



九天化工集团有限公司
JIUTIAN CHEMICAL GROUP LIMITED

ANCHORING GROWTH



SUSTAINABILITY REPORT **2022**

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This report has been reviewed by the Company's sponsor, PrimePartners Corporate Finance Pte. Ltd. (the "Sponsor"). It has not been examined or approved by the Singapore Exchange Securities Trading Limited (the "Exchange") and the Exchange assumes no responsibility for the contents of this report, including the correctness of any of the statements or opinions made or reports contained in this document.

The contact person for the Sponsor is Ms. Lim Hui Ling, 16 Collyer Quay, #10-00 Collyer Quay Centre, Singapore 049318, sponsorship@ppcf.com.sg.

1. Highlights

1.1 Corporate profile

Jiutian Chemical Group Limited (九天化工集团有限公司) ('**Jiutian**' or the '**Company**'), together with its subsidiaries (the '**Group**'), are engaged in the manufacturing and production of dimethylformamide ('**DMF**') and methylamine in the People's Republic of China ('**PRC**'). We are also involved in the processing and sale of consumable carbon dioxide and oxygen.

The business is divided into three main business divisions:

- DMF division produces DMF as its main product and methylamine as our secondary product;
- Sodium Hydrosulfite division produces Sodium Hydrosulfite; and
- The gas and Oxygen-18 division produces consumable carbon dioxide, Oxygen-18 and deuterium-depleted water.

We are located in Henan Province in the PRC. Whilst economic development and industrialisation in the PRC began on the eastern and southern coast, this process has begun to spread rapidly inland, including to Henan and its surrounding regions, where the cost of labour, land and raw materials are significantly lower.

As a result, industrialisation and urbanisation are occurring at a rapid pace in these regions, and the consequent establishment of factories producing a wide range of consumer products is driving the demand for chemicals such as DMF and methylamine. Being the only significant DMF producer in the Henan Province (within 500km of the plant), we are well-positioned to take advantage of this trend.

In addition, our location in the PRC's Coal Belt allows us to enjoy a cost advantage over other DMF producers in PRC due to our secure and low-cost access to the coal-based raw materials that are used in the manufacturing of our products. Our production efficiency and cost-effective supply chain management strategy, which include direct piping-in of raw materials from our main supplier, has provided us with a relative cost advantage against our competitors.

Henan Province is also on the Beijing-Guangzhou railway and its capital, Zhengzhou has one of Asia's largest railway stations and network. Zhengzhou has been developed into a logistics central station for cargo transportation. This will further reduce the transportation and distribution costs of our products. Our customer based in China consists of customers in Henan, the surrounding provinces adjacent to Henan, namely Hebei, Shaanxi, Shanxi, Hubei, Shandong, and Anhui, and provinces in the Yangtze Delta Region, namely, Jiangsu and Zhejiang.

Some of our customers are manufacturers of downstream products that use methylamine and DMF, while others, especially those located further away in the Yangtze Delta Region, are trading as an intermediary that distributes these chemicals to customers that use these chemicals in their manufacturing processes. With our second DMF/methylamine facility of 120,000 annual ton capacity completed in late 2007, we have emerged as one of the world's largest manufacturers of DMF with a total annual capacity of 150,000 tons of DMF and methylamine. In 2020, the permanent closure of one of our largest competitors led to shortages in supply and also resulted in our Group becoming China's second-largest DMF producer. In December 2022, we began constructing our third methylamine facility, which is expected to be completed within 12 months from the start of construction.

Jiutian is currently listed on the Catalist Board of the Singapore Exchange Securities Trading Limited ('**SGX-ST**') under the stock code C8R.

1.2 Message to stakeholders

On behalf of the Board of Directors of Jiutian Chemical Group Limited, I am pleased to present the Sustainability Report ('SR') for the financial year ended 31 December 2022 ('FY2022').

As a leader in DMF and methylamine production in China, Jiutian is poised to take a leading role in the environmental, health and safety ('EHS') aspects to ensure the sustainability of our operations and fulfil our responsibility towards our stakeholders. We continue to engage in constructive dialogue with our stakeholders and focus on our four key pillars of Quality Management, Production Safety, Environmental Protection and Employee Well-being.

We are aware that the Chinese government's emphasis on environmental-friendly industrial operations will necessitate us in keeping abreast of related regulatory developments and consequently improve our operations to comply with these changes. This proactive stance will in turn place Jiutian on a more sustainable growth trajectory.

Our Remarkable Performance

In FY2022, we experienced a surge in demand for our core products from downstream industries such as electric vehicles (EV) batteries, electronics, pharmaceuticals, and animal feeds. This robust growth in local and export markets fuelled the need for our DMF and Methylamine products. Despite the widespread lockdown in various parts of China due to the Covid-19 pandemic and the temporary shutdowns and production restrictions of our major downstream customers due to the blockade measures, we were still able to achieve an impressive sale volume of DMF and Methylamine. Our sales volume for these products in FY2022 was 8% higher and 3% lower than in FY2021.

Moreover, we were able to command higher prices for these products in FY2022, with average selling prices of DMF and Methylamine amounting to RMB 11,124 per tonne and RMB 15,532 per tonne, respectively.

Despite the challenges posed by the pandemic and the resulting lockdowns, we were able to capitalize on the strong demand for our products and achieve impressive sales volumes and prices. We remain committed to meeting the needs of our downstream customers and maintaining our position as a leading provider of DMF and Methylamine products in China.



Looking Ahead

As China's post-COVID-19 economic recovery gains momentum, demand for our DMF and Methylamine products remains strong and sustained. However, we acknowledge that macro challenges such as trade tensions, geopolitical conflicts, and other uncertainties remain a concern. We are closely monitoring these developments and taking optimal actions to benefit our stakeholders.

Being one of the largest DMF producers in the world we remain optimistic about our long-term prospects. Our strategic location with access to key resources at competitive pricing allows us to maintain our leading edge in the market.

At Jiutian, we are dedicated to being a key player in China's fine chemical industry, and we are constantly pursuing new means to strengthen our efficiency and capabilities. We are excited to share that our expansion plan is well underway, featuring a new 100,000-ton Methylamine plant adjacent to our current 120,000-ton Methylamine/DMF facility. The construction stage of the project began in December 2022, and we anticipate completion within 12 months from the start of construction. The commercial production of methylamine is expected in 1Q2024.

We wish to confirm that the sustainability issues have been considered as part of our strategic formulation, and the Board has determined the material environmental, social, and governance ('ESG') factors, overseeing their management in monitoring these factors.

As part of our commitment to sustainable development, we will continue to perform business responsibly. We believe that sustainable development is essential to our long-term success, and we will strive to balance economic, social, and environmental considerations in our business decisions.

On behalf of the Board of Directors

HAN LIANGUO

Non-Executive and Non-Independent Chairman



1.3 Scope of sustainability report

The scope of the report covers information on the material sustainability aspects of Jiutian, namely the Group's significant subsidiary, Anyang Jiutian Fine Chemical Co., Ltd (安阳九天精细化工有限公司) ('**Anyang Jiutian**'), from 1 January 2022 to 31 December 2022 unless otherwise specified. This should sufficiently address stakeholders' concerns in relation to the sustainability issues arising from the major business operations of the Group.

This report is prepared in accordance with the Global Reporting Initiative ('**GRI**') Standards: Core Option as it provides a set of an extensive framework that is widely accepted as a global standard for sustainability reporting. In preparing our report, we applied the GRI's principles for defining the report content and report quality by considering the Group's activities, impacts and substantive expectations and interests of its stakeholders. Please refer to **Appendix B** for the GRI Content Index. We also consider the Sustainability Reporting Guide in Practice Note 7F of the Singapore Exchange Securities Trading Limited ('**SGX-ST**') Listing Manual Section B: Rules of Catalist ('**Catalist Rules**') and the Singapore Exchange Limited ('**SGX**')'s Core ESG Metrics.

1.4 Internal review

The Board has engaged Crowe Horwath First Trust Advisory Pte Ltd ('**Crowe**'), a reputable professional firm specialising in audit and risk solutions, to assist the Board in the review of the adequacy and effectiveness of the Company's internal control systems in relation to the sustainability reporting.

The scope of the services is to review the operations related to the development of sustainability reports. The findings and recommendations are presented to the Board for its deliberation. There are no significant weaknesses reported.

The Board is of the opinion, with the concurrence of the Audit Committee ('**AC**'), that based on the review performed by Crowe, the Company maintains a sound system of internal controls in the areas of sustainability reporting. The Board however notes that no system of internal controls can provide absolute assurance against failure to meet business objectives, poor business judgement, human fallibility, material errors or losses, frauds, breaches of laws or regulations, or other unforeseeable occurrences.

The data and information provided within the report have not been verified by an independent third party.

1.5 Training on sustainability for Directors

We are pleased to confirm that all of our company's directors have successfully completed sustainability training in FY2022. The training program covered a range of topics related to sustainable business practices, including environmental responsibility, social impact, and corporate governance. We are committed to promoting sustainable business practices and believe that this training will help our directors lead the company in a socially and environmentally responsible way.

1.6 Restatements

We have recently reviewed and updated our carbon emission factor for purchased steam to align with current industry best practices, using the latest publication by the International Energy Agency ('**IEA**') as our source. This update has resulted in a restatement of our total carbon emissions and carbon emission intensity for FY2018¹ as it will be used as a baseline point for setting the target, FY2020¹ and FY2021¹, ensuring that our data accurately reflects our environmental impact.

In addition, we have identified an error in the computation of our expenditure on process improvement in FY2021² and have therefore restated the comparative figure in this report.

1.7 Sustainability contact

We welcome your views and feedback on our sustainability practices and reporting at info@jiutianchemical.com.

¹ Please refer to section 3.4 environmental protection and Appendix A: Sustainability scorecard for the restated figures.

² Please refer to section 3.2 quality management and Appendix A: Sustainability scorecard for the restated figures.

