



洋房牌水泥

Asia Cement (China)

Corporate Social Responsibility Report



Asia Cement (China) Holdings Corporation

Contents

About This Report	01
Message from the Chairman	03
Feature: Boost Smart Cement Manufacturing 4.0 with Digital Innovation	04

Independent Verification Statement	58
Appendices	60
Asia Cement (China)'s CSR Performance in 2022	60
Stakeholder Engagement Mechanism	67
Index Tables	68
Reader Feedback	77

01 Insights about Asia Cement (China)



About Us	07
History of Sustainable Development	08
Products and Market Layout	09
Entrepreneurial Spirit, Mission and Vision	10
Honours and Association membership	11

02 Governance



Sustainability Governance	13
Corporate Governance	17

03 Cooperation



Collaborative Environmental Management	23
Supplier Management	24
Green Products	25
Customer Management	27

04 Environment



Environmental Management System	30
Climate Action	31
Water Management	35
Pollution Control	38
Green Mines	40

05 Society



Employee Rights	45
Employee Development	50
Occupational Health and Safety	52
Giving Back to the Society	56

About This Report

Overview

The 2022 Corporate Social Responsibility Report of Asia Cement (China) Holdings Corporation (hereinafter referred to as the "report") is the 9th Corporate Social Responsibility (CSR) report released by Asia Cement (China) Holdings Corporation (hereinafter referred to as "Asia Cement (China)", "the Company" or "we"). It aims to present to stakeholders the Company's approaches to sustainable environmental, economic and corporate governance and highlights in this regard in 2021.

Scope of Reporting

Time range: January 1-December 31, 2022. A small amount of data for previous years and 2023 is included.

Geographic scope: The environmental, social and corporate governance information disclosed in this report covers the following 17 wholly owned subsidiaries of Asian Cement (China):

业务类型	公司名称	地址
Integrated cement companies	Jiangxi Ya Dong Cement Co., Ltd. (referred to as "Jiangxi Ya Dong")	No. 6 Yadong Avenue, Matou Town, Ruichang, Jiujiang, Jiangxi Province
	Huanggang Ya Dong Cement Co., Ltd. (referred to as "Huanggang Ya Dong")	No. 5 Tiyu Road, Huangzhou District, Huanggang, Hubei Province
	Hubei Ya Dong Cement Co., Ltd. (referred to as "Hubei Ya Dong")	Yangluo Economic Development Zone, Xinzhou District, Wuhan, Hubei Province
	Wuhan Ya Xin Cement Co., Ltd. (referred to as "Wuhan Ya Xin")	North of Jiangjun Mountain, Zhifang Subdistrict, Jiangxia District, Wuhan, Hubei Province
	Sichuan Ya Dong Cement Co., Ltd. (referred to as "Sichuan Ya Dong")	No. 66 Anpeng Road, Tianpeng Town, Pengzhou, Chengdu, Sichuan Province
	Sichuan Lan Feng Cement Co., Ltd. (referred to as "Sichuan Lan Feng")	Middle Section of Qinggui Road, Guihua Town, Pengzhou, Chengdu, Sichuan Province
Cement grinding companies	Yangzhou Ya Dong Cement Co., Ltd. (referred to as "Yangzhou Ya Dong")	No. 7 Gudu Road, Bali Town, Yangzhou Economic and Technological Development Zone, Jiangsu Province
	Wuhan Ya Dong Cement Co., Ltd. (referred to as "Wuhan Ya Dong")	No. 107 Chaoyang Road, Dongxihu District, Wuhan, Hubei Province
	Nanchang Ya Dong Cement Co., Ltd. (referred to as "Nanchang Ya Dong")	Changdong Industrial Zone, Qingshanhu District, Nanchang, Jiangxi Province
	Nanchang Ya Li Ready-mixed Concrete Co., Ltd. (referred to as "Nanchang Ya Li")	Baishuihu Industrial Park, Gangkou Avenue, Qingshanhu District, Nanchang, Jiangxi Province
Ready-mixed concrete companies	Wuhan Ya Li Ready-mixed Concrete Co., Ltd. (referred to as "Wuhan Ya Li")	No. 66 Yadong Avenue, Pingjiang West Road, Yangluo Economic Development Zone, Xinzhou District, Wuhan, Hubei Province
	Sichuan Ya Li Ready-mixed Concrete Co., Ltd. (referred to as "Sichuan Ya Li")	No. 268 Section 3 of Wenquan Avenue, Wenjiang District, Chengdu, Sichuan Province
	Chengdu Ya Li Ready-mixed Concrete Co., Ltd. (referred to as "Chengdu Ya Li")	No. 68 Anpeng Road, Tianpeng Town, Pengzhou, Chengdu, Sichuan Province
Transportation companies	Taizhou Ya Dong Building Materials Co., Ltd. (referred to as "Taizhou Ya Dong")	Zhongxin Village, Yong'an Zhou Town, Gaogang District, Taizhou, Jiangsu Province
	Jiangxi Ya Li Transportation Co., Ltd. (referred to as "Jiangxi Ya Li")	No. 8 Yadong Avenue, Matou Town, Ruichang, Jiangxi Province
	Hubei Ya Li Transportation Co., Ltd. (referred to as "Hubei Ya Li")	No. 201 Yushi Dun, Cihui Subdistrict, Dongxihu District, Wuhan, Hubei Province
	Sichuan Ya Li Transportation Co., Ltd. (referred to as "Sichuan Ya Li")	No. 68 Anpeng Road, Tianpeng Town, Pengzhou, Chengdu, Sichuan Province



Publication Cycle

Asia Cement (China)'s CSR report is published once a year, which is consistent with the publication cycle of our financial report. The previous CSR report was published in May 2022. The next report is expected to be published in May 2024.

Data Source

Data in this report comes from Asia Cement (China)'s original internal ledgers, documents, audit reports, etc. Some economic data comes from the Company's 2022 annual report, which has been audited by Deloitte. Unless otherwise specified, the amounts in this report are all in Chinese yuan renminbi (CNY).

This report has been deliberated and adopted by top management of Asia Cement (China). The Company's Board of Directors and directors guarantee that there are no falsifications, misleading statements or major omissions in this report. Asia Cement (China) is responsible for the authenticity, accuracy and completeness of contents herein.

Basis and Reference for Compilation

- This report was compiled in accordance with the Global Reporting Initiative Standards (hereinafter referred to as the "GRI Standards");
- This report complies with requirements in Appendix 27 Environmental, Social and Governance Reporting Rules and Guides of the Main Board Listing Rules issued by the Stock Exchange of Hong Kong;
- This report was prepared using industry standards recognized by the Global Cement and Concrete Association (GCCA) as reference;
- This report was prepared using standards for the construction materials industry issued by the Sustainability Accounting Standards Board (SASB) as reference;
- This report is in response to the United Nations Sustainable Development Goals (UN SDGs) 2030.

Third-party Verification

This report has been verified by independent third party Centre Testing International Group Co., Ltd. The verification statement is attached at the end of this report.

Publication Format

This report is published online in both Chinese and English. Should there is any discrepancy between the two versions, the Chinese version shall prevail. Please view or download the report on our website at <http://www.achc.com.cn/>.

Contact Information

To obtain a printed copy of this report, for comments or suggestions, please contact:
Contact person: Wu Shengxin
Tel: 0792-4888999#6027
Fax: 0792-4886998
Email: wushengxin@achc.com.cn
Address: No. 6 Ya Dong Avenue, Matou Town, Ruichang, Jiangxi Province
Company website: <http://www.achc.com.cn/>
CSR feedback and complaint mailbox: achc@achc.com.cn

Message from the Chairman



Global economic growth has slowed down due to the COVID-19 pandemic, which together with issues such as extreme weather events and energy crisis make ESG a global economic consensus. This requires green transition, carbon emissions reduction, and progress in new energy.

In China, the focus of discussions about ESG has gradually shifted from "why" to "how". Against the background of vigorous efforts for carbon emissions peak and carbon neutrality, the State-owned Assets Supervision and Administration Commission of China's State Council established the Science and Technology Innovation Bureau and the Social Responsibility Bureau in March 2022 to guide enterprises to actively engage in ESG and boost sustainable development. In April, "ESG" was first included in investor relationship management by the China Securities Regulatory Commission.

Asia Cement (China) has started green transition years ago. We value ESG and actively move towards the goal of net-zero carbon emissions, aiming to become a preferred partner for building sustainable green homeland!

Corporate governance for sustainable development

A sound governance structure and a well-established governance system constitute the cornerstone of the Company's sustainable development. We uphold integrity as the fundamental principle of business operations. Diverse Board members allow us to enhance corporate development from more comprehensive perspectives. Besides, we have established CSR Committee chaired by the Company's CEO. In order to strengthen ESG management, we have also established an action group for carbon emissions reduction

to tailor carbon reduction measures for our subsidiaries, and promote sustainable development in an orderly manner based on "one company, one policy".

Sustainability for a low-carbon future

Asia Cement (China) actively undertakes corporate responsibility to contribute to China's goals of "carbon emissions peak" and "carbon neutrality". We actively develop a circular economy based on resource conservation and recycling, and try to reduce the consumption of natural resources throughout the lifecycle of our cement products. Following the development roadmap of the cement industry, we aim to realize ultra-low emissions and clean production.

To effectively reduce energy consumption and improve efficiency, we have built an energy management system to rationalize and refine energy consumption per unit of products through management and monitoring. As of the end of the reporting period, all our integrated cement companies have passed ISO50001 certification on energy management system. They have long used recycled industrial waste residues as an alternative to raw materials to reduce the use of resources such as limestone, sandstone, and iron ore, and replace fossil fuel with biomass energy to achieve efficient utilization of resources. In the meanwhile, we call for other stakeholders in the supply chain to build a green value chain.

In the light of the development roadmap of the cement industry, we implement a green growth strategy combining cement production and solid waste processing. The capacity of our cement kiln co-processing covers domestic waste, municipal sludge, industrial hazardous waste, polluted soil, etc. With this, we help local government address environmental issues. Currently, Jiangxi Ya Dong, Hubei Ya Dong, and Sichuan Ya Dong are promoting cement kiln co-processing projects with a total annual disposal capacity of 170,000 tons.

We keep improving pollution control. Efforts are made to optimize technologies to realize ultra-low emission of main pollutants (particulate matter, SO₂, NO_x) in cement kilns. Methods such as low-nitrogen combustion, ammonia desulfurization, composite desulfurization, and dust collection with bags are adopted to reduce emissions. Renovations such as SCR denitrification and resistance reduction of cement rotary kilns are carried out to conserve energy. Through these approaches, we manage to reduce emission of pollutants such as nitrogen oxides and carbon dioxide, and create green cement plants. In addition, we design and install dust collection equipment such as hoods for cement bag loading machines, having controlled the concentration of dust emissions in workshops to less than 1.5mg/m³ and greatly improved working

environment for employees. As of the end of the reporting period, all our subsidiaries have completed renovation of cement kilns for ultra-low dust emission. It is planned that by 2025, all our subsidiaries will achieve ultra-low emission of nitrogen sulfide and meet A-level environmental standard.

Adhering to the principle of environmental friendliness, we spare no efforts to build green plants and green mines with new functions. We have formulated construction, implementation and rehabilitation plans for green mines based on the actual situation of each mine. Our ultimate goal is to achieve coordinated and balanced economic, ecological and social benefits by promoting rational utilization of resources, energy conservation and emission reduction, and protecting the environment of areas around mines. Currently, 10 mines under Jiangxi Ya Dong and Huanggang Ya Dong have been included in provincial list of green mines.

Sustainable society for greater responsibilities

Asia Cement (China) upholds the sustainability strategy of "create a happy workplace, help disadvantaged groups, foster cultural inheritance, and build an inclusive society". We manage human resources based on the company's development strategy, care about our employees, provide them with diverse training and development opportunities, and enhance their sense of belonging and happiness. Our goal is to rank among top 25% of the industry in terms of employee compensation and benefits.

Additionally, we vigorously provide sustainable social care and engage in public welfare through various events. For example, we assist in COVID-19 prevention and control, help locals repair their house, participate in post disaster reconstruction and emergency rescue, and support education for children. In this way, we give back to the society and take on our new responsibilities for sustainable development.

Looking forward, China's 14th Five-Year Plan for the National Economic and Social Development and the Outline of Vision for 2035 require to "promote green development" and "building a beautiful China". The construction materials industry has proposed to "promote high-quality and sustainable development of the industry through continuous innovation, and build an ecological civilization system to benefit mankind". Asia Cement (China) will demonstrate its determination with actions and firmly take the lead in advancing sustainable development.

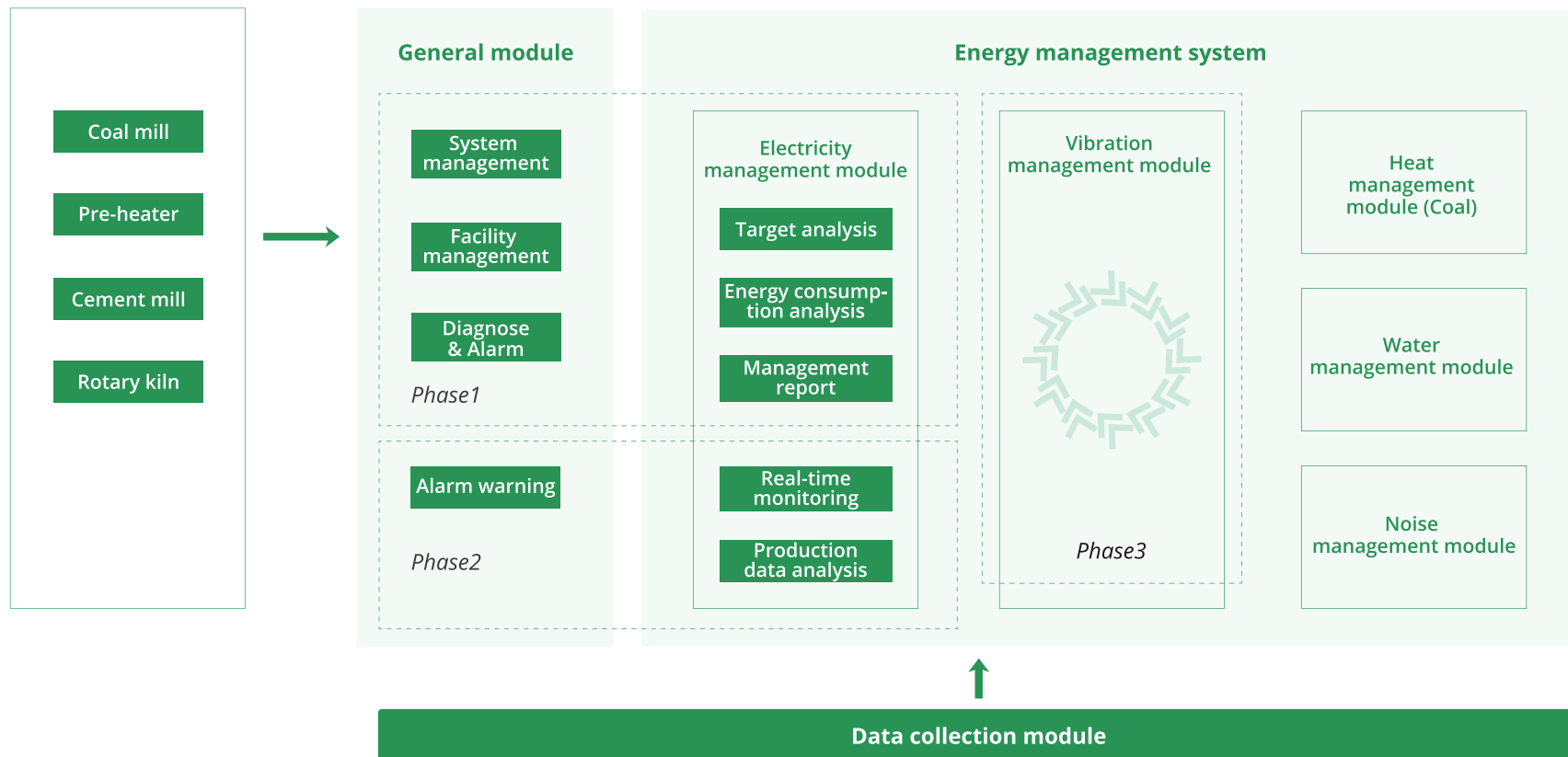
徐旭東

HSU Shu-tong Chairman of Asia Cement (China)

Feature: Boost Smart Cement Manufacturing 4.0 with Digital Innovation

To contribute to the national strategic goal of "Made in China 2025", Asia Cement (China) follows guidelines and standards including the Guidelines for Building Intelligent Manufacturing System in the Construction Materials Industry and the Smart Cement Plant (Exposure Draft) to actively boost digital transformation. We develop intelligent systems with rapidly updated technologies for the Internet, big data, the Internet of Things, and artificial intelligence, launch smart products that meet customer requirements, and build energy-saving and environmentally friendly smart plants.

We run an intelligent energy management system designed to reduce energy consumption. With this as the core, we expand related projects to achieve intelligent optimal control, energy management, quality management, logistics management, equipment management, etc. Constant efforts are being made to build our data analysis platform. We have successfully developed multiple integrated smart systems, including "intelligent power switch system", "dual closed-loop system for efficient L-NO_x denitration", "energy management system", "intelligent product quality control hardware", "intelligent shipping system (one universal code)", and "equipment vibration management system".



Energy management 	Quality management 	Optimal control 	Equipment management 	Logistics management 
<p>Energy management system</p> <p>Our energy management system was launched for trial use in March 2022. Based on real-time monitoring and dynamic analysis of energy consumption statistics, peak electricity consumption, main equipment abnormalities, cement quality and energy consumption proportion, energy performance, etc., it allows us to reduce energy consumption in various stages of production. In 2022, the system won the Far East Spirit Award - Group Comprehensive Efficiency (Excellent Award) because of outstanding performance in energy conservation and cost reduction.</p> 	<p>Intelligent product quality control hardware system</p> <p>© Raw material mills are equipped with an online neutron analyzer system to improve ingredient stability.</p> <p>© Cement mills are equipped with online particle size analyzer to detect the distribution of cement particles and provide real-time information on production parameters.</p> <p>© We have launched an electronic testing report system and a WeChat mini program for delivered cements, which allow customers to check tests and certificates on our products. They support electronic signatures, which can reduce the use of printing machine and paper.</p> <p>© We plan to develop a dual gamma system for online coal quality analysis, expand unmanned coal laboratories and phased semi-automatic testing equipment for production control. The goal is to improve our production and testing capabilities, achieve real-time data feedback, and improve unit production performance.</p>	<p>Intelligent power switch system</p> <p>We use QR codes to set up Bluetooth electronic locks on website and App to facilitate monitoring of backend systems. In this way, we improve the efficiency and safety of power switch.</p> <p>Dual closed-loop system for efficient L-NO_x denitration</p> <p>We improve the precision of SNCR control to accurately manage NO_x emissions.</p> <p>Packaging counting and coding system</p> <p>We use pickup QR codes to strengthen the flow control of packaging. Specifically, by scanning the pickup code, we can activate cement packaging equipment, and perform packaging information counting and coding.</p> <p>Measuring system in the intermediate warehouse</p> <p>When bulk cement vehicles leave intermediate warehouse, cement materials will be automatically replenished. We use measuring system to load cement as required, thus reducing manual operations and improving delivery efficiency.</p>	<p>Equipment vibration management system</p> <p>We utilize intelligent inspection system to realize effective monitoring. Based on SKF cloud database, we analyze equipment vibration spectra and assess equipment status with professional techniques. On this basis, we develop maintenance plan and improve equipment efficiency. To assist operators in maintaining equipment, the DashBoard of equipment vibration management system, Notes system, and energy management system are connected to comprehensively present equipment status.</p> 	<p>Intelligent shipping system (one universal code)</p> <p>We have upgraded previous one-card system into a one-universal-code system, which supports pickup with QR code, optimizes loading processes, and strengthens operation management and logistics information control. This system has improved work efficiency and provided customers with a better experience.</p>

In the future, we will continue to optimize and integrate our emission management system, dust collector management system, quality management system, water management system, and intelligent shipping system through innovations and breakthroughs. We will strive to build distinctive smart plants and move towards the era of smart cement manufacturing 4.0.

01



Insights about Asia Cement (China)

About Us

History of Sustainable Development

Products and Market Layout

Entrepreneurial Spirit, Mission and Vision

Honors and Association Status

Insights about Asia Cement (China)

About Us

Asia Cement (China) was incorporated by Taiwan-based Far Eastern Group in the Cayman Islands in April 2004. It owns 26 companies engaging in five types of business, namely integrated cement manufacturing, cement grinding, cement products manufacturing, transportation, and investment, and 5 strategic partner companies. Its total assets stand at nearly 20 billion CNY. On May 20, 2008, the Company was listed on the main board of the Stock Exchange of Hong Kong (stock code: 743).

