



中國建築國際集團有限公司
CHINA STATE CONSTRUCTION INTERNATIONAL HOLDINGS LIMITED



Leaping towards a
Sustainable Future

2017
Sustainability Report



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**About
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report**

About this report



Reporting Objectives

China State Construction International Holdings Limited (hereinafter referred to as “CSCI”, the “Company” or the “Group”) released its first *Sustainability Report* last year to replace the Company’s Corporate Social Responsibility Report that has been published since 2012. This report is the second *Sustainability Report* of the Company. By reporting its policies, measures and performances in issues such as economic and environmental management and social responsibilities, the Group hopes all stakeholders can better understand the Group’s progress and development direction in sustainability issues.

Reporting Year and Boundary

This report focuses on the businesses of CSCI and its directly related subsidiaries between 1 January 2017 and 31 December 2017. The Company publishes its *Sustainability Report* annually for public access to continuously enhance the transparency of information disclosure.

While this report does not cover all of the Group’s operations, the aim of the Group is to consistently upgrade the internal data collection procedure and gradually expand the scope of disclosure. Key performance indicators are included in the report with elaboration, to establish assessment baselines and facilitate comparison.

Reporting Standards

This report is prepared in accordance with the ‘comply or explain’ and selected ‘recommended disclosures’ provisions of Environmental, Social and Governance Reporting Guide (the “ESG Reporting Guide”) launched by The Stock Exchange of Hong Kong (the “SEHK”). It also takes reference from the GRI Standards published by Global Reporting Initiative (GRI) in 2016, and the Construction and Real Estate Sector Disclosures of GRI G4 Sustainability Reporting Guidelines. A complete index, covering selected provisions and key performance indicators of the ESG Reporting Guide and the GRI Standards, is inserted in the last chapter for reader’s easy reference.

Data Collection

The report includes information from all functional departments at CSCI, including but not limited to the Human Resources Department, the Finance and Treasury Department, the Legal Department, the President Office, the Corporate Communications Department and directly related subsidiaries. The Group has established an internal regulatory system and a formal review procedure to ensure that the information presented in this report is accurate and reliable. The report’s contents were also reviewed and approved by the Company’s Board of Directors in June 2018.

Report Accessibility

Available in Traditional Chinese, Simplified Chinese and English, the report is uploaded onto the SEHK website and the Group’s website www.csci.com.hk. Besides, the report offers an abstract H5 version.

For the sustainability performance of CSCI’s listed subsidiary, Far East Global Group Limited, please refer to its Environment, Social and Governance Report included in its Annual Report 2017.

Contact Methods

CSCI values the opinion of stakeholders. If you have any questions or suggestions regarding the content or format of the report, please provide opinions via the survey link listed on the last page of this report, or submit your feedbacks on the company webpage on sustainability. You could also please contact the Group via the following channels:

China State Construction International Holdings Limited

Address: 28th Floor, China Overseas Building, 139 Hennessy Road, Wanchai, Hong Kong

Fax: (852) 2527 6782

Email: csci_csr@cohl.com



Message from the management

In recent years, the world has seen a consistent increase in global awareness of sustainability due to issues of climate change, plastic pollution, etc. Faced with society's demands for infrastructure and calls for preserving the environment, the only way out for humanity is to embrace a sustainable model of development.

For four decades, CSCI has pursued the optimisation of construction technology and management to respond to the long-term societal needs with its expertise and edge. As an unstoppable trend, sustainability seamlessly aligns with the Group's philosophy of "Exercising caution in detail and implementation; Building a strong foundation to seek greater success". Upholding integrity, innovation and pragmatism, CSCI will seize the opportunities under the national wave of green development to continue creating values for stakeholders from all walks of life.

Under the new environment, in the battle against pollution and the campaign in moving forward in promoting environmentally friendly construction, the Group stands by the ideal of innovation to continue the work of its predecessors to advocate green development by making it a duty to prevent pollution.

The Group focuses on improving its operation and quality management to closely align itself with the relevant directions of development of the country, the society and its parent company. As the public's expectations of the quality of life increases with economic, social and environmental changes, the vision of CSCI is to expand the space of happiness with building construction, and to satisfy the users of today and tomorrow.

CSCI owes its gratitude to the entire staff of the Group for their effort, which gives it the capability and opportunity to build and serve the society. Employee safety is an endless pursuit for the Group. By establishing well-defined systems and guidelines and by engaging in pragmatic dialogues, the Group safeguards the

Message from the management



wellbeing and benefits of employees with the hope of creating a satisfactory working environment. Furthermore, the Group arranges employee training related to sustainability issues to build a strong corporate culture to strengthen its overall capability in achieving sustainability.

CSCI regulates staff conducts to maintain a fair and corruption-free business environment. Upholding business ethics helps the Group reduce corporate governance risks and act as an industry exemplar to lead the way in fulfilling social responsibility and building a more transparent and healthier industry chain. With regard to project management, the Group aims at fulfilling the needs of facilities users to care for the health and safety of customers through quality management and after-sales services.

CSCI believes in the coexistence of social infrastructure and environmental protection. To reduce the environmental impact of its business, the Group carefully analyses the lifecycle of each project to identify measures to improve. The Group's next step is to formulate its sustainability vision and mission to include in its 2018 Sustainability Report to further reinforce the Group's environmental, social and governance work and target.

The business nature of CSCI allows it to contribute to the community by changing the lifestyle and the development direction of society from infrastructure design. The Group strives to integrate sustainability ideals with its business development. To promote effective resources management, the Group is participating in more infrastructure projects related to sustainability ideals step by step, including renewable energy, waste management such as food waste management and wastewater treatment. These projects will improve the environment and the quality of life of the public and enhance the overall sustainability awareness of society.

The Group constantly refines its management strategies and structure of sustainability. During the reporting year we prepared for the establishment of the Sustainability Committee with the view of leading all business units to improve their environmental, social and governance work and performance. Formally established in early 2018, the Committee will be responsible for formulating the Group's sustainability vision and mission and inviting key stakeholders to participate in the formulation of the Group's long-term sustainability roadmap to further plan and implement comprehensive and detailed management measures. The Committee structure includes four vice-chairmen, to which senior management members are appointed, who are in charge of operations management, human resources, community investment and compliance and risks. This arrangement ensures smooth execution of policies and measures to continuously improve the Group's sustainability performance.

The relevant stakeholder engagement plan will be incorporated with the Group's long-term stakeholder engagement strategy to ensure the roadmap covers the issues that the stakeholders are most concerned about and their expectations. We understand that the task of promoting sustainability is both onerous and enduring, while we look forward to sharing the challenges of it and discussing its action plans with stakeholders through the publication of our Sustainability Report and organisation of sustainability engagement activities.

China State Construction International Holdings Limited
Zhou Yong

Executive Director, Chairman and Chief Executive Officer

About CSCI



About CSCI



Company Profile

Setting its footprint into the construction industry of Hong Kong in 1979, CSCI is a vertically integrated construction and investment conglomerate mainly engaged in infrastructure investment, construction projects, as well as building-related operations including building construction, civil engineering works, foundation engineering works, site investigation, mechanical and electrical engineering, concrete production, prefabricated construction, project supervision services, etc. The Group has established its headquarters in Hong Kong, and has been listed on the Main Board of The Stock Exchange of Hong Kong Limited (stock code: 3311.HK) since July 2005.

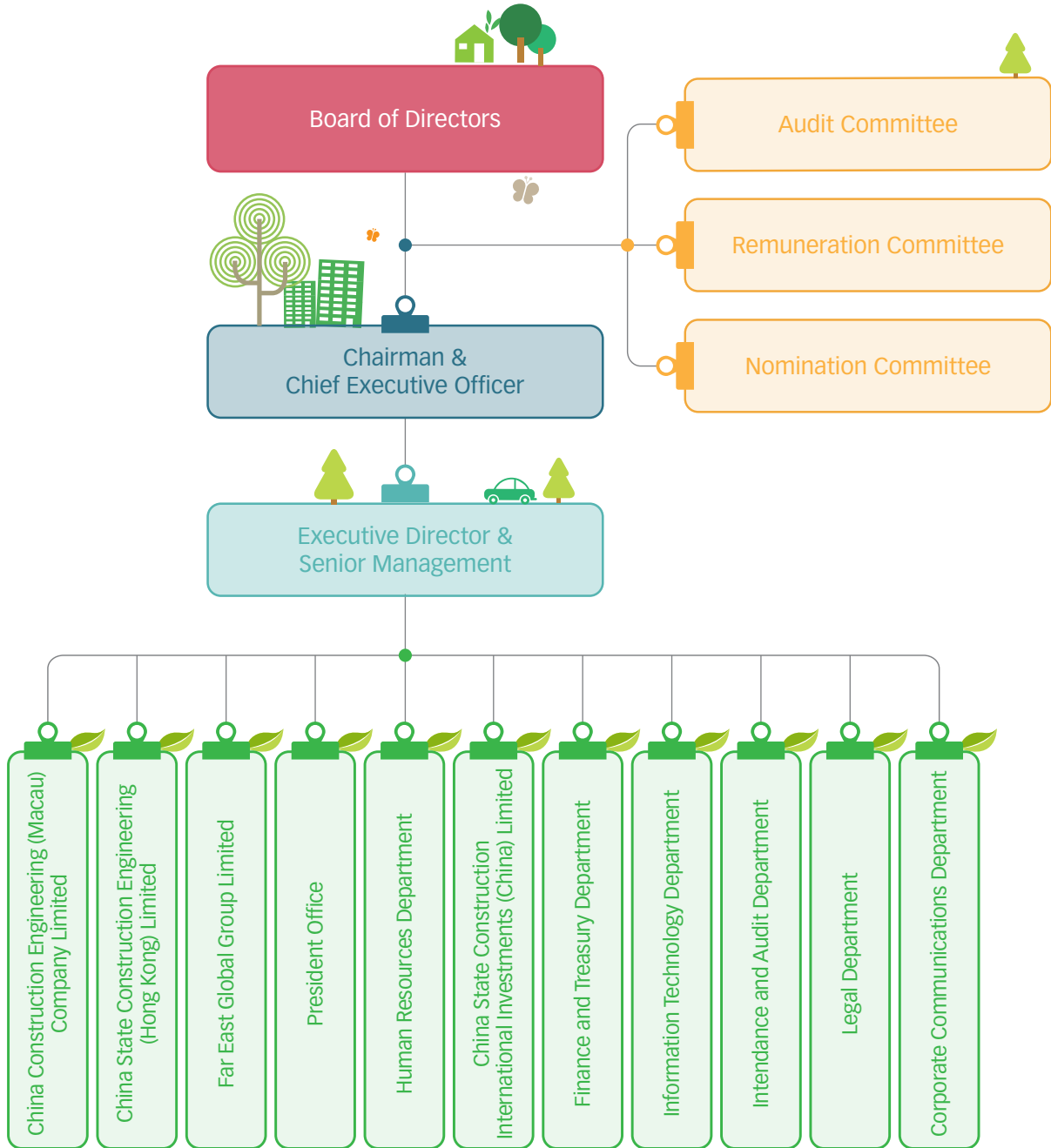
Corporate Structure



* "PPP" — "Public-Private-Partnership"
 ** Operate through a listed subsidiary, Far East Global Group Limited (Stock Code: 00830)



Directors and Organisation



About CSCI



Financial Performance

During the year, CSCI has established the operation principles of “determination to overcome challenges, quality and efficiency enhancement, synergy and innovation, and meticulous brand-building”, to realise dual increases in both the scale and efficiency.

Direct economic value¹ (HK\$)

Operating status

Projects under construction 146 projects accounting for an attributable contract value of HK\$309.07 billion; incomplete projects accounting for a contract value of HK\$188.01 billion	New projects 78 projects accounting for a total contract sum of HK\$103.14 billion	Completed projects 32 projects
Net assets HK\$38.46 billion (an increase of 50% compared to the same period last year)	Total assets at the end of the period HK\$118.52 billion (an increase of 38% compared to the same period last year)	Turnover HK\$50.15 billion (an increase of 9% compared to the same period last year)

Distributed economic value¹ (HK\$)

Operational costs ² HK\$43.85 billion	Payments to investors HK\$150 million	Payments to government HK\$1.26 billion
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Environmental protection investment and expenditures

HK\$

Waste disposal	52,590,931
Sewage treatment	2,029,969
Emissions treatment	50,000
Environmental protection facilities	9,635,405
Prevention of climate change risks	1,381,055
Employment of environmental experts	11,997,833
Total	77,685,193

¹ As at 31 December 2017

² Including costs of construction, sales, administration and other operations



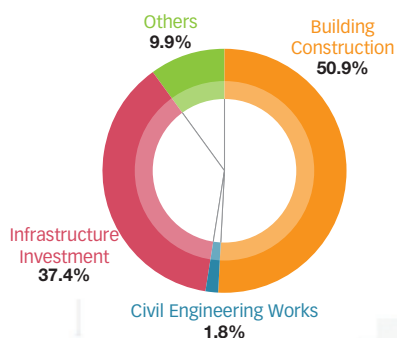
About CSCI

Project summary

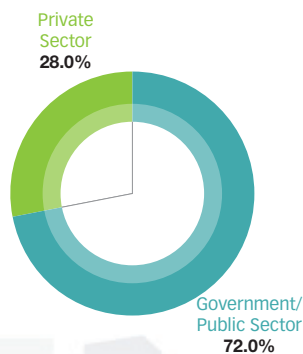
Major Completed Projects in 2017

No.	Project Name	Government/ Public Sector	Private Sector
1	Design and Construction of Centre of Excellence in Paediatrics in Kai Tak Development, Kowloon, Hong Kong	●	
2	Residential Development Project at TMTL 423, Area 48, Castle Peak Road, So Kwun Wat, Tuen Mun, Hong Kong		●
3	Main Contract Works for the Proposed Residential Development at Lot 6515 & 6517, Kai Tak, Hong Kong		●
4	Main Contract for Proposed Logistics Centre Development at Tsing Yi Town Lot No. 181, New Territories, Hong Kong		●
5	Home Ownership Scheme Project, Sha Tsui Road, Tsuen Wan, and Ching Hong Road, Tsing Yi, Hong Kong	●	
6	Public Housing Construction Project in Northeastern Road of Taipa, Macau	●	
7	Hotel Construction Project in Almeida Ribeiro Street (Phase 1), Macau		●
8	Harbour Area Treatment Scheme Stage 2A Upgrading Works at Stonecutters Island Sewage Treatment Works — Sludge Dewatering Facilities, Hong Kong	●	
9	Relocation Housing BT Project in New District of Zhenjiang, Jiangsu Province	●	
10	Two roads BT Projects in Zhengzhou, Henan Province	●	
11	Affordable Housing BT Project in Wuxing District of Huzhou, Zhejiang Province	●	
12	Phase 1 Affordable Housing and Infrastructure Projects, Hangzhou, Zhejiang Province	●	
13	Investment and Construction Project of Relocation Housing, Tianfu New Area, Sichuan Province	●	
14	Relocation Housing PPP Project, Pinghu of Jiaxing, Zhejiang Province	●	
15	Dayang Affordable Housing Project, Luyang District of Hefei, Anhui Province	●	

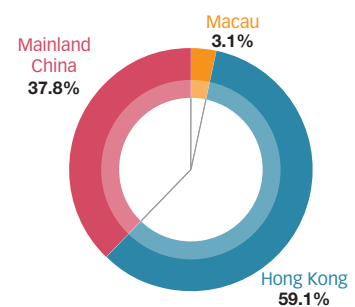
By Categories



By Customers



By Market



About CSCI

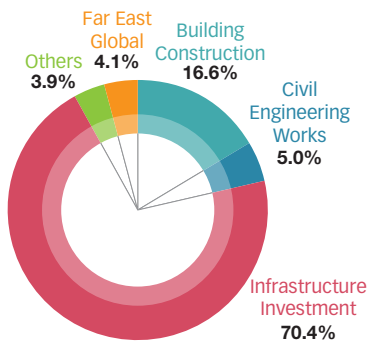


New Projects Awarded in 2017

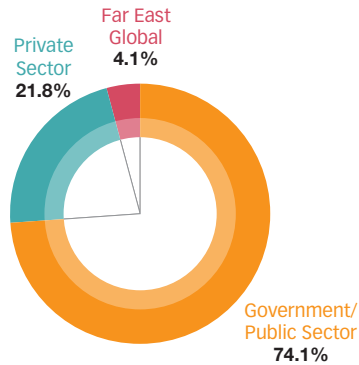
Summary for the year

- 78 new projects awarded
- Attributable contract value for new projects awarded was HK\$103.14 billion

