



Stewarding a Sustainable Future

Annual & Sustainability
Report 2024/2025

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About the National Environment Agency

The National Environment Agency (NEA) was established on 1 July 2002 by the NEA Act 2002 as a statutory board under the Ministry of Sustainability and the Environment (MSE).

Our work is diverse. As a regulator and advocate for the environment, we strive to formulate policies that benefit Singapore's environment, economy and society in the long run.

NEA is a member of:

- American Society of Heating, Refrigerating and Air-Conditioning Engineers Singapore Chapter
- ASEAN-Japan Energy Efficiency Partnership
- Singapore Programme for Research in Epidemic Preparedness and Response
- Singapore Standards Council
- United Nations Global Compact and its local chapter, the Global Compact Network Singapore
- World Health Organization (WHO) Collaborating Centre for Reference and Research of Arboviruses and their Associated Vectors

We are guided by the NEA Service Charter¹, which sets out our collective commitment to carry out our work with dedication and passion, providing a trusted and reliable public service for all.

¹ NEA's Service Charter: www.nea.gov.sg/corporate-functions/contact-us/service-standards

Chairman's Foreword

Mr Chaly Mah

Chairman *from 1 April 2025*
Deputy Chairman *1 April 2024 to 31 March 2025*



As I step into the role of Chairman of the Board, I would like to extend my heartfelt gratitude to Mr Lee Chuan Seng for his six years of exemplary leadership and for leaving behind a strong and resilient foundation. Under his stewardship, NEA navigated the unprecedented challenges of the COVID-19 pandemic and emerged stronger.

It is both an honour and a privilege to assume this role. Together with the Board and management, we will build upon NEA's strengths and explore innovative approaches to address the increasingly complex environmental and public health challenges of our time.

One such challenge is in weather prediction, as tropical weather is inherently complex due to its dynamic and localised nature. We commenced a new Weather Science Research Programme earlier this year to harness technological advancements and expand partnerships in weather prediction research. This will help raise Singapore's preparedness and resilience against more extreme weather events brought about by climate change.

Another challenge lies in enhancing energy resiliency and decarbonising the grid, including exploring the potential deployment of nuclear power in Singapore. NEA has been actively strengthening capabilities in nuclear safety and has supported the growth of the Singapore Nuclear Research and Safety Institute from a research initiative to a full-fledged institute, through a \$66 million grant under the Research, Innovation and Enterprise 2025 Plan.

Still on achieving Singapore's net zero commitments, this requires a multifaceted approach, of which carbon credits represent an important pathway to support decarbonisation efforts. As the regulator for carbon credits, NEA has worked with other government agencies to expand Singapore's carbon credit collaborations under Article 6 of the Paris Agreement, signing Implementation Agreements with seven countries to date. We will continue to facilitate these partnerships while ensuring these carbon credits meet the required standards for Singapore's Nationally Determined Contribution.

Another challenge lies in advancing the circular economy. While the waste generated per capita and per dollar GDP has declined over the past decade, recycling rates have also fallen. To address this, NEA will strengthen support for paper recycling and improve plastic recycling through initiatives such as the Beverage Container Return Scheme that will commence operations in 2026. Additionally, NEA is exploring carbon capture technologies for waste-to-energy plants, aiming to further reduce the carbon footprint of Singapore's waste sector while enhancing sustainability efforts.

Our partnerships with both international and local stakeholders are necessary in advancing our sustainability goals. Bilateral and regional partnerships provide opportunities to explore new solutions for safeguarding our environment and public health. By engaging local community partners and strengthening collective responsibility, we will ensure Singapore remains clean, liveable, and sustainable for generations to come.

CEO's Message

In 2024, the world experienced its hottest year on record, a stark reminder of the growing challenges posed by climate change. This milestone underscores the urgency for resilience – not just in adapting to environmental shifts, but in fortifying our systems, operations, and people in an increasingly complex and uncertain landscape. As an organisation, resilience is the cornerstone of our mission to build a cleaner, greener, and more sustainable Singapore.

RESILIENCE IN CRISIS

We have been strengthening our capacity to respond effectively to crises. This was reflected in the coordinated clean-up of the June 2024 oil spill at Pasir Panjang Terminal, which was completed ahead of schedule. These efforts highlight the importance of preparedness and collaboration in mitigating disruptions and protecting our environment.

RESILIENCE IN HOW WE OPERATE

Transformation through technology is key to enhancing operational resilience. For instance, NEA is leveraging surveillance technology to address rat and littering issues more effectively. Automation and advanced cleaning technologies are also being integrated to improve efficiency and ensure that our operations remain future-ready.

RESILIENCE THROUGH INNOVATION

Innovation drives our ability to tackle emerging challenges. A prime example is Project *Wolbachia*, a groundbreaking initiative in public health. By 2026, we aim to scale this programme to cover approximately 50% of households, significantly strengthening our fight against mosquito-borne diseases.

RESILIENCE WITH NEW CAPACITY

Expanding our capacity to meet future needs is another important aspect of resilience. The newly developed Mandai North Crematorium and Garden of Serenity will increase our after-death capacity, ensuring we meet the needs of an ageing population. Additionally, the completion of three new hawker centres in the past year enhances our ability to serve residents and support local communities.

RESILIENCE THROUGH SAFETY

Safety is integral to our resilience. We established a Workplace Safety and Health (WSH) Division within NEA and set up a dedicated safety office at our waste management facility last year. We also attained bizSAFE Level 3 in 2024. We have further stepped up our emphasis on safety through management walkabouts, awards, and a structured calendar of initiatives including our inaugural WSH Day.

RESILIENCE OF OUR PEOPLE

Our people are the foundation of our resilience. We are dedicated to equipping our employees with the skills and knowledge needed to navigate evolving challenges. This is achieved through structured training programmes, mentorship initiatives, and the transformation and redesign of jobs, including those for Environmental Health Officers. The Mental Wellness Month and other programmes also support our employees' emotional well-being. In all, these initiatives empower our workforce to adapt, grow, and excel in an ever-changing environment.



Mr Wong Kang Jet

Chief Executive Officer

RESILIENCE BY WORKING IN PARTNERSHIP

Strong partnerships amplify our resilience. I extend my heartfelt gratitude to every member of the NEA family, our industry partners, and community stakeholders for your unwavering dedication to shaping a clean and green Singapore. Together, we will continue to build a more resilient future.

Finally, I would like to express my deepest appreciation to our former Chairman, Mr Lee Chuan Seng, for his six years of exemplary leadership, especially through COVID-19 pandemic. I warmly welcome our new Chairman, Mr Chaly Mah, whose stewardship of the Board will continue to guide us as we navigate the challenges ahead.

Board of Directors



Mr Lee Chuan Seng
Chairman,
National Environment Agency
from 1 April 2019 to 31 March 2025



Mr Chaly Mah
Chairman,
National Environment Agency
Chairman, Surbana Jurong Pte Ltd
Chairman, Netlink NBN Trust
*Deputy Chairman from 1 April 2024 to
31 March 2025; Chairman with effect from
1 April 2025*



Mr Wong Kang Jet
Chief Executive Officer,
National Environment Agency



Dr Andrew Khoo
Former Deputy Managing
Director, Monetary Authority
of Singapore



Ms Janet Young
Managing Director & Group
Head, Channels & Digitalisation,
Strategic Communications &
Brand,
United Overseas Bank Ltd



Mr Zia Zaman
General Manager, Corporate
Business Development Asia,
Microsoft



Mr Walter Fernandez
Editor-in-Chief and
Chief Sustainability Officer,
Mediacorp Pte Ltd



Ms Fang Eu-Lin
Partner, Sustainability and
Climate Change Practice
Leader,
PwC Singapore



Dr Azlinda Anwar
Executive Director,
Biomedical Research Council
Agency for Science, Technology
and Research (A*STAR)



Ms Tan Man Ee
Chief Operating Officer & Director,
NatSteel Holdings Pte Ltd
Chairperson,
WSH Council (Manufacturing)
Committee



Ms Teo Siew Pan
Executive Secretary,
Advanced Manufacturing
Employees' Union



Mr Quek Suan Kiat
Former Vice Chairman,
Barclays Bank PLC Singapore
until 31 March 2025



Mr Lim Eng Hwee
Chief Executive Officer,
Urban Redevelopment
Authority
until 31 March 2025



Mr Puah Kok Keong
Chief Executive,
Energy Market Authority
until 31 March 2025



**Mr Abu Bakar Bin Mohd
Nor**
Chairman, M Kapital Holdings
Chairman, Workplace Safety
and Health Council
with effect from 1 April 2025



Mr Brian Tan
Corporate Vice President,
Applied Global Services,
Asia Pacific Regional
President, Applied Materials
South East Asia,
Applied Materials Inc.
with effect from 1 April 2025



Mr Lim Zhi Jian
Deputy Secretary (Land &
Communications),
Ministry of Transport
with effect from 1 April 2025



Ms Rachel Eng
Managing Director,
Eng and Co. LLC
with effect from 1 April 2025

Senior Leadership Team

As at 1 September 2025



Mr Wong Kang Jet
Chief Executive Officer,
National Environment Agency



Mr Ananda Ram Bhaskar
Deputy Chief Executive Officer,
Environmental Protection
Director-General,
Environmental Protection



Ms Koh Li-Na
Deputy Chief Executive Officer,
Meteorological Services &
Radiation Protection
Director-General,
Meteorological Services



Mr Ng Chun Pin
Deputy Chief Executive
Officer, Planning, Corporate &
Technology



Mr Chew Ming Fai
Deputy Chief Executive Officer,
Public Health
Director-General,
Public Health



Ms Tan Li Yen
Group Director,
Clean Environment



Mr Tan Eng Kim Francis
Group Director,
Corporate Services



Dr Ng Lee Ching
Group Director,
Environmental Health
Institute



Mr Tony Teo
Group Director,
Environmental Public Health
Operations



Mr Andrew Low
Group Director,
Hawker Centres



Mr Desmond Tan
Group Director,
Infrastructure & Engineering



Mr S Satish Appoo
Group Director,
Joint Operations &
Technology



Mr Ng Keng Wei
2 Group Director,
Joint Operations & Technology



Mr Lim Yuin Chien
Group Director,
Public Engagement



Mr Fong Peng Keong
Group Director,
Public Health Services &
Capabilities



Mr Halmie Hussein Mattar
2 Group Director,
Public Health Services &
Capabilities
Director, Environmental
Technology & Industry
Development Division
Chief Technology Officer



Mr Ang Kok Kiat
Group Director,
Radiation Protection & Nuclear
Science



Mr Chan Chin Kai
Group Director,
Resource & Sustainability
Group Director (Infra Projects),
Infrastructure & Engineering
Chief Sustainability Officer



Mr Koh Joon Hong
2 Group Director,
Resource and Sustainability
2 Group Director, Hawker Centres



Ms Ivy Ong Bee Luan
Group Director,
Strategic Planning & Policy

Governance

BOARD

The NEA Board comprises a Chairman² and up to 13 members from the private and public sectors. They bring diverse experience across domains such as sustainability, engineering, media, audit, finance, strategic planning, and enterprise risk management.

The Board provides strategic direction and oversight of organisational functions and goals, guiding the development and implementation of policies and strategies to fulfil our vision and mission. Through four committees focusing on audit, finance, human resources, and risk, the Board oversees internal and external sustainability initiatives, strategies and outcomes, risks, challenges, and opportunities. It also oversees the management of NEA's impact on the economy, environment and people. These roles and responsibilities are formalised in the terms of reference and undergo periodic review.

The Board receives regular updates through Board meetings and the annual Board Strategic Advance meeting. Members have access to sustainability training programmes to enhance their knowledge of sustainable development.

Board members are selected based on expertise to enhance Board composition and address new strategic priorities. Annual Board evaluations also assess processes, accountability, standards of conduct, and committee functions. Board appointments and remuneration follow the Public Service Division (PSD)'s recommendations and guidelines, including the consideration of minority groups and female representation, appointment tenure, and the number of directorship appointments on public boards.

Board members must disclose their interests and related third-party transactions annually and make additional declarations when necessary. In cases with potential conflict of interest, they are excluded from deliberations on transactions or projects in which they may have direct or indirect involvement.

SENIOR MANAGEMENT

Our senior management drives strategic initiatives and organisational excellence. They oversee critical aspects of their respective divisions – including financial, manpower and operational matters – while working collaboratively to enhance our capabilities in risk management, innovation and sustainability. They also review and endorse the sustainability disclosures, validate our material topics, and oversee this report's development.

Through regular strategic reviews, our senior management evaluates progress and adjusts organisational direction as needed. Strategic projects are initiated to strengthen our dual role as an environmental regulator and champion.

Our senior management's compensation framework consists of fixed and variable components, with the latter tied to individual performance and economic conditions. This performance-driven approach incorporates a higher variable to fixed pay ratio for senior management. NEA's Board Human Resource Committee determines appropriate bonuses and salary adjustments of senior management through thorough performance evaluations.

AUDIT

Our accounts are audited annually by external auditors, approved by the Board, and published with our Annual & Sustainability Report.

External auditors must declare their independence to the Audit Committee before being appointed by the Minister for Sustainability and the Environment in consultation with the Auditor-General. The audit by independent external auditors provides the Board with reasonable assurance that our financial statements are free from material misstatements. The audit is conducted in accordance with the audit plan presented to the Audit Committee, which also oversees the approval of any significant non-audit services.

Our financial governance is further strengthened by external controls from government agencies. The Auditor-General's Office and Accountant-General's Department conduct both scheduled and ad-hoc audits to verify adherence to good governance practices.

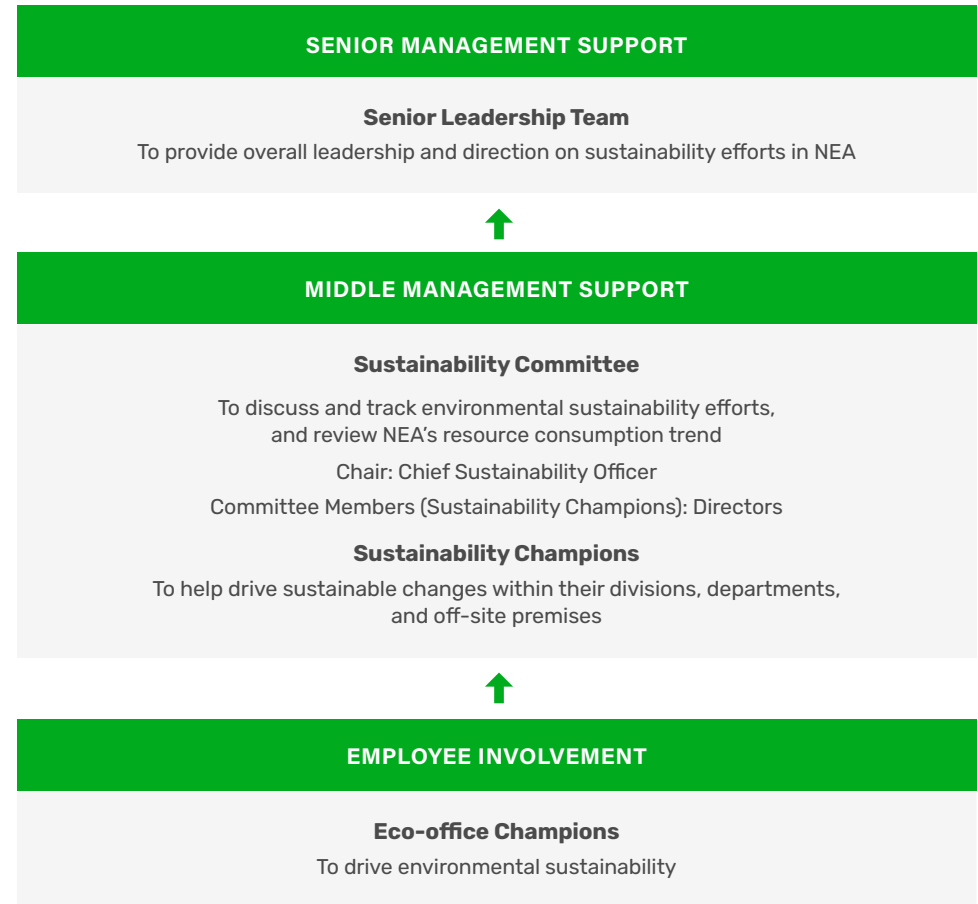
Within NEA, our Internal Audit Division provides independent assurance and consulting services, evaluating the effectiveness of our governance, risk management and control processes to continuously enhance operations.

² Chairman is not a senior executive in the organisation

SUSTAINABILITY GOVERNANCE

Our senior management establishes NEA’s sustainability direction and strategy. All NEA Directors serve as Sustainability Champions and take ownership of sustainability initiatives within their divisions, with a dedicated Eco-office Champion appointed from each division to work closely with NEA’s Sustainability Office and support their Director in implementing sustainability measures.

Eco-office Champions are responsible for monitoring resource consumption, identifying potential conservation measures, and implementing initiatives to reduce energy, water, and waste consumption across NEA’s premises. This governance structure ensures our sustainability agenda is executed effectively throughout NEA.





Stewarding Singapore's Environment

Safeguarding Public Health and the Environment

We adopt a holistic and forward-looking approach to uphold high public health standards, while safeguarding Singapore's environment.

YEAR OF PUBLIC HYGIENE

Public hygiene is fundamental to our well-being. To reinforce a shared sense of responsibility, MSE designated 2024 as the Year of Public Hygiene, encouraging everyone to play a part in maintaining good hygiene practices. In support of this initiative, we intensified efforts to enhance public health outcomes across five key areas.

TACKLING CLEANLINESS HOTSPOTS

We significantly intensified enforcement efforts in 2024 with around 130 blitzes at littering and smoking hotspots, up from 21 in 2023. We strengthened video surveillance and scaled capacity to conduct up to 1,000 camera deployments a year, up from 250 in 2023. To enhance deterrence, we increased visible patrols, put up banners and standees, and partnered community stakeholders to help identify egregious littering offenders caught on camera. We also conducted corrective work sessions at these hotspots to create better awareness.

The measures yielded positive results, with litter counts at hotspots falling by 36% between May and December 2024. About 1,900 fines were issued at hotspots islandwide during this period.

ENHANCING VECTOR CONTROL

We strengthened upstream rat control by promoting proper refuse management and addressing structural defects. Working with the Singapore Food Agency (SFA), we took over 1,000 enforcement actions against errant premises – nearly double the 670 in 2023 – with about half related to poor refuse management. To better monitor rat activity, we also successfully trialled the use of thermal cameras to complement existing surveillance tools like passive infrared cameras and borescopes.