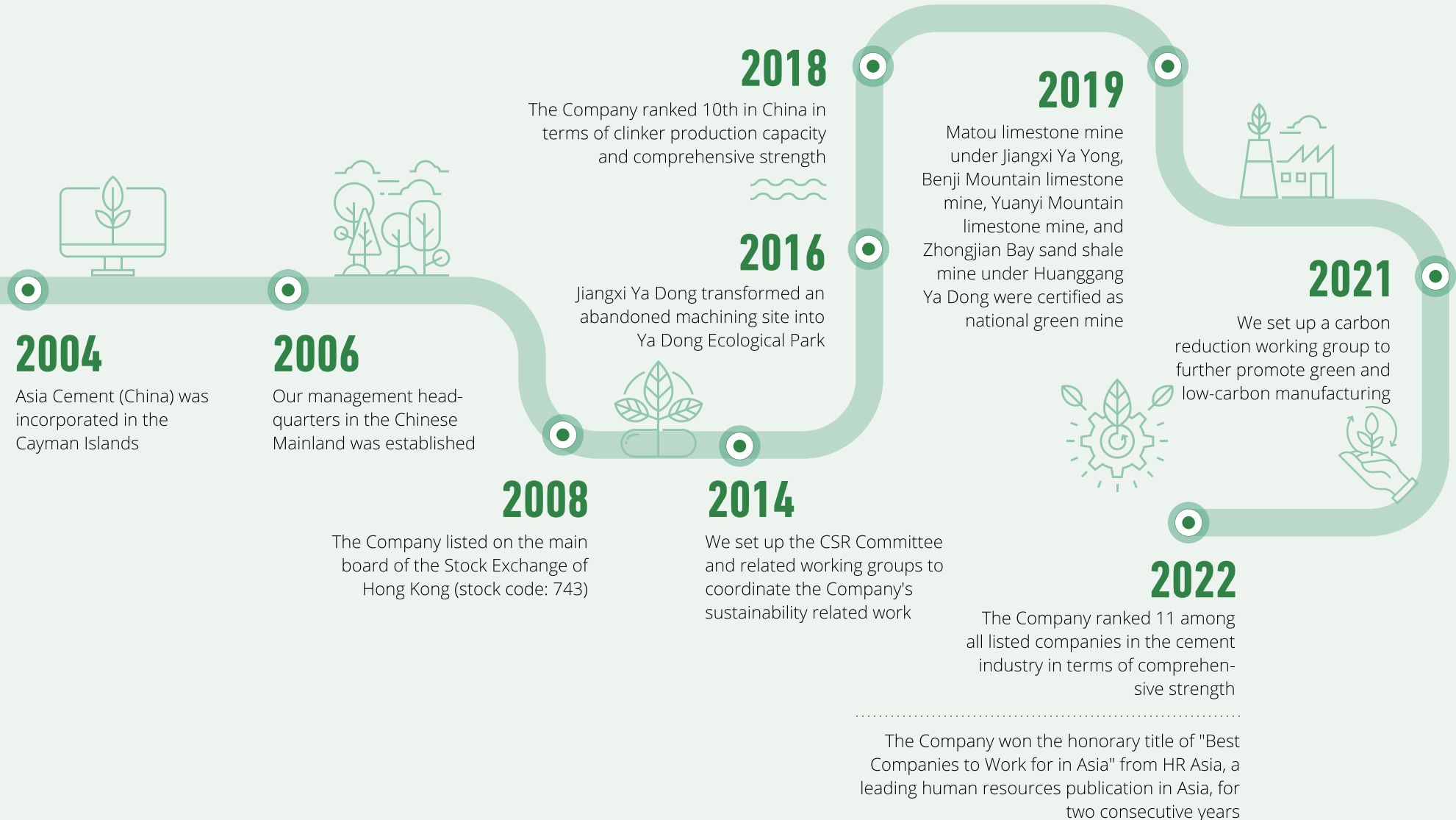
In July 2000, our first new-type dry process cement clinker production line with a daily output of 5,000 tons was successfully ignited and put into service in Jiangxi Ya Dong. After that, we built and run similar production lines in Jiujiang, Chengdu, Wuhan and Huanggang. Currently, the Company has 15 such production lines, whose daily output range from 3,000 tons to 6,000 tons, a total annual output of 35 million tons. According to evaluations conducted in 2022, Asia Cement (China) ranked 11 among all listed companies in the cement industry in terms of comprehensive strength.

Upholding the spirit of "Integrity, Diligence, Austerity, Prudence, and Innovation", we carry forward experience from Taiwan and are committed to building outstanding large modern cement plants with high quality, high level of environmental protection, high efficiency, and low cost, thus laying a good foundation for the sustainable development of the Company. Upholding the philosophy that "industrial development and environmental protection can go hand-in-hand", we invest huge manpower and material resources in energy conservation, consumption, clean production, circular economy, ecological restoration and more. We have won many awards for energy conservation, mining performance, environmental protection, etc.

Looking into the future, as one of the top ten cement groups in China, Asia Cement (China) will stick to its role and make due contributions to China's urbanization and various undertakings related to its business.



History of Sustainable Development



Products and Market Layout

Products

Following the business philosophy of "high quality, high level of environmental protection, high efficiency, and low cost", we mainly manufacture "Skyscraper" brand cements, clinkers, concretes, and aggregates. In 2022, we sold nearly 28 million tons of cements and clinkers. "Skyscraper" brand has become a representative of high-quality cements.

2,800 million tons

Sales quantity of cements and clinkers in 2022

Market layout

Take the advantages of the along-the-river layout and metropolis resources

- Sales area covers**
 Provinces of Sichuan, Hubei, Henan, Jiangxi, Anhui, Zhejiang, Shanghai, etc.
- Sales network includes**
 Operating entities in Chengdu, Wuhan, Nanchang, Jiujiang, Shanghai, etc.

530

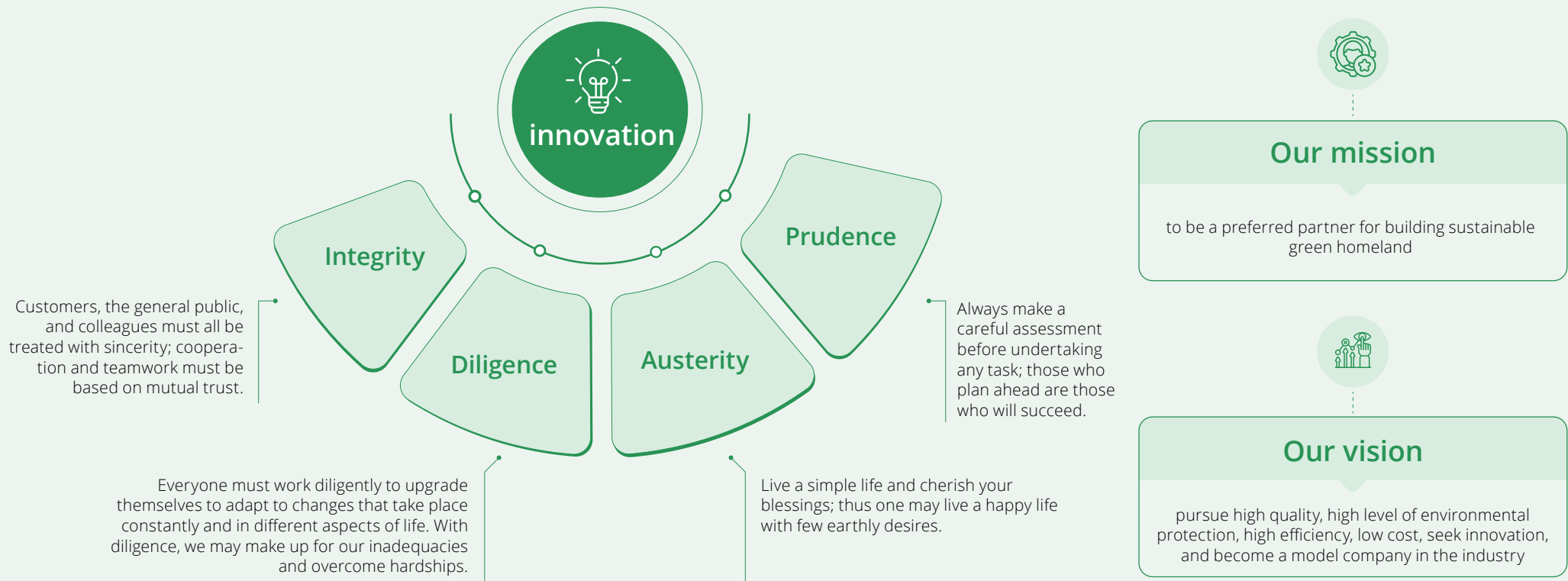
Number of distributors is over



Sales area

Sales network

Entrepreneurial Spirit, Mission and Vision



Honours and Association membership

● Green mine

Jiangxi Ya Dong was awarded the honorary title of "XCMG Cup" Top Ten Mine by China Cement Association

Jiangxi Ya Dong's greenhouse nursery won the Major Project Second Prize of Green Mine Science and Technology Award from ZHONGGUANCUN Green Mine Industry Alliance

● Quality control

Hubei Ya Dong, Wuhan Ya Xin, Wuhan Ya Dong, Nanchang Ya Dong, and Sichuan Yadong won a number of awards in the 18th "MEINOLF Cup" National Chemical Analysis of Cement Competition

The quality control teams of each company actively participated in the provincial and municipal cement quality performance inspection and comparison activities and won all excellent, all qualified and other commendations

● Safe and green production

Sichuan Ya Dong, Chengdu Ya Li, and Yangzhou Ya Dong passed certification of Level 2 or Level 3 enterprise for standardized safe production

Sichuan Ya Li passed green production enterprise verification, and Sichuan Ya Dong passed clean production verification

● Social contribution

Asia Cement (China) was awarded "Best Companies to Work for in Asia" from HR Asia for the second consecutive year

● Economic contribution

Sichuan Ya Dong and Sichuan Ya Li obtained many honors such as "Top 100 Manufacturing Company in Chengdu" and "Top 100 Private Companies in Chengdu"

Association joined	Role in the association
China Cement Association	Vice President
Sichuan Province Cement Association	Director
Jiangsu Building Materials Industry Association	Executive Director
Hubei Cement Industry Association	Vice President
Wuhan Circular Economy Association	Executive Director
Jiangxi Emergency Management Association	Member
Jiangxi Building Materials Industry Federation	Member



02

As one of the leaders in China's cement industry, the Company is well aware of the importance of sustainable development to corporate governance and practically improves its own sustainability. We have developed a governance system with our own characteristics, which covers sustainability leadership, compliance in operations, risk management, business ethics, information security, etc.



Governance

Sustainability Governance

Corporate Governance

SDGs responded to in this chapter



Key figures in 2022

24.22 million tons
Total cement production

23.63 million tons
Total clinker production

1.189 billion CNY
Total tax payment

689 million CNY
Total profit

9.614 billion CNY
Total operating revenue

21.146 billion CNY
Total assets

100%
Employee anti-corruption training coverage

0
Information leakage

0
Violations of compliance related laws and regulations

Sustainability Governance

Governance Structure for Sustainable Development

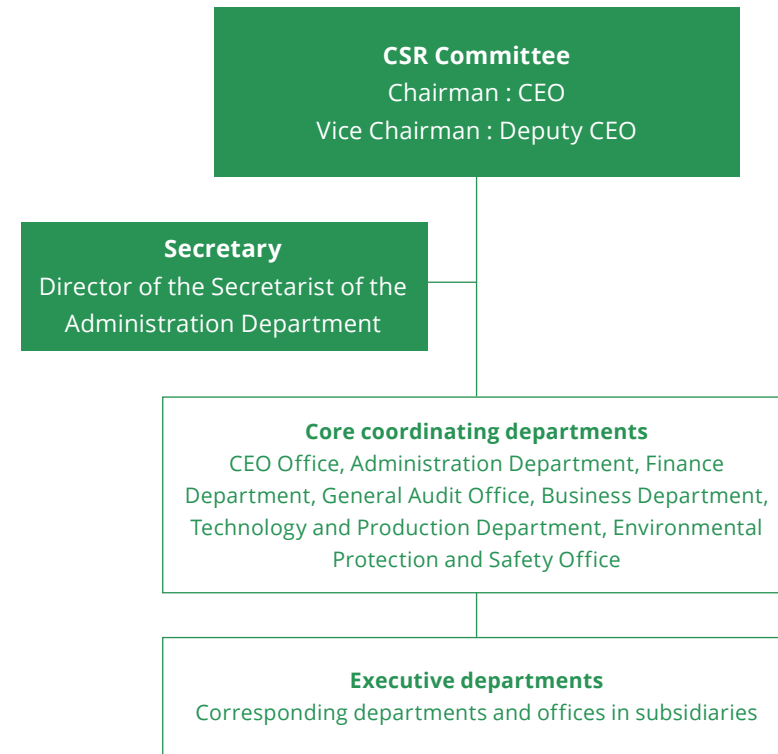
In order to effectively boost sustainability, we established CSR Committee in 2014. The committee is chaired by the CEO of Asia Cement (China), and its secretary is served by Director of the Secretariat of the Administration Department. Seven core departments of the Company coordinate sustainability related tasks from the dimensions of economy, society and environment.

Responsibilities of the CSR Committee

Discuss, plan and promote the resolution of issues related to the Company's sustainable development to achieve sustainable development that balances corporate governance, society and environment. Main tasks of the CSR Committee are:



Organizational structure for sustainability



Sustainable Development Strategy

We formulate targeted strategies for sustainable environmental, social and economic development, and evaluate the impact of our business operations on sustainable development at home and abroad. Based on feedback from stakeholders, characteristics the industry and opinions by external expert, we have identified sustainable mine, circular economy and low-carbon manufacturing as key areas for our sustainable development.

In recent years, we gradually quantify our sustainable development goals through scientific demonstrations, regularly track and evaluate the completion of sustainable development goals, and disclose our progress to employees, partners, customers and the public. In the meanwhile, we timely adjust or revise the goals based on completion status, the Company's strategic planning, and changes in market risks and opportunities to ensure their rationality and feasibility.



Environment

- ✔ Implement energy saving and carbon reduction
- ✔ Create a green homeland
- ✔ Strengthen education on ecology
- ✔ Achieve environmental sustainability



Society

- ✔ Create a happy workplace
- ✔ Help disadvantaged groups
- ✔ Foster cultural inheritance
- ✔ Create a harmonious society



Economy

- ✔ Comprehensive benefits in resources integration
- ✔ Sustainable innovative products
- ✔ Improve cost-effectiveness
- ✔ Create the highest value

Analysis of Material Topics

In order to make sure our sustainable development meets the needs of stakeholders, highlights the Company's characteristics, and conforms the trends of the industry, we adopt scientific approaches to systematically manage materials issues for sustainable development by four steps, i.e., identify sustainability topics, survey stakeholders, assess impact on sustainable development, and manage key material topics. Various internal and external factors are taken into account to identify material topics in a comprehensive manner. Stakeholder engagement is guaranteed via questionnaires, in-depth interviews, everyday feedback and the like. The frequency of questionnaire survey is once every 1 to 2 years, which is timely adjusted in the light of the Company's actual situation. Special investigations are conducted when there are significant changes in the deployment of sustainable development tasks.

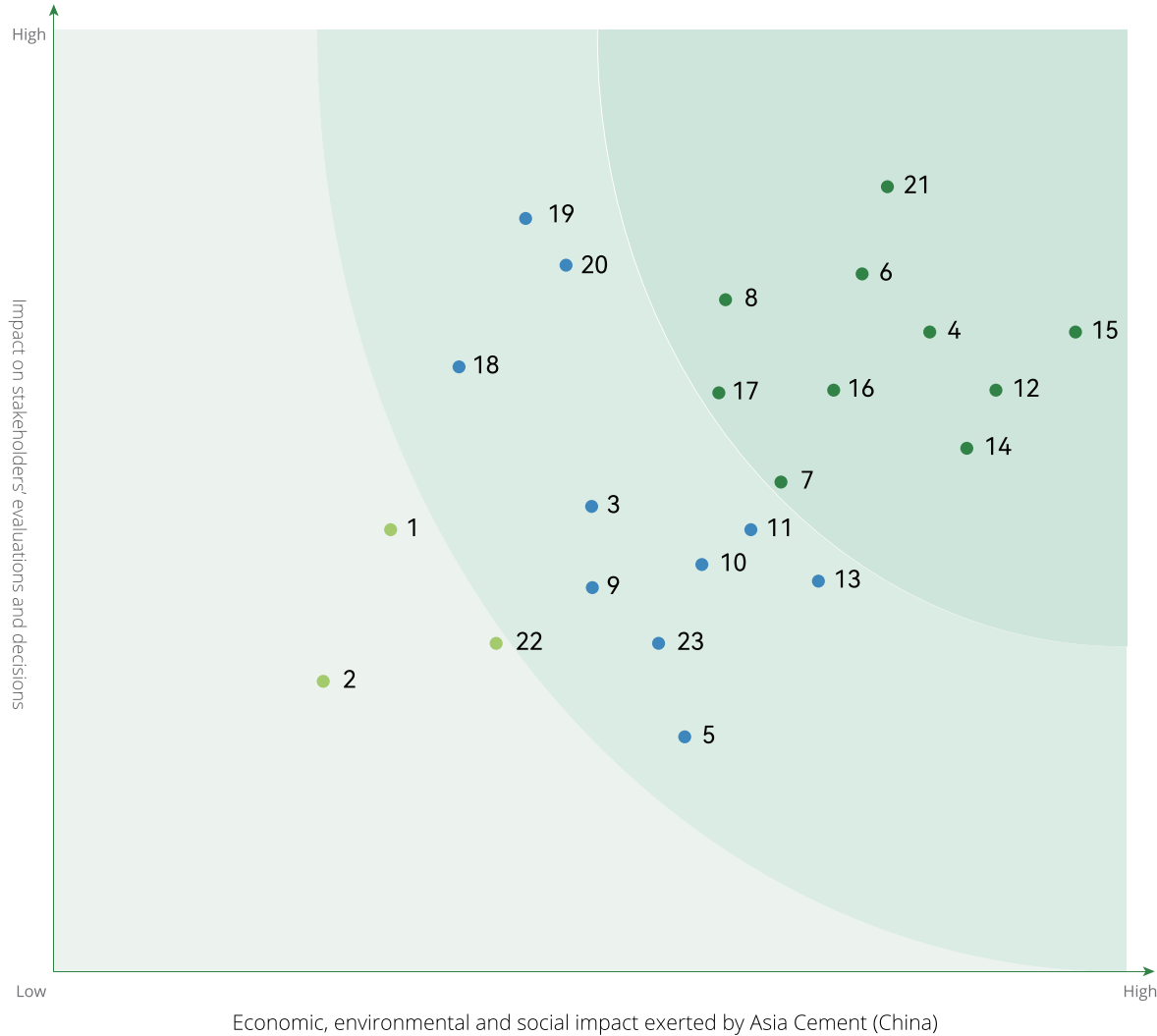


Sustainability management procedure

- Identification of sustainable development material topics
- Stakeholder engagement
- Sustainable development impact assessment
- High materiality topics management

While analyzing material topics for this report, we took into account our key tasks in 2022, trends of the industry, and feedback from stakeholders. Based on the survey of material topics in 2021, we included digital transformation in this report and adjusted the priority of some material topics. We conducted a cross-analysis from two dimensions, the degree of influence on stakeholders' evaluations and decisions, the degree of economic, environmental and social impact exerted by the Company, then used that analysis to form the matrix of material topics, which has been reviewed and adopted by the Board of Directors.