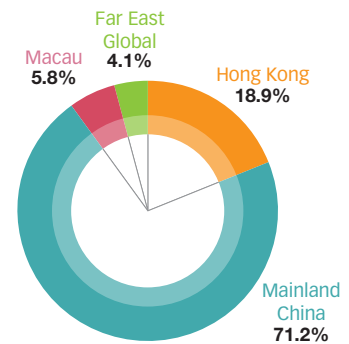
By Project Categories



By Customers

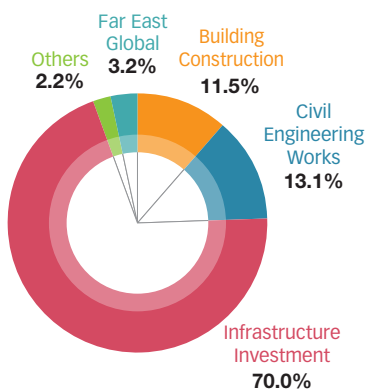


By Market

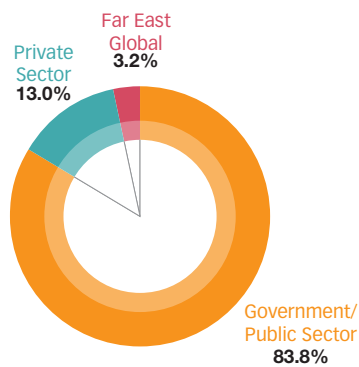


Projects in Progress

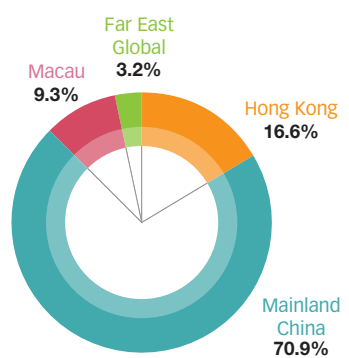
By Project Categories



By Customers



By Market





About CSCI

Major Projects in Progress — Hong Kong & Macau



Major Projects in Progress

* For project details please refer to the Company's 2017 annual report.

About CSCI

Major Business

— Mainland China



Prefabricated Construction Industrialization Base



Infrastructure Investment Project in progress



Operation and Management Project

* For project details please refer to the Company's 2017 annual report.

Sustainability Governance

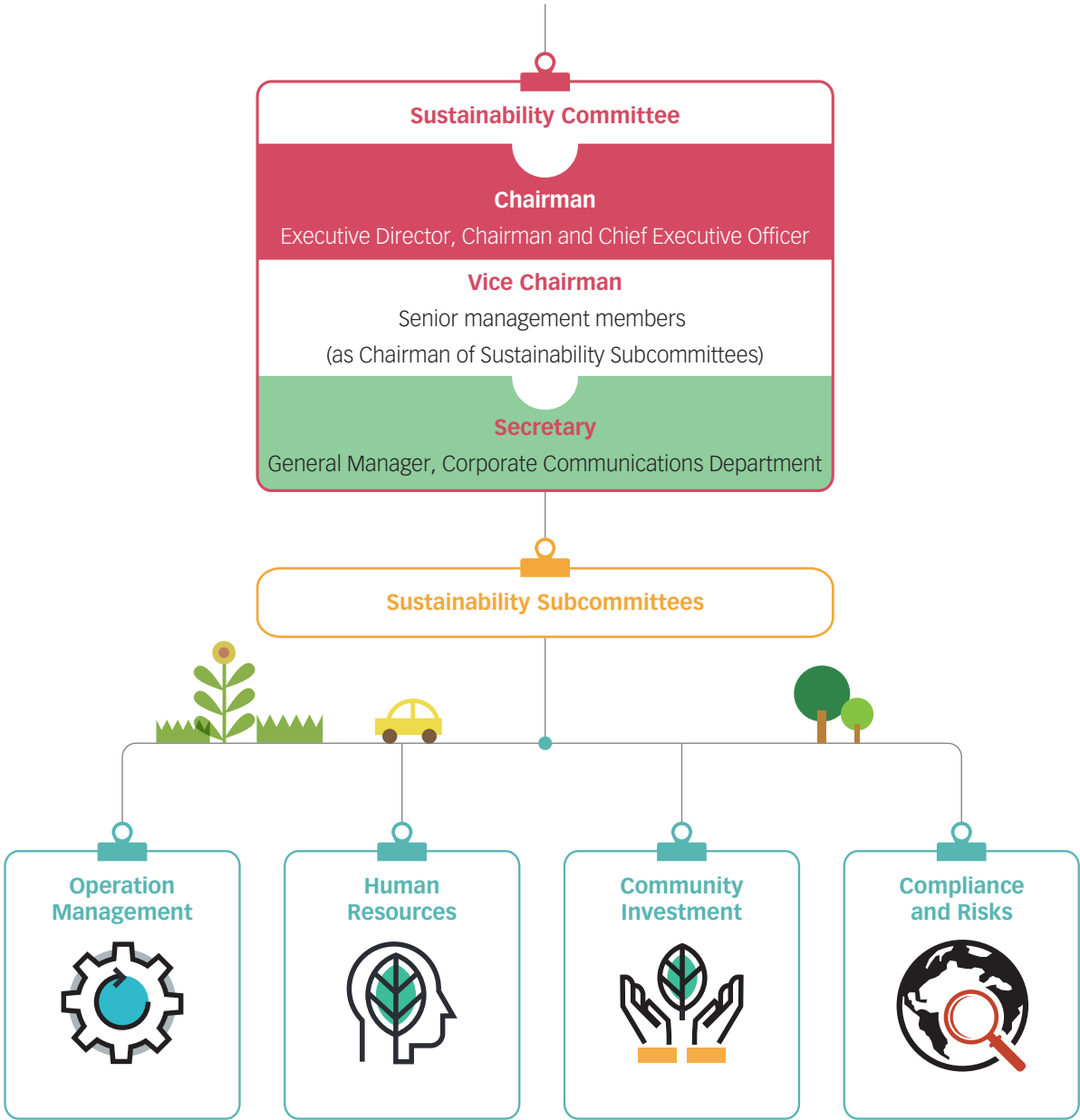


Sustainability Governance



To ensure the company could effectively and fully execute its sustainability strategy, CSCI established the Sustainability Committee in 2018 to supervise the environment, social and governance risks in each aspect of its operation. Chaired by Mr. Zhou Yong, Executive Director, Chairman and Chief Executive Officer of the Company, the Committee is divided into subcommittees for operations, human resources, community investment, and compliance and risks, which are chaired by senior management of the Group. Members of each subcommittee are responsible for implementing and promoting corresponding measures according to the Group's sustainability policy.

Sustainability Committee Structure





Sustainability Governance

Sustainability Strategy and Roadmap

CSCI believes that, a well-established sustainability roadmap could steer the Group in the right long-term direction by prioritising various tasks for resource distribution and orderly systematic execution. The roadmap could also assist the Group to review its progress and make corresponding adjustments in due course.

With the establishment of the Sustainability Committee, CSCI is preparing its sustainability roadmap. In the initial stage, the roadmap will focus on the aspect of environmental protection and will gradually expand to other sustainability issues.

Preparation

We carried out a series of preparatory tasks in 2017. To enhance the capability of internal staff in managing environmental performance, the Group commissioned a carbon assessment consultancy for the first time in November to organise an internal carbon assessment training in the training centre of our Hong Kong headquarter. To ensure each subsidiary understand the importance and assessment principles of carbon assessment, over 30 employees responsible collecting environmental performance data attended the training. Other employees who cannot travel to Hong Kong participated in the training through video conferencing.

To coordinate the collection of environmental and social performance data, the Group established an electronic platform for sustainability data collection. Considering the situation of projects, the employee may input data for each project. This design allows the Group to properly collect and review the data related to the project. Overall, the data collection platform helps the Group improve the accuracy of data and lays down a foundation for formulation of carbon emission target. Accumulation of data could also assist in-depth analysis in future with which the Group could carry out specific measures.





Managing the risks and opportunities of climate change

In recent years, numerous countries and regions have seen serious impact from hazards created by extreme weather such as high temperature, droughts, floods and snowstorms. This is a warning that corporates cannot ignore the threats brought by climate change. Global economies have adopted a low-carbon strategy in response to climate change, with the view to realise green growth and development of a low-carbon economy through managing the financial risks and opportunities brought by climate change.

Climate change brought various impacts to the global business environment, which are not restricted to the businesses of CSCI but affect the construction and development of cities. We spare no effort in reduction of greenhouse gas emissions and plan to establish the policy to assess climate change risks in order to regulate the risks identification in all current projects and formulate corresponding management measures and goals to enhance our resistance to climate change.

The building industry proactively promotes green buildings. CSCI has always dedicated itself to innovation by combining advanced technology and construction to build livable cities that are smart, low-carbon and sustainable. During the year, the Group provided various one-stop sustainability solutions for different projects via Transcendence Company Limited, including the flexible roof transformation project, which is designed to accommodate change in weather and is suitable for residential, public and commercial projects; the electric vehicle charging solution, which promotes the use of electric vehicles and indirectly reduces greenhouse gas emissions; the waterproof and rustproof smart station, which records electricity consumption to assist management of project energy use; and the smart home design, which helps users conserve energy effectively.

CSCI strives to integrate concepts of environmental protection in its corporate development. In future, it will participate in more green building projects and review the development of green finance via green bonds or loans to qualified projects, in order to more effectively promote the development of green building and other sustainability projects.

On this basis, CSCI will commission an independent sustainability consultancy to formulate the 2025 sustainability roadmap and annual target, to roll out regional initiatives in phases.

Stakeholder engagement



Stakeholder engagement



Stakeholder engagement is an important component in consistent improvement of sustainability performance. CSCI has maintained communication with internal and external stakeholders with diverse channels and has been continuously developing various innovative means of communication to enable stakeholders to speak their minds.

Stakeholders refer to groups or individuals materially influencing or affected by CSCI's business. Internal stakeholders include staff, management and directors. External stakeholders include clients, business partners, investors, supervisory organisations and various community groups. The Group values the feedback of stakeholders and exchange information with them via the report in order to respond to their suggestions in a timely manner, thereby meeting their expectations.

CSCI commissioned Carbon Care Asia (the "consultant"), an independent sustainability consultant to help conduct a stakeholder engagement exercise to gain an in-depth understanding of stakeholders' views and expectations of the sustainable development of the Group in a fair, unbiased and diverse modes of exchange. This allows the Group to identify issues that stakeholders are most concerned about and respond to them in the report. During the preparation of this report, major steps in identifying material issues include:

Identified sustainability issues

- The consultant had an interview with the representatives of the Group's senior management to assist the Group in reviewing and amending its list of sustainability issues.
- The consultant assisted the Group to identify 33 issues, spanning across five aspects including Economic Performance, Environmental Protection, Employment and Labour Practices, Operating Practices and Community Investment, which serve as the basis of this internal and external stakeholder engagement.
- The number of issues on the list was reduced from 37 in last year to 33 to allow a more focused discussion.

2

Identified the most important sustainability issues

- The consultant designed different engagement activities for internal and external stakeholders respectively, including training workshops and focus group discussion.
- The consultant assisted the Group to collect staff's view in the form of a questionnaire survey.
- All discussions and questionnaire survey are conducted in anonymity to ensure the confidentiality of the content of stakeholder engagement.

Confirmed material sustainability issues

- The consultant reported the stakeholders' opinions and the results of the materiality analysis to the Group's Corporate Social Report Editorial Committee.
- The Committee discussed the major issues for report disclosure and key points in sustainability performance improvement in future.
- The Committee validated the 17 material issues to be addressed in the report.

Conducted materiality analysis

- The consultant conducted the materiality analysis to identify the most important 17 issues.



Stakeholder engagement

Results of materiality analysis

CSCI invited the management, executives and junior staff of each department and representatives of suppliers and contractors to participate in the questionnaire survey. Stakeholders scored the 33 issues according to their importance to them and the level of economic, environmental and social impact of CSCI. Over 850 valid replies were collected in total. The consultant conducted a materiality analysis according to the results to identify the most important 15 issues. The materiality matrix of the Group is presented below, in which 'material issues' are highlighted in red.

CSCI's Materiality Matrix



Stakeholder engagement



Material issues

Material issues (in descending order of importance)	
1	A safe and healthy working environment
2	Employment management system
3	Prevent bribery, extortion, fraud and money laundering
4	Training and development
5	Customer health and safety
6	Protection of customer information and privacy
7	Employee diversity and equal opportunities
8	Quality management and after-sales service
9	Prevention of child labour or forced labour
10	Employer-employee relations
11	Elimination of discrimination
12	Protection of intellectual property rights
13	Prevention of anti-competitive practices
14	Fair and responsible marketing dissemination and information
15	Discharge, handling and disposal of effluent and waste

Despite that stakeholders did not express particular concern about the aspect of Economic Performance, as a responsible corporate citizen, the Group values the impact of its business on the economy. With the consultant's assistance, CSCI gained further understanding of the issues that internal and external stakeholders are concerned about in this aspect. Internal stakeholders are most concerned about 'economic performance' while external stakeholders are most concerned about 'procurement practices'. Therefore, the Group included 'Economic performance (including the financial risks and opportunities brought by climate change management)' and 'procurement practices' into 'material issues', and adopts a total of 17 items of material issues as the basis for reporting, to more comprehensively report the Group's performance in each aspect.



Stakeholder engagement

Stakeholders' opinions and the Group's response

CSCI hopes to understand stakeholders' opinions and expectations of the sustainable development of the Group. Therefore, the consultant offered a relaxed occasion for an anonymous discussion where stakeholders can speak their minds and honestly express their opinions and expectations.

The consultant invited the staff of different departments, including Project Management, Investment and Development, Finance, Human Resources, Administration and Public Relations, Information Management and Legal Affairs and suppliers and contractors the Group works with to participate in the discussion. The consultant summarised stakeholders' opinions and reported them to the Group. With regard to important aspects, the Group's responses are below:

Aspect	Stakeholders' concern	The Group's response
Supply chain risk management	<ul style="list-style-type: none"> Negotiate with the government for a reasonable price assessment mechanism Include the environmental and social performance of suppliers into the assessment mechanism to encourage business partners to adopt more proactive environmental and social measures with reasonable price levels. 	<p>The Group admits that the major factor of consideration under the current tendering mechanism is price, which cannot reflect the suppliers' environmental and social performances. The Group plans to study how to simplify and elevate the assessment of suppliers' environmental performance by establishing a precise and fair scoring mechanism to incorporate into the existing contractor scoring mechanism. At the same time, the Group will link the tendering mechanism and the scoring mechanism to ensure that suppliers' environmental and social performances are considered in the tendering process.</p>
Environmental protection risks	<ul style="list-style-type: none"> Procure durable machinery to reduce air pollution and improve operation efficiency Increase the chance of reusing leftover raw materials from other construction sites While more environmentally friendly alternatives to I-frames, brake board and bamboo scaffolding are available, they are not yet accepted by the government. CSCI should negotiate with the government to persuade it to accept such solutions. 	<p>The Group agreed with the stakeholder's opinion and will prepare machinery of higher quality for contractors and encourage the construction teams to reuse construction materials, provided that the materials to be reused should pass testing to ensure the quality.</p> <p>Also, the Group will suggest the use of environmentally-friendly construction tools to the government and discuss the detailed execution measures with it. The Group will also consider using mixed metal frames.</p>
Feedback and grievance mechanisms	<ul style="list-style-type: none"> Proactively address this focus group discussion Establish a grievance mechanism to enhance communication with business partners 	<p>The Group has established the Sustainability Committee to coordinate the related matters and will establish an independent 'communication officer' to follow up stakeholders' complaints.</p>

Stakeholder engagement



Sustainability awareness

- Staff awareness of sustainability issues have yet to be improved. It is suggested that the Group's internal culture establishment can be promoted in formats such as instructor training workshops

The Group understands that the concepts of sustainability are not popularised yet. Related training will be coordinated by the Human Resources Subcommittee under the Sustainability Committee. It is hoped that by increasing training in sustainability issues (such as equality and anti-discrimination), the Group's sustainability ideals can be introduced to staff.