Beyond rat control, we continued to monitor the dengue situation. The first quarter of 2024 saw over 5,166 dengue cases reported – more than double the 2,360 cases in the same period of 2023. In response, we launched the National Dengue Prevention Campaign ahead

of the typical peak dengue season, introducing the concept of 'Little Acts, Lethal Impact' to emphasise social responsibility in dengue prevention.

Although 2024 saw over 13,600 dengue cases, up from about 9,900 in 2023, Project *Wolbachia* and community vigilance helped to prevent large dengue clusters and subdue the expected mid-year surge. We conducted about 686,000 mosquito inspections and uncovered around 23,900 mosquito breeding habitats. Over 12,000 enforcement actions were taken against premises owners or occupiers for mosquito breeding. We also issued 748 fines and 61 Stop Work Orders to construction sites, with 79 contractors charged in court for repeat offences.

ENHANCING INDUSTRY CAPABILITY AND LEVERAGING TECHNOLOGY

Technology plays an important role in improving operational efficiency. In addition to deploying autonomous waterway cleaning machines across Singapore, we are working with service providers to trial and progressively roll out drain sensors that send alerts when drains are clogged or when water levels are too high.

Similarly, we partnered the National Parks Board (NParks) to trial Artificial Intelligence (AI) for detecting overflowing litter bins and littered public areas. Trials for autonomous pavement sweepers in selected parks commenced in July 2025.

We support the environmental services industry in enhancing their processes and improving operational efficiency with productivity solutions. The initial tranche of the Environmental Services Productivity Solutions Grant contributed to the transformation of more than 600 unique companies through the adoption of equipment technologies and digital solutions. The new tranche of funding, valued at \$90 million, opened for applications in December 2024 and will close by March 2027.

TACKLING PUBLIC TOILET CLEANLINESS

We supported MSE's Public Toilets Taskforce, which was established in 2024 to recommend measures for improving public toilet cleanliness. The Taskforce published its full report with 10 key recommendations in February 2025. At the Committee of Supply 2025, MSE announced two new grants in line with the Taskforce's recommendations: the Coffeeshop Toilet Renovation Grant and the Coffeeshop Toilet Deep Cleaning Grant.

RALLYING THE COMMUNITY

Community involvement is key to making the Year of Public Hygiene a success. This was exemplified by initiatives such as the Community Auditor Programme, where residents of private estates were engaged in assessing the performance of our cleaning service providers. The number of resident volunteers grew from 20 in 2020 to 169 in 2024, covering 99 private estates.

The Alternate Roadside Parking Programme continues to gain momentum, enabling more efficient cleaning of private estates. By encouraging residents to park their vehicles on

alternate sides of the road on designated days, the programme facilitates cleaning by mechanical road sweepers and electric leaf blowers, achieving time savings of between 50% and 80% compared to manual cleaning. With 33 private estates participating, we aim to expand to 45 estates by 2026.

In addition to these programmes, NEA and our partners rallied the community through numerous programmes. Clean & Green Singapore 2024 featured over 1,000 activities while the Public Hygiene Council (PHC)'s 'Keep Singapore Clean 2024' campaign engaged more than 76,000 individuals through over 1,400 clean-ups and related activities.

From November to December 2024, we jointly organised the 'Cleaner Public Toilets' campaign with PHC, which expanded its Neighbourhood Toilets Community Group and introduced a new Toilet Cleaning Module for primary schools. To engage youths in public cleanliness education, we launched the Singapore River Quest, a WhatsApp-based game that garnered over 3,800 sign-ups.

For the Year of Public Hygiene, over 1,750 activities were organised and supported by community and corporate partners – many of whom committed to continuing efforts beyond 2024.

OIL SPILL

With robust emergency protocols, inter-agency coordination, and monitoring systems, we stand ready to respond swiftly and effectively to environmental hazards such as oil spills.

On 14 June 2024, the Netherlands-flagged dredger *Vox Maxima* struck Singapore-flagged Marine Honour at Pasir Panjang Terminal, spilling 400 tonnes of fuel into Singapore's waters. As part of the emergency response led by the Maritime and Port Authority of Singapore, we coordinated joint landward clean-up operations, conducted air and water monitoring, and activated volunteers.

Mitigating the impact of the fast-spreading oil spill required a complex multi-stakeholder landward cleaning effort. We played a vital role that spanned several fronts, from inter-agency coordination to media and legal matters. We worked closely with PHC – which mobilised over 2,300 volunteers – and co-developed clean-up protocols, completing clean-up operations at affected shorelines ahead of schedule.

We monitored air quality at affected beaches to ensure that levels of Volatile Organic Compounds (VOCs) remained well within safe limits for cleaning operations, and conducted regular water sampling to assess beach water quality. To safeguard public health, the affected beaches were closed to facilitate clean-up operations. Advisories were also issued against swimming and other primary contact water activities. The beach closure and advisories were lifted when the beach water quality returned to normal levels and remained stable.

POLLUTION CONTROL

We work to prevent air and water pollution, manage hazardous substances and toxic waste, and protect people and the environment from radiation risks. We also help ensure a high-quality living environment by planning where industries are located and putting in place noise control measures.

Our pollution control efforts span from early planning and licensing to ongoing monitoring and enforcement. We take a proactive approach by strengthening rules for emerging pollutants, supporting the safe transport of radioactive materials, and working with other agencies to address complex pollution challenges.

MANAGING TRANSBOUNDARY HAZE

Singapore faces occasional episodes of transboundary smoke haze, particularly when land and forest fires increase during the dry season in the region. The Haze Task Force, chaired by NEA and comprising 28 government agencies, leads and coordinates inter-agency action plans to mitigate the impact of these events.

In the event of a haze episode, agencies activate tiered measures based on severity levels to safeguard public health, especially for vulnerable groups such as the elderly and those with chronic lung or heart conditions. The public receives regular updates on air quality, health advisories and Whole-of-Government (WOG) efforts.

DEVELOPING SPECIALISED AIR MONITORING CAPABILITIES

As industrial and commercial activities near residential areas intensify and contribute to ambient air pollution, we are deepening our understanding of the key contributors to particulate matter, ozone, and VOCs.

In the next two years, a specialised monitoring network will be set up in three regions to continuously measure non-traditional air pollutants and their compositions. This will support more targeted control measures and inform future policy reviews.

ADJUSTING EMISSION REQUIREMENTS FOR FOREIGN VEHICLES ENTERING SINGAPORE

We will tighten emissions requirements for foreign vehicles entering Singapore. Currently, foreign-registered commercial diesel vehicles emitting 60 Hartridge Smoke Units (HSU) or more are turned away at land checkpoints. This threshold will be tightened to 50 HSU from 1 April 2026.

Previously, we announced that local motorcycles registered before 1 July 2003 will not be allowed on Singapore's roads from 1 July 2028. This requirement will also apply to foreign-registered motorcycles. Foreign motorcyclists entering Singapore are required to use motorcycles registered on or after 1 July 2003 in their home country and comply with Singapore's in-use emission standards.

MONITORING AIR QUALITY

We monitor key pollutants³ via a network of ambient air monitoring systems, with hourly air quality updates on our website, the Haze microsite, and myENV⁴. Singapore's long-term air quality targets are pegged to WHO guidelines, reflecting our commitment to international standards.

We will continue to look into ways to achieve our long-term air quality targets. For example, as ozone is formed through complex reactions between VOCs and nitrogen oxides, we are conducting a study to better understand the ozone formation in Singapore and inform future policy assessments.

For other pollutants such as particulate matter, where a significant proportion is contributed from the region (both natural and anthropogenic), domestic efforts (such as periodic review of emission standards) will be supplemented with continued international engagement and collaboration to tackle anthropogenic sources.

Key Performance Indicator (KPI)	2022 Results	2023 Results	2024 Results	Long-term Targets
PM _{2.5} (annual mean)	11.0 µg/m ³	11.0 µg/m ³	12.0 µg/m ³	10.0 µg/m ³
PM _{2.5} (24-hour mean, 99th percentile)	26.0 µg/m ³	39.0 µg/m ³	31.0 µg/m ³	25.0 µg/m ³
PM ₁₀ (annual mean)	24.0 µg/m ³	24.0 µg/m ³	25.0 µg/m ³	20.0 µg/m ³
PM ₁₀ (24-hour mean, 99th percentile)	51.0 µg/m ³	62.0 µg/m ³	52.0 µg/m ³	50.0 µg/m ³
SO ₂ (24-hour mean, max)	37.0 µg/m ³	20.0 µg/m ³	21.0 µg/m ³	20.0 µg/m ³
O ₃ (8-hour mean, max)	124.0 µg/m ³	154.0 µg/m ³	129.0 µg/m ³	100.0 µg/m ³
NO ₂ (annual mean)	25.0 µg/m ³	23.0 µg/m ³	23.0 µg/m ³	40.0 µg/m ³
NO ₂ (1-hour mean, max)	128.0 µg/m ³	122.0 µg/m ³	104.0 µg/m ³	200.0 µg/m ³
CO (8-hour mean, max)	1.7 mg/m ³	1.5 mg/m ³	1.4 mg/m ³	10.0 mg/m ³
CO (1-hour mean, max)	2.1 mg/m ³	1.8 mg/m ³	1.6 mg/m ³	30.0 mg/m ³

³ Particulate matter (PM₁₀ and PM_{2.5}), sulphur dioxide, ozone, nitrogen dioxide, and carbon monoxide

⁴ The myENV mobile application is a one-stop platform that provides information on Singapore's environment, water services and food safety: www.nea.gov.sg/myenv

CLAMPING DOWN ON ERRANT MOTORISTS

We take a firm stance against all vehicles – including those registered abroad – that do not comply with vehicular exhaust and noise emissions standards outlined in Singapore's Environmental Protection and Management (Vehicular Emissions) Regulations. In the Financial Year (FY) 2024, we conducted joint enforcement blitzes with the Land Transport Authority (LTA) and the Singapore Police Force to reinforce compliance with environmental and road safety regulations, resulting in 105 enforcement actions against errant motorists for vehicular emissions offences.

CURBING CONSTRUCTION NOISE

We regulate construction noise levels by enforcing specific limits outlined in the Environmental Protection and Management (Control of Noise at Construction Sites) Regulations. In 2024, we received 11,213 feedback reports related to construction noise, with 402 enforcement actions taken against contractors for exceeding noise limits or working during prohibited hours. We also introduced an additional requirement for large-scale projects located near residential and noise-sensitive areas. Tenders called from 1 April 2025 must include the installation of noise barriers along the perimeter of the construction site, further reducing the impact of construction noise on nearby residents.

TRANSITIONING TO CLEANER ENERGY VEHICLES

To improve ambient air quality, we regularly review our policies to reduce vehicular emissions. The Vehicular Emissions Scheme (VES) has been extended to 31 December 2025, with pollutant thresholds tightened to better differentiate between conventional combustion engines and cleaner alternatives. From 1 January 2025, the VES Band A2 rebate was reduced from \$5,000 to \$2,500, while the VES Band A1 rebate remained at \$25,000. These adjustments incentivise the adoption of cleaner energy vehicles, particularly electric and other zero tailpipe emission vehicles.

The Commercial Vehicle Emissions Scheme (CVES) was extended to 31 March 2027. The incentive for Light Commercial Vehicles (LCVs) in CVES Band A remained at \$15,000 while those in CVES Band C faced an increased surcharge of \$20,000. There is no incentive or surcharge for LCVs in CVES Band B. Additionally, the Early Turnover Scheme for heavy commercial vehicles was extended until 31 December 2025. These changes are aligned with the Government's vision to have all vehicles run on cleaner energy by 2040.

MONITORING RECREATIONAL BEACH WATER QUALITY

We routinely monitor the water quality at Changi Beach, East Coast Park Beach, Pasir Ris Beach, Punggol Beach, Seletar Island Beach, Sembawang Park Beach and the Sentosa Island Beaches. Based on WHO's recreational water quality guidelines, which measure

Enterococcus bacteria levels, they are graded from 'Very Good' to 'Very Poor'. Beaches rated 'Good' or 'Very Good' are deemed suitable for primary contact water activities such as swimming.

In February 2024, five beaches were graded 'Good'. Findings suggested that the elevated *Enterococcus* bacteria levels at Pasir Ris and Sembawang Beach, which were graded 'Fair', might have originated from sources where improper hygiene practices could have impacted the water quality in waterways. We worked with our stakeholders to ensure proper housekeeping and waste management measures to minimise *Enterococcus* bacteria in our waterways. Agencies also stepped up inspections and enforcement against errant premises.

The 2025 assessment showed improvement, with six beaches achieving 'Good' grades. These included Pasir Ris Beach, which was previously graded 'Fair'. As Sembawang Park Beach maintained its 'Fair' rating, the public advisory against swimming and other primary contact water activities remained in effect.

IMPROVING INLAND WATER QUALITY MONITORING

We are setting up a continuous inland water monitoring system to provide real-time assessments of water quality at selected non-catchment rivers. Expected by 2026, it aims to provide early warnings of sudden changes in water quality, enabling timely investigation of potential pollution incidents and the prevention of harmful effects such as algal blooms and fish kills.

This system enhances our monitoring capabilities by complementing existing grab sampling and laboratory testing approaches. The online monitoring system has been customised with a floating intake system to minimise potential biofouling, as well as an air purging system to minimise the accumulation of sediments and clogging of the intake system. These customised features will ensure that the system operates under optimal conditions and avails quality data.

RADIATION SAFETY

MAINTAINING EXCELLENCE IN RADIOCHEMISTRY

In 2024, our National Radiochemistry Laboratory reaffirmed its commitment to excellence by achieving outstanding results in the International Atomic Energy Agency (IAEA) international proficiency tests. Conducted under the stringent criteria of the IAEA's ALMERA (Analytical Laboratories for the Measurement of Environmental Radioactivity) network, these tests require laboratories to deliver accurate and precise results within a seven-day window. NEA's performance in these assessments underscores our technical expertise, commitment to high standards, and ability to produce reliable data essential for safeguarding public health and the environment.

Further advancing our contributions to the field, we collaborated with Switzerland's Spiez Laboratory to publish a scientific paper titled 'Natural and Anthropogenic Radionuclides in Selected Environmental Radioactivity Monitoring Sites in Singapore' in the Journal of Radioanalytical and Nuclear Chemistry.

PLANNING FOR SAFE FACILITY DECOMMISSIONING

NEA and our local stakeholders are proactively planning for the safe and proper decommissioning of medical, radiopharmaceutical production and sterilisation facilities once they reach the end of operational life. In February 2025, we hosted an IAEA workshop on the requirements for decommissioning such facilities. Experts shared international guidelines and best practices with participants from hospitals and manufacturing and research facilities in Singapore.

SHARING OUR EXPERTISE ON THE INTERNATIONAL STAGE

We continue to strengthen our international standing through active collaboration with IAEA and other global partners. In June 2024, we were recognised for our good practices and invited to serve as a reviewer at the IAEA Consultancy Meeting on 'Code of Conduct on the Safety and Security of Radioactive Sources Supplementary Guidance' Self-Assessment Tool. In July 2024, we also supported Thailand as an expert reviewer under an IAEA mission to enhance radiation safety in the metal recycling industry.

We shared our experience at the 28th 'Webinar for International Safeguards Professionals' in February 2025 and the IAEA Workshop on 'Convention on the Physical Protection of Nuclear Material' in August 2024, contributing insights on Singapore's journey, measures and best practices. At the 'WHO International Advisory Committee on Non-Ionising Radiation' in June 2024, we presented findings on radiofrequency radiation in public areas and showcased our AI-driven surveillance tool for monitoring the online sale of potentially unsafe irradiating devices. Singapore's proactive approach received commendation.

We also highlighted our radiation monitoring expertise during a scientific visit to the Australian Radiation Protection and Nuclear Safety Agency in July 2024, which led to a reciprocal technical visit in November 2024. In April 2024, we hosted Brunei's Safety, Health and Environment National Authority, sharing Singapore's regulatory framework and extending technical guidance to support the development of their radiochemistry and dosimetry laboratories.

These engagements underscore our leadership in radiation protection and commitment to advancing global capabilities through international partnerships.

Protecting Our Resources

WASTE AND RECYCLING

ASPIRING TOWARDS ZERO WASTE

Singapore has made significant progress in waste reduction over the past decade, with domestic waste generated per capita and non-domestic waste generated per dollar of Gross Domestic Product (GDP) decreasing by more than 20% and 30% respectively.

Various complementary initiatives under the Zero Waste Masterplan enabled Singapore to attain this outcome. To reduce excessive consumption of disposables and packaging waste, we introduced the disposable carrier bag charge on 3 July 2023, requiring larger supermarket operators with over \$100 million in annual turnover to charge a minimum of five cents per disposable carrier bag at physical stores. One year after implementation, supermarket operators who started charging for disposable carrier bags in 2023 reported a 70% to 80% reduction in disposable carrier bags provided.

We also raised awareness of recycling through various public educational efforts, and engaged the wider community through our annual 'Say YES to Waste Less' campaign. In 2024, we collaborated with 167 partners across various sectors to encourage sustainable daily choices, particularly in reducing food waste and reliance on disposables.

Waste and Recycling Statistics

KPI	2022 Results	2023 Results	2024 Results	Targets
Domestic sector – waste generated per capita ⁵	0.90 kg a day/person	0.88 kg a day/person	0.85 kg a day/person	-
Non-domestic sector – waste generated per \$bn GDP ⁵	28.7 tonnes a day/GDP (\$bn)	25.4 tonnes a day/GDP (\$bn)	23.3 tonnes a day/GDP (\$bn)	-
Overall recycling rate	57%	52%	50%	70% by 2030

Domestic waste generated per capita and non-domestic waste generated per billion dollar GDP continued to improve in 2024. A similar trend was observed for disposal rates, reflecting the positive steps that households and companies have taken to reduce and reuse.

Singapore's overall recycling rate continued to hover at around 50% in 2024. The recycling rate of paper and cardboard, food, and plastics remained similar. The slight decrease in recycling rate was driven largely by the reduction in the amount of construction and demolition

⁵ Based on latest population and GDP data provided by the Singapore Department of Statistics

waste and used slag generated, which was almost completely recycled. This resulted in a corresponding reduction in overall recycling volume. Additionally, there was a dip in the amount of wood waste recycled arising from a short-term reduction in wood waste processing capacity in 2024. This was due to the closure of one biomass plant and prolonged maintenance of another.