Materiality matrix of Asia Cement (China) in 2022



Topics of high materiality

- 4. Business ethics
- 6. Green products
- 7. Circular economy
- 8. Digital transformation
- 12. Energy management
- 14. Solid waste management
- 15. Air quality
- 16. Green mine
- 17. Greenhouse gas emissions
- 21. Occupational health and safety

Topics of medium materiality

- 3. Compliance and risk management
- 5. Sustainable supply chain
- 9. Customer service
- 10. Information security
- 11. Environmental compliance
- 13. Water management
- 18. Employee relations
- 19. Employee rights and interests
- 20. Employee development
- 23. Charity and public welfare

Topics of low materiality

- 1. Economic performance
- 2. Structure of the management
- 22. Community relations

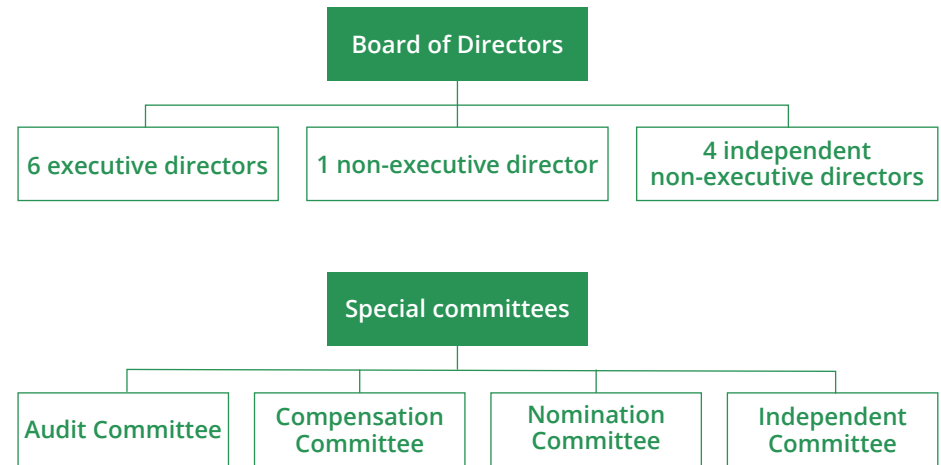
Corporate Governance

Governance Structure

Our Board of Directors is responsible to shareholders. The number and composition of our directors comply with laws and regulations including the Company Law of the People's Republic of China, the Securities Law of the People's Republic of China, the Code of Corporate Governance for Listed Companies of the People's Republic of China, and the Main Board Listing Rules of the Hong Kong Stock Exchange. The Board of Directors has decision-making power over the Company's major business matters including policies, strategies, budget, internal control, risk management, major transactions, and finance. There are 11 members in the Board of Directors, including 6 executive directors who implement its resolutions and coordinate, supervise and coordinate matters related to the Company's everyday operation for a term of three years.

There are 4 professional committees under the Board of Directors, who perform their duties within authorization, report to the Board of Directors on implementation, and provide consultation for major decisions. This ensures the professionalism and efficiency of Board meetings and decisions made. Notably, all members of the Independent Committee are independent non-executive directors. To build a healthy Board culture, we created the Board Independence Evaluation Mechanism in 2022. According to it, the Company should conduct annual review of the independence of the Board of Directors, directors are encouraged to seek independent professional advice when performing their duties, and the Nomination Committee should evaluate the independence of all independent non-executive directors. This mechanism is designed to ensure the Board of Directors has strong independence, so that it can make effective independent judgments and better protect the interests of stakeholders.

We recognize the importance of Board diversity to corporate governance and follows our Board Diversity Policy. The Nomination Committee evaluates the structure, personnel and composition of the Board of Directors every year. It takes into consideration gender, age, educational background, professional experience, skills, knowledge and industry experience when nominating directors to create a diverse and balanced Board structure. Relevant data is disclosed to the public in our annual report every year.



Statistics of our shareholders meetings, Board meetings, and special committee meetings during the reporting period are shown as follows:

Type of meetings	Frequency	Director attendance
Board meeting	4	100%
Shareholders meeting	1	100%
Audit Committee meeting	4	100%
Compensation Committee meeting	1	100%
Nomination Committee meeting	1	100%
Independent Committee meeting	1	100%

Compliance in Operations

Asia Cement (China) always takes compliance as the bottom line. The Company's operations are classified into five cycles. Management methods and specific rules for each cycle are in place to enhance internal control, reduce operational risks, and improve organizational resilience. In this way, the interests of stakeholders are protected from infringements while achieving operating objectives.

The Audit Committee assists the Board of Directors in conducting independent reviews on internal control and risk management, and supervises the reviews. It has set up the General Audit Office and regional audit offices to coordinate risk control. Targeted implementation rules for different departments are in place to guide auditing. We now have 23 auditors, who are allocated to different subsidiaries according to their size.

Multiple approaches such as self-assessment, external audit, annual audit and special audit are adopted to ensure the compliance of our operations. The General Audit Office and regional audit offices formulate their annual audit plan based on the level of risks in operations, and set audit frequency in the light of abnormal situations in previous audits. Temporary management risks and related reports are investigated in priority. Reports on annual audits, ad hoc audits, and whistleblowing investigations are submitted to the Vice Chairman for instructions, then sent to relevant offices or departments for rectification and improvement. Additionally, we encourage subsidiaries to conduct self-assessment of their internal control system, with the assistance of audit office, to identify non-compliance and illegal behaviors and risks, then improve relevant processes, and revise their internal control system to prevent the recurrence of misconducts. We have included process improvement and loss recovery into performance appraisal, and created a reward and punishment system to improve operation process and enhance the risk awareness of all employees.

During the reporting period, 0 violation of laws and regulations on compliance in operations was reported.

In 2022, we developed a five-year plan on internal audit, aiming to make audit offices helpful friends of the Company and further improve internal control and risk management from multiple dimensions:

- Each department and office should prepare information required for internal audit on a regular basis to increase the timeliness of auditing
- Enhance the consistency of management reports submitted by subsidiaries, cultivate managers, and enable them to quickly master management details
- Further revise internal control systems and audit rules for each cycle to ensure that the systems match operation process and that important risks are not missed
- Strengthen inspections, promote compliant production while reducing energy consumption, and actively respond to risks related to climate change
- Regulate the procedures for audit report compilation, and strengthen control over the quality of audit reports
- Track previous audits to ensure all risks have been rectified, and include rectification into reward and punishment system to strengthen personnel management

Business Ethics

We strictly follow relevant provisions of the Criminal Law of the People's Republic of China, the Criminal Procedure Law of the People's Republic of China and the Public Security Administrative Punishments Law of the People's Republic of China, and abide by international conventions and local laws. We adopt a "zero tolerance" policy towards bribery and corruption in any form, and are committed to maintaining high-standard business integrity, fairness, impartiality and transparency in all business transactions.

In 2022, we raised anti-corruption to a new height, and revised our Anti-corruption Policy. We strictly prohibit fraud and bribery in any form, and strive to prevent, deter, report and investigate various forms of fraud, unfair competition and bribery. The revised policy has been adopted by the Board of Directors. It further regulates acceptance of interests, conflicts of interest, document management, reporting, etc., and is applicable to all directors, officers and employees of the Company and all its subsidiaries. We encourage and expect business partners, including suppliers, contractors and customers, to comply with requirements in it.

After conducting risk assessment, we identified the following key corruption risks: unjustifiable low-price sales, falsified sales commissions, unreasonable purchase prices due to bribery, and untrue test results from quality control personnel. In response, we have formulated the Code of Conduct of Sales Staff, the Code of Integrity Management, the Report of Tertiary Kin, etc. to regulate employee behavior. All business transactions must be sent and received by public accounts only. Moreover, we have developed a rotation system to effectively reduce fraud by middle and senior managers. Different regions share problems and risks discovered and exchange experiences.

We advocate an integrity-based corporate culture. All new employees receive training on business ethics after joining the Company. In the future, we will deliver anti-corruption training for all employees on a regular basis, and strengthen publicity and training on business ethics (e.g., anti-corruption and anti-unfair competition) for partners including suppliers and contractors, thereby creating an ethical culture, enhancing trust among employees, and consolidating stakeholders' trust in us.

100%

Coverage of communication about anti-corruption policies with employees, members of governance bodies and suppliers

100%

Total percentage of operations assessed for risks related to corruption

0

Legal proceedings against business ethics violations by employees or the Company

100%

Coverage of anti-corruption training for employees

0

Partnership termination due to confirmed business ethics violations

Grievance reporting mechanism

We encourage all employees and/or external parties to report any suspected misconducts related to the Company. We revised our reporting system in 2022, aiming to enable employees and external stakeholders to report misconducts to our Audit Committee confidentially and anonymously, thus ensuring that we operate ethically. This policy applies to all employees of the Company and its subsidiaries, as well as any other interested parties who may become victims of employees' misconducts.

We strictly prohibit any person from performing any form of retaliation or discrimination against whistleblowers, and keep highly confidential the information of employees and external personnel involved.

During the reporting period, we received and processed all the letters

25

Total grievance letters

3

Verified to be true letters

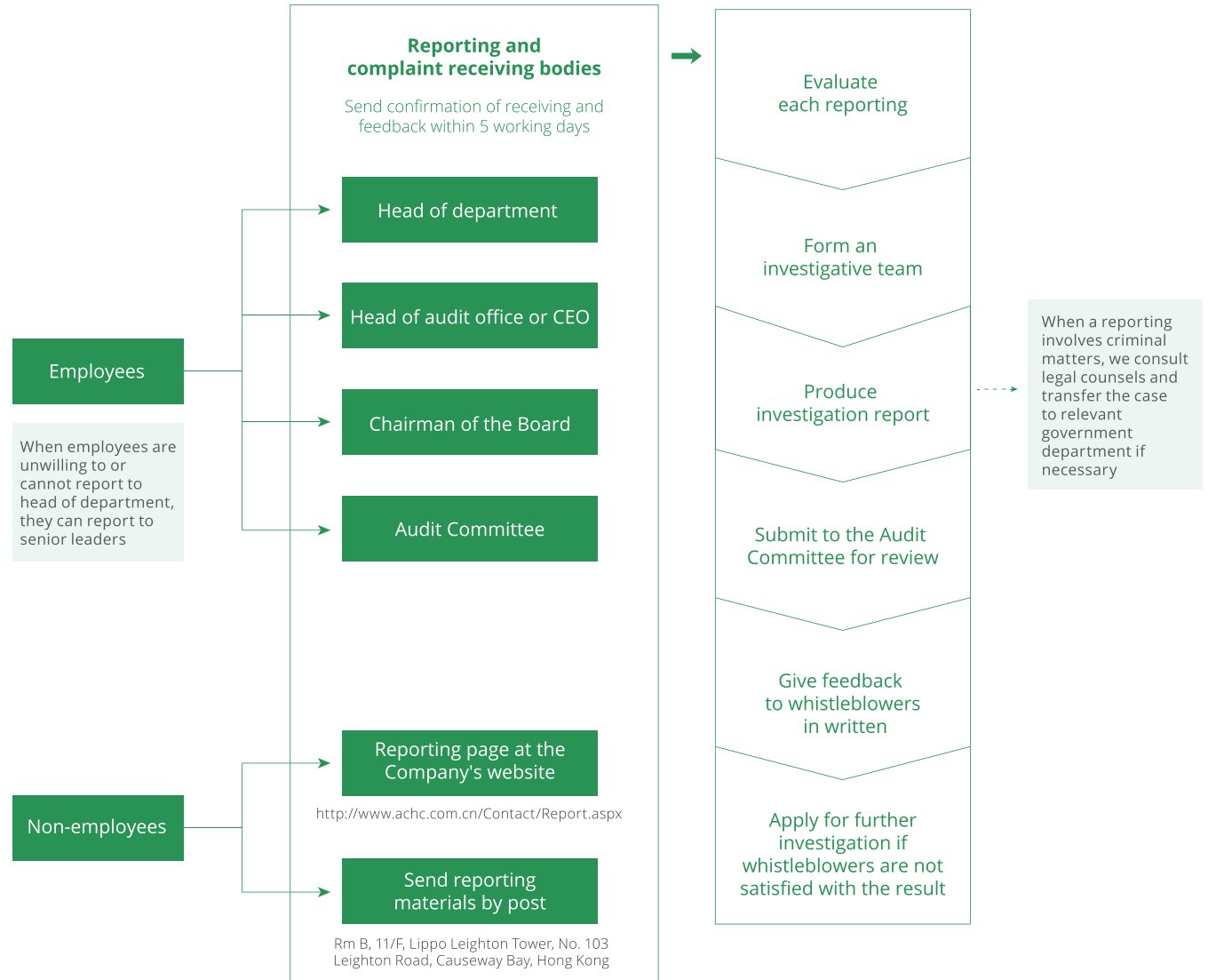


Diagram of our grievance reporting mechanism

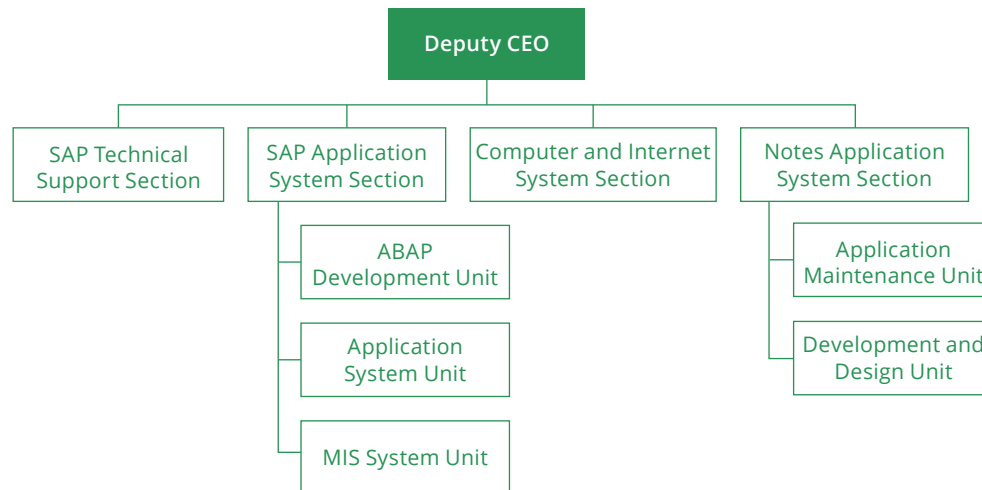
Information Security

To strengthen information security, we have formulated the *Employee Account* and *Password Management Measures*, the *Unified Computer Management Measures*, the *Data Backup Management Measures*, the *Computer Room Management Measures*, and the *Employee Internet Usage Management Measures*, etc. The Information Division, headed by the Company's Chief Financial Officer (CFO), consists of the SAP Technical Support Section, the SAP Application System Section, the Computer and Internet System Section, and the Notes Application System Section. It manages information security and provides technical support for digital transformation.

In addition, the Information Division develops software systems based on actual needs. So far, it has developed many systems such as the "Entrusted Bill of Parcels", the "Asian Cement China e-Order", the "Asian Cement China", the "Mine Early Warning" and the "Port Affairs", which have greatly improved work efficiency and customer experience. They win unanimous praise by employees and customers.

During the reporting period, there was 0 violation related to information leakage.

Organizational structure of our Information Division



We run multiple management mechanisms to ensure information security:

- **The Information Division performs self-inspection on a daily, weekly, monthly, and annual basis.**
- **Reverse penetration testing:** Invite professional organization to assess email, browsing, internet application firewall, etc., and propose feasible solutions against hardware security risks such as firewall, spam, and Internet behavior.
- **Information security audit:** Invite independent third party to conduct annual IT audits on all network equipment of Asia Cement (China) to avoid attacks against vulnerabilities.
- **Information security publicity:** Hold IT forums joined by Taipei-based IT Committee every year to effectively and timely discover security problems in our Internet, widely communicate on them within the Company, promote virus prevention among all employees, and require them to install anti-virus software and regularly update virus database.
- **Install security management systems** (firewall, Internet behavior management, anti-spam, safe intranet access, etc.) to strengthen IT information security.
- **Build equipment monitoring and management platforms** (ZABBIX, NETFLOW, etc.) to monitor computer rooms and equipment in them.
- **Remote and tape backup: ensure data security.**

03

Achievement of the industry's sustainable development goals is inseparable from joint efforts by all members of the value chain. While fulfilling our mission of sustainable development, we wholeheartedly provide the society with green products and excellent services, promote industrial cooperation, and join hands with enterprises in the upstream and downstream of the industry to boost sustainable development and the circular economy.



Cooperation

Collaborative Environmental Management
 Supplier Management Green Products
 Customer Management

SDGs responded to in this chapter



Key figures in 2022

3.22 million CNY
 R&D investments

10
 Number of certified green products

6.25 million tons
 Use of industrial waste residues, slag, and debris

0
 Marketing-related violations

0
 Complaints or violations related to customer privacy

0
 Product recalls or violations caused by quality/safety issues

0
 Product or service information/labeling violations

97%
 Customer satisfaction

Collaborative Environmental Protection

Asia Cement (China) pursues progress in green technology and environmental protection process, and advocates a circular economy. We use industrial waste slag including limestone powder, converter slag, non-ferrous metal slag, electric furnace slag and tailings in raw material production to reduce the consumption of limestone, sandstone, iron ore and other resources, thereby reducing dependence on natural mineral resources. For instance, we use yellow phosphorus slag to reduce the temperature of clinker calcination and improve the flammability of raw meal, and replace natural gypsum with phosphogypsum to reduce waste generation that is common in China's phosphorus chemical industry. Besides, these practices reduce carbon dioxide produced by carbonate decomposition and save energy.

Cement kiln co-processing is one of the important ways to achieve zero landfill of solid waste and make hazardous solid waste harmless. Recovering energy from incineration is also one of our important means to achieve a circular economy. As cement kilns have high temperature, alkalinity and large capacity, they

can effectively remove toxic and harmful substances such as dioxins and furans, improve resource utilization while avoiding damage to the environment, and turn waste into energy. This effectively contributes to green and sustainable development. In May 2022, Jiangxi Ya Dong started co-processing of hazardous solid waste with cement kilns. During the reporting period, it processed about 18,000 tons of hazardous solid waste and 73,000 tons general solid waste such as solid waste from paper industry, domestic sewage, sludge, municipal waste, and drilling cuttings (water system). By doing so, it not only effectively reduced environmental pollution caused by various types of waste during long-term stockpiling, but also produced alternative fuels by taking advantage of the flammability of some waste, being another move to conserve energy and reduce carbon emissions.

6.25 million tons

During the reporting period of 2022, the company used a total of various industrial waste, slag and debris of about

Materials consumed by integrated cement companies and cement grinding companies under Asia Cement (China) in 2022 are shown below:

Entity	Material	Unit	Consumption
Integrated cement companies	Limestone	t	31,808,428
	Clay	t	781,104
	Sandstone	t	3,041,464
	Industrial waste	t	4,036,380
	Slag	t	718,927
	Crumbs	t	698,063
	Co-processing materials	t	73,109
	Other materials	t	360,799
	Total	t	41,518,274
Cement grinding companies	Limestone	t	47,878
	Industrial waste	t	461,606
	Slag	t	335,151
	Total	t	844,635

Waste rocks on mines are also useful resources for Asia Cement (China). We manufacture building aggregates with high-magnesium limestone that cannot be used as raw material for cements, and use the powder generated from aggregate production as cement ingredients. In this way, we maximize the utilization of resources during production.

◎ Jiangxi Ya Dong

In 2022, Jiangxi Ya Dong produced about 3.84 million tons of building aggregates from high-magnesia limestone, and utilized 1 million tons of topsoil with the help of soil and stone blending technology. Waste rocks took up 17.88% of its total resource utilization.

◎ Huanggang Ya Dong

In 2022, Huanggang Ya Dong fully utilized 3.34 million tons of resources, including 1.09 million tons of limestone for cement (high-magnesium waste rock, Maokou formation, interlayer soil, interlayer stone, surface soil, fissure soil), and 2.25 million tons of high-magnesium waste rock for side materials. Waste rocks took up 48.82% of its total resource utilization.

◎ Sichuan Ya Dong

In 2022, Sichuan Ya Dong produced about 8.98 million tons of limestone from mines, of which 900,000 tons were blended from soil and interlayers (about 10%). The average integrated utilization rate of waste rocks in the mines of above three subsidiaries was about 25.60%.

Supplier Management

We integrate businesses in southeast, southwest and central China, and share procurement resources among the three regions, thereby building a green, low-carbon, environmentally friendly, and safe sustainable supply chain. We also regulate supplier access, evaluation and elimination following our Supplier Management Measures, the Standard Procurement Procedures, the Code of Conduct for Procurement, and the Supplier Code of Conduct. Supplier management is included in our annual internal audit and external audit. And efforts are made to identify management loopholes and seek improvements.



Supplier access mechanism

- Take into account factors such as social responsibility in supplier selection
- All contracts with suppliers contain the Supplier Behavior Guidelines, which clearly stipulates anti-corruption and unfair competition



Supplier evaluation mechanism

- Evaluate raw material suppliers every six months, and other suppliers annually
- The evaluation covers factors related to sustainable development such as social responsibility and the environment



Supplier elimination mechanism

- Classify suppliers into grades A, B, C and D based on evaluation result
- Exclude grade D suppliers from our supplier list within two years
- Conduct in-depth investigations on grade C suppliers and require them to rectify problems found within a time limit

We have always been aware of environment protection in production and operations. We increase the purchasing volume and scope of bulk industrial solid waste, including slag from steel plants, fly ash and desulfurization gypsum from power plants, steel slag from steel plants, phosphogypsum from chemical plants, non-ferrous metal ash from copper smelters, coal slag from power plants, and urban construction waste. We also prioritize the procurement of recycled materials without affecting product quality, and work together with various industries to reduce the consumption of natural resources, thus improving the integrated utilization of resources and achieving win-win results.