Infrastructure projects

- Participate in more infrastructure projects related to renewable energy, waste management and wastewater treatment

Construction projects under the Group have started to participate in infrastructure projects like waste management (such as food waste management) and wastewater treatment. It is expected that more resources will be invested in participating in other projects that promote sustainability to encourage the development of social infrastructure and facilities.

Stakeholder engagement plan

CSCI emphasises the importance of maintaining close connection with stakeholders with diverse means of communication to reinforce a mutually trusting relationship through open and transparent communication. It is the Group's view that establishing a long-term stakeholder engagement plan could promote communication with stakeholders. During the year, the Group commissioned the consultant to establish a stakeholder engagement strategy for the next six years with reference to AA1000 Stakeholder Engagement Standard (SES) 2015. In the beginning of the plan, the Group will analyse and understand the stakeholder and their related interests, which include three important stages: stakeholder identification, stakeholder prioritisation and stakeholder profiling to design the suitable stakeholder engagement methods.



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Employment System





Employment System

A safe and healthy working environment

We understand that high-risk work procedures are often involved in the construction engineering business. The Group always strives to protect the health and safety of each member of the team to prevent accidents, eliminate serious incidents and preclude prosecution due to non-compliance.

The Group has developed a set of comprehensive construction safety and health management measures to reduce the incidence of occupational injury. Some subsidiaries of the Group have commissioned the Hong Kong Quality Assurance Agency to conduct an annual external audit according to the OHSAS 18001 Safety Management System, and are now preparing for switching to occupational health and safety management system (ISO 45001). Besides, the Group established an independent production safety supervision and management committee under the Management Method of Organisational Structure of Sub-enterprise Headquarters of China State Construction Engineering Corporation Limited. The committee is chaired by the Chairman of the Company to implement a vertical production safety supervision management system.

OHSAS 18001

China State Construction Engineering (Hong Kong) Limited
China Overseas Building Construction Limited
China State Mechanical & Electrical Engineering Limited
Shenzhen Hailong Construction Science Co., Limited
Alchmex International Construction Limited

Apart from providing employees with a safe occupational environment, the Group also values their physical and mental health. Through corporate culture building, the Group continuously improves staff loyalty and creativity and enhances corporate cohesion and competitiveness. The Group values the importance of conducting face-to-face engagement with staff and liaison activities continuously to create a synergising, harmonious and mutually beneficial working environment. During the year, the Group fully supported the numerous cultural networking events organised by its parent company, the China Overseas Holdings Limited (COHL) to create a positive team spirit of mutual help. Among them, COHL coordinated the 'COHL Happy Run' online and offline social running events. Approximately 7,500 staff, property owners and partners participated in the online activity, amounting to a mileage of over 230,000 kilometers. At the same time, the Group's companies in Mainland China, Hong Kong and Macau organised numerous social running activities in different formats to nominate participants to join the New York City Marathon.

Through building an integrated management system, China State Construction Engineering (Hong Kong) Limited ("China State Construction Engineering (Hong Kong)") assures the safety and health of its employees.

General Manager	
<ul style="list-style-type: none"> — Determine and sign the Safety and Health Policy — Provide instructions for safety management according to the implementation of the safety and health management system and regular assessment of the results 	
Integrated Management Committee	Safety and environmental protection department
Formulate and implement the Safety and Health Policy	Assist in the implementation of the Safety and Health Policy formulate, review and execute safety and health management systems and measures.
Company Safety Management Working Group	Construction Site Integrated Management Working Group
<ul style="list-style-type: none"> — Raise suggestions for improving the safety and health management systems and measures; — Supervise the execution of the Safety and Health Policy; — Assess risks and the effectiveness of safety measures implementation; — Formulate a management system related to dangerous work; — Assist in establishing and reviewing the work safety procedures and work safety systems. 	<ul style="list-style-type: none"> — Execute the Safety and Health Policy and related management guidelines; — Establish a safety sub-group that comprises of the construction site manager and representatives of staff of different grades. Through monthly meetings the sub-group reviews the everyday safety and health management work and makes suggestions for improvement.



Safety and health management systems	
Objectives	<ul style="list-style-type: none"> — The management is responsible for formulating concrete, clear and measurable safety and health objectives and review or update the objectives yearly to ensure continuous improvement of the Company's safety and health performance. — The Company currently uses incidence of occupational injury as the basis of safety and health performance review.
Solutions	<ul style="list-style-type: none"> — The Company formulates and implements the safety and health management working plan every year. The plan includes the measures and timetable. The Safety Management Working Group regularly have meetings to review the effectiveness of the execution of the plan. — Construction sites are required to formulate a construction site safety plan according to the Project Engineering Plan Formulation Guide and the Working Procedure of Safety and Health Management and combine it with the characteristics of the construction project. — The construction site supervisor has to conduct a risk assessment to identify the possible health and safety hazards of regular and irregular work processes and to formulate and execute concrete management and monitoring measures according to the results of the analysis, in order to ensure all construction methods comply with the safety requirements.
Inspection	<ul style="list-style-type: none"> — Use the accident rate as the basis for reviewing the Company's safety and health performance — The Working Procedure of Safety and Health Management lists all regulations related to the execution of safety inspection in construction site. Areas of inspection include the work safety system and the effectiveness of the execution of related measures. Construction sites that fail to meet the requirements have to formulate a corrective plan and finish it within the deadline.
Internal audit	<ul style="list-style-type: none"> — The Company conducts internal audits regularly according to the Work Procedures of Safety Management Internal Audits to ensure each unit effectively execute the Company's safety and health management system and complies with the relevant safety standards and legal requirements. — The Safety and Environmental Protection Department conducts one safety audit in the construction site every six months and one internal safety audit with each department and engineering company every year. The audit covers safety and health training, facilities, material safety and construction safety management system.
Management review	<ul style="list-style-type: none"> — The management conducts a yearly assessment of the Company's safety and health management system to ensure the continuous applicability, suitability and effectiveness of the management system. — By conducting the management review meeting, it: <ul style="list-style-type: none"> • reviews the current Safety and Health Management Handbook; • examines safety and health goals and their achievements; • reviews the implementation of the safety and health management system and formulates improvement measures; • formulates suitable measures according to the latest safety and health laws and regulations.



Employment System

China State Construction Engineering (Hong Kong) updated the Standard Operational Procedures during the year to provide guidelines for safety and health training, risk assessment, construction site safety and health inspection, handling and work-related injury reporting, emergency response, staff safety promotion and health protection. To strength management of the person-in-charge of contractors, the engineering department signed the Responsibility Undertaking on Management of Safety Production on Construction Sites with all construction sites to stipulate the standard of an annual incidence of occupational injury per thousand persons of 8.8 or below. The accumulated work injury statistics of this year, including accidents in contracted projects and sites, is presented below.

A total of **1,134** safety inspections were carried out in construction sites during the year by the Safety and Environment Protection Department

A total of **114** occupational injuries were reported, of which **42%** were caused by materials lifting

Annual incidence of occupational injury per **1,000** staff **8.29**, within internal standard

Besides, China State Construction Engineering (Hong Kong) formulated a series of safety management objectives and amended the Construction Site Frontline Management Staff Safety Environment Management Divisional Responsibility System Implementation Methods and the Methods of Rewards and Penalties for the Safety Management of Site Contractors Caretakers and Workers to implement the production safety accountability system. Specifically on construction in the rail protection zone, China State Construction Engineering (Hong Kong) has compiled a guideline to explain the safety standards and requirements.

To improve staff awareness of occupational safety and health, China Construction Engineering (Macau) Company Limited ("China Construction Engineering (Macau)") organised an occupational safety and health promotion event under the theme of 'Safety at work for happiness at home'. Over a thousand staff, members of their family and representatives of contractors participated in the event. During the course of the event, China Construction Engineering (Macau) organised the opening ceremony for its 'Safe Production Month' and presented awards to the contractors with the best safety performances between 2016 and 2017.


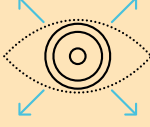
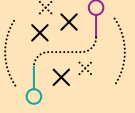

Besides, China Construction Engineering (Macau) participated in the 9th Guangdong, Hong Kong and Macau Safety Knowledge Contest co-organised by the Labour Affairs Bureau, the Administration of Work Safety of Guangdong Province and Hong Kong Occupational Safety and Health Council and won the Champion in the corporate category. Questions in the contests not only cover the knowledge of laws and regulations and work procedures in the three regions related to occupational safety and health but also include elements of practical operations to test the participating teams' ability to apply occupational safety and health knowledge.

In relation to the Group's investment businesses in the Mainland China, China State Construction International Investments (China) Limited ("China State Construction International Investments") formulated the China State Construction International Investments Safety and Health Management Methods to regulate the production safety management work organisations, production safety responsibility, safety planning, production safety technology management, production safety training and education, emergency management, accidents reporting and handling, etc.

Employment System



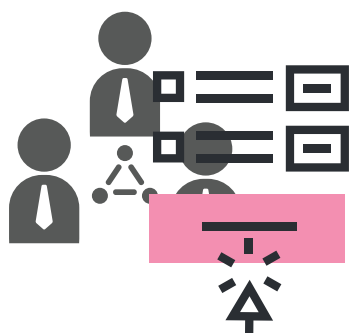
China State Construction International Investments has established a Production Safety Commission chaired by the main person-in-charge of China State Construction International Investments and is responsible for developing a production safety management system, formulating production safety goals and handling major production safety problems. Besides, China State Construction International Investments has established an independent production safety supervision management organisation which is responsible for the duties below:

 <p>Implement national production safety policy directions and relevant laws, regulations and standards</p>	 <p>Supervise subsidiaries to execute the China State Construction International Investments Safety and Health Management Methods, including establishing a production safety committee to coordinate the safety management work.</p>
 <p>Conduct production safety supervision checking to ensure subsidiaries execute safety prevention measures against hidden problems</p>	 <p>Implement the production safety incidents accountability system to supervise the handling of production safety incidents and conduct investigation of major production safety incidents</p>

Besides, as stipulated by the regulations of the China State Construction International Investments Safety and Health Management Methods the production safety technology management system should focus on the technical person-in-charge and divide projects according to the level of hazard to regulate the approval procedure of safety technology solutions. All subsidiaries have also established the production safety emergency management system to formulate the management structure and duties and formulated the Comprehensive Plan of Production Safety Emergency and The Special Plan of Production Safety Emergency to provide guidelines for subsidiaries in handling emergencies and reporting them to the production safety supervision management organisation of China State Construction International Investments in a timely manner.

During the year, China State Construction International Investments promoted to its subsidiaries and project units the implementation of the 'Safety Production Month' under the theme of 'fully implementing corporate production safety responsibility' in China to regulate subsidiaries' formulation of safety education, emergency drill and safety inspection plans.

During the event, 13 activities were organised by the subsidiaries, including:



Nearly **500** safety promotion education activities were held, participated by over 10,000 staff.

255 safety inspections conducted, spotting over 1,000 hidden problems



17 special safety events organised (including visit to safety education base), participated by over 2,000 staff.



Employment System

Through the “Safety Production Month” campaign, China State Construction International Investments not only enhances employees’ awareness of safety skills and safety accident prevention, but also discovers the shortcomings of daily safety management in a timely manner. China State Construction International Investments will formulate more targeted management measures to continuously improve its safety management system.

With regard to the Group’s prefabricated structures business in the Mainland China, Guangdong Hailong Construction Technology Company Limited fully implement the Project Production Safety and Civil Construction Reward Scheme and the Methods of Safety Coupon Reward Scheme. Besides, we continuously improve the occupational disease prevention responsibility system to identify risk factors in the production venue by inspection and arrange regular body checks with staff exposed to the relevant risk factors.

The Group enhanced the internal safety management of Shenyang Huanggu Thermal Power Plant (“Huanggu Thermal Power”) through measures including:



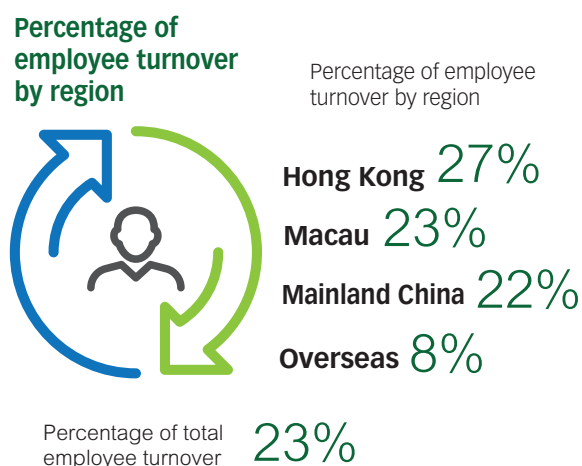
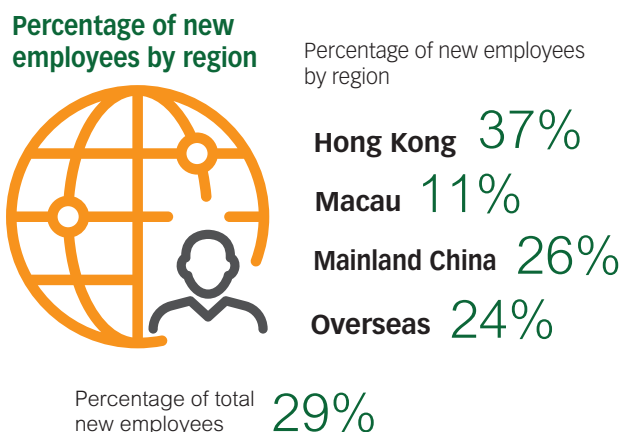
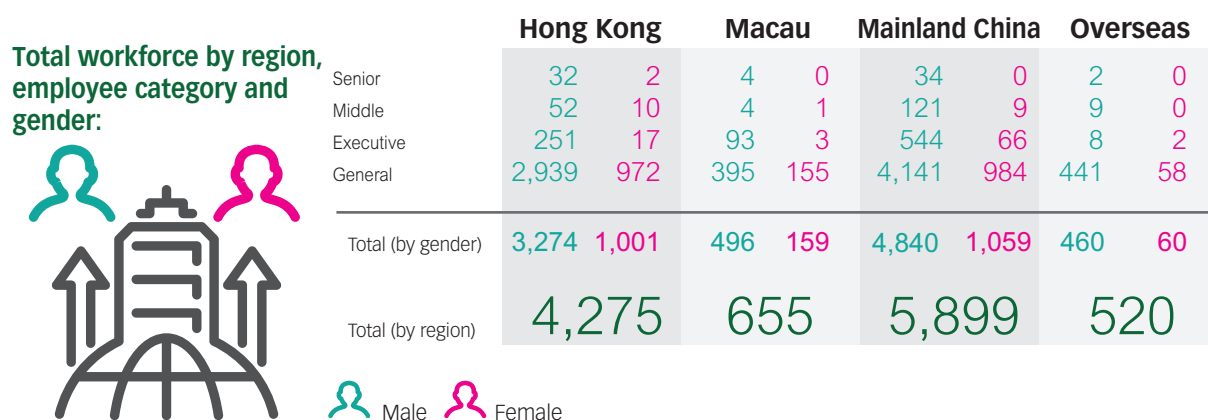
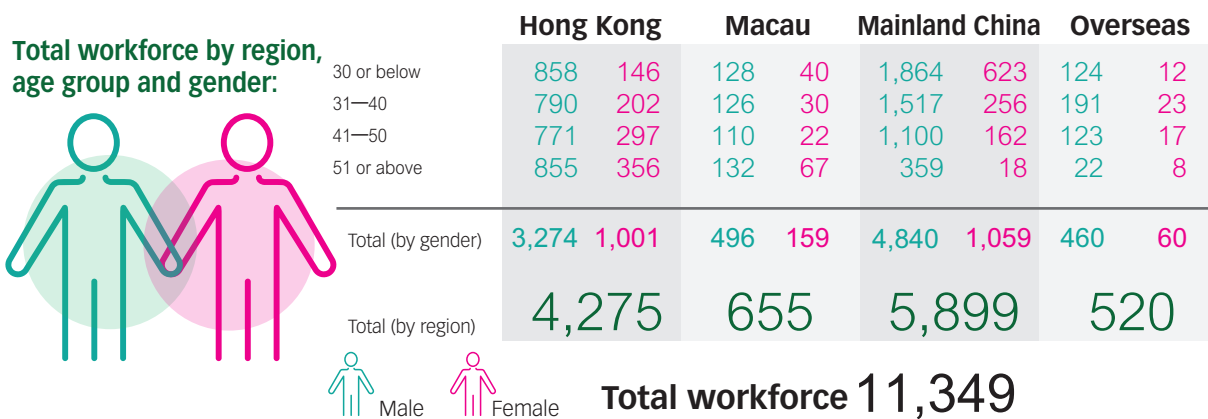
Among them, high-risk operation safety management and control regulates work at height, work in confined spaces and work with pressure vessels by conducting on-site safety supervision. Besides, the Group conducted a safety assessment of irregular operation during the year and conducted four incident simulation drills to enhance staff response to incidents.

