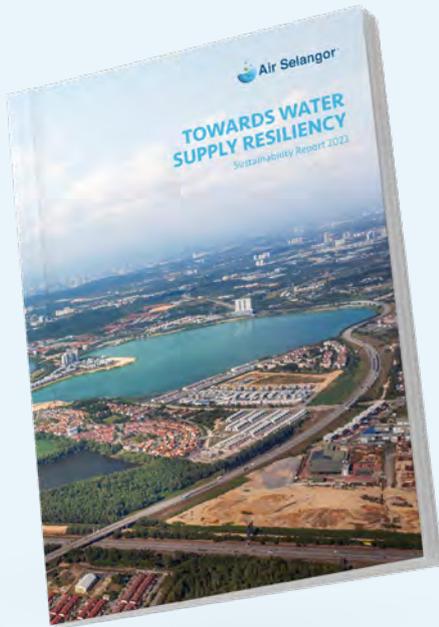


TOWARDS WATER SUPPLY RESILIENCY

Sustainability Report 2022





COVER RATIONALE

Our Sustainability Report 2022's theme, 'Towards Water Supply Resiliency' conveys our commitment to addressing the critical global issue of water supply and reflects our proactive approach in building resilience to mitigate risks and secure water security for our nation. Our forward-looking strategies and actions ensure that we continue to deliver reliable and clean water while upholding our environmental stewardship by being part of the solution to climate change. This report also symbolises our dedication to building a sustainable water future to safeguard the communities we serve.



ABOUT THIS REPORT

Pengurusan Air Selangor Sdn Bhd's (Air Selangor) Sustainability Report 2022 contains detailed concise and balanced information about the Company's approach to managing its material impacts on the economy, environment and society. This annual publication of the Sustainability Report tracks the progress of the Company's sustainability strategy, initiatives and programmes carried out and performance recorded for the period from 1 January to 31 December 2022.

This report covers all of Air Selangor's operations at its Headquarters, 10 customer service offices, 12 regional offices and all operational assets located in Selangor, Kuala Lumpur, Putrajaya and Pahang. Furthermore, this report is prepared with reference to the Global Reporting Initiative (GRI) Standards and the Sustainability Accounting Standard (SASB) for Water Utilities and Services. The relevant GRI indicators and Sustainability Disclosures Topics and Accounting Metrics are listed in the GRI Content Index and SASB Standards table, respectively, on pages 87 to 90.

Some data from previous years have been restated and this has been indicated in the footnotes of tables and charts and in the footnotes of the Performance Data section of this report, where applicable.

FEEDBACK

Air Selangor welcomes feedback and comments on the sustainability disclosures in this report. Please contact us at:

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Sustainability and Water Conservation
Section, Risk Management Department,**
Pengurusan Air Selangor Sdn Bhd,
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Scan here to view our
Sustainability Report online

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CHAIRMAN'S NOTE

Assalamualaikum warahmatullahi wabarakatuh. Salam sejahtera and greetings to all of you.

2022 has been a transition year for most of the world and Malaysia as we began to see COVID-19 waning in its severity, especially in countries with high vaccination rates. Without a doubt, the COVID-19 lockdown period put many of Selangor's and Malaysia's priorities on the backburner as the primary aim was to save lives and livelihoods. Now, it is time to redouble our efforts towards our Environmental, Social and Governance (ESG) responsibilities.

In Malaysia, we are constantly reminded of climate change's environmental and social impacts due to the risk of seasonal floods afflicting our country.

In 2022, it was estimated by the Department of Statistics Malaysia that damage caused by the floods cost the nation RM600 million.

At Air Selangor, we believe that it is paramount for all stakeholders to collectively reduce our carbon footprint and mitigate the impact of climate change to save our planet's future.

Therefore, I am pleased to note that Air Selangor's third Sustainability Report magnifies our commitment to upholding and striving towards realising the United Nations Sustainable Development Goals (UN SDGs), and reflects our pursuit of a better place for future generations. As the nation's largest water operator and a responsible corporate citizen, Air Selangor's ESG practices are at the forefront of our business and aims to steer the organisation forward to address our environmental and social risks.



The Selangor state's 10-year plan has included initiatives to study the feasibility of tapping into new water bodies, such as lakes and to create an interconnected system that links lakes, with rivers to strengthen water security further.

To combat this, improvement in water delivery mechanisms can help in reducing NRW from 28.6% in 2020 to the target of 25% in 2025. While Air Selangor has committed our efforts to sustainably reducing NRW, I want the group to redouble their efforts to further reduce NRW, especially once construction of the treatment plants in the pipeline is near completion.

Air Selangor also supports the Selangor government's Skim Air Darul Ehsan (SADE), which is to ensure equal access to clean water for all, especially by aiding the low-income households with the entitlement of 20m³ of water supply monthly for free. In 2022, the utility company processed 23,553 applications, and 301,549 recipients benefitted from the SADE programme, with the Selangor State Government bearing more than RM30 million in costs.

Focusing on Water Security

Water scarcity is a major threat and presents one of the biggest challenges of urbanisation. When coupled with increasingly extreme swings between droughts and floods, the management of water resources becomes even more complicated. The effects of climate change have also altered hydrological characteristics and with critical local water sources not being preserved, there is significant pressure on available water reserves.

In the context of the global economy, the situation affects essential industries, from food and energy production to displacement of people through migration. According to the World Bank, more than 216 million people are expected to move within and out of their countries to avoid climate change-related disasters. Water security is now a national security issue and water scarcity is estimated to cost some regions up to 6% of their Gross Domestic Product (GDP).

In Malaysia's context, water pollution has been a threat to the security of water supply, whether caused by accidents or on purpose. In 2022 alone, there were instances where Selangor and Kuala Lumpur were severely affected and left without water supply for days due to repeated pollution incidents in our rivers. It is estimated that water disruptions have an economic impact of billions of ringgit due to lost productivity, revenue and remediation costs.

Therefore, I believe it should be a top priority for all stakeholders to take the right actions to protect our water resources. Proactive steps to increase raw water storage, greater enforcement and monitoring of our rivers, more efficient use of our water, and improving our water reserve margin while reducing non-revenue water are all important initiatives that we must continue to support and build on.

Chairman's Note

Improving Water Security

In our mission to become a leading water services company in Asia by 2030, Air Selangor is highly cognisant and prepared to take the lead in addressing and tackling the water security issue for our stakeholders' best interests. As a major player in the industry, Air Selangor can play a role in calling for and supporting effective frameworks and mechanisms that position water as the most essential element for sustainable economic, social and environmental development.

The Selangor government's Raw Water Guarantee Scheme (SJAM), which was introduced to tackle the state's water pollution and insufficient raw water issues, is an initiative to look forward to. With the dedicated infrastructure to reroute water from the off-river storage to the treatment plant, thus preventing polluted water from flowing into the same plant, SJAM will begin to solve a huge burden of water disruption and make Selangor's water supply system more resilient.

In addition to SJAM, the Selangor state's 10-year plan has included initiatives to study the feasibility of tapping into new water bodies, such as lakes, and to create an interconnected system that links lakes with rivers to strengthen water security further. With the interconnectivity of water bodies, our water supply system serves a dual purpose; increasing supply and mitigating the threat of floods.

Building resilient frameworks and effective mechanisms also involves policies that can help to prevent water shortages, especially by implementing regulations to curb water pollution and promoting awareness on water security. Air Selangor fully supports the Polluter Pays Principle which is reflected in the readiness of the Ministry of Natural Resources, Environment and Climate Change to amend the Water Services Industry Act 2006 (Act 655). The amendment of the Act is slated to increase fines and impose heavier penalties on polluters commensurate with the disruptions they have caused, while conveying a strong message that maintaining the integrity of our water sources is non-negotiable.

Playing Our Part as a Responsible Water Utility Operator

As mapped out in the First Selangor Plan (2021-2025), in preparation for the state's transformation into a Smart City, the issue of Non-Revenue Water (NRW) must be addressed. NRW poses challenges to the operator to ensure that clean, safe and sufficient water is supplied to the consumers. To combat this, improvement in water delivery mechanisms can help in reducing NRW from 28.6% in 2020 to the target of 25% in 2025. While Air Selangor has committed our efforts to sustainably reducing NRW, I want the group to redouble their efforts to further reduce NRW, especially once construction of the treatment plants in the pipeline is near completion.

Pengurusan Air Selangor Sdn Bhd



Rasau Water Supply Scheme Dual-Function Off-River Storage

Robust infrastructure can also address NRW and other factors that lead to water disruptions. While Air Selangor acknowledges that we have inherited an ageing infrastructure from previous water operators, we are ready to invest in a sustainable business model to meet the growing demands of consumers in the long term. The organisation is strategically developing infrastructure by ensuring timely upgrades of assets and operational efficiency and is also leveraging on digitalisation to further drive efficiency and business governance. As it moves into the area of Artificial Intelligence solutions, Air Selangor is confident that we will be more efficient with the help of real-time insights that will enhance day-to-day activities and processes.

Air Selangor also supports the Selangor government's Skim Air Darul Ehsan (SADE), which is to ensure equal access to clean water for all, especially by aiding the low-income households with an entitlement of 20m³ of water supply monthly for free. In 2022, the utility company processed 23,553 applications, and 301,549 recipients benefitted from the SADE programme, with the Selangor State Government bearing more than RM30 million in costs.



Stepping into the Future as One

As Air Selangor accelerates its journey towards sustainability and continues to advocate and educate on the importance of water security, the organisation understands it must think and act on its feet to reduce threats posed by climate change and rapid urbanisation. However, we strongly believe that as a collective unit, we can confidently tackle future challenges and grow to be better prepared and equipped for the future.

I would like to thank our consumers for their support and the opportunity to serve an essential component of their lives. I thank the Board for helping to guide Air Selangor towards the right business path, especially in times of difficulties, through their wisdom and sound advice. I express my gratitude to the Management Team and employees of Air Selangor as they continue to dedicate their energies to delivering value. I also continue to emphasise the importance of dynamic collaborations through our relationships with authorities, business partners, vendors, and suppliers. Air Selangor remains committed to preserving a sustainable water ecosystem and continues to be fuelled by our aspirations to create a better world for future generations.

YANG AMAT BERHORMAT
DATO' SERI AMIRUDIN BIN SHARI
 Chairman

The Company is aware of and values its collaborations and partnerships with various stakeholders and supply chain, which have been instrumental in ensuring sustainable water security. Strategic partnerships can help by leveraging on resources and expertise of different stakeholders and promoting joint decision-making and action. This can lead to improved water governance, more efficient water use, and better coordination of efforts to address water-related challenges.

For instance, Air Selangor has intensified its efforts by increasing the water reserve margin and conducting a water reclamation initiative with Indah Water Konsortium Sdn. Bhd. (IWK). IWK's role includes treating bioeffluent at its wastewater treatment plants before being redistributed via Air Selangor to consumers through a dedicated pipe network for non-potable use. To combat water pollution cases, Air Selangor works closely with *Lembaga Urus Air Selangor* (LUAS) to ensure that critical areas are under 24-hour surveillance to mitigate the risk of water supply disruption caused by illegal dumping and pollution. We also continue to create awareness through education by jointly promoting water conservation with State Assemblymen (ADUN), religious organisations, educational institutions, and other programmes with various non-governmental organisations.

MESSAGE FROM THE ACTING CHIEF EXECUTIVE OFFICER

Dear Valued Stakeholders,

I am pleased to present Air Selangor's third Sustainability Report, which outlines our sustainability efforts in the year 2022. These efforts amplify our commitment to ensuring a culture of sustainability throughout the organisation and extending to our value chain as a collective force to enhance the lives of both people and the planet.

This report highlights our accomplishments, including new initiatives that further echo our unwavering commitment towards delivering quality services to our stakeholders and transparently acknowledging areas for continuous improvement.

2022 was the year in which most of the world returned to normalcy as COVID-19 abated.

In Malaysia, we moved forward with the shift to endemicity, regaining momentum socially and economically. However, Malaysia continued to be vulnerable to floods that destroyed lives and livelihoods in several states. The severity of the flood disasters was an important call for everyone to respond to climate change and to secure and safeguard a resilient and sustainable water system. This has pushed us towards mitigating and managing climate change while continuing to strengthen our business to create long-term positive impacts for the community and environment. These efforts are a key part of our new Air Selangor Sustainability Strategy 2030, which supports the organisation's vision to be the leading water services provider in Asia by 2030.

As we move ahead with our ambitions, a persistent challenge that we face, especially in ensuring the sustainable supply of water over the longer term, is the delay in tariff increase. Although we are investing significantly in various areas to improve efficiency and contribute towards safeguarding water security, the delay affects the business as adequate funding is required to support asset replacement and upgrading of water supply infrastructure.

Nevertheless, Air Selangor delivered results for our stakeholders in 2022, as we recorded higher revenue of RM2.45 billion, an increase of 12.44% as compared to 2021. However, we continued to face increasing operating and capital costs which impacted the bottom line despite the increase in revenue. In addition, the Rasau Water Supply Scheme Project has been awarded to three contractors and detailed design works have begun for the three packages. Air Selangor has also started the land acquisition process as well as engagement with local authorities to ensure full completion by 2025, which will support the increasing water demand in the Klang and Petaling regions.

Let me take you through our major milestones:



Message From The Acting Chief Executive Officer

Stronger Sustainability Governance

Air Selangor formed a Board Risk and Sustainability Committee (BRSC) in December to aid the Board of Directors (Board) in monitoring the efficiency of risk management and the assimilation of sustainability into the Company's strategy and business operations. With the BRSC, we are confident that clear oversight will ensure the efficient implementation of our sustainability initiatives.

Apart from the BRSC, we have established an internal Climate Change Taskforce to further drill down on the impact of climate change, especially disasters involving our line of business, such as floods and droughts. The Taskforce oversees the development of a Strategic Framework for managing droughts, while flood management is currently under the purview of our existing Business Continuity Plan, which will be eventually integrated into the Strategic Framework in a timely manner.

The *Jawatankuasa Bencana* and *Jawatankuasa Bilik Gerakan Operasi* were also formed at both the Headquarters and regional offices as key efforts to protect our operational assets from damage and prevent unscheduled service disruptions to customers. These two committees focus on response plans during all phases of a disaster and are guided by the new Flood Disaster Management Guidelines.

Sustainable Financing through Sukuk Kelestarian

I am also pleased to report that we issued our second and third tranches of our Sustainable and Responsible Investment (SRI) Sukuk Kelestarian Air Selangor (Sukuk Kelestarian), in July and September, involving net proceeds of RM900 million and RM100 million, respectively, which amounted to RM1 billion. Out of the RM1 billion, RM629.4 million was allocated and utilised for Sustainable Water Supply projects and the maintenance of existing water treatment and distribution structures. To further enhance operational efficiency, RM308.3 million was allocated to the improvement and maintenance of production and distribution, which will contribute to minimising service disruptions and reducing water losses and the impact on the environment, on top of better water quality. Since our first issuance, we have raised a total of RM1.43 billion between 29 October 2021 and 19 September 2022.



RM2.45 billion

▲ 12.44%

Recorded revenue

RM1.43 billion

Total raised through the issuance of Sustainable and Responsible Investment (SRI) Sukuk known as Sukuk Kelestarian Air Selangor (Sukuk Kelestarian) as of September 2022

100%

Compliance with Quality Assurance Programme (QAP)

17.70%

Water reserve margin by 2030

Message From The Acting Chief Executive Officer



Increasing Customer Satisfaction with Trust Our Tap 2028

As the nation's largest water services provider, we are committed to ensuring our customers have access to clean and safe potable water. Air Selangor's Trust Our Tap 2028 initiative successfully achieved the Ministry of Health's distinguished record of 99.85% compliance with the Drinking Water Quality Standard (DWQS) and 100% compliance with the Quality Assurance Programme (QAP). We are also continuously investing in digitalisation and real-time monitoring technologies, as evidenced by the deployment of the Hybrid Distribution Water Quality Real-Time Analyser (HYDRA). HYDRA is an online water quality monitoring station that issues alarm signals when anomalies are detected to support water quality restoration. Water quality performance is also protected through regular cleaning of our service reservoirs and pipelines, which we strictly conduct on a scheduled basis.

Striving for Improvements in Water Source Efficiency

The year under review was not without shortcomings compared to the previous financial year. Despite recording a NRW rate of 27.76% in 2022, an improvement of 0.23% from the year before, we fell short of the NRW target of 27.00% as specified by SPAN. This was due to the economy's recovery from the pandemic, coupled with disruptions in supply chains. We will continue to work towards our NRW reduction target through the implementation and strategic execution of NRW reduction programmes, an NRW Assessment study as well as the initiation of our smart meter pilot project, which involves the installation

of 2,393 smart meters that have demonstrated significant promise in Acoustic Leak Detection.

We also recorded 12.02% in average water reserve margin, which was a drop of 1.6% as compared to last year. The results fell short of our targeted 18.11%, mainly attributed to the delay in the implementation of the Langat 2 WTP distribution network. We expect to increase our water reserve margin to 17.70% by 2030 with projects to increase our production capacity.

In December 2022, we awarded a total of RM113 million worth of pipe replacement contracts. The physical works are scheduled to start in 2023. We are currently in the process of obtaining work permit approvals from various authorities as well as carrying out engagement activities with elected representatives, residents' associations and community leaders. The construction works are targeted to be completed in September 2024.

Growth through Digitalisation

To enhance the customer experience, our MyWater Operations Mobile Application (OMA) has undergone enhancement with at least 15 mobile applications integrated into a single digitalised platform. The app is slated to transform from its current state into a scalable application for future operational functions and greater efficiency. By leading the communication space in our industry, we bagged the top spot in the Malaysia Technology Excellence Awards 2022, organised by the Singapore Business Review, under the Mobile – Utilities Category. Our win was

Message From The Acting Chief Executive Officer

attributed to our Intelligent Emergency Response Plan, or i-ERP, which offers real-time updates to customers of water supply disruptions and availability of support services.

In ensuring consistent quality performance, the Digital and Analytics Centre introduced the new Operations Business Intelligence (OBI) for business functions within Air Selangor. By the end of 2022, most of the OBI for our business functions had gone live, been fully developed or were under trial for the system, which will help respective units to gain more analytical insights to improve processes.

As we progress into the future, Air Selangor is exploring the Artificial Intelligence space by implementing Water Intelligence for Supply and Demand Operations Management (WISDOM). WISDOM is expected to sustainably manage and plan the supply and demand of water operations. This will optimise efficiency for effective forecasts as well as enhancing customer experience and is expected to go live by the second quarter of 2023.

Achieving Customer Excellence while Serving the Community

Air Selangor is a customer-centric organisation that continuously monitors its performance through customer satisfaction levels. This not only provides us with insights but also, more importantly, enables us to advance through ethical and practical solutions. In 2022, our Customer Satisfaction Index Survey (CSAT) and Net Promoter Score (NPS) revealed improved scores from 72.1% to 84.0% and +5 to +14, respectively, year-on-year, particularly in the aspects of billing and payment methods, customer service and communications.

While attending to our customers' evolving needs, we continue to help and strengthen our relationship with the grassroots communities through our Sesama Mara Corporate Social Responsibility (CSR) programme. This year, three programmes were seamlessly executed, including the Box of Hope, Sesama Mara Online Learning for B40 Community and Plumbing Assistance Services. Air Selangor contributed RM459,165 to the communities via the Sesama Mara programme, aiding the underserved communities by contributing essential provisions and goods.



Ampang Impounding Reservoir

Appreciation

The success of our sustainability journey, as captured in this year's Sustainability Report, is a collective effort by various parties. In setting us on the right path through strategic navigation, I thank the Board for its guidance and support. I am also grateful to Air Selangor's Management Team and employees, who are unwavering in their commitment to ensuring that the organisation is on track to achieving its corporate mission and vision while overcoming unprecedented challenges in the business landscape. Our customers play a pivotal role in our business success, and I express my gratitude for their trust in us to provide them with high-quality services and clean water.

Our business partners also play a critical part in supporting our sustainability goals. Last but not least, Air Selangor acknowledges the support from the Selangor State Government, in particular *Unit Perancang Ekonomi Negeri (UPEN)* and *Lembaga Urus Air Selangor (LUAS)*, and the Federal Government through the Ministry of Natural Resources, Environment and Climate Change (NRECC) and *Suruhanjaya Perkhidmatan Air Negara (SPAN)*, as well as the local authorities and district offices that have provided us with support, guidance and feedback to ensure that we meet and exceed the required sustainability standards.

IR. ABAS ABDULLAH

Acting Chief Executive Officer

ABOUT AIR SELANGOR

Air Selangor is Malaysia’s largest water services provider and is responsible for the abstraction, treatment and distribution of treated water to consumers in Selangor, Kuala Lumpur and Putrajaya, with more than 2.5 million accounts consisting of domestic, non-domestic and others.

Air Selangor Holdings Berhad (AIS Holdings) is the immediate holding company and Menteri Besar Selangor (Incorporated), a corporate body formed under Enactment No.3 of the Menteri Besar Selangor (Incorporation) Enactment 1994, is the ultimate holding corporation of Air Selangor. Air Selangor’s production capacity stands at 5,117 million litres per day (MLD) of treated water, and it distributes the water to its consumers through its 30,422 km of pipelines.

The Company’s operations are supported by more than 5,000 staff and 1,377 business partners. Our business is regulated by Suruhanjaya Perkhidmatan Air Negara (SPAN) and is subject to the Water Services Industry Act 2006.



VISION

We will be the leading water services provider in Asia by 2030.

Labohan Dagang Water Treatment Plant

CORE VALUES



Teamwork

Providing support to one another, working collaboratively, and respecting one’s views.



Honesty

Being open and truthful in all dealings.



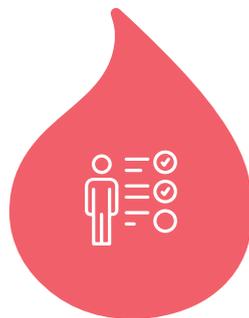
MISSION

We deliver the best experience to our customers.



Integrity

Continually doing the right thing no matter what the consequences.



Professionalism

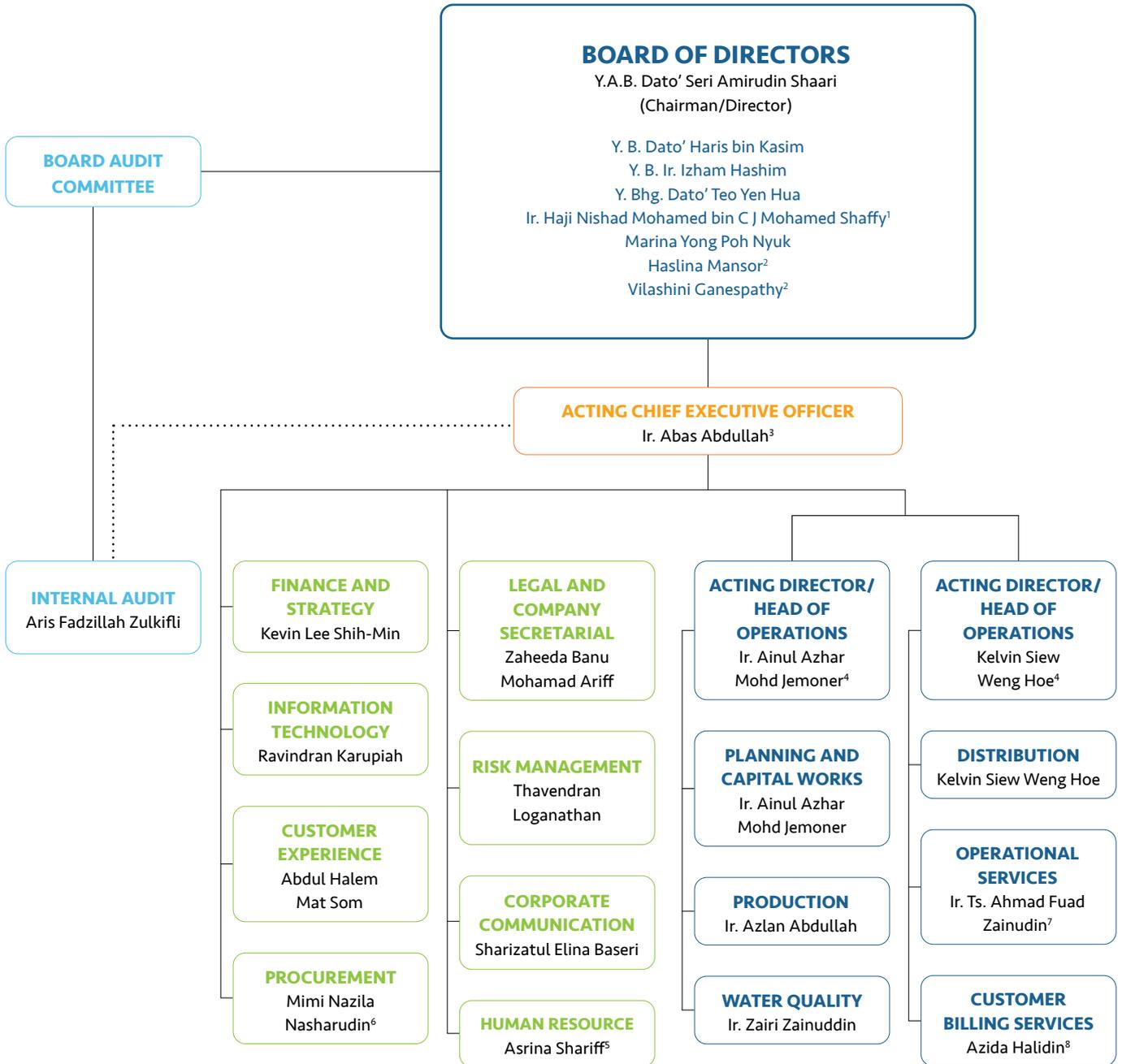
Striving for excellence and quality in everything we do on top of being reliable and responsible.



Highest Standard of Services

Respecting our customers and striving to deliver timely, responsive, and proactive services.

LEADERSHIP TEAM



The organisational chart is valid as of 16 January 2023.

¹ Effective 3 October 2022
² Effective 14 April 2022
³ Effective 1 January 2023
⁴ Effective 16 January 2023
⁵ Effective 1 June 2023
⁶ Effective 1 September 2022
⁷ Effective 1 July 2022
⁸ Effective 1 August 2022

CUSTOMERS

Air Selangor manages over 2.5 million accounts with more than nine million consumers (or over one-quarter of the national population) across a highly urbanised area, with Selangor as the state with the highest population in Malaysia, Kuala Lumpur as the national capital and Putrajaya as the administrative hub for the government of Malaysia.



Domestic

2,262,706 accounts

Domestic accounts consist of residential properties, which form the largest portion of the total accounts registered with Air Selangor.



Non-domestic

321,016 accounts

Non-domestic accounts cover industries, commercial areas, government offices and ships.



Others

5,271 accounts

Customers under this category include religious and charitable institutions.