We attach great importance to the capacity building of our suppliers, promote their environment protection and energy saving awareness, and strive to improve the occupational health and safety awareness of our engineering suppliers (i.e. contractors). All contractors are required to receive health and safety training before entering our construction sites. In addition, we provide on-site technological guidance to them during construction to ensure work safety. In the future, we will continue to revise relevant systems as reference for integrating sustainability factors into supplier access, evaluation and elimination.

Performance in partner management in 2022

Total number of suppliers	1,561
Number of new suppliers	460
Local purchasing rate	35%
Percentage of new suppliers selected using sustainability criteria (such as social responsibility)	100%
Percentage of suppliers having conducted environmental and social impact assessments	100%
Number of suppliers terminated due to actual or potential significant negative environmental impacts	0
Number of suppliers terminated due to actual or potential significant negative environmental impacts	0

Local purchasing rate = amount of purchases from local suppliers in important locations of operations / amount of total purchases in important locations of operations x 100% (Important locations of operations refer to the main entity in southeast, southwest and central China. Local refers to the province where the entity is located)

Green Products

Quality Control

As a material provider in the building industry, Asia Cement (China) attaches great importance to product quality and safety. It strictly abides by laws and regulations including Product Quality Law of the People's Republic of China to control quality strictly during production. All integrated cement plants and cement grinding plants under it have obtained ISO 9001:2015 certification on quality management systems, and product quality certification on cements and clinkers of all types. Besides, cement packaging bags are printed with standardized information required by law.

To ensure quality, we have formulated the standards for inspection and control of feedstock, raw materials, clinkers and finished products, and established a three-level inspection mechanism for quality control teams to regulate the product quality during the whole process. We encourage the subsidiaries to actively participate in competitions on test technology and product quality. Winning teams will be rewarded, which can make the staff focus more on product quality and safety, and improve professional skills through the exchange with peers. Over the years, the entities under the Company have won various honors including "The Overall-excellent Company" and "The Overall-qualified Company" in competitions at municipal, provincial and even national level. Our "Yang Fang" brand has become a representative of high-quality cements.

During the reporting period, no recall or violation due to unqualified or unsafe product occurred.

In 2022, in order to improve product quality and safety management, Asia Cement (China) integrated digital transformation, customer experience, etc. into product production under the premise of ensuring product quality.



Several cement plants have optimized the incoming raw fuel sampling system to ensure the representativeness of samples. They have completed the cross-checking operation of sealed and retained samples to improve the technical capability of quality control test.



Double blind sample testing rules and cross-checking ranking have been applied to improve the accuracy of lab data.



Digital test reports on finished cements and clinkers are available for customers, greatly improving customer experience.



Paper-free operation of the quality management system is promoted, including notices on quality abnormality correction, processing sheets on corrective and preventive measures, cement delivery notices, testing application forms and testing reports.



The data control mechanism of product quality is planned to be integrated into the digital energy management system, so as to realize the statistical management of product quality and enhance researches on the correlation with the field system data.

Scientific Innovation

The market demand for green building materials is increasing with the impel of China's "dual carbon" goal. Asia Cement (China) promotes low-carbon cement production, and encourages innovation in raw material proportioning, production technology and other angles under the premise of ensuring product quality.



Reducing the use of cement clinkers with cement grinding aids and composite powder to lower energy consumption and carbon emissions in cement production under the premise of ensuring product quality and safety.

In 2022, Jiangxi Ya Dong made use of the standby time of No.7 grinding mill to produce 356,000 tons of limestone-based composite powder to mix with PO42.5(R), PC42.5(R) and M32.5 cements. The cement quality was greatly improved and production costs reduced. At the same time, restricted by GB175-2007 general Portland cement on mixing materials of PII 52.5(R) cement (the use of slag or limestone must be no more than 5%), Jiangxi Ya Dong and Hubei Ya Dong promoted the production of PO52.5 cement to expand the available types and amount of mixing materials, effectively reduced the use of cement clinkers.



Continuously increasing the use of industrial waste residues as mixing materials of cement to reduce natural resource consumption and environmental impact of cement products, enhancing the integrated utilization rate of resources.

In December, 2022, the sample testing by Jiangxi Building Materials Research and Design Institute certificated that the use of waste residues in PC42.5 cement produced by Jiangxi Ya Dong reached 22.2%, which met the standard for tax rebate for integrated utilization of resources (>20%). This certification appreciated the efforts of Asian Cement (China) in its integrated utilization of resources and development of environment-friendly cement products, and will further motivate the Company to make more achievements in the reuse of industrial waste residues.



Development of new cement products

Asia Cement (China) pays close attention to market demand. While maintaining the production of traditional cement products, its keeps on developing new products suitable for special environments to meet diversified customer needs. In 2022, Jiangxi Ya Dong successfully developed and mass-produced moderate-heat Portland cement with high strength and low-heat of hydration, and successfully obtained the production license. With the wide application to dams, hydraulic engineering, and high-volume concrete projects, etc., the cement has enhanced the competitiveness of the Company in the cement market.

Performance in technological innovation in 2022



3.22 million CNY
R&D investments in 2022



37
Valid patents



10
Products with China Green Building Material Product Certification

Published paper

Page 24, Issue 4, 2022, Cement

Huanggang Ya Dong "improved the integrated utilization rate of mine resources with high-magnesium waste rock"



Customer Management

Asia Cement (China) is committed to improving services to create a better experience for customers with high-quality products. The company has a cross-regional sales and transportation network based on transportation lines along the Yangtze River, providing customers with comprehensive, fast and convenient delivery services through collaborative scheduling via the group platform. "Same-day delivery" is available in places near its plants.

In 2022, we optimized customer service by increasing service efforts, bettering customer experience, catering to customer needs, optimizing the briefing system and enhancing staff training.



Bettering customer experience

- The customer service app has been improved with a more friendly interface, including more convenient searching, digital lab test reports, statement inquiries, etc.
- The "One-code pass" delivery system has covered all subsidiaries and will further integrate with the customer service app.



Catering to customer needs

- Producing low alkali cement in special bins for key project customers.
- Conducting joint tests with customer labs to find technical solutions to reduce costs and increase efficiency.
- Planning to launch innovative products such as small-package cement and fine cement for the home improvement market.



Increasing service efforts

- Incorporating the amount of market information collection and reports into the performance assessment of sales staff to motivate them to pay attention to market changes and understand customer needs.
- Salesmen going deep into customer operations.



Optimizing the briefing system

- Analyzing business and market changes with big data to help business areas keep abreast of market changes in trends.



Enhancing staff training

- As digital technology is being increasingly integrated into production and operation, the Company provides data analysis training to sales (management) staff to improve their skills and help them better adapt to changes in work patterns.

Asia Cement (China) respects and strictly protects customer privacy. By signing Employee Commitment to the Use of IT Equipment, Internet Security and Confidentiality, all employees (except Information Services staff who need to maintain and test data information systems) have promised not to disclose, steal or illegally use confidential or customer information. In addition, the Company has formulated Code of Conduct of Sales Staff for sales staff who have access to primary customer information, to protect customer information with access authorization and approval control.

Every year, sales staff conduct two customer satisfaction surveys through visits or issuing questionnaires to collect customer feedback, and the company rectifies problems or complaints found and improves service quality. Through the efforts, our customer satisfaction has been staying high for consecutive years.

Notes:
 1. Violations refer to warnings, fines or lawsuits for violating regulations or voluntary codes.
 2. Marketing refers to advertising, promotion, sponsorship, etc. related to product sales.

Performance in customer service in 2022



04

We always keep in mind environmental protection, and facilitate green and low-carbon transformation of the construction industry through green operations.



Environment

Environmental Management System

- Climate Action
- Water Management
- Pollution Control
- Green Mines

SDGs responded to in this chapter



Key figures in 2022

- 325** million CNY
Investments in environmental protection
- 57.7** million CNY
Investments in mine governance
- 125,272** GJ
Total energy saved
- 1,032,189** tons
Total water saved
- 0.839**
tCO_{2e}/t Clinker
- 0.704**
tCO_{2e}/t Cement
- 8**
Number of green mines

Environmental Management System

We strictly obey laws, regulations and industry standards including the Environmental Protection Law of the People's Republic of China, the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste, the Law of the People's Republic of China on the Prevention and Control of Air Pollution, and the Emission Standard of Air Pollutants for Cement Industry, having established a sound environmental management system. All integrated cement companies under the Company have passed certification on environmental management system. Guided by environmental management policies, we systematically integrate environmental management

practices into production through planning projects. The practices cover all aspects, including organizational structure, document control, operation control, supervision, personnel training and technological improvement.

Aiming to build green plants, we adopt advanced clean production technology and efficient terminal treatment equipment, eliminate outdated equipment, establish resource recovery mechanisms, and optimize our energy structure. We aim to develop into a modern cement company with high quality, high level of environmental protection, high efficiency, and low cost.

325 million CNY

In 2022, we are investing in environmental protection in total



Climate Action

We seek every opportunity to implement China's "dual carbon" strategy, and contribute to energy saving and emission reduction as a high-energy-consuming industry. With the production technology upgradation and digital transformation, we has been optimizing energy structure to improve carbon emissions. Since the establishment of the action group for carbon emission reduction in May, 2021, all our subsidiaries have introduced measures for energy saving and carbon emission reduction. We have set targets and strengthened the assessment for energy saving and carbon emission reduction in terms of strategies, technology R&E, project implementation and personnel training to respond to climate change. Since the second half of 2022, the Technology Department has started to collect data monthly on the 15 annual targets of energy saving and carbon emission reduction, and review the results for adjustment.

Energy Management

Asia Cement (China) runs an excellent energy management system, and strictly implements the *Operating Procedures for Energy Management*. We calculate energy use, output and consumption of clinkers and cements under the *Specification for Equipping and Managing Energy Measuring Instruments in the Building Materials Industry* (GB/T24851-2010), and conduct statistical accounting of comparable energy consumption and verify energy performance against benchmark under the *Norm of Energy Consumption per Unit of Cement* (GB16780-2012). In addition, we continue to update equipment, optimize technologies, and increase the use of clean energy to improve energy

utilization. In 2022, we set targets of energy saving for integrated cement plants and cement grinding plants according to their production and operation. Our 9 subsidiaries saved 4,275 tons (125,272 GJ) of standard coal, while the target was 2,857 tons.

Asia Cement (China) consumes coal, electricity, diesel, gasoline and natural gas. Some of our outlets use solar energy and biomass fuel. In 2022, we set a goal of 1,200 KW of photovoltaic and wind power generation, and achieved 120 KW since most of them were to be converted into BOT (build-operate-transfer) cases. Besides, integrated cement plants have been equipped with a low-temperature cogeneration system, which efficiently recovers waste heat from gas in kiln heads and tails during cement production and converts it into electricity for reuse in the production. The system significantly reduces coal consumption and greenhouse gas emissions, benefiting the economy, the society and the environment. Cement grinding plants have replaced fossil energy such as coal with biomass fuel and natural gas to reduce emissions of greenhouse gas and air pollutants.

As smart plants are being built, energy management is also experiencing full digital transformation. A four-tier system has been adopted for real-time monitoring and dynamic analysis on "energy consumption statistics", "offpeak power use", "shutdown analysis", "main equipment anomaly analysis", "energy consumption ratio for cement quality", "energy performance" and "energy management overview" to assist the Company in fine management at the plant level. Since March, 2022, the time when the energy management system was put into use on trial, we have been striving to

reduce consumption in each production link. Based on our experience, about 0.75% of electricity will be saved annually. Based on the total electricity consumption of each subsidiary, approximately 19.09 GWh of electricity will be saved and 11,646 tons of CO₂ emission reduced every year, cutting down the overall production cost by about 11.35 million CNY. Energy consumption in 5 production lines has dropped from level 3 to level 2. Wuhan Ya Xin plans to halt the production of clinkers in 2023 because its energy and electricity consumption per unit of clinker exceeded level 3 in 2022.

4,275 tonnes
Coal saved

19.09 GWh
Electricity saved

11,646 tCO₂e
CO₂ emission reduced

11.35 million RMB
Production cost saved

Energy consumed by Asia Cement (China) in 2022

Entity	Energy used	Unit	2020	2021	2022
Integrated cement companies	Coal	GJ	75,809,581	77,665,319	74,977,199
	Diesel fuel	GJ	299,491	323,475	221,816
	Biomass fuel	GJ	/	45,166	24,323
	Grid electricity	GJ	6,174,421	5,854,567	5,601,384
	Total energy consumed	GJ	82,283,493	83,888,527	80,824,721
Ready-mixed concrete companies	Diesel fuel	GJ	5,419	3,366	5,043
	Gasoline	GJ	/	/	245
	Grid electricity	GJ	10,101	8,595	35,108
	Total energy consumed	GJ	15,520	11,961	40,396
Cement grinding companies	Coal	GJ	258,792	163,911	/
	Diesel fuel	GJ	918	39,829	3,585
	Biomass fuel	GJ	/	/	11,216
	Natural gas	GJ	/	/	147,951
	Grid electricity	GJ	486,361	434,988	342,693
	Total energy consumed	GJ	746,071	638,728	505,445
Transportation companies	Natural gas	GJ	12,570	12,444	17,358
	Gasoline	GJ	295	278	95
	Diesel fuel	GJ	110,528	115,815	80,214
	Grid electricity	GJ	1,438	1,319	1,862
	Total energy consumed	GJ	124,831	129,856	99,529
Total energy consumed		GJ	83,169,915	84,669,071	81,470,091
Energy consumption intensity	GJ/10,000 CNY output		76.84	72.02	84.74
Energy consumed per unit of cement	GJ/ton cement		3.40	3.34	3.64

Note: The units were converted in accordance with the General Rules for Calculation of the Comprehensive Energy Consumption (GB/T2589-2020).

Statistics of power generated by integrated cement companies from waste heat:

	Unit	2020	2021	2022
Power generated from waste heat	GJ	2,210,573.74	2,272,243.39	2,261,048.72
Proportion to total electricity (energy consumed)	%	27.09	27.23	28.74

GHG Emissions

We attach great importance to reducing carbon emissions, and earnestly implement requirements in the *Measures for the Administration of Carbon Emissions Trading (for Trial Implementation)* and the *Guiding Opinions on Coordinating and Strengthening the Response to Climate Change and Ecological Environmental Protection*. We have launched verification of our carbon footprints in an all-round manner, which is the first step towards reasonable and scientific carbon neutrality. Besides, technical transformation and intelligent manufacturing are performed to produce low-carbon cements. Efforts are also exerted to pass low-carbon product certifications.

During the reporting period

20,474,715.30 tCO₂e

Asia Cement (China)'s total GHG emissions reached

19,530,747.67 tCO₂e

Total direct greenhouse gas emissions

943,967.63 tCO₂e

Total indirect greenhouse gas emissions from energy

0.839 tCO₂e/t Clinker

Greenhouse gas emissions per ton of clinker

0.704 tCO₂e/t Cement

Greenhouse gas emissions per ton of cement

GHG emitted by Asia Cement (China)

Entity	GHG emissions	Unit	2020	2021	2022
Integrated cement companies	Total direct emissions (Scope1)	tCO ₂ e	19,765,630.15	20,420,878.92	19,521,273.99
	Total indirect emissions (Scope2)	tCO ₂ e	911,763.97	942,804.37	882,595.82
	Total emissions (Scope 1+2)	tCO ₂ e	20,677,394.13	21,363,683.29	20,403,869.81
Ready-mixed concrete companies	Total direct emissions (Scope1)	tCO ₂ e	412.23	258.48	834.48
	Total indirect emissions (Scope2)	tCO ₂ e	3,960.35	3,655.62	1,293.49
	Total emissions (Scope 1+2)	tCO ₂ e	4,372.58	3,914.10	2,127.97
Cement grinding companies	Total direct emissions (Scope 1)	tCO ₂ e	24,800.04	18,326.88	1,285.77
	Total indirect emissions (scope 2)	tCO ₂ e	84,912.45	74,249.70	59,683.87
	Total emissions (Scope 1+2)	tCO ₂ e	109,712.49	92,576.58	60,969.64
Transportation companies	Total direct emissions (Scope 1)	tCO ₂ e	8,094.86	8,480.01	7,353.43
	Total indirect emissions (Scope 2)	tCO ₂ e	209.96	192.65	394.45
	Total emissions (Scope 1+2)	tCO ₂ e	8,304.82	8,672.66	7,747.88
Total emissions		tCO ₂ e	20,799,784.02	21,468,846.63	20,474,715.30
Emission intensity		tCO ₂ e/10,000 CNY output	19.22	18.26	21.30

Note: Parameters such as low calorific value, carbon content per unit of calorific value and carbon oxidation rate used for calculation are from the Guidelines for Accounting and Reporting Greenhouse Gas Emissions for Chinese Cement Production Enterprises (for Trial Implementation). Regional power grid emission factors come from the Average CO₂ Emission Factors of China's Regional Grids in 2011 and 2012.

Company	Carbon emissions per unit of clinker (tCO ₂ e/t clinker)	Carbon emissions per unit of cement (tCO ₂ e/t cement)	
Integrated cement company	Jiangxi Ya Dong	0.843	0.736
	Hubei Ya Dong	0.805	0.668
	Huanggang Ya Dong	0.815	0.684
	Sichuan Ya Dong	0.839	0.679
	Sichuan Lan Feng	0.868	0.702
	Wuhan Ya Xin	0.859	0.690
Cement grinding company	Nanchang Ya Dong	-	0.024
	Wuhan Ya Dong	-	0.019
	Yangzhou Ya Dong	-	0.021

Note: Grid electricity emission factor was calculated by weighted in accordance with the Notice on Key Tasks for Enterprise Greenhouse Gas Emission Reporting and Management in 2022.



Energy conservation and emissions reduction on mines

- In 2022, Sichuan Ya Dong signed an agreement with Shaanxi Tonly Heavy Industries Co., Ltd. on renting 60T wide-body dump trucks from Tonly. In response to the announcement of the Pengzhou Municipal People's Government on designating prohibited areas for high-emission non-road mobile machinery which prohibits non-road mobile machinery following China II standards and below on vehicle emissions in designated areas from June 22, 2022, Sichuan Ya Dong rent 8 wide-body dump trucks from Tonly for daily production from August 2022. On average, the fuel consumption of rented trucks is 0.082L/T lower than that of its mine truck CAT. From August to November 2022, Sichuan Ya Dong reduced diesel consumption by 133,367L, which equals to a reduction of 433 metric tons of carbon dioxide emissions.
- After Sichuan Ya Dong completed installation of long-distance belt conveyor, it began to transport limestone through conveyor belt instead of trucks as did before, and energy consumed also changed from diesel to electricity. This greatly reduces the consumption of petrochemical energy, alleviates environmental pollution, and puts an end to traffic accidents caused by limestone transportation. In 2022, Sichuan Ya Dong's diesel consumption dropped by 8.95 million liters. After deducting power consumed by belt conveyor, it saved a total of 8,400 tons of standard coal, which significantly lowers greenhouse gas emissions. The long-distance belt conveyor means great contributions to many aspects such as economy, sustainable development, environmental protection, road safety, energy conservation and emission reduction.

Water management

Entities under Asia Cement (China) mainly withdraw water from third parties, surface water and rainwater (reservoirs on mines). The water used by integrated cement companies mainly comes from the Yangtze River or its tributaries with rich water resources. However, we are aware there may be water shortage in the future, in consideration of the months-long drought in the Yangtze River basin during the reporting period. Meanwhile, we also evaluate the water quality and the risks from multiple aspects to deal with water shortage.