Employment System



Employment management system

The Group attaches importance to the employee and employment management and has formulated and implemented an effective Human Resource Management Policy and Employee Handbook to regulate employment matters such as salary and dismissal, recruitment and promotion, working hours, rest days and other remuneration and benefits. As of the end of 2017, the Group recruited over 11,000 employees across the globe (excluding staff of our joint venture projects), approximately the same as the total staff of the previous year.





Employment System

With regard to family-friendly measures, China Construction Engineering (Macau) took the lead in cooperating with more than 20 corporate organisations and responded to the call of the Women's Federation of Macau to sign the "Paternity Leave Proposal". China Construction Engineering (Macau) hopes to encourage more enterprises to adopt the same practice to improve family-friendly policies. At the same time, it hopes to encourage fathers to perform their familial duties at the policy level by providing them with paid paternity leave.

During the year, many subsidiaries of the Group actively held family-parent-child activities to promote life and work balance. China Construction Engineering (Macau) hosted a fall picnic day for more than 90 employees and their families (close to 200 participants in total). The COHL Association and the Women's Association also organised a 'Hong Kong UNESCO Global Geopark Volcanic Area Kiu Tsui Island Tour' to enrich the lives of employees.



Employment System



Training and development

The Group values the development of its employees and expects that each team member will have the chance to learn and advance in their careers so as to develop their personal potential and to enhance their job satisfaction. To cope with the professional development of employees, the Group designed and implemented several rounds of internal training for its various regions and subsidiaries during the year. It also funded and encouraged employees to participate in external training and value-added courses

China State Construction Engineering (Hong Kong) also provides staff with comprehensive safety and health training, which enables the construction site staff to understand safe and healthy operation methods and various regulations of high-risk procedures, so as to raise the safety awareness of employees at all levels. Construction site safety and health training is divided into new hire training, 'Green Card' training, special training, construction site seminar and management training. In cooperation with the Human Resources Department, the safety orientation training for new management personnel was attended for 500 times. Every day workers are arranged to participate in safety assemblies in the morning for hazard identification and safety training activities. About 90% of all workers have received this training.

During the year, the group provided quality management training for nearly 450 new employees. Other types of quality management training, including basic welding work procedure training and pre-cast immersed tube site visits, attracted about 350 participants.

The Mainland China subsidiary also developed and provided safety education training for its staff while ensuring safety education investment. The company stipulates that the production unit should carry out safety education before work commences, and the operators engaged in special operations should receive pre-job safety education and training. Relevant safety technical education and training related to the management or operator of new technologies, new materials, new processes, and new equipment that are used in the production process should be conducted.





Employment System

Staff diversity and equal opportunity

The Group is committed to providing equal opportunities for its current and future staff. We adopted uniform selection criteria for our recruitment. In the Employee Handbook, we pledge that employees should have equal opportunities for employment and various welfare policies, including training, promotion, transfer, training, dismissal, layoffs and employment conditions, regardless of their gender, age, nationality and race. Besides, the Group values the provision of a diverse working environment to our employees, and plans to introduce relevant policies and guidelines in the Employee Handbook in future.

Prevention of child labour or forced labour

The Group is not involved in and does not tolerate the use child labor or forced labor. When hiring employees, the Group follows established procedures to scrutinise the personal data of the employed persons to ensure that no child labour is hired. Entry procedures (including signing employment contracts and introduction of employment policies, etc.) are followed according to work procedures to ensure clear, unambiguous employment conditions and compliance with the law. For construction site contractors, the Group has the responsibility to monitor their compliance regarding the employment of workers, and will arrange labor relations officers to regularly check the workers' registration information.

Labour relations

In case any staff has any questions or disputes regarding the issue of employment, a grievance can be raised to the management through the immediate supervisor, the department manager or the Human Resources Department. For contractor workers at construction sites, the labour relations officers are assigned to each site to follow up and handle relevant complaints.

Elimination of discrimination

The Group is committed to eliminating any phenomenon of discrimination at workplace, and has formulated and implemented the Policy of Preventing Discrimination and Harassment to provide guidance on any direct or indirect discrimination and harassment, including cases related to gender, marital status, pregnancy, disability, family status and race. The Group also encourages employees to report suspected cases through a grievance mechanism to protect the rights of every employee.

Besides, the Human Resources Subcommittee of the Group's Sustainability Committee will coordinate all trainings related to sustainability issues, the contents of which will cover issues of equality, anti-discrimination and so on, in order to improve staff awareness on eliminating discrimination and protecting individual rights.

Case study

Stonecutters Island Sewage Treatment Works (SCISTW)

Overview of project

CSCI has actively participated in the Hong Kong Government's Harbour Area Treatment Scheme¹ (HATS) of which the Stonecutters Island Sewage Treatment Works (SCISTW) project is an integral part. The Group constructed the sedimentation tank of the SCISTW in Phase 1 of HATS in the 1990s. In Phase 2, the Group participated in the expansion of the SCISTW in the joint construction of the interconnection tunnel and diaphragm wall, as well as the upgrading of sludge dewatering facilities. These two projects were essential to the expansion of the SCISTW in enhancing its capacity in order to improve the water quality of the Victoria Harbour and the ecosystem.

Safety management

Construction site housekeeping

CSCI places a marked emphasis on the health and safety of construction site workers. The SCISTW project faced the challenges of a tight schedule and narrow construction area. The construction team was required to carry out different construction processes simultaneously. Poor site housekeeping is one of the major causes of work-related injury in the construction industry. Therefore, management personnel were required to coordinate with each other to improve construction site housekeeping to ensure construction safety. Borrowing concepts from corporate production management, the construction site has applied 5S site housekeeping system² to maintain tidiness within the limited space to reduce safety risks and hidden hazards.



¹ The Harbour Area Treatment Scheme (HATS) is collecting and treating the sewage on both sides of Victoria Harbour.

² 5S is a workplace management tool that originates in Japan. 5S refers to "Seiri, Seiton, Seiso, Seiketsu, Shitsuke", meaning "organisation, setting in order, cleanliness, standardization and discipline".

Case study

Stonecutters Island Sewage Treatment Works (SCISTW)

On-site construction safety management

CSCI has established a structure involving the Civilised Construction Working Group and regional sub-groups to enhance on-site safety management. A message board for safe and environmentally-friendly projects is placed at the entrance of each construction site to illustrate the zoning of the construction site, the list of frontline management personnel and the floorplan of worker amenities. A 'Project-in-charge' flag is erected at the entrance and exit of each zone to display the information of each zone member including photograph, title, contact, etc., to facilitate enquiries by contractors, inspection bodies or members of the public. The same practice is also adopted for the contractors' safety management to ensure safety at the construction site.

By providing staff with safety guidelines such as the Civilised Construction Management Plan, the Group instructs each staff to prioritise his/her own safety. The construction team aims for zero work-related accidents to achieve zero injury and zero prosecution.

The construction site management promises to achieve the relevant safety requirements within the set time and encourages everyone to provide safety suggestions. Staff could also call the safety hotline or voice their opinion to the construction site management via mobile instantaneous communication applications.



Corporate Governance





Corporate Governance

Administrative structure

Currently, the Group's Board of Directors consists of seven executive directors and four non-executive directors, among which four non-executive directors are external professionals. The Board comprises the audit, remuneration and nomination committees, which are composed of independent non-executive directors, to ensure the independence of the Board of Directors and the Group's standard of governance.

To strengthen communication between the management and the Board of Directors, the Group's executive directors, senior executives, mid-level and site management personnel, and the management of subsidiaries summed up their work through quarterly meetings to ensure that the Board of Directors is informed of all areas of the Group to formulate future development strategies.

- **Two** shareholders' meetings;
- **Four** Board of Directors meetings;
- **Two** quarterly meetings and
- **Seven** Board of Directors Special Duty Committee meetings, which discussed 52 issues.



In addition, the Group is committed to protecting the rights and interests of investors and hopes that by enhancing the transparency of information, investors will have more in-depth understanding of the Group's operations and business development. The Group delivers important information to the market through various channels, such as announcements of results, public announcements, press conferences and analyst briefings, business information disclosure, roadshows and participation in meetings organised by investment institutions. The Group values the opinions of investors. In 2017, the Group organised meetings with over 1,200 investors in total to introduce its latest development strategy and business conditions.

Risk Management and Internal Control System

The Group has in place a risk management and internal control system and has formulated a risk management framework that defines the responsibilities of each employee. The Group's Board of Directors is responsible for overseeing management's design, implementation and monitoring of risk management and internal control systems.

The risk management group mainly focuses on the Group's strategic risk, financial risk, market risk and operational risk. Chaired by the Company's Chairman and Chief Executive Officer, the group comprises executive directors and senior management personnel in the financial department. Special reports and periodic reports of various departments must be submitted to the risk control group for review

The Intendance and Audit Department is independent of each business segment and is directly responsible to the Chief Executive Officer to ensure the neutrality of the monitoring. During the year, the Audit and Monitoring Department conducted an in-depth inspection, research and evaluation of four subsidiaries of the Group and a construction site to review and evaluate its cost control and integrated management, operating procedures, internal controls, finance, contracts, investments, and the management system of partnerships with government and social capitals. An independent internal audit report with recommendations was then submitted to the Chief Executive Officer. The Group has amended the issues identified in the report and there was no major monitoring misconduct that may affect the interests of shareholders.



Identifying risks

In addition to the financial risk management policies mentioned in the annual report, the major operational risks involving the Group includes construction risk, infrastructure investment risk, overseas business risk and compliance risk.

<p>Construction risk</p> <p>The Group regularly monitors and evaluates the price risk of the main materials. The bidding, procurement, engineering, and other departments effectively collaborate to implement the procurement plans, effectively control the scale and pace of procurement based on project progress, and lock in bid profits through centralised procurement. Materials involving major safety and social impacts are managed directly by the Group to monitor quality risks strictly.</p>	<p>Infrastructure investment risk</p> <p>Adhere to the selection criteria for new development projects, control investment risks from the source; regarding projects in construction, manage project progress and quality, and implement repurchase guarantee conditions; make preparation in advance for repurchased projects; actively communicate with responsible government departments and strive for favorable policy conditions.</p>
<p>Overseas business risk</p> <p>The Group took the initiative to reorganise its overseas business areas, focus its resources on expanding its core cities, avoiding political and monitoring risks.</p>	<p>Compliance risk</p> <p>The Group pays close attention to the formulation and revision of laws and regulations in the regions of its operation, as well as the tax risks brought about by the reform of the taxation system, including the Mainland’s replacement of business tax with value-added tax.</p>
<p>Environmental and social risk</p> <p>The Sustainability Committee is responsible for the formulation of environmental and social policies and measures. With the implementation of climate change risk assessment and the identification of potential risks, the Group will further incorporate climate change and other environmental and social risks into existing risk management procedures in future to ensure the effectiveness and completeness of the relevant management.</p>	

Business ethics

The Group is committed to fulfilling its social responsibilities and is convinced that every employee plays an important role in promoting fair competition policies. By establishing a fair market environment, the Group hopes to promote the sustainable development of the industry and ultimately benefit customers. Besides, we always conduct marketing dissemination in fair and responsible manners, to provide adequate and correct information to customers and users; while through internal advocacy works, we establish a culture of values to intellectual property. In future, the Group will compile specific policies, to further regulate related work.

Protection of customer information and privacy

The Group values data security, complies with privacy regulations and related regulations in its daily operations, and properly handles all information provided by customers, employees and business partners. The Group’s Employee Handbook sets out specific requirements for protection of information and ensures that employees are aware of it. The Group also enters into confidentiality agreements with project owners and contractors to ensure that the entire supply chain complies with the relevant requirements.

Case study

Management System of Letters and Visits Matters and Clues

To ensure that all letters and visits claims are properly addressed, the Group has established the Management System of Letters and Visits Matters and Clues during the year to standardise the management. It has also formulated the CSCI Management Methods of Letters and Visits Matters and Clues, to provide employees with guidance on the reporting and handling of cases. The formulation of the Management System and the Management Methods was based on the Regulations on Letters and Visits of the State Council of the People's Republic of China and the actual operations of the Group. These documents stipulate the definition of letters and visits matters and the sources of letters and visits clues to ensure open channels of communication for letter-writers and visitors.

Letters and visits matters

- Violation of law and order
- Problems of "Four Morales": formalism, bureaucracy, hedonism and extravagance
- Violation of eight anti-corruption measures guide of the central government

Sources of letters and visits clues

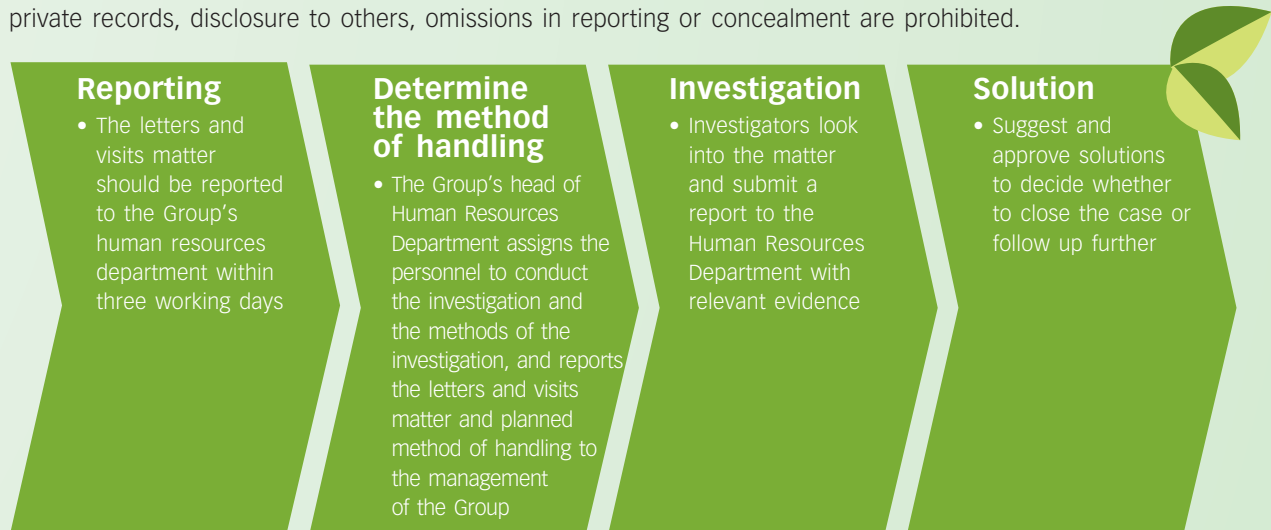
- Reported in letters, visits, phone calls, and through the internet
- Findings from inspection and audits
- Referred by judicial authorities, the disciplinary department, the audit department and other departments
- Assigned by or transferred from superiors



Case study

Management System of Letters and Visits Matters and Clues

The Group requires companies at all levels to properly handle letters and visits clues in accordance with the prescribed time limits and reporting methods. Conducts such as abuse of powers for personal gains, keeping private records, disclosure to others, omissions in reporting or concealment are prohibited.



