







Sembcorp has long held a strong commitment to sustainability. We believe that responsible corporates can play a role as agents of transformation for a sustainable future. We see sustainability at our company as inextricably linked to our ability to deliver long-term value and growth to all our stakeholders.

Sustainability is one of the key pillars of our business strategy that underpins our value creation process. In 2018, we developed a framework to articulate and drive our ambition to create a sustainable future. As a Group, we want to enable a low-carbon and circular economy, empower our people and communities and embed responsible business practices throughout our organisation.

We are a signatory to the United Nations Global Compact (UNGC) and a supporter of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD).

We participate in RobecoSAM's annual Corporate Sustainability Assessment that determines inclusion in the Dow Jones Sustainability Index, as well as the CDP (formerly known as the Carbon Disclosure Project) climate change programme.

For a list of our policies, certified facilities as well as memberships and participation in external initiatives, please visit the Reports & Policies and the Initiatives, Memberships and Certifications pages in the Sustainability section of our website.

In 2018. Sembcorp was once again selected as an index component of both the Dow Jones Sustainability Asia Pacific Index and the SGX Sustainability Leaders Index. We were conferred the Best Newcomer Award at the Sustainable Business Awards Singapore, and ranked sixth in the Singapore Governance and Transparency Index. At the Singapore Corporate Awards 2018, Sembcorp took home the gold award for the Best Annual Report for companies with market capitalisation of S\$1 billion and above. We were ranked 27th in the Top 100 Green Utilities and 11th in the Top Generators ranked by Renewables Capacity in Energy Intelligence's Top 100 Green Utilities.

# **Our Sustainability Framework**

The United Nations (UN) forecasts that by 2030, world population will have surpassed 8.5 billion, and the threat of climate change coupled with growing demand for critical resources will add considerable stress to our societies and the environment. Our future depends on urgent action, new business models, innovative technology and behavioural change. We believe that we must be part of the sustainable development agenda, and have a responsibility to our stakeholders to provide solutions that create value and positive impact for society. By meeting the needs of society, while managing our material environmental, social and governance (ESG) risks and opportunities, we believe that we will succeed as a business and give our shareholders a sustainable return.

Our Sustainability Framework articulates three ambitions for the future and demonstrates our support for the UN Sustainable Development Goals (SDGs). It directs our approach to integrate sustainability and manage our material ESG issues within our business strategy.

# **Driven by Our Purpose**

Our purpose and passion is to do good and play our part in creating a sustainable future. We deliver energy and innovative solutions that support development and create value – for our stakeholders and communities.

# **Underpinned by Our Values**



# **Creative Insight**

We innovate and solve complex problems



We walk the talk, do the right thing and deliver on our promises



We value our people, forge strong partnerships and care for our communities and the environment









**EMBEDDING RESPONSIBLE** 

**BUSINESS** 

**PRACTICES** 



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Maintaining an effective governance

# **Ethical Business**

Fostering an ethical culture and conducting our business with integrity, and ensuring we comply with all legal and regulatory requirements

Ensuring effective identification of material risks and putting in place an adequate and effective risk management and internal control system

# **Climate Change Health and Safety**

**EMBEDDING** 

RESPONSIBLE BUSINESS

**PRACTICES** 

**EMPOWERING** 

**OUR PEOPLE** 

COMMUNITIES

**ENABLING A** 

LOW-CARBON AND CIRCULAR

**ECONOMY** 

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Reducing our greenhouse gas (GHG) emissions intensity and moving towards a balanced portfolio of low-carbon energy assets

# **Resource Management**

Growing and innovating our business solutions to support a circular economy and ensuring we manage our operations efficiently to avoid or minimise the use of resources

# **Local Environmental Protection**

impacts and ensuring the highest standards of environmental management

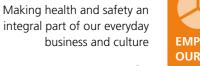
# Minimising negative environmental

# **Corporate Governance**

and decision-making structure

# and Compliance

# **Risk Management**



# People

Creating a values-based and performance-led culture. Providing an engaging employment experience where our people can grow and excel

# Community

Contributing to the sustainable development of our communities through engagement and partnerships and investing in initiatives that make a lasting positive impact













4 QUALITY EDUCATION

# Sustainability governance

Sembcorp's board of directors oversees the business affairs of the Group and is collectively responsible for our long-term success. The main duties of the board include providing leadership on Sembcorp's overall strategy, which takes into consideration sustainability issues. Our last materiality review was in 2016. In 2018, in line with the development of our Sustainability Framework, our management, with guidance from the board's Risk Committee, updated the ESG issues that are material to the Group's long-term sustainability. These nine ESG issues are presented in our Sustainability Framework on pages 78 and 79.

Sembcorp also has a Sustainability Steering Committee (SSC) that provides strategic direction for managing sustainability-related risks and opportunities. The SSC guides the development and improvement of frameworks, policies, guidelines, processes and initiatives to ensure that sustainability issues are effectively managed. It also directs the preparation of Sembcorp's Sustainability Report, and provides recommendations to the board's Risk Committee for approval. The SSC is chaired by our Group Chief Financial Officer, and comprises senior executives who are accountable for the management of Sembcorp's material issues.

In addition, our Integrated Assurance Framework ensures that key financial, operational, compliance and information technology (IT) risks are reviewed and tested using a robust assurance process.

As an initial but significant step, we revised the performance scorecard for our leadership team in 2018 to include specific

# **Board Statement**

Sembcorp's board of directors is collectively responsible for the long-term success of the company. The board considers sustainability issues as part of its strategy formulation. It has determined Sembcorp's material ESG factors, and exercises oversight in the management and monitoring of our material ESG factors.

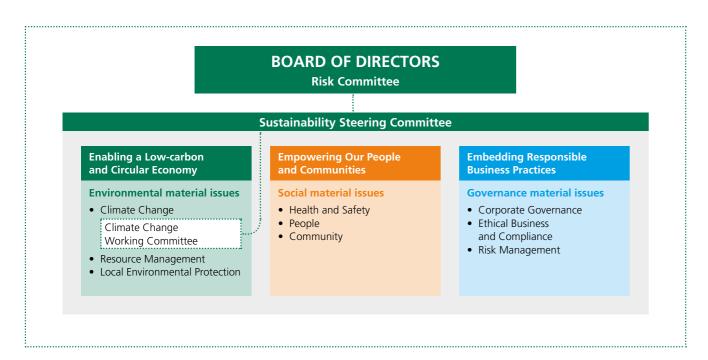
ESG components. With this, the award of our senior executives' performance incentives will specifically take into account ESG performance and the achievement of ESG targets. This underscores the importance we place on addressing ESG risks and opportunities.

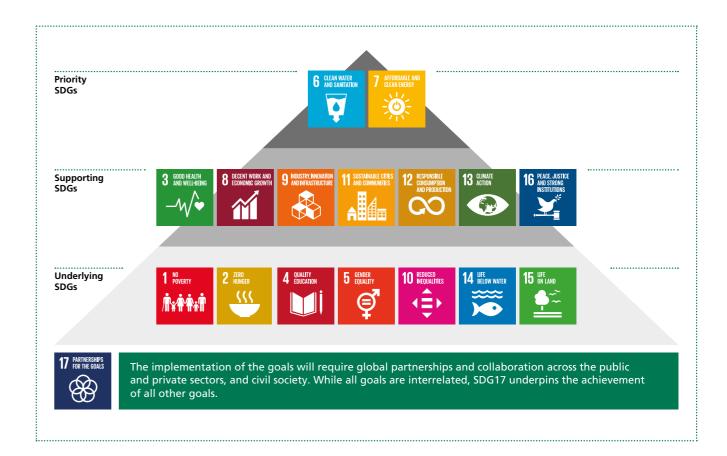
# **Sustainability contact**

We welcome feedback on our sustainability issues and reporting at sustainability@sembcorp.com.

# **Sustainable Development Goals**

The SDGs and their accompanying targets were ratified by 193 states at the historic UN Summit in September 2015. The SDGs set out a plan of action needed to address areas of critical importance for humanity and the planet by 2030. The scale and ambition of the SDGs mean that they cannot be achieved by governments alone. Businesses and other organisations also play important roles in addressing the sustainable development agenda.





# The Sustainable Development Goals offer businesses an invaluable opportunity to transform communities and economies for the better

Our commitment to enable a low-carbon and circular economy, empower our people and communities, and embed responsible business practices throughout our organisation, aligns with the framework set out by the SDGs.

We have reviewed the SDGs against our material issues to identify the most significant positive and negative impacts of our operations. We have also considered opportunities where we can make the biggest contributions towards the SDGs while growing our business sustainably.

For more information on our support of the SDGs, please visit Our Approach page in the Sustainability section of our website.



Our suite of water solutions for industrial and municipal customers helps treat wastewater, reclaim and supply water. These solutions help prevent pollution while extending the use of water beyond one cycle, thus reducing the use of freshwater and potable water.

**Target:** In 2018, we reclaimed around 61 million m<sup>3</sup> of water. We aim to develop a target in this area



As an integrated energy player, our business strategy is aligned to meeting the global need to decarbonise. We aim to increase our share of renewable assets, while managing our existing thermal assets to operate at optimal efficiency.

**Target:** We plan to double our renewable energy generation capacity (from 2017 baseline) by 2022

Sembcorp Industries Annual Report 2018

# **Key performance indicators**

|  | 2018    | 2017              | 2016    |
|--|---------|-------------------|---------|
| Environmental  |         |                   |         |
| Climate Change <sup>1,2</sup>  |         |                   |         |
| Direct greenhouse gas (GHG) emissions (million tonnes of CO <sub>2</sub> equivalent) | 23.6    | 22.2r             | 15.1    |
| GHG emissions intensity (tonnes of CO <sub>2</sub> equivalent per megawatt hour)     | 0.55    | 0.54 <sup>r</sup> | 0.45    |
| Renewable energy generation capacity (megawatts)                                     | 2,589   | 2,182             | 1,720   |
| Local Environmental Protection   |         |                   |         |
| Water withdrawal (million m³)  | 1,794.0 | 1,782.3°          | 1,874.0 |
| Waste generated <sup>3</sup> (thousand tonnes)                                       | 1,713.3 | 1,452.7°          | 927.1   |
| Hazardous waste  | 39.9    | 10.0              | 11.9    |
| Non-hazardous waste  | 1,673.4 | 1,442.7           | 915.2   |
| Significant spills <sup>4</sup>  | 0       | 0                 | 0       |
| Social   |         |                   |         |
| Health and Safety⁵   |         |                   |         |
| Number of fatalities <sup>6</sup>  | 1       | 3                 | 3       |
| Lost time injury rate per million man-hours  | 0.5     | 1.1               | 1.2     |
| Accident severity rate per million man-hours <sup>7</sup>                            | 10.1    | 15.3              | 17.2    |
| People   |         |                   |         |
| Employee turnover8 (%)   | 11.6    | 10.1              | 11.4    |
| Average training hours per employee <sup>9</sup>                                     | 25.2    | 23.8              | 28.2°   |
| Community  |         |                   |         |
| Community contributions 10 (S\$ million)   | 1.1     | 5.5               | 4.2     |

More performance data, including governance and qualitative data on each of our material issues, is available in this report, as well as in the Sustainability section of our website.