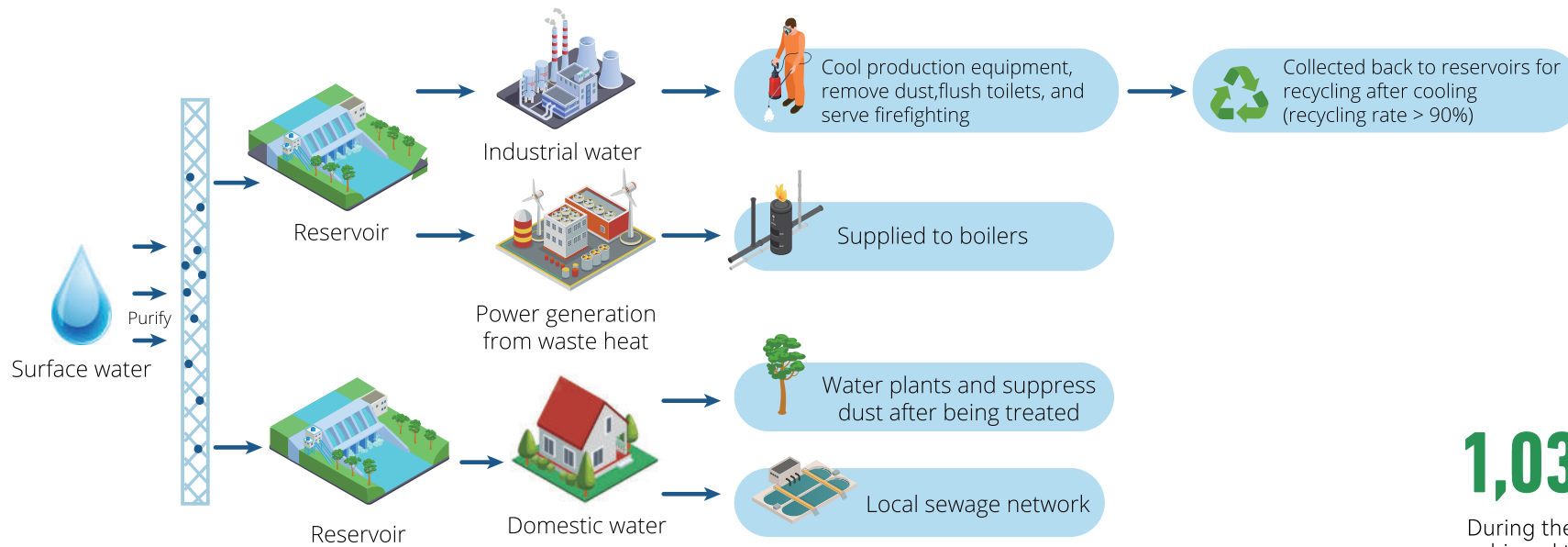
We keep promoting water saving-related improvements, and adhere to the national strategy to improve the ecosystem. Focusing on reasonable water use and greater water resource utilization, we save water from multiple aspects and implement long-term management for water conservation to achieve sustainability. We audit water consumption every year to seek opportunities to save water in line with the *Water Law of the People's Republic of China and Law of the People's Republic of China on the Promotion of Clean Production*. By the end of the reporting period, three integrated cement plants have been assessed as provincial level water-saving enterprises in key water-consuming industries.

Our subsidiaries have made specific regulations on job descriptions of water saving management positions and departments to play the initiative role of grassroots, identifying and controlling every factor affecting water consumption. Flow meters or water meters are installed in major water-consuming areas to monitor daily water consumption. The water used in production

is recycled with zero discharge. The temperature of the cooling water in production water supply facilities is reasonably controlled to regulate water consumption. The water facilities are inspected on a daily basis to prevent oil leakage which pollutes the circulating cooling water. The treated domestic sewage is used for dust removal, plant watering, car washing, etc. The statistics of the water consumption is analyzed daily to instruct responsible personnel to review and improve the abnormal water consumption to prevent leakage. We also distribute leaflets, make broadcasts and launch education activities to raise the employee's awareness of water conservation. For example, the integrated cement plants regularly monitor water performance in accordance with industrial water quota: advanced clinker value: 0.225 m³/t; advanced cement value: 0.195 m³/t.

We use water for industrial production, power generation from waste heat and domestic purposes. All of our integrated cement companies (except Wuhan Ya Xin) have their own water stations, which de-sand, sediment/flocculate, filter and disinfect surface water (from the Yangtze River) for production and commercial use. In addition, each plant is equipped with a reservoir to collect rainwater and wastewater for reuse. There are catch drains, drainage ditches and sedimentation tanks on all of our mines. The water collected from sedimentation tanks is recycled for removing dust and irrigation of self-owned saplings. We have also made the recycled water a scenery by inletting it to landscape ponds in order to achieve zero discharge in 2022.





1,032,189 tons
 During the reporting period, we achieved total water savings of

Water consumption by Asia cement (China)

Entity	Water balance	Unit	2020	2021	2022
Integrated cement companies	Surface water	t	7,930,422	8,051,780	7,077,608
	Groundwater	t	25,023	428	130
	Municipal water	t	296,077	350,721	292,208
	Rainwater	t	306,643	398,316	437,795
	Total water withdrawn	t	8,558,165	8,801,245	7,807,741
	Total water drained	t	86,366	87,618	-
	Total water circulated	t	216,722,922	216,721,105	133,171,862
	Recycling rate	%	96	96	95

Entity	Water balance	Unit	2020	2021	2022
Ready-mixed concrete companies	Surface water	t	28,200	22,000	56,827
	Groundwater	t	77,087	37,916	40,497
	Municipal water	t	117,551	92,536	22,592
	Rainwater	t	35,108	18,366	23,151
	Total water withdrawn	t	257,946	170,818	143,067
	Total water drained	t	7,014	8,777	1,330
	Total water circulated	t	44,329	45,477	27,651
	Recycling rate	%	15	21	16
Cement grinding companies	Municipal water	t	95,630	71,526	58,581
	Groundwater	t	/	/	4,636
	Total water withdrawn	t	95,630	71,526	63,217
	Total water drained	t	18,295	24,773	-
	Total water circulated	t	28,001	22,743	52,987
	Recycling rate	%	23	24	46
Transportation companies	Municipal water	t	19,523	15,663	7,732
	Groundwater	t	/	/	5,000
	Total water withdrawn	t	19,523	15,663	12,732
	Total water drained	t	5,000	5,000	-

Pollution Control

The Company pays high attention to pollution management. Supported by pollutant treatment facilities, we reduce the total amount and concentration of emissions by optimizing production and treatment processes. For pollutants that need external treatment, we collect, store, transport them, and track the entire process to ensure that they are properly disposed of.

Wastewater

Entities under Asia Cement (China) set their own wastewater discharge standard in accordance with the *Pollutant Discharge Standard for Municipal Wastewater Treatment Plants* (GB18918-2002) and the Integrated Wastewater Discharge Standard (GB8978-1996). They monitor wastewater discharge, regularly disclose related information, and ensure that wastewater is treated properly.

Integrated cement companies under Asia Cement (China) adopt dry process. No wastewater is directly generated from production, and their wastewater only comes from sewer lines. The wastewater enters their sewage treatment station together with domestic sewage for centralized treatment. After biochemical treatment, the wastewater and domestic sewage meet emission standards on indicators such as chemical oxygen demand (COD), biochemical oxygen demand (BOD5), suspended solids (SS), petroleum and ammonia/nitrogen. Part of the treated wastewater is used for dust removal, greening, road sprinkling or discharged to municipal wastewater treatment plants through wastewater pipes.

Exhaust Gas

In addition to conventional air pollutants (NO_x, SO₂, particulate matters, and soot), we monitor other indicators on a regular basis, including heavy metals and their compounds in the exhaust gas of co-processing facilities and by-products from incomplete combustion. We strictly control the emission of air pollutants in line with related standards. During the reporting period, the concentration of dioxins emissions was 0.03 ngTEQ/m³ and the total concentration of thallium (Tl), cadmium (Cd), lead (Pb), and arsenic (As) was 0.089 mg/m³ (according to the Standard for Pollution Control on the Municipal Solid Waste Incineration (GB18485-2001), the concentration of dioxins emissions shall not exceed 0.1 ngTEQ/m³ while the total concentration of Tl, Cd, Pb and As should not exceed 1.0 mg/m³). On the basis of complying with the Emission Standard for Air Pollutants in the Cement Industry (GB4915-2013), we improve our exhaust gas treatment capacity and reduce emissions. Regarding road transportation, we replaced all bulk cement trucks and dump trucks with vehicles meeting China V and above standards on the basis of meeting national policies, which can reduce emissions of NO_x, particulate matters and so on.

Measures for reducing air pollutant emissions and effects

- We proactively reduce air pollutant emissions through SNCR+SCR denitration and low-nitrogen combustion. In 2022, we set a goal of realizing ultra-low NO_x emissions in 5 production lines, and finally achieved ultra-low NO_x emissions in 7 production lines.
- We desulfurize with calcium hydroxide, hot raw materials, wet raw material and desulfurizing agents to reduce SO₂ emissions. We also carry out limestone pre-batching to reduce the proportion of SO₃ in the whole pile of limestone and the raw material to lower the original SO₂ emissions.
- Bag-type dust collectors are adopted to reduce dust emissions, and high voltage static electrostatic dust collectors are transformed into bag-type dust collectors. All indexes of air pollutant emissions are better than the standards set by the government.
- No. 2 kiln of Sichuan Ya Dong and No. 2 of Sichuan Lan Feng have finished the construction of denitration and put it into use in May, 2022. The NO_x emissions were less than 50mg/nm³ and ammonia escape less than 5mg/nm³. Unorganized dust discharge was improved through closing with belt corridors and bin sheds, and spraying in bins, and achieved A level in environmental performance rating.
- No. 1 and No. 2 kilns of Hubei Ya Dong have finished the construction of denitration. During the 3-day trial, both NO_x emissions and ammonia escape met the requirement of ultra-low emissions. The performance indicators will be evaluated in April, 2023.

In 2023, integrated cement companies under Asia Cement (China) will finish transformations for ultra-low emission of air pollutants, and advance projects such as SCR denitrification, wet desulfurization, sealing of belt corridors, and installation of dust collection system, and invest nearly 100 million CNY to build environmentally friendly green plants to create a beautiful China with green water and blue sky.

Entity	Atmospheric pollutants	Unit	2020	2021	2022	
Integrated cement companies	NO _x	t	10,032.62	9,405.37	6,616.65	
	SO ₂	t	935.00	698.74	622.10	
	Particulate matters	t	483.25	389.95	238.83	
	Soot	Kiln head	mg/m ³	5.00	4.20	3.62
		Kiln tail	mg/m ³	4.80	4.80	3.66
Cement grinding companies	NO _x	t	102.91	103.81	8.97	
	SO ₂	t	3.71	18.23	4.32	
	Particulate matters	t	10.97	16.16	13.86	
	Soot	mg/m ³	19.77	17.31	6.45	

For total exhaust gas emissions and the concentration of exhaust gas of each entity in 2022, please see appendix 1.

Solid Waste

Main hazardous waste generated by Asia Cement (China) is refractory bricks, engine oil, batteries and oil drums. We control hazardous waste generated from production in accordance with laws and regulations such as the *Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Waste*, the *National Catalogue of Hazardous Wastes*, and the *Standard for Pollution Control on Hazardous Waste Storage* (GB18597-2001). All hazardous waste is stored in storage rooms built in accordance with the Standard for Pollution Control on Hazardous Waste Storage (hardened ground, anti-seepage paint, oil guide groove, and airtight containers, which serve to prevent water, rain and penetration). We entrust qualified third parties to dispose of hazardous wastes, and file the disposal with the environmental protection authority. We also keep a ledger of hazardous waste in and out of storage rooms. Employees would fill in an electronic application form before each transfer, and use transportation vehicles which meet the standard for hazardous waste transportation and have been registered at the ecology and environment authority.

General solid waste generated mainly includes domestic waste, wood, and metals. We classify it before disposal to increase recycling. Moreover, we incinerate solid waste

selected for final disposal and recover the energy generated therefrom. Asia Cement (China) has always practiced circular economy. In addition to purchasing and utilizing industrial waste generated by other industries in large quantities, we reduce general solid waste from daily production, such as recycling particulate matters collected by dust collectors and recycling plastic and paper in day-to-day office.

2022	Unit	Hazardous solid waste	Non-hazardous solid waste
Total generated	t	2,463.64	13,836.18
Diverted from disposal	t	2,461.97	13,172.08
Directed to Disposal	t	1.67	664.10
Treated rate	%	99.93	95.20

Note: Energy recovered from incineration was classified into "diverted from disposal".

Green Mines

Asia Cement (China) fully applies a new mining model that meets the requirements of eco-environmental protection and conservation in accordance with the *Implementation Opinions on Accelerating the Construction of Green Mine* (Guotu Zigui [2017] No. 4) and the *Green Mine Construction Specification of Cement Limestone Industry* (DZ/T0318-2018). We review the completion of 8 targets in disclosure, and seek constant improvements on the basis of coordinated, green, open and shared development. By promoting resource utilization in the whole process of mine development, energy conservation, emission reduction, land reclamation, we achieve coordinated economic,

ecological and social benefits in resource development. During the reporting period, we invested 57.7 million CNY in mine construction and governance, which covered 169 projects such as environment of mining area, methods of mine development, comprehensive utilization of resources, energy conservation and emission reduction, technological innovation and digital mines, corporate management and image.

As of the end of the reporting period, among the 10 mines owned by Asia Cement (China), 8 have been certified as green mine. They are Matou limestone mine (National Green Mine in 2019), Xinwutian limestone

mine, Xiazhang limestone mine (National Green Mine in 2020), Dawuchen sand shale mine for cement (in 2022), Bao'anshan clay mine for cement (in 2022), Benji Mountain limestone mine, Yuanyi Mountain limestone mine, and Zhongjian Bay sand shale mine (National Green Mine in 2019), the former 5 of which belong to Jiangxi Ya Dong, while the latter 3 belong to Huanggang Ya Dong. In the future, we will keep improving the certified national green mines, and build the remaining mines by the standard for national green mine. In 2023, Woniuping mine and Tazi Mountain sand shale mine, both under Sichuan Ya Dong, will apply for green mine certification.

Disclosure item	Indicator	Description
Mining method	Follow the policy of "stripping before mining and mining both lean and rich ores" and ensure >95% ore recovery rate	We adopt section-by-section mining from top to bottom. The sections are designed as inwardly inclined storage platforms to guide the surface runoff into drainage system. We also optimize production parameters for cement factories and increase waste rocks with high magnesium oxide content to reduce the generation of waste. Currently, our ore recovery rate surpasses 98%.
Vibration induced by blasting	Ensure that the safe allowable particle vibration velocity of protected objects is <2.5cm/sec in accordance with the GB6722-2014 Blasting Safety Regulations	In 2022, digital electronic detonators and high-precision non-electric Orica detonators were used in all mines for deep hole-by-hole blasting, which effectively reduced vibrations induced by blasting.
Soil and water conservation in mining areas	Comply with Level 1 standard in Table 4 of the GB8978-1996 Integrated Wastewater Discharge Standard	In 2022, all quarterly soil and water samples were lower than the limits of Level 1 standard.
Monitoring of mining area safety	Monitor slope stability according to the GB51016-2014 Technical Code for Non-coal Open-pit Mine Slope Engineering	In 2022, the error of slope displacement monitoring points on mining sections, as shown by the result of our monthly monitoring, was less than 1mm.

Disclosure item	Indicator	Description
Environmental monitoring of mining areas	Control noise to comply with Class 2 limits in the GB 12348 Environmental Noise Emission Standard at the Boundary of Industrial Enterprise, and exhaust gas to meet the limits in Table 2 of the GB 4915-2004 Emission Standard of Air Pollutants for Cement Industry	In 2022, observed noise and particulate matter emissions were both below standard limits.
Green coverage rate of mining areas	Achieve 100% green coverage rate of mining areas in accordance with the DZ/T 0318-2018 Green Mine Construction Specification of Cement Limestone Industry	In 2022, greening for all possible areas was completed. The total completed mining areas (planes and slopes) was 17.4 hectares.
Green mine assessment	Be included into the list of green mines above the provincial level by 2022	In 2022, Jiangxi Ya Dong's Huawu integrated clay sandstone mine and Bao'anshan provincial-level clay mine passed third-party reviews. They are expected to obtain provincial green mine certification in 2023. under evaluation for green mines.
Local employee ratio in factories and mines	Employ at least 60% of local residents as factory and mine workers	Among factory and mine workers, over 80% are local residents.

Digital Mine

All 10 mines of Asian Cement (China) have been equipped with a remote monitoring system on mining equipment in open pit mines, a live 3D system, a remote output supervision system, a remote video monitoring system, and a reserve management system. Managers can manage and control important links such as mining, processing, and production in real time through remote command and promote safe operations. The systems fully display the reclamation and greening of mines. The green mine input module serves the function of green mine planning and publicity. The online environmental monitoring system tracks environmental quality in real time, including PM, noise, etc. and displays related information on the large outdoor screen.



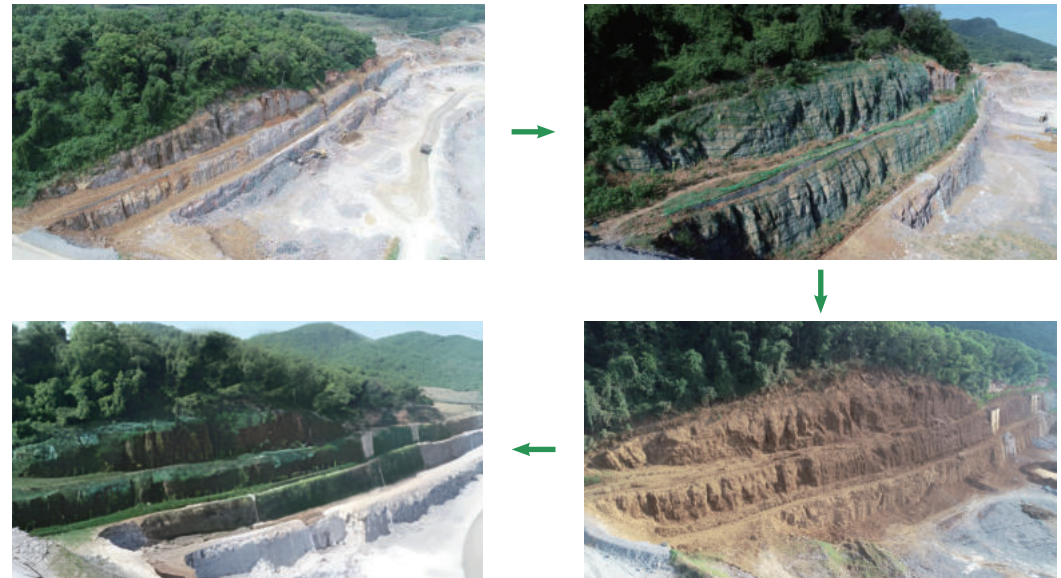
Jiangxi Ya Dong built a centralized control room for mining crushers and used electric vehicles in 2022. Sichuan Ya Dong invested about 140,000 CNY in 2022 to equip the safety blocking system for heavy machinery and vehicles and the automatic counting system for vehicle unloading. The systems monitor driving track and status of the equipment, automatically generate production reports and push abnormal status, making it convenient for managers to supervise operators' driving status and to analyze the production with the data in the reports. Errors from artificial statistics are reduced, and the workload of operators in the central control room is also greatly alleviated.

Mine Governance

We take seriously possible impact exerted by our production on the environment, including soil erosion, soil pollution and vegetation destruction. Multi-faceted measures are taken during the whole process to reduce adverse impacts on biodiversity, realize re-greening in an orderly manner, reduce visual impact on landscape, and ensure ecological safety.

All the mines of Asia Cement (China) implement their own environment restoration and land reclamation plans. Top-down mining sections are 12 meters high and 4-meters wide, with less-than-70 degree slope angle and 50-55 degree overall slope to ensure safe operations. After finishing mining each section, we immediately stack soil on it and plant greens to achieve re-greening and ecological restoration. We also manage the environment while mining. The greening cost and maintenance cost are relatively low and the effect is obvious. In view that trees planted on finished sections show shielding effect only after they grow up, Jiangxi Ya Dong and Huanggang Ya Dong used man-made “spiderwebs” or belt seeding to boost plant growth, which significantly reduce exposed mine and shorten the duration of uncoordinated visual landscapes.

Jiangxi Ya Dong used man-made “spiderwebs” on finished mining sections



Jiangxi Ya Dong removed earth from other places to boost plant growth on its mining sections



Ecological Restoration



Sichuan Ya Dong started to design the landscape at the entrance of its mining area in March 2021. The constructions include painting of the round warehouse, renovation of the parking lot, overlapping water landscapes and nurseries. These were completed and put into use by the end of 2022.



