan, Pengurusan Sisa dan Aktiviti Pemuliharaan mengikut Kumpulan Industri, 2021
 Table 5: Capital Expenditure and Value of Fixed Assets of Water Supply; Sewerage, Waste Management and Remediation Activities Services by Industry Group, 2021

Aktiviti <i>Activities</i>	Perbelanjaan modal <i>Capital expenditure</i>	Pelupusan <i>Disposal</i>	Susut nilai semasa <i>Current depreciation</i>	Nilai harta tetap <i>Value of fixed assets</i>
	(RM'000)	(RM'000)	(RM'000)	(RM'000)
Jumlah <i>Total</i>	1,121,861	274,045	1,356,799	11,168,590
Penakungan, perawatan dan bekalan air <i>Water collection, treatment and supply</i>	1,018,324	260,152	1,187,167	8,870,771
Pembetulan <i>Sewerage</i>	60,329	537	45,075	461,943
Pengumpulan sisa <i>Waste collection</i>	20,073	1,499	49,368	498,276
Rawatan dan pelupusan sisa <i>Waste treatment and disposal</i>	19,233	10,618	56,685	1,088,062
Pemulihan semula bahan <i>Material recovery</i>	3,867	1,210	18,077	246,773
Aktiviti pemulihan dan lain-lain perkhidmatan pengurusan sisa <i>Remediation activities and other waste management services</i>	36	29	427	2,765

BAHAGIAN *PART*

3

NOTA TEKNIKAL *TECHNICAL NOTES*



Muka surat ini sengaja dibiarkan kosong
This page is deliberately left blank

1. SKOP DAN LIPUTAN

Survei Ekonomi Tahunan 2022 meliputi pertubuhan berdaftar termasuk agensi bekalan air di bawah kerajaan negeri yang terlibat dalam sektor Perkhidmatan Bekalan Air; Pembetulan, Pengurusan Sisa dan Aktiviti Pemulihan. Sektor ini meliputi enam (6) kod industri di peringkat 3-digit mengikut Piawaian Klasifikasi Industri Malaysia (MSIC), 2008 Versi 1.0 seksyen E. Senarai lengkap industri yang diliputi adalah seperti di lampiran.

2. SENARAI SYARIKAT DAN PERTUBUHAN

Sumber maklumat utama bagi senarai pertubuhan ini diperoleh daripada Suruhanjaya Syarikat Malaysia (SSM). Selain itu, maklumat pertubuhan dikemaskini daripada pelbagai sumber seperti Suruhanjaya Perkhidmatan Air (SPAN), Jabatan Pengurusan Sisa Pepejal Negara (JPSPN), Pihak Berkuasa Tempatan (PBT) dan media massa.

Senarai pertubuhan dikemaskini dengan merekod sebarang perubahan status pertubuhan seperti tutup, tidak beroperasi, perubahan jenis aktiviti dan alamat pos/lokasi untuk memastikan maklumat yang terdapat dalam rangka adalah yang paling terkini termasuk pertambahan pertubuhan baru.

3. JENIS AKTIVITI PERNIAGAAN

Jenis aktiviti perniagaan merujuk kepada aktiviti utama dan sekunder. Aktiviti utama merujuk kepada aktiviti yang mana pertubuhan menumpukan sebahagian besar sumbernya atau memberi sumbangan besar dari segi pendapatan. Aktiviti sekunder didefinisikan sebagai aktiviti sampingan kepada aktiviti utama. Klasifikasi industri bagi pertubuhan adalah berasaskan kepada aktiviti utama dan Piawaian Klasifikasi Malaysia (MSIC), 2008 Versi 1.0 selaras dengan *International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4*.

4. KONSEP DAN DEFINISI

Konsep dan definisi yang diguna berasaskan kepada syor *International Recommendations for Industrial Statistics, 2008* oleh *United Nation Statistical Division*. Konsep berkenaan mengikut amalan yang sudah diterima pakai bagi memudahkan perbandingan data dibuat di peringkat antarabangsa.

Takrif yang digunakan adalah selaras dengan MSIC 2008 Versi 1.0 iaitu aktiviti yang berkaitan dengan perawatan dan bekalan air. Aktiviti yang berkaitan dengan pengurusan sisa turut merangkumi aktiviti pungutan, perawatan dan pelupusan seperti sisa terjadual, sisa pepejal dan air sisa daripada perindustrian dan isi rumah, termasuk juga pemulihan bahan dan tapak yang tercemar. Hasil sisa daripada proses perawatan boleh dilupus atau menjadi input kepada proses pengeluaran yang lain.

5. TAHUN SURVEI

Tahun survei adalah merujuk kepada tahun pelaksanaan survei.

6. TAHUN RUJUKAN

Tahun rujukan bagi penyiasatan ini adalah tahun takwim 2021. Pertubuhan yang mempunyai tahun kewangan yang berbeza daripada tahun takwim diminta menyediakan laporan mengikut tahun perakaunan atau kewangan yang meliputi sekurang-kurangnya enam (6) bulan dalam tahun rujukan.

7. KAEDAH PENGUMPULAN

Survei ini secara umumnya dijalankan dengan menggunakan tiga (3) kaedah pengumpulan data iaitu kaedah atas talian melalui portal e-AES; kutipan data melalui e-mel, pos, faks & telefon; dan kutipan data secara bersemuka.