For more information on our stakeholder engagement, materiality process and reporting scope and practice, please visit Our Approach page in the Sustainability section of our website.

- 1 Emissions data covers entities that produce GHGs from the combustion of fossil fuels consumed in our Utilities business' assets. It excludes emissions from anaerobic wastewater treatment plants, and maintenance and servicing equipment. Only CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O emissions are included in the calculation of direct GHG emissions. Global warming potential factors used are from the UN 2006 Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report for 2016 data, and the IPCC Fifth Assessment Report for 2017 and 2018 data. A 100-year time horizon is applied. Commentary on our performance can be found on pages 91 and 92 of this report
- <sup>2</sup> Emissions data for 2016 is presented using an operational approach, while emissions data for 2017 and 2018 are presented using an equity share approach
- <sup>3</sup> Data for waste generated excludes waste that is collected and incinerated for our customers
- <sup>4</sup> A significant spill is defined as that which resulted in a fine equal to or above S\$50,000
- <sup>5</sup> Health and safety data reflects group-wide performance. Data covers both assets in operation and under construction. A detailed breakdown of health and safety data is available in the Performance and Data Commentary report in Our Performance page in the Sustainability section of our website
- <sup>6</sup> Data covers employees and contractors as well as members of the public. Details of fatalities are reported on page 101
- 7 The accident severity rate excludes fatalities. The accident severity rate including fatalities is reported as part of detailed performance data, available in the Performance and Data Commentary report in Our Performance page in the Sustainability section of our website
- 8 Data covers both voluntary and involuntary turnover of permanent employees of Sembcorp and our subsidiaries, excluding Sembcorp Marine
- <sup>9</sup> Data covers permanent and contract employees
- <sup>10</sup> Data from 2017 onwards covers assets under construction
- r Indicates restated figure. Details can be found in the Performance and Data Commentary report of the respective year in Our Performance page in the Sustainability section of our website
- e Indicates data is based on management's best estimates; we have since refined the accuracy and consistency of the data

# **Our Supply Chain**

We recognise the importance of integrating sustainability practices into our procurement and supply chain management processes.

Sembcorp's main suppliers consist of original equipment manufacturers (OEMs), material suppliers, and engineering, procurement and construction (EPC) contractors. OEMs supply us with large-scale equipment such as gas turbines and desalination units as well as process equipment such as switchgears and control systems. Material suppliers provide fuel and chemicals needed to run our plants. EPC contractors provide detailed EPC services for our greenfield plants.

Our plants are designed and built to international codes and standards and it is with this perspective that we procure our equipment. We seek to ensure we procure high-quality and technologically advanced equipment that is durable and from suppliers who share our commitment to sustainability. Our Group Procurement Policy provides guidelines and control principles for various stages of the procurement process.

We value the opportunity to positively influence our service providers and suppliers towards greater health, safety and environment (HSE) awareness and social responsibility. In 2018, we launched our Supplier Code of Conduct. The Supplier Code defines the ESG standards of practice that we require of our suppliers. We will be implementing the Supplier Code across our markets in 2019, and will establish an annual assessment of procurement practices.

To improve the management of our suppliers and integrate the requirements of our Supplier Code across all stages of procurement, we are currently reviewing our due diligence process. For example, we have enhanced our existing vendor pre-qualification process to incorporate more extensive ESG criteria. Going forward, we will look into improving the evaluation of vendor performance for our critical suppliers.

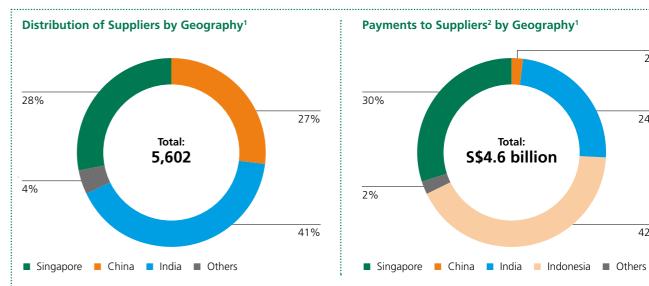
# Supplier diversification

Our efforts to ensure supply chain security include diversifying supply to mitigate concentration risk. Coal supply is managed via a portfolio of suppliers and country sources.

2%

24%

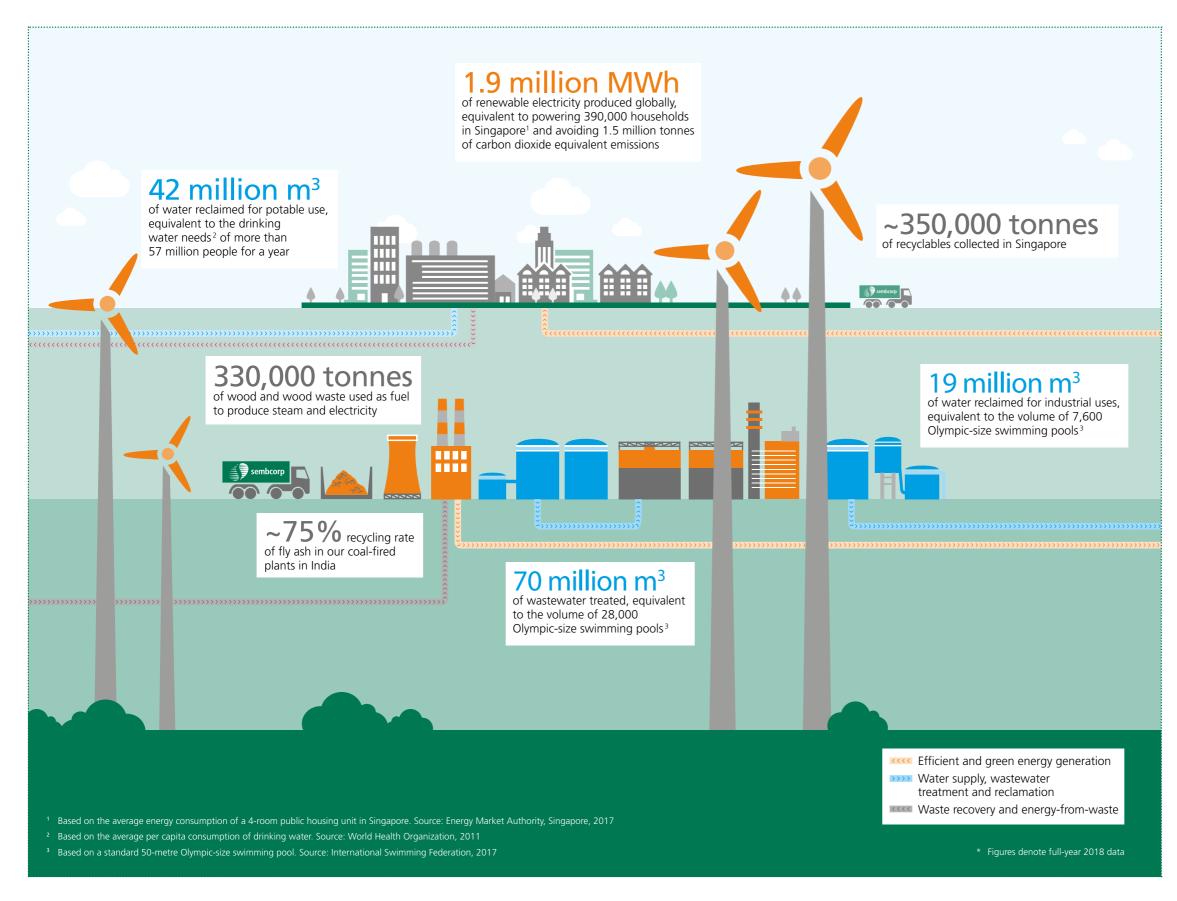
42%



Our suppliers and contractors provide a wide range of products and services including fuel and equipment for electricity generation, chemicals for water treatment as well as maintenance services for our power and water treatment plants.

In 2018, our operations in our key markets of Singapore, China and India procured goods and services from 5,602 suppliers, with a total expenditure of S\$4.6 billion. Spending on local<sup>3</sup> suppliers amounted to 42% for our Singapore operations, 100% for our China operations and 67% for our India operations. 42% of total payments to suppliers went to companies in Indonesia. This was mostly for our natural gas supply for Singapore operations and part of our coal supply for India thermal power operations.

- <sup>1</sup> Data from some operations have been aggregated
- <sup>2</sup> Payments made to suppliers include payments to governments, banks and financial institutions
- 3 Local suppliers are defined as suppliers and service providers who are registered in the country where the product or service was procured



In Singapore, Sembcorp's operations maintain at least one primary and one secondary supplier for critical spare parts and consumables, where possible.

# Fuel management

Fuel is a significant cost component for Sembcorp's power and steam generation operations. Therefore, managing our various fuel sources, along with their supply chains, is a key focus. Our fuel management teams look into issues such as contract management, hedging / trading and procurement, as well as logistics such as transportation and shipping, to ensure the security and reliability of our fuel supply. We secure long-term contracts for coal and gas supplies with reliable counterparties who have reserves that can sustain the useful lives of our assets. To further diversify our fuel mix and tap on sustainable sources, Sembcorp has increased our use of renewables and alternative fuels.

# **Innovative Solutions for a Sustainable Future**

The challenge facing industries and communities today is one of balancing development with resource scarcity and environmental concerns. Sembcorp believes that we have a part to play in contributing to a sustainable future.

Our Utilities business uniquely offers energy, water and waste solutions. We leverage group capabilities and strengths to minimise the impact of our activities on the environment and create innovative solutions for our customers.

# **Enabling a Low-carbon and Circular Economy**



## **Our Prioritie**

Reducing our greenhouse gas (GHG) emissions intensity and moving towards a balanced portfolio of low-carbon energy assets

## Relevant SDG







# How We Did in 2018

We grew our renewables capacity by around 20% to 2,600 megawatts. Our GHG emissions intensity was higher in 2018. However, we remain committed to meeting our 2022 target

> Pages 87, 91 and 92



## Our Priorities

Growing and innovating our business solutions to support a circular economy and ensuring we manage our operations efficiently to avoid or minimise the use of resources

# Relevant SDGs





# How We Did in 2018

We reclaimed around 61 million m<sup>3</sup> of water. We aim to develop a target in this area

> Pages 91 and 92



## Our Prioritie

Minimising negative environmental impacts and ensuring the highest standards of environmental management

## Relevant SDGs







# How We Did in 2018

We registered zero significant spills

> Pages 92 and 93

# Why this is material

Climate Change

As an energy producer, our power and steam generation activities release GHG emissions that contribute to climate change. Events and actions by governments in response to climate change pose potential regulatory, technological, physical and reputational risks to our businesses. One such significant development was the 2015 Paris Agreement on climate change, which countries accounting for over 88% of global GHG emissions have ratified. However, we recognise that in spite of these challenges, we are also uniquely positioned to leverage opportunities that have arisen from actions in response to climate change.