Panoramic view of landscape engineering at the entrance of Sichuan Ya Dong's mining area

Jiangxi Ya Dong Mine built a greenhouse nursery and an outdoor cultivation area in 2019 to cultivate native tree species and plants suitable for local growth such as *Robinia pseudoacacia* L., *Sapium sebiferum* (L.) Roxb., *Cinnamomum camphora* (Linn) Presl, *Sapindus mukorossi* Gaertn., *Wisteria sinensis* (Sims) Sweet, and *Parthenocissus laetevirens* Rehd. In 2022, the nursery cultivated 15,000 plants, including *Wisteria sinensis* (Sims) Sweet, *Cinnamomum camphora* (Linn) Presl, *Sapium sebiferum* (L.) Roxb., *pyracantha fortuneana*, *Sapindus mukorossi* Gaertn., *Robinia pseudoacacia* L., *Parthenocissus laetevirens* Rehd., and *Mucuna sempervirens*. Among them, 13,080 plants were transplanted to mining areas, and about 1,000 to the outdoor cultivation area. In 2022, Huanggang Ya Dong cultivated 600 *Sapindus mukorossi* Gaertn. saplings, 100 *Photinia × fraseri* Dress trees, and 100 *Sabina pingii* var. *wilsonii* trees. Its outdoor cultivation area cultivated 200 *Photinia × fraseri* Dress saplings, 40 *Ilex x attenuata* 'Sunny Foster' seedlings, 100 *Ligustrum japonicum* 'Howardii' seedlings, 600 colorful *Osmanthus fragrans* (Thunb.) Lour. seedlings, and 100 *Rhododendron simsii* Planch. seedlings. Sichuan Ya Dong installed a greenhouse seedling cultivation system (16mL*16mW*4.8mH) in June, 2021, and started nursery in the spring of 2022.



Nursery in Jiangxi Ya Dong



Nursery in Huanggang Ya Dong



In 2022, Jiangxi Ya Dong won Major Project Second Prize of Green Mine Science and Technology Award from ZHONGGUANCUN Green Mine Industry Alliance for its "Multi-species Cultivation Project of Thermostatic Nursery for Mine Ecological Restoration".



05



We stick to the strategy of "create a happy workplace, help disadvantaged groups, foster cultural inheritance, and build an inclusive society" to seek sustainable social development. Internally, we regard employees as the Company's core competitiveness and primary wealth, establish a harmonious relationship with them characterized by mutual respect, mutual trust and common growth, and create a happy workplace. This is achieved by providing employees with good remuneration and benefits, systematic career paths, considerate care, and a safe and healthy working environment. Externally, we pay close attention to the needs and feedback from local communities, help the disadvantaged, support local economy, and do our bit to building a green homeland.

Society

- Employee Rights
- Employee Development
- Occupational Health and Safety
- Giving Back to the Society

SDGs responded to in this chapter



Key figures in 2022

<p>73.1% Local employment rate</p>	<p>97.89% Coverage of employee performance appraisal</p>
<p>15.80% Increase of per capita allowances compared with 2021</p>	<p>0 Suspected or confirmed occupational disease</p>
<p>95.9 million CNY Investments in occupational health and safety</p>	<p>9.94 million CNY Giving back to the society</p>

Employee Rights

We strictly abide by laws and regulations including the *Labor Law of the People's Republic of China*, the *Labor Contract Law of the People's Republic of China*, the *Law of the People's Republic of China on the Protection of Minors*, and the *Special Rules on the Labor Protection of Female Employees*, and actively respond to international conventions including the United Nations' *Universal Declaration of Human Rights*, and the International Labor Organization's *Declaration on Fundamental Principles and Rights at Work*. We promise to protect employees' rights and interests, and provide them with more complete benefits beyond the requirements of laws and regulations. We promise not to employ or support the employment of children under 16. All our HR staff responsible for recruitment have received due training to ensure that employees of appropriate age are employed. When underage workers are employed, we offer special protection for them. All subsidiaries under Asia Cement (China) have set up trade unions, and all employees are members of respective trade union. Over the years, we have proactively communicated with employees, given them more rights and interests, and enabled them to share the Company's development results.

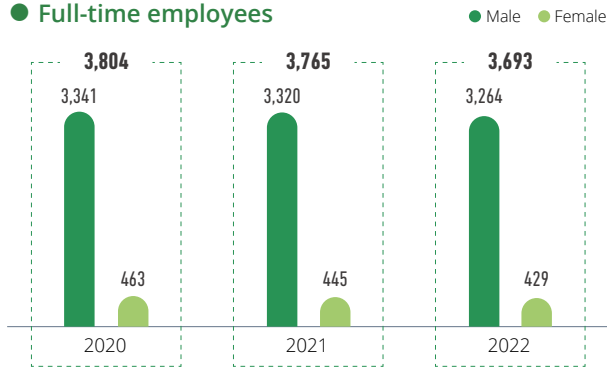
During the reporting period, there were no human rights violations such as forced labor, child labor, discrimination, harassment and abuse in the Company.



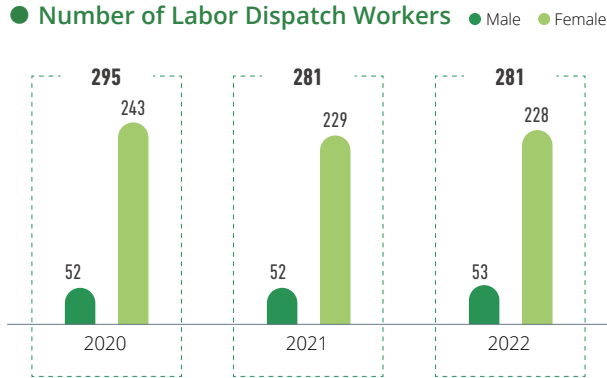
Asia Cement (China) won the honorary title of "Best Companies to Work for in Asia" from HR Asia, a leading human resources publication in Asia, for the second consecutive year

Employee Structure

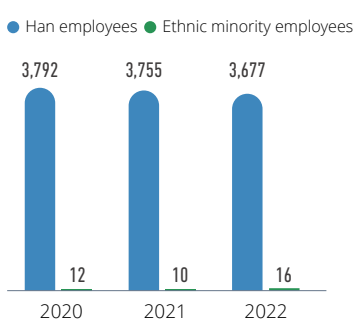
● Full-time employees



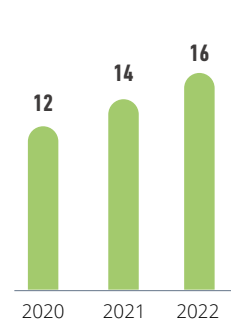
● Number of Labor Dispatch Workers



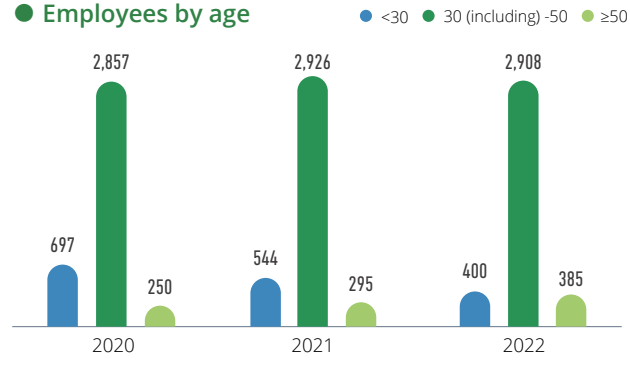
● Employees by ethnic group



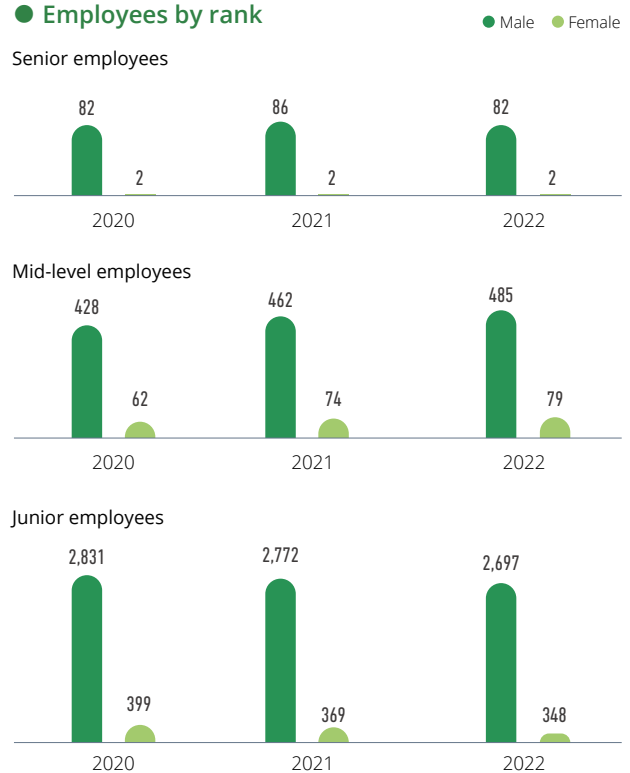
● Local executives*



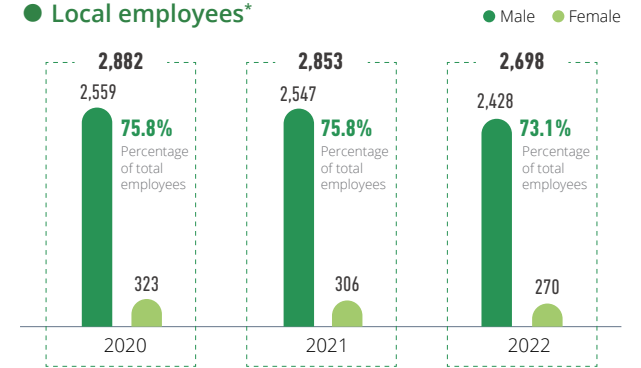
● Employees by age



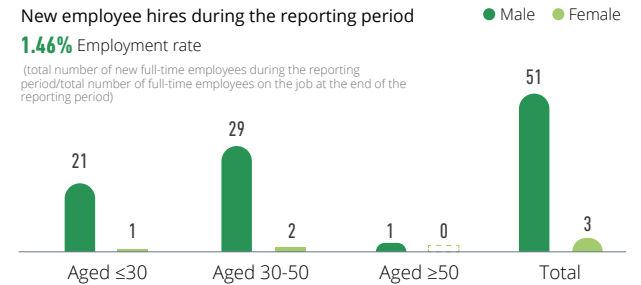
● Employees by rank



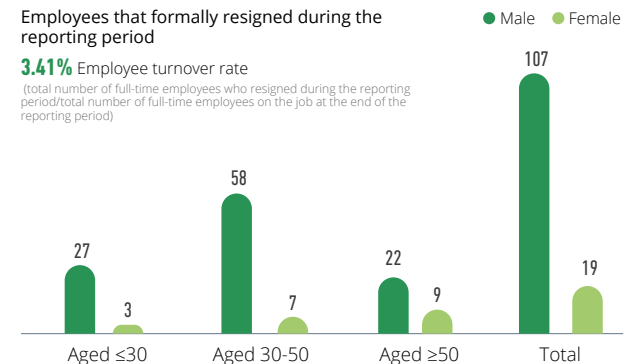
● Local employees*



● New employee hires and employment rate



● Resigned employees and employee turnover rate



Note: Local means employees' household is registered in the city where the Company is located.

Employee Compensation and Benefits

We guarantee more pay for more work, uphold the principles of fairness, justice, and gender equality for all employees, and hope to attract outstanding talents with competitive salary and benefits. Employees' compensation is managed in accordance with the Compensation Management Measures and the Bonus Distribution Measures. It consists of fixed salary, bonus by managers, monthly production/sales bonus, full attendance bonus, annual attendance bonus, year-end bonus, employee bonus (i.e., dividend), and contribution bonus. Moreover, we execute a minimum wage policy. When employees' compensation is lower than local minimum wage because they take too many leaves of absence or sick leaves or the Company's revenue declines, we would make up the difference to protect their basic rights and interests.

We endeavor to provide employees with an excellent working environment and all-round care. All subsidiaries under the Company have set up Employee Welfare Committee, which implements the *Administrative Measures for Employee Welfare Committees*, and constantly improves employees' welfare based on their needs. We carry on the tradition of offering subsidies and bonuses such as meal allowances, festival allowances, year-end parties, travel allowances, self-help benefits, birthday gifts, and wedding, funeral and maternity cash gifts.

Asian Cement (China) 2022 Benefit Payments Increase Significantly from 2021



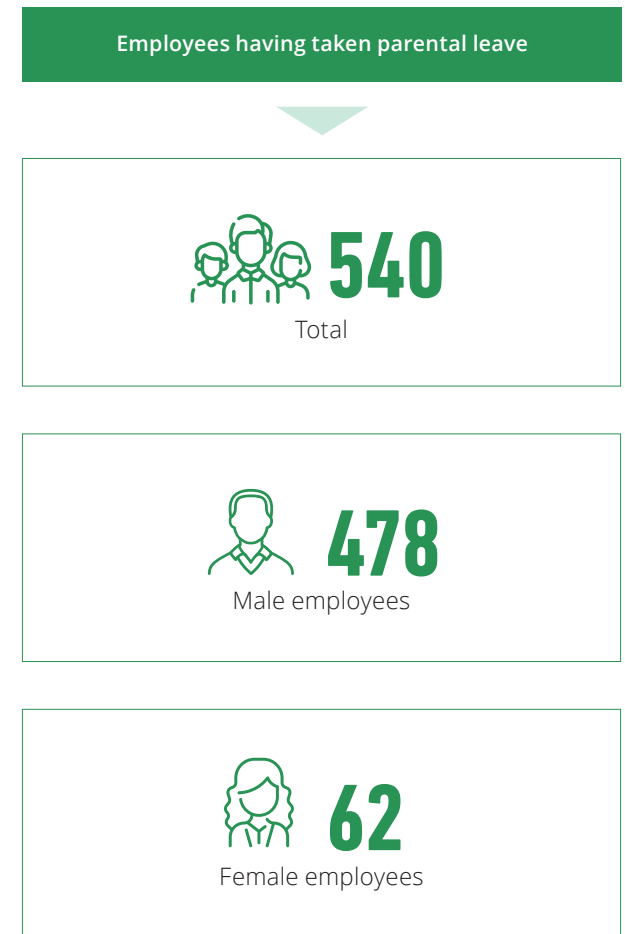
Ratio of female full-pay relevant employees to male full-pay relevant employees at Asia Cement (China)			
Employee category	2020	2021	2022
Managerial employees	86.4%	84.3%	85.4%
Business affairs employees (non-managerial)	96.5%	94.3%	93.6%
Factory affairs employees (non-managerial)	96.3%	99.5%	100.1%
Administrative employees (non-managerial)	97.6%	98.6%	98.4%

Amount (unit: CNY)

Allowances issued by Asia Cement (China) in 2022			
Birthday gifts 368,180	Wedding, funeral and maternity cash gifts 49,300	Festival allowances 2,721,517	Telephone allowances 2,019,794
Work clothes 1,578,297	Meal allowances 9,570,950	Transportation allowances 1,852,645	Year-end parties 1,242,650
Travel allowances 38,080	Self-help benefits 3,390,432	Per capita 6,182	Total 22,831,845

Asia Cement (China) actively responds to policies on maternity leave, paternity leave, parental leave and has improved the Measures for Employee Leaves. From 2021, couples who meet the maternity policy and have children under three years can enjoy childcare leave.

Maternity leave and paternity leave taken by employees at Asia Cement (China)			
Item	2020	2021	2022
Total employees taking maternity leave or paternity leave	169	155	119
Male employees taking paternity leave	137	123	95
Female employees taking maternity leave	32	32	24
Total employees returning to work after a leave	166	155	119
Male employees returning to work after a leave	137	123	95
Female employees returning to work after a leave	29	32	24
Return rate	98.22%	100%	100%
Total employees who have stayed for 12 months after returning to work	214	153	148
Male employees who have stayed for 12 months after returning to work	186	122	118
Female employees who have stayed for 12 months after returning to work	28	31	30
Retention rate	97.72%	92.17%	95.48%



Note:
 1. Return rate = total number of employees returning to work after a leave / total number of employees taking maternity leave or paternity leave
 2. Retention rate = total number of employees who have stayed for 12 months after returning to work / total number of employees who have returned to work after a leave

Employee Care

◎ Communication with Employees

We listen to the voice of employees and create a free and democratic workplace. Multiple channels are in place to facilitate communication on problems found and targeted suggestions, so as to timely improve management, workflow, etc. When employees are treated unfairly or discover potential violations or risks, they can directly report to senior managers, audit offices, and the Board of Directors, which will be quickly responded and handled with fairness and justice.

◎ Employee Mental Health

Asia Cement (China) highly values employees' mental health. All its subsidiaries have established cooperation with local professional psychological consulting institutions or hospitals. They regularly deliver lectures on mental health for employees to relieve their psychological stress, regulate their emotions, and prevent mental diseases. Employees can also seek free consultation on psychological problems via hotline for free. On the other hand, we gradually increase managers' attention to employees' mental health. While enhancing employee communication, we offer psychological interventions in a timely manner. All these measures help build better mental health for our employees.

In 2022, we held training on "managers' sensitivity to mental health management" in southeast, central and southwest China regions. The training increased supervisors' sensitivity to employee emotions and improved their communication skills, effectively helping them detect abnormal emotions in employees in time and preventing extreme events. A total of 175 people were trained, whose overall satisfaction reached 97.96%.



◎ Club Activities

We take multiple measures to enhance employees' centripetal force and improve their happiness in spare time. Each subsidiary has leisure and sports facilities for employees, such as basketball courts, football fields, tennis courts, libraries, and gymnasiums. We also give financial support to them to set up leisure clubs based on personal interests, organize a variety of activities such as ball games, long-distance running and fishing, and encourage them to attend cultural and sports activities held by the local community, so that they can relax and keep fit after work. In 2022, we set up the Employee Welfare Committee, Literature and Art Club, and Yoga Club, which attracted many employees and were well received.



Football



Basketball



Tennis Activities



Tug of war



Yoga



Long-distance running

Employee Development

Employee Training

We run a complete talent training system, and provide various training programs for employees in different posts based on their career development needs.

In addition to above training, the Human Resources Department joins hands with other departments to offer business ethics training, information security training and more, aiming to further enhance employee awareness and reduce operational risks. We also encourage employees to learn for life, offering various publications in reading rooms and organizing external training from time to time to help them obtain certificates and improve professional skills.

In 2022, we built a training database and began to link training with performance appraisal. This greatly stimulated employees' enthusiasm for training. All data on training delivered by the Company's subsidiaries are entered into the database, so that the Company can timely learn about training information, obtain data support for future work, and realize scientific digital management.

In order to improve the skills of future managers and meet their career needs, we have offered "Elite Class" training for many years in a row. The training programs are customized to cultivate more versatile talents with higher standards and more flexible teaching models. On November 11, 2022, the second session of Elite Class was successfully concluded. A total of 45 middle and high-level management talents were trained, who provide a strong impetus for the Company's future development.



Asia Cement (China) Education and Training System

Asia Cement (China) Employee training 2020-2022

	2020	2021	2022
Total hours of training	43,603	40,297	142,284
Total training hours for male employees	38,296	35,352	132,633
Total training hours for female employees	5,307	4,945	9,651

	2020	2021	2022
Total number of training opportunities	3,804	3,765	3,744
Total number of training opportunities for male employees	3,341	3,320	3,306
Total number of training opportunities for female employees	463	445	438

	2020	2021	2022
Average training hours per employee	11.5	10.7	38
Average training hours for male employees	11.5	10.6	40
Average training hours for female employees	11.5	11.1	22

Note: Training delivered by our subsidiaries in 2022 was entered into online system, so data here is more inclusive than previous years.

Employee Appraisal

To better motivate employees, tap their potentials, and strengthen their sense of competition and responsibility, we regularly appraise their performance every year in line with our Performance Evaluation Management Measures, and objectively and fairly evaluate their contributions to the Company. The appraisal covers work performance, attendance, work ability, learning, personal development and the like. Sustainability issues have been linked to the appraisal, such as occupational health and safety. We also introduced the Organizational Structure and Post Management Measures, and provide employees with multiple paths of career development based on integrated training and assessment.

In 2022, 204 employees were awarded, taking 6% of total number of employees, while the numbers for people who got promoted are 572 and 15.5%, respectively.