We will continue with initiatives to close key resource loops, such as the Extended Producer Responsibility scheme for e-waste. We will also be implementing the Beverage Container Return Scheme in 2026 to boost recycling rates.

ENCOURAGING SUSTAINABLE E-COMMERCE PACKAGING

Co-led by the Singapore Manufacturing Federation and Singapore Post, and supported by NEA, the Alliance for Action on Packaging Waste Reduction for the E-commerce Sector published a set of Voluntary Guidelines on Sustainable E-commerce Packaging⁶ in March 2025. The Guidelines offer practical 3R (Reduce, Reuse, and Recycle) solutions for different types of e-commerce packaging – such as cardboard boxes, mailers and fillers – and provide operating models for e-commerce marketplaces to promote sustainable packaging among consumers and suppliers. They also feature a scorecard for company leaders to assess their companies' sustainable packaging practices and identify areas for improvement.

EQUIPPING BUSINESSES THROUGH THE ZERO WASTE MANAGER COURSE

In partnership with NTUC Learning Hub, Republic Polytechnic, and the Waste Management and Recycling Association of Singapore, we introduced the Zero Waste Manager course to help businesses build waste management competencies and integrate the 3Rs into their organisational cultures.

Launched in March 2024, the course encourages companies – particularly those under the Mandatory Waste Reporting scheme – to appoint and train Zero Waste Managers to lead waste reduction efforts. Companies can also tap on Workforce Singapore's Career Conversion Programme for Sustainability Professionals to transition employees into sustainability-related roles, in line with Singapore's environmental services workforce transformation goals.

ADVANCING ENVIRONMENTAL SERVICES THROUGH INNOVATION

Singapore's first Enviro Tech Innovation Hub officially opened in April 2024, marking a key milestone in the Environmental Services Industry Transformation Map 2025. A strategic collaboration between the Environmental Management Association of Singapore, Temasek Polytechnic and industry partners, the hub provides industry consultation on Outcome-based Contracting and integrated facilities management. Supported by NEA, this dedicated facility

strengthens the environmental services sector through capability development, workforce upskilling, and solution co-creation.

ADVANCING WASTE MANAGEMENT TECHNOLOGIES

Through the Closing the Resource Loop Funding Initiative, we continue to drive technological advancements in waste management. The strategic research programme focuses on recovering value from priority waste streams – plastic, food and e-waste. It also aims to develop treatment capabilities for managing residual materials, such as incineration ash and non-incinerable waste, and ensure their safe repurposing.

In October 2024, we awarded three projects to develop new recycling methods for hard-to-recycle plastics and sustainable packaging that can be recycled. A subsequent grant call was launched in November 2024 to explore innovative solutions for food waste valorisation and contamination detection, enhancing source segregation of mixed food waste mandated under the Resource Sustainability Act. Additionally, we pioneered research into new applications for incineration ash from municipal solid waste and sewage sludge and developed science-based standards for their large-scale adoption.

ENERGY EFFICIENCY

We support Singapore's decarbonisation goals and help consumers and businesses reduce energy costs through various measures.

To encourage greater involvement in climate action and enable more energy- and water-efficient households, the expansion of the enhanced Climate Friendly Households Programme was announced at Budget 2025. In addition to the existing \$300, all Singaporean and Permanent Resident HDB households would receive an additional \$100 in Climate Vouchers, bringing the total to \$400. Since 15 April 2025, the programme also includes Singapore Citizen households in private residential properties. The programme currently covers more than 90% of households in Singapore. As of 31 January 2025, around 80% of eligible HDB households have claimed their \$300 Climate Vouchers and approximately \$88 million dollars of Climate Vouchers has been utilised.

After successfully improving the average energy efficiencies of energy intensive appliances such as air-conditioners and refrigerators through the Mandatory Energy Labelling Scheme and Minimum Energy Performance Standards, we extended the schemes in April 2025 to household water heaters and commercial storage refrigerators. With these changes, households can save up to \$115 a year by choosing higher-rated water heaters, while businesses can save up to \$700 a year with more efficient commercial refrigerators.

⁶ The Guidelines are available on the Packaging Partnership Programme website: packaging-partnership.org.sg

Deepening Singapore's Resilience

To stay ahead of evolving environmental conditions, we continue to strengthen our capabilities in weather prediction and climate science, and enhance our expertise in disease preparedness.

CLIMATE RESILIENCE

ENHANCING SINGAPORE'S WEATHER PREDICTION AND CLIMATE SCIENCE CAPABILITIES

With 2024 recorded as Singapore's warmest year, we are working with MSE and other stakeholders on Singapore's response to rising temperatures. Besides chairing the Government's Mercury Taskforce which coordinates the national heatwave response, we are providing the public with more location-specific information on heat stress with the expansion of the Wet-bulb Globe Temperature network from the current nine stations to 17 by 2025.

In March 2025, we also announced the \$25 million Weather Science Research Programme. Funded under the 'Research, Innovation and Enterprise 2025 Plan', the programme leverages AI and advanced technology to enhance tropical urban weather prediction, including extreme weather events. A key initiative is the development of Southeast Asia's first high-resolution, kilometre-scale historical weather regional reanalysis to better understand past weather patterns and train AI for weather prediction.

STRENGTHENING REGIONAL METEOROLOGICAL CAPABILITIES

In FY2024, we continued to strengthen regional capabilities in weather prediction and climate science through several key initiatives, like conducting four technical workshops through the ASEAN Specialised Meteorological Centre (ASMC) and hosting the 45th ASEAN Sub-Committee on Meteorology and Geophysics Meeting in October 2024. In September 2024, ASMC and the World Meteorological Organization (WMO) organised their inaugural forum on climate services and early warning systems in Southeast Asia.

At the 78th WMO Executive Council Session, NEA's Meteorological Service Singapore (MSS) was designated as the host of the WMO Regional Specialised Meteorological Centre for Vegetation Fire and Smoke Pollution. This marks the culmination of over three decades of Singapore's contributions to fire and haze monitoring, assessment, and early warning in Southeast Asia through the ASMC. The new centre provides modelling forecasts, observations and expertise to end-users, helping to address regional vegetation fires and smoke pollution more effectively.

DISEASE CONTROL

ENHANCING DISEASE PREVENTION

To strengthen Singapore's preparedness against infectious diseases, we released guidelines for cleaning and disinfecting premises exposed to infectious diseases in September 2024.

A set of guidelines was developed for facility owners and operators of non-healthcare premises. It contains protocols for environmental cleaning and disinfection to help owners and operators implement structured cleaning regimes that effectively reduce transmission risks in commercial and public spaces. These are complemented by dedicated guidelines for residential settings, which empower households with practical knowledge to maintain high standards of environmental hygiene. They translate complex public health principles into simple and actionable steps for everyday implementation.

Together, these guidelines form a comprehensive framework for environmental cleaning and disease prevention across different settings.

BUILDING INTERNATIONAL CAPABILITIES FOR DISEASE CONTROL

Since 2011, our Environmental Health Institute (EHI) has served as a WHO Collaborating Centre for Reference and Research on Arboviruses and their Associated Vectors. EHI continues to shape global vector control strategies through several key initiatives, including leading a regional surveillance network and hosting the 8th Singapore International Dengue Workshop. The latter, held in November 2024, brought together participants from 24 countries to explore innovative urban approaches to dengue prevention.

Further extending its reach, EHI co-organised a regional workshop on 'Developing a Regional Agenda for Wastewater & Environmental Surveillance and Research for Epidemics and Pandemics' in June 2024 with renowned partners such as the Gates Foundation and European Union's Health Emergency Preparedness and Response, engaging over 300 participants from 40 countries.

EHI's international recognition is reflected in its scientists' 19 expert and academic appointments in key positions, ranging from the Chair of WHO Technical Advisory Group on the Global Integrated Arboviruses Initiative to membership in American Society of Heating, Refrigerating and Air-Conditioning Engineers committee on infectious aerosol control standards. Our experts are frequently invited to speak at international platforms including the Global Consortium for Wastewater and Environmental Surveillance, advocating knowledge-sharing and collaboration.

Nurturing Hawker Culture

Hawker centres and markets are icons of Singapore's culinary heritage and culture, serving as social spaces for community bonding while providing affordable food options. NEA continues to preserve these time-honoured traditions.

HAWKER CENTRES

BUILDING NEW HAWKER CENTRES

In FY2024, we successfully opened three new hawker centres: Anchorvale Village Hawker Centre in June 2024, Woodleigh Village Hawker Centre in September 2024, and Bukit Batok West Hawker Centre in March 2025. These hawker centres feature high ceilings to enhance natural ventilation and spacious seating areas to ensure a comfortable dining experience for patrons.

We are on track to deliver the 20 new hawker centres that were previously announced and have planned five more to better serve residents. In June 2024, we announced the development of a new hawker centre at Lorong Chencharu in Yishun to complement Chong Pang Market and Food Centre and Yishun Park Hawker Centre in the town.

UPGRADING EXISTING HAWKER CENTRES

Existing hawker centres have also undergone infrastructural upgrades. In FY2024, we conducted Repairs and Redecoration (R&R) work at four hawker centres and markets – Beo Crescent Market, Yishun Park Hawker Centre, Bedok Food Centre and Geylang Serai Market.

Notably, Geylang Serai Market and Cheng San Market and Cooked Food Centre underwent the pilot Hawker Centres Transformation Programme (HTP), which went beyond the typical R&R work to future-proof their infrastructure. Drawing insights from the HTP, we will be rolling out the \$1 billion Hawker Centres Upgrading Programme 2.0, which will upgrade hawker centre infrastructure to be more vibrant, accessible and climate resilient.

HAWKER TRADE

EASING COST PRESSURES FOR HAWKERS

To discourage excessively high tender bids, NEA revised our policy in November 2024, phasing the downward adjustment of tendered rents to the Assessed Market Rent (AMR) over two tenancy renewals instead of one.

To promote more informed and realistic bidding, the median AMR for hawker centres with vacant stalls was provided from the February 2025 tender exercise. This was followed by a self-help business calculator that was launched in March 2025 to help prospective hawkers estimate costs and plan their bids.

We will continue to explore measures to address rising operating costs and support initiatives that improve hawker productivity.

SUPPORTING OUR HAWKERS

To support the new generation of aspiring hawkers, we had previously introduced initiatives including subsidised rentals at pre-fitted stalls, apprenticeship opportunities and training in essential business and culinary skills. Additionally, we had rolled out the Hawkers Succession Scheme, which enables retiring veteran hawkers to pass down their stalls, recipes, techniques, and practices to aspiring successors.

From 1 January 2025, we relaxed manpower policies by allowing Long-Term Visit Pass (LTVP) and LTVP-Plus holders approved to work in Singapore to be hawker stall assistants, regardless of familial ties to stallholders. This allowed hawkers to hire stall assistants more easily, providing additional support to our hawkers.

To enhance the appeal of the hawker profession, we will continue to review our policies and explore ways to improve working conditions and long-term career prospects.

Building Tomorrow's Capabilities

As a small, highly urbanised island state with limited resources, Singapore faces unique environmental challenges, from waste management and public hygiene to the impact of climate change. We have identified seven focal areas to evolve our strategies and capabilities to address these complex, interconnected issues and strengthen our long-term capabilities.

1 ZERO WASTE

Singapore's only landfill is projected to reach capacity by 2035. Given our land constraints, it is imperative for Singapore to manage our resources well and embrace a circular economy.

IMPLEMENTING THE BEVERAGE CONTAINER RETURN SCHEME

In July 2024, we named Beverage Container Return Scheme (BCRS) Ltd. – a not-for-profit company formed by beverage producers – as the licensed operator of BCRS in Singapore. Under the scheme, consumers will receive a 10-cent deposit refund upon returning empty plastic and metal beverage containers with a deposit mark to over 1,000 return points. BCRS Ltd. will oversee the collection and recycling of the beverage containers under the scheme, slated to commence in 2026.

EXPLORING NEW WASTE MANAGEMENT TECHNOLOGIES

Municipal solid waste is currently processed at waste-to-energy plants, which use mass burn technology to generate electricity that is exported to the national grid. Incineration reduces waste volume by up to 90% and the residual ash is sent to the landfill. Given Singapore's land constraints, waste-to-energy is a key strategy in managing solid waste.

In June 2024, we launched a Request for Information (RFI) to explore alternative technologies that can further reduce carbon emissions and residues that must be landfilled while yielding higher-value products with sustainable offtake demand. The RFI assessment has concluded and NEA is working with the shortlisted applicants on the next steps.

2 INTEGRATED WASTE MANAGEMENT FACILITY

To meet Singapore's solid waste management needs, NEA and PUB, Singapore's National Water Agency, embarked on a joint study in 2013 to explore synergies from co-locating a solid waste treatment facility with a used water reclamation plant. It led to the development

of Tuas Nexus, integrating NEA's Integrated Waste Management Facility (IWMF) and PUB's Tuas Water Reclamation Plant to optimise energy, resource recovery and land use.

The IWMF is being developed in two phases. Phase 1, slated for completion in 2027, will include a waste-to-energy plant, a Materials Recovery Facility, a Sludge Incineration Facility, and a Food Waste Treatment Facility. Meanwhile, planning for Phase 2 had commenced with the Expression of Interest for Multi-disciplinary Consultancy Services tender being published on GeBIZ in July 2024. The second stage tender was published in May 2025, and the tender process is underway.

3 NET ZERO

As the nation's carbon regulator, we advance Singapore's climate change strategy by administering the carbon tax and building capabilities to regulate international carbon credits. NEA contributes to international climate commitments through accurate and timely monitoring, reporting, and verification of national emissions.

IMPROVING INDUSTRIAL ENERGY EFFICIENCY

The Energy Conservation (Amendment) Act was passed by the Parliament on 11 November 2024, extending the implementation of Minimum Energy Efficiency Standards (MEES) to existing industrial facilities. The Act empowers NEA to impose MEES on water-cooled chilled-water systems in existing Energy Conservation Act facilities from 1 December 2025, and on all other existing industrial facilities from 1 December 2029.

COLLABORATING ON INTERNATIONAL CARBON CREDITS

Singapore has been actively engaging like-minded countries on carbon credit collaborations in line with Article 6 of the Paris Agreement. In September 2024, we launched the first call for project applications under the Implementation Agreement on carbon credit cooperation between Singapore and Ghana. In the first half of 2025, Singapore has further signed five Implementation Agreements, with Bhutan, Chile, Peru, Rwanda, and Paraguay. Together with MSE, the Ministry of Trade and Industry (MTI), and the National Climate Change Secretariat, we are working closely with host countries to operationalise these Article 6 partnerships.

As Singapore's regulator of International Carbon Credits, we assess and authorise carbon credit projects under the Implementation Agreements, and regularly review the eligible carbon crediting programmes and methodologies to maintain relevance and ensure environmental integrity standards.

EXPLORING CARBON CAPTURE AND STORAGE

NEA supports MTI to enable the implementation of cross-border Carbon Capture and Storage (CCS) cooperation. In December 2024, we called a tender to develop the Measurement,

Reporting and Verification requirements for cross-border CCS projects.

We are also studying solutions to capture carbon emissions at our waste-to-energy plant, and will work towards a pilot project by 2026 to validate carbon capture technologies such as amine-based absorption.

UPHOLDING RIGOUR IN NATIONAL GREENHOUSE GAS REPORTING

Singapore's greenhouse gas (GHG) inventory is compiled in line with the Enhanced Transparency Framework (ETF) principles for reporting to the United Nations Framework Convention on Climate Change (UNFCCC). This supports Singapore's obligations under the Paris Agreement, which include submitting the First Biennial Transparency Report and National Inventory Report on 11 November 2024. We hosted a UNFCCC Technical Experts Review session of our Biennial Transparency Report in May 2025, which will produce a report with recommendations that will help guide improvements in the reporting of our GHG inventory.

We collaborated with the UNFCCC on an informal online review of Singapore's GHG inventory. The workshop, co-hosted by UNFCCC GHG experts from 19 to 23 August 2024, built national capacity to meet ETF's new and more rigorous requirements, including the potential development of country-specific emission factors for key emission sources.

4 AFTER-DEATH FACILITIES AND SERVICES

We have been assessing site suitability for the planned development of a Funeral Services and Columbarium Complex – an innovative after-death services complex that integrates both columbarium and other funeral-related services. It complements ongoing projects such as the Mandai North Crematorium (MNC), which commenced operations on 15 August 2025.

Singapore's second inland ash scattering facility, the Garden of Serenity, is located next to the MNC building. These facilities are being developed in anticipation of future demand to ensure the provision of dignified and accessible after-death care services for Singapore's ageing population.

5 PUBLIC HEALTH

As the national authority on environmental public health standards in Singapore, NEA is committed to upholding stringent standards to safeguard public health.

SCALING UP AND EXPANDING PROJECT WOLBACHIA

Project *Wolbachia* achieved significant milestones in FY2024, receiving endorsement from WHO's Vector Control Advisory Group for its effectiveness. A multi-site study demonstrated a reduction in *Aedes aegypti* mosquito population by 80% to 90%. Dengue risk in study

areas and adjacent zones also decreased by 75% and 45% respectively. Supported by machine learning and robotic automation for mosquito releases, the project's coverage expanded from 480,000 to 580,000 households. By the end of 2026, Project *Wolbachia* will cover 800,000 households or about 50% of all households in Singapore.

IMPLEMENTING FORMALDEHYDE CONTROLS

From 1 January 2026, we will require all interior paint products sold in Singapore to be free of formaldehyde. Market surveillance and enforcement will be conducted to ensure compliance, gradually phasing out interior paint products containing formaldehyde in Singapore. While industrial paints and paints intended for outdoor applications are excluded from this requirement, they must be clearly labelled to inform users that they contain formaldehyde and are meant for industrial or outdoor use only.

STAYING AHEAD OF EMERGING ENVIRONMENTAL HEALTH THREATS

We continue to enhance environmental surveillance through EHI, which now conducts wastewater testing for Mpox alongside ongoing COVID-19 and Zika programmes. EHI supports investigations by assessing environmental transmission risks and emissions near industrial sites. As part of national biosurveillance efforts, EHI also collaborates with agencies to strengthen preparedness against emerging threats.

6 NUCLEAR SAFETY

NEA continues to build our capabilities to understand advanced nuclear energy technologies and assess their safety and environmental impact.

FUTURE-PROOFING LOCAL CAPABILITIES

We have expanded partnerships with regulators such as the United States Nuclear Regulatory Commission (USNRC) and the Radiation and Nuclear Safety Authority of Finland (STUK). The Nuclear Safety Advisory Panel, formed in February 2025, includes international experts experienced in nuclear safety, safeguards and regulation. The Panel held its inaugural meeting in April 2025.