8. RANGKA PERSAMPELAN

Rangka pensampelan adalah melibatkan pertubuhan aktif berjumlah **1,840** pertubuhan.

9. REKA BENTUK PERSAMPELAN

Rangka pensampelan bagi survei ini adalah pensampelan rawak strata satu peringkat. Kategori industri tiga (3) digit MSIC di peringkat negeri telah diklasifikasikan sebagai strata manakala pertubuhan sebagai unit pensampelan.

Setiap strata (industri) telah dibentuk kepada empat substrata untuk memastikan sampel yang diagihkan mengambil kira ciri-ciri ekonomi industri tersebut. Substrata utama bersifat heterogen diliputi secara liputan penuh. Manakala, substrata selainnya yang bersifat homogen disampelkan.

Substrata utama meliputi pertubuhan kategori besar yang mempunyai jumlah hasil yang signifikan dalam industri liputan manakala bagi substrata kedua hingga keempat berdasarkan kategori perusahaan kecil dan sederhana (PKS).

10. SAIZ SAMPEL

Statistik utama yang digunakan untuk penganggaran saiz sampel adalah jumlah hasil. Formula yang digunakan dalam penganggaran saiz sampel bagi strata adalah seperti berikut:

$$n = \frac{(\sum N_i S_i)^2}{V + \sum N_i S_i^2}$$

di mana,

n	=	Saiz sampel
N_i	=	Saiz populasi bagi strata i
S_i^2	=	Varian bagi strata i
V	=	Varian sasaran

$$V = RSE^2 \left(\frac{\hat{Y}_i}{Z} \right)^2$$

di mana,

$\hat{Y}_i$	=	Jumlah hasil bagi strata i
RSE	=	Ralat piawai relatif
Z	=	Nilai aras keyakinan

Sampel akan diagihkan kepada substrata dalam industri liputan dengan menggunakan kaedah *Neyman Allocation* seperti berikut:

$$n_{hi} = \left(\frac{N_h S_h}{\sum N_h S_h} \right) n'_i$$

$h = 2, 3 \text{ dan } 4$

$i = 1, 2, \dots k$

di mana,

n_{hi}	=	Saiz sampel bagi substrata h dalam strata i
N_h	=	Saiz populasi bagi substrata h
S_h	=	Sisihan piawaian bagi substrata h
n_i	=	Saiz sampel bagi strata i
h	=	Substrata
i	=	Strata

Semua pertubuhan kategori besar adalah terpilih, manakala pertubuhan bagi substrata kedua hingga keempat dipilih secara rawak mengikut kaedah pensampelan bersistematik.

11. WAJARAN PENSAMPELAN

Analisis berwajaran disediakan menggunakan wajaran bagi memastikan sampel yang dipilih dapat menggambarkan populasi survei. Wajaran yang diperlukan adalah wajaran di peringkat reka bentuk pensampelan dan wajaran tiada respons.

Wajaran reka bentuk pensampelan pada substrata h adalah seperti berikut:

$$W_h = \frac{N_h}{n_h}, n = 1, \dots, 4$$

di mana,

N_h = Bilangan populasi bagi substrata h

n_h = Bilangan sampel bagi substrata h

Wajaran tiada respons pada substrata h adalah seperti berikut:

$$NRW_h = \frac{1}{n'_h/n_h}, h = 1, \dots, 4$$

di mana,

n'_h = Bilangan sampel respons bagi substrata h

n_h = Bilangan sampel bagi substrata h

Kaedah pengiraan wajaran reka bentuk pensampelan selepas survei (*adjusted weight*) pada substrata h seperti berikut:

$$W'_h = W_h \times NRW_h, h = 1, \dots, 4$$

di mana,

W_h = Wajaran reka bentuk persampelan pada substrata h

NRW_h = Wajaran tiada respons pada substrata h

12. UNIT PELAPOR

Unit pelapor bagi survei ini ialah **pertubuhan**. Sesebuah pertubuhan secara ideal ditakrifkan sebagai “satu unit ekonomi yang bergiat di bawah satu hak milik atau penguasaan tunggal, iaitu di bawah satu entiti yang sah. Ia menjalankan satu jenis subsektor ekonomi utama di satu tempat/lokasi fizikal”. Setiap pertubuhan diberikan klasifikasi industri berdasarkan aktiviti utamanya dan bukannya mengikut aktiviti syarikat induk.

Setiap cawangan daripada organisasi yang mempunyai beberapa cawangan di lokasi yang berbeza dari segi konsep dianggap sebagai pertubuhan yang berlainan. Pertubuhan berkenaan diminta memberikan penyata yang berasingan bagi setiap kegiatannya dari segi nilai. Walau bagaimanapun, dari segi praktis akaun biasanya disediakan secara berpusat kerana kesukaran untuk memperoleh data yang berasingan bagi setiap unit atau cawangan. Entiti atau 'enterprise' ini akan dianggap sebagai satu unit pelapor dan dibenarkan mengemukakan soal selidik yang menggabungkan semua unit atau cawangannya.