2. Our approach to sustainability

2.1 Sustainability organisational structure

Sustainability is a vital part of our corporate strategy for achieving long-term growth. The values we create for our people, the environment and society at large very much influence our financial performance. In order to better accommodate our sustainability goals and values, we have developed a sustainability organisational structure to move things forward.

The Board is responsible for the Group's sustainability reporting and will continue to provide oversight over the identification of the Group's material environmental, social and governance ('ESG') factors and see to it that management ensures that these ESG factors are monitored and properly managed on an ongoing basis.



Leadership

- The Board of Directors establishes the sustainability framework while the Management sees through the implementation of the framework



Organisers

- Acting Chief Executive Officer ('CEO') of Jiutian is in charge of organising and coordinating the sustainability work in various committees and departments.

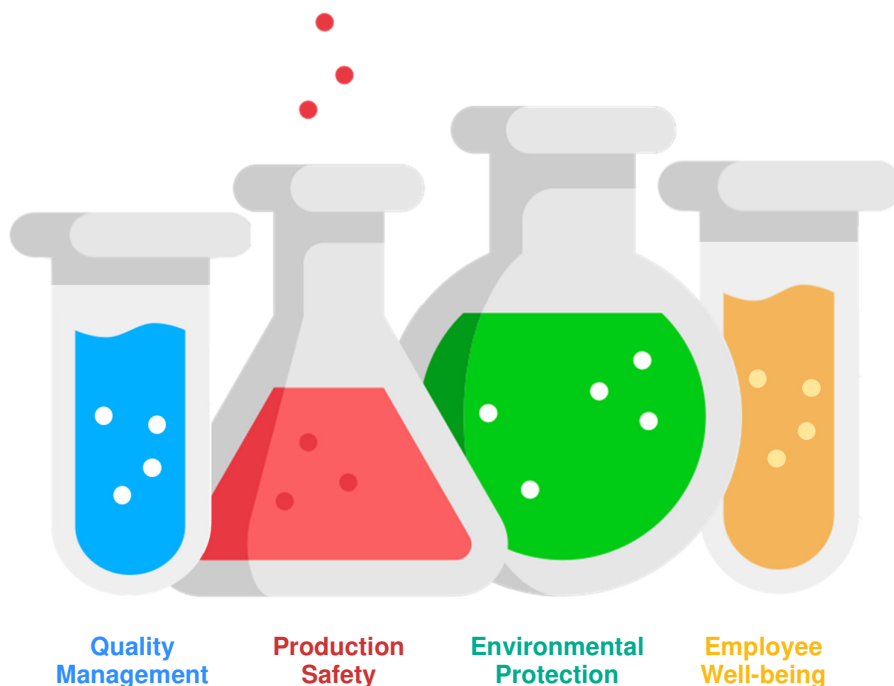


Executives

- The following committees and departments are responsible for sustainability work:
 - Safety Committee
 - Environmental Protection Committee
 - Production Department
 - Equipment Department
 - Technical Department
 - Human Resources Department
 - Administration Department

2.2 Sustainability strategy

At the Group, our sustainability strategy aims to create integrated values. Together with disciplined execution of our strategy and a commitment to doing business responsibly, we commit to delivering value to all our stakeholders through the following:



The sustainable strategy is underpinned by our comprehensive internal policies on the following:

- Production Safety Management (安全生产管理), which covers aspects of safety culture, safety training and development, occupational health and safety, handling of hazardous chemicals, fire safety and prevention, equipment maintenance and supplier management.
- Environmental Protection Management (环境保护管理), which covers aspects of source pollution management, air pollution monitoring, proper discharge of solid and liquid waste and pollution management, and pollution management diagrams for our production of DMF and methylamine.
- Emergency Response Management (应急预案), which covers aspects of emergency response procedures in the event of serious safety or environmental incidents.
- Human Resources Management (人事管理), which covers aspects of the employee handbook, department-specific performance evaluations, rewards and penalties.

The strategy is also guided by external sources, including the Global Reporting Initiative Standards and Sustainability Reporting Guide in Practice Note 7F of the Catalist Rules.

The rest of this report covers our progress and performance in each of these areas, and the impact we have on the economy, environment and society as a result.

2.3 Consulting our stakeholders

We recognise the need to continuously develop our responsible business approach in order to address the growing stakeholder expectations around our impact on the economy, environment and society. As such, we consult periodically with our stakeholders to determine the issues that are most relevant to them and Jiutian.

An overview of our approach and rationale is set out below (with stakeholders listed in alphabetical order), together with the feedback we have received.

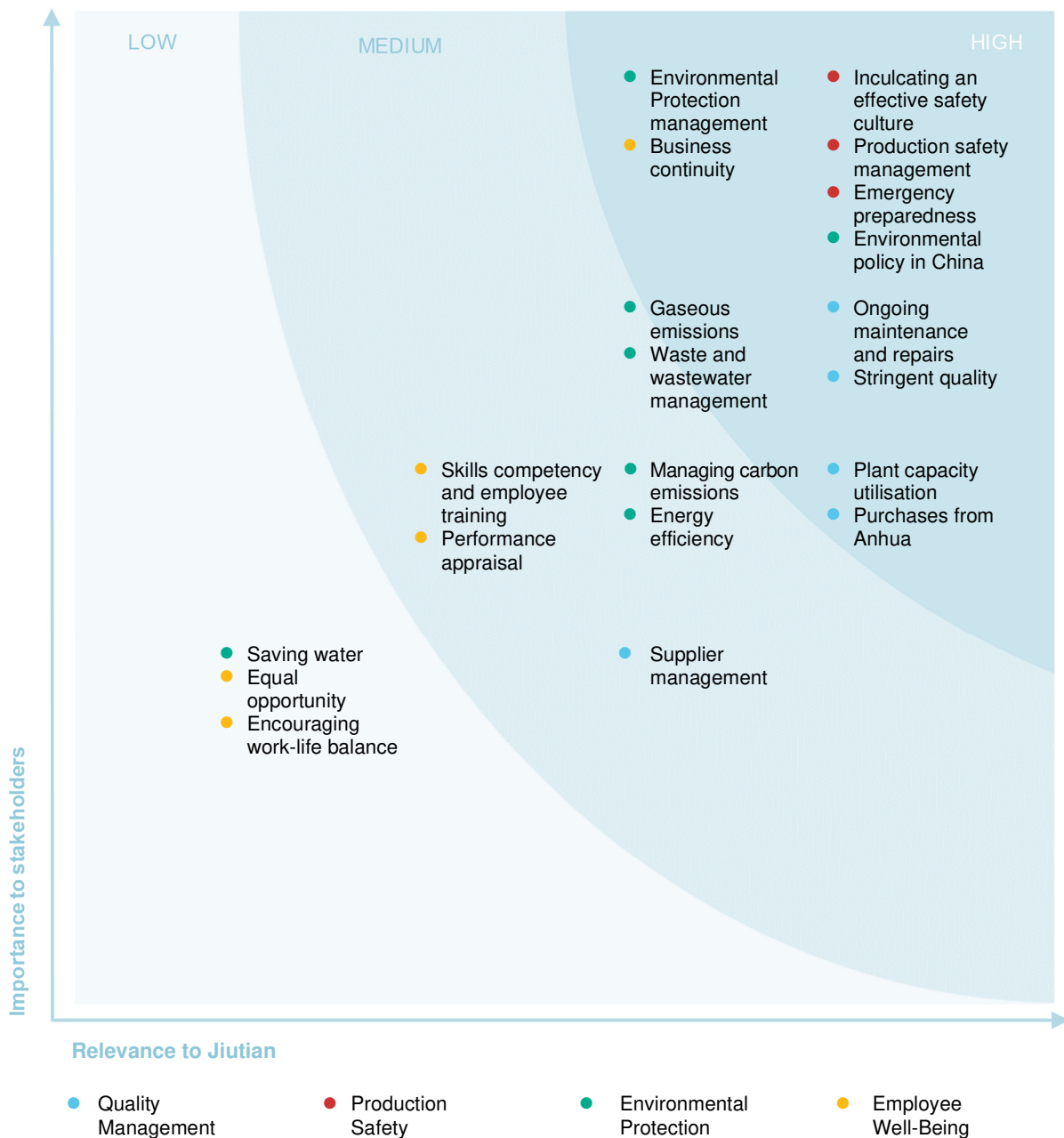
Stakeholders	How we listen	Why do we do it	What you've told us
Customers	<ul style="list-style-type: none"> Industry association meetings Meetings with the customer's procurement department 	<ul style="list-style-type: none"> Ensure the ability to meet customer's requirements in terms of quality and delivery timelines 	<ul style="list-style-type: none"> Provision of high-purity chemicals Ability to meet delivery timelines
Employees	<ul style="list-style-type: none"> Internal updates and communication Events and functions Whistle-blowing policy 	<ul style="list-style-type: none"> Improve employee capabilities through internal and external training Improve employee well-being through managing health and safety, and upkeep of the plant and surrounding areas 	<ul style="list-style-type: none"> Health and safety Career progression Benefits and rewards External courses
Regulatory authorities (Governments, SGX and etc)	<ul style="list-style-type: none"> Regular updates and communication Reports and compliance Periodical meetings with government bodies 	<ul style="list-style-type: none"> Adhere to environmental regulations for chemical production A good relationship between Company's continuing sponsor and facilitating dialogue with SGX 	<ul style="list-style-type: none"> Compliance with relevant laws and regulations
Shareholder and investors	<ul style="list-style-type: none"> SGX Announcements Shareholder's meeting Annual reports Regular updates and communication 	<ul style="list-style-type: none"> Committed to delivering economic value to our capital providers through strong financial performance and our methods of engagement with them. 	<ul style="list-style-type: none"> Long-term profitability Sustainability matters Group's performance against targets Compliance with the Catalyst Rules Business continuity
Suppliers	<ul style="list-style-type: none"> Meetings with the supplier's sales department Negotiation of bulk discounts 	<ul style="list-style-type: none"> Ensure availability of quality supplies for uninterrupted chemical production at a reasonable cost 	<ul style="list-style-type: none"> Ability to meet Company's quality standards Ability to meet Company's delivery timelines

2.4 Sustainability materiality

Based on the stakeholder engagement, we have developed our material sustainability matrix containing material aspects which are aligned with our principal business and operational risks and formed our sustainability strategy which has shaped our approach to sustainability reporting, as illustrated in the diagram below.