As part of Sembcorp's Climate Change Strategy, we have identified the climate-related risks and opportunities material to our Utilities business as follows:

• Changes in policy and regulation: Increasingly, governments are adapting their policies and regulations as part of country-level strategies to reduce emissions and support the transition to a low-carbon economy. Increasing global adoption of cap-and-trade schemes and carbon taxes will accelerate current trends favouring renewables, which in turn can significantly impact the future profitability of our assets and investments

- Changes in technology and customer demand: Falling costs and improved performance of new and emerging technologies such as photovoltaics, energy storage, smart grids and downstream technologies including electric vehicles and decentralised generation, are bringing about significant changes in the energy landscape. As a result of these technological changes, the needs of our markets and customers will change
- Weather disruption: Physical environmental risks, such as extreme weather linked to climate change, may cause disruptions to our assets and operations, and to the economic value chains and communities in which we operate. Exposure to physical risks varies widely across our operating geographies and across our businesses, from our power assets to our desalination plants
- Stakeholder expectations: Our stakeholders are
  increasingly focused on the impact of climate change
  and how we respond to climate change-related risks
  and opportunities. As a responsible corporate citizen,
  we recognise our obligations towards our stakeholders.
  Maintaining our stakeholder relationships is critical to our
  licence to operate and essential to protect our
  business reputation

Our climate change public disclosures are guided by the recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD).

# **Resource Management**

Global population growth and urbanisation have led to unprecedented demand for critical resources. This has underscored the need for us to consume resources responsibly, while pursuing innovations that support a circular economy. As an integrated energy player and a provider of water and waste management solutions, our innovative solutions help others on the journey towards sustainable development.

Operationally, achieving optimal energy and water efficiency are also business drivers for us. Maximising our efficiency and

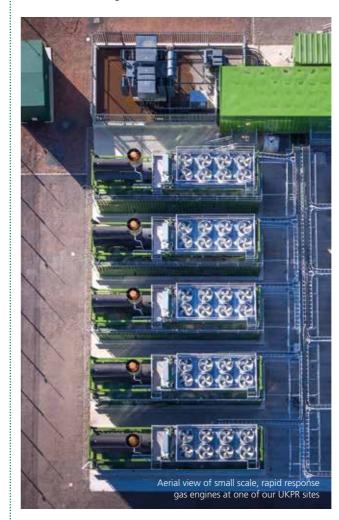
optimising our operations reduces our consumption of natural resources and our impact on the environment.

# **Local Environmental Protection**

As a result of the products and services we provide, our operations have varying direct and indirect impacts on the environment. These include the discharge of effluent and disposal of waste, as well as the release of air pollutants into the atmosphere. Any improper or non-compliant emission, discharge or disposal may result in harm to the environment and public health, and threaten our long-term viability.

# **Making Progress on Our Low-carbon Strategy**

We are focused on becoming one of the region's leading independent renewable energy players. In 2018, we made notable progress towards growing our renewables and low-carbon portfolio. We grew our global renewables portfolio in operation and under development by around 20% to 2,600 megawatts.



In Singapore, we grew to become one of the nation's leading solar power players, with nearly 120 megawatt peak capacity of rooftop solar projects across over 1,500 sites.

In India, we emerged as the largest cumulative winner in the first three nationwide wind power auctions conducted by SECI, with 800 megawatts secured. In 2018, we further cemented our reputation and credibility as a green energy player when we became the first company to deliver installed capacity awarded under these contracts. Power generated with our first 250-megawatt SECI 1 project will be supplied to Jharkhand, Bihar, Uttar Pradesh and Delhi, and will power more than 216,000 homes while avoiding over 700,000 tonnes of carbon dioxide equivalent ( $CO_3$ e) emissions per annum.

In the UK, we acquired UK Power Reserve (UKPR), the UK's largest decentralised provider of balancing services with a nationwide fleet of rapid response gas engines and upcoming battery storage projects. UKPR's total capacity of 813 megawatts includes 120 megawatts of battery storage, making it the largest battery operator in the UK. UKPR will support and enable a renewable future for the UK by bridging supply gaps between intermittent renewables generation and conventional centralised thermal generation.

We also established a beachhead in Australia through our investment in Vellocet Clean Energy. Our investment will allow us to grow in the Australian power market, particularly in the direct supply of renewable energy to companies.

These projects demonstrate our commitment to our priority UN SDG 7 (Affordable and Clean Energy), which aims to ensure access to affordable, reliable, sustainable and modern energy for all.

# Our approach

Climate Change

The table below sets out our management approach to climate change issues guided by TCFD recommendations.

For more information on our Climate Change Strategy, please visit the Reports & Policies page in the Sustainability section of our website.

# **TCFD Recommended Disclosures**



Climate-related issues are managed through our Climate Change Working Committee (CCWC), led by the head of our Renewables & Environment business. The CCWC reports to the Sustainability Steering Committee (SSC), which reports to the board's Risk Committee on sustainability issues including climate change. The achievement of our climate change targets is monitored and incentivised via the performance scorecards of our Group President & CEO and other relevant senior executives.



In formulating Sembcorp's Climate Change Strategy, the Group identified climaterelated risks and opportunities for our Utilities business by evaluating four key

risk factors: physical environmental impacts on our assets, brand and reputational risks, requirements for regulatory compliance, and product and market risks.

We evaluated these climate-related risks and opportunities using near-term (2017 to 2022) and medium-term (2030) lenses, and also considered long-term (2050) trends such as a science-based target for the utilities sector by 2050. When evaluating our markets from a climate-based scenario lens, we used International Energy Agency (IEA) scenarios such as the New Policies Scenario and the 450 Scenario.

The key risks related to climate change that Sembcorp's businesses face are changes in policy and regulation, technology and customer demand, and weather disruption and stakeholder expectation.

The findings from our climate-related scenario analysis shaped our strategy towards a more balanced energy portfolio. We will restrict our investments in coal-fired power plants and improve the energy efficiency of our existing plants. We will focus on growing our gas and renewables portfolio as well as our green business lines while exploring new business models, products and services that focus on energy efficiency, digitalisation and new energy solutions.



As part of the development of our Climate Change Strategy, climate-related risks and opportunities were identified as described above. The ongoing identification, assessment and management of climate-related risks is

complex and multi-dimensional. Currently, our markets and business units perform a high level impact assessment and review the adequacy and effectiveness of controls in addressing climate-related risks as part of our Governance Assurance Framework (GAF). We are in the midst of

transitioning from the GAF to an Integrated Assurance Framework, which provides a more holistic and robust basis of assurance for the adequacy and effectiveness of our risk management and internal control system.

The process identifies risk, including climate-related risks, from a top-down strategic perspective and a bottom-up perspective from each key market. We are committed to strengthening our organisational capabilities in addressing climate-related risks.



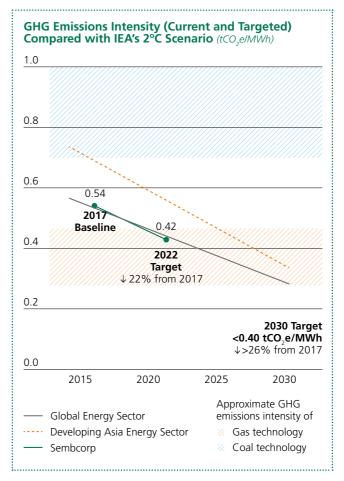
The key metrics and targets we have set are reductions in our GHG emissions intensity and growth of our renewables portfolio.

We have set emissions intensity targets to be in line with the scale of reductions required to keep the increase in global average temperature to below 2°C above pre-industrial levels as per projections in the IEA World Energy Outlook 2016. Our target is to reduce our GHG emissions intensity<sup>1</sup> from 0.54 tonnes of carbon dioxide equivalent per megawatt hour (tCO<sub>2</sub>e/MWh) in 2017 to 0.42 tCO<sub>2</sub>e/MWh by 2022, and to less than 0.40 tCO<sub>3</sub>e/MWh by 2030.

We plan to achieve these targets through two key thrusts. The first is to reduce negative impact by reducing emissions; the second is to move towards a balanced portfolio of low-carbon energy assets by growing our renewables capacity.

Our wind and solar energy assets generate low-carbon energy for customers. In 2018, we grew our wind and solar power capacity in operation and under development by around 20% to 2,600 megawatts. This is equivalent to taking approximately 550,000 cars off the road for a year or avoiding 2.5 million tonnes of carbon dioxide equivalent ( $CO_2$ e) emissions.

- <sup>1</sup> Refers to GHG emissions intensity of our Utilities business' assets that produce GHGs from the combustion of fossil fuels
- <sup>2</sup> Based on an average car emitting 4.6 tonnes of carbon dioxide per year. Source: US Environmental Protection Agency, 2017



# **Resource Management**

Sembcorp provides solutions in energy, water and waste management that support a circular economy and help minimise the use of resources.

In addition, we are committed to innovation and undertake various initiatives to improve operational efficiency in our energy and water plants. We collaborate with institutions of higher learning, research institutes as well as private sector players to explore solutions. To further encourage innovation from the bottom up, Sembcorp's !DEA Awards Programme also recognises innovative ideas and efforts across the Group.

# Energy management

Our power business generates electricity and steam. To ensure our assets generate energy efficiently, we invest in the latest technologies when developing new plants as well as retrofitting existing ones. We proactively pursue optimisation to improve our efficiency while reducing emissions. Energy efficiency parameters are embedded in our plant operation management systems and are monitored daily. A technical forum discussion is held monthly for our global energy

operations to facilitate best practice case studies and sharing of operational and efficiency issues.

# Water and wastewater management

Our water business comprises industrial wastewater treatment, water reclamation and seawater desalination. Through these services, we are able to provide solutions to issues related to water scarcity as well as water pollution.

Sembcorp's comprehensive suite of water solutions is able to integrate water supply, wastewater treatment and water reclamation into a closed loop for our customers. This approach minimises liquid discharge and reduces environmental impact while conserving water resources. In treating industrial wastewater, we apply innovative technologies to treat multiple streams of industrial wastewater we receive from our customers. We leverage different wastewater influent profiles to optimise the wastewater treatment process. In doing so, we reduce both energy consumption and chemical use in our treatment process. In some of our plants, we further channel a proportion of treated water for reclamation, and the reclaimed water is supplied to our customers for their industrial processes. In Singapore, our NEWater plant produces reclaimed water that helps meet Singapore's potable water needs.

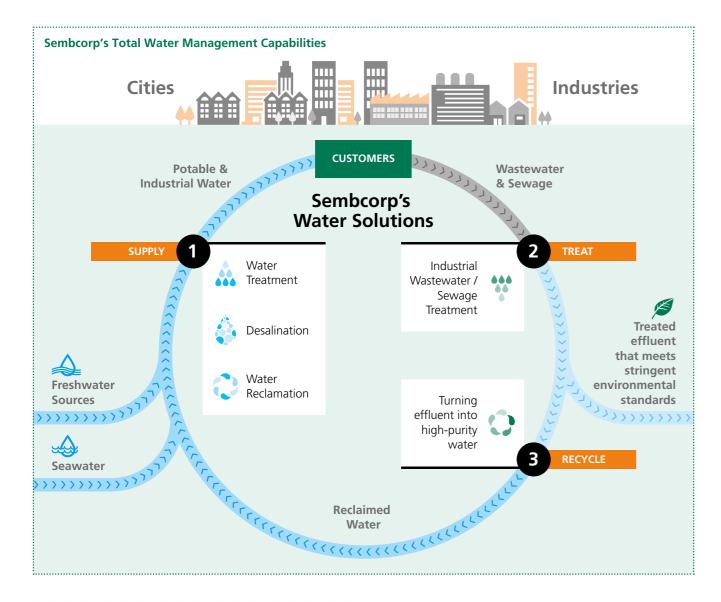
Our large-scale integrated power and desalination plants use multi-stage flash distillation and reverse osmosis to provide high-quality water to industries and households in water-scarce areas such as Oman and the UAE. Our desalination plant in the UAE uses waste steam from our power plant as part of its water production process.