13. NILAI OUTPUT KASAR

Nilai output kasar sektor bekalan air; pembetungan, pengurusan sisa dan aktiviti pemulihan meliputi:

- + Jumlah pendapatan daripada aktiviti utama
- + Bayaran diterima bagi kerja memproses yang dibuat untuk pertubuhan lain yang menggunakan bahan mereka sendiri
- + Pendapatan daripada perkhidmatan pembaikan dan penyelenggaraan
- + Nilai jualan barangan yang dibeli untuk dijual semula
- + Nilai daripada kerja perindustrian lain
- + Pendapatan daripada perkhidmatan profesional
- + Komisen dan brokeraj yang diterima
- + Pendapatan daripada sewa lain-lain
- + Royalti, hakcipta, perlesenan dan yuran francais
- + Lain-lain pendapatan operasi
- + Perbelanjaan modal yang dibuat dan dibina sendiri
- Pembelian air terawat
- Kos barang/bahan yang dibeli untuk dijual semula tanpa melalui proses selanjutnya
- + Perbelanjaan penyelidikan dan pembangunan (dalaman)

14. NILAI INPUT PERANTARAAN

Nilai input perantaraan sektor bekalan air; pembetungan, pengurusan sisa dan aktiviti pemulihan meliputi:

- + Pembelian air mentah
- + Bayaran kepada sub kontraktor

- + Caj pelupusan
- + Kos bahan mentah/komponen/bahagian yang digunakan
- + Bahan yang digunakan bagi pembaikan dan penyelenggaraan
- + Keperluan kilang
- + Alat tulis dan bekalan pejabat
- + Air yang dibeli
- + Tenaga elektrik yang dibeli
- + Bahan pembakar, pelincir dan gas yang digunakan
- + Bayaran bagi kerja memproses yang dibuat oleh pihak lain menggunakan bahan yang dibekalkan oleh pertubuhan ini
- + Bayaran pembaikan dan penyelenggaraan semasa yang dibuat oleh pihak lain bagi harta tetap pertubuhan ini
- + Perbelanjaan penyelidikan dan pembangunan
- + Pengangkutan barang
- + Perbelanjaan perjalanan
- + Bayaran perakaunan, audit dan kesetiausahaan
- + Bayaran guaman
- + Bayaran pengurusan
- + Bayaran keraian
- + Bayaran pos dan perkhidmatan kurier
- + Bayaran bank
- + Premium insurans dibayar ke atas bangunan, jentera, alat pengangkutan dan barang
- + Komisen dan bayaran agensi
- + Pengiklanan dan promosi
- + Bayaran professional
- + Bayaran pemprosesan data dan lain-lain perkhidmatan yang berkaitan dengan teknologi maklumat
- + Bayaran telekomunikasi
- + Lain-lain bayaran perkhidmatan bukan perindustrian
- + Sewaan operasi (tidak termasuk bayaran sewa tanah)
- + Bayaran royalti kepada: Organisasi bukan kerajaan/tajaan korporat
- + Lain-lain perbelanjaan operasi
- + Bayaran kepada pengarah tidak bekerja kerana kehadiran mereka dalam mesyuarat Lembaga Pengarah
- + Nilai pakaian percuma yang disediakan

- + Kos latihan kepada pekerja
- + Bayaran kepada pertubuhan lain yang membekalkan pekerja
- + Bayaran bagi perkhidmatan keselamatan

15. NILAI DITAMBAH

Nilai ditambah adalah perbezaan di antara output dan input perantaraan. Ia merupakan nilai ditambah barangan dan perkhidmatan dalam aktiviti ekonomi. Oleh itu, ia hampir menyamai dengan keuntungan perniagaan, gaji dan upah, susut nilai dan cukai tidak langsung; campur faedah yang dibayar dan tolak faedah yang diterima.

16. BILANGAN PEKERJA

Bilangan pekerja merujuk kepada bilangan orang yang bekerja pada bulan Disember atau pada tempoh pembayaran gaji terakhir bagi tahun rujukan. Bilangan orang yang bekerja dikategorikan seperti berikut:

a. Pemilik yang bekerja dan rakan niaga yang aktif

Kategori ini merujuk kepada semua pemilik perseorangan dan rakan niaga, sambilan atau sepenuh masa, yang bekerja dengan aktif dalam sesebuah pertubuhan itu. Justeru, ia tidak termasuk rakan niaga yang tidak aktif.

b. Pekerja keluarga tidak bergaji

Kategori ini meliputi semua ahli isi rumah kepada pemilik pertubuhan yang melaksanakan kerja tertentu (sepenuh masa atau sambilan) dan bekerja sekurang-kurangnya satu pertiga daripada waktu bekerja biasa yang diamalkan oleh pertubuhan berkenaan tanpa mendapat bayaran secara tetap, sama ada dalam bentuk wang tunai atau harta benda bagi kerja yang dilakukan. Biasanya pekerja berkenaan mendapat makanan, tempat tinggal dan bantuan lain sebagai sebahagian daripada ahli isi rumah pemilik tersebut dan terus mendapatnya sama ada ia bekerja atau tidak di dalam pertubuhan itu.

c. Pekerja bergaji (sepenuh masa)

Ia merujuk kepada semua pekerja bergaji yang bekerja sekurang-kurangnya enam jam sehari dan sekurang-kurangnya 20 hari sebulan.

d. Pekerja bergaji (sambilan)

Ia merujuk kepada semua pekerja bergaji yang bekerja kurang daripada enam jam sehari dan/atau kurang daripada 20 hari sebulan.