We have also developed metrics to help us measure our progress, as indicated in our sustainability scorecard in **Appendix A**. We will review and adjust the matrix each year when the external and business context changes.

The aspect boundaries 'within' the organisation are limited to our principal subsidiary, Anyang Jiutian, whereas the aspect boundaries 'outside' the organisation include customers, employees, regulatory authorities (governments, SGX and etc), shareholders and investors and suppliers.



3. Our performance

3.1 How we measure our performance

Our sustainability strategy is embedded into the appropriate parts of our business, with dedicated teams for each focus area, and coordination by our relevant departmental managers.

Progress will be tracked in two key ways: measuring performance against metrics, and evaluating how well the programmes have advanced through a series of ‘commitments’.

Metrics and targets

We have established the key performance indicators for each of the four focus areas outlined in our sustainability strategy. Periodically, we plan to introduce new metrics and update targets to ensure alignment with our strategy. Please refer to **Appendix C** for the methodology review and data boundaries.

Symbols used to indicate progress against commitments

	The new commitment this year		In progress		Ongoing commitment: no end date
	Not started		Complete		

Commitments to United Nations Sustainable Development Goals (‘UNSDGs’)

To ensure we have a robust sustainability programme in place, we have included the key commitments for each area of our sustainability strategy, guided by UNSDGs. The progress we have made against each key commitment is indicated using the symbols shown in the table below. We track and review our sustainability programme with the Board of Directors at least once a year.

As a global citizen, Jiutian supports UNSDGs through the following commitments:

Goals	How we support
<p>3 GOOD HEALTH AND WELL-BEING</p>	<p>We are committed to promoting and supporting initiatives that improve access to quality healthcare, ensure healthy living conditions, and promote mental and emotional well-being. By prioritizing the health and well-being of our employees, partners, and communities, we aim to contribute to the achievement of these vital Sustainable Development Goals (‘SDGs’) and create a better world for all.</p> <p>For our commitment, please refer to “Production Safety” and “Employee Well-being”</p>
<p>4 QUALITY EDUCATION</p>	<p>We believe that investing in employee training is not only essential for the growth and success of our organization but also for the professional development and job satisfaction of our employees. As an organization, we are committed to providing our employees with ongoing training and development opportunities that enable them to expand their knowledge, build new skills, and enhance their performance. We seek to offer training programs that are relevant, engaging, and aligned with the needs of our employees and our organization. By prioritizing employee training, we aim to create a culture of continuous learning and improvement that supports the success of our employees and our organization as a whole.</p> <p>For our commitment, please refer to “Employee Well-being”</p>
<p>5 GENDER EQUALITY</p>	<p>We believe that equal opportunities and rights for women and men are fundamental to building a fair, just, and inclusive society. As an organization, we strive to create a workplace culture that supports and values diversity, inclusivity, and equal opportunities for all. We are dedicated to ensuring that our policies and practices promote gender equality, and we actively seek to address and eliminate any barriers to equal opportunities and advancement for women.</p> <p>For our commitment, please refer to “Employee Well-being”.</p>

Goals	How we support
 <p>6 CLEAN WATER AND SANITATION</p>	<p>We recognize that access to clean water is a basic human right and essential for sustainable development. We also understand the importance of protecting our natural resources and reducing waste. We aim to reduce our water consumption and waste by utilizing innovative technologies and practices that recycle and reuse water, wherever possible. By prioritizing the use of recycled water, we aim to contribute to the conservation of our natural resources, promote sustainable development, and create a better world for future generations.</p> <p>For our commitment, please refer to “Environmental Protection”.</p>
 <p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>	<p>Jiutian recognizes the importance of innovation in the production of DMF and methylamine, and we are committed to developing and implementing new, sustainable technologies in our operations. We understand the critical role that DMF and methylamine play in the chemical industry, and we are dedicated to ensuring that our production methods are safe, efficient, and environmentally responsible. We seek to invest in research and development to identify new, innovative approaches to production that minimize waste, reduce energy consumption, and limit our environmental impact.</p> <p>For our commitment, please refer to “Quality Management and Production Safety”.</p>
 <p>13 CLIMATE ACTION</p>	<p>We recognize that climate change is one of the most significant challenges facing our planet, and we are dedicated to doing our part to mitigate its impact. As an organization, we seek to minimize our carbon footprint and reduce our greenhouse gas emissions through sustainable business practices and by investing in renewable energy sources. We aim to promote sustainable development by working with our partners to identify and implement solutions that reduce our collective impact on the environment. We also seek to raise awareness and promote action on climate change within our industry and the broader community.</p> <p>For our commitment, please refer to “Environmental Protection”.</p>

3.2 Quality management

Overview

At Anyang Jiutian, our primary focus is on the manufacture and production of high-purity DMF and methylamine, which are key feedstocks used in the production of polyurethane ('PU'). To ensure the quality of our products, we have established comprehensive procedures that are rigorously followed throughout the production process.

We also recognize the importance of effective supply chain management in promoting positive corporate values and achieving sustainable business practices. To this end, we remain dedicated to the consistent implementation of our procurement policies and procedures across our entire operation. By optimizing our processes and conserving resources, we aim to increase productivity and reduce our environmental footprint while meeting the needs of our customers.

Plant capacity utilisation

In FY2022, the capacity utilisation rate for DMF production increased from 62% to 67%, while the capacity utilisation rate for methylamine production was maintained at a 100% utilisation rate year-on-year. The relatively lower utilisation rate of the DMF plant was primarily due to management's balancing of the production mix to maximise profit.

Despite the challenges posed by the Covid-19 pandemic, we experienced a surge in demand for our core products from downstream users throughout the year. Industries such as EV batteries, electronics, pharmaceuticals, and animal feeds saw robust growth in both local and export markets, which fueled the need for our DMF and Methylamine products.

Looking ahead, we remain optimistic about the future. As the global economy continues to recover from the pandemic, we anticipate that the demand for DMF and methylamine will remain stable, if not increase further. We are committed to closely monitoring and reporting on the plant's capacity utilization rate for both products, and we are confident in our ability to continue meeting the needs of our customers in these vital industries.

Ongoing maintenance and repairs

In FY2022, we conducted scheduled maintenance on the DMF and methylamine plants. The maintenance involves the installation of the internal pressure vessel.

At our chemical plants, we prioritize regular maintenance and repairs to ensure smooth and efficient operations year-round. These activities include minor technological improvements, piping and insulation maintenance and repairs, meter updates, and structural reinforcements. These efforts improve production efficiency and quality and help prepare our chemical plant to operate smoothly during harsh winter months.

In FY2022, we will continue to increase our focus on regular maintenance and repairs, which has led to an increase in expenditure from RMB 12.0 million to RMB 13.6 million. By increasing the frequency of these activities, we are confident in our ability to maintain our high standards for production efficiency and quality, while reducing the risk of unexpected downtime.

FY2022 Progress

67%

DMF plant capacity utilisation rate

100%

Methylamine plant capacity utilisation rate

13.6m

Investment in maintenance and repairs (RMB)

3.36m

Investment in process improvements (RMB)

100%

Product acceptance rate by our customers

Despite the DMF and methylamine facilities being in production for over a decade, the Production, Equipment, and Technical Departments at Anyang Jiutian are committed to continually improving the efficiency and effectiveness of our production workflow through process improvement initiatives. In FY2022, we spent a total of RMB 3.36 million on process improvements, demonstrating our dedication to enhancing our operations.

Moving forward, we will continue to closely track and report on maintenance and repairs as well as process improvements made at Anyang Jiutian.

Stringent quality management

At Anyang Jiutian, we prioritize customer satisfaction by delivering high-quality products through our stringent quality management process. Our commitment to product quality is reflected in our ISO9001:2015 certification, which we renewed in June 2020 and plan to renew again in June 2023.

To ensure the purity of our products, we subject each incoming raw material shipment to rigorous analysis and inspection in our in-house laboratory. We only accept shipments that meet our strict production requirements, and any shipments that do not meet our purity standards are returned to the suppliers.

We also conduct hourly quality inspections during ongoing production to maintain consistency in DMF and methylamine production. By focusing relentlessly on quality, we have achieved a 100% product acceptance rate by our customers in FY2022 which is the same achievement rate in FY2021.

We are committed to continuing to prioritize product quality to achieve 100% customer satisfaction in the future. We will continue to improve our quality management process and incorporate customer feedback to ensure we are meeting their needs and exceeding their expectations.

Purchases from Anhua

Anyang Jiutian has maintained a strong partnership with our principal supplier and shareholder, Anyang Chemical Industry Group Co., Ltd. (安阳化学工业集团有限责任公司) ('Anhua'), since the signing of our raw materials and spare parts purchase agreement in January 2005. The 20-year agreement includes the supply of essential raw materials and utilities such as coal, distilled water, steam, and electricity to our facilities.

Our close working relationship with Anhua enables us to ensure the quality and consistent supply of these materials and utilities at a reasonable price. We value the partnership and trust we have built with Anhua over the years, and we are committed to continuing our collaboration to support the success of both companies.

At Anyang Jiutian, we recognize the importance of reliable and cost-effective raw materials and utilities to our production process, and we are grateful for the consistent support and partnership of Anhua in this regard. We look forward to continuing to work together to meet the needs of our customers and stakeholders.



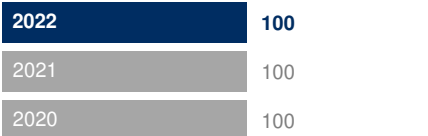

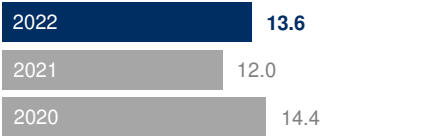
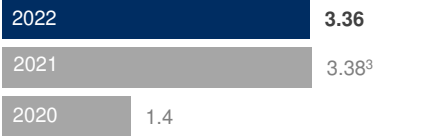


Supplier management

Anyang Jiutian purchases entirely from its reliable local suppliers. A secure and stable supply chain is very important to ensure the smooth and uninterrupted operation of our production activities. As such, we have established a set of Supplier Management Policies (供应商管理办法) to be applied to all our suppliers.