KEY ASSETS

RAW WATER STORAGE

8

Dams

3

Off-River Storage (ORS)



1

Hybrid Off-River Augmentation System (HORAS) 600

WATER PRODUCTION

WATER DISTRIBUTION



30,422 km

Pipe Length (mapped by GIS)



34

Water Treatment Plants (WTPs)

738

Pump Houses

1,618

Service Reservoirs

WATER QUALITY

15

River Monitoring Stations

1,163

Water Sampling Stations

3

Accredited Regional Laboratories



190

Hybrid Distribution Water Quality Real-Time Analysers (HYDRA)

31

Off-Plant Autonomous Chlorine Injection Systems (OACIS)

WORKFORCE

5,066

Employees



80:20

Male:Female
Gender Diversity



2022 KEY HIGHLIGHTS

Establishment of the Board Risk and Sustainability Committee

In December 2022, Air Selangor established its Board Risk and Sustainability Committee (BRSC) to assist the Board of Directors (Board) in overseeing the effectiveness of risk management and the integration of sustainability into the Company's strategy and business operations. This milestone marks our commitment to strengthening good governance in managing risk and sustainability within the Company.

Certification of Management Systems

Air Selangor successfully obtained two other management system certifications in 2022, namely ISO 22301:2019 Business Continuity Management System and ISO 18295-2:2017 Customer Contact Centres. This is in addition to the five management systems that Air Selangor has been certified with, which are:

- ISO 9001:2015 Quality Management System
- ISO 14001:2015 Environmental Management System
- ISO 45001:2018 Occupational Health and Safety Management System
- ISO/IEC 27001:2013 Information Security Management System for the entire organisation
- ISO 55001:2014 Asset Management System covering Headquarters, Production Regional, 29 WTPs and 10 Distribution Regional Offices.

With the certification of the business continuity management system, we have demonstrated our ability to manage risks and ensure the continuity of critical business processes in the face of disruptive events. On the other hand, the certification received for our customer contact centre demonstrates our commitment to robust management of Air Selangor's contact centres.

Water Supply Tariff Adjustment for Non-Domestic Accounts

In July 2022, the Ministry of Environment and Water (KASA) (now renamed to the Ministry of Natural Resources, Environment and Climate Change (NRECC)) announced the adjustment of water tariffs for the non-domestic and special categories in Peninsular Malaysia and Labuan through the Tariff Setting Mechanism (TSM) developed by SPAN. Effective 1 August 2022, water tariffs for non-domestic and special accounts were adjusted with an average increment of 28 cents per cubic metre (m³) of water. As the Company strives towards ensuring the highest standard of customer service, this tariff revision is crucial to support business operations given increasing operating and maintenance costs.

Sustainable and Responsible Investment Sukuk Issuance

In 2022, Air Selangor issued its second and third tranches of its SRI Sukuk Kelestarian Air Selangor (Sukuk Kelestarian) in July and September, respectively. The second and third issuances involved net proceeds of RM900 million and RM100 million, respectively, totalling RM1 billion. Since its first issuance of the Sukuk Kelestarian, Air Selangor has raised a total of RM1.43 billion in the period between 29 October 2021 and 19 September 2022.

As of 30 September 2022, from the total proceeds raised, 65.6% has been allocated and utilised, amounting to RM937.7 million, for the financing and refinancing of eligible capital expenditure (CAPEX) and operating expenditure (OPEX). A total of RM629.4 million was allocated and utilised for Sustainable Water Supply projects, the majority of which related to the development of the new Rasau Water Supply Scheme Stage 1 (Rasau Stage 1) and the maintenance of existing water treatment and distribution infrastructure. Under the category of Sustainable Water Management projects, RM308.3 million was allocated to maintain and improve production and distribution efficiency such as by improving system connectivity to minimise service disruptions, reducing water losses, minimising impacts on the environment and improving water quality.

To find out more, please refer to Air Selangor's inaugural Sukuk Kelestarian Air Selangor Impact Report 2021-2022 which is available on our website.

Carbon Neutral by 2040

Air Selangor started monitoring its carbon emissions in 2018 and is working towards reducing them. As a water services provider, we recognise the impact of climate change on our operations and the environmental impact we have and thus, we are wholly committed to reducing our carbon emissions. Consequently, Air Selangor has targeted to achieve carbon neutrality by 2040 for its Scope 1 and Scope 2 emissions through the implementation of energy efficiency and renewable energy projects, with a target to reduce 15% of Corporate Energy Intensity (CEI) by 2036 from the 2021 baseline and to source 100% of electricity from renewable energy by 2040. However, Air Selangor will be conducting an in-depth greenhouse gas (GHG) emissions assessment in 2023 to identify a potential Net Zero target for the future. As of December 2022, Air Selangor has initiated the installation of solar photovoltaic (PV) systems at six sites with an annual capacity of 9.3 MWac. The installations are targeted to be completed in 2023.

Participation in the Global Water Arena



Air Selangor saw the participation of its internal experts in various global water events and platforms to share business experiences and contribute towards the development of the water industry. The Acting Chief Executive Officer (ACEO), Ir. Abas Abdullah, participated in Singapore International Water Week 2022 as an anchor speaker. Additionally, Kelvin Siew, the Head of Distribution, was officially appointed by the Smart Water Networks Forum (SWAN) as a member of its third cohort Senior Utility Advisory Group (UAG) to share knowledge and opportunities to help accelerate the smart water sector.

In addition, Air Selangor has been featured in the Global Water Intelligence (GWI) Magazine, a leading international water industry magazine, both in the April and December 2022 issues. In the publication, Air Selangor shared its inventive ways to manage operations to meet the rising demands and pressures of climate change as well as insights on the opportunities and challenges of the reclaimed water industry landscape in Malaysia.

Customer Satisfaction Index Survey 2022

At Air Selangor, customer satisfaction levels are continuously monitored to gauge the Company's performance and explore areas for improvement that will enhance customer experience. For 2022, Air Selangor's NPS and CSAT scores improved from +5 to +14 and 72.1% to 84.0%, respectively, with further opportunities for improvement in the aspects of water quality and water disruption management.

Sesama Mara

In 2022, Air Selangor continued its Flagship CSR programme, known as Sesama Mara, with three initiatives, namely Box of Hope, Sesama Mara Online Learning for B40 Community and Plumbing Assistance Services. These initiatives were aimed at assisting vulnerable communities in Selangor, Kuala Lumpur and Putrajaya through the provision of goods and services. A total of RM459,165 was contributed to these communities via the Sesama Mara Programme, which was an increase from RM321,710¹ in the previous year.

¹ The amount has been restated to reflect the direct monetary value contributed to the beneficiaries.

Expansion of Eligibility Criteria for Skim Air Darul Ehsan

As part of the Selangor state's initiatives, the Skim Air Darul Ehsan (SADE) was introduced to provide the first 20 m³ of water for free to eligible Malaysian citizens residing in Selangor. To further assist Selangor residents in alleviating the impact of rising living costs, the eligibility criteria for household monthly income were revised from RM4,000 and below to RM5,000 and below, starting 1 October 2022. As of 31 December 2022, a total of 301,549 successful recipients have benefitted from the SADE programme, at a cost of more than RM30 million annually borne by the Selangor State government.

Road Safety Awareness Training

In 2022, Air Selangor recorded 58 road and commuting accidents caused by individual and third-party negligence. Meter readers are of particular concern as they travel and spend most of their time on the road. Other than meter readers, many of the Company's employees utilise motorcycles for their daily commute and therefore face a high risk of road accidents. Hence, the Company rolled out road safety awareness training for targeted employees who commute by motorcycle to enhance awareness and develop safe riding habits.

In July 2022, Air Selangor set up a Road Safety Committee, with the main function of planning, implementing and ensuring the effectiveness of road safety programmes and initiatives to prevent and reduce road incidents among employees.

AWARDS AND ACCOLADES

MALAYSIA TECHNOLOGY EXCELLENCE AWARDS 2022

Air Selangor once again secured the top spot in the Mobile – Utilities Category at the Malaysia Technology Excellence Awards 2022 for its Intelligent Emergency Response Plan, also known as i-ERP. This award, organised by the Singapore Business Review, aims to recognise distinguished organisations with the most innovative and unique IT initiatives and solutions in Malaysia.

The i-ERP offers real-time updates to customers regarding water supply disruptions and the availability of support services, such as *Pusat Khidmat Setempat*, public water taps and commercial filling stations, during the activation of the Emergency Response Plan (ERP). The i-ERP system leverages two integrated platforms, which are the Content Management System (CMS) and the Consumer Website Portal.

The CMS is utilised for synergistic mobilisation of water tankers and reservoir level monitoring. The Customer Website Portal, which is the Hentitugas microsite (<https://hentitugas.airselangor.com>), is activated during the ERP to provide customers with seamless access to information such as details of affected areas, estimated recovery times and recovery status.



40TH MSOSH OCCUPATIONAL SAFETY AND HEALTH AWARDS 2022

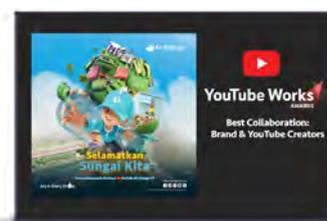
Air Selangor bagged 13 Gold Awards for its various sites during the 40th MSOSH Occupational Safety & Health Awards. The MSOSH Occupational Safety and Health Award (MSOSH Award) is an annual award presented to organisations in Malaysia with proven outstanding Occupational Safety and Health (OSH) performance. As part of the adjudication process, Air Selangor was subjected to stringent document and site verification audits to ensure that it was proactively and continually improving its OSH practices.



TOP 10 WINNER FOR MARKETING MAGAZINE ASIA EXPERT'S CHOICE AWARDS MERDEKA TVC 2022



FINALIST FOR THE BEST COLLAB: BRAND AND CREATOR CATEGORY AT THE YOUTUBE WORKS AWARD MALAYSIA 2021



BUSINESS PLANS

Air Selangor strives to provide a continuous and high-quality treated water supply to its consumers. To realise this, the Company must ensure its assets can cater for ever-growing water demand due to urbanisation and population growth, while successfully navigating challenges such as raw water pollution and climate change, which have elevated the risk of raw water shortages.

To address these challenges, Air Selangor is implementing a 30-year business plan consisting of seven Strategic Plans and Initiatives (SPIs) and eight Key Result Areas (KRAs) with a CAPEX amounting to RM35 billion that has been approved by SPAN. The progress towards achieving the SPIs is summarised below.



Pump House at Langat 2 Water Treatment Plant



SPI 1: Water Forever

Towards a Sustainable Water Future

Objectives

- Ensure sustainable water supply for the future.
- Mitigate potential effects of climate change and raw water pollution.
- Design interventions and initiatives that ensure water supply is in tandem with water demand. These actions include reducing system water loss, optimising customer water use and identifying and developing new sources of water.

Achievements in 2022:

- The average water reserve margin was at 12.02% against the targeted 18.11%. This was a drop of 1.61% compared to the reserve margin in 2021.
- Packages 1, 2 and 3 of Rasau Stage 1 are at the implementation stage.



SPI 2: Improvement in Asset Reliability and Resilience

Towards a Resilient Water Future

Objectives:

- Optimise management and maintenance of our assets.
- Ensure uninterrupted water supply to our customers.
- Rehabilitate, replace and upgrade our assets.
- Improve water storage capacity.

Achievements in 2022:

- Completed 95% of planned preventative maintenance of assets.
- Completed 100% of planned condition-based maintenance of assets.
- Completed 6,190 instances of corrective maintenance of assets.
- Completed pipe replacement works at 261 hotspots.
- Completed rehabilitation works on 54 unused reservoirs out of 144 identified.
- Completed refurbishment works on 11 pump houses out of 54 identified.
- Purchased 14 units of water tankers to enhance operational capability and improve the efficiency of fleet movements during service disruptions.



SPI 3: Improving Operational Efficiency

Digital Utility of the Future

Objectives:

- Leverage the growth of digital connectivity and big data to become the Digital Utility of the Future.
- Ensure effective use of resources across our operations, namely production, distribution, asset inventory and maintenance and customer management.

Achievements in 2022:

- Launched new Operations Business Intelligence (OBI) for Air Selangor's business functions. The OBI is an analytics dashboard that provides insights for reviewing and improving day-to-day business activities and processes.
- Coverage of the Intelligent Command Centre (ICC) was at 60.16% for all active reservoirs and pump houses.
- Completed tagging for 24,331 assets or 22.77% of total assets.
- Covered a total of 2,903 km of pipeline and 369 reservoirs using online Hydraulic Modelling Prediction.



SPI 4: Towards Best Customer Service

Drinkable Water from Tap by 2028 and Best Customer Service

Objectives:

- Improve our service delivery and exceed customer expectations in terms of reliability, responsiveness and quality continuously.

Achievements in 2022:

- Achieved 97% of meter replacement works for stuck and degraded meters.
- Completed the pilot installation of 2,394 units of Advanced Metering Infrastructure (AMI) meters in the Petaling region.
- Achieved Water Quality Complaint Index ratio of 0.5 complaints per 1,000 connections, below the targeted 0.6.
- 95.6% completion of works for five water courses under the Trust Our Tap initiative.
- Achieved water quality targets as follows:

Parameter	MOH Target (%)	Achievement (%)
<i>E. Coli</i>	≥ 99.85	100
Free Residual Chlorine (FRC)	≥ 98.15	99.99
<i>E. Coli</i> & FRC	≥ 99.95	100
Turbidity	≥ 98.00	99.98
Aluminium	≥ 90.00	96.61



SPI 5: NRW Reduction

NRW reduction to 25% by 2025, 20% by 2037, 15% by 2049

Objectives:

- Reduce water loss throughout our operations, targeting to achieve 25% by 2025, 20% by 2037 and 15% by 2049.
- Optimise operational costs and increase our revenue.

Achievements in 2022:

- Achieved NRW reduction of 27.76%, an improvement of 0.23% compared to 27.99% in 2021. However, this achievement was short of the 27.00% target set by SPAN.
- Achieved Pipe Burst Index of 5.35 bursts per 100 km of pipeline against the targeted 13.¹ This was an improvement from 6.37 bursts per 100 km per year as recorded in 2021.
- Achieved water supply targets as follows:

Parameter	SPAN Target	Achievement
Repair and resume water supply within 24 hours for communication pipe failure	80.00%	86.40%
Repair and resume supply within 24 hours for failure of mains of diameter less than 200 mm	85.00%	89.30%
Repair and resume supply within 36 hours for failure of mains of diameter more than 200 mm and less than 600 mm	90.00%	97.60%
Repair and resume supply within 48 hours for failure of mains of diameter greater than 600 mm	95.00%	99.70%

¹ Based on Unavoidable Annual Real Losses (UARL) and Infrastructure Leakage Index (ILI), Allan Lambert, Water Loss Research and Analysis Ltd, United Kingdom, 2019, the acceptable pipe burst index is at 13 bursts per 100 km per year.



SPI 6: Creating a Conducive Working Environment

World Class Water Services Provider

Objectives:

- Position Air Selangor as an employer of choice by creating a safe and conducive work environment.
- Develop and grow talent within our Company to ensure a sustainable pipeline of leaders and achievers.

Achievements in 2022:

- Recorded Lost Time Injury Frequency Rate (LTIFR) of 0.39, an improvement from 0.53 recorded in 2021.
- Achieved a 74% score in the Employee Engagement Survey.
- A total of 56 employees completed the Coaching and Mentoring Programme.
- A total of 848 employees have participated in the Leadership Development Programme since 2019.



SPI 7: Environmental Stewardship

Waste Zero Environment

Objectives:

- Operate responsibly, minimising our impact on the environment and adhering to regulations.
- Towards a zero-waste environment, optimising resource use and reducing our carbon emissions.

Achievements in 2022:

- Achieved compliance with the Department of Environment's (DOE) Guided Self-Regulation (GSR):

Scope	Compliance (%)
Water Treatment Plants	87.15
Distribution Activities	84.32

- Recorded carbon emissions and carbon emissions intensity for 2022 as follows:

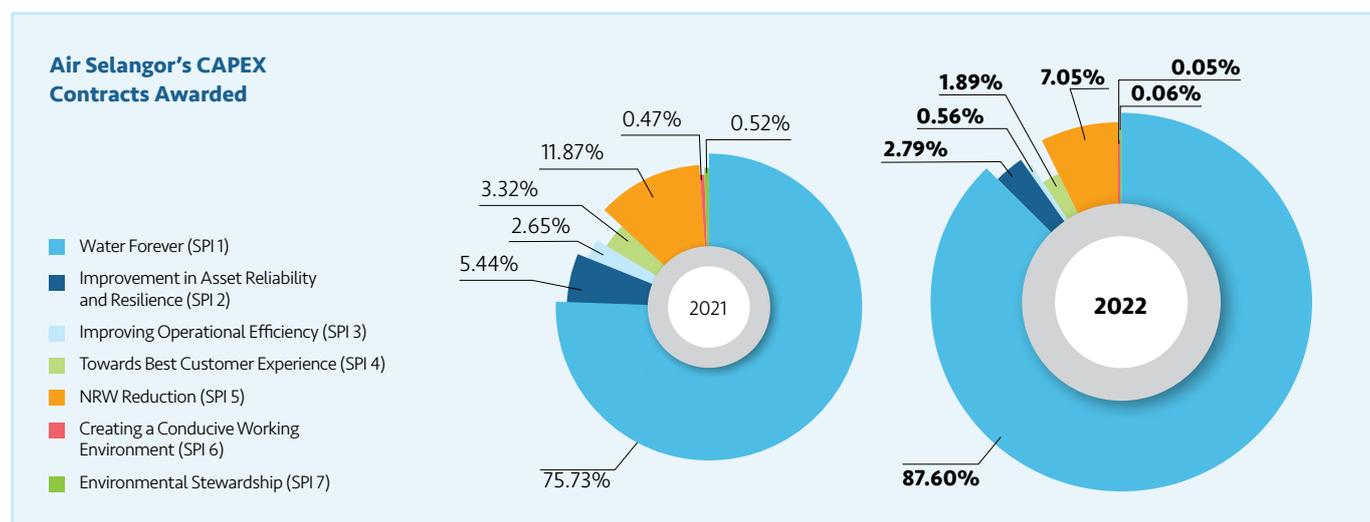
Total Carbon Emissions (tCO ₂)	788,879.78
Produced Volume Carbon Intensity (kgCO ₂ /m ³)	0.422
Billed Volume Carbon Intensity (kgCO ₂ /m ³)	0.586

FINANCIAL PERFORMANCE

Air Selangor is currently operating within a tariff environment that does not allow for full-cost recovery, which will ultimately impact its business in the long run. A sustainable business model is extremely crucial to enable the Company to develop the necessary water infrastructure to meet growing water demand, to ensure timely upgrades of ageing assets and to ensure operational efficiency. These efforts are needed to ensure that high-quality treated water is continuously provided to the customers.

In 2022, Air Selangor recorded revenue of RM2.45 billion, an increase of 12.44% from RM2.18 billion recorded in the previous year, as a result of the tariff adjustment for the non-domestic and special categories which became effective on 1 August 2022, coupled with the recovery in the Malaysian economy following the relaxation and eventual removal of COVID-19 restrictions. Along with the increase in revenue, the Company increased CAPEX spending by 88.21% to RM2.58 billion in 2022 as compared to RM1.37 billion in 2021. This was primarily attributed to contracts awarded for SPI 1: Water Forever, particularly for the Rasau Stage 1 project.

Air Selangor's CAPEX Contracts Awarded	2021 ¹ (RM mil)	2022 (RM mil)
Water Forever (SPI 1)	1,038.10	2,259.88
Improvement in Asset Reliability and Resilience (SPI 2) ²	74.61	71.93
Improving Operational Efficiency (SPI 3)	36.29	14.57
Towards Best Customer Experience (SPI 4) ³	45.45	48.70
NRW Reduction (SPI 5) ^{2,3}	162.71	181.88
Creating a Conducive Working Environment (SPI 6)	6.51	1.32
Environmental Stewardship (SPI 7)	7.09	1.60
TOTAL	1,370.76	2,579.88



¹ 2021 CAPEX has been updated to include new contracts awarded in 2022 that fall under the 2021 CAPEX budget.

² CAPEX for the Pipe Replacement Programme has been recategorised from SPI 2 to SPI 5.

³ Includes CAPEX which is funded via the NRW Matching Grant received from SPAN for the achievement of NRW targets.

Financial Performance

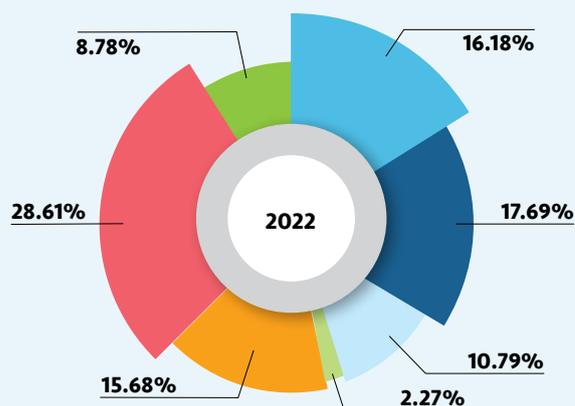
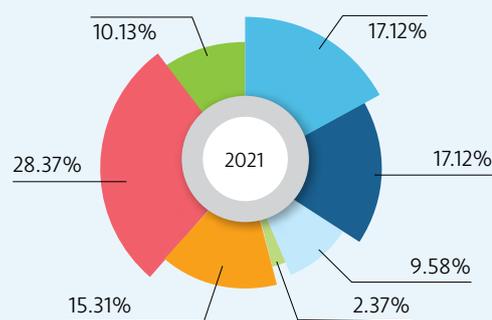
OPEX recorded an increase of 5.26% to RM2.56 billion from RM2.43 billion in 2021. The main expenditures were on finance and leasing cost, followed by repair and maintenance, staff cost and the cost of purchase of water. Despite an increase in revenue, total OPEX and CAPEX costs exceeded total revenue, which indicates that further water tariff reviews are necessary in order for the Company to achieve financial sustainability.

Air Selangor Company-level Operating Expenditure	2021 (RM mil) ¹	2022 (RM mil) ²
Staff	416.24	414.10
Repair and maintenance	416.23	452.88
Electricity	232.97	276.32
Chemical	57.69	58.02
Purchase of water	372.29	401.40
Finance and leasing cost	689.91	732.29
Others	246.42	224.75
TOTAL	2,431.75	2,559.76

¹ Excludes exceptional item - intercompany balance written off.

² Excludes exceptional item - intercompany balance written off and other professional service (subsidiaries).

Air Selangor Company-level Operating Expenditure



SUSTAINABLE FINANCING

In July 2022, Air Selangor completed a third issuance under its existing RM10.0 billion Sukuk Murabahah Programme. The RM900 million issuance with tenures across four series from seven years to 20 years represents Air Selangor's second Sukuk Kelestarian issuance.

In September 2022, a fourth issuance of RM400 million was completed comprising RM100 million in Sukuk Kelestarian and RM300 million in Islamic Medium-Term Notes (IMTNs) across three series from 10 years to 20 years.

The proceeds from the Sukuk Kelestarian will be utilised to finance eligible projects that comply with Air Selangor's Sustainable Development Sukuk Kelestarian Framework. Eligible projects include, among others, sustainable water supply and sustainable water management projects, all of which are in line with Air Selangor's sustainability strategies. The proceeds from the IMTNs will be utilised to finance, among others, Air Selangor's capital expenditure and working capital requirements.

The details of the allocation of proceeds from the Sukuk Kelestarian and the impacts of projects funded by the Sukuk Kelestarian can be found in the Sukuk Kelestarian Air Selangor Impact Report 2021-2022, available on Air Selangor's website.

RAM Rating Services Sdn Bhd reaffirmed the long- and short-term ratings of AAA with stable outlook and P1, respectively, for Air Selangor's Sukuk Murabahah Programme on 27 September 2022. The AAA rating indicates superior safety for payment of financial obligations while the P1 rating reflects high safety for payment of financial obligations in the short term.

KEY PERFORMANCE DATA¹

<p>Dam Active Storage</p> <p>96.97%</p> <p>▼ 3.03%</p>	<p>Average Production Volume</p> <p>5,117 MLD</p> <p>▲ 126 MLD</p>	<p>Water Reserve Margin</p> <p>12.02%</p> <p>▼ 1.61%</p>																		
<p>Yearly Average Non-Revenue Water</p> <p>27.76%</p> <p>▼ 0.23%</p>	<p>Overall Treated Water Quality Compliance</p> <p>99.84%</p> <p>▲ 0.05%</p>	<p>Pipe Burst Cases per 100 km per year</p> <p>5.35</p> <p>▼ 1.02</p>																		
<p>Pipe Leak Cases</p> <p>167,273</p> <p>▲ 31,860</p>	<p>Pipes Replaced</p> <p>65.53 km</p> <p>▼ 31.27 km</p>	<p>e-Bil Sign-up Rate by Customers</p> <p>65%</p> <p>▲ 13.52%</p>																		
<p>Asset Condition Score</p> <p>1.13²</p> <p>▼ 0.87</p>	<p>Revenue</p> <p>RM2.45 billion</p> <p>▲ RM0.27 bil</p>	<p>Carbon Emissions Intensity (per volume of water billed)</p> <p>0.586 kgCO₂/m³</p> <p>▼ 0.003 kgCO₂/m³</p>																		
<p>Lost Time Injury Frequency Rate</p> <p>0.39</p> <p>▼ 0.14</p>	<p>Gender Diversity³</p> <table border="1"> <caption>Gender Diversity Data</caption> <thead> <tr> <th>Category</th> <th>Male (%)</th> <th>Female (%)</th> </tr> </thead> <tbody> <tr> <td>Board</td> <td>67%</td> <td>33%</td> </tr> <tr> <td>Management</td> <td>67%</td> <td>33%</td> </tr> <tr> <td>Executive</td> <td>60%</td> <td>40%</td> </tr> <tr> <td>Non-Executive</td> <td>87%</td> <td>13%</td> </tr> <tr> <td>Overall⁴</td> <td>80%</td> <td>20%</td> </tr> </tbody> </table> <p>■ Male ■ Female</p>		Category	Male (%)	Female (%)	Board	67%	33%	Management	67%	33%	Executive	60%	40%	Non-Executive	87%	13%	Overall ⁴	80%	20%
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<p>Net Promoter Score</p> <p>+14</p> <p>▲ 9</p>																				

¹ Data as of December 2022. Data presented next to arrows for increment or reduction are in comparison to 2021. Data in green font indicate improved performance whereas data in red font indicate reduced performance.

² The score is between 1 (Very Good) and 5 (Extremely Critical).

³ Gender diversity in 2020 was 80% male and 20% female.

⁴ Data excludes the Board.

SUSTAINABILITY APPROACH

Sustainability at Air Selangor is strongly guided by the Company’s business plans and its Vision of becoming the leading water services provider in Asia by 2030. The Company strives towards improving quality of life by providing an uninterrupted supply of high-quality treated water to its customers. Air Selangor aims at embedding sustainability throughout the Company by establishing sustainability governance, strategies and capacity development.

SUSTAINABILITY GOVERNANCE

The Sustainability Framework established sets out the Company’s approach to identifying and managing its sustainability material matters and how the sustainability initiatives contribute towards the UN SDGs.

Sustainability at Air Selangor is ultimately overseen by the Board, which is assisted by the Board Risk and Sustainability Committee (BRSC). The establishment of the BRSC further strengthens the implementation of sustainability throughout the Company’s business operations through greater oversight. The governance structure and roles and responsibilities are shown below.



Solar Panels at Sungai Selangor Phase 2 (SSP2) Water Treatment Plant

Roles & Responsibilities

**Board of Directors (Board)**

The Board is ultimately responsible for the oversight, management, implementation, monitoring and disclosure of all sustainability initiatives by Air Selangor.