17. KATEGORI KEMAHIRAN

Kategori pekerjaan telah dikelaskan berdasarkan Piawaian Pengkelasan Pekerjaan Malaysia (MASCO) 2013 adalah seperti berikut:

e. Pekerja mahir

Pengurus, Profesional dan Juruteknik & Profesional Bersekutu;

f. Pekerja separuh mahir

Pekerja Sokongan Perkeranian; Pekerja Perkhidmatan & Jualan; Pekerja Kemahiran & Pekerja Pertukangan yang Berkaitan dan Operator Mesin & Loji dan Pemasang; dan

g. Berkemahiran rendah

Pekerja Asas

18. NILAI HARTA TETAP

Aset tetap ialah aset yang dihasilkan dan digunakan secara berulang kali atau berterusan dalam proses pengeluaran melebihi daripada setahun. Ia termasuk tanah, bangunan dan struktur, alat pengangkutan, komputer dan peralatan periferal, perisian komputer, peralatan mesin dan lain-lain, serta perabot dan pemasangan lain. Nilai harta awal dan akhir tahun 2021 adalah berasaskan nilai buku akaun. Pembelian, pindaan dan pembaikan besar atau perbelanjaan modal pada tahun berkenaan dikira pada nilai sebenar yang dibayar. Nilai aset yang dijual dalam tahun semasa juga dikira pada nilai sebenar.

19. PEMBUNDARAN

Jumlah bagi komponen mungkin berbeza dengan jumlah besar dalam jadual penerbitan disebabkan oleh pembundaran angka.

20. KADAR PERTUMBUHAN TAHUNAN

Pengiraan kadar pertumbuhan tahunan (r) adalah berdasarkan formula berikut:

$$y_t = y_0 (1 + r)^t$$

di mana,

$$r = \left[e^{\frac{1}{t} \ln \left(\frac{y_t}{y_0} \right)} - 1 \right] \times 100$$

di mana, y_t = Nilai pada tahun semasa
 y_0 = Nilai pada tahun sebelum
 t = Bilangan tahun, $y_t - y_0$
 r = Kadar pertumbuhan tahunan

21. SIMBOL DAN SINGKATAN

&	:	dan
%	:	peratus
}	:	cantum
-	:	tiada
0	:	kurang dari 0.5
r	:	pindaan
n.a	:	Tidak berkaitan
dll.	:	dan lain-lain
RM	:	Ringgit Malaysia
t.t.t.l.	:	tidak terkelas di tempat lain
W.P.	:	Wilayah Persekutuan

1. SCOPE AND COVERAGE

The Annual Economic Survey 2022 comprised of registered establishments including Water supply agencies under state government in the Water Supply; Sewerage, Waste Management and Remediation Activities Services sector. This sector encompass of six (6) industries at 3-digit level according to the Malaysia Standard Industrial Classification (MSIC), 2008 Version 1.0 section E. The complete lists of industry covered as per appendix.

2. LIST OF BUSINESS AND COMPANIES

The main source of information for the establishment list is from the Companies Commission of Malaysia (SSM). In addition, the establishments' information is updated from various sources such as the National Water Services Commission (SPAN), National Solid Waste Management Department (NSWMD), Local Authorities (PBT) and mass media.

List of establishments is updated in order to record any changes in the status of the establishments such as closed down, not in operation, change in activity and location/correspondence address to ensure that the frame is at the most current status including new establishments being added.

3. TYPE OF BUSINESS ACTIVITY

Type of business activity refers to both principal and secondary activities. The principal activity refers to the activity to which the establishment devoted most of its resources or activity which derived most of its income. Secondary activities are defined as those incidental or ancillary to the principal activity. The classification of the industry of the establishment is based on the principal activity and is in accordance with the Malaysia Standard Industrial Classification (MSIC), 2008 Version 1.0 in accordance with the International Standard Industrial Classification of All Economic Activities (ISIC) Revision 4.

4. CONCEPTS AND DEFINITIONS

Concepts and definitions used are based on the International Recommendations for Industrial Statistics, 2008 by United Nation Statistical Division. This concept adheres to accept practices, thereby facilitating data comparison at the international level.

The definition used is in accordance with the MSIC 2008 Version 1.0, which is activities related to water treatment and supply. Related activities in waste management is included encompass collection, treatment and disposal such as scheduled waste, solid waste and wastewater from industrial and household, including recovery materials and contaminated sites. The waste from the treatment process can be disposed off or used as input for other production processes.

5. SURVEY YEAR

Survey year refers to the year in which a survey was conducted.

6. REFERENCE YEAR

The reference year of the survey was the calendar year 2021. Establishments whose accounting year differed from the calendar year were requested to report according to the accounting year or financial year covering at least six (6) months in the reference year.

7. METHOD OF COLLECTION AND ESTIMATION

This survey is generally conducted through three (3) methods of data collection, namely, online method through the e-AES portal; data collection via e-mail, post, fax and telephone; and face-to-face data collection.