During the investigation, the investigators will conduct a preliminary investigation of the letters and visits clue and search for evidence. Upon investigation and reporting, claims based on non-verifiable subject matter or subject matter proved to be untrue will be closed and kept for the Group's record. For verified claims, investigators must handle the letters and visits matter by following the procedures proposed by the Central Commission for Discipline Inspection.

Five methods of handling letters and visits (in sequential order)



In addition, the Group's Employee Handbook stipulates that employees must not request or provide benefits to any individuals, and requires senior management to sign a letter of integrity responsibility to ensure their accountability to any corrupt conducts under their supervision. The Group also stepped up its promotion of the Corruption Risk Prevention Education Guidelines prepared by the parent company, COHL to raise employees' anti-corruption awareness.



Project management



Project management



Quality management and after-sales service

Quality management

The Group emphasises the quality management of its products and services and is committed to providing customers with healthy and safe products and services. We constantly review and improve the quality management system, formulate and implement relevant measures, improve the quality management performance of the Group, and strengthen the systematisation and standardisation of quality management.

Our quality management system is based on the requirements of ISO 9001 combined with the scope and characteristics of the Group's business, including materials procurement management, building works construction management, civil works construction management, foundation works construction management, electrical and mechanical works construction management and prefabricated construction units production management.

All of the Group's several dozens of major subsidiaries have passed the ISO 9001 standard certification and have established clear quality targets and indicators according to the needs of the Company and the project. The group's quality manager is responsible for implementing the quality management system. Through regular internal audits, it monitors the quality performance and makes optimisation recommendations. During the year, China Construction Engineering (Hong Kong) and several of its subsidiaries passed the ISO 9001:2015 transition audit. In addition, China State Construction Engineering (Hong Kong) actively enhances the qualifications of internal auditors and arranged ISO 9001 Lead Auditor Course, which is recognised by the Hong Kong Institution of Certified Auditors (HKICA) and International Register Certificated Auditors (IRCA), for employees. During the year, three employees were eligible for direct application of Lead Auditor of the Hong Kong Institution of Certified Auditors.

China Construction Engineering (Hong Kong) has compiled a series of guidelines for the different nature and needs of various projects. In order to improve its overall quality management performance, the Group summarised the major problems in the past construction process and the experience in handling them, to continue to compile and update the relevant management documents.

Objective	Measure
Enhance staff awareness and sense of responsibility towards quality	Updated the Construction Site Staff Quality Work Handbook
Strengthen the quality management and monitoring of housing projects	Continued compiling the Construction Guideline Series for Quality Management of Housing Projects; introduced the Guidelines for Private Housing Pre-delivery Inspection and the Guidelines for Quality Control of Building and Housing Equipment Installation during the year
Strengthen quality management work of civil engineering and foundation construction sites	Continued compiling the Guidelines for Quality Management of Foundational Projects and introduced the Guidelines for Quality Control of Piling Works during the year
Strengthen the quality management and technical management of construction sites	Compiled the Construction Site Quality and Technical Work Requirements





Project management

China State Construction Engineering (Hong Kong) issued the Circular on Strengthening the Quality Control of Tied Iron Processes in January, and the Circular on Strictly Implementing the Internal Notification Mechanism for Quality Incidents” in December, to reiterate the responsibility of the person-in-charge of construction sites to strictly implement the Construction Site Quality Incident Notification and Follow-up Work Procedures. The relevant procedure requires the person in charge of the construction site to report quality incidents according to their types to ensure that the Group is informed of the accident information in a timely manner to formulate appropriate emergency response plans. During the year, a total of 15 incidents were reported within China State Construction Engineering (Hong Kong), among which 11 were minor incidents and the remaining four were general incidents. During the year there were no serious quality incidents or non-compliance or prosecution records due to quality issues. The Group conducts investigation into non-compliance projects according to established procedures, and has enhanced relevant management work.

Project	Performance of target
Materials procurement	(Target met) No warning letter issued by the project owner regarding quality or supply of materials (Target met) 94% purchase contract completed within 15 working days after receipt of material application form
Building works	(Target met) The number of minor and general quality incidents did not exceed the established target; no serious quality incidents (Target met) Government projects did not receive non-compliance reports (Target not met) Two Housing Department projects performance rating fell below the average of Architectural Services Department projects (Target not met) One Architectural Services Engineering Performance scored lower than the quarterly median of similar government projects
Civil engineering works	(Target met) The number of minor and general quality incidents did not exceed the established target; no serious quality incidents (Target met) Government projects did not receive non-compliance reports (Target not met) Three government projects scored lower than the quarterly median of similar government projects
Foundation engineering works	(Target met) The number of minor quality incidents did not exceed the established target; no serious quality incidents (Target not met) Two minor incidents in one project
Mechanical and electrical engineering works	(Target met) The number of minor quality incidents did not exceed the established target; no serious quality incidents (Target met) Government projects did not receive non-compliance reports (Target not met) A Housing Department project performance rating fell below the average of Architectural Services Department projects (Target not met) Two government projects scored lower than the quarterly median of similar government projects (Target not met) Two general incidents occurred in the project
Prefabrication structures production	(Target met) No construction warning letter received (Target met) The number of construction complaint letters received within target (Target met) No incidents related to delayed delivery occurred (Target met) No serious quality incidents
Machinery	(Target met) No warning letter or complaint letter from the owner has been received



Project management



In order to enhance the monitoring of project quality, China State Construction Engineering (Hong Kong) conducted over 150 inspections of housing, civil engineering, foundation, and electromechanical engineering projects, including project quality inspections, key processes inspections, and implementation of quality management systems for construction sites. During the year, the Group recorded a total of 13 non-compliant cases and issued two early warnings, and made more than 800 suggestions for improvement. According to the inspection results, China State Construction Engineering (Hong Kong) adopted the following quality management work plan:

2018 work plan

- Implement company quality management system, strengthen accountability and early warning system
- Expand monitoring of construction process to prevent serious quality incidents
- Further improve the quality system and implement standardised management
- Strengthen quality training and promotion work and improve quality awareness

Promote technology applications and innovation

Scientific and technological innovation is one of the Group's development strategies, which has laid a solid technical foundation for us to obtain a leading position in the industry. The Group has set up a dedicated department for technological management to coordinate the management of technological research and development, technology introduction and exchange, promotion and application of "four news": new materials, new equipment, new processes and new technologies. In addition, the Group has formulated a five-year technological development plan to ensure that its technological innovations closely follow the frontier of industry development, and established a mechanism for technological innovation and personnel training to achieve an orderly progress of technological innovation.

Project management

In order to further enhance the ability of general contracting projects in technological application and innovation and development, the Group has formulated the Construction Organisation Design Composition and Evaluation Management Method. The method applies to all project general contracting projects undertaken by the Group in Hong Kong and Macau, and classifies them according to the project nature (including large-scale, new-type, special, difficult, and general engineering), and lists the main responsible person or departments and their duties, the composition principles, authority, content and management procedure of construction organisation design (i.e. preparation of project construction and guiding documents for monitoring the construction), to ensure that all stages of the construction process comply with the relevant project construction policies and laws in the region and apply new technologies, new materials, new processes and new equipment for innovative construction.

In addition to an overview of the basic situation of the project (including the possible impact of the construction on the surrounding environment), the method requires the person-in-charge to elaborate on the characteristics of the project and the difficulty management and technical solutions and to analyse the risks and opportunities of the quality, safety and environmental control, and engineering technical applications and contract management, in order to formulate relevant corresponding measures.

Technology guidance and exchange activities

During the year, the Group organised a technology guidance and exchange programme on the theme of "tunnel crossing and undersea immersed tube tunnel technology" in Hong Kong to conduct a site visit and technological exchange of the Hong Kong-Zhuhai-Macao Bridge Hong Kong section, Shatin to Central Link -the South-North Line harbour crossing railway tunnel and the Central-Wan Chai Bypass Causeway Bay tunnel project. On the day of the event, employees conducted extensive and in-depth discussions on the rational application of tunnel engineering technology.



Project management

Established a specialised IT company

The Group has established China State Construction Science and Technology Limited, which is responsible for the Building Information Modeling (BIM) business. It provides the constructor, the contractor and the design unit with comprehensive technical services at various stages such as the planning phase, the design phase, the construction phase, and operation and maintenance.

After-sale services

The opinions of our customers can help the Group continuously improve the quality of its products and services. We care about the after-sales follow up of products or services, to achieve continuous improvement of after-sale service quality.

During the year, China State Construction Engineering (Hong Kong) set up a private building works handover team responsible for the formulation and implementation of specific handover standards and the review of the implementation of the relevant work. In addition, China State Construction Engineering (Hong Kong) organised the Guidelines for Pre-Handover Inspection of Private Housing Projects conference in March to ensure that employees fully understand the requirements of the guidelines concerned.

China State Construction Engineering (Hong Kong) has always adopted the principle of “alright for one time, alright for all times” as its quality management policy. It also sets out in the quality management system the different indicators and targets for different projects. This year, most of the targets have been reached, but only the passing rate of waterproof initial tests is lower than the established target. The Group has followed up on projects that failed to pass the waterproof test in accordance with our established procedures, and has strengthened related management work, in order to ensure that it provides customers with excellent products and services.

Project	Performance of target
Building works	(Target met) Initial acceptance rate by owners of 95–100% (Target not met) Acceptance rate of initial waterproofing test not reaching 98–100%
Civil engineering works	(Target met) Initial acceptance rate by owners of 91–100% (Target met) The acceptance rate of the initial acceptance of the welding process reaches 95–100%
Foundation engineering works	(Target met) Pile grinding project: 100% pass rate of concrete brick pressure test (Target met) Pre-drilled rock-socketed steel H-shaped pile and mini pile project: 100% pass rate for load test acceptance and the British brick pressure test (Target met) H-shaped pile engineering: 100% acceptance rate of load test acceptance
Mechanical and electrical engineering works	(Target met) Initial acceptance rate by owners of 98–99%
Prefabrication structures production	(Target met) Only 0.01% of annual concrete production rejected (Target met) No itemised engineering scrap
Machinery	(Target met) No record of mistake regarding payment arrangements, equipment maintenance and repairs

Project management



Customer health and safety

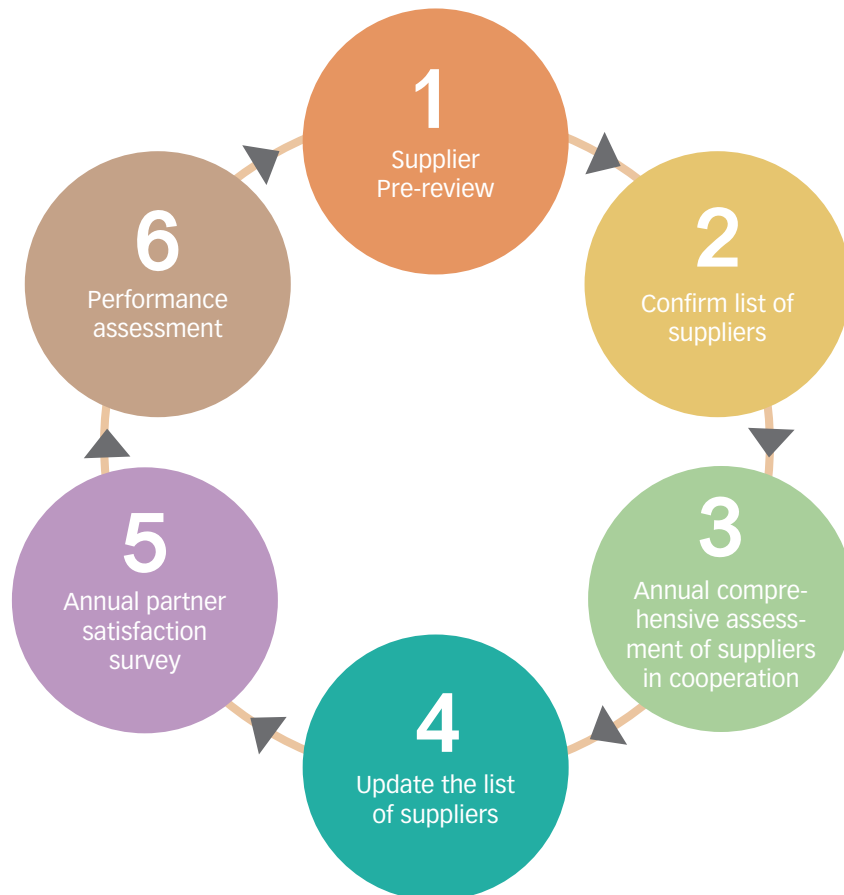
We value the health and safety of our customers, and managing the quality of raw materials is the key to safeguarding the health and safety of our customers. China State Construction Engineering (Hong Kong) established the ISO 31000 Risk Management System for the two projects of the Housing Department and passed the audit during the year. The audit includes areas such as materials procurement, acceptance, storage and use.

In order to ensure the Group's construction quality, we cooperated with the Hong Kong government to implement a number of initiatives to upgrade construction projects. We established a risk management system for installation materials and required that materials related to the health and safety of customers be used only if they can pass relevant external audits. At the same time, we did our best to improve the contractor material quality control process and extended the contractor construction materials management approach to all construction sites to improve the efficiency of material control at the source and accountability.

Supply chain management

The Group places emphasis on the environmental and social impacts of its own business and the entire supply chain. It is therefore also concerned about the selection of suppliers to properly manage the environmental and social risks of the supply chain.

The Group has compiled Procedures for Materials Procurement, which stipulates requirements for suppliers in terms of construction quality, safety, health and environmental protection to manage the entire procurement process and new material procurement risk management procedures. In addition, if the project contract has special safety, health and environmental protection requirements, the relevant department shall explain to the supplier and list the relevant special terms and conditions in the contract. The Group has stated the specific supplier approval process in the Work Procedures according to the nature of individual businesses and different scales of procurement.





Project management

The supplier's assessment covers the punctuality, quality, safety, environmental protection, service, compliance, business ethics, and financial aspects of the supply. At the same time, the Group needs to perform an annual performance assessment of suppliers that have a record of supply in the past year according to the Standard Work Procedures. During the year, all Hong Kong projects (including materials procurement, building construction, civil engineering works, foundation engineering works, mechanical and electrical engineering works and machinery) met the requirements of the established supplier performance indicators.

During the year, the Group updated the Procedures for Materials Procurement and adjusted suppliers' quotation and collection methods for tender responses. We support fair competition, and the tendering system adopts the principles of openness and fairness. All projects must formulate procurement plans and invite qualified suppliers to submit bids and quotes according to the procurement plan.

We understand that maintaining smooth communication with suppliers is conducive to risk management in the supply chain. The relevant department leaders maintain constant communication with suppliers and regularly meet and exchange market information and supply conditions. When faced with large-scale procurement or when relevant requirements are raised by site management personnel, we will invite suppliers to attend meetings and ensure timely communication of accurate information between the two parties. Every year we also invite major suppliers to participate in a partner satisfaction survey. The content covers two areas of corporate social responsibility (including waste reduction measures and self-discipline against corruption) and employee attitude (including behavioral performance, collaboration effectiveness, and results) to understand the employees' views and suggestions for the Group. In addition, the senior management of the Group also schedules meetings with suppliers each year to provide opinions and suggestions on future cooperation.