Board Risk and Sustainability Committee (BRSC)

- Assists the Board in overseeing the implementation and effectiveness of the Company's sustainability strategies and providing the necessary updates and assurances to the Board.
- Oversees all sustainability disclosures made by the Company and provides information and advice to the Board in relation to those disclosures as required.

Risk Management Committee (RMC)

- Monitors the effective implementation and integration of sustainability across Air Selangor.
- Monitors the Company's sustainability disclosures and performance and provides information and advice to the BRSC in relation to those disclosures as required.
- Reviews the adequacy of scope, functions and resources of the Sustainability & Water Conservation Section (SWCS) and ensures that the SWCS has the necessary authority to carry out its responsibilities.

Sustainability & Water Conservation Section

- Proposes sustainability strategies, policies and procedures aligned with Air Selangor's strategic objectives and priority SDGs.
- Identifies emerging sustainability risks and opportunities and proposes action plans and recommendations for consideration.
- Consolidates sustainability data and monitors the implementation of sustainability activities across Air Selangor.

Sustainability Working Committee

- Assists the SWCS in ensuring the effective implementation of sustainability initiatives.
- Identifies and recommends changes to material sustainability matters and strategies.

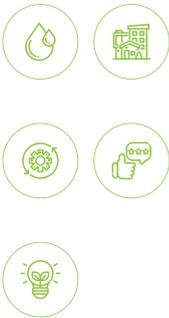
CONTRIBUTION TO THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

Air Selangor is committed to creating value for its stakeholders by operating its businesses efficiently and contributing towards enhancing the quality of life of its customers.

The integration of sustainability within the Company has directly contributed to the realisation of the UN SDGs, as elaborated below.

Air Selangor's Priority SDGs & Relevant SPIs

Air Selangor's Contribution (2022)



Water Quality:

- Achieved 100% compliance with the Ministry of Health's (MOH) QAP with zero violations for *E. Coli*, and zero simultaneous violation incidents for *E. Coli* and FRC.
- Achieved 99.84% compliance with the MOH Drinking Water Quality Standard (DWQS).
- Actively monitored raw water quality at all six water catchments through the PAKAR team, which will notify the relevant authorities if pollution is detected.

Reclaimed Water:

- The reclaimed water venture with Indah Water Konsortium (IWK) remains, with Air Selangor continuously supplying up to 4.0 MLD of reclaimed water from Central Water Reclamation Sdn Bhd's Setia Alam water reclamation plant to its customers.

Effluent Management:

- Working towards a zero effluent discharge operating model for all WTPs to minimise the impact on the environment.

Non-Revenue Water:

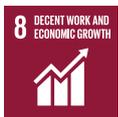
- Committed to reducing operational water loss and successfully reduced this to 27.76% in 2022 from 27.99% in 2021.

Water Conservation:

- Achieved average domestic water consumption per capita per day of 217 LCD, compared to 287 LCD recorded in 2021.
- Established Water Conservation Roadmap 2022-2025 to govern all domestic water conservation programmes under Air Selangor.

Education and Awareness:

- Continued active promotion of water conservation through various educational and awareness programmes in partnership with State Assemblymen (ADUN), religious organisations and educational institutions.
- Conducted the River Care programme at four different locations in collaboration with Friends of River Malaysia (FoRM).



Decent Work:

- Employed more than 5,000 skilled talents and provided them with competitive remuneration and benefits.
- No direct hiring of migrant labour.
- All suppliers and vendors are required to manage their employees/workforce according to the applicable standards and Malaysian laws as stipulated in their contracts, including compliance with the Employment Act, no hiring of illegal foreign workers and adhering to Air Selangor's health, safety and environmental policy and procedures.
- Identifying ways to improve diversity at the workplace, in addition to creating equitable opportunities for growth, welfare and well-being. In 2022, our employee turnover rate was at 5.21%.

Health and Safety:

- Extended road safety awareness training to selected employees who commute by motorcycle.
- Appointed two certified counsellors and selected 18 employees to serve as *Rakan Prihatin* to support the mental well-being of employees.

Contribution To The United Nations Sustainable Development Goals

Air Selangor's Priority SDGs & Relevant SPIs	Air Selangor's Contribution (2022)
    	<p>Process Improvements:</p> <ul style="list-style-type: none"> Optimising the water treatment process using technology, and actively monitoring and regulating various disinfectants and chemicals that are used. The disinfectants and chemicals are certified by SPAN, SIRIM and/ or <i>Jabatan Kemajuan Islam Malaysia</i> (JAKIM), where applicable. Continuously exploring recycling solutions to treat effluents and thus reduce freshwater withdrawals. Assessing the use of alternative coagulants to reduce the amount of residuals produced and landfilled. <p>Environmental Compliance:</p> <ul style="list-style-type: none"> Reducing impact on the environment by implementing GSR, the Recycle for Life campaign and optimising the way energy and other resources are used by implementing Energy Savings Pilot Projects. Managing the various types of waste from the water treatment process to meet full compliance with the Environmental Quality (Scheduled Wastes) Regulation 2005. <p>Disclosure:</p> <ul style="list-style-type: none"> Publishing an annual sustainability report in accordance with international reporting standards.
  	<p>Reducing Carbon Emissions:</p> <ul style="list-style-type: none"> Established a target for carbon-neutral operations by 2040 for Scope 1 and Scope 2 emissions by leveraging energy efficiency and renewable energy projects. Initiated six onsite, solar PV installations with an annual capacity of 9.3 MWac for internal use. The installations are targeted to be completed in 2023. <p>Climate Risk Adaptation:</p> <ul style="list-style-type: none"> Established <i>Jawatankuasa Bencana</i> and <i>Jawatankuasa Bilik Gerakan Operasi</i> at both the Headquarters and regional offices, and Flood Disaster Management Guidelines, to enhance the management of flood incidents in Air Selangor during the monsoon season. Established Air Selangor's Climate Change Taskforce to drive initiatives towards climate change adaptation.
     	<ul style="list-style-type: none"> Continuous awareness and training on anti-bribery and anti-corruption for employees. Organised Anti-Corruption Training by the Malaysian Anti-Corruption Commission (MACC) for the Board.

Legend													
	SPI 1		SPI 2		SPI 3		SPI 4		SPI 5		SPI 6		SPI 7

STAKEHOLDER ENGAGEMENT

Throughout its business operations, Air Selangor engages with various stakeholders, including regulators, authorities, suppliers, contractors, service providers and customers, among others. These stakeholders play a critical role in supporting overall business objectives, ensuring our licence to operate and helping us prioritise relevant issues in the supply of treated water to our customers.

Stakeholder engagement is an ongoing initiative and Air Selangor strives to provide the necessary and effective communication platforms where feedback and concerns can be heard, responded to and addressed.

<h2>Directors</h2>	
<p>Engagement Platforms</p> <ul style="list-style-type: none"> Board and Board Committee Meetings 	<p>Top Areas of Concern</p> <ul style="list-style-type: none"> Financial and operational performance Capital investments and initiatives Fundraising and capital management Risk management
<h2>Regulators</h2>	
<p>Engagement Platforms</p> <ul style="list-style-type: none"> Meetings Events Workshops Site visits Enforcement activities 	<p>Top Areas of Concern</p> <ul style="list-style-type: none"> Adherence to regulations and licence requirements Business plan and operational and financial performance Tariff rates Pollution Compliance with MOH DWQS Speedy and accurate water quality test results Engagement and communication Climate change Environmental performance
<h2>Customers</h2>	
<p>Engagement Platforms</p> <ul style="list-style-type: none"> Service counters Open counters Helpline Social media Mobile application Air Selangor's website Media Reports Campaigns Complaint investigation 	<p>Top Areas of Concern</p> <ul style="list-style-type: none"> Service reliability and billing accuracy Continuous water supply Optimum water pressure Water quality Engagement and communication Brand perception and trust Timeliness of resolutions and responsiveness to complaints Water conservation Awareness and educational matters
<h2>Developers</h2>	
<p>Engagement Platforms</p> <ul style="list-style-type: none"> Meetings Electronic Development Plan Approval System (eDPLAS) application 	<p>Top Areas of Concern</p> <ul style="list-style-type: none"> Efficient and transparent water supply application process Integrity and governance

Stakeholder Engagement

Employees

Engagement Platforms

- Employee engagement survey
- Employee training and employee engagement events
- Internal newsletters and bulletins
- Performance reviews
- Total Asset Management System (TAMS)
- Manuals and procedures
- Management Walkabout and Leadership Listening Tour
- HSE Week

Top Areas of Concern

- Engagement and communication with management
- Remuneration and benefits
- Workplace health and safety
- Succession planning and talent pool
- Opportunities for learning and development
- Internal system capability, reliability and performance in conducting day-to-day tasks
- Engagement between senior management and employees on HSE at the workplace

Vendors/Suppliers/ Contractors

Engagement Platforms

- Vendor engagements
- Vendors' performance reviews/meetings
- Vendors survey
- Air Selangor's website
- TAMS' Supplier Portal
- Tender Air Selangor Telegram channel
- Code of Business Ethics for Business Associates

Top Areas of Concern

- Fairness and transparency in the tender process
- Compliance with laws and business ethics
- Timely payment upon completion of work/services
- Long-term business and growth opportunities

Local Communities/ NGOs

Engagement Platforms

- Meetings
- Engagement sessions, community events and CSR programmes
- Campaigns

Top Areas of Concern

- Philanthropy and charitable giving
- Environmental performance
- Brand perception and trust
- Engagement and communication
- Partnerships and collaborations
- Awareness and educational matters

State Assemblymen, Government Agencies, Industry Groups, Academic Institutions and Others

Engagement Platforms

- Community programmes/ events
- *Sidang Dewan Undangan Negeri (DUN)*
- Briefings and engagement sessions
- Town hall
- Research collaborations
- Sharing industry experience

Top Areas of Concern

- Partnerships and collaborations
- Engagement and communication
- Timeliness of resolutions and responsiveness to complaints
- Awareness and educational matters
- Sharing of knowledge and industrial practices with university students

Media

Engagement Platforms

- Press conferences
- Events
- Air Selangor's website
- Engagement sessions

Top Areas of Concern

- Dissemination of information
- Engagement and communication

AIR SELANGOR'S SUSTAINABILITY STRATEGY 2030

In 2022, Air Selangor reviewed its operating period one (OP1) Sustainability Strategy and revisited the materiality exercise to refine its sustainability material matters identified in 2019. Various policies and frameworks, best practices and future trends surrounding the water industry, as well as Air Selangor's business plans as the key reference, were considered in identifying material sustainability matters. External stakeholder concerns raised through focus group discussions, surveys and comments were also considered during the process.

Following this, engagement sessions with internal stakeholders were conducted to gather feedback and to identify action plans in line with the current business requirements and the consideration of emerging sustainability risks for Air Selangor. After various discussions, Air Selangor's Sustainability Strategy 2030 was finalised and subsequently approved by the Board in January 2023.

The material sustainability matters and their categorisation into five main strategy pillars are explained in the diagram below.

Sustainability Strategy Pillars	Material Sustainability Matters	SDGs	SPIs			
Strengthening Governance and Increasing Transparency	<ul style="list-style-type: none"> Sustainability Governance Tariff and Pricing 	    	  			
Reducing the Impact of Climate Change	<ul style="list-style-type: none"> Climate Change Energy and Emissions Water Conservation 	  	     			
Prioritising Employee Health, Safety, Competency and Diversity	<ul style="list-style-type: none"> Health and Safety Workplace Diversity Employee Competency 	 	 			
Delivering Customer Service Excellence	<ul style="list-style-type: none"> Water Quality Customer Service 	 	  			
Leveraging Digitalisation to Support a Circular Economy	<ul style="list-style-type: none"> Procurement and Supply Chain Technology Waste Management 	   	   			
Legend						
 SPI 1	 SPI 2	 SPI 3	 SPI 4	 SPI 5	 SPI 6	 SPI 7

STRENGTHENING GOVERNANCE AND INCREASING TRANSPARENCY

Robust corporate governance and strong leadership are the cornerstones in anchoring the Company towards becoming a high-performing organisation. Air Selangor has set in place governance mechanisms for managing business risk, preventing unethical business conduct, implementing business continuity management and addressing cybersecurity risks for the Company.



CORPORATE GOVERNANCE

The Board of Directors of Air Selangor (Board) is collectively responsible for developing, implementing and maintaining a sound corporate governance system and continuously employs good corporate governance to ensure the Company achieves its business objectives, operates efficiently and manages risk effectively. Good corporate governance practices contribute to value creation for all stakeholders by ensuring accountability through clearly defined roles and responsibilities and promoting transparency through reporting and disclosure.

As a private company, Air Selangor observes the provisions of its Constitution and complies with the Companies Act 2016 and other relevant regulatory requirements. As a state-owned entity, the Company is also encouraged to embrace the governance practices prescribed by the Malaysian Code on Corporate Governance (MCCG) 2021. In this regard, the Board of Air Selangor has established four Board Committees, namely the Board Audit Committee, Board Nomination and Remuneration Committee, Board Risk and Sustainability Committee and Board Procurement Committee. The Board Committees are governed by their respective Terms of Reference (TOR) approved by the Board.

These Board Committees provide a platform for the Board to deal with specific matters that require specialised areas of expertise, including overseeing risk management and sustainability matters, reviewing the effectiveness of internal controls, making recommendations to the Board on significant matters of procurement and other aspects of good governance. The establishment of these Committees further strengthens the Company's governance practices and enhances the overall management of Air Selangor through expert opinions to guide the Board in business decision-making.

The departments within the Company, namely Human Resource, Finance and Strategy, Internal Audit, Procurement, Risk Management and Legal and Company Secretarial, have major roles in supporting the Board Committees by steering the execution of strategies and implementation of initiatives.

Strengthening Governance and Increasing Transparency

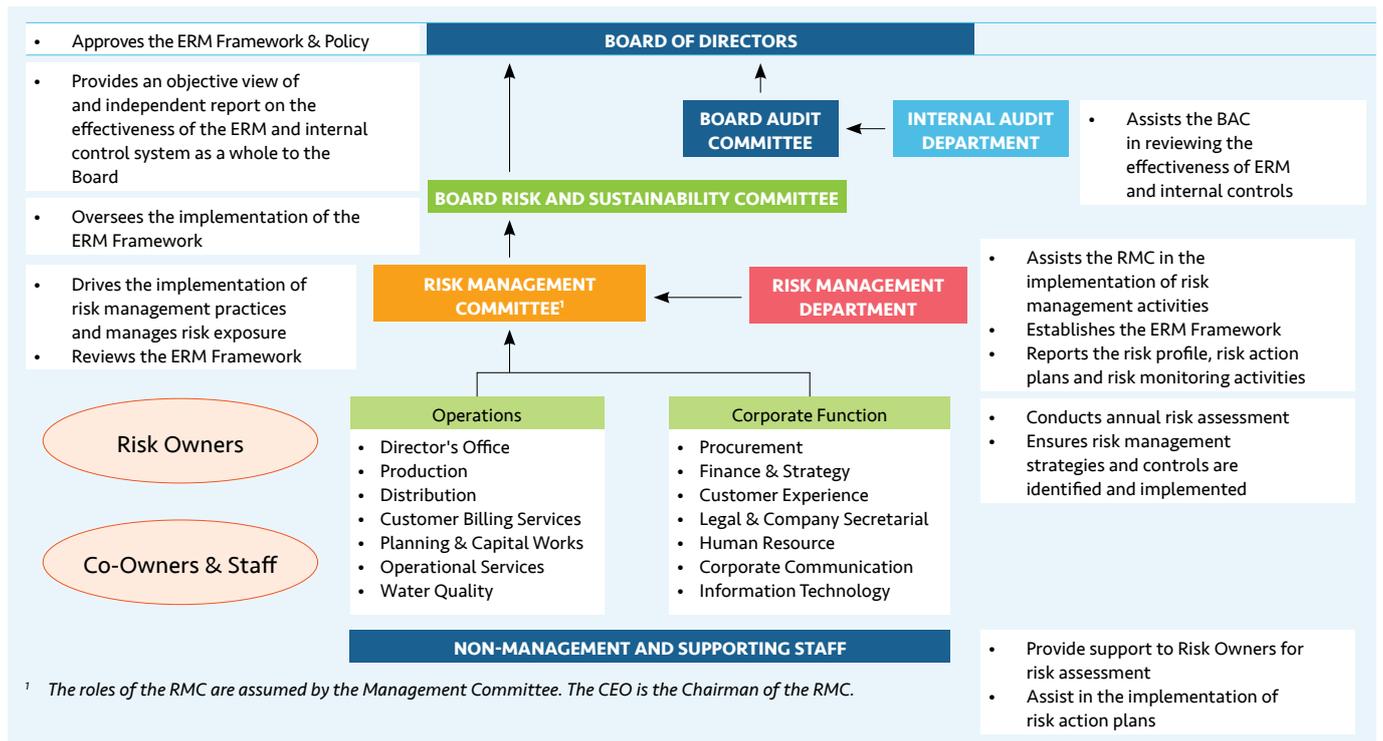


¹ The Board Risk and Sustainability Committee was established in 2022 and its inaugural meeting was convened on 8 December 2022.
² Reports directly and functionally to the Board Audit Committee and administratively to the CEO.
³ Support the Board Committees functionally and report directly to the CEO.

ENTERPRISE RISK MANAGEMENT

The Board sits at the apex of the risk management structure where it provides oversight on the establishment and implementation of organisational-wide risk management. The Board is assisted by the BRSC, which was established in 2022. With the establishment of the BRSC, Air Selangor has strengthened its risk management governance and the implementation of its Enterprise Risk Management (ERM) Framework.

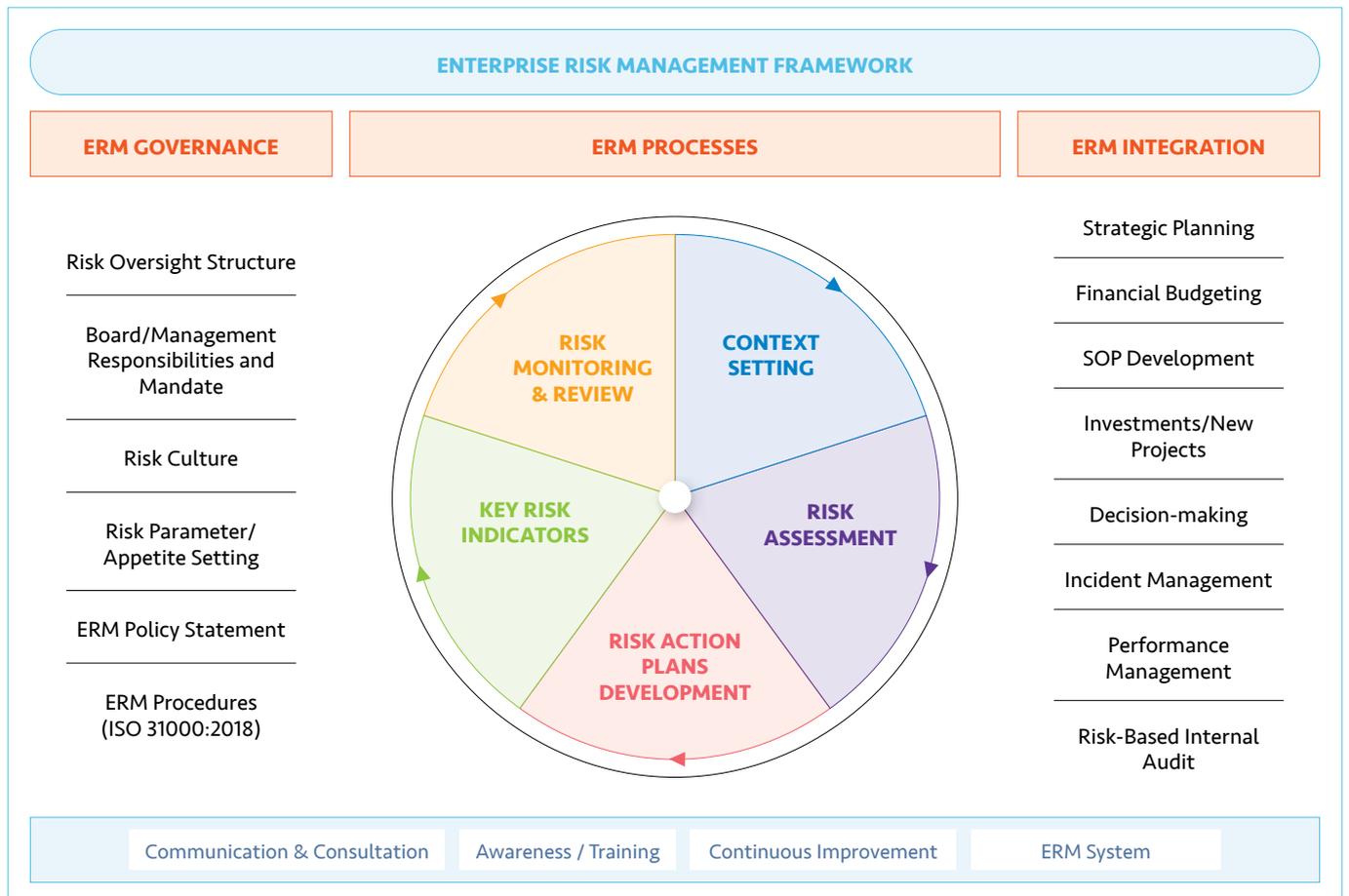
The key functions supporting the overall risk management structure are listed as follows:



¹ The roles of the RMC are assumed by the Management Committee. The CEO is the Chairman of the RMC.

Strengthening Governance and Increasing Transparency

Risk management is a crucial element in strategic decision-making, and it is supported by a robust ERM Framework in place that is guided by ISO 31000:2018 and consists of several key components, namely ERM governance, processes and integration.



Business Risks

As part of the ERM processes, an annual risk assessment is conducted to identify, analyse and evaluate key business risks, which subsequently will be used to understand the risk exposure of the Company and determine risk mitigation strategies. For 2022, the key business risks and their mitigation measures were as follows.

Key Business Risks	Mitigation Measures
<p>Delay in Tariff Increase</p> <p>A delay in tariff increase might affect the sustainability of the financial model and the realisation of the 30-Year Business Plan of the Company. Periodic adjustment of water tariffs is crucial to ensure the recovery of operational costs for water supply and to provide adequate funding to support asset replacement and upgrading of water supply infrastructure in a sustainable manner.</p>	<ul style="list-style-type: none"> Budget reviews to prioritise projects based on criticality. Structured budgeting and cash flow planning were implemented to ensure the stability of cash flow and control spending. Funding strategy in place to finance CAPEX, OPEX and working capital. Utilisation of matching grants for operational improvement programmes. Ongoing cost optimisation review and benchmarking.

Strengthening Governance and Increasing Transparency

Key Business Risks	Mitigation Measures
<p>Delay in the Completion of Rasau Stage 1</p> <p>Timely completion of the Rasau WTP is critical to reduce dependency on Sungai Selangor Water Supply schemes and to increase the overall reserve margin to above 15%.</p> <p>The Rasau WTP, upon completion, is expected to have the capacity of producing 700 MLD of clean water supply to the Klang Region. Without the Rasau WTP, the reserve margin of the Klang Region may drop to 1.9% by 2024, which may cause economic, developmental and social impacts on the region.</p>	<ul style="list-style-type: none"> • Coordination between Air Selangor and other agencies for approval of necessary work permits and land acquisition matters. • Conducted the preliminary study for the source work, which has been shared with the Ministry of Natural Resources, Environment and Climate Change (NRECC) to accelerate the progress of the project. • Periodic project risk reviews to ensure key risks are adequately managed.
<p>Climate Change</p> <p>Climate change has affected the quantity and quality of water resources. With this, Air Selangor needs to adapt and minimise the impact of climate change on its business operations.</p>	<ul style="list-style-type: none"> • Air Selangor established its Climate Change Taskforce in 2022 to lead initiatives towards climate change adaptation. • Engagement with relevant agencies to identify, communicate and execute mitigation strategies. • Development of raw water storage, i.e. retention ponds and ORS at critical water treatment plants to ensure continuous raw water supply in case of low levels at water intakes or water pollution issues.
<p>Sustainable NRW Reduction</p> <p>Air Selangor is committed to reducing its NRW rate to 25% by 2025. Control of NRW is crucial to sustain and curb the Natural Rate of Rise (NRR) in the long run, as well as reducing physical water losses and improving revenue recovery. Furthermore, it is difficult to strike a balance between costs and benefits to achieve the NRW target due to budget constraints. This is due to the current tariff environment which has limited Air Selangor's spending on managing its NRW. Meeting the NRW target approved by SPAN is crucial as it allows Air Selangor to claim the NRW matching grant to accelerate the execution of more programmes and improvement initiatives, as well as cushioning the impact of the delay in tariff increase.</p>	<ul style="list-style-type: none"> • A billing task force has been established to improve billing efficiency and accuracy. • Intensifying NRW Programmes at targeted regions to reduce physical losses. • Enhancement and optimisation of system input volume (SIV) control. • A continuous asset improvement programme is being carried out to improve asset performance and reduce leakages.
<p>Raw Water Pollution</p> <p>Raw water pollution is one of the key concerns in Air Selangor since it may lead to water service disruptions to customers due to a low water reserve margin and a lack of alternative water sources at critical WTPs such as Sg Selangor and Sg Semenyih.</p>	<ul style="list-style-type: none"> • Communication and stakeholder engagement activities are carried out to promote public awareness on river care and protection. • Periodic river surveillance by Air Selangor's PAKAR team to complement the surveillance activities carried out by PANTAS, a LUAS surveillance team. • Reporting illegal industrial discharge and conducting joint investigations with the relevant authorities to strengthen enforcement activities. • Real-time raw water quality monitoring via online monitoring systems at the River Monitoring Stations (RMS) and raw water intakes. • Activation of OPAK and HORAS 600 to expedite dilution and flushing of pollutants when pollution occurs.
<p>Project Delays (More than 20%)</p> <p>Project delays may increase project costs due to the extension of the contractual period and delay in improving operational performance and service delivery, which will affect the overall achievement of SPIs and efficiencies.</p>	<ul style="list-style-type: none"> • Close monitoring of permit approval status and timely response to the documentation and/or information required by the authorities. • Review of panel contractors' performance before project award. • Enforcement of liquidated and ascertained damages (LAD) on contractors who are unable to complete the project within the contractual period. • Establishment of a Project Risk Management Framework that governs the identification, reporting and monitoring of project risk.

* The key business risks outlined here are valid as of 31 December 2022.

Strengthening Governance and Increasing Transparency

Risk Awareness

Air Selangor believes that the development of a risk-based mindset is crucial to building a sustainable risk management culture and practice. This is important to equip employees with risk management capabilities to identify and manage risk exposures that might prevent the Company from achieving its key objectives.

In 2022, risk awareness and risk profiling workshops were extended to regional offices in Sabak Bernam, Sepang, Klang, Gombak and Hulu Langat. These sessions gathered around 100 participants holding various critical positions and helped to improve risk visibility and assessment.



BUSINESS ETHICS

Air Selangor is committed to the highest standards of ethical business conduct, transparency and accountability in its daily business operations, and is strongly guided by its Anti-Bribery and Anti-Corruption (ABAC) Framework, Policy and Procedures. The Policy and Procedures complement and shall be read together with other internal policies and procedures such as the Employee Handbook, Employee Code of Ethics, Code of Business Ethics for Business Associates, Whistleblowing Policy, No Gift Policy, Corporate Social Responsibility Policy and Conflict of Interest Policy.