8. SAMPLING FRAME

*Based on the identified population, the sampling frame covered **1,840** active establishments.*

9. SAMPLING DESIGN

The sampling design of the survey is a one-stage stratified random sampling. Categories of industries at three (3) digit MSIC at state level have been classified as stratum and the establishment as the sampling unit.

Each stratum (industry) has been set up into four substrata to ensure the distributed sample takes into account the economic characteristics of the industry. The main substratum is heterogeneous and was fully covered. Whereas, other substratum that is homogeneous were sampled.

The main substratum includes large establishments that have significant total revenue in the industry while for the second to fourth substratum is based on small and medium enterprise (SME) categories.

10. SAMPLE SIZE

The main statistics used to estimate the sample size is the total revenue. The formula used in the estimation of the sample size for a stratum is as follows:

$$n = \frac{(\sum N_i S_i)^2}{V + \sum N_i S_i^2}$$

where,

n	=	Sample size
N_i	=	Population size for stratum i
S_i^2	=	Variance for stratum i
V	=	Desired variance

$$V = RSE^2 \left(\frac{\hat{Y}_i}{Z} \right)^2$$

where,

$\hat{Y}_i$	=	Total revenues for stratum i
RSE	=	Relative standard error
Z	=	Value of confidence level

Sample is distributed to substratum of the industry using Neyman Allocation Method as follows:

$$n_{hi} = \left(\frac{N_h S_h}{\sum N_h S_h} \right) n'_i$$

$h = 2, 3 \text{ and } 4$

$i = 1, 2, \dots k$

where,

n_{hi}	=	Sample size for substratum h of stratum i
N_h	=	Population size for substratum h
S_h	=	Standard deviation for substratum h
n_i	=	Sample size for stratum i
h	=	Substratum
i	=	Stratum

All establishments of the large categories were selected while establishments of the second to the fourth substratum were randomly selected using systematic random sampling.

11. SAMPLING WEIGHTS

Weighted analysis is done using sampling weight to ensure that the selected sample can reflect the population survey. The weights required are the sampling design weight and non-response weight.

The sampling design weight for the establishment at stratum h is as follows:

$$W_h = \frac{N_h}{n_h}, n = 1, \dots, 4$$

where,

N_h = Total population of substratum h

n_h = Total sample of substratum h

Non response weight at substratum h as below:

$$NRW_h = \frac{1}{n'_h/n_h}, h = 1, \dots, 4$$

where,

n'_h = Number of response sample size for substratum h

n_h = Number of sample size for substratum h

The method of calculating the sampling design weight after the survey (adjusted weight) on substratum h as below:

$$W'_h = W_h \times NRW_h, h = 1, \dots, 4$$

where,

W_h = Sampling design weight at substratum h

NRW_h = Non response weight at substratum h

12. REPORTING UNIT

The reporting unit used in the survey was **establishment**. An establishment is defined as "an economic unit that engaged in one activity, under a single legal entity and operating in a single physical location". Each establishment was assigned to an industry classification based on its principal activity.

Each branch of a multi-branch organisation at a different location was conceptually treated as a different establishment. The establishment was requested to give separate returns for each activity in terms of value. However, if in practice, the accounts were centrally kept such that it was not possible to obtain separate data for each individual unit or branch. That entity or enterprise was treated as a single reporting unit and allowed to submit a consolidated questionnaire covering all units or branches.

13. VALUE OF GROSS OUTPUT

The value of gross output of water supply; sewerage, waste management and remediation activities sector includes:

- + *Total income from main activities*
- + *Fees received for processing of goods for other establishments on their materials*
- + *Income from service for repairs and maintenance*
- + *Value of goods/ materials purchased for resale without further*
- + *Value of other industrial work done*
- + *Professional fees received*
- + *Commissions and brokerage earned*
- + *Rental income received from others*
- + *Royalties, copyrights, licensing and franchise fees*
- + *Others operating income*
- + *Capital expenditure by self-produced/ built*
- *Purchase of treated water*
- *Cost of goods/materials purchased for resale without undergoing further processing*
- + *Research and development expenditure (in-house)*

14. VALUE OF INTERMEDIATE INPUT

Value of intermediate input of water supply; sewerage, waste management and remediation activities sector includes:

- + *Purchase or raw water*
- + *Subcontractor payment*
- + *Disposal charges*
- + *Cost of raw materials/components/parts used*

- + *Materials used for repairs and maintenance*
- + *Factory requisites*
- + *Stationery and office supplies consumed*
- + *Water purchased*
- + *Electricity purchased*
- + *Fuel, lubricants and gas used*
- + *Payments for processing work done by others on materials supply by this establishment*
- + *Payments for current repairs and maintenance work done by others on this establishment's fixed assets*
- + *Research and development expenditure*
- + *Transportation*
- + *Travelling expenses*
- + *Accounting, auditing and secretarial fees*
- + *Legal fees*
- + *Management fees*
- + *Entertainment expenses*
- + *Postage and courier service charges*
- + *Bank charges*
- + *Insurance premium on building, machinery, transport equipment and goods.*
- + *Commission and agency fees*
- + *Advertising and promotion*
- + *Professional charges*
- + *Payment for data processing and other services related to information technology*
- + *Telecommunication fees*
- + *Other payments for non-industrial services*
- + *Operational lease (exclude payment for rent of land)*
- + *Royalties paid to: Non-Government organisations/corporate sponsorship*
- + *Others operating expenditure*
- + *Fees paid to non-working directors for their attendance at Board of Directors, meetings*
- + *Value of free wearing apparel provided*
- + *Staff training cost*
- + *Payment to other establishment for providing workers*
- + *Payment for security services*

15. VALUE ADDED

Value added is the difference between output and intermediate input. It represents the added value of goods and services by economic activity. Hence, it is approximately equivalent to commercial profit, salaries and wages, depreciation and indirect taxes; plus, interest paid less interest received.