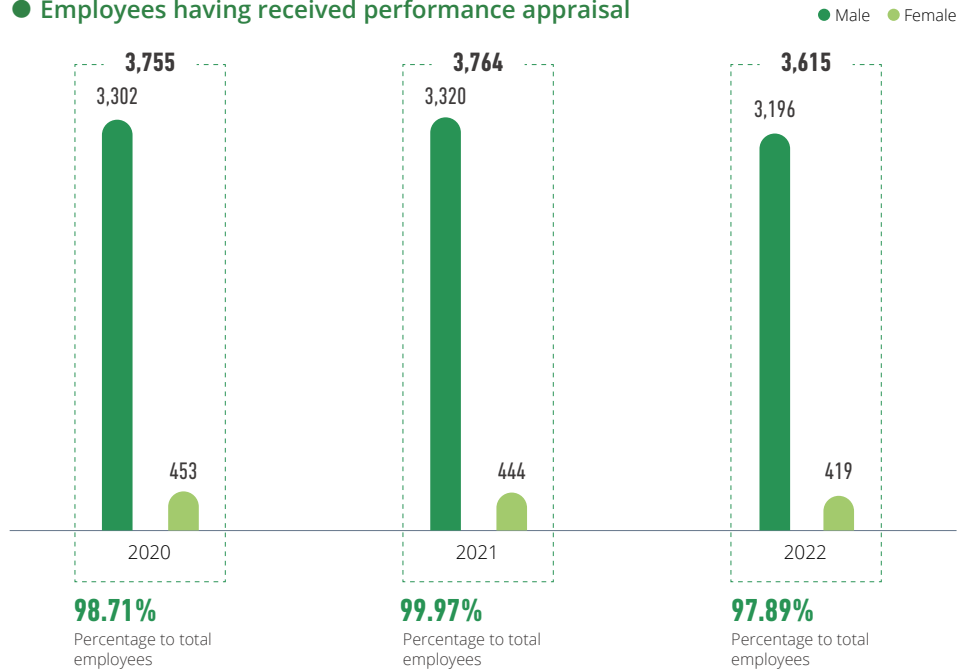
204

employees awarded

572

employees promoted

● Employees having received performance appraisal



Management

A low-level → middle-level → high-level career development path for managers, which is supported by targeted training and job rotations.



Professional skills

A career development path for technicians, engineers, managers, and specialists for professional and technical personnel, which is supported by targeted training and job rotations if they'd like to transfer to management position.

Occupational Health and Safety

Enhancing occupational health is an important manifestation of our "people-oriented" philosophy. We integrate the entrepreneurial spirit of "integrity, diligence, austerity, prudence, and innovation" into health and safety management, and strictly obey the Law of the People's Republic of China on Work Safety, the Law of the People's Republic of China on the Prevention and Control of Occupational Diseases, the Mine Safety Law of the People's Republic of China, etc. Supported by a sound management system, we prudently assess risks in each step, follow operating procedures and standards, and encourage all employees to attend training and develop the awareness of "safety first". Our managers conduct spot checks to prevent accidents. Besides, efforts are made to keep improving safety measures to protect the safety and health of our workers and create a safe working environment for them.

The Company actively promotes the standardization of safe production and the building of an occupational health and safety management system to improve occupational health and safety performance via systematic management. Our subsidiaries have developed their own occupational health and safety management system in the light of their business attributes. Some of them have obtained certificate on Level 2 enterprise for standardized safe production (construction materials, open-pit mines, transportation, and manufacturing of other products similar to cement), occupational health and safety management system (GB/T 45001:2020) and so on.

Based on our occupational safety and health management system, we have set up corresponding offices and recruited professionals in this regard. The safe production committee of subsidiaries, chaired by their general manager, consists of department heads, professionals and employee representatives (accounting for up to 73%). The committees hold meetings once a month to review safety and health policies, operating behaviors and safety hazards, put forward targeted suggestions, and deploy rectification according to resolutions.

● Mine safety management

We investigate safety issues, conduct emergency drills to ensure safety, and provide safety education. During the reporting period:

- **Jiangxi Ya Dong** offered 12 safety training sessions with a total of 1,282 person-time participants. It launched 4 major quarterly investigations of safety issues and several general investigations of safety issues in its mines. From January to November, 277 general safety issues were found and rectified. It also organized 3 emergency drills, including 1 special emergency drill (for oil depot fire on September 30, 2022) and 2 on-site disposal drills (for geological disaster on May 27, 2022 and heavy fog on November 24, 2022).
- **Sichuan Ya Dong** organized 28 safety training sessions. It launched 23 investigations and found 178 issues, all of which have been rectified. It also launched 1 comprehensive safety drill, 2 special emergency drills (for flood control and dumping sites) and 7 on-site disposal drills.
- **Huanggang Ya Dong** provided 39 safety training sessions. It carried out 12 investigations of safety issues, identified and rectified 690 general safety issues. It also launched 3 special emergency drills (for landslide, vehicle harms, etc.) and 2 on-site disposal drills.

● Contractor safety management

Asia Cement (China) highly values the occupational health and safety of contractors. We have not only incorporated contractors into safety management and treats them as our own employees, but has developed tailor-made three-level safety education and training for them, always promoting our "safety first" management philosophy. Through on-site audit and key coaching, we improve their safety performance to reduce occupational injuries. In addition to training and education, we also punish violators economically and forbid them to enter the plants.



Training on Occupational Health and Safety

● Transportation safety management

Transportation companies under Asia Cement (China) regularly launch fire safety drills and hazardous waste emergency drills. Employees are offered with annual physical examinations to prevent occupational diseases. Piecework or special vehicle drivers receive safety training on traffic regulations, safe driving, safe operation, emergency, etc. Every month. In addition, we conduct on-site safety inspections (8-15 times) and sign in NOTES to report the inspections and rectifications on monthly basis. We also hold safety meetings to discuss and study matters on safety production. During daily safety inspections, we replay the GPS tracks of vehicles for checking and sign daily monitoring reports in NOTES.

Enhancing employees' safety awareness is one of the fundamental factors for safe production. We have created a comprehensive talent training and incentive system and built a highly skillful occupational health and safety management team which is refreshed by professional talents from universities every year. Meanwhile, we choose outstanding employees to share their knowledge and experience on safe production so as to increase employee awareness. The training covers three-level safety induction, on-the-job safety, skills improvement, laws and regulations on occupational health and safety, qualification, etc. In addition, we convene safety accident/incident review meetings at the Company level on a regular basis, which is chaired by the general manager, deputy general manager or head of plant and attended by department heads and safety managers. They aim to promote safety concepts and make sure that regulations on safety management as well as safe production responsibility system are implemented.

Asia Cement (China) provided employees with a total of 91,657 hours of occupational health and safety training in 2022. The average training time for employees at integrated cement companies was 28.9 hours.

● Video training on safe production

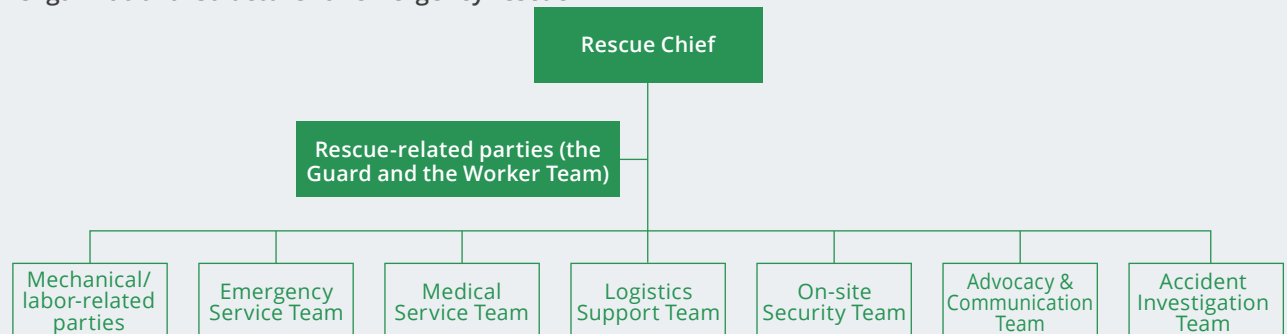
In order to improve safety training and sharpen employees' vigilance against safety accidents, we purchased 3D animation tutorial videos on the safety of both on-site and non-on-site employees, and organized video training. A total of 3,641 employees (accounting for 98.6% of total employees) attended the training. The satisfaction rate was 99.49%.



◎ Emergency Management

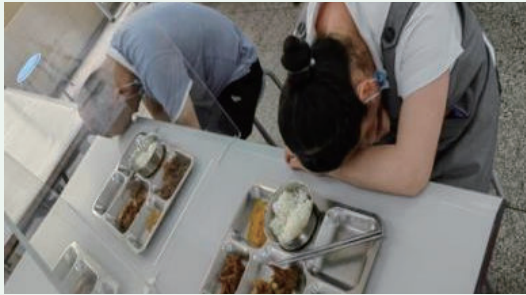
We have developed management documents including the Emergency Plan, the Special Plan, and the On-site Response Plan in line with the Regulation on Emergency Responses to Work Safety Accidents. Our emergency service teams organize various drills on fire, heat stroke, collapse when clearing cement storage tank, chemical leakage, etc. every year. This upgrades the self rescue and mutual rescue capabilities of employees when an emergency occurs, enhances the practical ability of emergency service teams, and improves the emergency management of the Company, being beneficial to the Company's property and employees' life.

Organizational structure for emergency rescue



● Emergency drill on food poisoning

On June 17, 2022, the Secretariat and the Environmental and Work Safety Office of Jiangxi Ya Dong jointly carried out an emergency drill on “kitchen food poisoning”, and shared rescue experience with colleagues.



● Emergency drill on diesel spill

In order to further strengthen employees’ awareness of chemical safety and improve their ability to deal with diesel spills, production team at Plant No.1 of Jiangxi Ya Dong launched an emergency drill on diesel spill in June 2022.



● Emergency drill on collapse when clearing cement storage tank by the stack affairs team

In June 2022, stack affairs team at Plant No.2 of Jiangxi Ya Dong carried out an emergency drill on collapse when clearing cement storage tank, in which emergency responses for such situations were improved. The drill further enhanced employees’ safety awareness and improved the Company’s organization, command, disposal, and collaboration capabilities.



◎ Prevention and Control of Occupational Hazards

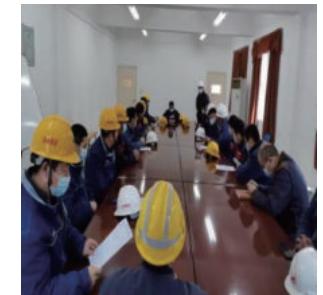
We assess occupational hazards such as noise, dust, and high temperature in production sites, and develop targeted safety and health operation systems and standards based on assessment results. We strictly manage the hazards in accordance with laws and regulations, and entrust qualified institutions to check occupational hazards each year, the results of which are disclosed on bulletin boards in workshops, canteens and our Intranet. In addition, we arrange physical exams for employees to maintain their occupational health as required by laws and regulations.

No occupational disease, as defined by related laws and regulations, was detected in Asia Cement (China) in 2022. That is, our occupational disease rate (ODR) was 0%.

In regard to occupational hazards, we give priority to source control, process improvement, and engineering control. We also strengthen supervision on workers, reduce personnel contact and provide workers with personal protection equipment (PPE). Comprehensive management measures help reduce the impact of occupational hazards to the lowest.



Physical exams to maintain occupational health



Mobilization for security inspection



□ We control noise from cement production lines by using low noise equipment as much as possible and adding sound insulation/noise reduction devices to it. At the same time, we improve production automation to reduce employees' contact with occupational hazards.



High temperature is one of the major occupational hazards of cement manufacturers. It mainly happens near preheating machines, cement rotary kilns, and cooling machines. We provide employees with PPE including protective clothing, high temperature safety shoes, and safety helmet. Each rest room for workers is equipped with air conditioner and shower stalls. Every year in summer, our canteen offers watermelon, mung bean soup, towel and other help to relieve heat for those who work in high temperature.



In response to high risks from working at height, electric shock, construction scaffolding, falling of objects, etc., we not only improve environment safety and provide employees with necessary PPE, but also establish their safety awareness through training and pre-operation risk analysis and announcement and carry out daily safety inspection and quarterly special safety inspection to effectively avoid accidents.

◎ Performance in Safe Production

Asia Cement (China) sets safe production goals and formulates performance assessment standards. The Environmental and Work Safety Office conducts regular inspections on all subsidiaries, and reports inspection results to the Work Safety Committee.

In 2022, we invested 95.9 million CNY in the occupational health and safety work in total. Our performance in safe production during the report period was as follows:

Indicators for work safety assessment of Asia Cement (China) in 2022	Safety level	Major occupational accidents	General occupational accidents	Total working hours	Frequency rate	Severity rate	Frequency severity index
Employees	Safe	0	16	9,741,600	1.64	51	0.29
Contractors	Safe	0	1	6,666,667	0.15	42	0.08

Note:
 1. Frequency rate (FR) = number of disability injuries × 1,000,000 / total working hours
 2. Severity rate (SR) = number of disability injury days × 100,000 / total working hours
 3. Frequency severity index (FSI) = square root of FR × SR / 1000 FSI

Giving Back to the Society

In a view to fulfill the mission of “to be a preferred partner for building sustainable green homeland”, Asia Cement (China) has been giving back to communities and supporting local education over the years. We integrate corporate development and social responsibility. Before building a new plant, we assess its impact on local communities. We also pay close attention to the demands of local communities, actively participate in their development and establish a good partnership with them, thus realizing common prosperity for the Company and the communities.

As a cement company, we actively engage in community building. In 2022, we donated more than 5,000 tons of cement, invested a great deal of manpower and material resources to take care of the disadvantaged, and supported educational and cultural programs. We gave back to the society at a value of nearly 10 million CNY in 2022, and will continue to respond to the needs of surrounding communities to do our bit in local development.



Line 1: 7-8 km



Community relations management case: upgrading of long-distance belt conveyor

Sichuan Ya Dong’s long-distance belt conveyor system covers 26.3 km, passing through many villages and rivers. It was built by the principle of not destroying original roads and ditches, and viaducts are adopted to minimize impacts on the life and travel of residents along it. Also, in order to avoid dust and noise, the 2nd phase of the conveyor is fully sealed.

From 2021 to 2022, we had invested another 15 million CNY to reduce noise produced by the belt by increasing the diameter and decreasing the rotation speed of rollers. Original $\phi 127$ low-noise rollers were replaced by $\phi 159$ low-noise rollers. This lowers rotation speed by 20%, and reduces noise at the height of 1 m by 9 Db and noise in residential areas to below 57 Db, which is lower than 60 Db stipulated in the Environment Noise Emission Standard for Social Living and accepted by local residents. Harmonious coexistence with local residents guarantees the operation of the conveyor system.



Line 2: Northwest Station



Jiangxi Ya Dong has been transforming the abandoned mechanical processing cold working site. Through improvement of the comprehensive utilization rate of land and continuous investment, it has gradually developed the site into an ecological agriculture sightseeing park -- Ya Dong Ecological Park -- that integrates modern agriculture, leisure tourism and 3D culture. The park is divided into four areas, including the green leisure area, agriculture sightseeing area, fruit park, and culture area, all of which are open to the public.

The ecological effect and function of Ya Dong Ecological Park was significantly improved by adjusting the planning and layout of the fruits & vegetables areas and the vegetation in the park in 2022. A total of over 110,000 kg of pollution-free fruits and vegetables were provided for our canteens, helping reduce the food cost and improve the food quality.

During the report period, the park received 25 visits from provincial and municipal government departments and various large enterprises and groups around the park, which were all well praised by the visitor. At the same time, we hosted the 2nd "Bring Your Kids to Work Day" with around 160 participants gathering at the park to spend quality time with their family through a series of interesting events.

Ya Dong Ecological Park, which creates new jobs for local communities and provides a green leisure place for the Company's employees as well as surrounding residents, has become one of the highlights contributing to the success of Jiangxi Ya Dong company in obtaining the national green mining area certification.



Highlights of giving back to the society in 2022



1,198,200 CNY

Community building



7,430,500 CNY

Care for vulnerable groups



41,700 CNY

Support for education



1,266,100 CNY

Other

Independent Assurance Statement

The target stakeholders of this statement: Government Non-Government Organization Clients
Suppliers Investors Customers
Other stakeholders:

Responsibilities of the reporting organization and assurance provider: CTI certification Co., Ltd. (hereinafter referred to as "CTI") is entrusted by Asia Cement (China) Holdings Corporation (hereinafter referred to as the "Reporting Organization") to assure the sustainable development information disclosed in its 2022 Corporate Social Responsibility Report (hereinafter referred to as the "Report"). The purpose of this process is to provide reasonable assurance for the sustainable information disclosed by the reporting organization, and to provide confidence for stakeholders to make decisions based on the information provided by the reporting organization.

This independent assurance statement is available in both Chinese and English versions. In case of any differences, the Chinese version shall prevail.

Assurance Standard: AA1000 Assurance Standard (v3)

Scope: Assure the content, background, and application of the report, as well as the quality of sustainable development information presented during the reporting period;

- Evaluate the compliance of the report with the AA1000 Accountability Principles (2018) in terms of inclusivity, materiality, responsiveness, and impact;
- Review the sustainability initiatives, practices, implementation, maintenance, and performance information described in the report;
- Assess the reporting mechanism of sustainability information and its consistency with applicable reporting standards;
- Evaluate the applicability and appropriateness of data collection, quantification, and data management included in the report.

Assurance type: Type 1

Subject matters and depth of review: **Subject Matters**
Degree of compliance with AA1000 Accountability Principles (2018)

Level of Assurance
Moderate Level

1/4



Tel: 400-830-5800 / 0755-82720533
 Web: www.cti-cert.org
 CTI Mail: www.ctimail.com
 CTI Academy: www.a.ctimail.com
 Company: one A BF CTI Building, No.4 Liu Xian San Road,
 Address: Xin'an Street, Bao'an District, Shenzhen, China.



Reference to criteria used: GHG Protocol GRI SASB
ISO 14064-1:2018 IFRS UNSDG
TCFD IIRC HKEX ESG Guidelines
Others: GCCA

Sources of Disclosures Covered: Name of report: 2022 Corporate Social Responsibility Report
 Source: Reporting Organization

Methodology: CTI formulated an engagement plan based on the assurance process and conducted the engagement according to the plan. CTI conducted inspections with a professional skepticism attitude, and the assurance activities included the following procedures:

- Based on the process of sampling, understanding, testing and judging the degree to which the reporting organization adheres to the AA1000 Accountability Principles, an evaluation is made of the degree to which the reporting organization adheres to the AA1000 Accountability Principles;
- Conducting management interviews on the effectiveness of the processes that have an impact, including the company's top management, department managers, and managers responsible for sustainable development;
- Based on sampling, reviewing and inspecting the management practices, business processes, and evidence collection processes of the reporting organization;
- Collecting and assessing documentary evidence and management representations that support adherence to the AA1000 Accountability Principles.

Conclusions: According to the AA1000 Assurance Standard (v3), CTI conducted a Type 1 assurance on the sustainable development information disclosed in the 2022 Corporate Social Responsibility Report prepared by the reporting organization. According to the requirements of the AA1000 Accountability Principles (2018), the conclusions are as follows:

The conformity of reporting organization and the report against AA1000 Accountability Principles (2018)

Inclusivity: CTI did not find any deviation between the report and the inclusive principle of AA1000 Accountability Principles (2018). The reporting organization regularly identifies and participates stakeholders, incorporating the concerns of key stakeholders into important considerations for the company's sustainable development. The report meets the requirements of inclusivity.

2/4



Tel: 400-830-5800 / 0755-82720533
 Web: www.cti-cert.org
 CTI Mail: www.ctimail.com
 CTI Academy: www.a.ctimail.com
 Company: one A BF CTI Building, No.4 Liu Xian San Road,
 Address: Xin'an Street, Bao'an District, Shenzhen, China.



Materiality: According to the AA1000 Accountability Principles (2018), CTI conducted a substantive evaluation of various aspects of the reporting organization, both internally and externally. CTI believes that the report proposes various issues and boundaries of different business operations of the reporting organization, and that the report meets substantive requirements.

Responsiveness: After the assurance of CTI, it is believed that the reporting organization's response to major issues has been defined and reflected in the report. The report meets the responsiveness requirements of the AA1000 Accountability Principles (2018).

Impact: The reporting organization has clear procedures to regularly monitor and measure their sustainable development impact, and has professionals to effectively promote the sustainable development agenda. During the assurance process, CTI did not find any situations or issues that had an impact on the ecosystem and surrounding infrastructure, and the reporting organization met the impact requirements of the AA1000 Accountability Principles (2018).

Limitations and mitigation methods

The limitations and mitigation methods of CTI in the assurance process:

- CTI did not conduct assurance on economic performance indicators, and only confirmed the accuracy of economic performance indicators through the verification of audited financial reports;
- CTI did not verify sustainability performance indicators. It only confirmed through interviews and factual evidence that all sustainability performance indicators have clear data sources;
- CTI was unable to provide assurance opinions on the opinions, beliefs, inferences, wishes, expectations, future intentions, and other viewpoints described in the report. However, CTI conducted assurance and issued assurance opinions on both quantitative and non-quantitative factual evidence supporting the above viewpoints;
- CTI will further focus on improving and enhancing the disclosure and management of ESG report information based on the purpose of continuous improvement in future assurance engagement.