In ensuring compliance with the Corporate Liability provision under Section 17A of the Malaysian Anti-Corruption Commission (MACC) Act 2009, Air Selangor conducts various initiatives to safeguard the Company and its employees from the risk of corruption. One of the leading initiatives is the Corruption Risk Assessment, which analyses the organisation's overall risk of corruption and develops risk profiles and action plans.

As of December 2022, the Corruption Risk Assessment completion rate stands at 44%, with completion targeted by the end of March 2023.

Air Selangor also places strong emphasis on having competent staff dealing with matters related to anti-corruption within the Company. As a testament to this, a member of the Integrity and Governance Section and the Head of the Risk Management Department are Certified Integrity Officers (CeIOs). CeIO certification is provided by the Malaysia Anti-Corruption Academy, the premier anti-corruption certification body in Malaysia.

In addition, Air Selangor is in the midst of obtaining its ISO 37001 Anti-Bribery Management System (ABMS) certification from SIRIM. The Stage 1 audit was completed in September 2022 and full certification is expected to take place by the third quarter of 2023.

AirSelangor has also established measures to prevent incidents of conflict of interest through compulsory declarations for new employees and vendors. Furthermore, information about conflict of interest has been included in the e-learning module that is mandatory for all employees to complete.

In addition to the Declaration of Conflict of Interest Policy, the Whistleblowing Policy was established to guide genuine reporting of any unethical conduct by employees and business partners and to protect whistleblowers in line with the Whistleblower Protection Act. Any improper conduct can be reported through the whistleblowing channel which is available on the Company's website. In 2022 alone, there were two attempts to bribe Air Selangor staff that were reported via the whistleblowing channel. In both cases, the staff to whom the bribes were offered were the ones who made the reports. This demonstrates the success of the awareness campaigns that were carried out throughout the year.

Strengthening Governance and Increasing Transparency

Anti-Bribery and Anti-Corruption Awareness and Training Programmes

During the year, Air Selangor organised various awareness and training programmes to further equip our employees and business partners with the latest knowledge and information about anti-bribery and anti-corruption.

Whistleblowing Awareness for vendors



Integrity awareness briefing to 16 critical vendors

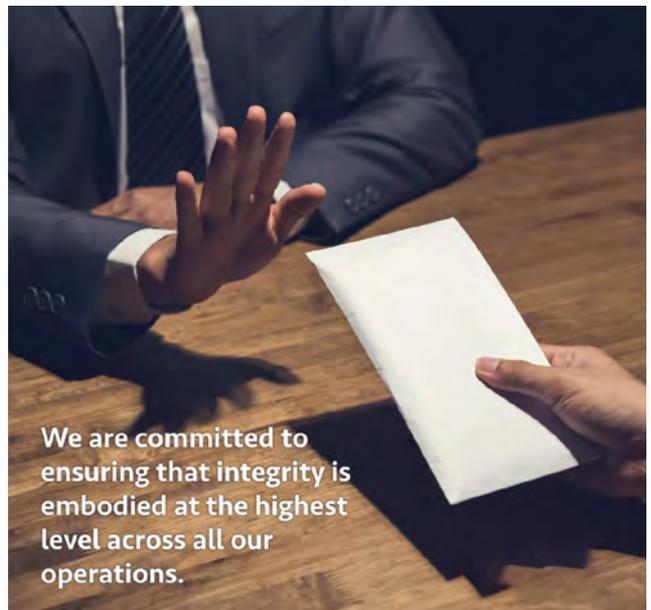


Anti-corruption awareness for the public through the LinkedIn platform

#AirSelangor



Training on various topics, such as ABAC Policy, No Gift Policy and Etiquette with Government Servants, for employees, conducted between June and December 2022



We are committed to ensuring that integrity is embodied at the highest level across all our operations.

Integrity briefing to new employees during their first day of reporting

Anti-corruption training for the Board by MACC

Strengthening Governance and Increasing Transparency

BUSINESS CONTINUITY MANAGEMENT

As the sole water services provider for Selangor, Putrajaya and Kuala Lumpur, Air Selangor understands its critical role in ensuring continuous water supply to its domestic customers and to businesses in support of the region's economic growth. Business continuity management (BCM) is the founding pillar in ensuring operational resiliency and robustness to enable the Company to respond to, recover and resume operations from episodes of disruptions arising from both internal and external risks.

Air Selangor's BCM Framework was established to guide BCM methodology, planning, activities and reporting throughout the Company, and it is guided by the ISO 22301 Business Continuity Management System. In 2022, the BCM Framework and Policy and other relevant documents such as the Business Impact Analysis (BIA) and Business Continuity Plan (BCP) templates, as well as the Crisis Management Plan and Crisis Communication Plan, were revised as part of efforts to enhance the overall BCM documentation and processes. Following the refinement of the BCM documentation and processes, numerous awareness and workshop sessions were conducted with BCM Coordinators to communicate the revised BIA and BCP templates.

ISO 22301:2019 BUSINESS CONTINUITY MANAGEMENT SYSTEM

Air Selangor has long recognised the importance of implementing a business continuity management system (BCMS) to ensure its operations can continue even in the face of unexpected disruptions. Hence, the Company decided to pursue the ISO 22301:2019 Business Continuity Management System certification, a globally recognised standard for BCMS.

The benefits of this certification include the establishment of effective response plans to address all types of business disruptions and minimising the impact on the organisation, minimising loss of data and revenue, facilitating timely recovery of business functions and maintaining public image and reputation.

The certification scope for Air Selangor covers the provision of corporate management support services, the management, operation and maintenance of water treatment plants, water resource planning, monitoring of water resource hotspots, water intake, dams and water transfer schemes.

In December 2022, Air Selangor successfully obtained the ISO 22301:2019 Business Continuity Management System certification. To maintain the certification, the Company continued to monitor and improve its BCM system and undergo periodic audits by the certification body. This helped the Company stay prepared for unexpected disruptions and ensure the continuity of its operations.



Control Panel at Filtration Tank Building, Langat 2 Water Treatment Plant

Integrated Business Continuity Plan Testing

Throughout 2022, the Company carried out various initiatives to ensure its readiness in facing crises and disruptions to its business processes and one of the initiatives was conducting business continuity plan testing. Two testing sessions were conducted where one session was a tabletop exercise, and the other was a crisis simulation exercise session at the Petaling Regional Office.

The tabletop exercise discussed and managed fictional scenarios that were supported by creative materials, such as mock voice recordings, for a more realistic simulation. On the other hand, the crisis simulation exercise, which was a larger-scale exercise, involved participants physically handling simulated fictional scenarios. This session saw participants physically evacuate, mobilise, respond to and recover critical business functions at its Buddy Regional Office. The Buddy Regional Office refers to backup office(s) for the primary regional office when a disaster occurs.

Strengthening Governance and Increasing Transparency

The areas assessed during these testing sessions were incident escalation, damage assessment, building evacuation, crisis management and stakeholder management, among others. Through these exercises, the Company identified areas for improvement in Air Selangor's plans, policy and framework, such as the Emergency Response Plan, Business Continuity Plan, Business Continuity Management Framework and Policy and Corporate Communication Framework.

Protecting Operational Assets from Flood Incidents

Following the massive flooding in Peninsular Malaysia in December 2021 and as part of measures to prepare for potential flood incidents in the future, Air Selangor strengthened its efforts to protect its operational assets from damage and to prevent unscheduled service disruptions to customers. The Company established *Jawatankuasa Bencana* and *Jawatankuasa Bilik Gerakan Operasi* at both the Headquarters and regional offices, and Flood Disaster Management Guidelines in November 2022 to enhance the management of flood incidents in Air Selangor.

The Committees were created to coordinate response plans and ensure that the disaster communication plan before, during and after an incident is effectively implemented.

Cross-Training Programme

The Cross-Training Programme was continued into 2022 with a focus on customer service counter operations. This is a crucial area for Air Selangor as service counters are one of our main customer-facing platforms where the Company needs to maintain its level of service even during crises. This programme trains selected employees from non-customer service functions to perform counter

Pengurusan Air Selangor Sdn Bhd

service operations. This is to ensure adequate manpower support in case of multiple manpower shortages at the service counters at the same time.

At the WTP level, the Cross-WTP Operation Training Programme was also organised and implemented in three stages, with Stage 1 involving a pilot WTP that was completed in October 2022, Stage 2 for critical WTPs that is still ongoing and Stage 3 scheduled to take place in 2023. This training covers WTP operations for the raw water intake, water treatment processes, residual treatment and maintenance and electrical systems.

The success of this programme will pave the way for similar cross-training programmes to be initiated for other critical business functions within Air Selangor.

BCM Awareness for Business Partners

Air Selangor also embarked on improving business continuity in its supply chain by conducting a BCM Awareness Programme for critical business partners. The aim was to ensure Air Selangor's business partners understood the importance of business continuity in ensuring Air Selangor's processes and services, as the sole water services provider, remained operational in the event of any disruptions. A total of 105 representatives of various vendors attended the session.



CYBERSECURITY

Air Selangor's daily business operations are highly dependent on the use of technology, and as we move towards further digitalisation of various processes, the risk of cybersecurity incidents will need to be managed holistically. A Cyber Security Incident Response Plan was formalised in September 2022 to support Air Selangor in managing cybersecurity incidents. The creation of this document was critical in order to provide a consistent and effective approach to preparing for and responding to cybersecurity and data breach incidents.

As part of efforts to safeguard Air Selangor from cybersecurity threats, the Company conducted a Security and Vulnerabilities Posture Assessment which was completed in the fourth quarter of 2022. Air Selangor also conducted a social engineering test to assess employees' adherence to the Company's Information Security Code of Practice upon completion of an e-learning programme.

OPTIMISING BUSINESS OPERATIONS

Air Selangor SPIs, namely Water Forever, Improving Asset Reliability and Resilience, Improving Operational Efficiency, NRW Reduction, and Towards Best Customer Experience have been the bedrock for the Company's mission in optimising its business operations. These strategies and targets serve to guide the Company to meet increasing water demand, improve water quality, reduce non-revenue water, optimise asset management, and implement good business practices within the supply chain.

WATER SUPPLY

According to Malaysia's SDG Voluntary National Review 2021, the average domestic water consumption for Peninsular Malaysia and the Federal Territory of Labuan was 245 litres per capita per day (LCD). The average Malaysian's water consumption is much higher than 165 litres a day as recommended by the World Health Organisation (WHO). Compared with neighbouring countries, Singapore uses an average of 151 LCD and Thailand uses 193 LCD. Should this trend continue, water operators in Malaysia will face difficulties in keeping up with water demand as the population grows. As the biggest treated water provider in Malaysia that serves over one-quarter of the total Malaysian population, this is a concern to us. Hence, Air Selangor is continuously striving to secure a sustainable water supply for customers in Selangor, Kuala Lumpur, and Putrajaya through extensive measures under the strategy of SPI 1: Water Forever.

Water Production

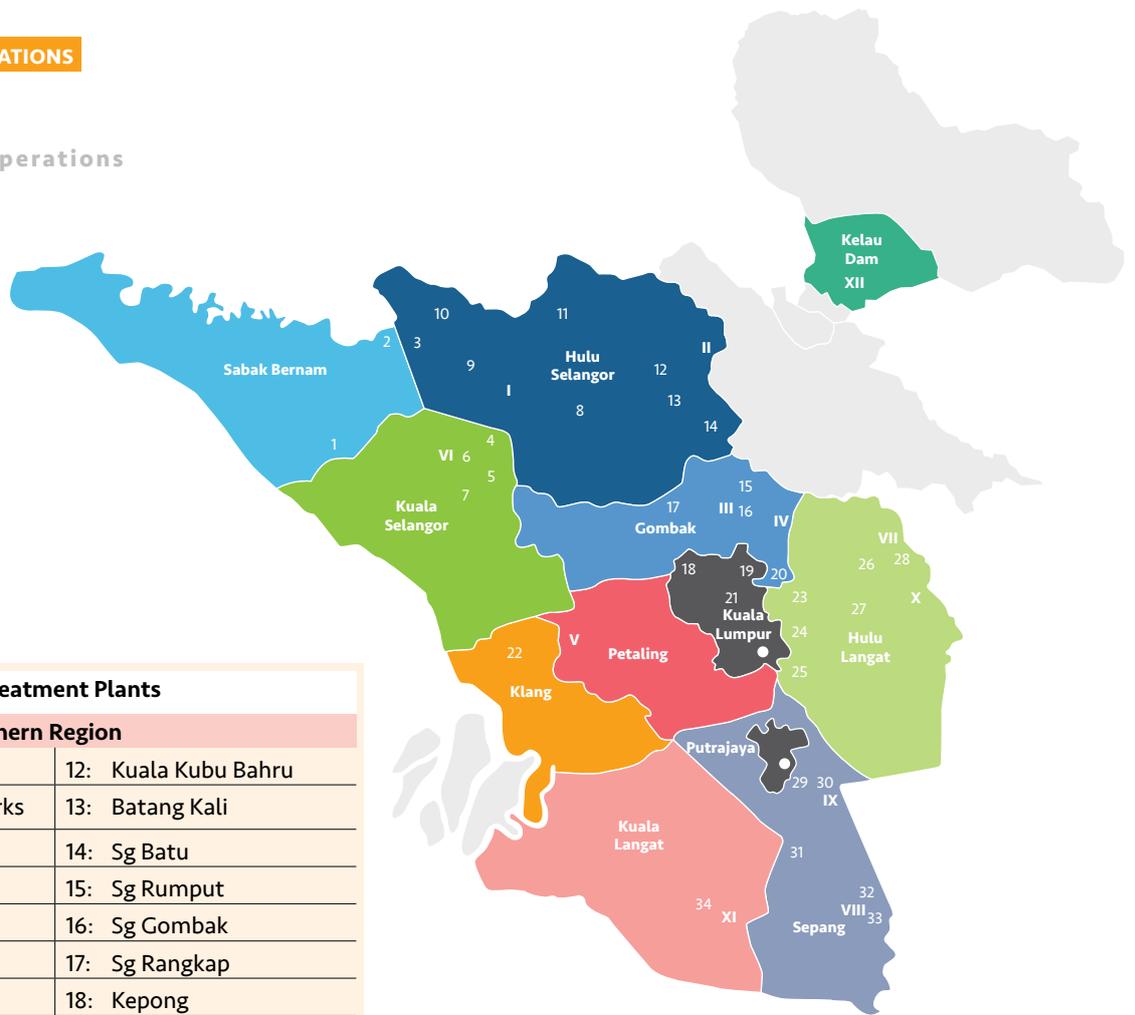
Air Selangor abstracts raw water from dams and rivers in Selangor and Pahang. A new injection of 69 MLD of water supply capacity from Labohan Dagang has increased the total distributable capacity from the 34 WTPs from 5,757 MLD to 5,826 MLD. Labohan Dagang WTP supplies treated water to parts of the Klang and Kuala Langat regions.

In 2022, average production has also increased from 4,991 MLD in 2021 to 5,117 MLD. This increase in production is mainly due to the new supply areas for Labohan Dagang WTP which are Olak Lempit and Rimbayu.



Pump House at Langat 2 Water Treatment Plant

Optimising Business Operations



Water Treatment Plants

Northern Region

1: Sg Sireh	12: Kuala Kubu Bahru
2: Bernam River Headworks	13: Batang Kali
3: Sg Dusun	14: Sg Batu
4: Rantau Panjang	15: Sg Rumput
5: Sg Selangor Phase 1	16: Sg Gombak
6: Sg Selangor Phase 2	17: Sg Rangkap
7: Sg Selangor Phase 3	18: Kepong
8: Rasa	19: Wangsa Maju
9: Sg Tenggi	20: Ampang Intake
10: Sg Selisik	21: Bukit Nanas
11: Kalumpang	22: North Hummock

Southern Region

23: Langat 2	29: Sg Semenyih
24: Sg Langat	30: Semenyih 2
25: Cheras Mile 11	31: Bukit Tampo
26: Sg Lolo	32: Salak Tinggi
27: Sg Serai	33: Sg Labu
28: Sg Pangsoon	34: Labohan Dagang

Dams/ORS/HORAS

Northern Region

I: Sg Tinggi
II: Sg Selangor
III: Batu ¹
IV: Klang Gates
V: Tasik Subang
VI: HORAS 600

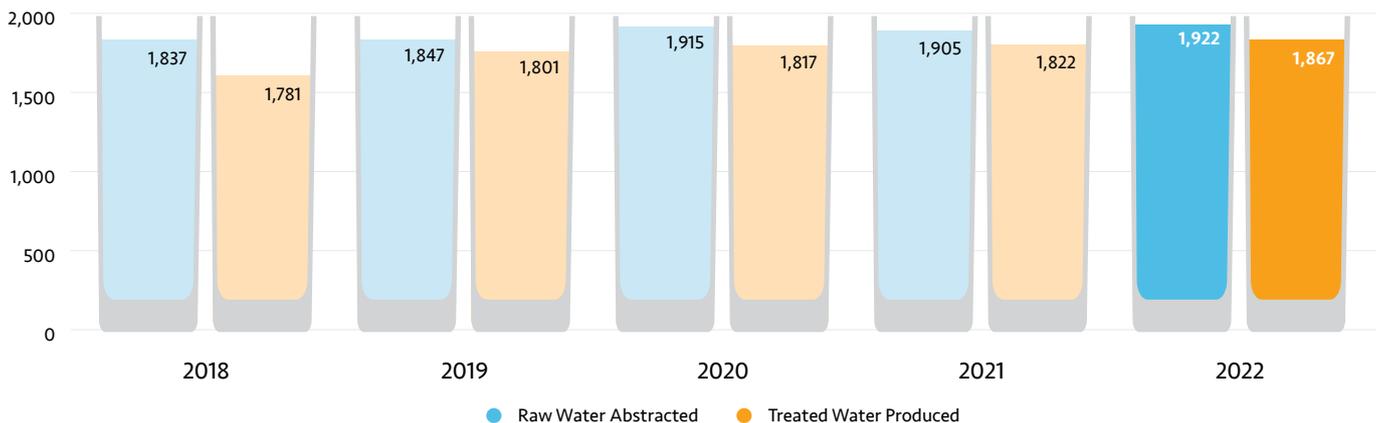
Southern Region

VII: Sg Langat
VIII: ORS Sg Labu
IX: ORS Semenyih 2
X: Semenyih 2
XI: ORS Labohan Dagang
XII: Kelau ²

¹ Batu Dam is under the supervision of the Department of Irrigation and Drainage
² Kelau Dam is located in Pahang

Volume of Water Abstracted and Produced

(mil.m³)



Optimising Business Operations

Pasukan Khas Lembangan dan Alur Air

Air Selangor established a Catchment and Waterways Surveillance Unit, or *Pasukan Khas Lembangan dan Alur Air* (PAKAR) to assist the Local District Authority and LUAS in safeguarding raw water sources from pollution. PAKAR conducts river water quality assessment and surveillance at 230 sampling points across six catchment areas. River Monitoring Stations are installed along selected rivers to monitor water quality trends and act as an early warning system in detecting potential pollution incidents. We also have dedicated Unmanned Aerial Vehicles to conduct catchment and industrial area profiling to identify sources of discharge and land use that may lead to water pollution.

In 2022, PAKAR initiated a study on watershed management which aims to establish watershed management practices and examine the readiness of policy, technology, systems, and people. The project was aimed at reviewing and evaluating the status of Air Selangor on the current implementation of the watershed management programme and recommending overall approaches and relevant strategies for adoption. Watershed management will involve the establishment of baseline information on watersheds and rivers, odour detection technology, management and utilisation of data, integration of water quality related systems and functional group structure set-up among key stakeholders.

Reserve Margin

The water reserve margin is the difference between the distributable capacity of the water treatment system against the current demand. It is a measure of a water utility's ability to meet future water demand and is paramount in ensuring that customers have an adequate water supply during times of drought or unexpected demand. Air Selangor is expected to increase its water reserve margin to 17.70% by 2030.

However, in 2022 the reserve margin has decreased to 12.02% from 13.63% in 2021 due to an increase in water demand and delay in the completion of Langat 2 WTP distribution network.

Air Selangor is currently working on projects to increase its production capacity. The current ongoing Rasau Water Supply Scheme Stage 1 will add another 700 MLD, which will benefit approximately 467,000 consumer accounts in the Klang Region.

By 2030, we have projected that the water demand in our distribution areas is expected to reach 6,910 MLD while Air Selangor's production capacity will achieve 8,400 MLD.

Water Supply Disruption

Air Selangor inherited aging infrastructure from the previous water operators which requires substantial investments for replacement, repair, and maintenance. Coupled with the stagnant water tariff, it is challenging for the Company to maintain its service delivery. Although Air Selangor always aims for seamless and uninterrupted water supply to all customers, disruptions can still occur from time to time. Various reasons such as third-party pollution which can lead to WTP shutdowns, scheduled or unscheduled repair works, aging pipes which causes pipe leaks and bursts, as well as pump house and reservoir failures can lead to water supply disruptions.

In order to control and minimise disruptions, the Company has taken proactive measures to prevent further recurrences. Our initiatives in curbing recurring disruption include predictive maintenance works, early detection systems, and mitigation plans. However, unscheduled disruptions may still occur due to pipe bursts, pump house breakdowns and reservoir issues. ERP will only be activated during major disruptions whether scheduled or unscheduled. The following sections detail the causes of water supply disruption and existing solutions that have been put in place.

Incidents	Number of Disruptions		Durations (hours)		Average No. of Affected Accounts	
	2021	2022	2021	2022	2021	2022
Water Outages						
Pipe Size > 600mm	45	67	1,022	1,366	4,706	9,449
Unscheduled Pump House Breakdown	54	61	518	557	740	1,906
Reservoir Issue	119	94	1,173	1,145	1,955	1,726
Unscheduled WTP Shutdown	5	6	276	169	272,590	219,379
Scheduled Disruption Due to Maintenance and Upgrading Work	5	1	332	55	189,221	126,142

Optimising Business Operations

PAKAR Surveillance Scope



WATER QUALITY

Air Selangor is required to comply with the Drinking Water Quality Standard set by the Ministry of Health and is actively working towards providing drinkable water from the tap by 2028. The Trust Our Tap initiative is captured in the business plan and includes initiatives towards achieving drinkable water quality.

Towards this, various initiatives such as real-time monitoring of water quality parameters along our distribution network, regular pipe cleaning and reservoir cleaning, installation of secondary chlorination, and advanced laboratory capabilities have been implemented.

Water Quality Monitoring and Compliance

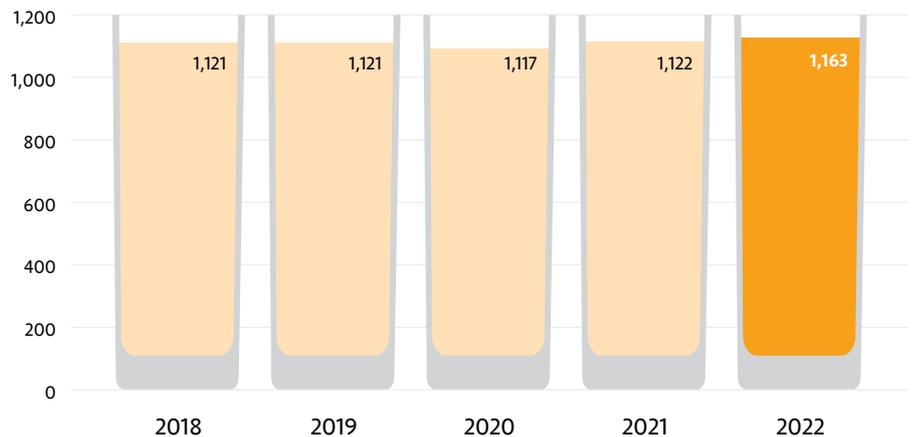
In 2022, Air Selangor performed more than three million water quality analyses across the entire Company's operations. Water quality testing is performed at two hour intervals at each WTP and a total of 190,000 analyses were conducted in regional laboratories annually, including physical, chemical, and microbiological analysis testing.

Air Selangor has three accredited regional laboratories that comply with MS ISO/IEC 17025:2017 Testing and Calibration of Laboratories which are located at major WTPs, namely Sg Selangor Phase 2, Sg Labu, and Sg Semenyih. These regional laboratories are staffed with 20 experienced chemists and microbiologists to ensure the analyses performed are conducted according to international standards and accredited methods.

Air Selangor operates 1,163 active water quality sampling stations for treated water across its distribution area where 692 are under mandatory monitoring by MOH, 401 are monitored by Air Selangor and 70 are jointly monitored by MOH and Air Selangor. As of December 2022, 291,525 treated water quality analyses conducted at these sampling stations indicated a 99.84% compliance with the MOH DWQS.

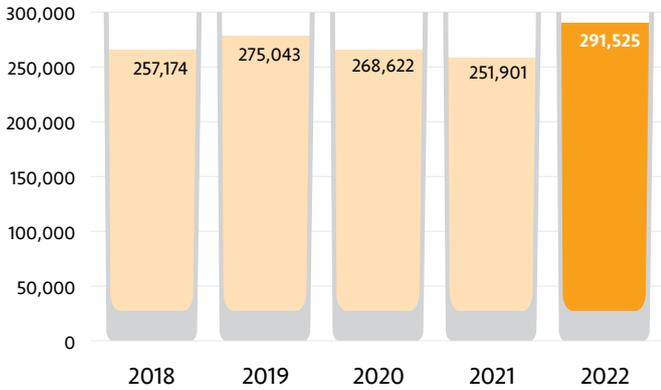
In 2022, Air Selangor recorded an increase in number of analyses as part of efforts to increase water quality parameter testing above and beyond compliance. The number of analyses in 2022 is also higher than previous years due to the increase in the number of water sampling stations monitored by the MOH.

Total Number of Active Water Quality Sampling Stations (Nos.)

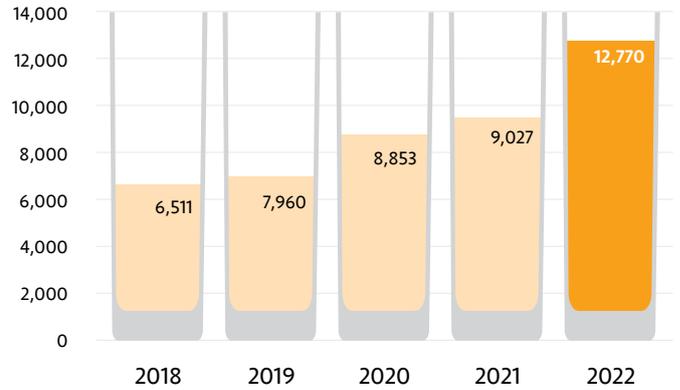


Optimising Business Operations

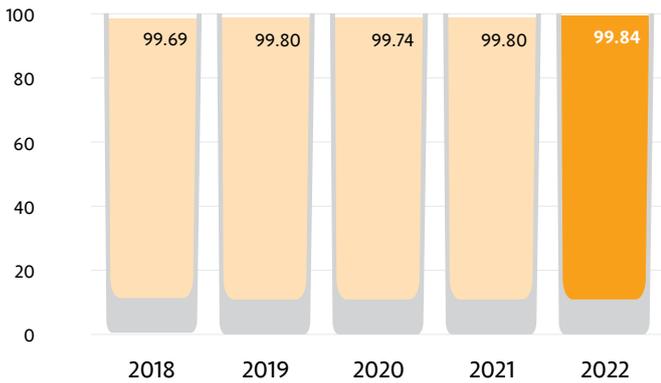
Total Number of Analyses
(Nos.)