In FY2024, NEA participated in study visits, workshops and attended international conferences such as the 'IAEA Conference on Small Modular Reactors and their Applications'. Training sessions by the USNRC and STUK further deepened our understanding of nuclear safety, regulation and radiation protection. Our officers also participated in an attachment programme with USNRC nuclear safety inspectors.

We participated in the ARGOS User Group meeting in November 2024, sharing updates on radiological plume modelling and engaging with global experts to strengthen our capabilities

in radiological modelling to support emergency preparedness. To build local expertise in safety analysis, radiobiology, and nuclear policy, we are deepening collaboration with the Singapore Nuclear Research and Safety Institute (SNRSI), which was established from a research initiative to a full-fledged institute in July 2025. The institute received a \$66 million grant under the Research, Innovation and Enterprise 2025 Plan for its next bound of research on nuclear safety. Several NEA facilities are co-located with SNRSI to foster greater synergy and collaboration.

ADVANCING COLLABORATION THROUGH ASEANTOM

As Singapore's representative in the ASEAN Network of Regulatory Bodies on Atomic Energy (ASEANTOM), we attended the 11th ASEANTOM Annual Meeting in Lao PDR in August 2024. Members discussed activities of the five ASEANTOM Technical Working Groups and explored regional and international collaboration.

Singapore, as co-lead of the ASEANTOM 'Technical Working Group on Radiation Monitoring' and 'Technical Working Group on Hazard Assessment and Radiological Dispersion Modelling', continues to steer regional projects in modelling, radiation monitoring and data sharing. ASEANTOM has operationalised the ASEAN Radiation Data Exchange Platform to facilitate the exchange of radiation monitoring data as part of the Early Warning Radiation Monitoring Network (EWRMN). The EWRMN project is expected to be completed once the remaining sensors are installed by 2026.

Singapore also led the renewal of the Practical Arrangements between ASEAN and the IAEA for cooperation in nuclear science, technology, safety, security and safeguards. The agreement was renewed for another five years until 16 September 2029.

7 HAWKERS AND HAWKER CULTURE

NEA will continue to explore how to better build, operate, and future-proof our hawker centres and markets.

As announced at Budget 2025, we will be rolling out the Hawker Centres Upgrading Programme 2.0 (HUP 2.0), which will invest up to \$1 billion to upgrade hawker centres over the next 20 to 30 years. This initiative is timely as the last major upgrading effort – HUP 1.0 – took place from 2001 to 2013, during which nearly 100 hawker centres and markets were upgraded or rebuilt.

By upgrading infrastructure, HUP 2.0 aims to create more vibrant, accessible and climate-resilient hawker centres for patrons while providing a more conducive work environment for hawkers. Key areas of focus include optimising space usage, enhancing barrier-free access, and improving thermal comfort.



Transforming Today's Operations

To accelerate transformation and achieve better outcomes, we have embarked on operational reviews. We remain committed to sustaining this momentum of change by fostering a culture of innovation and continuous improvement.

1 WASTE MANAGEMENT

In FY2024, we conducted a review of Waste Management Facilities (WMF) operations to enhance safety leadership and culture, strengthen safety systems, and inculcate a safety-first mindset. We implemented life-saving rules at our facilities and introduced a safety pulse survey and structured framework for safety reporting. To complement these efforts, the Contractor Safety Promotion Group was formed at the inaugural Contractor Safety Forum in November 2024, and a \$1 million Safety and Innovation Fund was launched in March 2025.

In April 2025, we launched the Contractor Ops Excellence Framework to emphasise safety in contractor selection during tendering, and to systematically review and monitor their safety performance and efforts toward operational excellence. We also formed a new Engineering and Safety Department, comprising the Safety and Operational Excellence Office and the Engineering Office. The former focuses on further strengthening safety practices within the WMFs, while the latter conducts in-depth technical analyses of the performance and availability of NEA's own WMFs and the Public-Private Partnership waste-to-energy plants.

2 AFTER-DEATH

An After-death Services Operational Review was conducted to ensure in-service assurance, supply resilience and the maintenance of a safe and clean environment at after-death facilities. In FY2024, we implemented several initiatives including wide-ranging safety enhancements across facilities.

To enhance operational efficiency at Mandai Crematorium, we upgraded our system to incorporate QR code functionality for cremation forms. This enhancement enables seamless data exchange with an in-house application at Mandai Crematorium, providing end-to-end traceability from cremation to ash collection. The application also features dashboards and live notifications for real-time monitoring. Additionally, insights into usage patterns enabled the development of more targeted and effective officer training.

To support further digitalisation, we developed an automated data exchange solution to connect with the systems in the new Mandai North Crematorium.

3 CLEANLINESS

In 2024, the Year of Public Hygiene, we launched the Public Cleanliness Operational Review to raise cleanliness standards through stronger community involvement. Since 2025, we have shifted to a new Cleaner Neighbourhood concept of operations, where we proactively identify hotspots and tackle them with an integrated operations and outreach strategy. This shift is supported by an upskilled workforce that is able to tackle multi-faceted public hygiene issues.

Simultaneously, we are optimising the cleanliness value chain with technology and video analytics. We work closely with relevant agencies to explore the use of new cleaning technologies, such as waterway cleaning machines and autonomous pavement sweepers. To complement these efforts, we are also exploring the use of AI to help improve operational efficiency.

4 ENFORCEMENT

We launched the Dengue Enforcement Administration Operational Review to streamline enforcement processes and leverage digital technologies. This initiative reduces administrative burden and shortens the time required to complete investigations.

In public health enforcement, particularly for mosquito breeding offences, we used robotic process automation to standardise workflows and reduce manual workload. These enhancements have shortened processing times and improved case tracking.

In parallel, we expanded our surveillance infrastructure through an upgraded network of cameras. The network deters public health offences and enables our officers to conduct remote enforcement using high-quality video evidence. Remote surveillance provides better intelligence and oversight of public health issues, allowing for more efficient manpower deployment.

The integration of these technological solutions has markedly improved our operational efficiency and enforcement effectiveness.

5 REGULATIONS

As part of WOG efforts to foster a pro-enterprise environment, we established a Regulatory Steering Committee in early 2025 to oversee the review of regulatory processes. Our aim is to adopt a pro-enterprise mindset and identify areas where regulatory burden can be reduced to improve service standards, strengthen assurance, and process regulatory applications more efficiently.

We also published technical guidelines for Air Dispersion Modelling Studies and redesigned our website to present development control requirements more clearly, helping industry partners expedite their building plan submissions and environmental assessments.

Living Our EARTH Values

NEA continues to drive accountability and sustainability across all aspects of our work, while living out our EARTH values - Empathy, Agility, Resilience, Teamwork and Heart for the Environment.

SPEARHEADING INNOVATION AND EXCELLENCE

SURPASSING ONE MILLION DOWNLOADS FOR MYENV

In FY2024, we introduced three key enhancements to myENV:

- A heat stress alert feature was added to notify users when the Wet-bulb Globe Temperature reached 32° or higher, supporting workplace safety and outdoor activity planning.
- The Lightning feature was enhanced to provide automatic alerts for cloud-to-ground lightning and thundery showers, with notifications enabled by default and can be disabled at any time.
- A new *Wolbachia* Programme feature was introduced to let users track mosquito control efforts, receive updates on new release areas and schedules, and access detailed programme information via our website.

With improvements in user experience and access to environmental information, the app surpassed one million downloads in January 2025.

ACHIEVING COMMUNICATIONS EXCELLENCE

We are committed to communications excellence, with a focus on engaging our target audience through their preferred online platforms and formats. In FY2024, we received industry recognition for our efforts and garnered eight awards.

Our collaboration with SGAG on a music video to encourage climate action earned multiple accolades, including a Gold for 'Best Social Media Education or Awareness Campaign' at the Hashtag Asia Awards 2025, Gold for 'Excellence in Influencer/KOLs Marketing' at the Marketing Excellence Awards 2024, and two awards at the MARKies Awards Singapore 2025.

Our partnership with Viu, which encourages everyone to keep Singapore clean through a Korean drama, was similarly recognised with a Gold for 'Most Creative Video' at the MARKies Awards Singapore 2025, and a Silver for 'Excellence in Content Marketing' at the Marketing Excellence Awards 2024.

MANAGING FINANCIAL RESOURCES RESPONSIBLY

As a statutory board primarily funded through government grants, NEA ensures that all operational decisions are guided by sound financial management and long-term sustainability. Our fees and charges are aligned with policy objectives and are periodically reviewed based on these principles:

- Recover costs directly from the users of that service
- Account for the full cost of goods or services provided
- Avoid competition with private sector offerings
- Enhance cost efficiency and affordability through business process improvements

To optimise resource utilisation and uphold corporate governance standards, we maintain a robust framework of financial policies and procedures which undergo regular reviews. These policies are accessible via the NEA intranet to ensure consistent implementation and standardised practices across departments.

The NEA Board conducts annual fiscal budget approvals, ensuring the strategic allocation of resources based on operational requirements. Our commitment to fiscal responsibility is supported by regular performance monitoring and reporting to both NEA management and our parent ministry.

ENSURING GOOD PROCUREMENT PRACTICES

We consider both local⁷ and overseas suppliers in our procurement activities, with all processes guided by the three key principles of procurement: transparency, open and fair competition, and value for money. In FY2024, we awarded contracts to 286 suppliers, with 99.8% of our procurement budget spent on local suppliers.

We adopt a Price Quality Scoring Framework for an objective evaluation of quotations and tenders. High-value procurements are prioritised through a centralised oversight process to ensure prudent resource allocation and achieve cost savings while maintaining operational efficiency. NEA also maintains controls to ensure segregation of duties and manages potential conflicts of interest in accordance with WOG guidelines.

Suppliers' debarment statuses are checked to safeguard our interests and ensure that vendors with records of misconduct or contractual non-compliance are excluded. In line with national initiatives such as the Progressive Wage Mark accreditation, we source from firms that meet employment standards and pay progressive wages.

For relevant purchases, workplace safety criteria are included in tender specifications to reinforce WSH standards for workers. We also enhanced our Green Procurement Guidelines to incorporate requirements for environmentally sustainable products and practices.

No significant environmental or social impacts were identified in the supply chain.

ENGAGING OUR PARTNERS AND COMMUNITY

FOSTERING INTERNATIONAL PARTNERSHIPS AND EXCHANGES

We actively collaborate with international partners to advance environmental and sustainability efforts. In 2024, we continued bilateral engagements with countries including Malaysia, Brunei, China, Japan and the United States on areas such as environmental protection and the circular economy. We also hosted delegations from the United Arab Emirates, Thailand and Lao People's Democratic Republic, sharing expertise on topics such as Project *Wolbachia*, hawker centre and waste management, environmental protection, and public health.

At the regional level, we worked with MSE to further ASEAN cooperation through platforms such as the ASEAN Ministerial Meeting on Environment, and the Conference of the Parties to the ASEAN Agreement on Transboundary Haze Pollution, contributing to regional policies on circular economy, haze and pollution.

We also supported MSE in ongoing negotiations on the Internationally Legally Binding Instrument on Plastic Pollution, reaffirming Singapore's commitment to an ambitious yet practical agreement that empowers effective international actions.

In addition, we engage international industry stakeholders on issues such as climate action, circularity and public hygiene. In June 2024, we hosted the CleanEnviro Summit Singapore, a global platform for leaders to connect and explore sustainable environmental solutions.

To build regional capacity, we conducted training sessions under the Third Country Training Programmes and the Singapore Cooperation Programme Training Awards, covering topics such as waste management, circular economy and public health. A total of 127 delegates from Southeast Asia, Africa and Eastern Europe participated in these knowledge-sharing programmes.

ENGAGING STAKEHOLDERS IN ENVIRONMENTAL STEWARDSHIP

We hosted Clean & Green Singapore Experiences 2024 visit sessions to showcase Singapore's Ambient Air Quality Monitoring Station, giving the public a closer look at how NEA tracks and manages air quality.

As part of our public education efforts, MSS engages youth through outreach programmes that highlight meteorological services and capabilities. MSS also hosts visits to the Central

⁷ Local suppliers refer to firms registered in Singapore

Forecast Office for educators and youth environmental advocates, offering insights into weather forecasting and hazard monitoring operations.

Project E.C.O. (Educate.Challenge.Organise.) is NEA's year-long programme that cultivates a network of young environmental champions to drive positive change in their schools and communities. In 2024, we empowered more than 350 students from 63 primary and secondary schools to spearhead sustainability initiatives and inspire environmental consciousness among their peers.

NEA's national YOUth for Environmental Sustainability Leaders programme equips passionate youths with the skills and knowledge to champion sustainability. The programme supports them with funding to lead projects and provides them with opportunities to learn from and network with experts and industry players. NEA has been collaborating with corporate partners to provide opportunities for youths to lead sustainability projects. In 2024, PacificLight joined the movement, organising a Sustainable Cities Challenge for Institutes of Higher Learning.

MAKING FEEDBACK CHANNELS MORE ACCESSIBLE

We offer multiple channels for public feedback and enquiries, including the NEA hotline, online feedback form, myENV and OneService app. All cases are consolidated within NEA's Customer Relationship Management System, which enables end-to-end tracking from the initial report to investigation outcomes and final resolution.

The system also facilitates coordination with other agencies on inter-agency issues, ensuring a more effective and seamless response. In addition, the virtual assistant Ask Captain Green is always available to provide instant answers to frequently asked questions.

GIVING BACK TO SOCIETY

We are committed to making a positive impact on both the environment and the community, by cultivating an engaged and socially responsible workforce that supports our social sustainability goals.

In FY2024, we contributed to various philanthropic initiatives, raising \$35,725 in addition to the \$104,509 in donations made through the monthly Community Chest SHARE programme. These efforts reflect NEA's goal of fostering a socially responsible workforce while building meaningful relationships with stakeholders.

PRIORITISING WORKPLACE SAFETY AND HEALTH

WSH is a top priority in NEA, and everyone plays an active role in building a culture of safety and ensuring a safe work environment for all stakeholders.

To build a positive WSH culture, we have identified five key focus areas to guide our efforts in improving WSH in NEA.

Commitment	Our WSH Policy aligns with NEA's EARTH values. In line with the SGSecure movement, we refreshed our WSH Policy to reflect our commitment to preparing our workforce and protecting against terrorism. During safety walkabouts conducted across all divisions and premises, our senior management engages employees, gathers feedback, and conducts ground checks and validations.
Capacity	A dedicated WSH Division was established to strengthen our focus and capabilities. In addition, the Safety and Operational Excellence Office was set up to enhance WSH capabilities within key waste management facilities.
Common	Slips, trips and falls (STF) continue to be the leading cause of incidents at NEA. To raise awareness and promote prevention, we developed and launched an e-learning module focused on STF prevention. Our annual WSH Day 2024 also featured an STF-themed exhibition and experiential learning activities for employees.
Care	To enhance employee safety across NEA, we introduced three basic safety guidelines and premises-specific Life Saving Rules. In November 2024, we launched the Safety Practices Observation and Training (SPOT) programme, a behaviour-based safety approach that trains employees to identify and communicate safety observations effectively. Trained SPOT Champions conduct regular safety observations and use the data and insights gathered to address potential safety gaps.
Certification	Following risk management audits conducted across 17 NEA sites, we attained the bizSAFE Level 3 Certification in October 2024.

WSH is a key strategic risk for NEA and is closely monitored by the Board. To strengthen leadership commitment and ownership of WSH, Group WSH Committees chaired by Group Directors have been established. WSH Committees are also in place at the divisional and department levels to foster stronger management-worker relations and facilitate discussions on WSH matters.

Senior management provides guidance through bi-monthly Enterprise Risk and Safety Steering Committee meetings, while WSH representatives appointed from each NEA division provide feedback on WSH initiatives and management systems to the central WSH Division.

WSH Committees across NEA premises have been formalised into a structured three-tier system.

Tier	Premises Type	Examples	Frequency of Meeting
1	Operational facilities	Laboratories, waste-to-energy plant, landfill and transfer station, cremation facilities and cemeteries (including burial operations)	Monthly
2	Hawker centres and dedicated office premises	Hawker centres owned by MSE and NEA regional offices	Monthly
3	Office settings (where NEA is the tenant)	NEA Headquarters at Environment Building, and Hawker Centres Group at HDB Hub	Annual

WSH representatives conduct risk assessments to identify WSH risks associated with their respective work activities. Trained under bizSAFE 2: Develop a Risk Management Implementation Plan, they serve as WSH risk management champions within their divisions and departments. Their responsibilities include managing risk assessments for all work activities by identifying WSH hazards, overseeing the implementation of control measures, and monitoring outcomes - all in compliance with WSH (Risk Management) Regulations.

To support capability building, a WSH training roadmap has been developed for safety appointment holders. This includes occupational first aid courses for first aiders, fire safety awareness courses for fire wardens, and functional training for tasks such as working in confined spaces and at heights. New hires are briefed on WSH matters during their induction and all NEA employees are required to complete two in-house e-learning modules to build foundational WSH knowledge and awareness.

We have also enhanced our Incident Reporting Framework to guide incident management. The framework ensures timely reporting, root cause identification, and the implementation

of corrective actions to prevent recurrence. Employees are encouraged to report near misses, risks, unsafe conditions or hazards to their supervisors directly or through the WSH Open Reporting channel without fear of reprisal. In March 2024, the WSH Open Reporting campaign emphasised how quick and accurate reporting enables timely intervention, prevents harm and damage, and saves lives.

Our contractors are also required to submit Risk Assessments and Safe Work Procedures before commencing relevant work to ensure a safe working environment. Visitors to operational facilities receive mandatory safety briefings and personal protective equipment is provided where necessary.

To further promote safety awareness, we organised the annual General Waste Disposal Facility dialogue and networking session to raise awareness of fire and workplace safety among facility operators.

OUR WSH PERFORMANCE

Despite our continued efforts to achieve zero fatalities and zero major injuries among employees, one major injury was reported in 2024⁸.

No. of fatal injuries	0
No. of major injuries	1
No. of minor injuries	33
Workplace Injury Rate (per 100,000 workers)	924
No. of fatalities as a result of work-related ill health	0
No. of cases of recordable work-related ill health	5

The incident involved a traffic accident in which an NEA officer riding a motorcycle skidded on a sandy road surface while exiting a construction site after an inspection, resulting in rib fractures. In response, all employees were reminded to exercise extra caution when driving or riding. WSH alerts and regular communications were issued to reinforce road safety tips, vigilant driving practices, and the importance of traffic and vehicular safety. The rise in Workplace Injury Rate was primarily due to the increase in dengue cases among employees.