Some of the areas covered by our policies include:

- Supplier classification,
- New supplier qualification and authorisation,
- Supplier evaluation,
- Supplier disqualification,
- Supplier selection through fair competition, and
- Inventory management.

Commitments: Quality management

Key Commitments	Plant Capacity Utilisation for DMF (%)	FY2022 progress 								
Track and report plant capacity utilisation rate for DMF and Methylamine	 <table border="1"> <thead> <tr> <th>Year</th> <th>Utilisation (%)</th> </tr> </thead> <tbody> <tr> <td>2022</td> <td>67</td> </tr> <tr> <td>2021</td> <td>62</td> </tr> <tr> <td>2020</td> <td>56</td> </tr> </tbody> </table>	Year	Utilisation (%)	2022	67	2021	62	2020	56	<ul style="list-style-type: none"> During the year, there was a surge in demand for our core products from downstream users. These customers from industries such as EV batteries, electronics, pharmaceuticals and animal feeds saw strong growth in local and export markets, which in turn fuelled the need for our DMF and Methylamine products.
Year	Utilisation (%)									
2022	67									
2021	62									
2020	56									
	Plant Capacity Utilisation for Methylamine (%)	<ul style="list-style-type: none"> For FY2022, the capacity utilization rate for DMF production increased from 62% to 67% while that for methylamine production maintained at 100% The relatively lower utilisation rate of the DMF plant compared to the plant capacity utilization for Methylamine was primarily due to management's balancing of the production mix to maximise profit. We have met this commitment in FY2022 and will continue to track and report the plant capacity utilisation rate for DMF and Methylamine for FY2023. 								
	 <table border="1"> <thead> <tr> <th>Year</th> <th>Utilisation (%)</th> </tr> </thead> <tbody> <tr> <td>2022</td> <td>100</td> </tr> <tr> <td>2021</td> <td>100</td> </tr> <tr> <td>2020</td> <td>100</td> </tr> </tbody> </table>	Year	Utilisation (%)	2022	100	2021	100	2020	100	
Year	Utilisation (%)									
2022	100									
2021	100									
2020	100									
Key Commitments	Maintenance and repairs (RMB'million)	FY2022 progress 								
Track and report ongoing maintenance, repairs and improvements	 <table border="1"> <thead> <tr> <th>Year</th> <th>Amount (RMB'million)</th> </tr> </thead> <tbody> <tr> <td>2022</td> <td>13.6</td> </tr> <tr> <td>2021</td> <td>12.0</td> </tr> <tr> <td>2020</td> <td>14.4</td> </tr> </tbody> </table>	Year	Amount (RMB'million)	2022	13.6	2021	12.0	2020	14.4	<ul style="list-style-type: none"> Regular maintenance and repairs continue to be carried out periodically. Maintenance and repairs expenses in FY2022 are RMB 13.6 million. The amount spent on process improvement in FY2022 is almost identical to that of FY2021, totalling RMB 3.36 million.
Year	Amount (RMB'million)									
2022	13.6									
2021	12.0									
2020	14.4									
	Process improvements (RMB'million)	<ul style="list-style-type: none"> We have met this commitment in FY2022 and will continue to track and report ongoing maintenance, repairs and improvements for FY2023. 								
	 <table border="1"> <thead> <tr> <th>Year</th> <th>Amount (RMB'million)</th> </tr> </thead> <tbody> <tr> <td>2022</td> <td>3.36</td> </tr> <tr> <td>2021</td> <td>3.38³</td> </tr> <tr> <td>2020</td> <td>1.4</td> </tr> </tbody> </table>	Year	Amount (RMB'million)	2022	3.36	2021	3.38 ³	2020	1.4	
Year	Amount (RMB'million)									
2022	3.36									
2021	3.38 ³									
2020	1.4									
Key Commitments	Achievements	FY2022 progress 								
Full compliance with ISO9001:2015 (Quality Management System)	<ul style="list-style-type: none"> ISO9001:2015 certified since October 2018 and has been renewed every three years. 	<ul style="list-style-type: none"> Anyang Jiutian is fully compliant with the requirements of ISO9001:2015 since October 2018. 								
Key Commitments	Achievements	FY2022 progress 								
Achieve a 100% product acceptance rate by our customers	<ul style="list-style-type: none"> Achieved 100% product acceptance rate by our customers since FY2017 	<ul style="list-style-type: none"> Backed by our stringent quality management process, Anyang Jiutian continues to achieve a 100% product acceptance rate by our customers since FY2017. 								

³ Restated due to computation error. Please refer to section 1.6 Restatements for more information.

3.3 Production safety

Overview

At Anyang Jiutian, we recognize that safety is of paramount importance in the chemicals industry, particularly when dealing with hazardous chemicals throughout our production process. As such, we place a strong emphasis on production safety in all of our operations.

We believe that creating a more effective safety culture is the key to improving safety in our workplace. This means shifting our mindset from prioritizing production over safety to prioritizing safety as the foundation of all of our operations. We strive to create a workplace where safety is embedded in our daily routines, and where all employees take responsibility for safety.

To achieve this, we provide comprehensive training to our employees on safety protocols, emergency response procedures, and safe handling practices for hazardous chemicals. We also conduct regular safety audits and risk assessments to identify any potential hazards and implement appropriate measures to mitigate these risks.

We encourage our employees to speak up and report any safety concerns they may have, and we actively seek their input and feedback to continuously improve our safety practices. By fostering a culture of safety, we are committed to ensuring the health and well-being of our employees, protecting the environment, and providing safe and reliable products to our customers.

Inculcating an effective safety culture

Safety in the chemical industry relies heavily on following correct procedures. Having an effective safety culture is hence very important. By building an effective safety culture, we were not only able to reduce injuries, but we can also strengthen production, increase operational agility and move ahead on the journey to becoming a high-performance business.

Anyang Jiutian is fully compliant with China's production safety policy and has regularly renewed the requisite Production Safety License (安全生产许可证) on our production facilities. We enforce strict safety regulations and take stringent measures to ensure the safety aspects of our production facilities and processes.

As part of our strategy, we seek to continue to be fully compliant with China's production safety policy with zero production stoppage due to safety incidences and zero serious accidents.

At Anyang Jiutian, our Safety Committee is headed by our Acting CEO and General Manager of Subsidiaries, and supported by our Vice General Manager (Technical), Equipment Manager, Production Manager and Safety Manager.

Daily safety briefings are held before each production shift with weekly and monthly safety meetings to summarise and incorporate lessons learnt. There are also periodic sharing sessions from each department to highlight the important safety aspects.

New employees are required to attend the company and departmental orientation training where safety features prominently in the topics which are covered. They are also required to familiarise themselves with all safety aspects in relation to their job scope.

FY2022 Progress

0

Production stoppage due to safety incidences

0

Serious incidents

0

Workplace injuries

In June 2022, we kicked off a full month of activities in conjunction with Production Safety Month to strengthen safety awareness and safety aspects in our daily operations in line with the principles of “Zero Violations, Zero Hazards, Zero Accidents” (无三违、无隐患、无事故). We also organise monthly safety competitions between different production shifts and reward the winning team with additional salary incentives for each month for the winning team. We believe that this is an effective motivational tool to improve production without compromising safety.

Production safety management

We are totally committed to production safety and have established a set of Production Safety Management Policies (安全生产管理制度) that requires all employees to adhere to the relevant safety laws and regulations and company standards. Anyang Jiutian is fully compliant with the requirements of OHSAS18001:2007 (Occupational Health & Safety) from October 2018 to September 2020. Effective from October 2020, Anyang Jiutian has been certified to be compliant with the requirements of ISO45001:2018 (Occupational Health & Safety Management System). This certification has a validity of three years and will be renewed in June 2023.

Our employees are required to familiarise themselves with and uphold safety standards in order to achieve “Safety First, Effective Prevention, and Comprehensive Management” (安全第一、预防为主、综合治理).

Some of the areas covered by our policies include:

- Effective safety culture,
- Safety training and development,
- Occupational health and safety,
- Handling of hazardous chemicals, and
- Fire safety and prevention.

Emergency preparedness

While we emphasise preventing safety incidents, we also prepare the employees to handle and respond to emergencies, including potential explosions, fires and chemical spills. This is very important to reduce and limit the impact and casualties as a result of any safety incidents that may happen in our line of work.

In addition to departmental training and refresher courses, we also conduct annual fire safety and emergency preparedness drills that involve all company personnel and the local fire station.

In November 2022, we kicked off a full month of activities in conjunction with the “119” National Fire Prevention Month to strengthen fire safety and emergency preparedness awareness within Anyang Jiutian and our local community, focused on the following areas:

- Case studies on major fire incidents in recent years,
- Response to emergency situations at work and at home,
- Usage of fire safety equipment, and
- Usage of gas masks.

Commitments: Production safety

Key Commitments

Full compliance with production safety laws and regulations

Achievements

- Achieved zero production stoppage due to safety incidences and zero serious accidents

FY2022 progress



- Focusing on inculcating an effective safety culture, upholding production safety and emphasising emergency preparedness, we continue to achieve zero production stoppage due to safety incidences and zero serious accidents.

Key Commitments

Full compliance with ISO45001:2018 (Occupational Health & Safety Management System)

Achievements

- OHSAS18001:2007 certified from October 2018 to September 2020, and ISO45001:2018 certified from October 2020 with a validity of three years.

FY2022 progress



- Anyang Jiutian is fully compliant with the requirements of OHSAS18001:2007 (Occupational Health & Safety) from October 2018 to September 2020, and ISO45001:2018 since October 2020.

3.4 Environmental protection

Overview

Environmental protection is fast gaining traction in China amongst policymakers and the public. This move has posed significant implications, especially for the chemicals industry. As one of the largest producers of DMF and methylamine in China, Anyang Jiutian is committed to ensuring our full compliance with national environmental regulations.