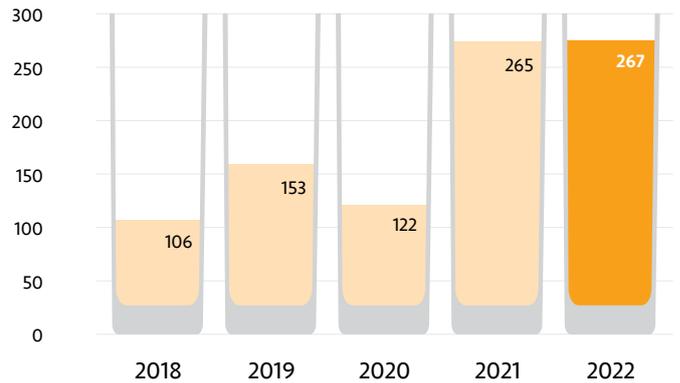
Total Number of Pipe Cleaning Works
(Nos.)



Average Water Quality Compliance
(%)



Total Number of Reservoir Cleaning Works
(Nos.)



Regular pipe cleaning using pressurised and non-pressurised cleaning methods is carried out to eliminate sedimentation, biofilm, and soft mineral scale which can affect water quality. As of 2022, works are ongoing for five water courses which include the construction of new water quality sampling stations, water quality assessments at active service reservoirs, reservoir cleaning, pipe cleaning, and activation of Pipe Cleaning Zone with Compression Gear and Isolation (POLIGONs).

POLIGONs are activated progressively with priority given to areas with dead-end pipe systems, valley areas where sediments tend to accumulate, and areas with a large number of water quality complaints. Cleaning involves the injection of compressed air into the pipe to remove and flush out sediments from the pipeline through the scour point at high velocity. As of December 2022, POLIGONs covered approximately 11,400 km of reticulation pipes.

Reservoir cleaning works are usually conducted every six years and include surface and internal structure deep cleaning, sediment removal, and disinfection. Such cleaning works are necessary to maintain treated water quality for our customers.

Emerging Contaminants

As Selangor, Kuala Lumpur, and Putrajaya become more urbanised and industrialised, Air Selangor is cognisant of the risk of evolving or emerging contaminants in existing raw water sources. Presently, these categories of contaminants are not part of the mandatory parameters monitored by MOH.

Therefore, Air Selangor is constantly improving its chemicals and contaminants monitoring, leveraging the advancement of technology as well as field experts stationed at our laboratories. Furthermore, we have elevated the standards of our regional laboratories to diagnostic laboratories from their previous status as analytics laboratories.

In 2022, Air Selangor’s regional laboratories have started to monitor an additional 15 water quality parameters in the emerging contaminants category under industrial solvents and microbials. Additionally, these regional laboratories have also successfully developed testing methodologies to analyse Per- and Polyfluoroalkyl substances (PFAs), which was highlighted by MOH and other international regulators such as the United States Environmental Protection Agency.

Optimising Business Operations

Air Selangor is targeting to further expand its water quality testing and monitoring capabilities to a total of 160 compounds by 2030, including the existing 47 parameters listed by MOH in the National Drinking Water Quality Standard. These additional compounds will include Persistent Organic Pollutants (POPs), Persistent Bio-accumulative Toxic substances (PBTs), industrial solvents, pesticides, pharmaceuticals, and drugs. These chemicals include chemicals detected from previous water pollution incidents, new chemicals, microbials regulated by Malaysian Acts or by other countries, and chemicals that are based on MOH's secondary list of parameters which is currently not mandatory for monitoring.

NON-REVENUE WATER

Non-Revenue Water (NRW) refers to the amount of water that is produced by the Company but is lost during distribution before it reaches customers' water meters and includes the consumption by customers that cannot be billed accurately. These losses can be due to leaks, pipe bursts, reservoir overflows, meter inaccuracies, theft, and other factors. NRW Reduction is one of Air Selangor SPIs where the Company is targeting to achieve NRW of 25% by 2025, 20% by 2037, and 15% by 2049. One of the main reasons for NRW in the distribution network is the use of more than 6,000 km of asbestos cement pipes that become brittle with age and are highly susceptible to pipe bursts and leaks.

In 2022, Air Selangor achieved an NRW rate of 27.76%, an improvement of 0.23% compared to the previous year. However, this achievement did not meet the NRW target of 27.00% set by SPAN. This was attributed to delays in project implementation due to the sluggish economic situation since the start of the COVID-19 endemic phase which caused some supply chain disruptions.

The Company continued to implement two categories of NRW reduction programmes which are the Physical Loss Reduction Programme and the Commercial Loss Reduction Programme. Through the Physical Loss Reduction Programme, 151.4 MLD worth of leaks were reduced through pipe replacement, active leak detection, and pressure management. Air Selangor's pipe replacement project began in 2016 and as of December 2022, a total of 621.67 km pipes had been replaced. In addition, the Commercial Loss Reduction Programme managed to reduce 58.8 MLD worth of water losses through meter replacement and meter relocation.

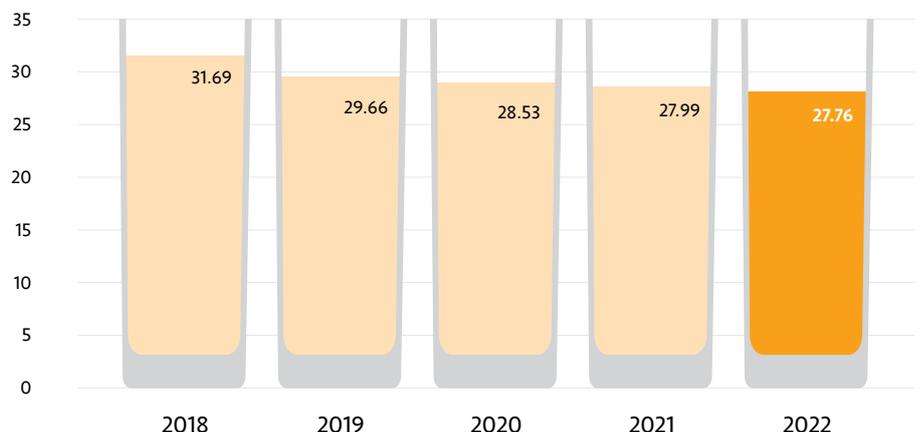
In 2022, Air Selangor also initiated the smart meter pilot project aimed at reducing NRW more effectively. This involved the installation of 2,393 smart meters across 467 commercial premises and 1,926 residential premises. Although the project is at the pilot stage, it has shown significant potential in Acoustic Leak Detection.

In the same year, Air Selangor also commissioned an NRW Assessment study to evaluate current initiatives and to further identify impactful strategies which would result in NRW targets being achieved. Some of the initiatives planned include the deployment of 50,000 smart meters, implementing a regimented active leak detection monitoring programme, and accelerating pipeline replacement. NRW management will remain a key aspect of operational improvement for Air Selangor where we aim to make continuous and sustained improvements in the years to come.

NRW Savings in 2022 is
210.2 MLD
 equivalent to 7,440.30 kg CO₂ of
 daily carbon emissions avoided.



Average NRW Rate (%)



Optimising Business Operations

ASSET MANAGEMENT

Optimising the management of assets including regular and timely maintenance and asset upgrading is vital to prevent disruptions to water treatment and distribution activities. SPI 2: Improvement to Asset Reliability and Resilience, guides the Company towards operational efficiency through key indicators covering asset inventory, asset criticality assessments, preventive and corrective maintenance achievements, and unused assets rehabilitation.

Air Selangor’s production and distribution business functions have been certified with the ISO 55001 Asset Management System towards improving overall asset management practices. Assets are monitored through TAMS under Work and Asset System (WAMS) module where the asset lifecycle is tracked from acquisition and registration, maintenance, monitoring until asset retirement. These systems provide a holistic view of the Company’s assets which is useful in optimising business operations and preventing water services interruption. Enhancements of both TAMS and WAMS are continuously implemented to ensure the robustness of these systems.

A total of 109,404 assets have been registered in WAMS as of December 2022, which is an additional 12.7% compared to last year. The asset condition score for 2022 is 1.13, an improvement from the score of 2.00 recorded in 2021.

Pump Houses and Reservoirs Rehabilitation

As of December 2022, Air Selangor operates 738 active pump houses and 1,618 reservoirs. In increasing the overall asset capability within Air Selangor, rehabilitation of unused pump houses and reservoirs has been ongoing since 2016 where a total of 54 pump houses and 144 reservoirs have been identified to undergo rehabilitation. As of December 2022, 11 pump houses and 53 reservoirs have been rehabilitated and commissioned out of the total identified.

SUPPLY CHAIN

In ensuring continuous water supply to customers, Air Selangor is supported by its business partners consisting of contractors, consultants, suppliers, and other vendors. In 2022, Air Selangor engaged a total of 1,377 active vendors with 99.91% of procurement spend going to local business partners.

As part of efforts to ensure alignment with business plans and objectives, Air Selangor continuously strengthens its business relationship with its vendors through various engagement platforms.

Digital Transformation Forum

To provide insight to Air Selangor’s Business Partners on the importance of digital transformation.



Contractors HSE Assurance Programme

To strengthen and empower contractors with HSE requirements in Air Selangor.



Forum: Towards Sustainable Business Partnership in Water Management

To discuss and create awareness, initiate, and accelerate business decisions for sustainable development.



Business Continuity Management Awareness Programme

To improve overall service availability with comprehensive business continuity strategies that effectively manage internal and external disruption.



Optimising Business Operations

Code of Business Ethics (COBE)

In 2022, Air Selangor's COBE was revised to include the aspect of "Sustainable Practices" which cover Labour Rights and Working Conditions and Whistleblowing. The Company is committed to not only adopting sustainable practices but also influencing and encouraging its Business Associates to implement ethical and sustainable practices as part of the wider supply chain.

PERFORMANCE DATA

DESCRIPTION	2018	2019	2020	2021	2022
OPERATIONS					
Total number of accounts	2,334,224	2,412,735	2,491,888	2,557,248	2,588,993
Number of accounts by type					
• Domestic	2,014,227	2,091,711	2,166,925	2,230,180	2,262,706
• Non-domestic	306,496	307,401	311,237	313,256	321,016
• Others	13,501	13,623	13,726	13,812	5,271
Total number of consumers	8,056,908	8,366,844	8,667,700 ¹	9,093,900 ¹	9,103,700
Total number of dams	7	7	8 ^{2,3}	8 ^{2,3}	8^{2,3}
Total number of WTPs	33	34 ⁴	34 ⁴	34 ⁴	34⁴
Average water demand (MLD)	4,857	4,932	4,965	4,991	5,117
Total number of pump houses	653	731	732	728	738
Total number of service reservoirs	1,574	1,601	1,610	1,599	1,618
Total number of HORAS	-	-	1	1	1
Total number of ORS	2	2	3	3	3
Total length of pipes (mapped using GIS) (km)	28,641	29,044	29,540	30,008	30,422
Average water reserve margin (%)	5.87	10.98	11.87	13.63	12.02
Average water quality compliance (%)	99.69	99.80	99.74	99.80	99.84
Average NRW rate (m ³ method) (%)	31.69	29.66	28.53	27.99 ⁵	27.76
Pipe burst index (no./100 km/year)	13.52	9.61	8.87	6.37	5.35
Total number of pipe leak cases	104,033	108,759	124,614	135,413	167,273
Length of pipes laid per year (km)	113.89	259.85	85.60	96.80	65.53
Total number of pipe cleaning works	6,511	7,960	8,853	9,027	12,770
Total number of reservoir cleaning works	106	153	122	265	267
Total number of active water quality sampling stations	1,121	1,121	1,117	1,122	1,163
Asset Condition Score	-	2.24	2.14	2.00	1.13

¹ The number of consumers was revised according to the published information by the Department of Statistics Malaysia for 2020 and 2021.

² Kelau Dam was handed over to Air Selangor in 2020.

³ Seven dams are under the supervision of Air Selangor, whereas Batu Dam is under the supervision of the Department of Irrigation and Drainage.

⁴ Thirty-one WTPs are operated by Air Selangor, and three WTPs are under other appointed parties.

⁵ The data is restated upon audit by SPAN.

LEVERAGING DIGITALISATION TO SUPPORT A CIRCULAR ECONOMY

Leveraging digitalisation and technology is paramount as the world is moving faster than ever and digitalisation has been proven to drive efficiency in businesses. Considering this, Air Selangor is actively implementing digitalisation efforts to boost transformation and unlock opportunities in line with the Company's goal of becoming a Digital Utility of the Future. In 2022, there were various digitalisation initiatives carried out to further create value for stakeholders where key initiatives include data analytics, Intelligent Command Centre (ICC), and enterprise content management.

DIGITAL & ANALYTICS CENTRE

Data analytics leveraging big data capabilities can help drive effective decision-making processes. Since it was first established in 2019, various initiatives had been implemented involving the enhancement of key business performance monitoring through the Air Selangor Strategic Plans and Initiatives Realisation (ASPIRE) dashboard and exploratory and predictive analytics across business operations. ASPIRE is utilised at the organisational level that empowers and enables the Company in keeping track of its performance against its goals using big data analytics.

Operations Business Intelligence

This year, Digital & Analytics Centre (DAC) has introduced the new Operations Business Intelligence (OBI) for business functions within Air Selangor such as Production, Distribution, Water Quality, Planning and Capital Works, Operational Services, Human Resource, Risk Management, Procurement, Inventory, and Customer Lifecycle Journey. These OBI empower the respective business functions with analytical insights to further improve and enhance day-to-day activities and processes. The operational insights provided complement and boost the achievement of the SPI's strategic, tactical, and operational drivers in ASPIRE.

As of December 2022, OBI for all business functions have either gone live or have been fully developed and are under trial, except for Operational Services which is expected to go live by March 2023.



Leveraging Digitalisation To Support a Circular Economy

Water Intelligence for Supply and Demand Operations Management

Air Selangor will be implementing Water Intelligence for Supply and Demand Operations Management (WISDOM) which is an Artificial Intelligence (AI) solution to manage and plan the supply and demand of water operations. The AI solution adopts advanced Machine Learning to predict, optimise, and generate action plans for effective short-term and long-term planning of water supply based on the various water demand forecast scenarios. The deployment of WISDOM will enable the Company to make strategic decisions and plans to ensure sustainable water management and provide greater customer satisfaction and experience. WISDOM is expected to go live by April 2023.

MyWater Operations Mobile Application

Operations Mobile Application (OMA) is a unified mobile application that consolidates and streamlines Air Selangor’s operational processes consisting of various functions for diverse tasks. Air Selangor started leveraging OMA in December 2020 with 10 applications in a single platform and in December 2021, OMA enhancement started to include more mobile applications and transform the current application into a scalable one for future operational functions. The enhanced OMA has been named MyWater OMA and will have at least 15 mobile applications that will be integrated into a single digitalised operational platform.

MyWater OMA has gone live progressively since September 2022 covering selected mobile applications. More mobile applications will be made available in MyWater OMA from time to time to integrate internal operations tasks for greater operational efficiency.

INTELLIGENT COMMAND CENTRE

Air Selangor’s Intelligent Command Centre (ICC) is a platform for monitoring and controlling key operational parameters in real time, leveraging the use of technology and systems. The ICC plays a vital role in detecting anomalies which can be quickly addressed through

corrective measures and aims to ultimately prevent uninterrupted operations of water assets. On top of that, the ICC has been integrated with the i-ERP system where the ICC provides real-time data for reservoir levels which is monitored during water disruptions.

In 2022, Air Selangor continued to enhance its ICC capabilities such as increasing cyber security measures, redesigning ICC architecture, and resolving downtime issues. As of December 2022, the ICC coverage was at 60.16% for all active reservoir and pump houses. This is lower compared to the ICC coverage disclosed previously due to the realignment of assets which involves a revision of the ICC coverage.

ENTERPRISE CONTENT MANAGEMENT

Enterprise Content Management (ECM) is a large-scale digitalisation effort by Air Selangor to streamline its document management processes and digitise information creation and management.

As part of this initiative, Air Selangor has successfully consolidated various document repositories into centralised cloud storage for all departments in Headquarters. Along this journey which started in 2022, various programmes were carried out to equip users with relevant knowledge and requirements, hands-on training, and user walkthrough sessions.

In addition, the Company established an online document approval workflow to digitise selected internal approval processes and automated selected business processes to reduce paperwork and enhance process efficiency.

Air Selangor aims to expand its ECM efforts to its regional offices and introduce further improvement initiatives to enhance its digital content management capabilities. By adopting a more efficient and streamlined approach to document management, Air Selangor is well-positioned to strengthen its capability in managing information security risks.

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Water Intelligence for Supply and Demand Operations Management (WISDOM)
- 

MyWater Operations Mobile Application (OMA)
- 

Intelligent Command Centre (ICC)
- 

Enterprise Content Management (ECM)

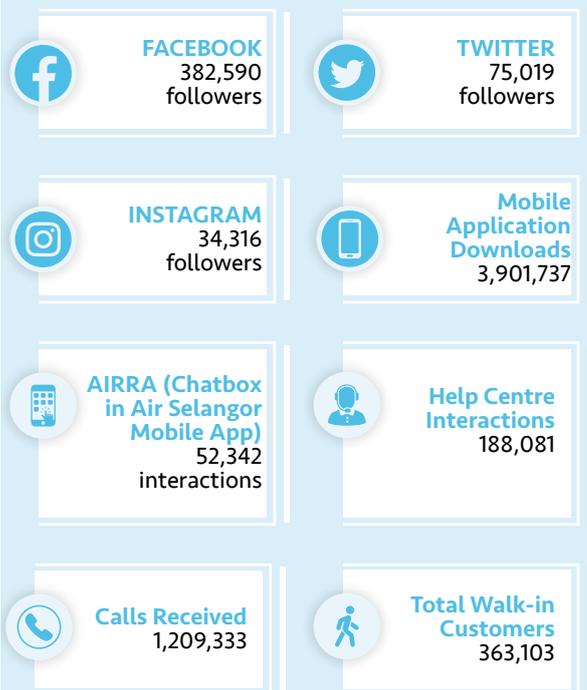
DELIVERING CUSTOMER SERVICE EXCELLENCE

Air Selangor strives to provide the best customer experience by minimising water supply disruptions, ensuring effective and timely communication about services, and building strong relationships with customers. In maintaining a strong relationship with our customers, Air Selangor interacts through several channels including our service counters, social media platforms, mobile application, the Company’s website, and digital and traditional media. With a diverse variety of customer touchpoints, the Company believes that these channels can cater to all our customers who should be able to access the necessary information about our services with ease and utmost convenience.



COMMUNICATION PLATFORM

With customers at the core of our business, it is paramount that reliable and transparent communication between the Company and customers is maintained to meet the demands and expectations of customers. Over the past few years, Air Selangor has directed substantial focus to improving our communication mediums which have significantly helped improved communications with our customers and stakeholders at large.



* Data for Facebook, Twitter, Instagram, and Mobile Application Downloads are cumulative.

* Data for AIRRA, Help Centre Interactions, Calls Received, and Total Walk-in Customers are for 2022.

Delivering Customer Service Excellence

In 2021, resulting from the utilisation of the Robotic Process Automation (RPA) technology, the service level increased to 90% by December. Improvements made in 2022 has further increased the Call Centre Service Level to

93%.

In achieving a higher standard of customer service experience, Air Selangor has been improving and upgrading its mobile application through various enhancements throughout 2022. Some notable improvements are the new features that allow customers to book a physical appointment via the mobile application and customer portal, allow users to delete their accounts in the mobile application and customer portal in adherence with data protection regulations, and allow registered and unregistered users to view the status of their complaints via Help Centre and AIRRA.

HYDRO HUB

Air Selangor continues to improve public awareness of water-related matters and issues through various forms of interactive media such as videos. These materials are updated and published via the Company's website, social media accounts such as Instagram, Twitter, Facebook, and LinkedIn, and video-sharing platforms such as YouTube.

To further enhance communication, we launched the Hydro Hub, a microsite containing all awareness and educational content for customers to view and keep informed of water conservation and sustainability on top of Air Selangor's initiatives, milestones and latest updates. Viewers can access the company's latest publications, videos, event photos and current campaigns on one website. Hydro Hub can be accessed through this link: <https://hydrohub.airselangor.com/>

Pengurusan Air Selangor Sdn Bhd

ISO 18295-2:2017 CUSTOMER CONTACT CENTRES

In September 2022, Air Selangor was successfully certified with the ISO 18295-2:2017 Customer Contact Centres. With this certification, Air Selangor is working towards ensuring customer expectations are consistently met through the robust management of our customer contact centre to widely accepted standards.



CUSTOMER ENGAGEMENT PROGRAMME

We continued to connect with our stakeholders such as customers, local authorities, non-governmental organisations (NGOs), and other industry leaders and peers through regular engagement programmes. These annual programmes provide the opportunity for all involved to share and exchange knowledge and ideas, receive feedback and opinions on Air Selangor services, and nurture strong connections which further improves the working relationships between the Company and all its stakeholders.



Let's Talk Leadership 2.0 Programme

In its second year running, the Let's Talk Leadership 2.0 Programme invited Dato' Sri Idris Jala to share his "Secrets of Transformational Leadership" with 193 employees. It was held on 27 October 2022 at the Auditorium Kompleks Penyelidikan dan Pengurusan Inovasi (KPPi), Universiti Malaya.

Delivering Customer Service Excellence

Customer Outreach Programmes

There were 57 customer outreach programmes initiated throughout 2022 to build rapport with customers, strengthen relationships, educate and create awareness on water-related matters, and address issues experienced by customers. These outreach programmes include:



Personalised Customer Outreach Programme

Personalised visits to selected customers to further strengthen relationships and obtain views about Air Selangor's customer service level.



Customer Literacy Outreach Programme

Customer briefings to address consumers' concerns and complaint channels and to instil awareness of Air Selangor's operational matters including initiatives such as e-Bil and mobile application.



Outreach CX Programme with Perbadanan Bekalan Air Pulau Pinang Sdn Bhd

Knowledge exchange and sharing session between Air Selangor and Perbadanan Bekalan Air Pulau Pinang Sdn Bhd on customer experiences and services.



Jelajah Selangor Penyayang

Air Selangor participated in the Jelajah Selangor Penyayang, a state-led community engagement event aimed to promote and spread awareness of all Selangor state initiatives and activities to the local community.

Delivering Customer Service Excellence

Stakeholder Engagement Programmes

In 2022, Air Selangor engaged its stakeholders through focus group sessions which aimed to gauge feedback on the Company’s high-priority initiatives and strategies. The programmes include:



Let’s Get Candid 2.0 - An annual, moderated interactive focus group platform, designed for organic conversation with key influencers to yield reliable information, feedback, opinion and data. Participants included consumer groups, commercial groups, and environmental groups.



Bowl Down Barriers 2.0 - Social activity with local authorities from all regions.



Stakeholders Appreciation Ceremony 2022 - An appreciation event for stakeholder groups who have played a vital role in providing feedback whilst taking the lead in educating the community.

CUSTOMER SATISFACTION INDEX SURVEY 2022

Air Selangor kicked off the Customer Satisfaction Index (CSI) Survey with 4,770 responses received across all regions and customer groups. The results indicated that Air Selangor’s 2022 NPS and CSAT scores improved to +14 and 84.0% respectively, a significant improvement from the +5 for NPS and 72.1% for CSAT recorded in 2021.

Air Selangor scored well in key areas such as billing and payment, customer service/technician, and communications. Customers have also remarked that the company provided a satisfactory payment method, displayed efficiency and professionalism in dealing with customers, and engaged customers in communicating its brand.

Despite the gains in NPS and CSAT scores, there were also areas for further improvement according to customer feedback, especially on water quality and water disruption management. As such, more public education on initiatives and processes implemented by Air Selangor will be a focus for the coming years to improve public trust in water quality. Air Selangor will continue to leverage such surveys to deliver the best customer service experience.

AIR SELANGOR CORPORATE REPUTATION SURVEY 2022

The Air Selangor Corporate Reputation Survey was completed in November 2022 for key stakeholders such as State Assemblymen, the Members of Parliament (MPs), NGOs, vendors, government agencies, media, and community leaders. A total of 636 respondents participated in the online survey and interviews. Although Air Selangor experienced a slight drop of 3% in corporate trust to 75% compared to the previous year, which stood at 78%, this score remains higher than the average rating of 72% of other utility brands across multiple markets.

Moving forward, Air Selangor plans to continue examining the recommendations from the survey and develop interventions to address the gaps identified.

<p>Air Selangor’s 2022 Net Promoter Score:</p> <p>+14 (2021: +5)</p>	<p>Customer Satisfaction Score:</p> <p>84.0% (2021: 72.1%)</p>
<p>Corporate Trust:</p> <p>75% (2021: 78%)</p>	

Delivering Customer Service Excellence

ENHANCING EMPLOYEES' SKILLS IN CUSTOMER SERVICE

Equipping employees with the right skills and knowledge will determine the level of services provided by Air Selangor to its customers. Every year, Air Selangor provides employee training and programmes to better improve customer service delivery.

Brand Activation Journey

Air Selangor's Brand Activation Journey is aimed at supporting the activation of our new Brand Strategy Framework. This programme equips all employees with consistent and sound knowledge about the Company's plans through active engagement and training activities over 12 months starting from August 2021 to August 2022. More than 95% of Air Selangor employees participated in the Brand Regional Workshops facilitated by our internal Brand Trainers.

**Radical Customer Service 2.0**

A customised programme to enable learners to improve and upskill customer support offerings for better overall service satisfaction and customer experience.

**CX 4.0 Experience Transformation & Services Excellence**

Created new experiences for customers with a focus on driving loyalty by discovering a holistic approach towards designing exceptional customer experiences.

Delivering Customer Service Excellence

CUSTOMER COMPLAINT MANAGEMENT

Air Selangor has integrated its complaint system processes through the Help Centre which can be found on both the Company's website and mobile application. Customers can post enquiries, connection requests, check on the status of queries submitted, and submit complaints on billing and meter as well as other water services issues.

Throughout 2022, Air Selangor has identified three categories of cases that have received the most complaints from customers which are faulty meter and meter leaks, pipe leaks, and no water. There were 476,098 complaints recorded in 2022 for these top issues where 147,796 and 55,669 complaints were recorded for faulty meters and leaking meters, respectively. Meanwhile, for pipe leaks and no water complaints, 167,706 and 106,664 complaints were recorded respectively.

On the matter of faulty meters and meter leaks, Air Selangor has created a new case type called "Meter Leak" on the Help Centre platform with the target for cases to be resolved within 24 hours in an effort to ensure speedy rectification. On the issues of pipe leaks and no water, Air Selangor has improved the handling of complaint cases through monitoring via the Closed-Loop Customer Management Dashboard which leverages our internal big data platform to effectively manage complaints.