In terms of work-related ill health, five employees tested positive for latent tuberculosis following a public health advisory by the Ministry of Manpower (MOM). Employees who frequented ABC Brickworks Market and Food Centre - which was identified as part of a tuberculosis cluster - were invited for testing along with nearby residents. As latent

⁸ WSH statistics reported are based on calendar year to enable benchmarking against MOM's national WSH statistics. Definitions of major and minor injuries are aligned with MOM's terminology

tuberculosis is not infectious, the affected employees received prophylaxis medication and were cleared to return to their regular duties without additional restrictions. All affected employees, except one who had a suspected allergic reaction, have since completed their treatment. No further treatment was required for the remaining individual, as the medication was preventive in nature to reduce the risk of developing active tuberculosis later in life.

PLACING OUR PEOPLE FIRST

We create a positive work environment by emphasising fair employment practices and promoting work-life balance. Our management is actively involved in setting the agency's vision and direction, formulating and implementing policies, and ensuring a feedback loop to support fair and inclusive employment practices.

We signed the Employers' Pledge of Fair Employment Practices in April 2007 and regularly review our employment practices to ensure alignment with the principles of the Tripartite Alliance for Fair Employment Practices. NEA's terms of employment are guided by Singapore's legislation, including the Employment Act 1968, the Workplace Safety and Health Act 2006, and the Retirement and Re-employment Act 1993.

We continue to work closely with the Amalgamated Union of Public Employees and its Daily-Rated Workers Branch to safeguard employee well-being. As of 2024, 93% of our employees are covered under the collective bargaining agreement, while employment terms for those not covered remain aligned with the union-provided provisions.

We also support the United Nations Global Compact and its Ten Principles in the areas of Human Rights, Labour, Environment and Anti-corruption. Our employee retention rate stood at 93.8% in 2024, meeting our target of placing within the 70th percentile among all statutory boards in the Public Service.

INCLUSIVE HIRING

We are committed to building an inclusive workplace supported by a holistic framework that outlines clear strategies, initiatives and action plans. Our recruitment process includes provisions for the hiring of Persons with Disabilities (PWDs), interview guidelines and Disability Awareness workshops for employees.

Through our partnership with SG Enable and participation in career fairs and internship programmes, we are proud to have welcomed 21 PWDs into our workforce in 2024, including two students from Institutes of Higher Learning who completed internships with NEA.

CODE OF CONDUCT

Our adherence to the key principles of the Public Service Code of Conduct (CoC) reflects our zero-tolerance policy towards fraud and misconduct. The CoC provides clear guidelines on managing conflicts of interest, maintaining confidentiality, preventing corruption, and exercising sound financial stewardship. Aligned with the Singapore Public Service's values of Integrity, Service and Excellence, the CoC sets out the standards of behaviour expected of all public officers, guiding employees to perform their duties with the highest levels of personal and organisational integrity.

To help employees uphold the integrity and reputation of the Public Service, the Staff Handbook is readily available on our intranet. New employees are briefed on the CoC during onboarding, and all employees are required to complete an annual CoC quiz to refresh and reinforce their understanding of its principles.

In the event of a disciplinary breach, the NEA Disciplinary Policy outlines the procedures for addressing the matter.

Employees are reminded to declare any actual or potential conflicts of interest that may arise in the course of their work. When such declarations are made, the relevant parties are informed accordingly. To prevent and manage conflicts of interest, employees must promptly declare any situation in which their official duties may conflict with personal interests.

Examples include:

- Using any official information or position to further a private interest directly or indirectly
- Being involved in the activities of any organisation – whether in a personal capacity or as an office bearer of a recreational club, society or association – where such involvement may interfere with the objective performance of official duties or result in personal advantage or gain

Additionally, all employees are required to complete an annual declaration of financial indebtedness and investments.

WHISTLEBLOWING POLICY

We maintain an unwavering commitment to integrity at NEA, with zero tolerance for fraud or unethical conduct.

Our whistleblowing policy enables both employees and external stakeholders to report incidents of fraud and serious misconduct with confidence. Employees may report directly to the CEO in accordance with our Internal Disclosure Policy, which is accessible via our intranet.

To ensure a safe and secure reporting environment, all whistleblowing reports are handled with strict confidentiality. Comprehensive measures are in place to protect the identity of whistleblowers and individuals who provide evidence of wrongdoing within legal boundaries. The independent management of whistleblowing channels by our Internal Audit Division further ensures that stakeholders can report concerns in good faith without fear of reprisal.

While whistleblowers who report in good faith are protected from adverse consequences regardless of the investigation outcome, we maintain a firm stance against false or malicious reports. Such cases may face serious consequences, including potential referral to the relevant law enforcement agencies.

EMPLOYEE GRIEVANCE

Through NEA's Grievance Handling Procedure, employees who feel aggrieved may raise their concerns through established channels, either verbally or in writing. All grievances submitted in good faith are treated with strict confidentiality.

We strictly prohibit any form of retaliation against employees who raise concerns. Any employee or supervisor found to have engaged in retaliatory behaviour may be subject to disciplinary action. Conversely, if a grievance is found to be frivolous, malicious or motivated by personal gain, appropriate disciplinary measures may also be taken.

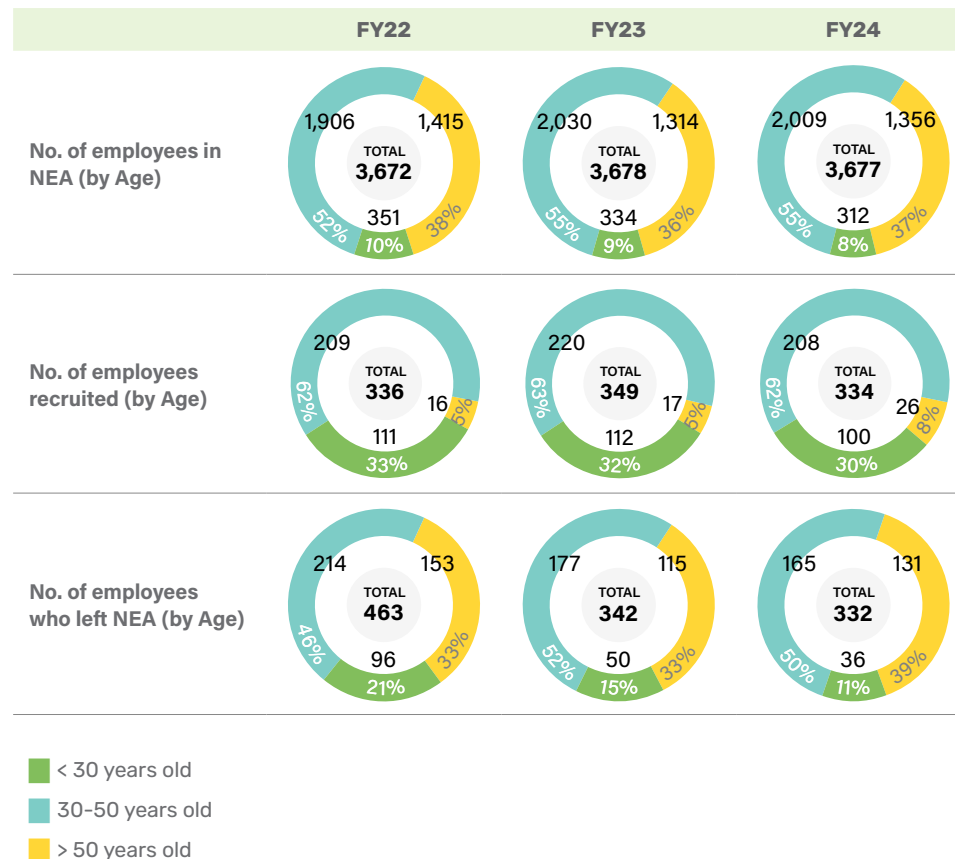
All critical concerns are escalated to the Chairman of the Board Audit Committee.

EMBRACING WORKPLACE DIVERSITY

NEA is a dynamic organisation comprising 3,677⁹ employees with diverse skill sets and expertise, all working together to fulfil our mission of ensuring a clean and sustainable environment for Singapore. In 2024, the new hire and turnover rates were 9.08% and 9.03% respectively, indicating a relatively stable workforce throughout the year.

BREAKDOWN BY AGE

Our workforce spans a diverse age demographic, with most employees between the ages of 30 and 50. We recognise the invaluable contributions of our mature employees and offer re-employment opportunities to those who are eligible. For employees who do not meet the re-employment criteria, we provide comprehensive transition support that is aligned with PSD's guidelines. This includes offering Employee Assistance Payment and facilitating referrals to the Employment and Employability Institute for career guidance and skills development.



⁹ Figure is based on head count at the end of FY2024

BREAKDOWN BY GENDER

NEA is an equal opportunity employer. While our enforcement and field operations roles may attract more male applicants, all candidates are assessed based on their qualifications, competencies and merit.

	FY22		FY23		FY24	
No. of employees in NEA (by Gender)	2,371 65%	1,301 35%	2,359 64%	1,319 36%	2,354 64%	1,323 36%
No. of employees recruited (by Gender)	187 56%	149 44%	187 54%	162 46%	207 62%	127 38%
No. of employees who left NEA (by Gender)	301 65%	162 35%	204 60%	138 40%	211 64%	121 36%

■ Male
■ Female

BREAKDOWN BY EMPLOYMENT TYPE

Our workforce is predominantly composed of full-time employees, reflecting our commitment to stable and long-term employment relationships.

	Male	Female
Permanent and fixed Term contract	2,354	1,323
Temporary contract	0	0
Non-guaranteed hours	-	-
Full-time	2,354	1,322
Part-time	0	1

DEVELOPING OUR WORKFORCE

We recognise the importance of learning and development in driving organisational productivity and growth. NEA's Singapore Environment Institute (SEI) works closely with internal and WOG stakeholders to identify and implement learning initiatives aligned with our shift towards competency-based growth and self-directed learning. These efforts help build a relevant, resourceful and resilient workforce equipped with the skills to engage citizens effectively and demonstrate thought leadership in environmental matters.

In 2024, SEI conducted a range of training programmes to strengthen our officers' field capabilities including enforcement, investigation skills and pollution control. Specialised training was also provided for the Response and Recovery taskforce to support decontamination operations during environmental incidents. To uphold safety standards, extensive WSH training was implemented in support of NEA's attainment of bizSAFE Level 3 certification.

Complementing formal training, NEA's Learning Fridays featured learning journeys and sharing sessions to raise awareness of NEA's diverse work areas. To support the upskilling of Converted Monthly Rated Employees who were previously Daily Rated Employees, SEI developed tailored programmes through targeted needs analysis and engagement.

SEI also delivered training and conducted on-the-job training more effectively by enabling them to acquire professional credentials. This includes enrolling aspiring trainers in the 'WSQ Advanced Certificate in Learning and Performance' and the 'Effective Coaching for Workplace Trainers' course for NEA officers.

Employees receive regular performance and career development reviews including annual appraisals, where they review their work targets and discuss core competencies with their supervisors.

We support employees' personal growth through various channels including internal job postings and placements across the Public Sector. These opportunities range from short-term attachments and project-based assignments to secondments, with employees remaining under NEA's employment and benefits framework.

Career development is further supported through regular workshops with certified career coaches and digital platforms such as Career Kaki and One Talent Gateway.

For employees aged 50 and above, SEI collaborates with the Council for Third Age and our union to offer retirement planning courses as well as programmes focused on health, wellness, financial planning and digital skills.

SUPPORTING EMPLOYEE ENGAGEMENT AND WELL-BEING

We are committed to providing equitable benefits to both full-time and part-time employees. Temporary employees hired through outsourced agencies are covered under their respective agencies' benefit policies.

To better support employee healthcare needs, we have enhanced medical and dental subsidies, increased the number of ordinary sick leave days without a medical certificate, and extended time-off entitlements to include dental appointments.

Our family-friendly policies include paid parental leave for both male and female employees, as well as a 'Back-to-School' time-off initiative that allows eligible employees to accompany their children at the start of a new school year.

From 1 January 2025, we expanded the definition of immediate family members for Family Care Leave, Compassionate Leave and Unpaid Leave for Unexpected Care Needs to include grandchildren.

These enhancements have contributed to our high retention rate, with 90% of employees remaining employed in FY2024¹⁰ after taking parental leave in the previous FY.

Return-to-work and Retention Rates of Employees who took Parental Leave

	Male			Female		
	FY22	FY23	FY24	FY22	FY23	FY24
Return-to-work rate	100%	100%	100%	100%	100%	100%
Retention rate	91%	97%	92%	96%	98%	90%

No. of Employees who took Parental Leave

	FY22	FY23	FY24
Female	56	60	107
Male	99	93	66

No. of Employees who Returned to Work after Taking Parental Leave

	FY22	FY23	FY24
Female	56	60	107
Male	99	93	66

Beyond leave entitlements, we support employees' familial responsibilities through flexible work arrangements including staggered working hours and hybrid work options.

In 2024, we launched initiatives under the Employee Engagement Framework to support employee well-being. These included mentoring programmes through the Stewardship Fund, well-being activities and a half-day off during Mental Wellness Month. Mental health resources, such as the Well-being@Gov platform and access to Well-being Ambassadors, are available to employees.

To promote physical and social well-being, we introduced gym sessions, exercise time-off, and expanded corporate pass access to venues such as the Singapore Flyer and SuperPark. We also encouraged community engagement through outreach initiatives.

Employees continue to benefit from annual health screenings, influenza vaccinations and recreational activities such as e-Games Day and sports tournaments.

¹⁰ The breakdown of gender is 86 males and 54 females

Managing Our Impact

MATERIAL ISSUES

Our material issues are reflected in our corporate KPIs, which are reviewed and endorsed by the Board and tracked within the organisation. For example, the material issue of ‘Strong Corporate Practices for a Sustainable Organisation’ is reflected through KPIs covering key areas of organisational excellence. These include metrics such as employee retention rate, employee engagement scores and targets related to WSH.

Reviewed every few years based on work priorities and critical areas, our material issues elaborate on NEA’s strategic contributions, stakeholder impact, and the risks and opportunities involved. This ensures alignment with the objectives in our strategy map.

In 2024, we reviewed our material issues to identify key environmental and stakeholder impacts. Following evaluation and validation with senior management, we concluded that the existing material issues remain relevant to our operations.

Through internal and external stakeholder engagement, we gained insights into the diverse interests and needs of our stakeholders. These are addressed in the material issues presented in this report.

Stakeholder Groups	Public Sector Agencies	Schools and the General Public	Employees	Industry, NGOs and Partners
Modes of Engagement	<ul style="list-style-type: none"> • Inter-agency taskforce • Cross sharing meetings 	<ul style="list-style-type: none"> • Surveys • Interviews • Focus group discussions • Mainstream media and online platforms • Learning journeys 	<ul style="list-style-type: none"> • Employee engagement survey • Townhall • Dialogues • Welfare and cohesion activities 	<ul style="list-style-type: none"> • Surveys • Industry sharing sessions • Conferences
Purpose of Engagement	Harness synergies across agencies, streamline public service delivery, and ensure coherent policy implementation	Foster environmental ownership, nurture future environmental stewards, and ensure policies and initiatives remain relevant and effective to address ground needs	Identify key drivers for employee engagement and areas of improvement that address employees’ interest, strengthening organisational excellence	Leverage diverse expertise, resources and perspectives to co-create innovative and sustainable solutions for Singapore

Material Issue	Impact (Positive and Negative)	Risks and Challenges	Opportunities
High Public Health Standards	<ul style="list-style-type: none"> NEA is responsible for controlling the vector population, managing public cleanliness, environmental sanitation and hygiene NEA is also responsible for providing adequate government after-death facilities and services and enforcing public health offences (such as mosquito breeding, littering, smoking in prohibited places) to maintain high environmental public health standards and quality of life for all 	<ul style="list-style-type: none"> Vector-borne disease outbreaks 	<ul style="list-style-type: none"> Use data to understand the epidemiology of diseases for temporal and spatial risk stratification Leverage technology to enhance our operations and build capability in related areas of research
Safe, Healthy and Conducive Living Environment	<ul style="list-style-type: none"> To ensure a safe, healthy and conducive living environment, NEA monitors, reduces and prevents environmental pollution. We also incorporate environmental considerations into land use planning, development and building control 	<ul style="list-style-type: none"> Deterioration of ambient air quality Deterioration of coastal and inland water quality 	<ul style="list-style-type: none"> Leverage technology to monitor air and water quality and identify sources of pollution
Sustainable and Resource Efficient Singapore	<ul style="list-style-type: none"> Minimising waste generation and disposal is vital to conserving resources and landfill space. Increasing energy efficiency also helps to reduce GHG emissions and fight climate change 	<ul style="list-style-type: none"> Resource scarcity Insufficient waste management capacity Climate change 	<ul style="list-style-type: none"> Drive infrastructure enhancement, innovation and behavioural changes to achieve environmental sustainability Gain public trust in our national policy
Timely and Reliable Weather and Climate Services	<ul style="list-style-type: none"> Timely and reliable meteorological services help decision-making and planning 	<ul style="list-style-type: none"> Severe weather conditions 	<ul style="list-style-type: none"> Leverage technology to boost our capabilities in weather monitoring and forecasting
Vibrant Hawker Culture	<ul style="list-style-type: none"> Preserving Singapore's hawker culture safeguards our heritage and ensures that people from all walks of life can enjoy affordable meals in a clean and hygienic environment 	<ul style="list-style-type: none"> Inability to meet the need for affordable cooked food options in a clean and hygienic environment 	<ul style="list-style-type: none"> Build new hawker centres and rejuvenate existing ones Offer a variety of pathways for aspiring hawkers