In view of the nature of business related to the design and construction of Hong Kong building construction, civil engineering works, foundation engineering works, and construction products, the Group has formulated the Supplier Code of Conduct, which stipulates that all suppliers must abide by the following rules:

Corruption free	Maintain market competition	Manage and supervise upstream suppliers	Abide by laws and Group policies
Give priority to sourcing from nearby origins to reduce carbon emissions	Give priority to procuring environmental materials to protect the environment.	Supply according to demand to avoid waste of resources	Fulfill corporate social responsibility

The Group will regularly review and improve the management system to ensure that all suppliers follow the requirements of the Supplier Code of Conduct and provide quality services and products.

Case study

Design and construction of the Medical Centre of Excellence in Paediatrics

Project overview

As Hong Kong's first children hospital and one of the most advanced paediatrics medical centres in Asia, Hong Kong Children's Hospital (HKCH) in the Kai Tak Development Area is a key project of CSCI. The HKCH is jointly designed and constructed by the Company and Shui On Group with a total contract sum of HK\$9.09 billion. The construction started in 2014 and finished in 2018. The hospital is scheduled to come into service in phases started from the fourth quarter of 2018, providing approximately 230 beds in the early stage. The project includes two buildings. Theme gardens are designed for each floor and extend towards the central park on the ground floor. Together with the waterfront promenade, it provides a suitable environment for the treatment and recovery of child patients.



Quality management

The Group established a three-fold quality management procedure to address the three aspects of materials and equipment; technical skills and construction; and quality standard and inspection. This three-fold quality management is realised, by adopting management measures such as production of technical orientation documents and conducting quality requirement orientation, on-site secondary model, three-fold construction quality inspection, control and management of key construction procedures, workers permit system and summarising and analysing common quality problems. Besides, detailed instructions and requirements are provided in relation to the construction site design, testing, construction, distribution of labour and construction procedures:

Preliminary construction site design

Building Information Modeling (BIM) is employed to conduct clash detection to solve clash issues between different project designs beforehand to prevent changes or repeated works during the construction phase.

Division and allocation of labour in testing and construction

Site Frontline Management Accountability System is implemented to divide the site boundary into regions according to the detail of the construction and allocation of labour and conduct regular reviews with regard to changes in construction works and staff allocation.

Construction procedures

The Key Construction Process Quality Management Procedure is formulated according to the importance, difficulty, impact on construction quality of each construction process to provide concrete instructions and requirements for the key construction processes.



Case study

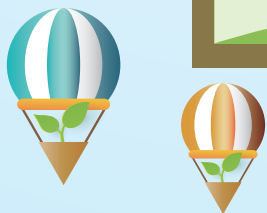
Design and construction of the Medical Centre of Excellence in Paediatrics

During the construction site design and construction, the Group used innovative building materials and replaced traditional sand bricks and concrete partition walls with high-density gypsum bricks and high-density waterproof gypsum bricks. It not only reduced the weight of the building significantly but also reduced the amount of plasterwork and the burden of cleanout and enhanced the quality of the finishing.

In terms of construction technology, vertical blinding was used in large areas for the pit construction. It not only guarantees the underground outdoor waterproofing quality, but also accelerated the construction. In the process of constructing the connecting bridge, large-scale steel structure (RMD) was used for the first time in a construction project of the Hong Kong government. Action cameras were used for visual inspection to improve construction quality and ensure safety during the construction process.

Safety and environmental management

The Group adopted the safety management concept of 'safety and environmental protection triangle'. To help workers grasp the safety essentials, the Group used the story of The Romance of the Three Kingdoms to design the safety slogan of 'Pass five hurdles, remove six harms' to help them identify high-risk processes and conduct safety demonstration.



Case study

Design and construction of the Medical Centre of Excellence in Paediatrics

By optimising the pile cap design, the depth of excavation was reduced by 3 meters and one less lateral support was used in the Excavation Lateral Support (ELS) system. As the construction difficulty was reduced, pressure on construction site safety management was lessened.

Numerous environmental design features have been introduced in the hospital building, which has received the Provisional Platinum rating from the Hong Kong Green Building Council, making it the first government hospital project to receive BEAM Plus Platinum certification. The project received the Merit Award for new buildings category (projects under construction) in the Green Building Award 2016 organised by the Hong Kong Green Building Council with the Professional Green Building Council. The Group also won for the first time the Bronze Award of the Temporary Works Excellence Award 2017 organised by the Development Bureau and the Construction Industry Council.



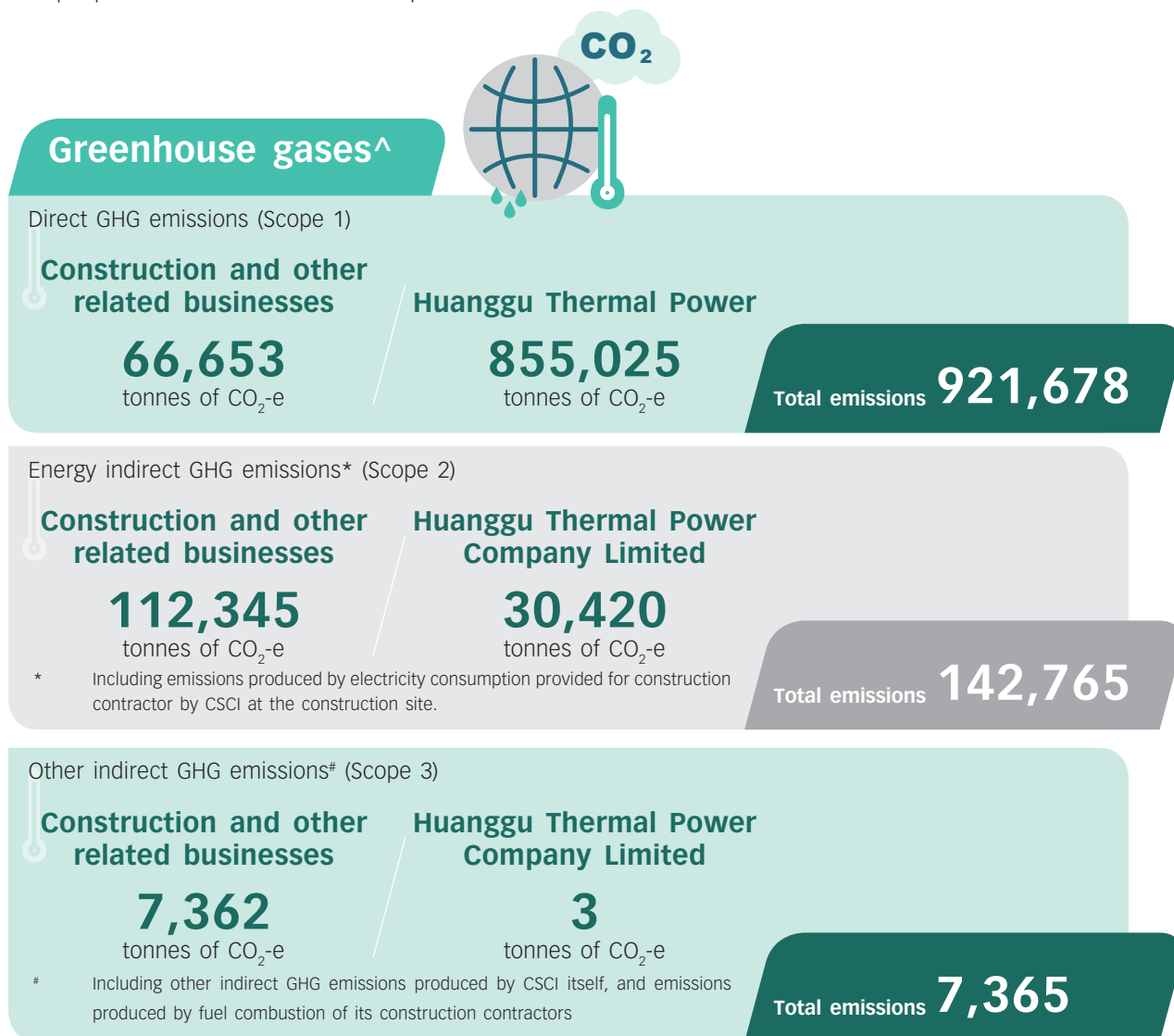
Environmental management



Environmental management



The Group develops an environmental management system to formulate environmental protection indicators and objectives and strive to review and refine the relevant management system to continuously improve the Group's performance in environmental protection.



[^] The greenhouse gas assessment covered six types of greenhouse gases controlled by the Kyoto Protocol. The quantification process and emission factors are referenced to the Guidelines for Accounting and Reporting Greenhouse Gas Emissions China Electricity Generation Enterprises (Trial), the Guidelines for Accounting and Reporting Greenhouse Gas Emissions China Public Building Operation Units (Enterprises) (Trial), the Guidelines for Accounting and Reporting Greenhouse Gas Emissions Other Industrial Enterprises (Trial), the Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purposes) in Hong Kong, the ISO14064-1 standard and the Greenhouse Gas Protocol. The operational control approach was adopted to aggregate the data.





Environmental management

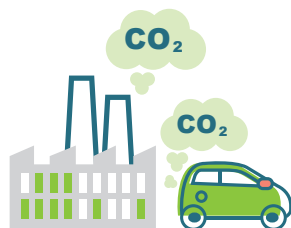
Total greenhouse gas emissions by business nature

Intensity#	Construction and other related businesses	Huanggu Thermal Power
21.4 tonnes of CO ₂ -e/million HK\$ thousand	186,360 tonnes of CO ₂ -e	885,448 tonnes of CO ₂ -e

Calculation of Greenhouse gas intensity covers scope 1, scope 2 and scope 3 emission

Total emissions 1,071,808

Air emissions



Amount of air pollutants emitted*

Nitrogen oxides 1,190 kgs	Sulfur oxides 1,070 kgs	Suspended particulates 80 kgs
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* Only includes the emissions of Huanggu Thermal Power

Energy (direct)



Energy Consumption

Acetylene 2,082 GJ	Lignite 8,475,326 GJ	Gasoline 62,231 GJ
Diesel 855,993 GJ	Liquefied petroleum gas 2,838 GJ	Naphtha 837 GJ
Natural gas 8,479,629 GJ	Renewable energy 402 GJ	

Environmental management



Energy (indirect)

Energy Consumption

Steam

21,136 GJ

Electricity

203,979 MWh

Total energy consumption[^]

18,632,796 GJ

Energy intensity[#]

372 GJ/million HK\$ turnover

[^] Excluding electricity sold by Huanggu Thermal Power

[#] Intensity covers energy consumption within the organization

Water resources



Water consumption and discharge

Water consumption

7,109,189 m³

Water intensity

142 m³/million HK\$ turnover

Municipal/sewage discharge

2,114,113 m³

Total discharge

2,295,610 m³

Discharge intensity

46 m³/million HK\$ turnover

(after treatment) Discharge into the sea, rivers or lakes

181,497 m³

Major construction materials



Major raw materials (Provided by CSCI)

Reinforcing bars

384,824 tonnes

Concrete

1,983,503 m³

Stone

1,811,734 tonnes

Sand

463,849 tonnes

Bricks

597,336 tonnes

Cement

172,638 tonnes

Mortar

176,547 m³

Gate

133,972 tonnes



Environmental management

Circular Development and Leading Action

In response to the national *Circular Development and Leading Action*, CSCI proactively followed the main objectives and requirement indicators advocated by the country for achieving circular economy in 2020 to research on how to implement the national policy in corporate management and production aspects with the core values of green, circular and low-carbon development, resources efficiency and circular recycling. Having regard to the ideals of circular economy, the Group will regulate the handling of hazardous and non-hazardous waste according to the law.

ISO 14001 Environmental Management Systems Audit

The Group established an environmental management system according to ISO 14001 : 2015. All subsidiaries (including China Overseas Building Construction, China Construction Civil Engineering, China State Foundation Engineering, China State Mechanical & Electrical Engineering and Alchmex International Construction) successfully passed the external audit during the year. In future, the Group will expand the scope of the environmental management certification system of China State Construction Engineering (Hong Kong) to include building structure demolition and design projects

China State Construction Engineering (Hong Kong)

The Hong Kong company has already formulated a construction project environmental management measure for the entire project lifecycle, which includes five aspects as follow: energy use management of the construction site, construction site waste management, construction environment dust control, control of water pollution and wastewater discharge and protection of environmental biodiversity.

Energy use management of the construction site	
Install a solar power water heater to supply hot water for washing in the construction site office	Install solar power water heater control to control the water temperature
	Transport documents between the main contractor and the office with electric vehicle
Capture natural lighting to save energy in the design of the temporary office of the construction site	Equip the construction site office with air-conditioners with energy labels and T5 fluorescent tubes to improve energy use efficiency
Construction site waste management	
Reduce slurry runoff and dust emission by placing concrete paving slabs at the construction site	Set up recycling stations at the office
Recycle and reuse waste reinforcement bars on the site	Recycle expired safety helmets
Using scrap concrete to make concrete blocks for use at the construction site	Remaining excavated materials from the site are sent to other sites for packing or landfills as covering materials
Construction environment dust control	
Collect sample of the low-sulphur diesel used by equipment for testing	Install smoke filter at the barge
Install water curtain in the tunnel project under construction to block emission of dust	Clean vehicles leaving the construction site thoroughly by setting up tire washing facilities at the entrance and exit
Control dust emission and dispersion by spraying water with water truck, water sprayer, spray system, etc at various location of the construction site regularly	

Environmental management



Control of water pollution and wastewater discharge	
Well cover the mud in the site to prevent mud from seeing large amounts of mud during rainy weather	Installation of sewage treatment equipment, disposal of all site wastewater before discharge
To prevent sedimentation and diffusion of mud and sand in construction projects at sea, a sedimentation screen is placed in the sea with an extra layer of geotextile to prevent leakage of mud and sand	
Protection of environmental biodiversity	
Carry out sedimentation rate monitoring at four monitoring stations at the seabed of the project location	Conduct water quality monitoring at mudflats to inspect levels of dissolved oxygen, turbidity and suspended solids
Conduct mudflat biodiversity monitoring within the project boundary: set up three specimen collection zones and assign professionals to search for horseshoe crabs to carry out monitoring and rescue, monitor the seaweed bed and conduct biodiversity investigations in the intertidal zones	Conduct dolphin monitoring survey within the project boundary to collect monthly statistics of dolphin distribution, scale of groups and chances of sightings to assess the impact of the project on the dolphin activity zones

Environmental inspection

During the year, China State Construction Engineering (Hong Kong) conducted over 100 daily environmental inspections, including construction sites with high environmental management risks to monitor the execution of environmental measures and to amend the progress. Besides, China State Construction Engineering (Hong Kong) conducted 75 holiday and evening inspections for noise checking and to manage high-risk construction sites.

To remind the construction sites to adopt measures to prevent potential problems with the buildings waste payment account and the use of wastewater treatment machine, China State Construction Engineering (Hong Kong) issued two environmental protection warning to illustrate the related legal requirements and precautions.

Wastewater treatment:

- Construction sites should be equipped with adequate wastewater treatment equipment and relevant facilities, including a pre-sedimentation tank, wastewater treatment machine, sludge discharge tank, water pump, inlet and outlet pipes according to the discharge;
- Connect pipes properly to ensure they are connected to the observation tank to discharge wastewater at the site specified by the license for monitoring wastewater quality.

Energy management system

Within the year, China State Construction Engineering (Hong Kong) implemented the ISO 15001:2011 energy management system in a Housing Department construction site and pass the internal and external audit successfully. Therefore, China State Construction Engineering (Hong Kong) expanded the certification area of its energy management system to include large diameter bored pile and percussive piling.

Besides, China State Construction Engineering (Hong Kong) will establish a more effective energy management system at the Housing Department construction sites:

Provide timely training to address the specific requirements of construction sites	Assist the Housing Department construction site to conduct an energy audit and compile the relevant report	Assist the clarification of construction site staff's duties and responsibility in energy management
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Environmental management

China State Construction Engineering (Hong Kong) formulate environmental indicators and goals for the operation nature of construction sites and office according to the Environmental Indicator Calculation Guideline and Material Loss Control Working Guide every year, which are approved by the integrated management committee officer.