PERFORMANCE DATA

DESCRIPTION	2018	2019	2020	2021	2022
CUSTOMERS					
Number of calls received	1,553,584	1,693,689	1,591,819	1,478,514	1,209,333
Number of walk-in customers	509,718	486,584	341,575	302,627	363,103
Number of Facebook followers	78,987	168,502	313,885	368,341	382,590
Number of Twitter followers	7,631	17,880	49,400	64,291	75,019
Number of Instagram followers	2,026	7,138	23,500	31,464	34,316
Number of downloads of mobile application	120,488	316,584	1,786,736	2,574,915	3,901,737
Number of AIRRA interactions	-	-	167,072	134,057	52,342
Number of Help Centre interactions	-	-	-	120,107	188,081
e-Bil sign-up rate by customers (%)	-	18.90	23.70	51.48	65.00

MANAGING ENVIRONMENTAL IMPACT

As a Company that is heavily dependent on natural resources, Air Selangor is also responsible for any environmental impact arising from its operations. Cognizant of this, Air Selangor has identified action plans to mitigate this which have been captured within the Company strategic plans, SPI 1: Water Forever and SPI 7: Environmental Stewardship. We are in the process of adapting our operations against the impacts of climate change and have commissioned the Climate Change Taskforce and actively mitigate our emissions by managing our energy consumption, with a target to achieve carbon neutrality by 2040.

Along with formalising the Water Conservation Framework to ensure a sustainable water future, the Company continued towards the target of Zero Waste Environment by embracing the circular economy concept and striving for full compliance with the Environmental Quality Regulations.

REDUCING THE IMPACT OF CLIMATE CHANGE

Climate change is changing the global water cycle including that in Malaysia and this has resulted in many business risks, especially for water service providers. Over the past few years, the country has experienced more unpredictable periods of severe rainfall that frequently resulted in floods. On the other extreme, dry spells due to El Nino are projected to occur from 2025 through 2035 in Peninsular Malaysia. Apart from physical water stress that affects the raw water supply and quality, climate change also worsens workplace conditions and increases flood risks for assets. Hence, Air Selangor is proactively accounting for and managing these risks to minimise operational disruptions and ensure a steady supply of clean water to our customers.



Managing Environmental Impact

Climate Change Taskforce

An internal Climate Change Taskforce was established to address the physical impact of climate change, particularly for drought and flood events. The Taskforce is developing a Strategic Framework for managing droughts by building resilience, introducing relevant interventions, and improving communication. This strategic framework will focus on developing supply alternatives, implementing operational changes, maintaining environmental and water quality, and applying demand modifications. Flood management is currently being addressed through the existing Business Continuity Plan and will be integrated wholly in the later stage of the development of the Framework. As water management is a multistakeholder agenda, the Framework will also be presented and discussed with the relevant stakeholders namely the Selangor State government, regulators, and local authorities.

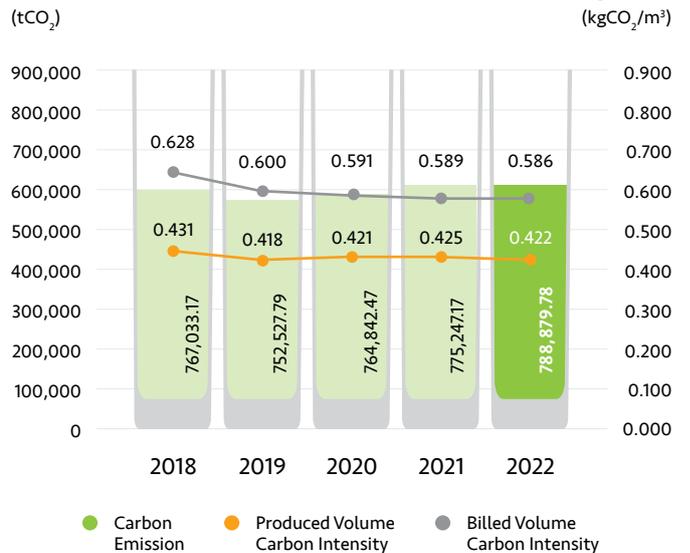
Carbon Emissions

Apart from addressing imminent climate adaptation risks, the Company is taking proactive action in mitigating its climate impact on the environment by managing its carbon emissions.

Air Selangor Scope 1 emissions consist of fuel consumption from petrol and diesel to power its fleet vehicles, backup generators and various equipment. Scope 2 emissions contributing 99.65% of the Company's total emissions are solely from the electricity purchased to operate WTPs, pump houses, office buildings and all associated facilities. Moving forward, the Company is working towards measuring its Scope 3 emissions in more detail including emissions from materials usage, generated waste, and its supply chain, giving a complete insight into Air Selangor's carbon impact.

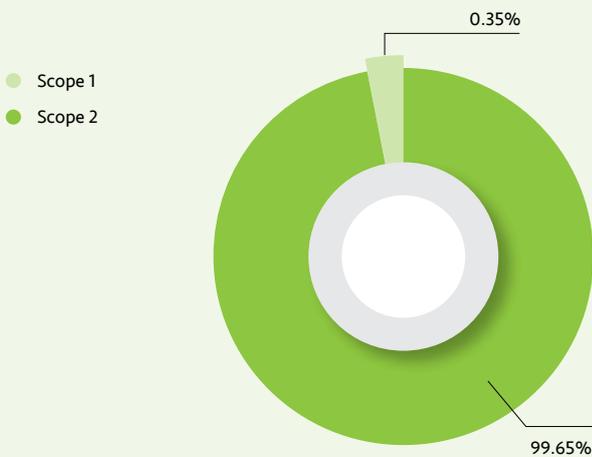
Air Selangor's absolute carbon emissions are increasing each year proportional to its expanding operations in meeting growing water demand. Despite this, the Company has successfully managed to gradually decrease its carbon intensity per billed volume through operational efficiency, reduction of NRW and improved billing collection.

Total Carbon Emissions and Carbon Emissions Intensity



¹ The carbon emissions have been restated based on carbon emissions factors from Malaysia's Fourth Biennial Update Report (BUR) submitted to the United Nations Framework Convention on Climate Change in December 2022.
² The electricity carbon emission factor for Peninsular Malaysia is 0.807 kgCO₂/kWh in 2018 and 0.780 kgCO₂/kWh in 2019 and the following years. The carbon emission factors for diesel and petrol are 0.0741 kgCO₂/MJ and 0.0693 kgCO₂/MJ respectively.

Breakdown of Carbon Emissions by Scope



Carbon Neutral By 2040

In support of Malaysia's national pledge in reducing its carbon emissions intensity to 45% by 2030 compared with the 2005 baseline and Malaysia's commitment to achieving net zero emissions as early as 2050, Air Selangor has set a target of being a carbon-neutral operation by 2040 for its Scope 1 and Scope 2 emissions. The pathway towards this target is based on two main strategies, Energy Efficiency and Renewable Energy with a target to reduce 15% of CEI by 2036 from the 2021 baseline and to achieve carbon neutrality by 2040. Air Selangor will be conducting an in-depth GHG emissions assessment in 2023 to identify a potential Net Zero target for the future.

Managing Environmental Impact

Renewable Energy for Water (RENEW)

Upon completion of the capacity assessment for electricity generation from renewable energy in Air Selangor’s facilities, the Company started its implementation of the Renewable Energy for Water (RENEW) Programme. This year, Air Selangor initiated six on-site, self-consumption solar PV installations with an annual capacity of 9.3 MWac. The installations are targeted to be completed in 2023. The RENEW programme will continue ahead for the Company to reach its target of generating and utilising clean energy sources to achieve carbon neutrality by 2040.



Solar Panels at Sungai Selangor Phase 2 (SSP2) Water Treatment Plant

Managing Energy Consumption

Treating and supplying water across more than 30,000 km of pipelines require a large amount of energy. Air Selangor’s energy consumption consists of 99% purchased grid electricity, with the remaining energy coming from fuel consumption. With the recent steep increase in electricity tariff, Air Selangor recognises the importance of lowering the energy intensity of its operation to balance its cost recovery. More importantly, effective and efficient energy management will accelerate the decarbonisation of the Company’s operations.

Facilities Energy Management

While the RENEW programme and the wide-scale energy efficiency strategy are still in its early stages, Air Selangor continued its facilities energy management programme that started in 2020 focusing on zero- and low-cost initiatives. The programme consists of tariff correction, elimination of

surcharge penalties and optimisation of WTPs and pump houses operations. This year, several pilot projects using technologies such as Demand Control Drives, Energy Saving Air Conditioning, and Intelligent Power Factor Controllers, were completed. These energy savings devices are now listed under Air Selangor’s Approved Product List to be installed in other facilities. Still under evaluation is the Variable Frequency Drives integration project with the automated pump monitoring system “PumpMeter”. The programme has successfully allowed the Company to achieve a 7.04% energy cost reduction from the 2019 baseline.

Fleet Energy Management

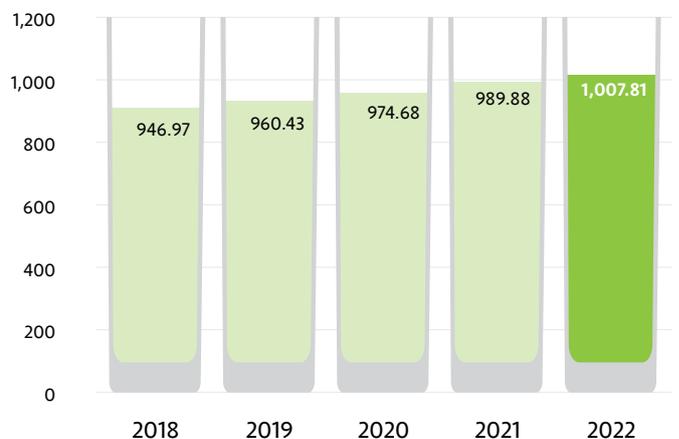
Air Selangor’s Fleet Management is guided by its Vehicles Management and Usage Policy which incorporates vehicle maintenance and disposal procedures along with user behaviour instructions. Each operation and management vehicle are provided with a fuel card and has an automated fuel usage report. Additionally, GPS trackers are installed in operation vehicles to enable real-time monitoring of their location, driver behaviour, reduce the risk of theft and allows for optimisation of routing and dispatching processes, especially for water tankers.

Overall Energy Consumption

Air Selangor’s total electricity consumption has increased year after year and fuel consumption has been reduced through the effectiveness of fleet management. Overall, the Company’s energy consumption has increased proportionally to the growth in the number of customer accounts and its expanding operations while the energy intensity has reduced from the previous year from improvements made to operational efficiency.

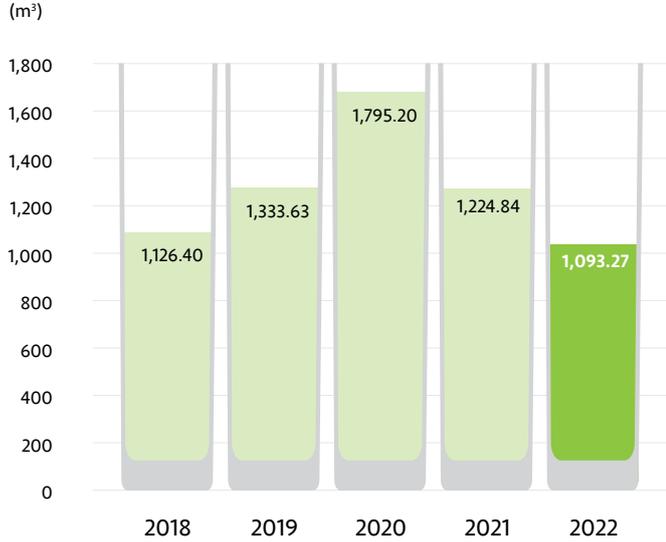
Total Electricity Consumption

(GWh)

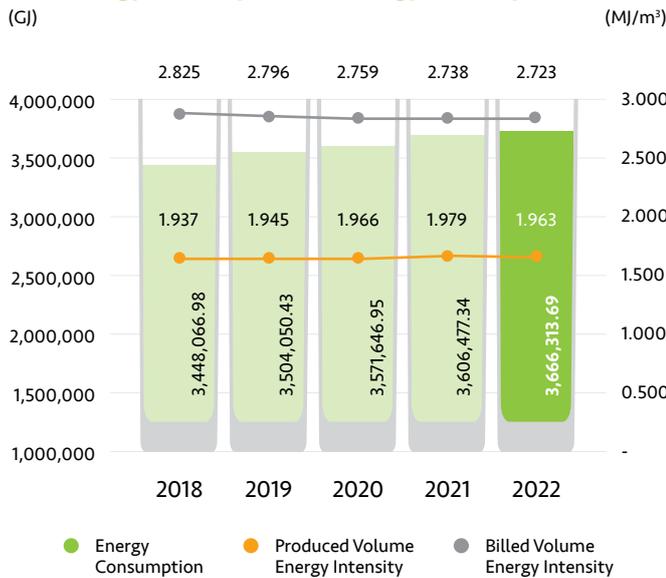


Managing Environmental Impact

Total Fuel Consumption



Total Energy Consumption and Energy Intensity



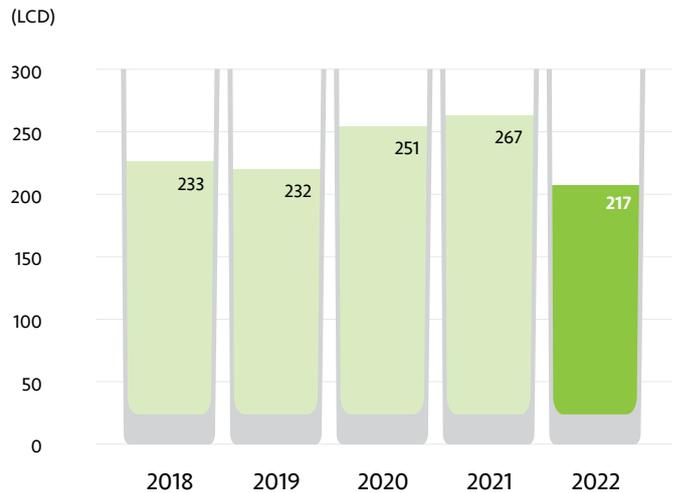
WATER CONSERVATION

Air Selangor recognises that the area it serves will face high water stress due to the threat of climate change and increasing total water demand from a growing population and economic activity. Although the Company is ensuring water supply resilience through infrastructure and services readiness, consumer water demand management through water conservation is necessary.

After two years of high domestic water consumption, where more people stayed at home due to the COVID-19 pandemic, domestic water use finally stabilised in 2022 at 217 LCD. However, it is still 35.6% higher than the target of 160 LCD set in the Malaysia Environmental Sustainability Roadmap 2030.

As such, Air Selangor has come up with a domestic water conservation roadmap and ramped up its engagement programmes showing its commitment to addressing the issue.

Average Domestic Daily Water Consumption per Capita



Water Conservation Framework and Policy

The Water Conservation Framework and Policy is part of the Company’s responsibility as a water operator under the Water Services Industry Act 2006 (WSIA) to develop and implement a water conservation programme. The Framework aims to govern all domestic water conservation programmes under Air Selangor through five main approaches which are:



Managing Environmental Impact

Engagement Programmes

Air Selangor partners with various government agencies, regulators, local authorities, and NGOs, to educate the public on the importance of efficient water use and how these efforts contribute toward water supply sustainability. Water conservation talks and the distribution of water thimbles are part of the activities held during these community engagement programmes. Moving forward, Air Selangor will partner with more schools in educating and inspiring youths on the importance of water conservation.

State Assemblymen (ADUN) Programme



Engagement with Religious Organisations



Engagement with Schools and Universities



Engagement with Local Councils



Water Conservation Awareness through Digital Platform

The Water Conservation Master Class series published on Air Selangor’s social media sites aims to boost public knowledge of water conservation practices with content based on Air Selangor’s Water Handbook. The Master Class is anchored by the Hydro Squad featuring Nabil Ahmad, Arwind Kumar, and two newcomers, Daniel Cheang, and Layla Sania, leveraging on their large following. The younger generation also continued to learn about water conservation through the Air Selangor x Boboiboy Air video series.



Managing Environmental Impact

#KitaJagaAir Challenge

Air Selangor and Universiti Malaya (UM) Water Warriors launched the #KitaJagaAir Challenge 2022 to spread awareness and educate students and UM staff on water efficiency. The competition aimed to incentivise users to set long-term water conservation goals using the concept of sustainability gamification. The seven-week challenge saw more than 300 students and faculty members participating in various activities to understand the importance of water conservation.



Water Conservation Pilot Project

Applying the research approach, Air Selangor in partnership with the Subang Jaya state government representative conducted a pilot project to reduce domestic water consumption using water efficiency tools. One hundred households consisting of apartments, terraces and bungalows volunteered to participate in the project. The project aims to increase consumer awareness of the availability of low-cost water savings solutions and the importance of selecting water-efficient fixtures. The project will conclude in 2023 and may be extended to other eligible households if the results are promising.



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River Care Programme

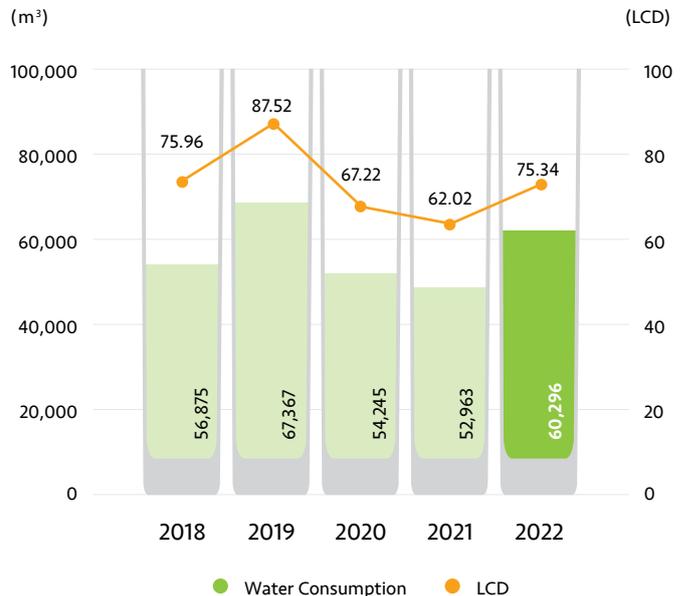
Together with the surrounding community and Friends of Rivers Malaysia, Air Selangor employees cleaned and beautified the riverbanks at Sg Kuang in Kampung Gombak, Sg Labu in Kampung Giching, Sg Pusu in IIUM Gombak Campus, and Sg Taman Melawati River Three. The programme aims to raise awareness of the importance of river conservation as the primary raw water source while supporting Malaysia's National River Trail project.



INTERNAL WATER USE

In line with the digitalisation efforts, the Company is now monitoring the monthly water consumption of its office buildings through the OBI dashboard. Air Selangor's internal water consumption increased in 2022 due to the full return of employees to the offices.

Total Internal Water Consumption and Average Water Consumption per Employee per Day



Managing Environmental Impact

Rainwater Harvesting System

One of the potential small-scale solutions to address the treated water supply demand of consumers is through the usage of alternative sources of water. Air Selangor installed a rainwater harvesting system in its Gombak and Kuala Langat offices to showcase to customers the availability of a water savings system that can be replicated in their premises. The collected rainwater is used for watering and cleaning purposes which helps reduce reliance on treated water supply.



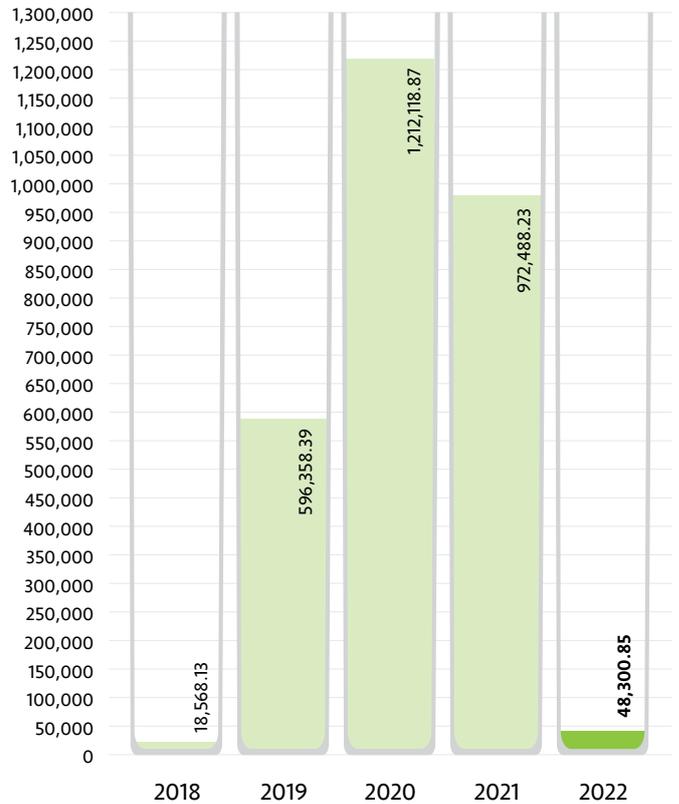
WASTE MANAGEMENT

Waste management is guided by Air Selangor’s Health, Safety and Environment Policy and ISO 14001 Environmental Management ensuring compliance with the Environmental Quality Act and Regulations. Air Selangor is dedicated towards its long-term strategic plan of establishing a Waste Zero Environment by continuously exploring innovative methods and embedding the concept of a circular economy into waste management.

Scheduled Waste

Water treatment residuals (residuals) are one of the biggest waste streams for any water supply services operator and is listed under the Environmental Quality (Scheduled Wastes) Regulations 2005. Air Selangor generated 48,300.85 MT of residuals in 2022. The large volume of residuals disposed of in the previous years was caused by the desilting process in SSP2 WTP residual lagoon. As the process has been completed by the end of 2021, the lagoon had a sufficient area to store and treat residuals before being disposed of at the approved landfill area. The SSP2 WTP will also be installed with a temporary residual treatment facility in 2023, to minimise the discharge of effluent into the lagoon and to allow for the direct disposal of residuals into the landfill area.

Total Residuals (SW204) Generated (MT)



Moving towards the Zero Waste Environment target and applying the concept of a circular economy within our operations, Air Selangor engaged Forest Research Institute Malaysia (FRIM) to study the potential use of residuals as a soil enhancer for forested areas.

Air Selangor also applies its waste management procedures in handling the other scheduled waste and domestic waste. The Company implements the principles of waste hierarchy namely prevention, reduction, reuse, and recycling, before disposal to landfills. In 2022, the total amount of other scheduled waste generated was 26.13 MT.

Total Other Scheduled Waste Generated (MT)



Managing Environmental Impact

Recycle for Life

Air Selangor’s Recycle for Life programme is in its third year running where in support of the national recycling target rate of 35% by 2025, the Company has collaborated with Cenviro to collect recyclables from the Company’s premises and the employee’s homes. In 2022, a total of 18,180 kg of recyclable materials, including paper, plastic, aluminium, e-waste, cooking oil and fabric, were collected. Additionally, various awareness sessions were held throughout the year to further educate employees on domestic waste management.



- Zero Waste Campaign/Zero Waste Exhibition by Zero Waste Malaysia



- Composting Workshop by Sunway XFarms

MONITORING AIR QUALITY

Air quality monitoring is conducted annually at selected WTPs and facilities with standby diesel generators and air pollution control devices such as chlorine scrubbers, bag filters, and fume hoods. Air Selangor also conducts Indoor Air Quality Monitoring at the Headquarters offices as per the Department of Safety and Health (DOSH) Industry Code of Practice for Indoor Air Quality 2010.

ENVIRONMENTAL COMPLIANCE

Air Selangor supplies an essential commodity and therefore, a safe and healthy environment is vital to the long-term sustainability of the Company’s operation. Air Selangor is subjected to three environmental regulations, namely, Environmental Quality (Scheduled Wastes) Regulations 2005, Environmental Quality (Industrial Effluent) Regulations 2009 and Environmental Quality (Clean Air) Regulations 2014. The Company utilised DOE GSR, a set of environmental mainstreaming tools that consist of environmental policy, budgeting, monitoring, facility, competency, reporting, communication, and transparency parameters to achieve self-regulation and full compliance with the environmental regulations. In line with the GSR requirements, Air Selangor has established the Environmental Regulatory Compliance Monitoring Committee (ERCMC) at the corporate level and the Environmental Performance Monitoring Committee (EPMC) at the regional level in ensuring compliance with applicable environmental regulations. The ERCMC meeting convenes together with the HSE Corporate Committee meeting.

In 2022, Air Selangor improved its scheduled waste management by constructing new scheduled waste storage facilities and improving its procedures while increasing the number of Environmental Competent Persons. As of December 2022, Air Selangor recorded 35 Certified Environmental Professionals across four categories of competencies which are Bag Filter Operation (CePBFO), Industrial Effluent Treatment Systems Operation (CePIETSO), Scrubber Operation (CePSO) and Scheduled Waste Management (CePSWAM). These initiatives have increased the completion of DOE GSR from last year, 87.15% for Production activities compared to 84.32% and for Distribution activities, 84.32% compared to 65.73%.

There were 84 violations recorded against the Industrial Effluent Regulations, detected through in-house effluent samplings. This is a 37.3% reduction from the previous year and can be attributed to the change in chemicals used to treat the residuals. However, these violations are mainly due to insufficient capacity for residual treatment which is already being addressed through the upgrading and rehabilitation of existing RTFs and the process components, and the construction of new RTFs to meet the required capacity. The upgrading and rehabilitation of RTFs are part of DOE - Air Selangor resolutions, where progress is regularly updated and presented to DOE.

Air Selangor recorded no significant spills and received zero notices of non-compliance and zero fines from DOE under all regulations.

Managing Environmental Impact

PERFORMANCE DATA

DESCRIPTION	2018	2019	2020	2021	2022
ENVIRONMENTAL					
Average daily domestic water consumption per capita (LCD)	233 ¹	232	251 ²	267 ²	217
Total internal water consumption (m ³)	56,875	67,367	54,245	52,963	60,296
Average daily water consumption per employee (LCD)	75.96	87.52	67.22	66.02	75.34
Total energy consumption (GJ)	3,448,066.98	3,504,050.43	3,571,646.95	3,606,477.34	3,666,313.69
Energy intensity (MJ)/m³					
• Produced	1.937	1.945	1.966	1.979	1.963
• Billed	2.825	2.796	2.759	2.738	2.723
Total electricity consumption (GWh)	946.97	960.43	974.68	989.88	1,007.81
Total fuel consumption (m ³)	1,126.40	1,333.63	1,795.20	1,224.84	1,093.27
Total carbon emissions ³ (tCO ₂)	767,033.17	752,527.79	764,842.47	775,247.17	788,879.78
Carbon emissions intensity³ (kgCO₂/m³)					
• Produced	0.431	0.418	0.421	0.425	0.422
• Billed	0.628	0.600	0.591	0.589	0.586
Total Scope 1 carbon emissions ³ (tCO ₂)	2,825.71	3,390.05	4,587.43	3,137.69	2,791.72
Total Scope 2 carbon emissions ³ (tCO ₂)	764,207.46	749,137.74	760,255.04	772,109.48	786,088.06
Total SW204 scheduled waste generated (MT)	18,568.13	596,358.39	1,212,118.87	972,488.23	48,300.85
Total other scheduled waste generated (excludes SW204) (MT)	26.69	43.15	52.41	31.60	26.13
Total volume of chemicals used for water treatment ⁴ (MT)	65,963.29	68,465.66	68,714.17	64,179.67	61,092.101

¹ Data obtained from Malaysia Water Industry Guide 2019.

² Data is restated based on updated population data from the Department of Statistics Malaysia that was released in 2022.