Energy plants use large amounts of water for cooling purposes. A majority of our energy plants use seawater for cooling purposes, to minimise the use of freshwater and groundwater. In some of our power plants, we further employ closed loop cooling water systems to minimise water drawn from the ocean.

# Waste management

We aim to apply a circular approach across our businesses. We operate energy-from-waste plants in Singapore and the UK, where energy is generated from waste. In our coal-fired power plants in India, fly ash is generated as a by-product of the combustion of coal. We channel the majority of this fly ash to vendors who recycle it into cement and bricks.

In our industrial wastewater treatment operations, we actively look to reduce the volume of sludge generated as a by-product of the treatment process. Where feasible, our sludge disposal vendors convert non-hazardous sludge into products such as bricks and plant fertiliser.



# **Recovering Energy from Waste**

In 2018, our Energy-from-Waste Plant in Singapore started commercial operation. The plant is designed to consume 1,000 tonnes of industrial and commercial waste per day collected by Sembcorp's solid waste management operations. We also recycle woodchips processed from construction and demolition waste to produce steam at our Woodchip Boiler Plant. In doing so, we use around 16%¹ of Singapore's wood waste annually. At our biomass plant in the UK, we also generated 232,000 megawatthours of electricity, which is equivalent to the annual electricity consumption of over 60,000 homes<sup>2</sup>.

- Based on waste management figures. Source: National Environment Agency, Singapore, 2017
- <sup>2</sup> Based on Sub-national Electricity and Gas Consumption Statistics. Source: Department for Business, Energy & Industrial Strategy, England, 2018

90

# **Local Environmental Protection**

We are committed to integrating environmental protection and stewardship into our operations, in the belief that sound practices and performance in this area can help mitigate environmental risks while contributing to a sustainable future.

We adopt the Precautionary Principle in our approach to managing environmental risks, carefully assessing the potential environmental impacts from our operations and applying appropriate control measures to minimise them. In particular, we are focused on keeping our atmospheric emissions below legally acceptable levels, avoiding any pollution from effluents or disposal of waste and hazardous substances, preventing spills and environmental incidents, and monitoring our environmental noise.

We are guided by the principles and practices set out in our Statement of Commitment to Environmental Protection and Environmental Protection Management Guidelines. We also aim to fully comply with all applicable environmental regulations and requirements.

We integrate environmental considerations as a priority in our planning for all existing and new operations, products and services. We conduct environmental assessments in accordance with national and / or international standards and methodologies. These include environmental and social impact assessments, environmental baseline studies and pollution control studies. Recommendations from these assessments form part of our management of health, safety and environment (HSE) risks, and these recommendations are incorporated into the planning, design, construction and operation of new plants.

We apply stringent controls to the management of waste generated by our operations and strive at all times to adhere to discharge and emission limits set by local authorities. We implement containment measures to minimise any direct impact on the environment and the surrounding community.

Our Group HSE Management System's Incident Investigation and Reporting Requirements allow us to take systematic steps and actions in response to HSE incidents and near misses, to prevent recurrence. Our Integrated Assurance Framework (IAF) sets out the three lines of defence that ensure compliance to our operating standards, and that such standards are effective.



7) For more information on our IAF, please refer to page 104.

# Our performance

In 2018, Sembcorp was ranked 27<sup>th</sup> in the Top 100 Green Utilities and 11th in the Top Generators ranked by Renewables Capacity in Energy Intelligence's Top 100 Green Utilities. Sembcorp is the only company from Singapore on the list, which ranks the world's leading electric utilities based on their renewable energy portfolios and GHG emissions. In 2018, we grew our renewables capacity by over 400 megawatts to 2,600 megawatts, resulting in renewables accounting for over 20% of our total energy generation capacity of nearly 12,500 megawatts.

As part of our continual efforts to ensure the accuracy and consistency of our environmental data, we adopted a cloudbased environmental data reporting system in 2018.

To further encourage innovation from the bottom up, Sembcorp's !DEA Awards Programme recognises innovative ideas and efforts across the Group. Some of the winning ideas in 2018 included autonomous drones for inspections, insulator and heater temperature controls, and the use of ultra low frequency technology to reduce biofouling.

# Climate Change

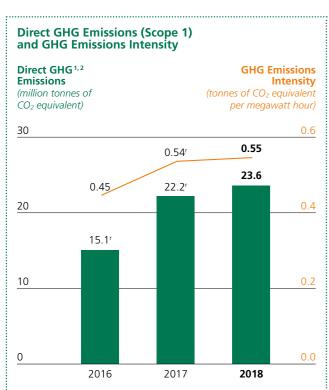
We launched our Climate Change Strategy in 2018 and set reduction targets for our GHG emissions intensity as well as growth targets for our renewables capacity by 2022. We achieved healthy growth in our renewables portfolio in 2018. Our emissions intensity registered a slight increase. However, we remain committed to meeting our 2022 target. We increased our engagement on numerous platforms to highlight the importance for businesses to take action to combat climate change. Our Group President & CEO and other senior executives participated in various climate-related panel discussions, including a Carbon Pricing Leadership Coalition plenary and the CleanEnviro Summit.

# **Resource Management**

Across our plants, we pursue initiatives to increase efficiency. In the UK, we introduced the use of kaolin, a naturally occurring mineral, in our biomass power plant processes. This helps to reduce slag formation, leading to increased reliability, reduced maintenance costs and financial savings. In our India thermal plants, we introduced electric vehicles, buggies and bicycles for employees to guickly and safely move around our sites. This helps us reduce vehicular emissions. We also launched our Virtual Brain water monitoring system in our water plants in China. This system monitors and predicts water effluent quality against regulatory compliance standards and recommends corrective actions through machine learning. The Virtual Brain monitoring system will be progressively rolled out to our other water plants. In one of our Singapore wastewater treatment plants, we piloted a project using cutting-edge membrane and ozonator technologies to lower energy consumption. We also partnered with a Singapore university to develop an advanced biological process to achieve higher quality effluent at a lower treatment cost. These two projects are ongoing and, if successful, will help us reduce our environmental impact while bringing about energy and cost savings.

In line with the methodology used for the development of our GHG emissions intensity targets, we started reporting our GHG emissions and emissions intensity using an equity share approach from 2017. The slight increase in the absolute emissions and emissions intensity in 2018 was due to increased electricity generation at our India thermal power plants.

We report emissions from the combustion of biomass separately, in accordance with Global Reporting Initiative Standards. These emissions amounted to approximately 447,000 tonnes of carbon dioxide equivalent in 2018, compared to around 442,000 tonnes in 2017.

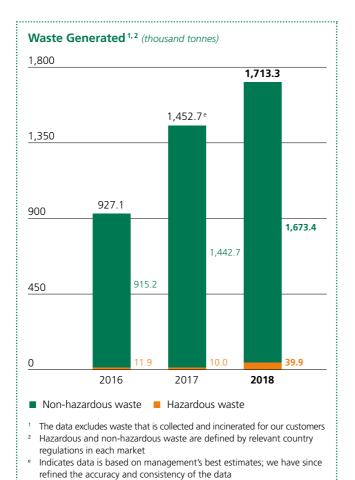


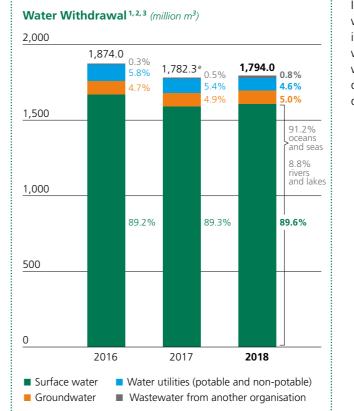
- <sup>1</sup> Emissions data covers entities that produce GHGs from the combustion of fossil fuels consumed in our Utilities business' assets. It excludes emissions from anaerobic wastewater treatment plants, and maintenance and servicing equipment. Only CO<sub>2</sub>: CH<sub>4</sub> and N<sub>2</sub>O emissions are included in the calculation of direct GHG emissions. Global warming potential factors used are from the UN 2006 Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report for 2016 data, and the IPCC Fifth Assessment Report for 2018 data. A 100-year time horizon is applied
- <sup>2</sup> Emissions data for 2016 is presented using an operational approach, while emissions data for 2017 and 2018 are presented using an equity share approach
- Indicates restated figure. After an internal verification exercise, direct GHG emissions for 2016 and 2017 have been restated to 15.1 and 22.2 million tonnes of CO<sub>2</sub> equivalent respectively, instead of 15.4 and 22.7 million tonnes of CO<sub>2</sub> equivalent as previously reported. GHG emissions intensity for 2017 has been restated to 0.54 tCO<sub>2</sub>e/MWh instead of 0.55 tCO<sub>2</sub>e/MWh as previously reported

# **Local Environmental Protection**

The increase in non-hazardous waste generated in 2018 was due to increased electricity generation at our India thermal power plants. The non-hazardous waste comprised mainly fly ash, a by-product of coal combustion in power plants. In 2018, we achieved an overall fly ash recycling rate of nearly 75%, which amounted to nearly 1.1 million tonnes.

In 2018, we registered zero significant spills at our global operations. A significant spill is defined as that which resulted in a fine equal to or above \$\$50,000.





Water withdrawn during asset construction as well as water withdrawn

during plant commissioning for a closed loop cooling system is excluded

Indicates data is based on management's best estimates; we have since

Percentages may not add up to 100% as they are rounded to the

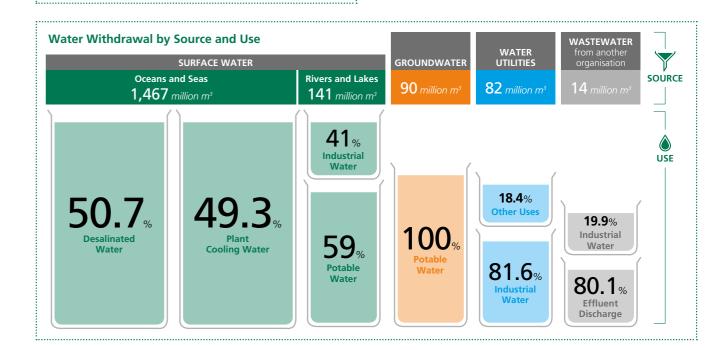
refined the accuracy and consistency of the data

Data is collected from meters

from the reporting scope

nearest one decimal place

In 2018, over 90% of the surface water drawn comprised water from oceans and seas. We saw a decrease of nearly 11% in the amount of water drawn from rivers and lakes. There was a decrease of around 14% in the water we obtained from water utilities, which was treated non-potable industrial and domestic wastewater. These decreases were due to the divestment of our South African municipal water assets in 2018.