Comprehensive policies are developed to ensure that Anyang Jiutian's commitment towards environmental protection, reducing carbon emissions, preventing pollution, and minimising waste can be achieved during our daily operations.

Environmental policy in China

Environmental policy in China is set by the National People's Congress and managed by the Ministry of Environmental Protection of the People's Republic of China. The central government issued strict regulations for which the actual monitoring and enforcement are largely undertaken by the local governments.

In January 2015, a new environmental law came into effect, covering land, water and air pollution. It contains strict penalties, including seizing the property of illegal polluters and company executives subject to prison sentences of 15 days. There is no upper limit on fines. More than 300 different groups will be able to sue on behalf of the people harmed by pollution.

Anyang Jiutian is fully compliant with China's environmental policy and has obtained the requisite clearance on its environmental protection facilities since November 2015.

As part of our strategy, we seek to continue to be fully compliant with China's environmental policy with zero environmental incidents and zero fines for contravention of environmental regulations.

To address the increasingly stringent national environmental policy in China, Anyang Jiutian's management requires all environmental matters to be addressed as a high priority through the following steps:

- Manage and analyse the root causes of environmental incidents in a timely manner,
- Adopt a conscientious and persistent attitude towards the improvement of processes, and
- Maintain an open mind towards the adoption of new and advanced technology and management methods.

Managing climate-related risks

We recognize that climate change poses significant risks to our operations, our industry, and the communities in which we operate. We aim to identify and assess these risks and implement measures to manage and mitigate them. We seek to promote sustainable practices that reduce our carbon footprint and minimize our impact on the environment. We also work with our partners to identify and manage climate-related risks throughout our supply chain, ensuring that we promote sustainable practices throughout our industry. We understand the importance of transparency and plan to align our disclosure with the recommendations of the Task Force on Climate-related Financial Disclosures ('TCFD'). As a result, we will include additional information in our Sustainability Report for the financial year 2024.

FY2022 Progress

0

Environmental incidents

0

Fines on contravention of environmental regulations (RMB)

12.32kgCO_{2e}

Carbon footprint per tonne of production

100%

Gaseous emissions that meet local emission standards

100%

Wastewater discharge that meets local emission standards

0.33m³

Water consumption per tonne of production

0.86m³

Wastewater discharge per tonne of production

147%

Water recycled and reused

Environmental protection management

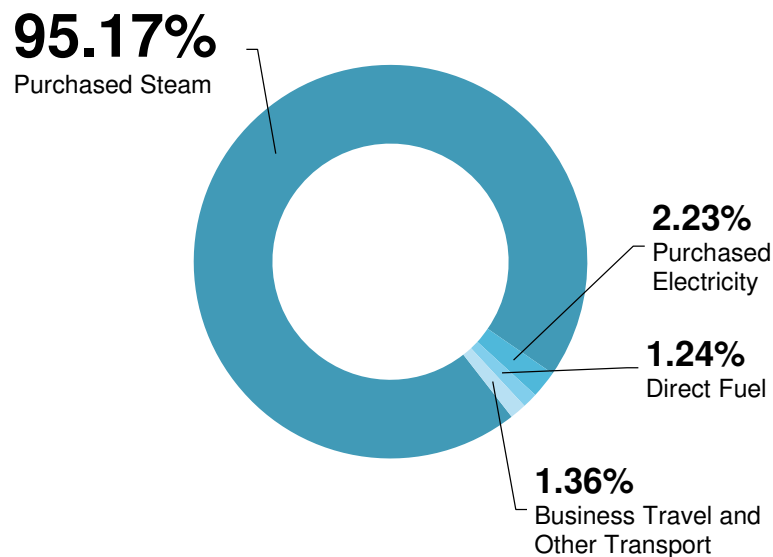
At Anyang Jiutian, our Environmental Protection Committee is headed by our Acting CEO and General Manager of Subsidiaries and supported by our Vice General Manager (Technical), Equipment Manager, Production Manager and Safety Manager. They will oversee all environmental protection matters in the Company.

We are totally committed to environmental protection and have established a set of Environmental Protection Management Policies (环境保护管理制度) that requires all employees to adhere to the relevant environmental protection laws and regulations and company standards. Anyang Jiutian is fully compliant with the requirements of ISO14001:2015 (Environmental Management System) since October 2018. Effective from June 2020, Anyang Jiutian has been re-certified to be compliant with the requirements of ISO14001:2015. This certification has a validity of three years and will be renewed in June 2023.

Some of the areas covered by our policies include:

- Source pollution management,
- Air pollution monitoring,
- Proper discharge of solid and liquid waste,
- Pollution management, and
- Pollution management diagrams for our production of DMF and methylamine.

Managing carbon emissions



To determine the carbon footprint, we collect energy usage data from each of our businesses and then calculate our total annual greenhouse gas ('GHG') emissions. We follow the GHG Protocol established by the World Resources Institute and the World Business Council for Sustainable Development, the standard manual for measuring corporate GHG emissions. Using the "control method", we include 100% of the emissions associated with businesses which we directly control. Our carbon footprint includes:

- All fuels used directly by our companies (Scope 1 emission)
- All purchased electricity and steam used in our facilities (Scope 2 emissions)
- Impact of business travel, and transportation of goods to our customers (optional Scope 3 emissions)

In FY2022, Anyang Jiutian generated a carbon footprint of 3,319 tonnes of carbon dioxide emission ('tCO₂e') with a carbon emission intensity of 12.32 kilogram of carbon dioxide emission ('kgCO₂e') per tonne of production, representing a 2% decrease from the previous year. The emission mainly arises from purchased steam used in the production process which accounted for 95% of the total carbon emission of Anyang Jiutian.

The reduction in carbon emission intensity is mainly due to improved energy efficiency in our production, as well as a decrease in travel due to COVID-19.

We recognise that reducing carbon emissions in our daily operations has a positive effect on climate change and are committed to achieving our target of reducing our carbon footprint intensity by 10% by FY2025 based on FY2018's baseline. We will work towards ensuring that our carbon footprint intensity in future years will achieve this target.

Energy efficiency

At Anyang Jiutian, we recognize that energy consumption is a significant contributor to our operating expenses and also impacts the environment. Therefore, we are committed to investing in energy efficiency measures to reduce our carbon footprint and lower our financial costs.

In FY2022, our total electricity consumption was 72,542 kilowatt-hours ('kWh'), with an intensity of 0.27 kWh per tonne of production, representing a 7% decrease from the previous year. Our total steam consumption was 1,011,123 cooling tonnes ('CT'), with an intensity of 3.75 CT per tonne of production, representing a 1% decrease from the previous year.

To enhance our existing assets, we have allocated considerable resources to process improvement initiatives over the years. We have optimised eco-efficiency in our production operations to cut our energy consumption with the primary goal of reducing our carbon footprint. For example, we are improving the energy efficiency of our boilers through regular maintenance and refurbishment. Occasionally, we also introduce more extensive process improvements through our major maintenance exercise.

Gaseous emissions

DMF and methylamine production produce fumes containing hydrogen sulphide and ammonia respectively. These obnoxious fumes need to be securely collected and treated before they can be safely released into the atmosphere.

Hydrogen sulphide gas from DMF production will undergo a desulphurisation process to remove the presence of sulphur to a level of fewer than 0.1 parts per million ('ppm'). On the other hand, ammonia gas from methylamine production is recovered, purified and recycled as feedstock for the production.

As a result, the fumes released into the atmosphere will be able to meet the requirements of the gas emission standard of the Henan Province. As part of our strategy, we seek to continue to ensure that 100% of our gaseous emissions meet the local emission standards.

Saving water

At Anyang Jiutian, we extensively use water as a natural coolant to maintain the correct temperature of our reactor towers during chemical production. Whenever possible, we implement procedures to utilize recycled water for our processes.

In FY2022, we achieved a water consumption intensity of 0.33 cubic metres ('m³') per tonne of production, representing a 15% decrease from the previous year. Furthermore, we recycled and reused up to 147% of municipal water consumption, demonstrating our commitment to increasing recycling and reuse of municipal water consumption in our production.

We are committed to tracking and monitoring our performance in wastewater discharge, water consumption, and water recycling and reuse. We will report our progress and performance improvements every year in the SR.

Waste and wastewater management

The waste materials generated by Anyang Jiutian's production of DMF and methylamine are not significant. However, any waste engine oils and materials recovered from the maintenance of piping, meters, and insulation are collected in a locked and isolated container and disposed of through proper biohazard disposal channels.

Anhua, a third-party facility, manages Anyang Jiutian's wastewater disposal. Anhua's facilities utilize parallel biological treatment tanks, which are capable of handling up to 15,000 m³ of wastewater per day. The treated wastewater discharge from Anhua's facilities meets the Henan Province's water emission standard. We are committed to ensuring the 100% of our wastewater discharge meets the local emission standards.

In FY2022, Anyang Jiutian's wastewater discharge intensity was 0.86 m³ per tonne of production, which increased from 0.72 m³ per tonne of production in the previous year. The reported increase in wastewater discharge intensity in FY2022 was primarily attributed to the adoption of a more precise measurement method that was newly introduced in 2022. Prior to FY2022, the estimation of wastewater discharge intensity was based on the total production quantity rather than the actual measurements of the discharge. By switching to the actual measurements, the accuracy of the reported values improved significantly. As environmental laws and regulations in China become increasingly stringent, we will continue to strive to reduce wastewater discharge through ongoing maintenance, repairs, and process improvements.