³ The carbon emissions have been restated based on carbon emissions factors from Malaysia's Fourth Biennial Update Report (BUR) submitted to the United Nations Framework Convention on Climate Change in December 2022.

⁴ Data excludes SSPI, SSP2 and Rasa WTPs.

PRIORITISING EMPLOYEE HEALTH, SAFETY, COMPETENCY AND DIVERSITY

Through SPI 6: Creating Conducive Working Environment, towards World Class Water Service Provider, Air Selangor aims to position itself as an employer of choice for the water services sector. Our goal is to help employees develop and grow their talent within the Company ensuring a sustainable pipeline of leaders and performers.

Air Selangor also continuously emphasises the importance of cultivating a robust health and safety culture, as well as improving employee competency and promoting employee diversity. We believe that embedding the Company's values among employees to foster a culture of teamwork based on honesty, integrity, and professionalism, will positively contribute to improving service quality for our customers.

Air Selangor complies with all relevant labour laws and regulations and treats all stakeholders, employees, its business partners, and customers respectfully as prescribed in our Employee Handbook and Code of Business Ethics.



PULSE SURVEY 2022

We regularly measure the level of effectiveness of employee engagement programmes and identify required areas of improvement based on employees' feedback through Air Selangor's employee engagement survey, known as the Pulse Survey. In August 2022, 3,234 employees across the Company participated in the survey and provided feedback on areas that are key to them, such as rewards and recognition, performance management, employee well-being, career opportunities and senior management. Air Selangor received a score of 74% with a 97% response rate.

TALENT RECRUITMENT AND ONBOARDING PROGRAMME

Apart from diversity, Air Selangor provides job opportunities for the community with various roles at all levels. The Talent Acquisition Unit actively conducts and participates in various recruitment drives to engage new talents for the water services sector.

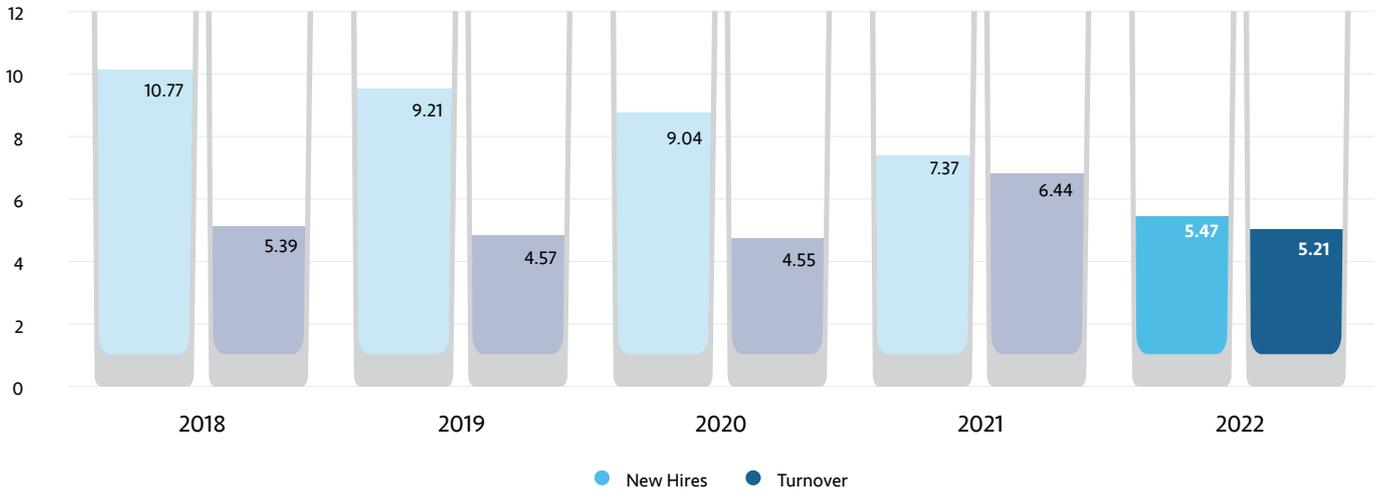


Air Selangor has a comprehensive onboarding programme for new hires that introduces them to the Company's business functions, culture and values, and acquaints them with their duties. The new hires will also undergo two formal feedback sessions ensuring they receive the necessary support and guidance to fulfil their job requirements while building their confidence in conducting their tasks.



Prioritising Employee Health, Safety, Competency and Diversity

New Employee Hires Rate and Employee Turnover Rate (%)

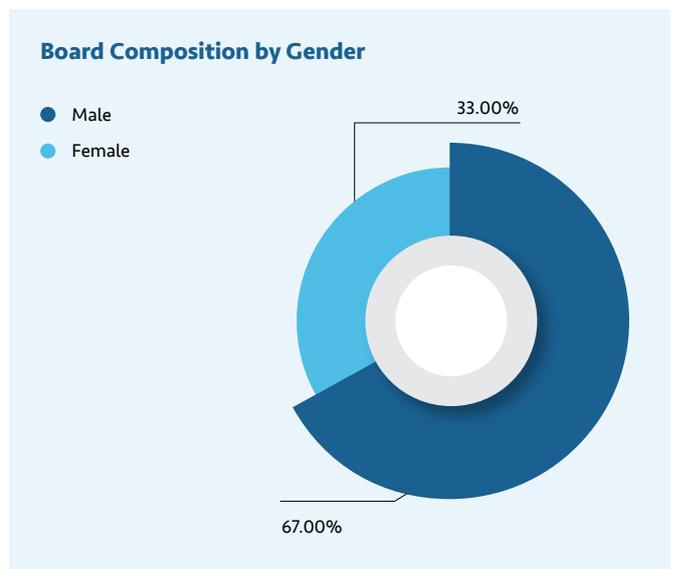
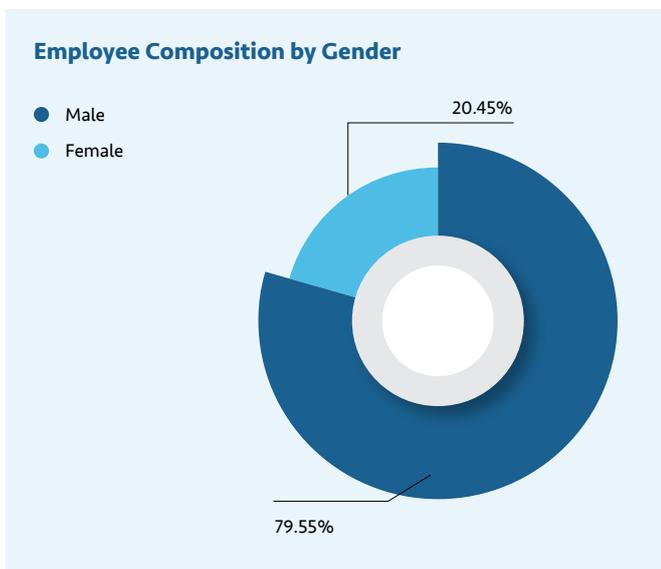


DIVERSITY AND INCLUSION

Air Selangor promotes diversity among its employees from the aspects of gender, age, ethnicity, and work background because the Company believes that a diverse workplace provides a broader range of skills, experiences, and perspectives. This leads to increased productivity and creativity among employees which ultimately will enhance services and customer experience.

In terms of gender diversity, Air Selangor’s workforce is still predominantly male where seventy-one per cent of Air Selangor’s employees consist of non-executives who work on shifts to ensure continuous water supply for the customers. Nevertheless, the Company does not discriminate nor place gender prohibitions on its hires regardless of the position or roles. The Company employs female tanker drivers, technicians, engineers and even in the Security and Enforcement sections.

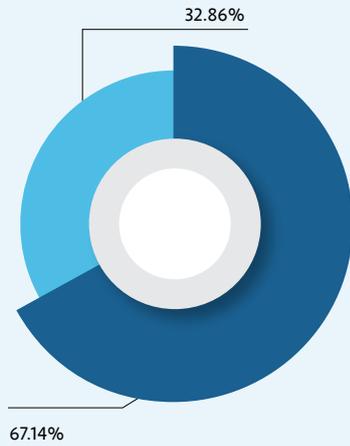
Additionally, the number of female representatives at the Board and senior management levels has increased with the appointment of two new female Board members and two new female Heads of Departments. For more details, please refer to the ‘Leadership Team’ section of this report.



Prioritising Employee Health, Safety, Competency and Diversity

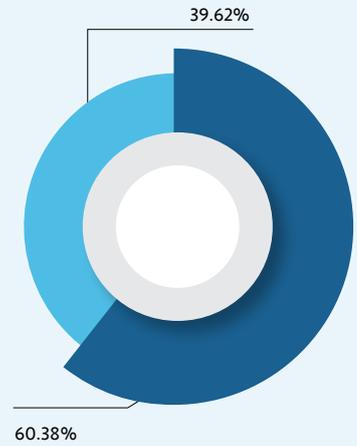
Management Composition by Gender

- Male
- Female



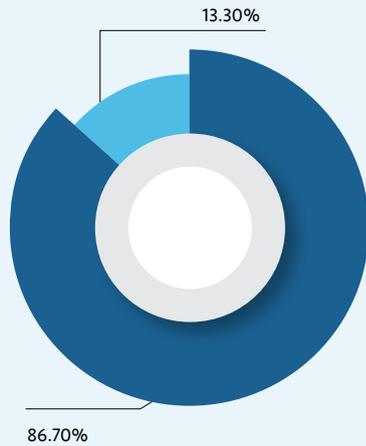
Executive Composition by Gender

- Male
- Female



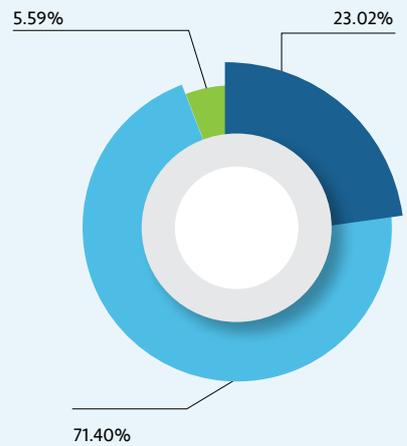
Non-Executive Composition by Gender

- Male
- Female



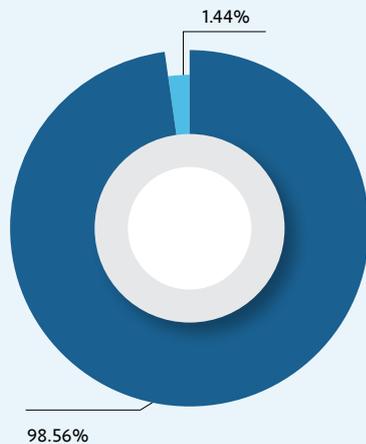
Percentage of Employees by Employment Category

- Management
- Executive
- Non-Executive



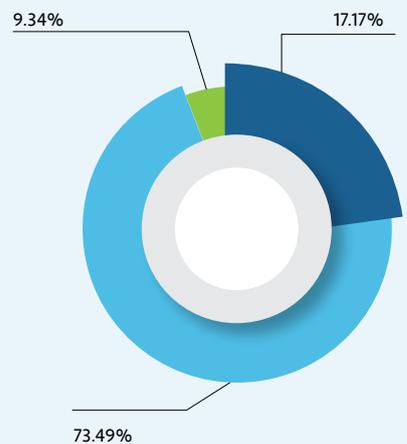
Percentage of Employees by Employment Type

- Permanent
- Contract



Percentage of Employees by Age Group

- <30
- 30-49
- 50 and above



¹ As of December 2022.

Prioritising Employee Health, Safety, Competency and Diversity

Employee Benefits

Some of the benefits that Air Selangor offers to its employees include:

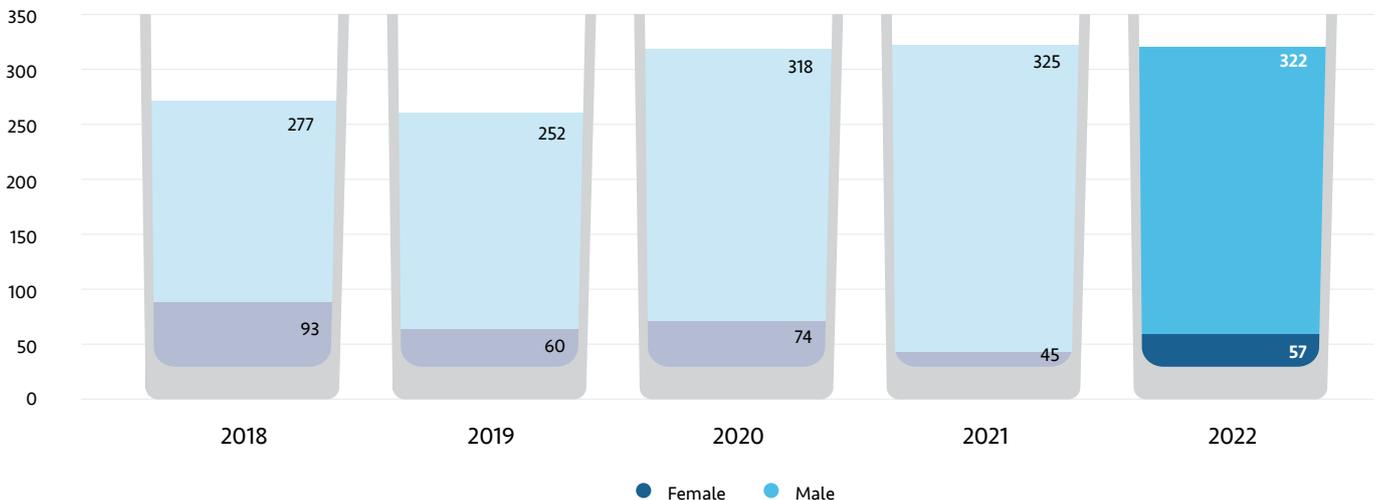
Leave	<ul style="list-style-type: none"> Other than the statutory Annual, Sick and Parental Leave, provision of Compassionate Leave, Examination and Study Leave, Prolonged Medical Leave, two months Retirement Leave and Hajj Leave.
Medical and Insurance	<ul style="list-style-type: none"> Accident, medical and death insurance, optical and dental for employees and immediate family members. Maternity expense coverage for female employees and spouses of male employees.
Allowance	<ul style="list-style-type: none"> Various allowances based on the nature of work such as Call Back allowance, Stay Back allowance, and special roles allowance.
Self-Development	<ul style="list-style-type: none"> Professional association memberships.
Financial Assistance	<ul style="list-style-type: none"> Provision of affordable housing (staff quarters) for essential employees. Housing loan interest subsidy. Computer loan. Children's education loan.

Parental Leave

Air Selangor complies with the latest Employment Act (Amendment) 2022 in allocating maternity and paternity leave to all eligible employees. In 2022, 379 employees took parental leave with a 100% retention rate after the leave ended where 373 were still employed with the Company after 12 months. The retention rate after 12 months is 98.44% for male and 98.24% for female employees respectively.

Total Number of Employees Taking Parental Leave

(Nos.)



Prioritising Employee Health, Safety, Competency and Diversity

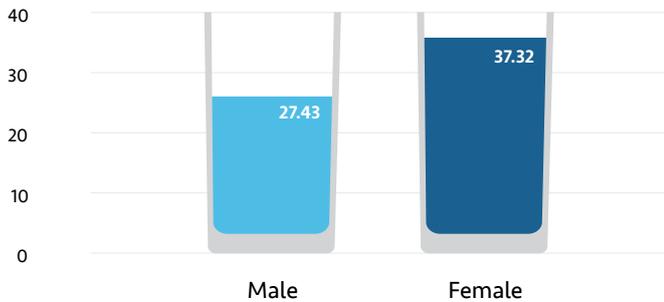
TRAINING AND DEVELOPMENT

We recognise the importance of having a skilled workforce to deliver the best customer experience. The Company is continually grooming high-performance and agile talent through training and development initiatives to establish the skills needed for the future of its operations. Furthermore, all eligible employees undergo biannual performance and career development reviews.

In 2022, Air Selangor spent RM4.17 million equivalent to 149,227 total hours for the training of its employees.

Average Training Hours per Employee by Gender

(Hours)



Average Training Hours per Employee by Employment Category

(Hours)



Leadership Competency-Based Programme

The Leadership Development Programme (LDP) aims to develop future leaders of Air Selangor in line with the Company's Leadership Competency Framework. Since 2019, 848 employees have participated in the programme that aims to shift mindsets and equip them for the new responsibilities of their future roles. It is designed specifically for each level of employment ensuring inclusive opportunities for all.

- Leadership Competency-Based Development Programme (LEAD)
- Executive Competency-Based Development Programme (EDP)
- Non-Executive Competency-Based Development Programme (NEDP)

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The LDP is supported by a self-paced learning course on Digital Awareness, ensuring continuous learning and creating an understanding of the latest digital trends to prepare participants for future digital transformation.

In 2022, Super Charging Future Readiness for LEAD and EDP and Professional Career Enhancement (Pro-Career) programme were created to expand leadership competencies, ensuring it is embedded within their daily work routine. A total of 152 learners participated in the programme.

Additionally, 56 employees successfully completed the Coaching and Mentoring Programme (CMP) in 2022. CMP seeks to create leaders that will inspire and cultivate team culture in Air Selangor.



Functional and Competencies Programme

There are continuous learning opportunities provided for employees as the Company constantly conducts learning programmes to develop competencies and drive better job performance as part of creating a skilled taskforce.



Prioritising Employee Health, Safety, Competency and Diversity

Water Expert Development Programme

Air Selangor collaborated with the Faculty of Engineering and Build Environment, Universiti Kebangsaan Malaysia, to create the Water Expert Development Programme (WEDP). The WEDP is designed to enhance employees' technical knowledge of water operations. The programme started in 2021 with participation from 133 employees from various operational departments. It is conducted by 18 internal experts who have been certified by HRDF Train-the-Trainer. Eighty-two employees graduated in 2022, while the remaining will graduate in March 2023. Moving forward, Air Selangor aims to establish the WEDP as a benchmark in building water supply expertise in Malaysia.

Sijil Kemahiran Malaysia

We are committed to producing skilled and competent employees in line with the requirements set by SPAN. To drive the implementation and achievement of competency requirements in the water services industry in Malaysia, Air Selangor conducted a series of Sijil Kemahiran Malaysia (SKM) certification programmes through Sistem Latihan Dual Nasional (SLDN) and Pengiktirafan Pencapaian Terdahulu (PPT) programmes. As of 31 December 2022, a total of 969 employees in Air Selangor were recognised as competent under this programme.

Lean Six Sigma

Lean Six Sigma (LSS) is one of the newly introduced development programmes in Air Selangor which aims at maximising the performance of business operations using continuous improvement techniques. Fifty-six employees from various departments have completed their nine months of training.

E-learning Self-Paced Course

Bouncing back from the restrictions imposed during the COVID-19 pandemic, the Company adapted training and development via an e-learning platform. This e-learning platform also provides flexibility to learners to learn everywhere and anytime. Three mandatory modules introduced via this platform are Anti-Bribery and Anti-Corruption (ABAC), HSE Awareness and Air Selangor Core Values. In 2022, seven new e-learning modules were launched, ranging from awareness of IT and Security and soft skills such as Effective Communications, Business English, Customer Services and Coaching Skills.

Prioritising Employee Health, Safety, Competency and Diversity

EMPLOYEE ENGAGEMENT PROGRAMME

Throughout the year, various employee engagement programmes were held to strengthen the relationship between the Company and its employees. The Company believes that employee engagement programmes are crucial to connect with employees to exchange ideas and interests and to show appreciation to employees, which ultimately will uplift employee morale.



ERP Appreciation Lunch



Water Rafting



Sports Engagement



Canting Batik

Prioritising Employee Health, Safety, Competency and Diversity

HEALTH AND SAFETY MANAGEMENT

Air Selangor strives to ensure full compliance with the Occupational Safety and Health Act (OSHA) 1994 and all its regulations relevant to the Company's operations. Employees' health and safety is a top priority and therefore the Company formalised its Health, Safety and Environment Policy, along with robust health and safety standards guided by the ISO 45001:2018 Occupational Health and Safety Management System. This policy and standards are extended to and are being practised by Air Selangor's contractors and their workers who conduct activities on behalf of the Company.

Health and Safety Governance

Air Selangor's HSE Corporate Committee was formed to fulfil the requirements of OSHA 1994. The CEO chairs the Committee which consists of representatives from the management and employees across departments and regions, with the HSE Section serving as the secretariat. The Committee meets quarterly to discuss HSE issues and performance and reviews relevant policies, SOPs, and initiatives. A similar governance structure has also been established at the regional level aimed at managing health and safety matters.

Incident management in Air Selangor is guided by ISO 45001 and ISO 14001. All incidents are reported in the HSE On the Go online system and reviewed by HSE Personnel. Upon conclusion of the investigation, an incident report which is classified as work related is submitted to DOSH. HSE Alerts will be circulated internally through e-mail to all employees, highlighting the incidents with corrective action measures ensuring transparency and awareness creation among employees.

Air Selangor's Health and Safety management practices are audited annually by a third-party certification body that ensures adherence to the procedures and regulations.

HSE Performance

As of 31 December 2022, Air Selangor recorded zero fatalities and an LTIFR of 0.39, an improvement from 0.53 recorded in 2021. The six lost-time injury (LTI) cases are from road accidents and dog bites. The Company is proactively acting to mitigate these incidents through the establishment of the Road Safety Committee and the testing of dog-repellent devices.

Road Safety Committee

The highest number of safety incidents recorded at Air Selangor throughout the years are from road and commuting accidents from individual and third-party negligence. In 2022, 58 commuting accidents with a frequency rate of 5.52% were recorded. Realising the gravity of the matter, Air Selangor established the Road Safety Committee consisting of departments and regional representatives. The Committee discussed ways to identify the source of road accidents and initiatives that should be taken to reduce the incidents.

Among the initiatives is road safety awareness training, which has been expanded from specific roles to employees who commute by motorcycle while carrying out tasks i.e., meter readers, leak inspectors and pump operators. The training intends to develop internal awareness and responsibility towards safe riding and building up correct and safe behaviour during daily commutes. The Committee also assesses how travelling distance and fatigue management contribute towards road incidents.

Health and Safety Initiatives

In 2022, health and safety initiatives focused on Health and Safety Empowerment by promoting collective responsibility for health and safety at the workplace. Various initiatives were conducted to continually improve the practices and overall performance of health and safety. Employees' contributions towards HSE initiatives were also recognised through the HSE Excellence Recognition of Outstanding Employees (HEROSE) for being safety champions, first responders, or creative thinkers towards the betterment of HSE practices at the workplace.

Health and Safety Awareness

All employees of Air Selangor are required to complete the HSE Awareness Online Module which enlightens employees about the relevant HSE laws and regulations, ways to identify hazards and risks, and reporting of incidents, among others. This module was supplemented with focus group sessions to promote HSE Consequence Management Procedure and enhance understanding of HSE Legal Requirements for operational departments.

Additionally, all employees are frequently updated through e-mail circulation of HSE Flash and HSE Advisory that include practical safety guidance, with seasonal reminders, such as holidays, monsoons, and viral diseases, ensuring employees apply the necessary precautions beyond the workplace.

Prioritising Employee Health, Safety, Competency and Diversity

Health and Safety Competencies

On top of meeting regulatory needs, Air Selangor develops its employees' health and safety competency by ensuring they are certified with recognised professional programmes. Among key competency programmes attended by employees are:

- Basic Occupational First Aid, Cardiopulmonary Resuscitation and Automated External Defibrillator (BOFA) - 134 participants
- Authorised Entrant and Standby Person for Confined Space (AESP) - 196 participants
- Authorised Gas Tester and Entry Supervisor for Confined Space (AGTES) - one participant
- Forklift Truck Safety and Competency Workshop - 98 participants
- Safe Handling of Liquid Chlorine Training - 40 participants
- Safe Handling Hazardous Chemical Training - 88 participants
- Training on Safe Boat Handling and Basic Aquatic Safety - 55 participants

Air Selangor has also appointed an Occupational Health Advisor to monitor the employees' physiological and psychological needs, and health in line with the amended OSHA 2022 requirements.

Operational Site Safety Improvement

Air Selangor strengthened its operational site safety performance through training and site inspections namely, Permit to Work (PTW) and Operational Safety training. During the sessions, participants learned about PTW preparation and implementation of Site Safety Inspections.

In addition, Air Selangor started to implement Event Safety Inspections for external venues where Company activities will take place. Additionally, through the HSE On the Go system, incident reporting is made convenient regardless of the work location.

HSE Improve and Continue Programme

Through the HSE Improve and Continue (ICON) programme conducted in 2021, 25 improvement initiatives were finalised. Ten out of the 25 initiatives consisting of housekeeping, implementation of 5S and usage of robotic technology for reservoir cleaning was completed in 2022 and the rest are in progress. Larger scale initiatives such as the jacking system for concrete slab has been brought up to Air Selangor's Technical Product Committee to be implemented throughout our operations.

HSE Week

Air Selangor continued its annual HSE Week with this year's theme of "HSE Empowerment: Elevating Compliance and Strategic Alliance". HSE Week is a platform to further raise awareness via various programmes and engagement activities. Among activities conducted during the HSE Week were the River Care Programme, Art Therapy, Blood Donation, E-Games Tournament, Get Fit Zumba, HSE Explorace, Zero Waste Workshop, Mental Health Screening and Seedlings of Hope.



Prioritising Employee Health, Safety, Competency and Diversity



Wacana Ilmiah Amalan Kesihatan, Keselamatan & Alam Sekitar mengikut Perspektif Islam
 Presenter: Tan Sri Dr Mohd Daud Bakar



Elevating HSE Compliance Towards Involving Culture Programme
 Presenter: En Aliasman Morshidi



HSE Explorace with Region SSP2



Seedlings of Hope



Art Therapy



Get Fit Zumba

Prioritising Employee Health, Safety, Competency and Diversity

Contractors' Health and Safety

Health and safety go beyond Air Selangor’s employees, as contractors are also essential to the Company’s operations. Ensuring their safety and upholding high safety standards in their way of work is critical. Air Selangor has established a robust Contractor HSE Management programme, where all contractors must go through the Air Selangor Safety Induction and hold the Air Selangor-NIOSH Safety Passport (ANSP). ANSP is a collaborative programme between Air Selangor and NIOSH that aims to provide information and training to contractors on the aspects of safety and health in accordance with the requirements of the authorities and industry standards.

Air Selangor’s Contractor HSE Assurance Programme was developed to strengthen and empower contractors while providing the Company with a tangible approach to monitor and assess their HSE performance. In 2022, engagement and coaching sessions were held for the contractors with a requirement to complete an improvement project and participate in on-site audits. In acknowledging their efforts, four best-performing contractors were awarded the Contractors HSE Excellence Awards (CONHEXA).



'HSE In Universities' Programme

Air Selangor hosted a programme, 'HSE In Universities' in collaboration with Universiti Kebangsaan Malaysia (UKM) and Universiti Sains Malaysia (USM) where more than 350 students participated. The programme aimed at instilling a greater understanding of HSE requirements for industries. Air Selangor hosted talks about the importance of HSE practices at the workplace and a Q&A session. Additionally, Air Selangor assisted students in carrying out safety inspections at campus workshops and laboratories.