# **Empowering Our People and Communities**



Making health and safety an integral part of our everyday business and culture



# How We Did in 2018

Our injury rates showed an overall improvement. Regrettably, we suffered one fatality in 2018. We are committed to achieving zero fatalities

> Pages 100 and 101

# ಎಎಎಎಎ People

Creating a values-based and performance-led culture. Providing an engaging employment experience where our people can grow and excel





# low We Did in 2018

We developed and launched the Sembcorp Mindset and Leadership Competencies. We also saw an increase in training hours from 2017, registering an average of 25.2 hours of training per employee

> Pages 101 and 102

# Community

Contributing to the sustainable development of our communities through engagement and partnerships, and investing in initiatives that make a lasting positive impact









We made community investments of S\$1.1 million. 52% of our operations had local community engagement and development programmes

> Page 102

# Why this is material

# **Health and Safety**

Sembcorp develops and operates power and water plants as well as other facilities, where extensive health and safety precautions are required. It is our responsibility to ensure that globally, all our employees and contractors are competent and equipped to work safely. We recognise our duty of care to provide a safe workplace for those who step into our premises, and we work hard to fulfil that duty. The health and safety of our customers is also a key priority – especially in our municipal water operations, where any lapse in health and safety protocols can result in a direct impact on people in the community.

The industry we operate in is becoming increasingly complex due to market disruptions by technological advancement, climate change and resource scarcity. We have responded to these complexities by repositioning our businesses and organisation, pursuing growth strategies and building new capabilities. Our employees play a vital role in ensuring we achieve our business strategy and goals. There is therefore a critical need to develop and retain a capable, highly motivated and adaptable workforce to navigate this changing landscape. Of the issues relating to our people, our materiality review

process has identified the following to be important areas of focus:

- Employee development
- Employee compensation and benefits
- Employee engagement
- Employee wellness
- Diversity and equal opportunities
- Human rights and labour standards

# Community

Sembcorp's long-term success is based on being a valued partner to the communities we operate in. While Sembcorp's businesses play an important role in supporting economic development and improving living standards in our communities, we recognise that there are social and environmental impacts on the communities around us as a result of the development and operation of our plants. Therefore, as part of our licence to operate, we aim to contribute to the sustainable development of our local communities through engagement and partnerships, and investing in initiatives that make a lasting positive impact.

# **Cultivating a Safety Culture**

Health and safety is an integral part of our everyday business and culture. We recognise that having and maintaining good safety performance requires an organisational safety culture and the right mindset. Our past efforts in safety management have borne fruit, as we continue to see a downward trend in our injury rates.

To further improve our safety performance, we have embarked on a behaviour-based safety observation programme in Singapore. The programme focuses on cultivating an

organisational culture where safety is everybody's responsibility, through affirming positive safety behaviour and encouraging corrective actions. We are testing a web-based application to record observations and analyse the recorded safety performance data. Results from analyses done allow for the identification of gaps in safety performance, and hence feed into a more targeted response to enhancing safety. The programme will be progressively rolled out to Sembcorp employees across all markets.

# Our approach

**Health and Safety** 

Occupational health and safety

Our vision is to be an organisation with a proactive health and safety culture. We are committed to working towards the goal of zero fatalities and injuries in our workplace, with a workforce that puts safety first. We benchmark our health and safety performance against relevant global industry safety statistics, such as the International Oil and Gas Producers Global Safety Performance Indicators, and aim for progressive improvement. As our operations grow in different markets, the security of our staff and assets is also becoming increasingly important for us to manage. In response to this, we have adopted a phased approach in the development of our security management programme, starting with a focus on projects under development.

We have put in place structures and processes to meet our goal, including:

- Board review
- Oversight by the board's Risk Committee
- Leadership by our Group President & CEO
- A Group Health, Safety and Environment (HSE) management system framework comprising:
  - Group HSE Policy
- Group HSE management system guidelines and standards

The Group HSE management system framework provides guidelines and standards detailing expectations and principles relating to different aspects and activities that take place at a plant or site. It is further supported by Sembcorp's 10 Elements for Good HSE. We value lives and are committed to safety, and believe that this is a responsibility shared by all employees across the organisation. Health and safety key performance indicators have been embedded into relevant employees' scorecards, and the award of performance incentives for all

# Sembcorp's 10 Elements for Good HSE System of Risk Safety **Document Work Plan** Strong Assessment in Design **Validation** Control Management & Controls of HSE Verification by Every **Employee** >>>>> >>>>> 6 **Third Party** Competent **Operations Effective** Selection and Resources Integrity Communication Qualification CONTINUAL ASSESSMENT AND IMPROVEMENT

employees specifically takes into account the Group's health and safety performance for the year.

## Assurance

Our Group Health, Safety, Security and Environment (HSSE) assurance is aligned with the Integrated Assurance Framework (IAF) that we are transitioning to. The IAF adopts a three lines of defence (LOD) approach that sets in place a robust accountability system in order to ensure that there is continual improvement.

For more information on our IAF, please refer to page 104.

- First LOD regular site-level HSSE inspections and evaluation of HSSE control effectiveness are conducted at all plants and sites as part of our assurance regime
- Second LOD on-site operations reviews conducted by subject matter experts from other markets and the Global Operations department evaluate the effectiveness of the plants' or sites' HSSE controls. On an annual basis, a validation and verification schedule is formulated using an internal risk-based assessment to ensure that the assurance exercise will focus on higher risk areas. Plants or sites with higher risk ratings will be given priority in the assurance exercise. The results of the assurance then form the basis for the development of improvement plans at the site

For more information on our on-site operations reviews, please refer to page 100.

• Third LOD – the integrated audit provides independent assurance to ensure compliance with our operating standards

# Training

96

Providing our employees with relevant HSE and technical capability development ensures that we have competent safety practitioners and line managers who support safe operations. Training plans are tailored to the particular operation or site's risk profile and local conditions, and is conducted on an ongoing basis. Examples of operations-specific training include defensive driving at our solid waste management unit as well as project commissioning and construction orientation for project development teams. An annual global HSSE workshop is also held as a platform for the learning and sharing of corporate initiatives and best practices from our different operations.

# Product responsibility: safety and quality

Product safety and compliance is a priority as non-compliance can result in serious health, safety and operational issues for our customers, many of whom depend on us for basic utilities or require our products for their industrial processes.

Compliance testing of our products is done at various stages,

from manufacturing to distribution and supply. We have a robust maintenance and monitoring regime in place, which includes stringent inspections and preventive maintenance of all critical instruments including meters and sensors at both our and our customers' facilities. We also conduct regular laboratory tests to meet regulatory requirements and ensure that the water we produce is safe for our customers and end users.

# **People**

Our operations span 15 countries across five continents where labour laws, regulations, employment codes and practices differ widely. All our local human resource policies comply with local laws.

Our human resource practices are guided by the following:

- Oversight by the board's Executive Resource & Compensation Committee
- Oversight by the Senior Leadership Council
- The Sembcorp Mindset and Leadership Competencies
- Our Code of Conduct
- Our Human Rights Policy
- Our Harassment Policy
- Our Grievance Handling Policy

Human capital risk is monitored as part of our key risk indicators and reported biannually to the board's Risk Committee.

# Employee development

As part of equipping our workforce to respond effectively to change and disruptions in our operating context, we reviewed our approach to workforce management. A key outcome from this review was the development and launch of the Sembcorp Mindset and Leadership Competencies.

The Sembcorp Mindset determines who we are and how we should operate our business. Known as the five Cs – Creative Insight, Committed, Connected, Courageous and Curious – they represent our promise to internal and external stakeholders and are critical to support our business strategy as we adapt to changes in our operating context. The new Leadership Competencies define the key characteristics of a Sembcorp employee. Underpinning each of the above competencies are anchor behaviours that we have identified as critical to drive organisational performance and build future business leaders.

Employee development is a key lever of Sembcorp's transformation and is underpinned by the Leadership Competencies. With our training programmes, we aim to reskill employees to be future-ready by driving behavioural change. We are focused on building our internal leadership pipeline as part of succession planning. Part of supporting Sembcorp's transformation efforts also involves building our

We value our people, We walk the talk, forge strong partnerships We continuously do the right thing We dare to and care for our seek to learn about We innovate and solve and deliver on communities and challenge the norm ourselves and the complex problems and lead disruption world around us our promises the environment Creative Insight Committed Connected Curious Courageous **SEMBCORP** LEADERSHIP COMPETENCIES Believe It Develop It See It Do It Shapes the future Drives performance Attracts and Inspires and energises develops talent Leads change Makes decisions and Leads via influence tests new ideas and networks and transformation Builds great teams

digital capabilities to improve the efficiency of our business, the security of our and our customers' data, and our assets and operations.

We also ensure that local talent are placed in senior management roles in each market we are in. This is key to improving our ability to understand local market conditions, while supporting capability building in the local communities.

Effective performance management is also a critical component of Sembcorp's business transformation. It involves aligning our employees' competencies to our new business direction,

# **Aligning Goals and Developing Competencies**

To support Sembcorp's ongoing transformation effort, we launched and rolled out our enhanced performance management system LeAD in our key markets of Singapore, India and China, and are rolling it out in phases in the UK. This system facilitates a more structured and concerted effort to set and cascade goals, and moves the focus of the performance management system from being an assessment mechanism to one that focuses on the coaching and development of staff. The Sembcorp Leadership Competencies were introduced as a key measure of performance to facilitate culture change as part of business transformation. Staff in these key markets have attended training on LeAD principles and the Sembcorp Leadership Competencies.

as well as recognising their contributions. This is facilitated through our newly launched performance management system LeAD (Lead, Appraise, Develop).

# Employee compensation and benefits

To attract, motivate and retain employees, Sembcorp's remuneration and reward system is market competitive and performance-based. To determine salary levels and benefits, regular reviews and benchmarking are conducted against local standards and data from global market surveys and consultancy firms. In countries where there is a minimum wage policy, Sembcorp pays above the minimum wage.

Sembcorp adopts an equal pay policy where rewards are based entirely on merit and performance. Salary increases are based on individual performance and benchmarked against the external market as well as negotiations with employee unions and guidelines issued by the local government. Annual variable bonuses are based on the Group's performance as well as employees' performance against individual targets set jointly with their supervisors.

# Providing an engaging employee experience

# Employee engagement

As part of employee engagement, our senior leaders deliver consistent communications about the company's vision, strategy and progress. Quarterly staff communication sessions are conducted face-to-face where possible and via webcast to a global audience. Each session is also followed by an open dialogue where employees can send in their questions and feedback. Additionally in Singapore, we hold monthly "Meet

Sembcorp Industries Annual Report 2018

the Leaders" sessions for our senior leaders to share about their personal leadership experiences and upcoming projects, as well as for employees to engage with them in an informal setting.

Over the course of the year, organisational updates, internal campaigns as well as business milestones are communicated via channels such as briefings and workshops, emails, the intranet and other interactive internal digital platforms.

# Employee wellness

We recognise the impact of wellness on our employees' overall effectiveness and have set aside a dedicated wellness budget in countries where we have major operations, such as Singapore, China and India. The budget is available for department heads to use for activities that encourage employee well-being and team bonding. We also provide Group Term Life and Group Personal Accident coverage in all our key markets. Besides mandatory medical screenings for employees potentially exposed to occupational health hazards, voluntary annual health screenings are available free of charge to all employees in Singapore, China, India, Oman and the UAE.

In 2018, we launched the Business Psychological Resilience Programme (B-PREP) in Singapore. B-PREP aims to provide employees with a safe, supportive and caring environment to seek help when exposed to critical incidents that impact them emotionally and psychologically.