Commitments: Environmental protection

Key Commitments	Achievements	FY2022 progress										
Full compliance with environmental laws and regulations	<ul style="list-style-type: none"> Achieved zero environmental incidents and zero fines on contravention of environmental regulations. 	<ul style="list-style-type: none"> We are fully compliant with China's environmental policy with zero environmental incidents and zero fines for contravention of environmental regulations. 100% of gaseous emissions meet the local emission standards. 100% of wastewater discharge meets the local emission standards. 										
Key Commitments	Achievements	FY2022 progress										
Full compliance with ISO14001:2015 (Environmental Management System)	<ul style="list-style-type: none"> ISO14001:2015 certified since October 2018. Effective from June 2020, Anyang Jiutian has been re-certified to be compliant with the requirements of ISO14001:2015 	<ul style="list-style-type: none"> Anyang Jiutian is fully compliant with the requirements of ISO14001:2015 since October 2018. 										
Key Commitments	Carbon footprint intensity (kgCO₂e/tonne)	FY2022 progress										
Reduce carbon footprint per tonne of production by 10% by FY2025 (from an FY2018 baseline)⁴	<table border="1"> <thead> <tr> <th>Year</th> <th>Intensity (kgCO₂e/tonne)</th> </tr> </thead> <tbody> <tr> <td>2022</td> <td>12.32</td> </tr> <tr> <td>2021</td> <td>12.54</td> </tr> <tr> <td>2020</td> <td>12.29</td> </tr> <tr> <td>2018 Baseline</td> <td>12.67</td> </tr> </tbody> </table>	Year	Intensity (kgCO ₂ e/tonne)	2022	12.32	2021	12.54	2020	12.29	2018 Baseline	12.67	<ul style="list-style-type: none"> 2% decrease in carbon emission intensity from the previous year. The reduction in carbon emission intensity is mainly due to improved energy efficiency in our production. We are committed to achieving our target of reducing our carbon footprint intensity by 10% by FY2025 based on FY2018's baseline. We will work towards ensuring our carbon footprint intensity in future years to achieve this target.
Year	Intensity (kgCO ₂ e/tonne)											
2022	12.32											
2021	12.54											
2020	12.29											
2018 Baseline	12.67											
Key Commitments	Wastewater discharge intensity (m³/tonne)	FY2022 progress										
Track and monitor our performance on wastewater discharge, water consumption, and water recycling and reusing	<table border="1"> <thead> <tr> <th>Year</th> <th>Intensity (m³/tonne)</th> </tr> </thead> <tbody> <tr> <td>2022</td> <td>0.86</td> </tr> <tr> <td>2021</td> <td>0.72</td> </tr> <tr> <td>2020</td> <td>0.65</td> </tr> </tbody> </table>	Year	Intensity (m ³ /tonne)	2022	0.86	2021	0.72	2020	0.65	<ul style="list-style-type: none"> Anyang Jiutian had a wastewater discharge intensity of 0.86 m³ per tonne of production. The reported increase in wastewater discharge intensity in FY2022 was primarily attributed to the adoption of a more precise measurement method that was newly introduced in 2022. 		
Year	Intensity (m ³ /tonne)											
2022	0.86											
2021	0.72											
2020	0.65											
	Water consumption intensity (m³/tonne)											
	<table border="1"> <thead> <tr> <th>Year</th> <th>Intensity (m³/tonne)</th> </tr> </thead> <tbody> <tr> <td>2022</td> <td>0.33</td> </tr> <tr> <td>2021</td> <td>0.39</td> </tr> <tr> <td>2020</td> <td>0.46</td> </tr> </tbody> </table>	Year	Intensity (m ³ /tonne)	2022	0.33	2021	0.39	2020	0.46	<ul style="list-style-type: none"> While FY2021's target to reduce wastewater discharge is not met in FY2022, we will continue to strive to reduce wastewater discharge due to increasingly stringent environmental laws and regulations in China. 		
Year	Intensity (m ³ /tonne)											
2022	0.33											
2021	0.39											
2020	0.46											
	Water recycled and reused (%)											
	<table border="1"> <thead> <tr> <th>Year</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr> <td>2022</td> <td>147</td> </tr> <tr> <td>2021</td> <td>118</td> </tr> <tr> <td>2020</td> <td>73</td> </tr> </tbody> </table>	Year	Percentage (%)	2022	147	2021	118	2020	73	<ul style="list-style-type: none"> In line with the increased recycling and reuse of municipal water consumption, Anyang Jiutian managed to further reduce its water consumption intensity to 0.33 m³ per tonne of production. We recycled and reused up to 147% of municipal water consumption, up from 118% from the previous year. 		
Year	Percentage (%)											
2022	147											
2021	118											
2020	73											

⁴ As the carbon footprint and carbon footprint intensity at Anyang Jiutian are primarily generated by energy consumption, the target for carbon footprint intensity has been set with consideration of the energy consumption. Therefore, the establishment of a separate target for energy consumption has not been deemed necessary.

3.5 Employee well-being

Overview

To improve employees' productivity, we have implemented a comprehensive performance appraisal program and reward system based on the results of the appraisal. This program is essential for us to understand the skill levels of our employees and design appropriate training programs to address any skill gaps.

We place a strong emphasis on the career path and progression of our employees. To achieve this, our management has established multiple two-ways communication channels to ensure that employee career development needs are taken into consideration whenever possible. Training opportunities are offered to all employees based on their identified needs.

These efforts have positioned Anyang Jiutian to provide a positive working experience for our employees while contributing to the economic development and skilled labour resources of the local community.

Skills competency and employee training

To ensure that our employees excel, we emphasise continuous learning in the workplace. Every employee has equal opportunities to upgrade and sharpen his or her skill set through formal and on-the-job internal training programs and inter-departmental competitions.

In FY2022, Anyang Jiutian invested an average of 81 hours of training for each employee, representing a slight decrease from the previous year. We have achieved our target of a minimum of 80 hours of training per employee and will work towards achieving the same target in future years.

Performance appraisal

To ensure the achievement of our goals, we have implemented various performance appraisal methods to assess both the Company's performance and that of each individual employee.

The employee performance appraisal primarily consists of quantifiable evaluation criteria. In addition, we proactively collect performance information of each employee on a monthly basis through direct supervisor inputs and feedback, as well as periodic employee communication sessions.

The collected information allows us to understand the performance and skill development needs of each team and each individual employee from multiple perspectives. This understanding is crucial for the Company to develop annual training programs aimed at enhancing employee skills and improving overall productivity.

As of FY2022, all of our employees have undergone at least one annual performance appraisal by their superiors. We aim to continue this practice in the coming year.

FY2022 Progress

81

Training hours per staff

100%

Employees subject to regular performance appraisal

44%

Female representation in the workforce

29%

Female representation in management

Equal opportunity

Anyang Jiutian has always been committed to being an equal-opportunity employer, providing a fair workplace for all employees and adhering to the principles of equality and non-discrimination. In matters of recruitment, remuneration, promotion, and benefits, we require objective assessments, equal opportunities, and non-discrimination to be observed regardless of gender, race, marital status, pregnancy, disability, age, or family status.

We believe in attracting talented employees through a fair and flexible recruitment strategy that encompasses recruitment applications, job descriptions, job application, interviews, selection, approval, and job offers. Promotions are based solely on performance and suitability.

We offer competitive remuneration packages that include the necessary social benefits to attract and retain skilled staff members. These packages are reviewed periodically to ensure consistency with current employment market benchmarks. Dismissals are also carried out in accordance with employment laws and regulations relating to non-discrimination.

As of FY2022, female employees make up 44% of our entire workforce, with a 29% representation in management positions. We remain committed to tracking and monitoring female representation in our workforce and will report these statistics every year.

Encouraging work-life balance

We organized a range of employee activities aimed at promoting the relaxation of both mind and body, encouraging teamwork, and fostering the exploration of talents. Our goal was to cultivate a positive attitude in both work and life.

To boost employee teamwork and cohesion, improve employee health, and enhance work-life balance, Anyang Jiutian has been organizing periodic sports competitions, providing gift packs during major festivals (such as Spring Festival, Duanwu Festival, and Mid-Autumn Festival), and offering family care packs during summer and winter. Additionally, we organize free annual health check-ups for our employees and provide financial assistance to those in need.

Business continuity

At Anyang Jiutian, we understand the importance of maintaining our operations in the challenge of unforeseen events or disasters. We are committed to ensuring the continuity of our business and providing uninterrupted services to our customers in the event of any disruptive incidents.

Our business continuity plan is designed to ensure that we can quickly and effectively respond to any situation that may impact our operations. The plan outlines the roles and responsibilities of our key personnel during a disruption, and we will take these steps to ensure the safety of our employees and the continuity of our operations. This includes having redundant supply chains, alternate sourcing arrangements, and remote work capabilities for our employees to ensure we can continue to operate even in the event of a significant disruption.

We regularly test our business continuity plan to ensure that it is effective and up-to-date, and we provide training to our employees to ensure that they are prepared to respond to a disruption. Our goal is to maintain the resilience and agility to continue operating in the challenge of unexpected disruptions while ensuring the safety of our employees and minimizing the impact on our customers.