Material Issue	Impact (Positive and Negative)	Risks and Challenges	Opportunities
Private Sector as Force Multipliers for Mission Success	<ul style="list-style-type: none"> Environmental Services (ES) provide essential cleaning, waste management and pest management services to keep Singapore clean and hygienic and maintain low incidences of vector-borne diseases 	<ul style="list-style-type: none"> Inability to meet increasing demand for ES 	<ul style="list-style-type: none"> Transform the ES industry through the Environmental Services Industry Transformation Map, which promotes the adoption of technology to improve standards and service delivery, build a skilled and productive workforce, and support business growth and international expansion
Active Community as Stewards of the Environment	<ul style="list-style-type: none"> As NEA is a frontline agency with multiple public touchpoints, collaboration with stakeholders and public support are critical to mission success 	<ul style="list-style-type: none"> Lack of environmental ownership 	<ul style="list-style-type: none"> Work more closely with our partners to achieve environmental ownership
Public Sector Taking the Lead in Environmental Sustainability	<ul style="list-style-type: none"> A WOG approach will help us achieve a clean and sustainable Singapore 	<ul style="list-style-type: none"> Resource scarcity Insufficient waste management capacity Climate change 	<ul style="list-style-type: none"> Drive innovation and behavioural changes to achieve environmental sustainability Gain public trust in our national policies by walking the talk
International Partnerships as Strategic Levers	<ul style="list-style-type: none"> International engagements and partnerships with strategic countries safeguard and advance Singapore's environmental interests in the global arena 	<ul style="list-style-type: none"> Inability to fulfil NEA's obligations set out in environmental agreements 	<ul style="list-style-type: none"> Meet the increased demand for clean energy, low-emissions transport and sustainable urban solutions
Creation of Capacity	<ul style="list-style-type: none"> Operational capacity is vital to effective service delivery and enforcement efforts, given the wide range of issues and heavy operational workload we face 	<ul style="list-style-type: none"> Compromised data due to malicious activities against our IT systems and infrastructure 	<ul style="list-style-type: none"> Deepen technical capabilities in key areas to improve our services Simplify application and compliance processes for our regulations where feasible
Strong Capabilities for Mission Success	<ul style="list-style-type: none"> Digitalisation and capability development are key pillars in meeting public sector transformation objectives 	<ul style="list-style-type: none"> Inability to meet NEA's manpower requirements 	<ul style="list-style-type: none"> Uncover new areas for collaboration and the deployment of systems and services Improve productivity and forge a future-ready NEA

Material Issue	Impact (Positive and Negative)	Risks and Challenges	Opportunities
<p>Strong Corporate Practices for a Sustainable Organisation</p>	<ul style="list-style-type: none"> Financial management and manpower management enable effective and efficient operations, governance and development. Good procurement practices enable fair, transparent, effective and efficient operations and governance 	<ul style="list-style-type: none"> Gaps in growing public expectations Weak controls resulting in fraudulent practices Challenges in talent recruitment and retention Instances of non-compliance with WSH regulations or procedures 	<ul style="list-style-type: none"> Spur accountability and resource optimisation Gain public confidence in our financial management and resource utilisation as a government-funded organisation Encourage strong corporate governance and risk management practices Develop a stronger sense of identity and purpose among employees Develop a more engaged and socially responsible workforce that gives back to the community
<p>Conducive Culture for Collaboration, Learning and Innovation</p>	<ul style="list-style-type: none"> A strong organisational culture is the foundation for a high-performance and future-ready organisation 	<ul style="list-style-type: none"> Fragmented data-sharing when teams work in silos 	<ul style="list-style-type: none"> Enable a high-performance NEA by driving organisational productivity and growth while strengthening our brand positioning as an employer of choice

ENTERPRISE RISK MANAGEMENT

NEA has an Enterprise Risk Management (ERM) framework to proactively identify, assess, prioritise, treat and monitor our key strategic and operational risks on an ongoing basis. In planning ERM activities, we are guided by an ERM framework built around three thrusts.

Robust Risk Management Governance Structure

Chaired by our CEO, NEA's Enterprise Risk and Safety Steering Committee (ERSSC) drives our overall ERM efforts and provides strategic leadership on enterprise risks and safety matters. The ERSSC approves the ERM framework, risk assessments and mitigation plans to ensure that enterprise risks are adequately addressed. It also provides regular updates to the NEA Board and the Board Risk Committee, which oversees strategic risks and risk management.

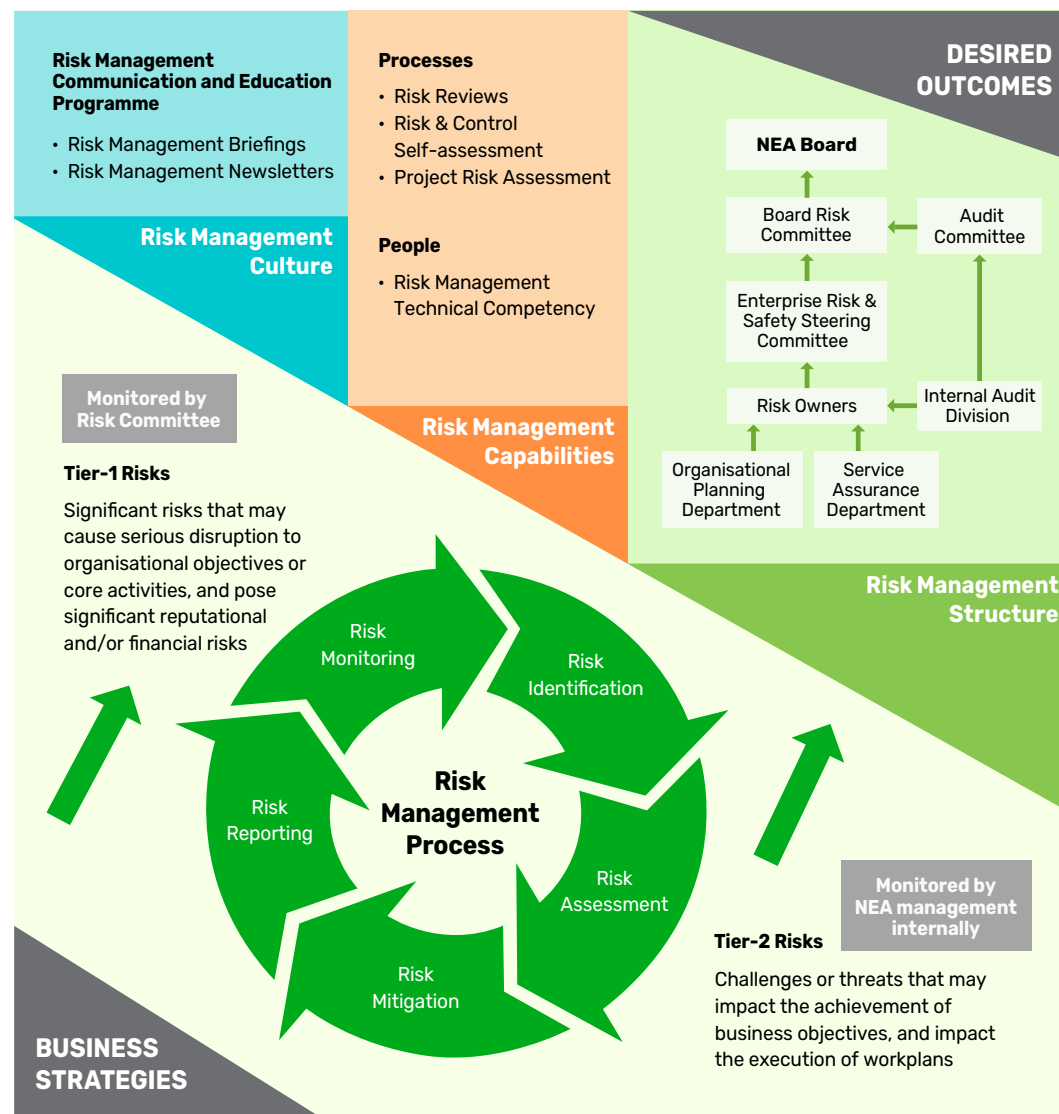
Risk Owners, typically members of NEA management, are responsible for identifying, assessing and monitoring risks within their areas of work, as well as formulating appropriate treatment plans. Environmental scans are conducted to assess material issues that may affect our strategic objectives. Process Owners, on the other hand, provide detailed risk content including root causes, consequences and controls, and are accountable for the implementation and monitoring of risk treatment plans.

Proactive Risk Management Culture

To strengthen our risk culture, NEA's risk communication and education efforts include briefings and newsletters that raise awareness and understanding of risk management methodologies, tools and templates. These initiatives also help communicate how employees can embed risk management practices in their areas of work. Risk Champions, nominated to facilitate risk-related initiatives within their teams, are recognised during employee appraisals for their contributions.

Strong Risk Management Capabilities and Tools

We constantly strengthen our risk management capabilities through processes such as risk reviews, project risk assessments, and risk and control self-assessments. We also ensure employees are well-trained in risk management tools and methodologies to proactively manage risks and address control issues.



NEA'S CLIMATE RESILIENCE

Climate change presents substantial risks to the economy, environment and public well-being. Singapore's Third National Climate Change Study underscores these challenges, projecting rising daily mean temperatures, increased rainfall and higher sea levels through 2100. As a public agency, we are committed to leading by example in fostering a sustainable and resilient future. Our approach to climate action focuses on ensuring long-term economic stability, preserving natural resources and protecting communities from climate-related impact.

NEA's efforts to support Singapore's climate resilience and low-carbon transition span a range of areas, including:

- Conducting climate projection studies
- Promoting energy efficiency in the industry, household and public sectors through legislation, incentives and public education
- Administering Singapore's carbon tax regime under the Carbon Pricing Act
- Regulating the environmental integrity of carbon credits accepted under the International Carbon Credit Framework

We lead a multi-agency effort to compile Singapore's GHG Inventory and serve on the Inter-Ministerial Committee on Climate Change, ensuring WOG coordination in addressing climate change.

To enhance our weather forecasting services, NEA also operationalised SINGV-EPS, an Ensemble Prediction System (EPS) based on the SINGapore Variation resolution model (SINGV). SINGV-EPS is a convective-scale ensemble numerical weather prediction system that quantifies uncertainty in weather forecasts, supporting decision-making in areas such as public weather services, urban flood management and aviation.

Recognising the potential impact of climate change on our operations, NEA integrates climate-related risks and opportunities into our business strategy and planning. In FY2023, we identified and assessed these risks to strengthen our resilience. In the current year, we further enhanced our climate governance and climate risk mitigation efforts, reinforcing our commitment to transparency, accountability and continuous progress in climate risk management.

NEA'S CLIMATE-RELATED RISKS

To enhance our understanding and management of climate-related risks, we conducted a landscape scan and qualitative assessment to evaluate both physical and transition risks. The identified risks were reviewed and approved by NEA management.

Alongside risk mitigation, we have also identified potential climate-related opportunities that can enhance our operations and contribute to national sustainability goals.

To enhance resilience and preparedness, NEA monitors new and emerging climate-related concerns. This structured approach enables us to systematically identify, assess and manage climate risks alongside other business risks.

Guided by GreenGov.SG targets, we regularly review our decarbonisation plans and track our carbon emissions. Our waste-to-energy plant complies with the Carbon Pricing Act, with emissions reviewed and validated by a third-party verifier before submission to the authorities.

Detailed information on our climate performance can be found in the Our Sustainability Commitments chapter.

Climate-related Risks	Potential Impact	Mitigation Efforts and Climate Opportunities
Physical Risks		
Rise in Mean Temperature	<ul style="list-style-type: none"> Greater strain on public health services due to heat stress and heat-related illnesses 	<ul style="list-style-type: none"> Developed the Heat Stress Advisory, which provides real-time information on heat stress levels in Singapore and offers tips for members of the public to protect themselves against heat
Prevalence of Heatwaves	<ul style="list-style-type: none"> Increase in risk of heat stress for our employees 	<ul style="list-style-type: none"> Raised employees' awareness of heat stress management through preventive measures such as monitoring Wet-bulb Globe Temperature, encouraging rehydration and acclimatisation, improving ventilation, providing rest areas and shade, and establishing emergency response plans for employees working outdoors
Rise in Sea Levels	<ul style="list-style-type: none"> Increase in risk of flooding and damage to coastal infrastructure leading to higher maintenance and repair costs Potential disruptions to waste management facilities affecting incineration, recycling and landfill operations 	<ul style="list-style-type: none"> Planned and incorporated higher elevation into the design of future critical infrastructure to minimise flood risks
Changes in Precipitation Patterns	<ul style="list-style-type: none"> Increase in frequency and intensity of heavy rainfall may elevate the risk of flash flooding 	<ul style="list-style-type: none"> Planned and incorporated higher elevation into the design of future critical infrastructure to minimise flood risks Enhanced NEA's weather forecasting capabilities to provide accurate weather forecasts Informed the public of heavy rainfall events through the NEA and MSS websites as well as myENV
Outbreak of Dengue and other Vector-borne Diseases	<ul style="list-style-type: none"> Burden on public healthcare 	<ul style="list-style-type: none"> Established a regional network for dengue surveillance Strengthened vector control measures through surveillance and legislation Enhanced mosquito control by expanding Project <i>Wolbachia</i> Educated the public about environmental sanitation by designating 2024 as the Year of Public Hygiene and promoting good hygiene practices through the PHC

Climate-related Risks	Potential Impact	Mitigation Efforts and Climate Opportunities
Transition Risks		
Increased Costs to Transition to Lower Emissions Technology and more Sustainable Raw Materials	<ul style="list-style-type: none"> • Increase in expenditure on new or alternative technologies • Increase in maintenance and training costs for new technologies 	<ul style="list-style-type: none"> • Prioritised high-impact and cost-effective technology upgrades to improve efficiency and sustainability • Implemented green procurement policies that support more sustainable products and services • Strengthened infrastructure resilience by integrating modular and adaptable low-emission solutions
Increased Pricing of GHG Emissions	<ul style="list-style-type: none"> • Increase in operating costs such as carbon tax and insurance premiums 	<ul style="list-style-type: none"> • Increased energy efficiency of our operations • Regularly reviewed fees, charges and budget to account for any increases in operating costs
Enhanced Emissions Reporting Obligations	<ul style="list-style-type: none"> • Increase in the need for investment in data management systems to ensure accurate emissions tracking and reporting • Increase in costs arising from sustainability reporting 	<ul style="list-style-type: none"> • Standardised reporting methodologies and established clear internal policies for emissions monitoring • Strengthened internal capacity through targeted Environmental, Social and Governance reporting training • Benchmarked against industry best practices to enhance transparency and accountability
Increased Stakeholder Concern or Negative Stakeholder Feedback	<ul style="list-style-type: none"> • Potential reputational risks if adaptation and mitigation measures do not meet stakeholders' expectations 	<ul style="list-style-type: none"> • Engaged key stakeholders to implement relevant policies and best practices to achieve our mission

Our Sustainability Commitments

ACHIEVING PUBLIC SECTOR SUSTAINABILITY TARGETS

The GreenGov.SG initiative was launched in July 2021 to set sustainability targets for the public sector, including:

- Reducing energy and water consumption by 10% by FY2030, based on the average levels from FY2018 to FY2020
- Reducing the amount of waste disposed of by 30% by FY2030, using FY2022 levels as the baseline
- Achieving net zero emissions around 2045

To meet these targets, we actively implement resource management measures across all our premises.

ACHIEVING GREEN CERTIFICATIONS

Under GreenGov.SG, all new public sector buildings are required to achieve at least Green Mark (GM) Platinum Super Low Energy standards or equivalent. Similarly, all existing public sector buildings must meet the same standards or equivalent when undergoing major retrofitting work. In FY2024, Tiong Bahru Market & Food Centre achieved GM 2021 In Operation - Platinum Super Low Energy certification.

Our commitment to environmental excellence extends beyond GM certifications. In FY2024, we improved our water efficiency by attaining PUB's Water Efficient Building certification for another three premises by implementing water-efficient fittings.

Our sustainable office practices were also validated under the Singapore Environment Council's Eco Office certification programme, with 12 offices earning the Elite award in FY2024 – a significant improvement from six offices in the previous certification cycle.

MANAGING CARBON EMISSIONS

As a statutory board responsible for the management of key operational facilities, including waste-to-energy plant, transfer station and landfill, and hawker centres, we recognise that our activities contribute to carbon emissions. In line with our commitment to environmental accountability, we systematically track our Scope 1, Scope 2 and Scope 3 GHG emissions to ensure transparent and comprehensive reporting.

Our carbon footprint is primarily attributed to emissions from our waste-to-energy plant, the Tuas South Incineration Plant (TSIP).

Our Scope 1 emissions decreased in FY2024 compared to FY2023 due to the operation and maintenance schedule of TSIP, resulting in reduced waste processing capacity as well as variations in the composition of waste incinerated. Our Scope 1 emissions are expected to increase in the coming years, especially with the commissioning of the Integrated Waste Management Facility from 2027 onwards. Our Scope 2 emissions in FY2024 remained comparable to FY2023, but Scope 3 emissions increased slightly due to an increase in both local and overseas business travel.

In the immediate to medium term, we are focused on progressively electrifying our on-road vehicle fleet and transitioning to energy-efficient equipment to reduce carbon emissions. Over the long term, we are launching a Carbon Capture and Storage (CCS) pilot project by 2026 to study the viability of CCS for waste-to-energy plants.