Around the world, employee-led committees within our operations organise a range of recreational activities as well as nutrition and stress management programmes to support employees' physical and mental well-being.

# **Promoting a fair and equitable work environment**Diversity and equal opportunities

Sembcorp is committed to promoting a fair and equitable work environment for all employees. We believe all employees should have the opportunity to thrive in a diverse workplace free from harassment. We recruit, promote, reward and provide career advancement and development opportunities based on merit and without discrimination on the basis of age, race, gender, sexual orientation, religion, family or marital status. Our Senior Leadership Council is represented by more than five different nationalities and our global workforce includes people from over 35 nationalities.

# Human rights and labour standards

Our Human Rights Policy defines our responsibility to ensure the highest respect for human rights and the company's expectations of our workers and business partners. We are committed to uphold and respect the spirit of the UN Universal Declaration of Human Rights and the International Labour Organization's Declaration on Fundamental Principles and Rights at Work. We are also guided by the UN Guiding

Principles on Business and Human Rights. Our Code of Conduct sets out our stance on fairness, opportunity, non-discrimination, dignity, respect and harassment. We abide by the Employers' Pledge of Fair Employment Practices under Singapore's Tripartite Alliance for Fair and Progressive Employment Practices. We do not hire forced or child labour in our operations.

We abide by local laws wherever we operate. Our Human Rights Policy states that Sembcorp employees are entitled to practise freedom of association and to be covered by collective bargaining agreements in the workplace, within the regulatory boundaries of each of the jurisdictions. We hold constructive ongoing engagements with employee unions in our various operations. In countries where our operations are covered by collective agreements, we abide by the terms stated in these agreements, including those relating to minimum notice periods. Procedures for grievance handling are also specified in the agreements. Where collective agreements do not exist, we abide by the terms stated in employment contracts.

Our grievance mechanisms are readily available and transparent. We strictly prohibit any form of retaliation against an individual who raises a grievance in good faith. The grievance procedure sets out our approach for the fair handling of employee grievances, and employees have confidential channels to submit feedback.

Our Grievance Handling Policy complements the group-wide Whistle-blowing Policy, which encourages all employees to report any possible improprieties on a confidential basis, without fear of recrimination. The company has an easily accessible whistle-blowing portal, and employees may also provide feedback via email or phone. The right to a work environment free from harassment is part of our Human Rights Policy. In the event of harassment, we ensure that remediation is undertaken in line with our Grievance Handling Policy.

For more information on our Code of Conduct, Human Rights Policy and Whistle-blowing Policy, please visit the Report & Policies page in the Sustainability section of our website.

# Community

As we build successful and sustainable businesses, societies and communities benefit. Our operations generate employment, contracts for local suppliers and tax revenues for governments and result in infrastructure development in our host communities. The direct economic value generated and distributed by our businesses can be found on the following page. We also recognise that our operations bring changes to our communities and can have positive or adverse environmental and social impacts that vary across our operations.

As a company with operations across five continents, we understand first-hand how the needs of one community can

be very different from another. We believe that our local operations are best placed to not only understand the needs of the community, but also forge partnerships with local stakeholders. Therefore, while the Group provides the strategic framework, tools and guidelines to ensure consistency and acceptable standards, community assessments and engagements as well as contributions are managed at the local level.

# Assessment and engagement

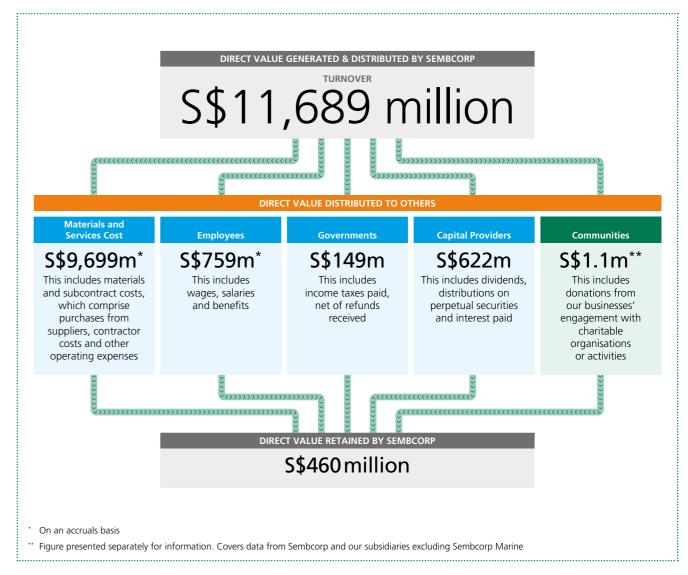
Our assessment and engagement of the community is guided by our Group Stakeholder and Community Engagement Policy as well as our Group Community Grievance Management Policy. Environmental and social impact studies are carried out in accordance with international and / or national standards for major new projects and expansions. These studies typically include social management plans that are implemented by the operations teams through the various stages of a site's development.

# Community investment

Sembcorp's global Corporate Social Responsibility (CSR) Framework provides a strategic and consistent approach for our charitable contributions and community investments. We focus on fostering environmental stewardship and improving quality of life for the communities we are in.

Our CSR Framework aligns the tracking and reporting of our community contributions with guidelines set by the LBG (formerly known as the London Benchmarking Group). This allows us to account for our total community giving using standard definitions and valuations, and helps us ensure that the contributions recorded are meaningfully spent on community investment activities.

For more information on our key programmes, please visit Our Focus Areas: Social page in the Sustainability section of our website.



# **Securing Access to Clean Drinking Water**

Sembcorp installed 14 water treatment plants within the 13 villages that surround the Sembcorp Myingyan Independent Power Plant in Myanmar, providing more than 19,000 people with access to clean drinking water within 500 metres of their homes. Toilets were also installed in schools within these communities. Additionally, given that the communities are located far away from the Ayeyarwady River, underground water tanks were also installed to provide a quick source of fire-fighting water.

U Chit Win, village head of one of the beneficiary villages, Sate Nyan Village, said, "We are thankful to Sembcorp for the installation of the water treatment plant and underground water tank for fire-fighting purposes. Our family feels safer living in Myingyan because, with Sembcorp's help, my children have easy access to clean drinking water and our house is now safeguarded against fire."

In line with our commitment to our priority UN SDG 6 (Clean Water and Sanitation), this initiative has helped provide safe drinking water for the communities surrounding our plant, and improved water and sanitation management.



# Our performance

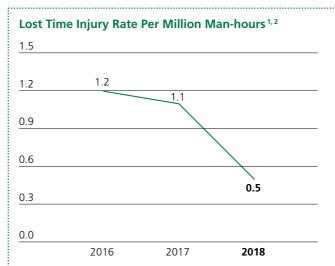
Health and Safety

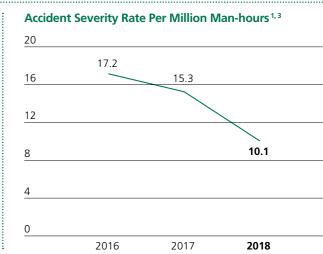
In line with our global footprint, we continued to focus on aligning our practices with international standards. Key initiatives include:

- Trade-based standards such as the Safe Lifting Operations and Working At Height standards were rolled out in 2018.
   We will implement a behaviour-based safety observation programme for all our operating assets by 2019
- Operations review activities were conducted to assist sites in identifying areas for improvement, such as operational processes and health and safety. The review exercise takes on a peer review approach, where each team conducting the operations review involves the participation of and feedback from other market functions. These collaborative efforts between our markets and Global Operations

department aim to drive operational excellence by providing post-review support to the improvement efforts of each site

- An annual Global Operations and HSSE Workshop was last held in Singapore in April 2018. Critical control points for power assets were identified by representatives from all sites globally through a detailed process assessment exercise. These were then mapped to technical and HSSE standards, and, in response, site-specific standard operating procedures were developed to enhance risk management within our operations
- An injury case management programme was developed and piloted in Singapore. All injury cases are managed through a "Return To Work" programme, which encourages a positive safety culture by helping injured employees return to work quickly and supporting a culture of care in the company





- Group Health and Safety Performance is reported and recorded in accordance with the reporting requirements defined in the Group HSE Health and Safety Performance Reporting Standards. The principles adopted in the Standards are consistent with the general principles of the Global Reporting Initiative Standards, the International Oil and Gas Producers Association Reporting Standards, and the US National Institute for Occupational Safety and Health. Occupational health and safety data covers employees and contractors in our operational assets. It excludes data from administrative offices and service companies. All injuries involved male employees and contractors
- 2 Lost time injury rate is defined as the number of fatalities and lost work day cases per million man-hours worked. It excludes first aid cases
- 3 Accident severity rate is defined as the number of lost work days per million man-hours worked. It has been charted to exclude fatalities. Accident severity rate including fatalities is reported as part of our detailed performance data available in the Performance and Data Commentary report in Our Performance page in the Sustainability section of our website
- The launch of our Group Security Management System, which sets a framework for the implementation of security policies and application of consistent security standards across our markets. These security standards are presently being developed and formalised

Despite our best efforts, it is with deep regret that we report one fatality in 2018 due to a contractor accident at one of our sites in India. We are deeply saddened by this incident. A thorough review has been carried out, following which additional safeguards have been implemented to minimise risks. We will strive to ensure that employees and contractors maintain safe work practices and also encourage other companies within our sphere of influence to do the same.

We closely monitor our safety statistics to ascertain the effectiveness of our initiatives. We believe that our efforts to improve our operations' and sites' abilities to identify and address unsafe conditions or actions have borne fruit. In 2018, we were encouraged by positive results in both our operating assets as well as projects under construction. We saw a more than 50% decrease in our lost time injury rate, and our accident severity rate has seen a consistent decrease in the past three years.

# People

In 2018, a key enhancement of our approach to workforce management was the development and launch of the

Sembcorp Mindset and Leadership Competencies. We also launched a new performance management system, LeAD, in our key markets of Singapore, India, China and the UK. There was 100% uptake of the system for the goal setting and performance review processes by over 3,500 staff in key markets within six months of its launch.

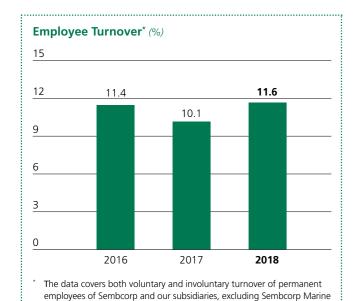
We continued with the Sembcorp Leaders' Programme (SLP), which has received consistently positive feedback. With the launch of the new Leadership Competencies, the SLP will be reviewed as part of the holistic Learning and Development framework to incorporate future skills needed to develop our employees and leaders.

Employee turnover rate was stable, increasing slightly from 10.1% in 2017 to 11.6% in 2018. The voluntary turnover rate increased from 8.4% in 2017 to 9.3% in 2018. We recognise the potential impact that our transformation efforts may have on our employees, and remain committed to consistently engage our employees and equip them with skills to cope with future changes as we continue to implement our new strategy.

The average number of training hours per employee was 25.2 hours in 2018, an increase from 23.8 hours in 2017. This increase reflects our efforts to build up our employees' capabilities to respond effectively to ongoing industry change and disruption.