Commitments: Empowering lives

<p>Key Commitments</p> <p>Achieve a minimum of 80 hours of training per employee</p>	<p>Training hours per employee (Hours)</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Hours</th> </tr> </thead> <tbody> <tr> <td>2022</td> <td>81</td> </tr> <tr> <td>2021</td> <td>83</td> </tr> <tr> <td>2020</td> <td>88</td> </tr> </tbody> </table>	Year	Hours	2022	81	2021	83	2020	88	<p>FY2022 progress </p> <ul style="list-style-type: none"> Anyang Jiutian invested an average of 81 hours of training for each employee. We will continue to commit to a minimum of 80 hours of training per employee every year. 								
Year	Hours																	
2022	81																	
2021	83																	
2020	88																	
<p>Key Commitments</p> <p>All employees are at least subject to an annual performance appraisal by their superiors</p>	<p>Achievements</p> <ul style="list-style-type: none"> All employees are at least subject to an annual performance appraisal by their superiors. 	<p>FY2022 progress </p> <ul style="list-style-type: none"> All employees are at least subject to an annual performance appraisal by their superiors. 																
<p>Key Commitments</p> <p>Track and monitor female representation in the workforce</p>	<p>Female representation in the workforce (%)</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr> <td>2022</td> <td>44</td> </tr> <tr> <td>2021</td> <td>46</td> </tr> <tr> <td>2020</td> <td>42</td> </tr> </tbody> </table> <p>Female representation in management (%)</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr> <td>2022</td> <td>29</td> </tr> <tr> <td>2021</td> <td>28</td> </tr> <tr> <td>2020</td> <td>31</td> </tr> </tbody> </table>	Year	Percentage (%)	2022	44	2021	46	2020	42	Year	Percentage (%)	2022	29	2021	28	2020	31	<p>FY2022 progress </p> <ul style="list-style-type: none"> Female employees decreased slightly to 44% of our entire workforce. Female representation in management increased slightly to 29%. Anyang Jiutian has always been an equal opportunity employer to provide a fair workplace for employees, following the principles of equality and non-discrimination. We will continue this practice in future years.
Year	Percentage (%)																	
2022	44																	
2021	46																	
2020	42																	
Year	Percentage (%)																	
2022	29																	
2021	28																	
2020	31																	

Appendix A: Sustainability scorecard

General

Performance indicators	Units	FY2020	FY2021	FY2022
Independent Directors	%	55.5	55.5	55.5
Female on the Board of Directors	%	0	0	0
Confirmed incidents of corruption	Number	0	0	0
Regulatory and compliance incidents	Number	0	0	0
Purchases from local suppliers	S\$000	871	1,498	1,726
Average anti-corruption training hours per employee	Hours	- ⁵	- ⁵	48

Quality management

Performance indicators	Units	FY2020	FY2021	FY2022
Plant capacity utilisation rate (DMF)	Percentage	56	62	67
Plant capacity utilisation rate (Methylamine)	Percentage	100	100	100
Investment in maintenance and repairs	RMB'million	14.4	12.0	13.6
Investment in process improvements	RMB'million	1.4	3.38 ⁶	3.36
Products that meet the quality requirements of our customers	Percentage	100	100	100

Production safety

Performance indicators	Units	FY2020	FY2021	FY2022
Production stoppage due to safety incidences	Number	0	0	0
Number of cases related to fatalities	Number	0	0	0
Number of cases related to high-consequence injuries	Number	0	0	0
Number of cases related to recordable injuries	Number	0	0	0
Number of cases related to recordable work-related ill health cases	Number	0	0	0

Environmental protection

Performance indicators	Units	FY2020	FY2021	FY2022
Environmental incidents	Number	0	0	0
Fines on contravention of environmental regulations	RMB'000	0	0	0
Carbon emission				
Carbon emission (scope 1)	tCO ₂ e	103.5	42.9	41.0
Carbon emission (scope 1) intensity	kgCO ₂ e/tonne	0.44	0.17	0.15
Carbon emission (scope 2)	tCO ₂ e	2,761	3,149	3,233.0
Carbon emission (scope 2) intensity	kgCO ₂ e/tonne	11.65	12.15	12.0
Carbon emission (scope 3)	tCO ₂ e	46.4	58.8	45.1
Carbon emission (scope 3) intensity	kgCO ₂ e/tonne	0.20	0.23	0.17
Total carbon emission	tCO ₂ e	2,911 ⁷	3,251 ⁷	3,319
Carbon emission intensity	kgCO ₂ e/tonne	12.29 ⁷	12.54 ⁷	12.32

⁵ Performance indicators as recommended by SGX in Core ESG Metrics published in December 2021 that has not been tracked in the previous FYs. Please refer to SGX Core ESG Metrics_Dec 2021.pdf for SGX Core ESG Metrics.

⁶ Restated due to the computation error. Please refer to section 1.6 Restatements for more information.

⁷ Restated due to the updated carbon emission factor for purchased steam. Please refer to section 1.6 Restatements for more information.

Performance indicators	Units	FY2020	FY2021	FY2022
Gaseous emissions that meet local emission standards	Percentage	100	100	100
<u>Energy consumption</u>				
Total electricity consumption	kWh	47,449	75,992	72,542
Electricity consumption intensity	kWh/tonne	0.20	0.29	0.27
Total steam consumption	CT	868,378	983,292	1,011,123
Steam consumption intensity	CT/tonne	3.66	3.79	3.75
<u>Water consumption</u>				
Total water consumption	m ³	109,717	102,320	89,898
Water consumption intensity	m ³ /tonne	0.46	0.39	0.33
<u>Waste management</u>				
Wastewater discharge that meets local emission standards	Percentage	100	100	100
Total wastewater discharged	m ³	154,025	185,350	232,331
Wastewater discharge intensity	m ³ /tonne	0.65	0.72	0.86
Water recycled and reused	Percentage	73	118	147

Employee well-being

Performance indicators	Units	FY2020	FY2021	FY2022
<u>Employment</u>				
Total number of employees	Number	401	567	578
Employee turnover	Percentage	10	9	0.8
Employees subject to regular performance appraisal	Percentage	100	100	100
<u>Current employee by gender</u>				
Female in management	Percentage	31	28	29
Male employee	Percentage	61	56	56
Female employee	Percentage	39	44	44
<u>Current employees by age group</u>				
Above 50	Percentage	.8	.8	9
30-50	Percentage	.8	.8	82
Below 30	Percentage	.8	.8	9
<u>New hires by gender</u>				
Male new hires	Percentage	69	58	67
Female new hires	Percentage	31	42	33
<u>New hires by age group</u>				
Above 50	Percentage	.8	.8	3
30-50	Percentage	.8	.8	73
Below 30	Percentage	.8	.8	24
<u>Employee turnover by gender</u>				
Male resignee	Percentage	73	68	40
Female resignee	Percentage	27	32	60
<u>Employee turnover by age group</u>				
Above 50	Percentage	.8	.8	0
30-50	Percentage	.8	.8	80

⁸ Performance indicators as recommended by SGX in Core ESG Metrics published in December 2021 that has not been tracked in the previous FYs. Please refer to [SGX Core ESG Metrics Dec 2021.pdf](#) for SGX Core ESG Metrics.

Performance indicators	Units	FY2020	FY2021	FY2022
Below 30	Percentage	. ⁹	. ⁹	20
<u>Training</u>				
Investment in training	S\$000	74	67	50
Total training hours	Hours	35,136	46,858	46,925
Average training hours per employee	Hours	88	83	81
Average training hours per male employee	Hours	. ⁹	. ⁹	68
Average training hours per female employee	Hours	. ⁹	. ⁹	70

⁹ Performance indicators as recommended by SGX in Core ESG Metrics published in December 2021 that has not been tracked in the previous FYs. Please refer to [SGX Core ESG Metrics Dec 2021.pdf](#) for SGX Core ESG Metrics.

Appendix B: GRI content index

GRI Standards Content Index

The GRI Content Index references the Jiutian Chemical Group Limited Sustainability Report 2022 (SR), and the Annual Report 2022 (AR).

Disclosure number	Disclosure title	Page reference and remarks	
GRI 2: General disclosures			
The organisation and its reporting practices	2-1	Organisation details	<ul style="list-style-type: none"> AR Corporate Profile
	2-2	Entities included in the organisation's sustainability reporting	<ul style="list-style-type: none"> Section 1.3 of the SR: Scope of sustainability report
	2-3	Reporting period, frequency and contact point	<ul style="list-style-type: none"> Section 1.3 of the SR: Scope of sustainability report Section 1.7 of the SR: Sustainability contact
	2-4	Restatements of information	<ul style="list-style-type: none"> Section 1.6 of the SR: Restatement
	2-5	External assurance	<ul style="list-style-type: none"> No External Assurance
Activities and workers	2-6	Activities, value chain and other business relationships	<ul style="list-style-type: none"> AR Corporate Profile
	2-7	Employee	<ul style="list-style-type: none"> Appendix A of the SR: Sustainability scorecard
	2-8	Workers who are not an employee	<ul style="list-style-type: none"> Not applicable
Governance	2-9	Governance structure and composition	<ul style="list-style-type: none"> AR Corporate Governance
	2-10	Nomination and selection of the highest governance body	<ul style="list-style-type: none"> AR Corporate Governance
	2-11	Chair of the highest governance body	<ul style="list-style-type: none"> AR Corporate Governance
	2-12	Role of the highest governance body in overseeing the management of impacts	<ul style="list-style-type: none"> AR Corporate Governance
	2-13	Delegation of responsibility for managing impacts	<ul style="list-style-type: none"> AR Corporate Governance
	2-14	Role of the highest governance body in sustainability reporting	<ul style="list-style-type: none"> Section 2.1 of the SR: Sustainability of organisational structure
	2-15	Conflicts of interest	<ul style="list-style-type: none"> AR Corporate Governance
	2-16	Communication of critical concerns	<ul style="list-style-type: none"> Section 2.3 of the SR: Consulting our stakeholders
	2-17	The collective knowledge of the highest governance body	<ul style="list-style-type: none"> AR Corporate Governance
	2-18	Evaluation of the performance of the highest governance body	<ul style="list-style-type: none"> AR Corporate Governance
	2-19	Remuneration policies	<ul style="list-style-type: none"> AR Corporate Governance
	2-20	The process to determine the remuneration	<ul style="list-style-type: none"> AR Corporate Governance
	2-21	Annual total compensation ratio	<ul style="list-style-type: none"> AR Corporate Governance
Strategy, policies and practices	2-22	Statement on sustainable development strategy	<ul style="list-style-type: none"> Section 2.2 of the SR: Sustainability strategy