EMPLOYEE WELL-BEING AND WELLNESS

At Air Selangor, looking after employees’ health and well-being goes beyond safety measures at the workplace, and providing healthcare and medical benefits. Among the initiatives to promote employees’ well-being was the provision of a gym located at Headquarters and participation in AIA Wellness, a voluntary health promotion programme. Additionally, wellness activities as part of employee engagement such as running, hiking, cycling and interval exercises have been held throughout the year. A total of 1,046 employees signed up for AIA Wellness, with an engagement rate of more than 90%. To appreciate employees’ efforts, active participants were also rewarded at the end of the year.



Employee Counselling and Rakan Prihatin

Air Selangor appointed two certified counsellors and identified 18 employees to serve as *Rakan Prihatin* to support employee mental health. The *Rakan Prihatin* are HR Business Partners who have attended a comprehensive guidance and counselling course guaranteeing their professionalism. This initiative aimed to provide support on mental well-being and counselling for Air Selangor staff who may require it. Approximately 50 employees have received individual counselling throughout the year 2022. Recognising the challenging working conditions of Air Selangor’s security personnel due to shift work, remote working locations and exposure to safety risks, a specialised programme on mental well-being was also held for them.

Prioritising Employee Health, Safety, Competency and Diversity

Wellness Talks and Activities

Throughout the year, Air Selangor held several activities on health, mental health, and wellness for its employees:

- Webinar on Stress and Relaxation from Sunway Medical Centre
- Webinar on Women Related Cancer from Pantai Hospital Ampang
- General health screening for blood pressure, BMI and glucose monitoring conducted by KPJ Damansara
- Mental health talk and screening with discussion on case studies by OSHMed Solutions
- Typhoid vaccination for employees who are in direct contact with raw water sources



Flood Preparedness Exercise

Air Selangor’s assets and many of its employees were personally affected by the flood incident of December 2021. Following this, the Company held a Flood Preparedness Training to give awareness and guidance before the year-end monsoon season. The Fire Department representative gave a virtual talk, and selected employees also attended a practical training session.



Prioritising Employee Health, Safety, Competency and Diversity

PERFORMANCE DATA

DESCRIPTION	2018	2019	2020	2021	2022
SOCIAL					
Total number of employees	4,520	4,802	5,022	5,056	5,066
By Gender					
• Male (%)	79.29	79.00	78.97	79.63	79.55
• Female (%)	20.71	21.00	21.03	20.37	20.45
By Age Group					
• < 30 years old (%)	21.28	22.89	21.76	20.09	17.17
• 30 to 49 years old (%)	67.59	66.78	68.44	70.67	73.49
• ≥ 50 years old (%)	11.13	10.33	9.80	9.24	9.34
By Employment Category					
• Management (%)	5.00	4.89	5.20	5.26	5.59
By gender					
• Male (%)	69.03	68.51	67.17	66.54	67.14
• Female (%)	30.97	31.49	32.83	33.46	32.86
By age group					
• < 30 years old (%)	0.00	0.00	0.00	0.00	0.00
• 30 to 49 years old (%)	70.35	69.78	72.51	72.56	71.02
• ≥ 50 years old (%)	29.65	30.22	27.49	27.44	28.98
• Executives (%)	21.39	21.57	22.34	23.14	23.02
By gender					
• Male (%)	60.49	60.13	60.60	60.60	60.38
• Female (%)	39.51	39.87	39.40	39.40	39.62
By age group					
• < 30 years old (%)	13.85	17.66	19.16	18.97	15.78
• 30 to 49 years old (%)	78.49	75.28	73.70	74.27	76.93
• ≥ 50 years old (%)	7.66	7.06	7.14	6.76	7.29
• Non-Executives (%)	73.61	73.53	72.44	71.60	71.40
By gender					
• Male (%)	85.45	85.24	85.48	86.74	86.70
• Female (%)	14.55	14.76	14.52	13.26	13.30
By age group					
• < 30 years old (%)	24.88	25.94	24.10	21.93	18.97
• 30 to 49 years old (%)	64.23	64.08	66.52	69.36	72.57
• ≥ 50 years old (%)	10.89	9.98	9.38	8.71	8.46
By employment type					
Permanent by gender					
• Male	3,531	3,726	3,897	3,965	3,975
• Female	926	987	1,040	1,017	1,018

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DESCRIPTION	2018	2019	2020	2021	2022
Contract by gender					
• Male	53	68	69	61	55
• Female	10	21	16	13	18
Permanent by location					
• Gombak	317	320	333	351	350
• Headquarters	1,110	1,194	1,302	1,263	1,304
• Hulu Langat	277	272	302	304	303
• Hulu Selangor	204	210	208	212	210
• Klang	360	372	379	395	386
• Kuala Langat	140	146	156	162	161
• Kuala Lumpur	268	270	276	281	281
• Kuala Selangor	143	143	149	147	145
• Northern Region	476	557	570	570	569
• Petaling	446	460	470	473	458
• Sabak Bernam	115	114	116	122	117
• Sepang	168	166	179	184	191
• Southern Region	435	489	497	518	518
Contract by location					
• Gombak	2	2	4	3	2
• Headquarters	30	53	50	50	53
• Hulu Langat	3	3	1	0	1
• Hulu Selangor	0	1	2	3	3
• Klang	1	0	1	0	0
• Kuala Langat	2	4	3	2	0
• Kuala Lumpur	2	1	2	1	1
• Kuala Selangor	1	0	0	0	0
• Northern Region	9	9	10	10	6
• Petaling	1	2	3	2	4
• Sabak Bernam	0	0	0	0	0
• Sepang	2	4	3	1	0
• Southern Region	10	10	6	2	3
Number of new employee hires	478	431	436	373	277
By age group					
• < 30 years old	282	290	300	255	173
• 30 to 49 years old	194	132	140	116	102
• ≥ 50 years old	2	9	3	2	2
By gender					
• Male	378	335	317	282	215
• Female	100	96	126	91	62

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DESCRIPTION	2018	2019	2020	2021	2022
By location					
• Gombak	32	20	25	36	19
• Headquarters	167	205	212	167	143
• Hulu Langat	24	14	20	11	14
• Hulu Selangor	19	10	12	9	3
• Klang	45	20	26	31	12
• Kuala Langat	11	8	8	4	6
• Kuala Lumpur	34	3	18	16	12
• Kuala Selangor	11	5	11	7	2
• Northern Region	36	20	33	24	28
• Petaling	40	31	20	20	14
• Sabak Bernam	8	5	2	4	1
• Sepang	14	7	17	5	3
• Southern Region	37	83	39	39	20
Rate of new hires (%)	10.77	9.21	9.04	7.37	5.47
Number of employee turnover	238	213	224	326	264
By age group					
• < 30 years old	94	75	101	97	92
• 30 to 49 years old	92	73	74	146	112
• ≥ 50 years old	52	65	49	83	60
By gender					
• Male	168	152	146	221	206
• Female	70	61	78	105	58
By location					
• Gombak	19	10	10	18	11
• Headquarters	78	97	103	172	124
• Hulu Langat	13	11	6	12	13
• Hulu Selangor	9	3	10	8	2
• Klang	24	15	17	20	17
• Kuala Langat	6	3	3	5	7
• Kuala Lumpur	19	18	10	14	13
• Kuala Selangor	6	7	7	8	6
• Northern Region	9	16	24	20	30
• Petaling	20	12	8	20	20
• Sabak Bernam	3	3	0	3	3
• Sepang	10	4	6	10	3
• Southern Region	22	14	20	16	15
Average employee turnover rate (%)	5.39	4.57	4.55	6.44	5.21

Prioritising Employee Health, Safety, Competency and Diversity

DESCRIPTION	2018	2019	2020	2021	2022
Total training hours provided	75,032	129,193	79,721	121,723	149,277
Average training hours by gender					
• Male	16.10	25.40	14.60	29.24	27.43
• Female	18.70	33.10	20.60	39.07	37.32
Average training hours by employment category					
• Management	41.90	74.10	26.60	65.70	70.55
• Executives	28.00	53.30	24.10	51.53	53.58
• Non-Executives	11.60	16.10	13.00	18.37	19.38
Occupational Safety and Health					
Lost Time Injury (LTI) cases	-	-	21	8	6
Lost Time Injury Frequency Rate (LTIFR) per million works hours	-	-	1.27	0.53	0.39
Fatal Work-Related Injury	-	-	0	1 ¹	0

¹ Commuting accident based on Air Selangor's internal incident classification.

CORPORATE SOCIAL RESPONSIBILITY

As the largest water services provider in Malaysia, Air Selangor understands that much of its success in the past years was made possible through the support of communities in preserving the ecosystems that are nurtured by water and water bodies. Air Selangor strives to bring positive changes through our community engagement programmes and our CSR flagship programme, Sesama Mara.

We aim to continue supporting our local communities in Selangor, Kuala Lumpur, and Putrajaya through CSR programmes with the hope that these efforts will bring joy and uplift the livelihoods of these communities.

SESAMA MARA

Box of Hope

Empowering Online Learning for B40 Community

Plumbing Assistance Services



SESAMA MARA

Sesama Mara, meaning 'Together We Move Forward', is the overarching theme for Air Selangor's CSR programmes. The programme consists of grassroots initiatives to give back to surrounding communities and strengthen the ties between the Company and local communities, residents' associations, local authorities, and NGOs. In 2022, we contributed RM459,165 to the community, an increase compared to RM321,710 in 2021.



Box of Hope

Since 2020, Box of Hope by Air Selangor has assisted underprivileged households by providing essential goods to ease their financial burden. Collection boxes are placed and situated at five Village Grocer outlets in MyTown, 1MontKiara, Melawati Mall, i-City Mall, and Tamarind Square to collect essentials donated by the public. The collected items are packed in the Box of Hope and are distributed by Air Selangor's NGO partner, Yayasan Food Bank Malaysia, across Selangor and Kuala Lumpur.

As of December 2022, 1,621 boxes of essential goods were distributed to selected B40 households, compared to 1,334 boxes in 2021.

Box of Hope is also distributed during national festive celebrations such as Ramadan, Hari Raya Aidilfitri, Chinese New Year, Deepavali, Christmas, and Merdeka at 19 welfare homes with the value of goods amounting to RM68,900.

In 2022, Air Selangor amplified its Box of Hope initiative with the launch of a digital platform to encourage and enable the public to donate via online transactions without having to visit the Box of Hope distribution centres located at selected Village Grocer outlets.



Empowering Online Learning for B40 Community

For some sectors, the impact of COVID-19 is still felt to this day. Education, for example, is still lagging for some students and many need help to catch up, especially marginalised B40 families. Air Selangor continued to support selected children of B40 families through the Empowering Online Learning Initiative for B40 communities. This initiative is aimed at alleviating the financial burden faced by those who have to purchase laptops or tablets for their children by providing an alternative to expensive desktop computers with a cost-efficient mini-computer unit that runs desktop-level performance, suitable for online learning.

A total of 100 devices were distributed and placed at 11 *Program Perumahan Rakyat* (PPR) or low-cost housing areas community centres that are monitored and managed by Yayasan Wilayah Persekutuan and Adab Youth Garage.



SESAMA MARA

Plumbing Assistance Services

Since 2020, residents in Selangor, Kuala Lumpur, and Putrajaya have benefited from the Plumbing Assistance Services offered by Air Selangor. Acknowledging the high cost that could be incurred for maintaining and repairing plumbing systems, Air Selangor initiated this initiative to aid the needy in their homes. In 2022, the services were mainly targeted to the B40 families and welfare homes.

As of December 2022, 20 homes (including welfare homes) have benefited from this initiative and Air Selangor had spent RM25,350 under this initiative.



SKIM AIR DARUL EHSAN

The Selangor government introduced SADE to ensure all community members have equal access to clean water. Low-income households are entitled to receive 20m³ of water supply monthly for free, worth RM11.40. However, usage beyond the allocated amount will be charged accordingly.

To qualify for the scheme, applicants are required to submit an application and fulfil the following criteria:



ILTIZAM SELANGOR PENYAYANG (ISP)
SKIM AIR DARUL EHSAN



Senarai semak untuk syarat-syarat kelayakan Skim Air Darul Ehsan.



Warganegara Malaysia dan menetap atau menyewa di negeri Selangor



Pendapatan bulanan serumah kurang daripada RM5,000



Menggunakan meter individu di premis kediaman

Layari <https://www.airselangor.com/residential/skim-air-darul-ehsan/> untuk maklumat lanjut.

www.airselangor.com



In 2022, Air Selangor processed 23,553 applications and in total 301,549 successful recipients have benefited from the SADE programme.

GLOSSARY AND INDEXES

Association Memberships

1. Malaysian Employers Federation
2. Senior Utility Advisory Group, Smart Water Network (SWAN) Forum, UK
3. Contact Centre Association of Malaysia (CCAM)
4. Transparency International Malaysia
5. Customer Experience Professionals Association

GRI Content Index

STATEMENT OF USE	Air Selangor has reported with reference to the GRI Standards for the period between 1 January to 31 December 2022.
GRI 1 USED	GRI 1: Foundation 2021
APPLICABLE GRI SECTOR STANDARD(S)	Not applicable

DISCLOSURE	DESCRIPTION	PAGE
GRI 2: GENERAL DISCLOSURES 2021		
2-1	Organizational details	2, 12, Back page
2-2	Entities included in the organization's sustainability reporting	Not applicable
2-3	Reporting period, frequency and contact point	2
2-4	Restatements of information	19, 50, 60, 67
2-5	External assurance	Not applicable
2-6	Activities, value chain and other business relationships	12, 15, 49
2-7	Employees	17, 80, 81
2-8	Workers who are not employees	Not applicable
2-9	Governance structure and composition	29, 36
2-11	Chair of the highest governance body	14
2-12	Role of the highest governance body in overseeing the management of impacts	29
2-13	Delegation of responsibility for managing impacts	29
2-14	Role of the highest governance body in sustainability reporting	29
2-16	Communication of critical concerns	39
2-22	Statement on sustainable development strategy	4 - 11
2-25	Processes to remediate negative impacts	39, 54 - 56
2-26	Mechanisms for seeking advice and raising concerns	39
2-27	Compliance with laws and regulations	66
2-28	Membership associations	87
2-29	Approach to stakeholder engagement	32, 33, 54 - 56, 58
GRI 3: MATERIAL TOPICS 2021		
3-1	Process to determine material topics	34
3-2	List of material topics	34
3-3	Management of material topics	35 - 86

GLOSSARY AND INDEXES

DISCLOSURE	DESCRIPTION	PAGE
Topic Standards		
Procurement Practices 2016		
204-1	Proportion of spending on local suppliers	49
Anti-corruption 2016		
205-1	Operations assessed for risks related to corruption	39
205-2	Communication and training about anti-corruption policies and procedures	39, 40
Materials 2016		
301-1	Materials used by weight or volume	67
Energy 2016		
302-1	Energy consumption within the organisation	61, 62, 67
302-3	Energy intensity	62, 67
302-5	Reductions in energy requirements of products and services	62, 67
Water and Effluents 2018		
303-2	Management of water discharge-related impacts	66
303-3	Water withdrawal	44
303-5	Water consumption	64
Emissions 2016		
305-1	Direct (Scope 1) GHG emissions	67
305-2	Energy indirect (Scope 2) GHG emissions	67
305-4	GHG emissions intensity	24, 27, 60, 67
Waste 2020		
306-1	Waste generation and significant waste-related impacts	65, 66
306-2	Management of significant waste-related impacts	66
306-3	Waste generated	65, 67
306-4	Waste diverted from disposal	66
306-5	Waste directed to disposal	65, 67
Effluents and Waste 2016		
306-3	Significant spills	66
Employment 2016		
401-1	New employee hires and employee turnover	69, 80, 81, 82
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	71
401-3	Parental leave	71
Occupational Health and Safety 2018		
403-1	Occupational health and safety management system	18, 75
403-4	Worker participation, consultation, and communication on occupational health and safety	75
403-5	Worker training on occupational health and safety	19, 76
403-6	Promotion of worker health	78, 79
403-9	Work-related injuries	24, 27, 75, 83

GLOSSARY AND INDEXES

DISCLOSURE	DESCRIPTION	PAGE
Training and Education 2016		
404-1	Average hours of training per year per employee	72, 83
Diversity and Equal Opportunity 2016		
405-1	Diversity of governance bodies and employees	27, 69, 70, 80
Local Communities 2016		
413-1	Operations with local community engagement, impact assessments, and development programmes	84 - 86
Customer Health and Safety 2016		
416-1	Assessment of the health and safety impacts of product and service categories	46 - 48

SASB Content Index

CODE	DESCRIPTION	UNIT OF MEASURE	PAGE	REMARKS
SUSTAINABILITY DISCLOSURE TOPICS & ACCOUNTING METRICS				
IF-WU-130a.1	Energy Management	(1) Total energy consumed (2) Percentage grid electricity (3) Percentage renewable	Gigajoules (GJ), Percentage (%)	61, 62, 67 -
IF-WU-140a.1	Distribution Network Efficiency	Water main replacement rate	Rate	27, 50 Air Selangor reports this in kilometers per year
IF-WU-140a.2		Volume of non-revenue real water losses	Thousand cubic meters (m ³)	23, 27, 30, 48, 50 Air Selangor reports this in percentage
IF-WU-140b.1	Effluent Quality Management	Number of incidents of non-compliance associated with water effluent quality permits, standards, and regulations	Number	66 -
IF-WU-140b.2		Discussion of strategies to manage effluents of emerging concern	Not applicable	Not available -
IF-WU-240a.1	Water Affordability & Access	Average retail water rate for (1) residential, (2) commercial, and (3) industrial customers	Rate	https://www.airselangor.com/faq/
IF-WU-240a.2		Typical monthly water bill for residential customers for 10 Ccf of water delivered per month	Reporting currency	https://www.airselangor.com/faq/
IF-WU-240a.3		Number of residential customer water disconnections for non-payment, percentage reconnected within 30 days	Number, Percentage (%)	Not disclosed
IF-WU-240a.4		Discussion of impact of external factors on customer affordability of water, including the economic conditions of the service territory	Not applicable	25
IF-WU-250a.1	Drinking Water Quality	Number of (1) acute health-based, (2) non-acute health-based, and (3) non-health-based drinking water violations	Number	23
IF-WU-250a.2		Discussion of strategies to manage drinking water contaminants of emerging concern	Not applicable	47 - 48 -

GLOSSARY AND INDEXES

CODE	DESCRIPTION	UNIT OF MEASURE	PAGE	REMARKS	
IF-WU-420a.1	End-Use Efficiency	Percentage of water utility revenues from rate structures that are designed to promote conservation and revenue resilience	Percentage (%)	Not disclosed	
IF-WU-420a.2		Customer water savings from efficiency measures, by market	Cubic meters (m ³)	Not available	
IF-WU-440a.1	Water Supply Resilience	Total water sourced from regions with High or Extremely High Baseline Water Stress, percentage purchased from a third party	Thousand cubic meters (m ³), Percentage (%)	Not available	
IF-WU-440a.2		Volume of recycled water delivered to customers	Thousand cubic meters (m ³)	30	
IF-WU-440a.3		Discussion of strategies to manage risks associated with the quality and availability of water resources	Not applicable	46 - 48, 59 - 60	-
IF-WU-450a.1	Network Resiliency & Impacts of Climate Change	Wastewater treatment capacity located in 100-year flood zones	Cubic meters (m ³) per day	Not applicable	
IF-WU-450a.2		(1) Number and (2) volume of sanitary sewer overflows (SSO), (3) percentage of volume recovered	Number, Cubic meters (m ³), Percentage (%)	Not applicable	
IF-WU-450a.3		(1) Number of unplanned service disruptions, and (2) customers affected, each by duration category	Number	45	-
IF-WU-450a.4		Description of efforts to identify and manage risks and opportunities related to the impact of climate change on distribution and wastewater infrastructure.	Not applicable	Not applicable	
ACTIVITY METRICS					
IF-WU-000.A	Number of: (1) residential, (2) commercial, and (3) industrial customers served, by service provided	Number	15, 50		
IF-WU-000.B	Total water sourced, percentage by source type	Cubic meters (m ³), Percentage (%)	Not disclosed		
IF-WU-000.C	Total water delivered to: (1) residential, (2) commercial, (3) industrial, and (4) all other customers	Thousand cubic meters (m ³)	Not disclosed		
IF-WU-000.D	Average volume of wastewater treated per day, by (1) sanitary sewer, (2) stormwater, and (3) combined sewer	Cubic meters (m ³) per day	Not applicable		
IF-WU-000.E	Length of (1) water mains and (2) sewer pipe	Kilometers (km)	16, 50	Length of water mains only	

Glossary

ABAC	Anti-Bribery and Anti-Corruption
ABMS	Anti Bribery Management System
ACEO	Acting Chief Executive Officer
ADUN	State assemblymen
AESP	Authorised Entrant & Standby Person
AGTES	Authorised Gas Tester and Entry Supervisor for Confined Space
AI	Artificial Intelligence
AIRRA	Air Selangor Mobile App Chatbot
AMI	Advanced Metering Infrastructure
ANSP	Air Selangor National Institute of Occupational Safety and Health Safety Passport
ASPIRE	Air Selangor Strategic Plans and Initiatives
BIA	Business Impact Analysis
BCM	Business Continuity Management
BCMS	Business Continuity Management System
BCP	Business Continuity Plan
BOD	Board of Directors
BOFA	Basic Occupational First Aid
BRSC	Board Risk and Sustainability Committee
CAPEX	Capital Expenditure
Carbon Neutral	Achieving balance between the amount of greenhouse gas emissions produced and the amount of emissions removed from the atmosphere
CEI	Corporate Energy Intensity
CePBFO	Certified Environmental Bag Filter Operation
CePIETSO	Certified Environmental Industrial Effluent Treatment Systems Operation
CePSO	Certified Environmental Scrubber Operation
CePSWAM	Certified Environmental Scheduled Waste Management
CeIO	Certified Integrity Officer
CEO	Chief Executive Officer
CIDB	Construction Industry Development Board
CM	Corrective Maintenance
CMP	Coaching and Mentoring Programme
CMS	Content Management System
COBE	Code of Business Ethics
CONHEXA	Contractors HSE Excellence Awards
CSAT	Customer Satisfaction
CSI	Customer Satisfaction Index
CSR	Corporate Social Responsibility
CX	Customer Experience
DAC	Digital & Analytics Centre
DOE	Department of Environment
DOSH	Department of Occupational Safety and Health
DUN	Dewan Undangan Negeri
DWQS	Drinking Water Quality Standard
ECM	Enterprise Content Management
EDP	Executive Competency-Based Development Programme
eDPLAS	Electronic Development Plan Approval System
EMPC	Environmental Performance Monitoring Committee
ERCMC	Environmental Regulatory Compliance Monitoring Committee
ERM	Enterprise Risk Management
ERP	Emergency Response Plan
FoRM	Friends of River Malaysia
FRC	Free Residual Chlorine
FRIM	Forest Research Institute Malaysia
GHG	Greenhouse Gas
GIS	Geographic Information System
GJ	Gigajoule
GPS	Global Positioning System
GRI	Global Reporting Initiative
GSR	Guided Self-Regulation
GWJ	Global Water Intelligence
GWh	Gigawatt-hour
HEROSE	HSE Excellence Recognition of Outstanding Employees
HORAS	Hybrid Off-river Augmentation System
HSE	Health, Safety and Environment
HYDRA	Hybrid Distribution Water Quality Real-time Analyser
IAQ	Indoor Air Quality
ICC	Intelligent Command Centre
ICON	HSE Improve and Continue Programme
IUM	International Islamic University Malaysia
ILI	Infrastructure Leakage Index
IMS	Integrated Management System
IMSIRA	Integrated Management System Integrated Risk Assessment
IMTN	Islamic Medium-Term Notes
ISO	International Organization for Standardization
IWK	Indah Water Konsortium
JAKIM	Jabatan Kemajuan Islam Malaysia
KASA	Kementerian Alam Sekitar dan Air
kgCO₂/m³	Kilogram of carbon dioxide per cubic metre
KRA	Key Result Areas
KPPI	Auditorium Kompleks Penyelidikan dan Pengurusan Inovasi, Universiti Malaya
kWac	Kilowatt Alternating Current
kWh	kilowatt-hour
LAD	Liquidated and ascertained damages

GLOSSARY AND INDEXES

LEAD	Leadership Competency-Based Development Programme	PPT	Pengiktirafan Pencapaian Terdahulu
LCD	Litres per capita per day	PTW	Permit To Work
LSS	Lean Six Sigma	PV	Solar Photovoltaic
LTI	Lost-time Injury	QAP	Quality Assurance Programme
LTIFR	Lost Time Injury Frequency Rate	RA	Risk Assessment
LUAS	Lembaga Urus Air Selangor	RENEW	Renewable Energy for Water
m³	Cubic metre	RMC	Risk Management Committee
MACC	Malaysian Anti-Corruption Commission	RMD	Risk Management Department
MC	Management Committee	RMS	River Monitoring System
MCCG	Malaysian Code of Corporate Governance	RPA	Robotic Process Automation
MJ/m³	Megajoule per cubic metre	RTF	Residuals Treatment Facility
MLD	Million litres per day	SADE	Skim Air Darul Ehsan
MOH	Ministry of Health	SBR	Singapore Business Review
MoU	Memorandum of Understanding	SDG	Sustainable Development Goal
MP	Members of Parliament	SLDN	Sistem Latihan Dual Nasional
MSOSH	Malaysian Society of Occupational Safety and Health	SMS	Short Message Service
MT	Metric tonne	SIRIM	Standards and Industrial Research Institute of Malaysia
MWac	Mega-Watt Alternating Current	SKM	Sijil Kemahiran Malaysia
NEDP	Non-Executive Competency-Based Development Programme	SOP	Standard Operating Procedure
NGO	Non-governmental Organisation	SPAN	Suruhanjaya Perkhidmatan Air Negara
NIOSH	National Institute of Occupational Safety and Health	SPI	Strategic Plans and Initiatives
NPS	Net Promoter Score	SRI	Sustainable and Responsible Investment
NRECC	Ministry of Natural Resources, Environment and Climate Change	SSP1	Sg Selangor Phase 1
NRR	Natural Rate of Rise	SSP2	Sg Selangor Phase 2
NRW	Non-revenue Water	SWAN	Smart Water Networks Forum
OACIS	Off-plant Autonomous Chlorine Injection System	TAMS	Total Asset Management System
OBI	Operations Business Intelligence	tCO₂	Tonne of carbon dioxide
OMA	Operations Mobile Application	ToR	Terms of Reference
OP	Operating Period	TSM	Tariff Setting Mechanism
OPAK	Operasi Pengepaman Air Kolam	UARL	Unavoidable Annual Real Losses
OPEX	Operational Expenditure	UAG	Utility Advisory Group
ORS	Off-river Storage	UKM	Universiti Kebangsaan Malaysia
OSHA	Occupational Safety and Health Act	UM	Universiti Malaya
OSH	Occupational Safety and Health	WAMS	Work and Asset Management System
PAKAR	Pasukan Khas Lembangan dan Alur Air	WEDP	Water Expert Development Programme
PFA	Polyfluoroalkyl	WHO	World Health Organisation
PKS	Pusat Khidmat Setempat	WISDOM	Water Intelligence for Supply and Demand Operations Management
POLIGONs	Pipe Cleaning Zone with Compression Gear and Isolation	WRP	Water Reclamation Plant
POP	Persistent Organic Pollutants	WSIA	Water Services Industry Act
PPR	Projek Perumahan Rakyat	WTP	Water Treatment Plant



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