Sembcorp Industries Annual Report 2018

101



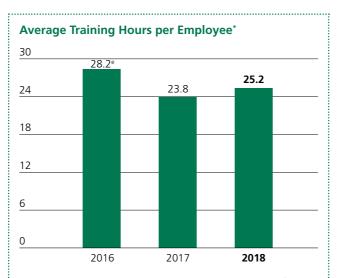
# Community

In line with our commitment to manage our impact on the community responsibly and better mitigate the environmental and social impacts of our businesses, key community investments and programmes are designed in consultation with local communities as guided by our CSR Framework. In 2018, we reviewed and enhanced our CSR Framework to develop a more strategic approach with our community investments. The updated framework will be launched and implemented in 2019. We also plan to grow the percentage of our operations with community investment programmes.

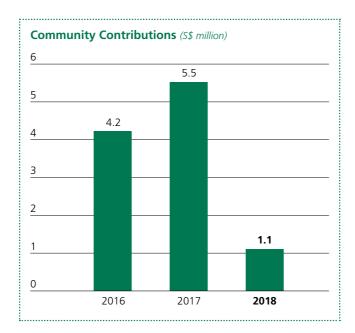
As part of our commitment to SDG 6, one of our priority SDGs, we invested in programmes to secure access to safe drinking water for communities living in the vicinity of our plants. In 2018, we installed 14 water treatment plants in Myanmar. To date, we have installed a total of 27 water treatment plants that benefit more than 68,000 people in over 50 villages in India and Myanmar.

Our community investments also aim to impact the lives of youth in these communities. We have designed holistic education programmes that not only include the physical upgrading of school building infrastructure, but also awareness raising campaigns on issues such as personal healthcare and drug addiction. In 2018, we renovated over 35 schools and classrooms, benefitting more than 6,700 students in India and Myanmar.

In 2018, Sembcorp contributed S\$1.1 million in cash and in-kind to charities and community initiatives globally. Over S\$470,000 comprised mandatory contributions and close to S\$15,000 were leveraged contributions. These contributions supported



- Training data covers both permanent and contract employees of Sembcorp and our subsidiaries, excluding Sembcorp Marine. Other indicators in the People section relate to permanent employees of Sembcorp and our subsidiaries, excluding Sembcorp Marine
- Indicates data is based on management's best estimates; we have since further refined the accuracy and consistency of the data



causes such as environmental and water conservation education, as well as youth development, apprenticeships and job training programmes. There was a decrease in our community investments as we paid out the final instalment of our investment in the enhancement of the Cool House at Singapore's National Orchid Garden in 2017.

Total volunteer man-hours amounted to more than 4,000 hours, of which over 25% was spent outside of working hours due to event requirements.

# **Embedding Responsible Business Practices**



## Our Priorities

Maintaining an effective governance and decision-making structure

## Relevant SDC



# How We Did in 2018

We continue to be placed in the top 10 of the Singapore Governance & Transparency Index

> Page 108



# **Ethical Business** and Compliance

## **Our Prioritie**

Fostering an ethical culture and conducting our business with integrity, and ensuring we comply with all legal and regulatory requirements

## Polovant CD



# How We Did in 2018

We rolled out our revised Code of Conduct and conducted training on the Code. Over 99% of our staff have since acknowledged their compliance with the Code

> Page 108

# A

# Risk Management

## Our Prioriti

Ensuring effective identification of material risks and putting in place an adequate and effective risk management and internal control system

## Relevant SDGs



# How We Did in 2018

We are in the midst of transitioning our current Governance Assurance Framework (GAF) to an Integrated Assurance Framework (IAF)

> Pages 104 and 108

# Why this is material

# **Corporate Governance**

We define corporate governance as the structures and processes in place for the transparent and accountable control and governance of our organisation. Well-defined corporate governance processes are essential to enhancing corporate accountability and long-term sustainability to preserve and maximise shareholder value.

# **Ethical Business and Compliance**

Responsible business conduct and ethical business practices ensure the long-term viability of our businesses and build trust and confidence with our stakeholders. We are committed to high standards of behaviour and integrity in everything we do. We believe in conducting our business legally, fairly, honestly and with integrity, and expect the same of those whom we do business with. We have zero tolerance for fraud, bribery and corruption. Our businesses operate in highly regulated environments where non-compliance may subject us to statutory and regulatory fines and sanctions, including losing our licence to operate and material litigation. It may also result in damage to our reputation and credibility, limiting future growth opportunities.

# Risk Management

Managing risk is an integral part of our business activities. As we continue to grow and expand globally, we are exposed to diverse risks, including strategic, financial, operational, compliance and fraud risks. Besides helping to preserve our bottom line by reducing the likelihood and impact of potential losses, risk management provides a common basis to evaluate new business opportunities. It also assures our board and shareholders that key enterprise and business risks faced by the organisation have been identified, assessed and managed with appropriate risk mitigation measures and controls.

# Our approach

# **Corporate Governance**

Sembcorp is led by an effective board comprising mainly independent non-executive directors. The board is collectively responsible for providing overall strategic direction and ensuring the long-term success of the Group. Several board committees have been established with clear terms of reference, both to assist the board in fulfilling its responsibilities and to provide independent oversight of management.

Furthermore, the board and management of Sembcorp recognise that well-defined corporate governance processes are essential to enhancing corporate accountability and long-term sustainability, and are committed to high standards of governance to preserve and maximise shareholder value. We comply with the principles and guidelines set out in the Singapore Code of Corporate Governance 2012 issued by the Monetary Authority of Singapore, and our corporate governance practices are set out in the Corporate Governance Statement in this annual report.

To facilitate the effective execution of both our internal processes and business needs, we have in place a clearly defined organisational structure which includes detailed roles and responsibilities for key appointment holders. This is further supported by an established matrix for delegation of authority as well as financial authority limits, which have been approved by the board. A comprehensive set of group-wide governance and functional policies ensure entity-level controls are also implemented across the Group. The Group's internal controls policy and manual, which adopts principles of the Committee of Sponsoring Organizations of the Treadway Commission, provides a framework for what constitutes an effective and adequate system of internal controls. It also provides guidelines on the appropriate segregation of duties and a checklist of recommended internal controls for operations in our various markets to put in place.

We are in the midst of transitioning our current GAF to an IAF to provide a more holistic and robust basis of assurance for the adequacy and effectiveness of our risk management and internal control system. The process identifies risk from a top-down strategic perspective and a bottom-up perspective from each key market, putting greater emphasis on the three lines of defence (LOD) model.

# a. First LOD

Key markets and business units are required to regularly review their risk and internal control environment to ensure that they operate within the prescribed risk appetite. This is done through a combination of detailed risk and control registers and review processes, established escalation procedures and well-defined consequence management. In addition, a rigorous management attestation process, the Management Control Assessment (MCA), is submitted quarterly by each market and business

unit to provide the assurance that its risk management and internal control system is adequate and effective.

# b. Second LOD

The second LOD sets the policies, standards and standard operating procedures that the markets and business units are required to adopt. Additionally, submissions and responses from the MCA are further validated through substantive review by the business lines, subject matter experts and corporate functions as an added layer of assurance.

# c. Third LOD

Group Integrated Audit (GIA) provides independent assurance across financial, operational, compliance and IT risks through a series of walkthroughs and substantive testing. Management works closely with GIA in closing out all material issues and gaps in a timely manner to ensure that there is continual improvement to our risk and controls environment as well as an effective feedback loop to the first and second LODs. External audit considers internal controls relevant to the preparation of financial statements to ensure they give a true and fair view.

# Risk Management

The Group manages risk under an overall strategy, determined by the board of directors and supported by the board's Risk Committee and Audit Committee. The Risk Committee reviews and enhances the effectiveness of the Group's risk management and health, safety and environment (HSE) plans, systems, processes and procedures. It also regularly reviews group-wide risks including significant risk exposures relating to foreign exchange rates, commodity prices and major investment projects as well as corresponding risk mitigation plans. HSE policies, guidelines and limits are also regularly

# THREE LINES OF DEFENCE SECOND THIRD Accountability and Ownership Driven by Markets and business units Driven by Susiness lines / subject matter experts and corporate functions THIRD Independent Assurance Driven by Group Integrated Audit and external audit

reviewed. Oversight for risk management within the Group's listed entities lies with their respective boards.

# Risk appetite framework

The board has determined a risk appetite framework for Sembcorp that forms a common understanding among both our board and management to execute the Group's strategy and objectives. Under this framework, the board has approved risk appetite statements with respect to the areas below. These are aligned with how the Group categorises our material issues for the management and reporting of our overall sustainability performance:

# a. Economic

Sembcorp actively pursues global strategies to deliver sustainable long-term value and growth. We will continue to invest in and develop our capabilities and expand our business in both existing and new markets. Investing in such markets inevitably carries with it inherent risks; however, the Group is a disciplined investor with a robust investment approval process that calls for the necessary due diligence and risk management to be done. The Group has set appropriate limits for investment exposure in each country to manage concentration risk.

The Group is committed to maintaining a strong financial position and targets to achieve an investment grade equivalent credit rating to ensure access to funding and protect shareholder value. The Group has a defined set of risk management policies to manage our financial risks. The Group will not take part in any form of transaction that is deemed speculative in nature, under any circumstances.

# b. Environmental

Sembcorp is committed to operate in a socially responsible manner to manage our impact on the environment, as well as provide high quality products and services that contribute to the sustainable development of the communities in which we operate.

In addition to being committed to complying with all applicable environmental standards and requirements through our established internal policies and processes, we assess the impact of environmental and climate-related risks on our business, and apply appropriate control measures to manage them. Where viable, we also invest in the latest technologies and utilise our capabilities to achieve better operational efficiencies and promote environmental sustainability.

# c. Social

Sembcorp is committed to being a responsible business that ensures the health and safety of our people, and makes a positive impact on our people and communities. In our pursuit of operational excellence and business growth, Sembcorp will not compromise the health and safety of our internal and external stakeholders. The health and safety of all our employees, contractors, customers and the public is of paramount importance to the Group. We take a serious view of any breach of health and safety standards and regulations across all our operations and facilities.

Sembcorp recognises the need to have in place a strong and competent team that is committed to our values for transformation and growth. Sembcorp will continue to equip our employees with the relevant capabilities / competencies and provide an engaging employment experience, thereby creating a values-based and performance-led culture to ensure a sustainable business.

Sembcorp is also committed to building our digital capabilities to improve the efficiency of our business and maintain an effective control environment to manage the cyber risk exposure of our and our customers' data and our assets and operations.

In addition, Sembcorp believes that as an integral part of our communities, we should conduct our business in a responsible manner and make a positive contribution to the communities in which we operate. The Group is therefore committed to high standards of business conduct, engaging our stakeholders and managing our environmental and social impact on local communities responsibly.

# d. Governance

As a listed company on the Singapore Exchange that has both responsibility and accountability to a wide range of stakeholders, Sembcorp is committed to maintaining high standards of behaviour and integrity, and aims to be best in class for governance practices. The Group will strive to comply with all applicable laws and regulatory requirements in the countries where we operate, including adopting a zero tolerance stance towards any form of fraud, bribery and corruption. We expect all employees to adhere to the quidelines set forth in the company's Code of Conduct (CoC).

Our risk appetite statements are also supported by key risk indicators, which are monitored and reported to the board's Risk Committee on an ongoing basis.