16. NUMBER OF PERSONS ENGAGED

Employment covers all persons engaged during December or the last pay period of the reference year. The number of persons engaged was classified under the following categories:

a. **Working proprietors and active business partners**

This category refers to all individual proprietors and partners, part-time or full time, who are actively engaged in the work of the establishment. Therefore, excludes silent and inactive partners.

b. **Unpaid family workers**

This is defined as all persons (full-time or part-time) in the household of any of the owners of the establishment who perform a specified job and work for a minimum of one third of the normal working time for the establishment, but do not receive regular payment either in cash or in kind for the work done. Such workers generally receive food, shelter and other support as part of the household of an owner but this would continue whether they worked in the establishment or not.

c. **Paid employees (full-time)**

This is defined as all paid workers who work for at least 6 hours a day and at least 20 days a month.

d. **Paid employees (part-time)**

This is defined as all paid workers who work for less than 6 hours a day and/or less than 20 days a month.

17. CATEGORY OF SKILLS

Job category has also been categorized according to Malaysia Standard Classification of Occupations 2013 (MASCO) as follow:

a. High-skilled

Managers, Professionals, Technicians and Associate Professionals;

b. Semi-skilled

Clerical Support Workers; Service & Sales Workers; Craft & Related Trades Workers; Plant and Machine Operators & Assemblers; and

c. Low-skilled

Elementary occupations

18. VALUE OF FIXED ASSETS

Fixed assets are produced assets that are used repeatedly or continuously in production processes for more than one year. This includes land, buildings and structure, transport equipment, computer and peripheral equipment, other machinery, equipment and furniture and fittings. Value of fixed assets as at the beginning and end of 2021 was based on net book value. Purchases, alterations and major repairs or capital expenditure during the year were valued at actual costs incurred. Value of fixed assets sold during the year refers to the actual value.

19. ROUNDING

The sum of the components may not add up to the total in the tables presented due to rounding.

20. ANNUAL GROWTH RATE

The calculation of annual growth rate (r) is based on the following formula:

$$y_t = y_0 (1 + r)^t$$

where,

$$r = \left[e^{\frac{1}{t} \ln \left(\frac{y_t}{y_0} \right)} - 1 \right] \times 100$$

where,

y_t	=	Value at current year
y_0	=	Value at previous year
t	=	Number of years, $y_t - y_0$
r	=	Compound annual growth rate

21. SYMBOLS AND ABBREVIATIONS

&	:	and
%	:	per cent
}	:	combine
-	:	nil
0	:	Less than 0.5
r	:	revised
n.a	:	Not applicable
etc.	:	et cetera
RM	:	Ringgit Malaysia
n.e.c	:	not elsewhere classified
W.P.	:	Wilayah Persekutuan

LAMPIRAN APPENDIX



Muka surat ini sengaja dibiarkan kosong
This page is deliberately left blank

Piawaian Klasifikasi Industri Malaysia 2008 Ver. 1.0
Malaysia Standard Industrial Classification 2008 Ver. 1.0

Kumpulan Groups	Perkara Items	Keterangan Description	MSIC 2000
360	Penakungan, perawatan dan bekalan air <i>Water collection, treatment and supply</i>		
	36001	Penulenan dan pengagihan air untuk tujuan bekalan air <i>Purification and distribution of water for water supply purposes</i>	01400p, 41000p
	36002	Penyahmasinan air laut atau bawah tanah untuk menghasilkan air sebagai kepentingan produk utama <i>Desalting of sea or ground water to produce water as the principal product of interest</i>	41000p
370	Pembetungan <i>Sewerage</i>		
	37000	Pembetungan dan aktiviti-aktiviti yang seumpamanya <i>Sewerage and similar activities</i>	90001p
381	Pengumpulan sisa <i>Waste collection</i>		
	38111	Pengumpulan sisa pepejal yang tidak berbahaya (cth. sampah) di kawasan setempat <i>Collection of non-hazardous solid waste (i.e garbage) within a local area</i>	90002
	38112	Pengumpulan bahan kitar semula <i>Collection of recyclable materials</i>	90002p
	38113	Pengumpulan sampah dalam tong sampah di kawasan awam <i>Collection of refuse in litter-bins in public places</i>	90002p
	38114	Pengumpulan sisa pembinaan dan runtuh <i>Collection of construction and demolition waste</i>	90003p
	38115	Operasi stesen pemindahan pembuangan sisa tidak berbahaya <i>Operation of waste transfer stations for non-hazardous waste</i>	90001p
	38121	Pengumpulan sisa berbahaya <i>Collection of hazardous waste</i>	90003p
	38122	Operasi stesen pemindahan pembuangan bagi sisa berbahaya <i>Operation of waste transfer stations for hazardous waste</i>	90003p