Corporate Carbon Footprint¹¹

Carbon Emissions (tCO ₂ e) (% of total aggregate)	FY22	FY23	FY24
Direct Carbon Emissions (Scope 1)			
Waste-to-energy Plant ^{12 13}	472,290 (98.2%)	421,400 (97.8%)	321,279 (96.9%)
NEA Operations (e.g. vehicles & machineries) ¹⁴	5,727 (1.2%)	6,621 (1.5%)	7,182 (2.2%)
Liquefied Petroleum Gas (LPG) & Town Gas ¹⁵	3,059 (0.6%)	3,000 (0.7%)	2,991 (0.9%)
Sub-total tCO₂e Emissions (Scope 1)	481,076	431,021	331,452
Indirect Carbon Emissions (Scope 2)			
Electricity ¹⁶ (NEA offices ¹⁷)	2,823 (32.3%)	2,765 (31.9%)	2,633 (30.7%)
Electricity ¹⁸ (NEA facilities)	5,906 (67.7%)	5,918 (68.1%)	5,953 (69.3%)
Sub-total tCO₂e Emissions (Scope 2)	8,729	8,683	8,586
Indirect Carbon Emissions (Scope 3)			
Local ¹⁹ Business Travel	239 (43.6%)	188 (38.9%)	214 (39.4%)
Overseas Business Travel (flight only)	310 (56.4%)	295 (61.1%)	329 (60.6%)
Sub-total tCO₂e Emissions (Scope 3)	550	483	543

¹¹ Our corporate carbon footprint is calculated in accordance with the GHG Protocol Corporate Accounting and Reporting Standard set by the World Business Council for Sustainable Development and World Resources Institute. This is in line with the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National GHG Inventories, which is used in Singapore's international reporting to the UN Framework Convention on Climate Change. The computations for GHG emissions from waste incineration at TSIP are also in accordance with the 2006 IPCC Guidelines for National GHG Inventories. CO₂e, CH₄, and N₂O were included in the calculation of Scope 1 emissions

¹² Consumption is largely dependent on public demand for our services. The Scope 1 emissions for waste incineration have been restated for FY2023 to reflect actual emissions upon verification of the figures. January to March 2025 figures were based on estimates and will be finalised at the end of 2025 upon verification. The actual figure for FY2024 will be updated in next year's report

¹³ Figures refer to TSIP's non-biogenic emissions. The biogenic emissions from TSIP were 577,003 tCO₂e, 617,675 tCO₂e, and 647,347 tCO₂e in FY2022, FY2023, and FY2024 respectively. The biogenic emissions are not included in NEA's corporate carbon footprint to align with IPCC guidelines, where biogenic emissions with CO₂ content only are reported as information item, but not included in the inventory

¹⁴ Carbon emissions for NEA-owned vehicles are calculated based on amount of fuel – diesel and petrol – used. Diesel consumed by vehicles, equipment, diesel generator, and marine vessels used at Tuas Marine Transfer Station, Semakau Landfill, and TSIP was also included in the calculation of carbon emissions

¹⁵ Carbon emissions are calculated for LPG and Town Gas used at Choa Chu Kang Crematorium and Mandai Crematorium respectively. The emissions are impacted by factors beyond our control, such as the number of after-death services required

¹⁶ Grid-average emissions factor (GEF) data is used to calculate GHG emissions from electricity we purchased from the national grid. FY2024 figures are calculated based on 2023 electricity GEF: 0.412 kg CO₂/kWh (www.ema.gov.sg/resources/singapore-energy-statistics/chapter2). FY2023 figures have also been restated to use the updated GEF value of 0.412 kg CO₂/kWh

¹⁷ Scope 2 emissions for NEA offices and facilities have been restated for FY2022 and FY2023, due to correction of electricity consumption figures for some premises

¹⁸ Electricity consumed at TSIP and Tuas Marine Transfer Station was excluded from the carbon emissions calculation, as the electricity used at these premises is self-generated. For Semakau Landfill, the electricity consumed was generated by diesel generators on the landfill. The diesel consumed by generators had been accounted for under Scope 1 - NEA operations

¹⁹ Carbon emissions were calculated based on local business travel by employee vehicles, excluding the travel journeys of NEA employees to and from their homes

Comparison of NEA's Corporate Emissions Intensity

	FY22	FY23	FY24
Indirect Carbon Emissions ²⁰ comprising Scope 2 & 3 (tCO ₂ e)	9,279	9,165	9,129
GFA ²¹ (m ²)	236,858	237,575	236,524
Carbon Emissions Intensity (tCO ₂ e/m ²)	0.039	0.039	0.039

MONITORING OUR AIR QUALITY EMISSIONS

Beyond reducing corporate carbon emissions, our commitment to environmental stewardship extends to managing the environmental impact of our core operations. Both TSIP and Mandai Crematorium operate in strict compliance with Singapore's Environmental Protection and Management (Air Impurities) Regulations, incorporating air pollution control design features and conducting regular tests to uphold rigorous air quality standards.

Status of Air Quality Emissions

NEA's Facilities	Impurities (mg/Nm ³)	FY22	FY23	FY24	Emission Limits
Tuas South Incineration Plant	Particulates	4.3	10.8	5.5	< 50
	SO ₂	125.9	85.0	112.9	< 1,700
	NO _x	167.4	169.3	130.9	< 400
Mandai Crematorium	Particulates	14.3	9.9	21.9	< 50
	SO _x	13.4	0.0	< 1.0	< 1,700
	NO _x	240.0	125.5	297.5	< 400
	HCl	36.4	2.6	< 0.5	< 200
	CO	5.0	5.0	1.4	< 250

CONSERVING RESOURCES WITHIN NEA

Energy Management

In FY2024, our total energy consumption was 574 TJ, with 26% attributed to the use of LPG at Choa Chu Kang Crematorium, Town Gas at Mandai Crematorium, as well as diesel and petrol used in NEA operations, including landfill operations and vehicle use.

Energy Consumed (TJ)	FY22	FY23	FY24
Total Energy Consumed within NEA	532	573	574
- Electricity purchased from grid, and self-generated electricity from on-site generators ²²	397	426	419
- Renewable energy (e.g. solar)	4	5	5
- LPG and town gas	55	54	54
- Diesel and petrol	76	88	95

Electricity Consumption

Our total electricity consumption in FY2024 was comparable to FY2023. In line with the public sector's commitment to renewable energy adoption, we deployed solar photovoltaic panels across nine premises²³ including hawker centres, after-death facilities and Semakau Landfill. These premises generated about 1,500 MWh of electricity in FY2024, with about 1,400 MWh of solar energy consumed on-site.

Electricity Consumed at NEA Premises²⁴

Electricity Consumed (kWh)	FY22 ('000)	FY23 ('000)	FY24 ('000)
Total	111,727	119,978	118,236
- Offices	6,774	6,711	6,391
- Facilities	104,953	113,267	111,845

²⁰ FY2022 and FY2023 figures have been restated, as the Scope 2 emissions data have been revised due to correction of electricity consumption figures for some premises

²¹ The GFA has been revised to correct the figures for some premises

²² FY2022 and FY2023 figures have been corrected due to correction of electricity consumption figures for some premises

²³ We also deploy solar panels on four other premises - these have been omitted in this report as the premises are excluded from GreenGov.SG scope

²⁴ Refers to the total electricity drawn from the grid and self-generated electricity consumption. FY2022 and FY2023 figures on electricity consumed and GFA have been corrected, due to correction of electricity consumption figures and GFA for some premises

Energy Utilisation Index (EUI) ²⁵ (kWh/m ²)	Baseline ²⁶	FY22	FY23	FY24
Overall for Offices & Facilities	80.8	79.1	79.2	79.3
- Offices	N.A.	197.9	194.9	188.9
- Facilities	N.A.	64.6	65.2	66.0

Our overall electricity consumption and EUI in FY2024 remained comparable to FY2023. The marginal increase in overall EUI is primarily attributed to the increased electricity consumption at some public facilities due to extended operating hours, which offsets the decrease in electricity consumption at other premises. We continue to explore additional energy-saving initiatives across our premises, such as replacing fluorescent lighting with LED lighting and switching off lights during lunch breaks. We also remind employees to adopt sustainable practices.

Electricity Generation

Electricity generated from waste incineration powers the operations at TSIP and Tuas Marine Transfer Station (TMTS), with surplus electricity exported to Singapore's national grid. TSIP remained operational in FY2024 and generated sufficient power to meet its own energy needs and that of TMTS.

Electricity Generated from Waste Incineration

Total Electricity (MWh)	FY22	FY23	FY24
Generated	400,223	277,946	289,138
Exported	310,807	180,760	193,909

Water Management

Our water consumption is largely attributed to the facilities for purposes such as cleaning, sanitation, and cooling towers. In FY2024, we consumed 307,562,500 L of NEWater for activities such as boiler operations at TSIP, and general washing and landscaping at Kranji State Cemetery.

Water Consumed at NEA Premises

Water consumed ²⁷ (L)	FY22 ('000)	FY23 ('000)	FY24 ('000)
Total	481,989	552,063	593,996
- Offices	17,956	19,356	22,680
- Facilities	464,033	532,707	571,316

Water Efficiency Index (WEI) ²⁸ (L/person/day)	Baseline ²⁹	FY22	FY23	FY24
Overall for Offices & Facilities	28.3	25.5	26.8	20.7
- Offices	N.A.	16.6	14.9	20.0
- Facilities	N.A.	24.9	25.7	19.4

Despite the increase in total water consumption, our WEI improved by 22.8%. This was driven by a 19.2% reduction in water consumption across hawker centres and after-death facilities as well as a higher visitor count at our public facilities in FY2024 compared to FY2023.

Our water conservation efforts include harvesting rainwater for general washing purposes at both TSIP and TMTS. At the Garden of Peace inland ash scattering facility, a rainwater harvesting system has been incorporated to support a practical and dignified ash scattering process while promoting sustainability. The system includes a storage tank that ensures a consistent water supply, allowing next-of-kin to gently pour water over the scattered ashes, which then percolates naturally through the pebbled surface into the soil below.

²⁵ The calculation of EUI excludes premises such as NEA Headquarters, TSIP, cremators at Mandai Crematorium, the Mosquito Production Facility, air pollution and weather monitoring stations, Semakau Landfill, Tuas Marine Transfer Station, Kranji State Cemetery, and Inland Ash Scattering Facility as per GreenGov. SG reporting

²⁶ We use the average of FY2019 and FY2020 levels as our baseline to track EUI performance. This is in line with the overall baseline of the MSE Family, which comprises MSE, NEA, PUB, and SFA

²⁷ Total amount of water withdrawn is the same as total amount of water consumed

²⁸ The scope of WEI is aligned with that of EUI found in footnote 25

²⁹ NEA uses the average of FY2019 to FY2020 levels as our baseline to track our WEI performance. This is in line with the MSE Family's overall baseline

Water Discharge

In FY2024, TSIP discharged 69,600,000 L of used water into the public sewers. This represented an increase from the previous year, primarily due to operational demands.

All wastewater is properly treated and discharge is carefully monitored through flowmeters and monthly quality checks to ensure compliance with PUB’s Sewerage and Drainage Act (Chapter 294, Sections 72 and 74) and the Sewerage and Drainage (Trade Effluent) Regulations.

Waste Management

As Singapore’s leading agency for waste management, we continue to implement strategies to enhance our waste management capabilities and extend the lifespan of Semakau Landfill.

The main source of waste generated at our premises is attributed to hawker centres and markets, with food waste constituting the largest component. In FY2024, the total waste generated³⁰ by NEA decreased by 11.2% compared to FY2023, with the reduction mainly observed at our hawker centres and offices.

Waste Generation at NEA Premises³¹

Waste Generated (kg)	FY22 ('000)	FY23 ('000)	FY24 ('000)
Total	12,037	12,538	11,133
- Offices	111	135	97
- Facilities	11,926	12,402	11,035

Waste Disposal Index (WDI) ³² (kg/person/day)	Baseline (FY22)	FY23	FY24
Overall for Offices & Facilities	2.1	1.7	1.5
- Offices	0.4	0.5	0.3
- Facilities	2.2	1.7	1.5

Our overall WDI improved by 14.8% due to an overall decrease in waste disposed of across most premises, coupled with a higher visitor count in FY2024 as compared to FY2023.

We continue to reduce our waste generation through recycling efforts and by displaying resource conservation posters to remind occupants and visitors to minimise waste.

Through our agency-wide recycling initiatives, we collected over 17,000 kg of paper, plastics and metal recyclables at our premises. These materials were processed by a third-party recyclables contractor for resource recovery.

Overseeing Biohazardous Waste Disposal

Our EHI’s laboratory generated 35,520 L of biohazardous waste and 3,090 L of chemical waste in FY2024. All hazardous waste is managed in accordance with NEA’s Environmental Public Health (Toxic Industrial Waste) Regulations, through a comprehensive disposal protocol that safeguards environmental integrity.

This process includes secure storage in purpose-built containment units, followed by collection and off-site incineration by licensed industrial waste collectors.

In addition to laboratory waste, we disposed of 7.6 tonnes of used oil from TSIP through off-site incineration. The 10% increase in used oil compared to the previous year is attributed to increased maintenance.

³⁰ We collect waste data from the public waste collectors (PWC) and general waste collectors on a monthly basis. Waste generated by NEA is incinerated by a third-party waste management provider off-site, in compliance with national environmental laws and regulations on waste management

³¹ We are in the process of verifying the accuracy of the waste data in consultation with the PWCs, and will update the figures in subsequent reports. Hence, the waste data for a few premises has been excluded from this report

³² The scope of WDI is aligned with that of EUI found in footnote 25. The waste generated at leased premises is accounted for under the landlord, which is aligned with GreenGov.SG reporting

About This Report

In this Annual & Sustainability Report³³, NEA presents an account of our corporate, financial and sustainability performance in FY2024, covering the period from 1 April 2024 to 31 March 2025.

We hope this report will serve as a valuable reference for organisations and agencies seeking to embark on their sustainability journeys.

Reporting Scope³⁴

This report, published in September 2025, documents NEA's organisational activities, achievements and financial performance in FY2024 across our key premises, unless otherwise stated.

Stand-alone Office Premises

- Centre for Climate Research Singapore at Kim Chuan Road
- Choa Chu Kang Cemetery Office at Old Choa Chu Kang Road
- NEA Regional Offices:
 - Central Regional Office at Jalan Bukit Merah
 - Eastern Regional Office at Tannery Lane
 - Eastern Regional Office (Satellite Office) at Sin Ming Drive
 - Western Regional Office at Albert Winsemius Lane

Tenanted Office Premises

- Changi Meteorological Station
- Environmental Health Institute at Ang Mo Kio Tech Place II
- Environmental Health Institute at Biopolis
- Environmental Health Institute at Van Kleef Centre
- Hawker Centres Group at HDB Hub
- Meteorological Service Singapore at Changi Airport
- National Radiochemistry Laboratory at CREATE Tower
- NEA Headquarters at Environment Building
- Pollution Control Division 1 and 2 at Bukit Merah Central

- Secondary Standards Dosimetry Laboratory at Health Sciences Authority
- Seletar Meteorological Station
- Singapore Environment Institute at Lifelong Learning Institute

Industrial Premises

- Semakau Landfill
- Tuas Marine Transfer Station
- Tuas South Incineration Plant

Other Premises

- Burial Preparation Facility (Jalan Bahar)
- Choa Chu Kang Cemetery, Columbarium, and Crematorium
- Garden of Peace @ CCK (Inland Ash Scattering Facility)
- Hawker Centres and Markets³⁵
- Kranji State Cemetery
- Mandai Crematorium and Columbarium
- Yishun Columbarium

Assurance

External assurance was not sought for the reporting period. Nonetheless, the data in this report has undergone rigorous internal processes including data monitoring and review to ensure its accuracy.

Enquiries

As part of NEA's environmental conservation efforts, the report will not be printed. Digital copies of past and current reports can be found on NEA's corporate website: www.nea.gov.sg/publications

For feedback or enquiries, please contact the NEA Corporate Communications Division: Ms Eleanor Goh at eleanor_goh@nea.gov.sg

³³ This report's design contains generative AI elements

³⁴ This report's annual and financial reporting scope covers all NEA premises. Our sustainability reporting scope aligns with GreenGov.SG, which covers premises whose resource consumption NEA has operational control over. In this regard, NEA's resource consumption performance excludes the National Radiochemistry Laboratory at the Campus for Research Excellence and Technological Enterprise (CREATE), as the resource consumption data is aggregated for entire CREATE Tower, and breakdown of data for individual laboratories is unavailable. It also excludes the Socially-conscious Enterprise Hawker Centres as these hawker centres are not within NEA's operational control

³⁵ Full list of hawker centres and markets are at www.nea.gov.sg/our-services/hawker-management

GRI Content Index

For the Content Index – Essential Service, GRI Services reviewed that the GRI Content Index has been presented in a way consistent with the requirements for reporting in accordance with the GRI Standards, and that the information in the index is clearly presented and accessible to the stakeholders.



**CONTENT INDEX
ESSENTIALS SERVICE**

2025

Statement of use	NEA has reported in accordance with the GRI Standards for the period 1 April 2024 to 31 March 2025.
GRI 1 used	GRI 1: Foundation 2021
Applicable GRI Sector Standard(s)	N/A

GRI Standard	Disclosure	Page Reference	Page No.	Omission		Direct Answer / Additional Information
				Reasons	Explanation	
GENERAL DISCLOSURES						
GRI 2: General Disclosures 2021	2-1 Organisational details	About the National Environment Agency	2	-	-	-
		About This Report	43			
	2-2 Entities included in the organisation's sustainability reporting	About This Report (Reporting Scope)	43	-	-	-
	2-3 Reporting period frequency and contact point	About This Report	43	-	-	-
	2-4 Restatements of information	Our Sustainability Commitments	39-42	-	-	-
	2-5 External assurance	About This Report (Assurance)	43	-	-	-

GRI 2: General Disclosures 2021	2-6 Activities, value chain and other business relationships	About the National Environment Agency About This Report	2 43	-	-	Our upstream value chain includes the Ministry of Finance, MSE and PSD. Downstream, our stakeholders include businesses, hawkers, schools, research institutions and the general public.
	2-7 Employees	Living Our EARTH Values (Embracing Workplace Diversity)	27-28	-	-	-
	2-8 Workers who are not employees	Living Our EARTH Values (Embracing Workplace Diversity)	27-28	-	-	NEA engaged about 60 non-employees to cover the duties of employees on extended leave, such as maternity leave, hospitalisation leave or no pay-leave. These individuals performed a range of duties, from office-based to operational roles.
	2-9 Governance structure and composition	Governance	7-8	-	-	-
	2-10 Nomination and selection of the highest governance body	Governance	7	-	-	-
	2-11 Chair of the highest governance body	Governance	7	-	-	-

GRI 2: General Disclosures 2021	2-12 Role of the highest governance body in overseeing the management of impacts	Governance	7-8	-	-	-
	2-13 Delegation of responsibility for managing impacts	Governance	7-8	-	-	-
	2-14 Role of the highest governance body in sustainability reporting	Governance Managing Our Impact (Material Issues)	7-8 30-35	-	-	GRI 2 -14a: The Board oversees NEA's sustainability plans, strategies and targets, which inform the sustainability reporting process led by senior management. The Annual & Sustainability Report is subsequently reviewed and approved by the Minister for Sustainability and the Environment before its launch.
	2-15 Conflicts of interest	Governance	7	-	-	-
	2-16 Communication of critical concerns	Living Our EARTH Values (Placing Our People First - Whistleblowing Policy; Employee Grievance)	26-27	GRI 2-16a: Confidentiality constraints	As the information is confidential, details are not disclosed due to their sensitive nature.	-
	2-17 Collective knowledge of the highest governance body	Governance	7	-	-	-