Disclosure number	Disclosure title	Page reference and remarks	
2-23	Policy commitments	<ul style="list-style-type: none"> Section 3.1 of the SR: How we measure our performance 	
2-24	Embedding policy commitments	<ul style="list-style-type: none"> Section 3.1 of the SR: How we measure our performance 	
2-25	Processes to remediate negative impacts	<ul style="list-style-type: none"> Section 2.2 of the SR: Sustainability strategy 	
2-26	Mechanisms for seeking advice and raising concerns	<ul style="list-style-type: none"> AR Corporate Governance Section 2.3 of the SR: Consulting our stakeholders 	
2-27	Compliance with laws and regulations	<ul style="list-style-type: none"> Section 3.4 of the SR: Environmental protection 	
2-28	Membership associations	<ul style="list-style-type: none"> Not Applicable 	
Stakeholder engagement	2-29	Approach to stakeholder engagement	<ul style="list-style-type: none"> Section 2.3 of the SR: Consulting our stakeholders
	2-30	Collective bargaining agreements	<ul style="list-style-type: none"> Not Applicable
GRI 3: Disclosures on material topics			
Material topics	3-1	The process to determine material topics	<ul style="list-style-type: none"> Section 2.4 of the SR Sustainability materiality
	3-2	List of material topics	<ul style="list-style-type: none"> Section 2.4 of the SR Sustainability materiality
	3-3	Management of material topics	<ul style="list-style-type: none"> Section 2.4 of the SR: Sustainability materiality Section 3.2 of the SR: Quality management Section 3.3 of the SR: Production safety Section 3.4 of the SR: Environmental protection Section 3.5 of the SR: Employee well-being
GRI 200: Economic disclosures (applicable sections only)			
Economic performance	201-1	Direct economic value generated and distributed	<ul style="list-style-type: none"> AR Financial Highlights
Procurement practices	204-1	The proportion of spending on local suppliers	<ul style="list-style-type: none"> Section 3.2 of the SR: Quality Management
Anti-corruption	205-3	Confirmed incidents of corruption and actions taken	<ul style="list-style-type: none"> There are no incidences of corruption.
Anti-competitive behaviour	206-1	Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	<ul style="list-style-type: none"> There are no legal actions for anti-competition.
GRI 300: Environment disclosures (applicable sections only)			
Energy	302-1	Energy consumption within the organisation	<ul style="list-style-type: none"> Section 3.4 of the SR: Environmental Protection
Water	303-1	Water withdrawal by source	<ul style="list-style-type: none"> Section 3.4 of the SR: Environmental Protection
	303-3	Water recycled and reused	<ul style="list-style-type: none"> Section 3.4 of the SR: Environmental Protection
Emissions	305-1	Direct (Scope 1) GHG emissions	<ul style="list-style-type: none"> Section 3.4 of the SR: Environmental Protection Appendix A of the SR: Sustainability Scorecard
	305-2	Energy indirect (Scope 2) GHG emissions	<ul style="list-style-type: none"> Section 3.4 of the SR: Environmental Protection Appendix A of the SR: Sustainability Scorecard
	305-3	Other indirect (Scope 3) GHG emissions	<ul style="list-style-type: none"> Section 3.4 of the SR: Environmental Protection Appendix A of the SR: Sustainability Scorecard
	305-4	GHG emissions intensity	<ul style="list-style-type: none"> Section 3.4 of the SR: Environmental Protection Appendix A of the SR: Sustainability Scorecard
Effluents and waste	306-1	Water discharge by quality and destination	<ul style="list-style-type: none"> Section 3.4 of the SR: Environmental Protection
	306-2	Waste by type and disposal method	<ul style="list-style-type: none"> Section 3.4 of the SR: Environmental Protection

Disclosure number	Disclosure title	Page reference and remarks	
	306-3	Significant spills	<ul style="list-style-type: none"> There are no incidences of significant spills.
	306-4	Transport of hazardous waste	<ul style="list-style-type: none"> Section 3.3 of the SR: Production Safety
Laws and regulations	307-1	Non-compliance with environmental laws and regulations	<ul style="list-style-type: none"> There is no non-compliance with environmental laws and regulations.
GRI 400: Social disclosures (applicable sections only)			
Employment	401-1	New employee hires and employee turnover	<ul style="list-style-type: none"> Section 3.5 of the SR: Employee Well-being Appendix A of the SR: Sustainability Scorecard
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	<ul style="list-style-type: none"> Section 3.5 of the SR: Employee Well-being
Occupational health and safety	403-1	Occupational health and safety management system	<ul style="list-style-type: none"> Section 3.3 of the SR: Production Safety Appendix A of the SR: Sustainability Scorecard
	403-5	Worker training in occupational health and safety	<ul style="list-style-type: none"> Section 3.3 of the SR: Production Safety Appendix A of the SR: Sustainability Scorecard
	403-9	Work-related injuries	<ul style="list-style-type: none"> Section 3.3 of the SR: Production Safety Appendix A of the SR: Sustainability Scorecard
	403-10	Work-related ill health	<ul style="list-style-type: none"> Section 3.3 of the SR: Production Safety Appendix A of the SR: Sustainability Scorecard
Training and education	404-1	Average hours of training per year per employee	<ul style="list-style-type: none"> Section 3.5 of the SR: Employee Well-being Appendix A of the SR: Sustainability Scorecard
	404-2	Programs for upgrading employee skills and transition assistance programs	<ul style="list-style-type: none"> Section 3.2 of the SR: Quality Management Section 3.3 of the SR: Production Safety Section 3.5 of the SR: Employee Well-being
	404-3	Percentage of employees receiving regular performance and career development reviews	<ul style="list-style-type: none"> Section 3.5 of the SR: Employee Well-being
Diversity and equal opportunity	405-1	Diversity of governance bodies and employees	<ul style="list-style-type: none"> Section 3.5 of the SR: Employee Well-being
Non-discrimination	406-1	Incidents of discrimination and corrective actions taken	<ul style="list-style-type: none"> There are no incidents of discrimination.
Child labour	408-1	Operations and suppliers at significant risk for incidents of child labour	<ul style="list-style-type: none"> Child labour is strictly prohibited.
Forced or compulsory labour	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labour	<ul style="list-style-type: none"> Forced and compulsory labour is strictly prohibited.
Local communities	413-1	Operations with local community engagement, impact assessments, and development programs	<ul style="list-style-type: none"> Section 3.3 of the SR: Production Safety Section 3.5 of the SR: Employee Well-being
Socioeconomic compliance	419-1	Non-compliance with laws and regulations in the social and economic area	<ul style="list-style-type: none"> There is no non-compliance with socioeconomic laws and regulations.

Appendix C: Methodologies and data boundaries

This section details key definitions, methodologies and data boundaries applied to Jiutian's Sustainability Report, as we endeavour to elevate transparency and facilitate comparability of our data disclosed. These definitions and methodologies are adapted with reference to the GRI Standards Glossary 2021, Reporting Recommendations and Guidance set out in the respective GRI disclosures and various authoritative intergovernmental instruments.

Carbon emissions

In the scope of this reporting, scope 1 emissions are emissions that are generated from the consumption of fuels for our operations. The emission factor used for calculating carbon emission is obtained from The International Energy Agency ('IEA'). Carbon emissions are expressed in tonnes of carbon dioxide equivalent ('tCO₂e').

The scope of this reporting, scope 2 emissions are emissions that result from the generation of purchased or acquired electricity and steam, by the Group. The Grid Emission Factor ('GEF') used for calculating carbon emissions for electricity is obtained from IEA. The carbon emission factor for the acquired steam is obtained from the U.S. Environmental Protection Agency ('EPA'). Carbon emissions are expressed in tCO₂e.

The scope of this reporting, scope 3 emissions are generated from the consumption of fuels used for the delivery of our products. The emission factor used for calculating the carbon emission is obtained from IEA. Carbon emissions are expressed in tCO₂e.

Carbon emissions intensity

This is the ratio of carbon emissions relative to the tonnes of production of Anyang Jiutian's properties. Carbon emissions intensity is expressed in kilogram per tonne of production ('kgCO₂e /tonnes').

Energy efficiency

Energy consumed results from purchased electricity and steam by the operations of Anyang Jiutian. Purchased electricity is expressed in kilowatt-hours ('kWh') and purchased steam is expressed in cooling tonnes ('CT').

Energy intensity

This is the ratio of energy consumed relative to the tonnes of production. Electricity consumption intensity is expressed in kWh per tonne of production ('kWh/tonnes'). Steam consumption intensity is expressed in CT per tonne of production ('CT/tonnes').

Water consumption

This is the volume of water consumed by Anyang Jiutian. The sources of water are supplied by local municipalities. The total amount of water withdrawn is assumed to be the amount consumed as reflected in the utility bills received by Anyang Jiutian. The volume of water consumed is expressed in cubic meters ('m³').

Water intensity

This is the ratio of water consumed relative to the production tonnes of Anyang Jiutian. Water intensity is expressed in m³ per tonne of production ('m³/tonnes').

Wastewater discharged

This is the volume of wastewater discharged by Anyang Jiutian through our parallel biological treatment tanks. The volume of wastewater discharged is expressed in m³.

Wastewater discharge intensity

This is the ratio of wastewater discharged relative to the production tonnes of Anyang Jiutian. Wastewater discharge intensity is expressed in m³/tonnes.

New hires and turnover

New hires are defined as new employees who have joined Anyang Jiutian during the financial year.

Turnover is defined as all employees who have left Anyang Jiutian voluntarily, or due to dismissal, retirement or death in service during the financial year.

The new hires/turnover rate is the total number of new hires/employee turnovers in the financial year, relative to the total number of employees recorded at financial year-end.

The new hires/turnover rate by age group is the total number of new hires/employee turnovers for each age group in the financial year, relative to the total number of new hires/resignees recorded at financial year-end.

New hires/turnover rate by gender is the total number of female/(male) new hires/employee turnovers for each gender in the financial year, relative to the total number of new hires/resignees recorded as at financial year-end.

Training hours

Average training hours per employee is the total number of training hours incurred during the financial year provided to employees, relative to the total number of employees recorded as of financial year-end.

Average training hours per female/male employee is the total number of training hours provided to female/male employees, relative to the total number of female/male employees recorded as of financial year-end.

Fatalities in workplace

The number of fatalities as a result of work-related injury during reporting period across the organisation.

High-consequence injuries in the workplace

Number of high-consequence work-related injuries (an injury that results in a fatality from which the worker cannot fully recover to pre-injury health status within 6 months) excluding fatalities during the reporting period.

Recordable injuries

The number of recordable work-related injuries during the reporting period.

Recordable work-related ill health cases

The number of recordable work-related illnesses or health conditions arising from exposure to hazards at work during the reporting period.