Kumpulan Groups	Perkara Items	Keterangan Description	MSIC 2000
382	Rawatan dan pelupusan sisa <i>Waste treatment and disposal</i>		
	38210	Rawatan dan pelupusan sisa tidak berbahaya <i>Treatment and disposal of non-hazardous waste</i>	90002p, 24120p
	38220	Rawatan dan pelupusan sisa berbahaya <i>Treatment and disposal of hazardous waste</i>	90002p, 90003p, 23300p
383	Pemulihan semula bahan <i>Material recovery</i>		
	38301	Meremukkan secara mekanikal sisa logam <i>Mechanical crushing of metal waste</i>	37101, 37109p
	38302	Meleraikan peralatan automobil, komputer, televisyen dan peralatan lain untuk pemulihan bahan <i>Dismantling of automobiles, computers, televisions and other equipment for material recover</i>	37109p
	38303	Memulih guna getah seperti tayar terpakai untuk menghasilkan bahan mentah sekunder <i>Reclaiming of rubber such as used tires to produce secondary raw material</i>	37202
	38304	Penggunaan semula produk getah <i>Reuse of rubber products</i>	37202p
	38309	Pemulihan bahan t.t.t.l <i>Materials recovery n.e.c.</i>	37109p, 37201p, 37209p
390	Aktiviti pemulihan dan lain-lain perkhidmatan pengurusan sisa <i>Remediation activities and other waste management services</i>		
	39000	Aktiviti pemulihan dan lain-lain perkhidmatan pengurusan sisa <i>Remediation activities and other waste management services</i>	45102p, 45104p, 90001p, 90002p, 90003p

**PERTANYAAN BERHUBUNG DENGAN PENERBITAN INI BOLEH JUGA DIBUAT DI
PEJABAT PERANGKAAN NEGERI SEPERTI BERIKUT:**

Pengarah,
Jabatan Perangkaan Malaysia Negeri Johor,
Tingkat 14, Menara Tabung Haji,
Jalan Air Molek,
80000 Johor Bahru, Johor.
Tel. : 07-225 3700
Faks : 07-224 9972
E-mel : jpjohor@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Kedah,
Aras 1, Zon C, Wisma Persekutuan,
Pusat Pentadbiran Kerajaan Persekutuan,
Bandar Muadzam Shah,
06550 Anak Bukit, Kedah.
Tel. : 04-700 1240
Faks : 04-733 8412
E-mel : jpkedah@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Kelantan,
Tingkat 8, Bangunan Persekutuan,
Jalan Bayam,
15514 Kota Bharu, Kelantan.
Tel. : 09-741 9449
Faks : 09-748 2142
E-mel : jpkelantan@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Melaka,
Aras 7 & 8, Wisma Persekutuan,
Jalan MITC, Hang Tuah Jaya,
75450, Ayer Keroh,
Melaka.
Tel. : 06-252 2725
Faks : 06-252 2711
E-mel : jpmelaka@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Sembilan,
Tingkat 12, Wisma Persekutuan,
Jalan Dato' Abdul Kadir,
70000 Seremban,
Negeri Sembilan.
Tel. : 06-765 5000
Faks : 06-765 5002
E-mel : jpnsembilan@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Pahang,
Tingkat 7, Bangunan Persekutuan,
Jalan Gambut,
25000 Kuantan, Pahang.
Tel. : 09-516 3931/7
Faks : 09-514 4636
E-mel : jppahang@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Pulau Pinang,
Tingkat 6, Bangunan Persekutuan,
10400 Jalan Anson,
Pulau Pinang.
Tel. : 04-226 6244
Faks : 04-229 9499
E-mel : jppulaupinang@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Perak,
Tingkat 3, Blok A, Bangunan Persekutuan Ipoh,
Jalan Dato' Seri Ahmad Said (Greentown),
30450 Ipoh, Perak.
Tel. : 05-243 6107
Fax : 05-255 1073
E-mel : jpperak@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Perlis,
Bangunan Perodua Kangar,
No. 2C, Persiaran Jubli Perak
01000 Kangar, Perlis.
Tel. : 04-976 7381/9025
Faks : 04-976 8950
E-mel : jpperlis@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Selangor,
Tingkat 9, Bangunan Darul Ehsan,
Jalan Indah, Seksyen 14,
40000 Shah Alam, Selangor.
Tel. : 03-5515 0200
Faks : 03-5518 0408
E-mel : jpselangor@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Terengganu,
Tingkat 9, Wisma Persekutuan,
Jalan Sultan Ismail,
20200 Kuala Terengganu, Terengganu.
Tel. : 09-622 3062
Faks : 09-622 9659
E-mel : admin_jptrg@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Sabah,
Tingkat 1-3, Blok C,
Kompleks Pentadbiran Kerajaan Persekutuan Sabah,
Jalan UMS, Beg Berkunci 2046,
88999 Kota Kinabalu, Sabah.
Tel. : 088-484 602
Faks : 088-484 659
E-mel : jpsabah@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Sarawak,
Tingkat 7 & 8, Bangunan Tun Datuk Patinggi
Tuanku Haji Bujang, Jalan Simpang 3,
93514 Kuching, Sarawak.
Tel. : 082-240 287
Faks : 082-242 609
E-mel : sarawak@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia
Wilayah Persekutuan,
Tingkat 14 & 15, Wisma FGV,
Jalan Raja Laut,
50350 Kuala Lumpur.
Tel. : 03-2267 2400
Faks : 03-2691 0639
E-mel : dosmwp@dosm.gov.my