Electricity conservation

Indicator	2017 target	2017 performance	2018 target
Electricity conservation	Less than HK\$250,000/ HK\$100 million of turnover	Target met for all construction sites	Less than HK\$240,000/ HK\$100 million of turnover

Water conservation

Indicator	2017 target	2017 performance	2018 target	2018 measures
Water conservation	Less than HK\$61,000/ HK\$100 million of turnover (General construction sites)	Target met	Below HK\$60,000/ HK\$100 million of turnover (General construction sites)	1. Water storage tanks are set up at the site to recycle wastewater for recycling
	Less than HK\$660,000/ HK\$100 million of turnover (Bored pile construction sites)	Target met	Less than HK\$650,000/ HK\$100 million of turnover (Bored pile construction sites)	2. Site explorer checks hose and water supply pipeline to prevent water leakage



Environmental management



Building materials conservation

Indicator	2017 target	2017 performance	2018 target	2018 measures
Reduction of concrete loss	Below 2.0% (General construction sites)	Target met	Target unchanged	1. Site representative responsible for project planning and formulation of construction plan
	Below 6.0% (Bored pile construction sites)			2. Calculate, order and check concrete quantity by quantity surveyor, site supervisor and site engineer 3. The construction of the site supervisor supervision board mold to prevent waste due to process problems 4. Construction site managers formulate solutions to better utilise surplus concrete 5. Site material personnel randomly check the supply quantity
Reduction of reinforcing bar loss	Below 4.5% (Housing construction sites)	Target met	Target unchanged	1. Site representative responsible for project planning and formulation of construction plan
	Below 3.0% (Civil and mechanical engineering construction sites)			2. The quantity surveyor, site supervisor and site engineer are responsible for calculating, ordering and reviewing the amount of iron material separately.
	Below 4.0% (Foundation construction sites)			
Reduce wood usage	Less than 133 m ³ /HK\$100 million of turnover	Target met	Less than 133 m ³ /HK\$100 million of turnover	Recycling old boards

Apart from reducing the use of construction materials, the Group also pays attention to the quality of materials and its environmental impact. China State Construction Engineering (Hong Kong) raised the requirement for the plywood and beams it procured so that about 30% of all timber procured during the year is environmentally certified. Subsidiaries in different regions of the country also adopt environmentally friendly materials and production methods.

Looking forward, subsidiaries of all regions will formulate targets with regards to environmentally friendly materials and practices. China State Construction Engineering (Hong Kong) in the coming five years will gradually increase the percentage of timber with environmental certifications, **and fully switch to using environmentally certified plywood and beam in the year 2023**. Besides, starting from the year 2018, China State Construction Engineering (Hong Kong) will conduct a questionnaire survey of major suppliers of key materials to assess their environment, social and governance performance.



Environmental management

Hong Kong Headquarters

With regard to the nature of operation of the Hong Kong headquarters, the Group has formulated yearly resources conservation targets. As the number of bids for this year has increased significantly compared to last year, the Group has provided air conditioning for employees who need to work overtime, thus failing to meet the annual electricity conservation targets. In addition, the use of work-related paper has also increased for this reason.

Electricity conservation	Paper conservation
2017 target: 1% reduction compared to 2016	2017 target: 3% reduction in average consumption between 2014 and 2016
2017 performance: target not met	2017 performance: target not met
2018 target: 1% reduction compared to 2017	2018 target: 3% reduction in average consumption between 2015 and 2017

In addition, the headquarters Information Management Department is responsible for recycling all computers and related products, including monitors, hard disks, and printer toner cartridges. There are waste paper recycling bins on each floor of the headquarters, and the environmental protection supervisors of each department are responsible for checking the recycling results regularly.

Huanggu Thermal Power

In response to the energy consumption of the frequent powering on and off of wastewater pump, Huanggu Thermal Power implemented the wastewater pump room control system reform which is estimated to save 13,000 units of electricity each year. Besides, Huanggu Thermal Power established the energy management group to enhance energy statistics and the management of energy measurement.

Environmental Protection Training

China State Construction Engineering (Hong Kong) has adopted a series of measures to support and provide staff with various environmental protection training:

Green building training conducted by external organisations	The Hong Kong company is an institutional member of the Hong Kong Green Building Council (HKGBC) so that staff could enjoy discount for participating in various activities and trainings organised by the Council.
Internal environmental protection training course	Internal training course for implementation of ISO50001:2011 energy management system
	Internal training course for implementation of ISO14001:2015 environment management system
	Environmental protection liaison officer training course
	Environmental protection training for new staff
	Training course for application of Construction Noise Permit
	BEAM Plus for Contractors

In terms of prevention of environmental incident prevention, the Group will implement an accountability system to impose legal and management responsibility for violation of regulations. There were no cases of environmental non-compliance in the construction sites in the Hong Kong company during the year. Nevertheless, there was an incident in 2016 in a jointly operated construction site for the Shatin to Central Link project. When construction company concerned dumped grade three contaminated dredged sediment at sea, damage to the container bag caused sediment to enter the sea. During the year, the incident was ruled to be in violation of the permit requirements of the sea dumping. Each partner of the joint-operation was fined HK\$100,000. Investigation shows that the area for dumping on the unloading vessel was uneven, which is the potential cause for the damage of the container bag. Since remedial measures were carried out, no similar incidents have happened again.

Case study

Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road Project

Project overview

The proposed Hong Kong – Zhuhai – Macao Bridge (HZMB), being situated at the waters of Lingding Channel of Pearl River Estuary, is a large sea crossing linking the Hong Kong Special Administrative Region, Zhuhai City of Guangdong Province and Macao Special Administrative Region. The Hong Kong projects involves the construction of the Hong Kong Link Road (HKLR), which is a dual three-lane road of about 12 kilometres connecting the HZMB Main Bridge at the HKSAR boundary with the proposed Hong Kong Boundary Crossing Facilities (HKBCF) at the north-eastern side of sea area adjacent to the Hong Kong International Airport (HKIA). China State Construction Engineering (Hong Kong) was awarded the contract in 2012 by the Highways Department for the design and construction of the section of HKLR between Scenic Hill and the HKBCF, and roadlinks between the HKBCF and HKIA, which are the most complicated part of the HKLR, comprising tunnels, ground roads, seawall, reclamation and associated facilities. The project was completed in October this year.



Significant social impact	Complex geological conditions	Numerous construction restrictions	High technical content
<ul style="list-style-type: none"> As one of the Ten Major Infrastructure Projects, it attracted the attention of the country, the Hong Kong government and society since the planning stage 	<ul style="list-style-type: none"> Stability of the stratum underneath the Airport Express Line was poor with a high permeability coefficient. Situated closely next to the sea, the geological condition made settlement control difficult. Weak stratum in the reclaimed area where the tunnel is situated led to waterproofing difficulty 	<ul style="list-style-type: none"> Airport height limits restricted the space for machine operation Operation time was restricted Drilling and blasting operations in the vicinity of the cable car steering station and aviation fuel facility required extra precaution 	<ul style="list-style-type: none"> First application of internationally leading construction technologies in Hong Kong Multiple special construction techniques were used in reclamation part



Case study

Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road Project

Environmental management Reclamation solution

This project utilises a non-dredge construction method so that instead of removing sediment when building seawalls, gravel piles were installed in the permanent seawall for reinforcement. Despite the higher costs of construction, it does not require excavation at the seabed or disposal of sediment so there was less environmental damage. Traditional dredge reclamation requires disposal of sediment, yet the excavation pollutes seawater and the disposal of sediment would damage the environment.

Traditional dredge reclamation

- Over a million cubic meter of sediment to be handled
- Greater disturbance to white dolphins
- Serious destruction to ecology
- Lower costs of construction
- Sophisticated technology with less difficulties

Non-dredge reclamation

- Without dumping of excessive sediment
- Less disturbance to white dolphins
- Less harm to ecology
- Higher costs of construction
- New technology with greater difficulties

Construction site dust control measures



All vehicles leaving the construction site were washed



Six water trucks were deployed to spray water for dust suppression in the construction site every day

Spray water on earthworks to prevent flying dust from polluting the sea



Water spray curtain was installed at the construction site tunnel exit to control dust from excavation

Case study

Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road Project



Noise pollution prevention measures

- 1) Install sound insulation device in construction vessels to reduce marine operation noise pollution;
- 2) Install enclosed sound barriers in noise sensitive areas.
- 3) Install explosion proof gates in tunnel excavation blasting to reduce the impact of blasting noise.



Water resources protection measures

- 1) Environ-tanks are installed in each construction zone to treat wastewater before discharge;
- 2) Install sand filter within the marine project scope to prevent muddy water from entering the sea;
- 3) Place sand bags along the highway and the coast to prevent wastewater from entering public area

Reduce ecological impact

A dolphin hotspot is located in the west of the HKIA. The Group abided by the requirements of the environmental impact assessment to implement various mitigation measures during the construction to minimise the potential impact on the Chinese White Dolphin. Mitigation measures included specialised and routine monitoring, installing sand filtration net in the marine operation area and fixing marine travel routes and speed limits, in order to prevent marine machines from interfering with dolphin activities.



Community Investment

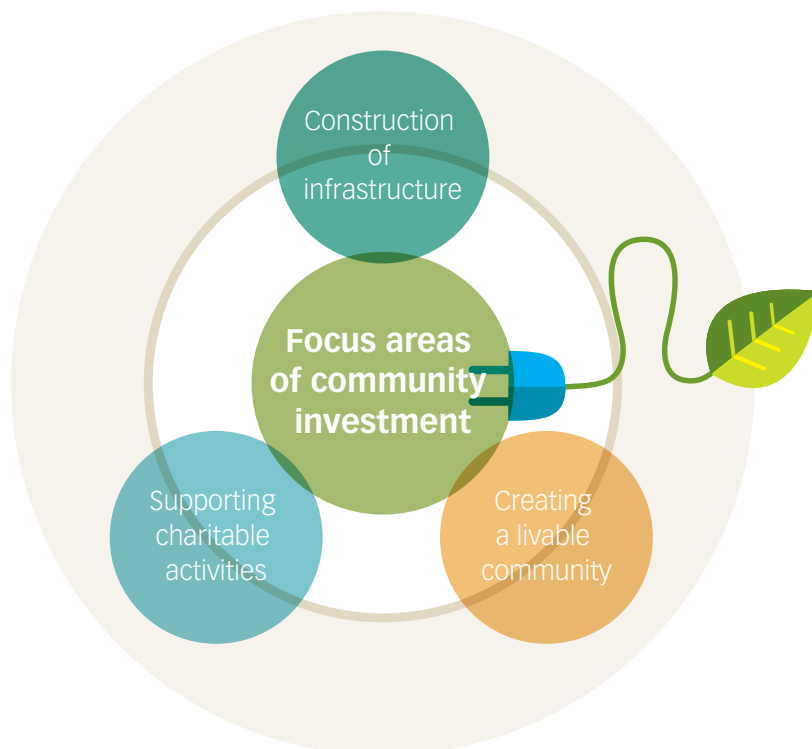


Community Investment



We strive to build a good relationship with the community where we conduct business. Meanwhile, we hope to bring positive influence to society through the value chain of our business and build a sustainable and caring community with the Group's partners.

Underneath the Group's Sustainability Committee established in 2018 is a Community Investment Subcommittee. Led by the senior management responsible for community management, the subcommittee assists the Group in implementing community investment strategies. Our community plan continues to focus on three aspects, including construction of infrastructure, creating a livable community and supporting charitable activities. The Community Investment Subcommittee will draft policies related to community investment to ensure the Group could strategically utilise skills and resources on different community projects.



Investing in infrastructure

As one of Hong Kong's prime construction companies, the Group utilises its corporate advantage and resources to proactively invest in various kinds of infrastructure businesses to serve the society and improve livelihood. The Group mainly participate in public infrastructure projects in the form of public-private partnership ('PPP'), which cut across different types of businesses, including investing and building municipal roads, bridges and tunnels, affordable housing, hospitals and schools. During the year, the Group proactively increases its infrastructure investment in the Mainland China and secured several large-scale PPP projects, including many investment and construction projects of municipal infrastructures, integrated pipeline corridors, industrial districts and science cities, located in various regions such as Hubei, Anhui and Shanxi. The Group believes that the related projects could improve the quality of life of citizens and improve the competitiveness of the local community in the long run.

Constructing livable communities

The Group has always maintained a close relationship with partners in the community where it operates to understand the needs of the community and create a livable community for residents in a responsible manner.



Community Investment

Besides, the Group managed and reduced the impact of its construction businesses on the nearby environment through an environmental management system. The Group understands that the construction unavoidably impacts the life of the nearby communities. To maintain harmony among neighbours, the Group has assigned public relations officers in some construction sites to conduct daily patrol and exchange with stakeholders in the vicinity of the project, such as residents, businesses and district councilors and attend to complaints in a timely manner. A list of major personnel and their contact numbers are posted on the fence panel of the construction site. Stakeholders could contact construction site personnel directly to handle the problem. The Group pledges to reply to enquiries within a day.

Supporting charitable activities

The Group upholds the vision of “Building an Evergreen Business” and the philosophy of “Exercising Caution in Details and Implementation; Building a Strong Foundation to Seek Greater Success” adopted by its parent company COHL. Meanwhile, by following the execution standards and guidelines of routine charitable programmes, the Group actively organises and encourages employees to participate in various charitable activities, and to make contributions to society.



The Group encourages employees to participate in many volunteer activities organised by the Construction Industry Council of Hong Kong, to promote the spirit of healthy lifestyle and caring culture. All funds raised by the activity are donated to the Construction Charity Fund to help the construction workers in need.



To help promoting ecological protection in active response to the World Environment Day, the Group organised a Guided Tour of the Kadoorie Farm and Botanic Garden, during which employees learned about the bio-diversity in Southern China and local efforts in animal and plant conservation, to contribute to the promotion of ecological culture protection.



Over 100 employees of the Group and their family members participated in the Hong Kong Walk for Millions by the Community Chest, raised funds for family and child welfare services.



The Group's subsidiary — Far East Global Group Limited — cooperated with Treats again, to organise the “Rugby For All” charity workshop, to co-construct social inclusion for people with impaired abilities.

Case study Participating in Disaster Relief Work

Typhoon Hato hit Macau this year, causing casualties and severe damage to infrastructure. In the aftermath of the typhoon, many areas of the city were flooded, scaffoldings were toppled, trees were uprooted, windows and signs fell off and trash piled up. Upholding the motto of 'serving society', China Construction Engineering (Macau) Company efficiently organised a rescue coordination team, mobilised its staff to join the volunteer team of the Macau Chinese Enterprises Association, and prepared rescue supplies. The team helped the Department of Civic and Municipal Affairs of Macau Government restore traffic and the community environment so that citizens can return to normal daily activities.



Impact of Typhoon Hato on Hong Kong and Macau

On 23 August 2017, the strongest storm in 53 years, Typhoon Hato hit the west of Pearl River estuary, including Hong Kong, Macau and Zhuhai, resulting widespread regional flooding, power and water suspension, which caused casualties and direct economic loss.

Establishing the rescue coordination team and rescue volunteer team

On the same day, China Construction Engineering (Macau) called upon a special meeting upon learning the severity of the disaster, meanwhile it volunteered to join the Macau Department of Civic and Municipal Affairs in disaster relief. The China Construction Engineering (Macau) rescue coordination team and rescue volunteer team were established after the meeting and volunteers were assigned different roles and tasks.



Case study Participating in Disaster Relief Work



Providing key rescue supplies and conducting rescue tasks efficiently

To support the trash cleanup of the Macau Department of Civic and Municipal Affairs, construction site staff of China Construction Engineering (Macau) worked overnight in six volunteer teams to prepare rescue equipment and vehicles for the next day.