GRI 2: General Disclosures 2021	2-18 Evaluation of the performance of the highest governance body	Governance	7	-	-	-
	2-19 Remuneration policies	Governance	7	-	-	-
	2-20 Process to determine remuneration	Governance	7	-	-	-
	2-21 Annual total compensation ratio	-	-	Confidentiality constraints	NEA's compensation policies are aligned with PSD guidelines. As the information is confidential, details are not disclosed due to their sensitive nature.	-
	2-22 Statement on sustainable development strategy	Chairman's Foreword	3	-	-	-
		CEO's Message	4	-	-	-
	2-23 Policy commitments	Living Our EARTH Values	22-29	-	-	-
		Our Sustainability Commitments	38-42	-	-	-
	2-24 Embedding policy commitments	Living Our EARTH Values	22-29	-	-	-
Our Sustainability Commitments		38-42	-	-	-	
2-25 Processes to remediate negative impacts	Living Our EARTH Values (Placing Our People First - Whistleblowing Policy; Employee Grievance)	26-27	-	-	-	
2-26 Mechanisms for seeking advice and raising concerns	Living Our EARTH Values (Placing Our People First - Whistleblowing Policy; Employee Grievance)	26-27	-	-	-	

GRI 2: General Disclosures 2021	2-27 Compliance with laws and regulations	-	-	Confidentiality constraints	NEA and two of our officers have been charged under the Workplace Safety and Health Act in relation to the Tuas Incineration Plant incident in 2021. As this matter is before the Courts, we are unable to provide further information.	-
	2-28 Membership associations	About the National Environment Agency	2	-	-	-
	2-29 Approach to stakeholder engagement	Managing Our Impact	30-33	-	-	-
	2-30 Collective bargaining agreements	Living Our EARTH Values (Placing Our People First)	26	-	-	-
MATERIAL TOPICS						
GRI 3: Material Topics 2021	3-1 Process to determine material topics	Managing Our Impact	30	-	-	-
	3-2 List of material topics	Managing Our Impact	30-33	-	-	-
MATERIAL TOPIC: HIGH PUBLIC HEALTH STANDARDS						
GRI 3: Material Topics 2021	3-3 Management of material topics	Stewarding Singapore's Environment (Safeguarding Public Health and the Environment - Year of Public Hygiene)	9-10	-	-	-
		Stewarding Singapore's Environment (Deepening Singapore's Resilience - Disease Control)	15	-	-	-

GRI 3: Material Topics 2021		Building Tomorrow's Capabilities (After-death Facilities and Services; Public Health)	18-19	-	-	-
		Transforming Today's Operation (Cleanliness; Enforcement)	21	-	-	-
		Managing Our Impact (Material Issues)	31	-	-	-
MATERIAL TOPIC: SAFE, HEALTHY AND CONDUCTIVE LIVING ENVIRONMENT						
GRI 3: Material Topics 2021	3-3 Management of material topics	Stewarding Singapore's Environment (Safeguarding Public Health and the Environment - Pollution Control)	11-12	-	-	-
		Managing Our Impact (Material Issues)	31	-	-	-
		Our Sustainability Commitments (Monitoring Our Air Quality Emissions; Conserving Resources within NEA - Water Management)	40-42	-	-	-
GRI 303: Water and Effluents 2018	303-4 Water discharge	Our Sustainability Commitments (Conserving Resources within NEA - Water Discharge)	42	GRI 303-4a: Information unavailable / incomplete	NEA has disclosed water discharge information for TSIP. While water discharge data for other facilities is unavailable, it is not considered material to our overall environmental impact. All NEA facilities are designed and operated in compliance with regulatory requirements to ensure environmentally safe water discharge.	-

GRI 305: Emissions 2016	305 – 6 Emissions of ozone-depleting (ODS)	-	-	Not applicable	NEA is not involved in the production, import or export of ozone-depleting substances (ODS).	-
	305-7 Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	Stewarding Singapore's Environment (Safeguarding Public Health and the Environment - Pollution Control)	11-12	-	-	-
		Our Sustainability Commitments (Monitoring Our Air Quality Emissions)	40	-	-	-
MATERIAL TOPIC: SUSTAINABLE AND RESOURCE EFFICIENT SINGAPORE						
GRI 3: Material Topics 2021	3-3 Management of material topics	Stewarding Singapore's Environment (Safeguarding Public Health and the Environment - Protecting Our Resources)	13-14	-	-	-
		Building Tomorrow's Capabilities (Zero Waste; Integrated Waste Management Facility; Net Zero)	17-18	-	-	-
		Managing Our Impact (Material Issues)	31	-	-	-
GRI 302: Energy 2016	302-1 Energy consumption within the organisation	Our Sustainability Commitments (Conserving Resources within NEA – Energy Management)	40	-	-	-
	302-2 Energy consumption outside of the organisation	-	-	Information unavailable / incomplete	NEA has not started tracking energy consumption outside the organisation.	-
	302-3 Energy intensity	Our Sustainability Commitments (Conserving Resources within NEA – Energy Management)	40	-	-	-

GRI 302: Energy 2016	302-4 Reduction of energy consumption	Our Sustainability Commitments (Conserving Resources within NEA – Electricity Consumption)	40-41	-	-	-
	302-5 Reductions in energy requirements of products and services	Our Sustainability Commitments (Conserving Resources within NEA – Energy Management)	40	-	-	NEA provides services such as weather-related data services to industries. Energy reductions from these services are reflected within our aggregated annual performance.
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	Stewarding Singapore's Environment (Safeguarding Public Health and the Environment - Pollution Control - Monitoring Recreational Beach Water Quality; Improving Inland Water Quality Monitoring)	12	-	-	No water bodies or related habitats were significantly affected by water withdrawal, discharges or runoff.
		Our Sustainability Commitments (Achieving Green Certifications)	38	-	-	-
		Our Sustainability Commitments (Conserving Resources within NEA – Water Management)	41	-	-	-
	303-2 Management of water discharge related impacts	Our Sustainability Commitments (Conserving Resources within NEA – Water Discharge)	42	-	-	No water bodies or related habitats were significantly affected by water withdrawal, discharges or runoff.
	303-3 Water withdrawal	Our Sustainability Commitments (Conserving Resources within NEA – Water Management)	41	-	-	GRI 303-3d: Water withdrawal is from third-party sources – PUB, and tracked using water meters.

GRI 303: Water and Effluents 2018	303-5 Water consumption	Our Sustainability Commitments (Conserving Resources within NEA – Water Management)	41	-	-	GRI 303-5b: NEA does not consume water from water stress areas.
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	Our Sustainability Commitments (Managing Carbon Emissions)	38-39	-	-	-
	305-2 Energy indirect (Scope 2) GHG emissions	Our Sustainability Commitments (Managing Carbon Emissions)	38-40	-	-	-
	305-3 Other indirect (Scope 3) GHG emissions	Our Sustainability Commitments (Managing Carbon Emissions)	38-40	-	-	-
	305-4 GHG emissions intensity	Our Sustainability Commitments (Managing Carbon Emissions)	40	-	-	-
	305-5 Reduction of GHG emissions	Our Sustainability Commitments (Managing Carbon Emissions)	38-40	-	-	-
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	Our Sustainability Commitments (Conserving Resources within NEA – Waste Management)	42	-	-	-
	306-2 Management of significant waste-related impacts	Our Sustainability Commitments (Conserving Resources within NEA – Waste Management)	42	-	-	-
	306-3 Waste generated	Our Sustainability Commitments (Conserving Resources within NEA – Waste Management)	42	-	-	-
	306-4 Waste diverted from disposal	Our Sustainability Commitments (Conserving Resources within NEA – Waste Management)	42	-	-	-

GRI 306: Waste 2020	306-5 Waste directed to disposal	Our Sustainability Commitments (Conserving Resources within NEA - Waste Management)	42	-	-	-
MATERIAL TOPIC: TIMELY AND RELIABLE WEATHER AND CLIMATE SERVICES						
GRI 3: Material Topics 2021	3-3 Management of material topics	Stewarding Singapore's Environment (Deepening Singapore's Resilience - Climate Resilience)	15	-	-	-
		Managing Our Impact (Material Issues)	31	-	-	-
MATERIAL TOPIC: VIBRANT HAWKER CULTURE						
GRI 3: Material Topics 2021	3-3 Management of material topics	Stewarding Singapore's Environment (Nurturing Hawker Culture)	16	-	-	-
		Building Tomorrow's Capabilities (Hawkers and Hawker Culture)	19	-	-	-
		Managing Our Impact (Material Issues)	31	-	-	-
MATERIAL TOPIC: PRIVATE SECTOR AS FORCE MULTIPLIERS FOR MISSION SUCCESS						
GRI 3: Material Topics 2021	3-3 Management of material topics	Stewarding Singapore's Environment (Safeguarding Public Health and the Environment - Year of Public Hygiene - Enhancing Industry Capability and Leveraging Technology)	10	-	-	-
		Stewarding Singapore's Environment (Protecting Our Resources - Waste and Recycling - Equipping Businesses through the Zero Waste Manager Course; Advancing Environmental Services Through Innovation; Advancing Waste Management Technologies)	14	-	-	-

GRI 3: Material Topics 2021		Managing Our Impact (Material Issues)	32	-	-	-
MATERIAL TOPIC: ACTIVE COMMUNITY AS STEWARDS OF THE ENVIRONMENT						
GRI 3: Material Topics 2021	3-3 Management of material topics	Stewarding Singapore's Environment (Safeguarding Public Health and the Environment - Year of Public Hygiene - Rallying the Community)	10	-	-	-
		Stewarding Singapore's Environment (Safeguarding Public Health and the Environment - Oil Spill)	10	-	-	-
		Living Our EARTH Values (Engaging Our Partners and Community - Engaging Stakeholders in Environmental Stewardship)	23-24	-	-	-
		Managing Our Impact (Material Issues)	32	-	-	-
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programmes	Stewarding Singapore's Environment (Safeguarding Public Health and the Environment - Year of Public Hygiene - Rallying the Community)	10	-	-	-
		Stewarding Singapore's Environment (Safeguarding Public Health and the Environment - Oil Spill)	10	-	-	-
		Living Our EARTH Values (Engaging Our Partners and Community - Engaging Stakeholders in Environmental Stewardship; Giving Back to Society)	23-24	-	-	-

GRI 413: Local Communities 2016	413-2 Operations with significant actual and potential negative impacts on local communities	-	-	Not applicable	NEA's operations do not have any significant actual and potential negative impact on local communities.	-
MATERIAL TOPIC: PUBLIC SECTOR TAKING THE LEAD IN ENVIRONMENTAL SUSTAINABILITY						
GRI 3: Material Topics 2021	3-3 Management of material topics	Stewarding Singapore's Environment (Safeguarding Public Health and the Environment - Oil Spill; Pollution Control; Radiation Safety)	10-13	-	-	-
		Stewarding Singapore's Environment (Protecting Our Resources - Waste and Recycling; Energy Efficiency)	13-14	-	-	-
		Stewarding Singapore's Environment (Deepening Singapore's Resilience - Climate Resilience)	15	-	-	-
		Building Tomorrow's Capabilities (Zero Waste; Integrated Waste Management Facility; Net Zero; Nuclear Safety)	17-19	-	-	-
		Managing Our Impact (Material Issues)	32	-	-	-
MATERIAL TOPIC: INTERNATIONAL PARTNERSHIPS AS STRATEGIC LEVERS						
GRI 3: Material Topics 2021	3-3 Management of material topics	Stewarding Singapore's Environment (Safeguarding Public Health and the Environment - Radiation Safety)	12-13	-	-	-
		Stewarding Singapore's Environment (Deepening Singapore's Resilience - Climate Resilience - Strengthening Regional Meteorological Capabilities)	15	-	-	-

		Stewarding Singapore's Environment (Deepening Singapore's Resilience - Disease Control - Building International Capabilities for Disease Control)	15	-	-	-
		Building Tomorrow's Capabilities (Net Zero - Collaborating on International Carbon Credits)	18	-	-	-
		Building Tomorrow's Capabilities (Nuclear Safety)	19	-	-	-
		Living Our EARTH Values (Engaging Our Partners and Community - Fostering International Partnerships and Exchanges)	23	-	-	-
		Managing Our Impact (Material Issues)	32	-	-	-
MATERIAL TOPIC: CREATION OF CAPACITY						
GRI 3: Material Topics 2021	3-3 Management of material topics	Stewarding Singapore's Environment (Safeguarding Public Health and the Environment - Year of Public Hygiene - Enhancing Industry Capability and Leveraging Technology)	10	-	-	-
		Stewarding Singapore's Environment (Safeguarding Public Health and the Environment - Pollution Control - Developing Specialised Air Monitoring Capabilities; Improving Inland Water Quality Monitoring)	11-12	-	-	-
		Building Tomorrow's Capabilities (Integrated Waste Management Facility)	17-18	-	-	-

GRI 3: Material Topics 2021		Transforming Today's Operations (After-death; Cleanliness; Enforcement)	21	-	-	-
		Living Our EARTH Values (Spearheading Innovation and Excellence - Surpassing One Million Downloads for myENV)	22	-	-	-
		Managing Our Impact (Material Issues)	32	-	-	-
MATERIAL TOPIC: STRONG CAPABILITIES FOR MISSION SUCCESS						
GRI 3: Material Topics 2021	3-3 Management of material topics	Stewarding Singapore's Environment (Deepening Singapore's Resilience - Climate Resilience)	15	-	-	-
		Building Tomorrow's Capabilities (Nuclear Safety)	19	-	-	-
		Transforming Today's Operations (After-death; Cleanliness; Enforcement)	21	-	-	-
		Living Our EARTH Values (Developing Our Workforce)	28	-	-	-
		Managing Our Impact (Material Issues)	32	-	-	-
MATERIAL TOPIC: STRONG CORPORATE PRACTICES FOR A SUSTAINABLE ORGANISATION						
GRI 3: Material Topics 2021	3-3 Management of material topics	Living Our EARTH Values (Spearheading Innovation and Excellence - Managing Financial Resources Responsibly; Ensuring Good Procurement Practices)	23	-	-	-
		Living Our EARTH Values (Prioritising Workplace Safety and Health; Placing Our People First)	24-27	-	-	-

GRI 3: Material Topics 2021		Living Our EARTH Values (Developing Our Workforce; Supporting Employee Engagement and Well-being)	28-29	-	-	-
		Managing Our Impact (Material Issues)	33	-	-	-
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	Annual Financial Statements	Pg 6 of Financial Statements	-	-	-
	201-2 Financial implications and other risks and opportunities due to climate change	Managing Our Impact (NEA's Climate Resilience)	35-37	-	-	-
	201-3 Defined benefit plan obligations and other retirement plans	Annual Financial Statements	Pg 14-15 of Financial Statements	-	-	-
	201-4 Financial assistance received from government	Living Our EARTH Values (Spearheading Innovation and Excellence - Managing Financial Resources Responsibly)	23	-	-	-
Annual Financial Statements		Pg 6 and 10 of Financial Statements	-	-	-	
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	Living Our EARTH Values (Spearheading Innovation and Excellence - Ensuring Good Procurement Practices)	23	-	-	-
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	Living Our EARTH Values (Spearheading Innovation and Excellence - Ensuring Good Procurement Practices)	-	Information unavailable / incomplete	NEA has not started tracking new suppliers that have been screened using environmental criteria.	-

GRI 308: Supplier Environmental Assessment 2016	308-2 Negative environmental impacts in the supply chain and actions taken	Living Our EARTH Values (Spearheading Innovation and Excellence - Ensuring Good Procurement Practices)	23	-	-	-
GRI 401: Employment 2016	401-1 New employees hires and employee turnover	Living Our EARTH Values (Embracing Workforce Diversity)	27-28	-	-	-
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	Living Our EARTH Values (Supporting Employee Engagement and Well-being)	29	-	-	-
	401-3 Parental leave	Living Our EARTH Values (Supporting Employee and Engagement and Well-being)	29	-	-	-
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	Living Our EARTH Values (Prioritising Workplace Safety and Health)	24-25	-	-	-
	403-2 Hazard identification, risk assessment, and incident investigation	Living Our EARTH Values (Prioritising Workplace Safety and Health)	24-25	-	-	-
	403-3 Occupational health services	Living Our EARTH Values (Prioritising Workplace Safety and Health)	24-25	-	-	-
	403-4 Worker participation, consultation, and communication on occupational health and safety	Living Our EARTH Values (Prioritising Workplace Safety and Health)	24-25	-	-	-

GRI 403: Occupational Health and Safety 2018	403-5 Worker training on occupational health and safety	Living Our EARTH Values (Prioritising Workplace Safety and Health)	24-25	-	-	-
	403-6 Promotion of worker health	Living Our EARTH Values (Prioritising Workplace Safety and Health; Supporting Employee Engagement and Well-being)	24-26, 29	-	-	-
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationship	Living Our EARTH Values (Prioritising Workplace Safety and Health)	24-25	-	-	-
	403-8 Workers covered by an occupational health and safety management system	Living Our EARTH Values (Prioritising Workplace Safety and Health)	24-25	-	-	-
	403-9 Work-related injuries	Living Our EARTH Values (Prioritising Workplace Safety and Health)	25	-	-	-
	403-10 Work-related ill health	Living Our EARTH Values (Prioritising Workplace Safety and Health)	25-26	-	-	-
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	Governance Living Our EARTH Values (Embracing Workforce Diversity)	7-8 27-28	-	-	-
	405-2 Ratio of basic salary and remuneration of women to men	-	-	Confidentiality constraints	NEA's compensation policies are aligned with PSD's guidelines. As the information is confidential, no further details will be shared.	-

GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	Living Our EARTH Values (Placing Our People First - Employee Grievance)	-	GRI 406-1: Confidentiality constraints	As the information is confidential, details are not disclosed due to their sensitive nature.	-
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	Living Our EARTH Values (Spearheading Innovation and Excellence - Ensuring Good Procurement Practices)	-	Information unavailable / incomplete	NEA has not started tracking new suppliers that have been screened using social criteria.	-
	414-2 Negative social impacts in the supply chain and actions taken	Living Our EARTH Values (Spearheading Innovation and Excellence - Ensuring Good Procurement Practices)	23	-	-	-
MATERIAL TOPIC: CONDUCTIVE CULTURE FOR COLLABORATION, LEARNING AND INNOVATION						
GRI 3: Material Topics 2021	3-3 Management of material topics	Living Our EARTH Values (Developing Our Workforce)	28	-	-	-
		Managing Our Impact (Material Issues)	33			
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	-	-	Not applicable	NEA has pivoted towards competency-based learning, prioritising job-specific and organisational competencies over the number of learning hours.	-
	404-2 Programmes for upgrading employee skills and transition assistance programmes	Living Our EARTH Values (Developing Our Workforce)	28	-	-	-
	404-3 Percentage of employees receiving regular performance and career development reviews	Living Our EARTH Values (Developing Our Workforce)	28	-	-	-



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