ENQUIRIES ABOUT THIS PUBLICATION CAN ALSO BE MADE AT THE FOLLOWING STATE STATISTICS OFFICES:

Director,
Department of Statistics, Malaysia Johor,
14th Floor, Menara Tabung Haji,
Jalan Air Molek,
80000 Johor Bahru, Johor.
Tel. : 07-225 3700
Fax : 07-224 9972
Email : jjphohor@dosm.gov.my

Director,
Department of Statistics, Malaysia Kedah,
1st Floor, Zon C, Wisma Persekutuan,
Pusat Pentadbiran Kerajaan Persekutuan,
Bandar Muadzam Shah,
06550 Anak Bukit, Kedah.
Tel. : 04-700 1240
Fax : 04-733 8412
Email : jpkedah@dosm.gov.my

Director,
Department of Statistics, Malaysia Kelantan,
8th Floor, Bangunan Persekutuan,
Jalan Bayam,
15514 Kota Bharu, Kelantan.
Tel. : 09-741 9449
Fax : 09-748 2142
Email : jpkelantan@dosm.gov.my

Director,
Department of Statistics, Malaysia Melaka,
7th & 8th Floor, Wisma Persekutuan,
Jalan MITC, Hang Tuah Jaya,
75450, Ayer Keroh,
Melaka.
Tel. : 06-252 2725
Fax : 06-252 2711
Email : jpmelaka@dosm.gov.my

Director,
Department of Statistics, Malaysia Negeri Sembilan,
12th Floor, Wisma Persekutuan,
Jalan Dato' Abdul Kadir,
70000 Seremban,
Negeri Sembilan.
Tel. : 06-765 5000
Fax : 06-765 5002
Email : jpnsembilan@dosm.gov.my

Director,
Department of Statistics, Malaysia Pahang,
7th Floor, Bangunan Persekutuan,
Jalan Gambut,
25000 Kuantan, Pahang.
Tel. : 09-516 3931/7
Fax : 09-514 4636
Email : jppahang@dosm.gov.my

Director,
Department of Statistics, Malaysia, Pulau Pinang,
6th Floor, Bangunan Persekutuan,
10400 Jalan Anson,
Pulau Pinang.
Tel. : 04-226 6244
Fax : 04-229 9499
Email : jppulaupinang@dosm.gov.my

Director,
Department of Statistics, Malaysia Perak,
3rd Floor, Block A, Bangunan Persekutuan Ipoh,
Jalan Dato' Seri Ahmad Said (Greentown),
30450 Ipoh, Perak.
Tel. : 05-243 6107
Fax : 05-255 1073
Email : jpperak@dosm.gov.my

Director,
Department of Statistics, Malaysia Perlis,
Bangunan Perodua Kangar,
No. 2C, Persiaran Jubli Perak
01000 Kangar, Perlis.
Tel. : 04-976 7381/9025
Faks : 04-976 8950
Email : jpperlis@dosm.gov.my

Director,
Department of Statistics, Malaysia Selangor,
9th Floor, Bangunan Darul Ehsan,
Jalan Indah, Seksyen 14,
40000 Shah Alam, Selangor.
Tel. : 03-5515 0200
Fax : 03-5518 0408
Email : jpselangor@dosm.gov.my

Director,
Department of Statistics, Malaysia Terengganu,
9th Floor, Wisma Persekutuan,
Jalan Sultan Ismail,
20200 Kuala Terengganu, Terengganu.
Tel. : 09-622 3062
Fax : 09-622 9659
E-mel : admin_jptrg@dosm.gov.my

Director,
Department of Statistics, Malaysia Sabah,
Level 1-3, Block C,
Kompleks Pentadbiran Kerajaan Persekutuan Sabah,
Jalan UMS, Beg Berkunci 2046,
88999 Kota Kinabalu, Sabah.
Tel. : 088-484 602
Fax : 088-484 659
Email : jpsabah@dosm.gov.my

Director,
Department of Statistics, Malaysia Sarawak,
7th & 8th Floor, Bangunan Tun Datuk Patinggi
Tuanku Haji Bujang, Jalan Simpang 3,
93514 Kuching, Sarawak.
Tel. : 082-240 287
Fax : 082-242 609
Email : sarawak@dosm.gov.my

Director,
Department of Statistics, Malaysia
Federal Territories,
14th & 15th Floor, Wisma FGV,
Jalan Raja Laut,
50350 Kuala Lumpur.
Tel. : 03-2267 2400
Fax : 03-2691 0639
Email : dosmwp@dosm.gov.my



www.dosm.gov.my



20 OKT 2016-2030



PSSN



**MALAYSIA
MADANI**