# Enterprise risk management

The Group is committed to ensuring that an effective and practical enterprise risk management (ERM) framework is in place. Our framework aims to safeguard our people and assets, protect shareholders' interests, facilitate informed decisions for value creation and ultimately enhance our brand and reputation. In designing our ERM framework, the Group has adapted and made reference to various industry risk

104 Sembcorp Industries Annual Report 2018 105

management standards, such as ISO 31000 and the Enterprise Risk Management – Integrated Framework of the Committee of Sponsoring Organizations of the Treadway Commission. This ensures that we are in line with best practice. To sustain a successful ERM programme, we believe in having the right processes and tools as well as instilling the right risk awareness culture. Our ERM framework specifically sets out a systematic and structured approach towards risk management through the following activities:

- Awareness training and workshops
- Risk identification and assessment
- Formulation of key risk management strategies
- Design and implementation of risk mitigation controls (preventive, detective and responsive controls)
- Monitoring and timely reporting of risk management performance and risk exposure levels
- Continual improvement of risk management capabilities and mitigation measures

Our ERM framework is supported by the following key pillars:

# a. Fraud Risk Management

The possibility of fraud is an inherent risk in any organisation. To manage this, the Group has established a fraud prevention policy, which has been approved by our board's Risk Committee. The policy provides a framework and comprehensive guidance on anti-fraud measures to proactively manage the risk of fraud, bribery and corruption. We actively influence and encourage our joint ventures and associates to adopt our fraud risk management framework. The Group maintains a zero tolerance policy for fraud, which we take to include corruption and bribery. This stance is regularly communicated to employees through awareness training and e-learning programmes.

The following key activities and complementary policies and procedures are part of our holistic approach towards fraud risk management, and also address the risk of bribery and corruption:

Preventive anti-fraud measures

- Code of Conduct
- Conflict of Interest Policy
- Gifts and Entertainment Policy
- Fraud risk assessments
- Employee and third party due diligence

Detective anti-fraud measures

- Whistle-blowing Policy
- Forensic data analysis
- Compliance and monitoring
- Pre-employment screening

Responsive anti-fraud measures

- Fraud reporting procedures
- Fraud investigation procedures
- Grievance handling procedures

# Whistle-blowing policy

Sembcorp has a Whistle-blowing Policy in place. We provide employees and external parties with well-defined and accessible channels through which they may, in confidence, raise concerns regarding possible improprieties in the conduct of business activities, financial reporting or other matters to the Audit Committee. This facilitates independent investigation of such matters for appropriate resolution. The policy is available on our website and is subject to review on a regular basis.

A whistle-blower may submit his / her allegations or concerns either by telephone, email, our whistle-blowing portal or other communication channels.

The company will take reasonable steps to protect the identity of the whistle-blower. The company does not condone retaliatory action against the whistle-blower. The whistle-blowing case will be received by the Head of GIA and an investigation will be conducted in compliance with the requirements set out in the company's Whistle-blowing Policy.

For more information on our Whistle-blowing Policy, please refer to the Report & Policies page in the Sustainability section of our website.

# b. Operational Risk Management

The Group's management of operational risk is focused on the following areas:

# Crisis management and business continuity

A robust and effective crisis management framework is put in place with the Group's crisis management, emergency response and business continuity procedures and plans. These procedures and plans are regularly tested and fine-tuned. The Group also addresses crises and emergencies through the implementation of appropriate prevention, preparedness, and response and recovery programmes. Some of these material operational risks include natural disasters, terrorism, cybersecurity attacks, epidemic outbreak and failure of critical equipment.

# Health, safety and the environment

A group-wide HSE management system which is aligned with international standards and industry best practice sets the standard for operations in the various markets to actively manage HSE risks.

# Insurance

As a risk transfer mechanism, the Group has in place a comprehensive insurance programme to protect our worldwide business operations against financial loss arising from property damage, machinery breakdown, business interruption and / or third party liability. The Group has also engaged a panel of top-tier insurance consultants, leveraging their technical expertise and resources to negotiate competitive pricing and comprehensive coverage with insurance companies. To balance the cost of risk transfer, the Group focuses on insuring catastrophic events while maintaining our emphasis on improving internal controls over operations and maintenance. Sembcorp Captive Insurance, a wholly-owned captive insurance subsidiary, provides first-layer coverage against property damage and business interruption losses for the Group's power and utilities operations in Singapore and Teesside in the UK. Sembcorp Captive Insurance serves not only as an internal risk transfer mechanism, but also showcases the Group's efforts to promote greater accountability and responsibility in operations and maintenance. Over the years, Sembcorp Captive Insurance has successfully built up a strong capital surplus, allowing it to extend its insurance reach to other operations and broaden its scope of coverage should the need arise.

# c. Financial, Market and Credit Risk Management

Sembcorp's financial, market and credit risk exposure is managed via established policies, including treasury policies, financial authority limits and Governance Assurance Certification

# Financial and market risks

The Group defines and utilises approved financial instruments to manage exposure to foreign exchange, commodity prices and interest rate fluctuations arising from operational, financing and investment activities. Under the Group's overall treasury policy, transactions for speculative purposes are strictly not allowed.

# Default and counterparty credit risks

A group-wide credit risk policy has been put in place to ensure that we transact with creditworthy counterparties as much as possible. We also screen for material concentrations of credit risk to ensure that no single counterparty or group-related counterparties has excessive credit exposure that may result in material impact on the Group in the event of a default.

# d. Investment Risk Management

The Group has in place an investment approval process to ensure a prudent and disciplined approach to all investment decisions, including a country risk framework that sets appropriate country risk limits.

As at December 31, 2018, the countries outside of Singapore in which the Group has the largest investment exposure are India (\$\$3.6 billion), China (\$\$1.8 billion), Brazil (\$\$1.6 billion) and the UK (\$\$1.2 billion). Investment exposure comprises invested capital, including reserves and committed contingent support for projects and assets.

# e. Tax Risk Management

It is our policy to comply with all relevant taxation laws, regulations and regulatory disclosure requirements.

In 2018, Singapore implemented Country-by-Country (CbC) Reporting for Singapore multinational enterprise (MNE) groups. As a Singapore-headquartered MNE, Sembcorp is required to file a CbC Report for financial years beginning on or after January 1, 2017. We are pleased to report that during the financial year, we filed the CbC Report in compliance with the submission requirements of the Inland Revenue Authority of Singapore.

For more information on our ERM framework and a full description of our approach to managing the above risks as well as more information on our Tax Policy, please refer to Our Focus Areas: Governance page in the Sustainability section of our website.

# **Ethical Business and Compliance**

Sembcorp's values of Creative Insight, Committed and Connected define our approach to sustainable growth, and form the foundation of Sembcorp's CoC. Employees are required to comply with the requirements of the CoC, which addresses Sembcorp's stance in the following ways:

- We treat each other fairly and with respect
- We protect personal information
- We do not bribe
- We deal with government officials responsibly
- We work with trustworthy business partners and representatives
- We compete ethically
- We avoid conflicts of interest
- We treat gifts, entertainment and hospitality responsibly
- We safeguard company assets and information
- We work with ethical suppliers
- We do not disclose or act on inside information
- We do not facilitate money laundering or financial crimes
- We maintain accurate records, contracts and sound internal controls
- We are good corporate citizens
- We are politically neutral
- We manage our health, safety, security and environmental responsibilities as our first priority

The CoC is endorsed by the Board. Requirements of the CoC are communicated to employees globally through a message from the Group President & CEO, face to face training in the local language as well as a video presentation. Employees are required to complete an annual declaration to acknowledge that they have read and understood the principles and requirements of the CoC, and agree to comply with its principles and requirements and promptly report any violation through available reporting channels. Suppliers and contractors who work with Sembcorp are expected to respect and follow the CoC as well.

The CoC also provides for escalation procedures in the event of a breach of the CoC as well as feedback channels for employee clarification and queries.

Full compliance with all legal and regulatory requirements is the minimum expectation we prescribe for all our businesses. As part of our IAF, all heads of markets have to certify that they have complied with all relevant legal and regulatory requirements in their respective entities and countries of operation. Any monetary fines and non-monetary sanctions imposed on the markets are also to be reported.

In view of emerging concerns on data privacy, the Group has established the Group Personal Data Protection Policy which sets out the principles and processes to govern the collection, use, disclosure and retention of personal data across all markets and business units. Markets and business units are expected to abide by the policy, subject to local laws and regulations on data protection.

Regular audits are conducted by the GIA and Group HSSE departments to ensure compliance and also to identify gaps and lapses in compliance. They also work closely with management to develop action plans to prevent future recurrences of gaps and lapses.

# Our performance

We continued to be ranked sixth in the Singapore Governance and Transparency Index, the leading index for assessing corporate governance practices of Singapore-listed companies.

In 2018, we undertook a suite of improvement initiatives following a group-wide bribery and corruption risk assessment in 2017. We enhanced our CoC and Anti-bribery and Corruption Policy to strengthen employees' understanding of their obligations and foster accountability and ownership of our ethical commitments. Extensive training and awareness programmes were conducted globally, including face to face training, train-the-trainers programme, a CoC video and monthly key compliance message communications. We conducted face to face training in our operations in Singapore, China, India, Bangladesh and Myanmar. For the remaining regions, training

was conducted via video conference and train-the-trainers programme. In 2018, 96% of employees underwent training in the enhanced CoC through various platforms, and over 99% of employees have acknowledged their compliance with the CoC. We also launched our whistle-blowing portal. The portal is available in the Whistle-blowing Policy document on our website. It has a pre-defined set of questions to guide whistle-blowers in providing the required information / documents in reporting their concerns and also to allow the investigation team to maintain communication.

In 2018, our operations in Chile paid significant\* fines totalling \$\$421,000. Two fines for incidents in 2016 and 2018 were for non-compliance with environmental regulations totalling \$\$362,000. They pertained to odour issues and the discharge of sewage to the ocean, stemming from failures in sewage lifting stations. Remedial actions have been taken, including enhancing the electrical system of the lifting stations and level metering system to better manage sewage water discharge, and building a new sludge thickener and dewatering plant with bio-filter system for odour control. The other fine of \$\$59,000 was for a delay in constructing a well in a timely manner as committed to under a Regulatory Development Plan in 2014. The well was completed thereafter and has been in operation since 2015.

In 2018, we embarked on transitioning from the GAF to an IAF to put greater emphasis on the three LOD model. Through the IAF structure, the respective LODs work closely to ensure that key financial, operational, compliance and IT risks are reviewed and tested using a robust assurance process. The IAF is expected to be implemented for all key markets by end 2019. The Audit Committee, supported by the Risk Committee, oversees the IAF and its implementation.

Our ongoing efforts to build in-house capabilities, readiness and resilience in crisis and emergency response situations require us to regularly conduct and participate in crisis simulation exercises and awareness training. While we recognise the importance of effective crisis response procedures and proactive stakeholder engagement to manage a crisis, we see the importance of helping affected employees cope with the psychological and emotional impacts, so that they can recover faster from an incident. We have developed a Business Psychological Resilience programme which complements the existing Group Crisis Management Framework and enhances Sembcorp's resilience in crisis and emergency response situations.

\* A significant fine refers to a monetary sanction equal to or above S\$50,000 that was paid during the financial year