The powerful typhoon caused seawater intrusion, power cut, water suspension, network disconnection and shortage of daily supplies, while road traffic was obstructed by large quantities of fallen branches and objects. To reduce its impact on citizens' daily activities, the cleanup had to speed up. Faced with a shortage of chainsaws, the rescue coordination team contacted its chainsaw supplier in Guangzhou for the Macau Department of Civic and Municipal Affairs over the same night and arranged a delivery to Macau at 5am the following morning, which gained time and resources for the rescue.

The volunteer working group also arranges project-in-charge to assign vehicles and staff to tasks. Volunteers started road cleaning at 6am across different city districts. As this operation required a large number of waste collection vehicles, China Construction Engineering (Macau) coordinated its resources and provided 20 transport vehicles to conduct the rescue with the volunteer team, the Liaison Office of the Central People's Government and the People's Liberation Army Macau Garrison. During the cleanup, China Construction Engineering (Macau) leverages its capabilities and help seal the windows of affected households to protect their property and safety from any secondary damage of Typhoon Pakhar. Besides, CSCI Hong Kong across the border sent a team of 15 volunteers on 26 August to deliver rescue supplies to Macau.

China Construction Engineering (Macau) provided key supplies including transport vehicles, shovels and chainsaws for the volunteer teams and arranged a volunteer team of 300 to assist the road cleanup, which constituted a main source of volunteers in the rescue.



300
volunteers



20
transport
vehicles

1,000
shovels



200
chainsaws



Focusing on post-disaster reconstruction

There was pressing need for post-disaster reconstruction, which involves numerous livelihood services such as civil administration, waterworks, power supply, construction, telecommunications, firefighting, safety monitoring management, etc. As the level of damage in each aspect is different, it adds further difficulty to the reconstruction. China Construction Engineering (Macau) is constantly concerned with the needs of the community in the hope of contributing to the long-term post-disaster recovery and reconstruction of the Macau community.



Key Performance Data



Environmental Performance

Major raw materials and packaging materials used by region

Materials	Unit	Total			Mainland China	Overseas
		Consumption	Hong Kong	Macau		
Concrete	m ³	1,983,503	578,109	83,465	1,321,929	N/A
Cement mortar	m ³	176,547	13,782	8,197	154,568	N/A
Reinforced steel bar	tonnes	384,824	101,900	15,084	267,841	N/A
Steel beams	tonnes	24,236	17,709	3,626	2,901	N/A
Sheet pile	tonnes	133,972	3,599	310	130,063	N/A
Cement	tonnes	172,638	38,803	222	133,613	N/A
River sand	tonnes	463,849	174,920	325	288,604	N/A
Stones	tonnes	1,811,734	289,835	48	511,706	1,010,145
Bricks	tonnes	597,336	N/A	11,393	585,943	N/A
Concrete floor materials	tonnes	3,075	N/A	N/A	3,075	N/A
Aluminium products	tonnes	12,863	N/A	N/A	12,641	222
Steel products	tonnes	17,020	N/A	10	17,010	N/A
Silica gel	tonnes	18	N/A	0.5	0.1	17
Glass	tonnes	69,168	N/A	N/A	25,644	43,524
Timber for packaging	tonnes	2,548	N/A	123	2,425	N/A
Intensity of packaging materials	tonnes/ million HK\$ revenue	0.05	N/A	N/A	N/A	N/A

Energy consumption

Type	Unit	Total Consumption
Acetylene	GJ	2,082
Lignite	GJ	8,475,326
Petrol	GJ	62,231
Diesel	GJ	855,993
Liquefied petroleum gas (LPG)	GJ	2,838
Petroleum naphtha	GJ	837
Natural gas	GJ	8,479,629
Steam	GJ	21,136
Electricity	MWh	203,979
Renewable energy	GJ	402
Total energy consumption [^]	GJ	18,634,796
Energy intensity [#]	GJ/million HK\$ revenue	371.6

[^] Excluding electricity sold by Huanggu Thermal Power

[#] Intensity covers energy consumption within the organization



Key Performance Data

Air emissions

Type of air emissions	Unit	Total emissions ¹
Nitrogen oxides	kgs	1,190
Sulfur oxides	kgs	1,070
Suspended particles	kgs	80

¹ Air emission produced from power generation at Huanggu Thermal Power

GHG emissions

By region

Scope	Unit	Mainland China	Hong Kong	Macau	Overseas	Total GHG emissions
Scope 1: Direct GHG emissions	tonnes of CO ₂ e	59,825	1,076	60,769	7	921,678
Scope 2: Indirect GHG emissions from energy consumption	tonnes of CO ₂ e	12,023	9,776	20,587	379	142,765
Scope 3: Other indirect GHG emissions	tonnes of CO ₂ e	7,203	—	160	2	7,365
Total	tonnes of CO ₂ e	79,051	10,852	981,517	388	1,071,808

By business nature

Scope	Unit	Construction business	Huanggu Thermal Power	Total GHG emissions
Scope 1: Direct GHG emissions	tonnes of CO ₂ e	66,653	855,025	921,678
Scope 2: Indirect GHG emissions from energy consumption	tonnes of CO ₂ e	112,345	30,420	142,765
Scope 3: Other indirect GHG emissions	tonnes of CO ₂ e	7,362	3	7,365
Total	tonnes of CO ₂ e	186,360	885,448	1,071,808

Intensity

	Unit	Amount
Greenhouse gas intensity [#]	(tonnes CO ₂ e/ million HK\$ turnover)	21.4

[#] Calculation of Greenhouse gas intensity covers scope 1, scope 2, and scope 3 emission

Key Performance Data



Hazardous and non-hazardous waste

Type	Unit	Total emissions
Hazardous waste		
Chemical waste	tonnes	18.2
Total amount of hazardous waste	tonnes	18.2
Intensity of hazardous waste	tonnes of CO ₂ e/ million HK\$ revenue	0.0004
Non-hazardous waste		
Inert construction and demolition waste (sent to public fill reception facilities)	tonnes	621,327
Non-inert construction and demolition waste (sent to landfills)	tonnes	76,273
Construction and demolition waste (sent to construction waste sorting facilities)	tonnes	32,363
Inert construction and demolition waste (sent to other authorized facilities for reuse)	tonnes	100,260
Total amount of non-hazardous waste	tonnes	830,223
Intensity of non-hazardous waste	tonnes of CO ₂ e/ million HK\$ revenue	16.6

Water consumption and discharge

Type	Unit	Consumption/ Discharge
Total water consumption	m ³	7,109,189
Water consumption intensity	m ³ /million HK\$ revenue	141.8
Sewage discharge through municipal sewage system/sewer pipes	m ³	2,114,113
Treated sewage discharge into ocean, river or lake, etc.	m ³	181,497
Total sewage discharge	m ³	2,295,610
Intensity of sewage discharge	m ³ /million HK\$ revenue	45.8

Environmental protection investment and expenditures

Type	HK\$
Waste disposal	52,590,931
Sewage treatment	2,029,969
Emissions treatment	50,000
Environmental protection facilities	9,635,405
Prevention of climate change risks	1,381,055
Employment of environmental experts	11,997,833
Total	77,685,193



Key Performance Data

Human Resources Data

Total workforce by region, employee category, age group and gender

Region	Gender/ Age group	30 or below	31-40	41-50	51 or above	Total (by gender)	Total (by region)	Total
Hong Kong	Male	858	790	771	855	3,274	4,275	11,349
	Female	146	202	297	356	1,001		
Macau	Male	128	126	110	132	496	655	
	Female	40	30	22	67	159		
Mainland China	Male	1,864	1,517	1,100	359	4,840	5,899	
	Female	623	256	162	18	1,059		
Overseas	Male	124	191	123	22	460	520	
	Female	12	23	17	8	60		

Total workforce by region, employee category and gender:

Region	Gender/ Employee category	Senior	Middle	Executive	General	Total (by gender)	Total (by region)	Total
Hong Kong	Male	32	52	251	2,939	3,274	4,275	11,349
	Female	2	10	17	972	1,001		
Macau	Male	4	4	93	395	496	655	
	Female	0	1	3	155	159		
Mainland China	Male	34	121	544	4,141	4,840	5,899	
	Female	0	9	66	984	1,059		
Overseas	Male	2	9	8	441	460	520	
	Female	0	0	2	58	60		

Key Performance Data



Number and percentage of new employees by region

Region	Number of new employees	Percentage of that type of employees
Hong Kong	1,583	37%
Macau	71	11%
Mainland China	1,555	26%
Overseas	125	24%
Total number of new employees and percentage	3,334	29%

Number and percentage of employee turnovers by region

Region	Number of employee turnovers	Percentage of that type of employees
Hong Kong	1,157	27%
Macau	152	23%
Mainland China	1,276	22%
Overseas	44	9%
Total number of employee turnovers and ratio	2,629	23%

Ratio of salary of male employees to female employees by region

Region	Ratio of salary of male employees to female employees
Hong Kong	2.53:1
Macau	1.27:1
Mainland China	1.62:1
Overseas	0.53:1



Key Performance Data

Data on work-related injuries by region and gender

Region	Gender	Number of work-related injuries	Number of fatalities	Work-related injury rate per 1,000 persons	Lost days due to work-related injuries	Absent days
Hong Kong	Male	8	0	2.4	1,489	2,225
	Female	2	0	2.0	370	573
Macau	Male	0	0	0.0	0	0
	Female	0	0	0.0	0	0
Mainland China	Male	13	0	2.7	1,920	16,339
	Female	0	0	0.0	0	2,950
Overseas	Male	0	0	0.0	0	8
	Female	0	0	0.0	0	0
Total		23	0	2.0	3,779	22,095

Average hours of training of employees by region, employee category and gender

Region	Employee category	Average hours of training of male employees	Percentage of male employees trained	Average hours of training of female employees	Percentage of female employees trained
Hong Kong	Senior	12.0	100%	10.0	100%
	Middle	12.3	98%	12.1	70%
	Executive	10.5	90%	8.4	72%
	General	11.7	50%	9.7	25%
Macau	Senior	8	100%	N/A	N/A
	Middle	20	100%	20	100%
	Executive	5.5	100%	2	100%
	General	3.4	94%	1.7	93%
Mainland China	Senior	21	100%	N/A	N/A
	Middle	26	91%	24.6	56%
	Executive	22	94%	19	85%
	General	17	90%	32	93%
Overseas	Senior	4	100%	N/A	N/A
	Middle	3	89%	N/A	N/A
	Executive	2	86%	3	100%
	General	8	96%	10	95%

Key Performance Data



Number of employees received regular performance and career development review by region, employee category and gender

Region	Employee category	Number of male employees received review	Percentage of male employees received review	Number of female employees received review	Percentage of female employees received review
Hong Kong	Senior	32	100%	2	100%
	Middle	52	100%	10	100%
	Executive	251	100%	17	100%
	General	2,939	100%	972	100%
Macau	Senior	4	100%	N/A	N/A
	Middle	4	100%	1	100%
	Executive	93	100%	3	100%
	General	395	100%	155	100%
Mainland China	Senior	34	100%	N/A	N/A
	Middle	121	100%	9	100%
	Executive	544	100%	66	100%
	General	4,141	100%	984	100%
Overseas	All employees		100%		

Supplier Management

Region of suppliers	Type of product or service supplied	Number of suppliers	Percentage of suppliers received assessment
Hong Kong	Concrete	5	100%
	Reinforced steel bar	6	100%
	Shaped steel	5	100%
	Steel products	7	100%
	Machinery rental	5	100%



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HKEX ESG Reporting Guide	Content	GRI Standards	Related Chapters/Remarks
A. Environmental			
A1 Emissions			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.	GRI 103-2	Environmental management; During the reporting period, there were no incidents of non-compliance with relevant laws and regulations that have a significant impact on the Group.
A1.1	The types of emissions and respective emissions data	—	Environmental management ;
A1.2	Greenhouse gas emissions in total and intensity	GRI 305-1 GRI 305-2 GRI 305-3 GRI 305-4	Key Performance Data
A1.3	Total hazardous waste produced and intensity	—	Key Performance Data
A1.4	Total non-hazardous waste produced and intensity	—	
A1.5	Description of measures to mitigate emissions and results achieved	—	Sustainability governance; Environmental management
A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved	GRI 103-2	Environmental management
A2 Use of Resources			
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.	GRI 103-2	Environmental management
A2.1	Direct and/or indirect energy consumption by type and intensity	GRI 302-1 GRI 302-3	Environmental management; Key Performance Data
A2.2	Water consumption in total and intensity	—	
A2.3	Description of energy use efficiency initiatives and results achieved	—	Environmental management;
A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved	GRI 103-2	During the reporting period, there were no problems in sourcing water encountered in our operations.
A2.5	Total packaging material used for finished products and intensity	GRI 301-1	Key Performance Data
A3 The Environment and Natural Resources			
General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources.	GRI 103-2	Environmental management
A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them		

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HKEX ESG Reporting Guide	Content	GRI Standards	Related Chapters/ Remarks
B. Social			
B1 Employment			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	GRI 103-2	Employment system; During the reporting period, there were no incidents of non-compliance with relevant laws and regulations that have a significant impact on the Group.
B1.1	Total workforce by gender, employment type, age group and geographical region	—	Key Performance Data
B1.2	Employee turnover rate by gender, age group and geographical region	GRI 401-1	
Outside the scope of HKEX ESG Reporting Guideline	Total number and rate of new employee hires by gender, age group and geographical region The total number of discriminatory events and the improvement actions taken	GRI 406-1 G4-HR3	Employment system
B2 Health and Safety			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.	GRI 103-2	Employment system; During the reporting period, there were no incidents of non-compliance with relevant laws and regulations that have a significant impact on the Group.
B2.1	Number and rate of work-related fatalities	—	Key Performance Data
B2.2	Lost days due to work injury		
B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored	GRI 103-2	Employment system
B3 Development and Training			
General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	GRI 103-2	Employment system
B3.1	The percentage of employees trained by gender and employee category	Outside the scope of GRI Standards	Key Performance Data
B3.2	The average training hours completed per employee by gender and employee category	GRI 404-1 G4-LA9	



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HKEX ESG Reporting Guide	Content	GRI Standards	Related Chapters/Remarks
B4 Labour Standards			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour.	GRI 103-2	Employment system; During the reporting period, there were no incidents of non-compliance with relevant laws and regulations that have a significant impact on the Group.
B4.1	Description of measures to review employment practices to avoid child and forced labour	—	Employment system; During the reporting period, there were no such practices discovered in our operations.
B4.2	Description of steps taken to eliminate such practices when discovered		
B5 Supply Chain Management			
General Disclosure	Policies on managing environmental and social risks of the supply chain.	GRI 103-2	Project management : Key Performance Data
B5.1	Number of suppliers by geographical region	Outside the scope of GRI Standards	
B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored	GRI 103-2 GRI 414-1	
B6 Product Responsibility			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	GRI 103-2	Project management; During the reporting period, there were no incidents of non-compliance with relevant laws and regulations that have a significant impact on the Group.
B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons	GRI 416-1	During the reporting period, there were no recall concerning the provision of products and services for safety and health reasons
B6.2	Number of products and service related complaints received and how they are dealt with	—	Project management
B6.3	Description of practices relating to observing and protecting intellectual property rights	GRI 103-2	Corporate governance
B6.4	Description of quality assurance process and recall procedures	Outside the scope of GRI Standards	Project management; Recall procedures are not considered as material to our operations.
B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored	GRI 103-2	Corporate governance

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HKEX ESG Reporting Guide	Content	GRI Standards	Related Chapters/Remarks
B7 Anticorruption			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	GRI 103-2	Corporate governance; During the reporting period, there were no incidents of non-compliance with relevant laws and regulations that have a significant impact on the Group.
B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases	—	Corporate governance; During the reporting period, there were no concluded legal cases of corruption brought against the Group or its employees.
B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored	GRI 103-2	
B8 Community Investment			
General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	GRI 103-2	Community investment
B8.1	Focus areas of contribution		
B8.2	Resources contributed to the focus area		

Thank you for your interest in the ESG performance of China State Construction International Holdings Limited and reading this report. Your views and comments on our performance and the disclosure in this report are important for us to continuously improve corporate performance. You are cordially invited to provide your opinions and suggestions through the following link.