Competence and Independence of CTI

Established in 2004, CTI has been approved by the China National Certification and Accreditation Administration (CNCA) and accredited by the China National Accreditation Service for Conformity Assessment (CNAS). It is an independent and impartial third-party professional certification institution with extensive experience in conducting management system certification for quality, environment, safety, occupational health and energy, and validation and verification of environmental information such as greenhouse gases.

3/4

Tel: 400-830-5800 / 0755-82720533
Web: www.cti-cert.org
CTI Mail: www.ctimail.com
CTI Academy: www.a.ctimail.com
Company: one A 8F CTI Building, No.4 Liu Xian San Road,
Address: Xin'an Street, Bao'an District, Shenzhen, China.

AA1000
Licensed Assurance Provider
000-669

Except for the assurance and verification of sustainability data and the report, no member of the assurance team has any business relationship with Asia Cement (China) Holdings Corporation its directors, executives, or department managers. After the internal impartiality assessment conducted by CTI, we believe that there is no conflict of interest in this assurance engagement.

Assurance Team Leader	Technical Reviewer	Signed by
Du Wenjun	Lin Wu	General Manager: Zhou Lu

AA1000
Licensed Report
000-669/V3-2FW6C

CTI Certification Co., Ltd
Issued on: April 22, 2023
Place of issuance: Beijing

4/4

Tel: 400-830-5800 / 0755-82720533
Web: www.cti-cert.org
CTI Mail: www.ctimail.com
CTI Academy: www.a.ctimail.com
Company: one A 8F CTI Building, No.4 Liu Xian San Road,
Address: Xin'an Street, Bao'an District, Shenzhen, China.

AA1000
Licensed Assurance Provider
000-669

Appendices

© Appendix 1. Asia Cement (China)'s CSR Performance in 2022

1.Environmental performance

Entity	Energy used	Unit	2020	2021	2022
Integrated cement companies	Coal	GJ	75,809,581	77,665,319	74,977,199
	Diesel fuel	GJ	299,491	323,475	221,816
	Biomass fuel	GJ	/	45,166	24,323
	Grid electricity	GJ	6,174,421	5,854,567	5,601,384
	Total energy consumed	GJ	82,283,493	83,888,527	80,824,721
Ready-mixed concrete companies	Diesel fuel	GJ	5,419	3,366	5,043
	Gasoline	GJ	/	/	245
	Grid electricity	GJ	10,101	8,595	35,108
	Total energy consumed	GJ	15,520	11,961	40,396
Cement grinding companies	Coal	GJ	258,792	163,911	/
	Diesel fuel	GJ	918	39,829	3,585
	Biomass fuel	GJ	/	/	11,216
	Natural gas	GJ	/	/	147,951
	Grid electricity	GJ	486,361	434,988	342,693
Total energy consumed	GJ	746,071	638,728	505,445	

Entity	Energy used	Unit	2020	2021	2022
Transportation companies	Natural gas	GJ	12,570	12,444	17,358
	Gasoline	GJ	295	278	95
	Diesel fuel	GJ	110,528	115,815	80,214
	Grid electricity	GJ	1,438	1,319	1,862
	Total energy consumed	GJ	124,831	129,856	99,529
Total energy consumed	GJ	83,169,915	84,669,071	81,470,091	
Energy consumption intensity	GJ/10,000 CNY output		76.84	72.02	84.74
Energy consumed per unit of cement	GJ/ton cement		3.40	3.34	3.64

Note: The units were converted in accordance with the General Rules for Calculation of the Comprehensive Energy Consumption (GB/T2589-2020).

	Unit	2020	2021	2022
Power generated from waste heat	GJ	2,210,573.74	2,272,243.39	2,261,048.72
Proportion to total electricity (energy consumed)	%	27.09	27.23	28.74

Entity		Carbon emissions per unit of clinker (tCO ₂ /t)	Carbon emissions per unit of cement (tCO ₂ /t)
Integrated cement company	Jiangxi Ya Dong	0.843	0.736
	Hubei Ya Dong	0.805	0.668
	Huanggang Ya Dong	0.815	0.684
	Sichuan Ya Dong	0.839	0.679
	Sichuan Lan Feng	0.868	0.702
	Wuhan Ya Xin	0.859	0.690
Cement grinding company	Nanchang Ya Dong	-	0.024
	Wuhan Ya Dong	-	0.019
	Yangzhou Ya Dong	-	0.021

Note: Grid electricity emission factor was calculated by weighted in accordance with the Notice on Key Tasks for Enterprise Greenhouse Gas Emission Reporting and Management in 2022.

Entity	Company	Unit	NO _x	SO ₂	Particulate matters	
					Kiln head	Kiln tail
Integrated cement company	Jiangxi Ya Dong	mg/m ³	133.90	10.90	3.80	3.20
	Huanggang Ya Dong	mg/m ³	300.43	26.48	3.51	6.57
	Hubei Ya Dong	mg/m ³	189.33	12.49	2.10	2.56
	Wuhan Ya Xin	mg/m ³	138.50	8.00	7.53	7.58
	Sichuan Ya Dong	mg/m ³	59.49	3.14	1.26	1.24
	Sichuan Lan Feng	mg/m ³	64.04	2.73	3.53	0.81

Entity	Company	Unit	NO _x	SO ₂	Particulate matters	
					Kiln head	Kiln tail
Cement grinding company	Nanchang Ya Dong	mg/m ³	11.28	5.72	-	-
	Yangzhou Ya Dong	mg/m ³	-	-	-	-
	Wuhan Ya Dong	mg/m ³	-	-	-	-

Entity	Atmospheric pollutants	Unit	2020	2021	2022	
Integrated cement companies	NO _x	t	10,032.62	9,405.37	6,616.65	
	SO ₂	t	935.00	698.74	622.10	
	Particulate matters	t	483.25	389.95	238.83	
	Soot	Kiln head	mg/m ³	5.00	4.20	3.62
		Kiln tail	mg/m ³	4.80	4.80	3.66

Entity	Atmospheric pollutants	Unit	2020	2021	2022
Cement grinding companies	NO _x	t	102.91	103.81	8.97
	SO ₂	t	3.71	18.23	4.32
	Particulate matters	t	10.97	16.16	13.86
	Soot	mg/m ³	19.77	17.31	6.45

Entity	Material	Unit	Consumption
Integrated cement companies	Limestone	t	31,808,428
	Clay	t	781,104
	Sandstone	t	3,041,464
	Industrial waste	t	4,036,380
	Slag	t	718,927
	Crumbs	t	698,063
	Co-processing materials	t	73,109
	Other materials	t	360,799
	Total	t	41,518,274
Cement grinding companies	Limestone	t	47,878
	Industrial waste	t	461,606
	Slag	t	335,151
	Total	t	844,635

Entity	Water balance	Unit	2020	2021	2022
Integrated cement companies	Surface water	t	7,930,422	8,051,780	7,077,608
	Groundwater	t	25,023	428	130
	Municipal water	t	296,077	350,721	292,208
	Rainwater	t	306,643	398,316	437,795
	Total water withdrawn	t	8,558,165	8,801,245	7,807,741
	Total water drained	t	86,366	87,618	-

Entity	Water balance	Unit	2020	2021	2022
Integrated cement companies	Total water circulated	t	216,722,922	216,721,105	133,171,862
	Recycling rate	%	96	96	95
Ready-mixed concrete companies	Surface water	t	28,200	22,000	56,827
	Groundwater	t	77,087	37,916	40,497
	Municipal water	t	117,551	92,536	22,592
	Rainwater	t	35,108	18,366	23,151
	Total water withdrawn	t	257,946	170,818	143,067
	Total water drained	t	7,014	8,777	1,330
Cement grinding companies	Total water circulated	t	44,329	45,477	27,651
	Recycling rate	%	15	21	16
	Municipal water	t	95,630	71,526	58,581
	Groundwater	t	/	/	4,636
	Total water withdrawn	t	95,630	71,526	63,217
	Total water drained	t	18,295	24,773	-
Transportation companies	Total water circulated	t	28,001	22,743	52,987
	Recycling rate	%	23	24	46
	Municipal water	t	19,523	15,663	7,732
	Groundwater	t	/	/	5,000
Transportation companies	Total water withdrawn	t	19,523	15,663	12,732
	Total water drained	t	5,000	5,000	-

2022	Unit	Hazardous solid waste	Non-hazardous solid waste
Total generated	t	2,463.64	13,836.18
Diverted from disposal	t	2,461.97	13,172.08
Directed to Disposal	t	1.67	664.10
Treated rate	%	99.93	95.20

Note: Energy recovered from incineration was classified into "diverted from disposal".

2.Social performance

		2020	2021	2022
Full-time employees	Male	3,341	3,320	3,264
	Female	463	445	429
	Total	3,804	3,765	3,693
Number of Labor Dispatch Workers	Male	52	52	53
	Female	243	229	228
	Total	295	281	281
Disabled employees		22	24	25

Diversity of full-time employees		2020	2021	2022			
By ethnic group	Han employees	3,792	3,755	3,677			
	Ethnic minority employees	12	10	16			
By age	<30	697	544	400			
	30 (including)-50	2,857	2,926	2,908			
	≥ 50	250	295	385			
By rank		Male	Female	Male	Female	Male	Female
	Senior employees	82	2	86	2	82	2
	Mid-level employees	428	62	462	74	485	79
	Junior employees	2,831	399	2,772	369	2,697	348

Local employment*		2020	2021	2022			
Local executives		12	14	16			
Local employees	Gender	Male	Female	Male	Female	Male	Female
	Number	2,559	323	2,547	306	2,428	270
	Total	2,882	2,853	2,698			
	Percentage of full-time employees	75.8%	75.8%	73.1%			

Note: Local means employees' household is registered in the city where the Company is located.

New employee hires during the reporting period	Aged 30 and below		Aged 30-50		Aged 50 and above		Total		
	Male	Female	Male	Female	Male	Female	Male	Female	
	21	1	29	2	1	0	51	3	
Employment rate (total number of new full-time employees during the reporting period/total number of full-time employees on the job at the end of the reporting period)								1.46%	

Employee resignation during the reporting period	Aged 30 and below		Aged 30-50		Aged 50 and above		Total		
	Male	Female	Male	Female	Male	Female	Male	Female	
	27	3	58	7	22	9	107	19	
Employee turnover rate (total number of full-time employees who resigned during the reporting period/total number of full-time employees on the job at the end of the reporting period)								3.41%	

Ratio of female full-pay relevant employees to male full-pay relevant employees at Asia Cement (China)			
Employee category	2020	2021	2022
Managerial employees	86.4%	84.3%	85.4%
Business affairs employees (non-managerial)	96.5%	94.3%	93.6%
Factory affairs employees (non-managerial)	96.3%	99.5%	100.1%
Administrative employees (non-managerial)	97.6%	98.6%	98.4%

Employees having taken parental leave	
Total	540
Male employees	478
Female employees	62

Maternity leave and paternity leave taken by employees at Asia Cement (China)			
Item	2020	2021	2022
Total employees taking maternity leave or paternity leave	169	155	119
Male employees taking paternity leave	137	123	95
Female employees taking maternity leave	32	32	24
Total employees returning to work after a leave	166	155	119
Male employees returning to work after a leave	137	123	95
Female employees returning to work after a leave	29	32	24
Return rate	98.22%	100%	100%
Total employees who have stayed for 12 months after returning to work	214	153	148
Male employees who have stayed for 12 months after returning to work	186	122	118
Female employees who have stayed for 12 months after returning to work	28	31	30
Retention rate	97.72%	92.17%	95.48%

Note:
 1. Return rate = total number of employees returning to work after a leave / total number of employees taking maternity leave or paternity leave
 2. Retention rate = total number of employees who have stayed for 12 months after returning to work / total number of employees who have returned to work after a leave

Employee training			
	2020	2021	2022
Total hours of training	43,603	40,297	142,284
Total training hours for male employees	38,296	35,352	132,633
Total training hours for female employees	5,307	4,945	9,651

Employee training	2020	2021	2022
Total number of training opportunities	3,804	3,765	3,744
Total number of training opportunities for male employees	3,341	3,320	3,306
Total number of training opportunities for female employees	463	445	438
Average training hours per employee	11.5	10.7	38
Average training hours for male employees	11.5	10.6	40
Average training hours for female employees	11.5	11.1	22

Note: Training delivered by our subsidiaries in 2022 was entered into online system, so data here is more inclusive than previous years.

Employees having received performance appraisal	2020	2021	2022
Male	3,302	3,320	3,196
Female	453	444	419
Total	3,755	3,764	3,615
Percentage to total employees	98.71%	99.97%	97.89%

Indicators for work safety assessment of Asia Cement (China) in 2022	Safety level	Major occupational accidents	General occupational accidents	Total working hours	Frequency rate	Severity rate	Frequency severity index
Employees	Safe	0	16	9,741,600	1.64	51	0.29
Contractors	Safe	0	1	6,666,667	0.15	42	0.08

Note:
 1. Frequency rate (FR) = number of disability injuries × 1,000,000/total working hours
 2. Severity rate (SR)=number of disability injury days×1000000/total working hours
 3. Frequency severity index (FSI) =square root of FR×SR/1000 FSI

Social Giving Back	Amount	Unit
Community building	1,198,200	CNY
Care for vulnerable groups	7,430,500	CNY
Support for education	41,700	CNY
Other	1,266,100	CNY

3. Corporate governance performance

Performance in Business Ethics Management in 2022

Coverage of communication about anti-corruption policies with employees, members of governance bodies and suppliers	100%
Coverage of anti-corruption training for employees	100%
Legal proceedings against business ethics violations by employees or the Company	0
Partnership termination due to confirmed business ethics violations	0

Performance in partner management in 2022

Total number of suppliers	1,561
Number of new suppliers	460
Local purchasing rate	35%
Percentage of new suppliers selected using sustainability criteria (such as social responsibility)	100%
Percentage of suppliers having conducted environmental and social impact assessments	100%
Number of suppliers terminated due to actual or potential significant negative environmental impacts	0
Number of suppliers terminated due to actual or potential significant negative environmental impacts	0

Performance in customer management in 2022

Customer satisfaction	97	%
Number of complaints	33	/
Complaint handling rate	100	%
Number of incidents of product/service information or labeling violations	0	/
Number of marketing-related violations	0	/
Number of major customer information leaks	0	/
Complaints about customer privacy violations	0	/

Performance in technological innovation in 2022

R&D investment	3.22 million CNY
Number of valid patents	37
Number of certified green products	10
Product recalls or violations caused by quality/safety issues	0

◎ Appendix 2. Stakeholder Engagement Mechanism

We attach great importance to communication with stakeholders, listen to their opinions and suggestions on our sustainable development practices, and respond to their appeals and expectations in a timely, rapid and effective manner upon communication with them through transparent and effective channel. We also timely adjust and improve our sustainable development plans and practices based on their feedback.

Stakeholder identity	Topics of concern	Main communication channels
Employees	<ul style="list-style-type: none"> • Legal employment • Employee rights protection • Diversity and equal opportunity • Training and personal development • Occupational health and safety 	<ul style="list-style-type: none"> • Training and performance appraisal • Complaints and feedback • Labor union • Employee handbook, Electronic bulletin boards • Employee satisfaction survey
Shareholders and investors	<ul style="list-style-type: none"> • Economic performance • Risk management • Compliance operations • Management structure 	<ul style="list-style-type: none"> • Shareholders' meetings • Investor page on company website • Information disclosure (annual reports, social responsibility reports) • Daily communication (phone calls, emails and meetings)
Clients and partners	<ul style="list-style-type: none"> • Product quality and safety • Customer service • Information security • Digital transformation 	<ul style="list-style-type: none"> • Satisfaction survey • Product quality certification and inspection reports • Laboratory cooperation • Feedback page on company website • Daily communication (phone calls, emails and meetings)
Suppliers and contractors	<ul style="list-style-type: none"> • Responsible procuring • Supplier management • Business ethics 	<ul style="list-style-type: none"> • Supplier appraisal • Supplier management platforms • Questionnaire on suppliers • Daily communication (phone calls, emails and meetings)
Government and regulatory agencies	<ul style="list-style-type: none"> • Economic performance • Environmental compliance 	<ul style="list-style-type: none"> • Information disclosure • Regulatory briefing, seminars or symposiums • Official documents • Inspection
Non-government organizations	<ul style="list-style-type: none"> • Response to climate change • Green mines • Energy conservation 	<ul style="list-style-type: none"> • Company website • Participation in NGO activities • Seminars/symposiums
Industry associations and companies in the same industry	<ul style="list-style-type: none"> • Economic performance • Green products 	<ul style="list-style-type: none"> • Exhibitions and seminars • Industry conferences • Daily communication (phone calls, emails and meetings)
Communities and public media	<ul style="list-style-type: none"> • Community relations • Mine management • Pollution prevention • Charity 	<ul style="list-style-type: none"> • Complaints and feedback • Charitable activities • Community resident activities • Company website • Daily communication (phone calls, emails and meetings)

◎ Appendix 3: Index tables

GRI Standards Index

Statement of use	Asia Cement (China) Holdings Corporation has reported in accordance with the GRI Standards for the period from 1st January 2022 to 31st December 2022.
GRI 1 used	GRI 1: Foundation 2021

	DISCLOSURE	Page
General disclosure		
GRI 2: General Disclosures 2021	2-1 Organizational details	7
	2-2 Entities included in the organization's sustainability reporting	1
	2-3 Reporting period, frequency and contact point	2
	2-4 Restatements of information	/
	2-5 External assurance	58
	2-6 Activities, value chain and other business relationships	9
	2-7 Employees	46
	2-8 Workers who are not employees	46
	2-9 Governance structure and composition	17
	2-10 Nomination and selection of the highest governance body	17
	2-11 Chair of the highest governance body	17
	2-12 Role of the highest governance body in overseeing the management of impacts	17
	2-13 Delegation of responsibility for managing impacts	13
	2-14 Role of the highest governance body in sustainability reporting	13
	2-15 Conflicts of interest	17

	DISCLOSURE	Page
GRI 2: General Disclosures 2021	2-16 Communication of critical concerns	17
	2-17 Collective knowledge of the highest governance body	19
	2-18 Evaluation of the performance of the highest governance body	/
	2-19 Remuneration policies	/
	2-20 Process to determine remuneration	/
	2-21 Annual total compensation ratio	/
	2-22 Statement on sustainable development strategy	14
	2-23 Policy commitments	45
	2-24 Embedding policy commitments	45
	2-25 Processes to remediate negative impacts	20
GRI 3: Material Topics 2021	2-26 Mechanisms for seeking advice and raising concerns	15
	2-27 Compliance with laws and regulations	17
	2-28 Membership associations	11
	2-29 Approach to stakeholder engagement	67
	2-30 Collective bargaining agreements	/
GRI 3: Material Topics 2021	3-1 Process to determine material topics	15
	3-2 List of material topics	16
Material topics		
GRI 201: Economic Performance 2016	3-3 Management of material topics	/

	DISCLOSURE	Page
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	12
	201-2 Financial implications and other risks and opportunities due to climate change	/
	201-3 Defined benefit plan obligations and other retirement plans	47
	201-4 Financial assistance received from government	/
GRI 202: Market Presence 2016	3-3 Management of material topics	47
	202-1 Ratios of standard entry level wage by gender compared to local minimum wage	47
	202-2 Proportion of senior management hired from the local community	46
GRI 203: Indirect Economic Impacts 2016	3-3 Management of material topics	56
	203-1 Infrastructure investments and services supported	56
	203-2 Significant indirect economic impacts	57
GRI 204: Procurement Practices 2016	3-3 Management of material topics	24
	204-1 Proportion of spending on local suppliers	24
GRI 205: Anti-corruption 2016	3-3 Management of material topics	19
	205-1 Operations assessed for risks related to corruption	19
	205-2 Communication and training about anti-corruption policies and procedures	19
	205-3 Confirmed incidents of corruption and actions taken	19
GRI 206: Anti-competitive Behavior 2016	3-3 Management of material topics	19
	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	19
GRI 207: Tax 2019	3-3 Management of material topics	/
	207-1 Approach to tax	/
	207-2 Tax governance, control, and risk management	/
	207-3 Stakeholder engagement and management of concerns related to tax	/

	DISCLOSURE	Page
GRI 207: Tax 2019	207-4 Country-by-country reporting	/
	3-3 Management of material topics	23
GRI 301: Materials 2016	301-1 Materials used by weight or volume	23
	301-2 Recycled input materials used	23
	301-3 Reclaimed products and their packaging materials	23
GRI 302: Energy 2016	3-3 Management of material topics	31
	302-1 Energy consumption within the organization	32
	302-2 Energy consumption outside of the organization	32
	302-3 Energy intensity	32
	302-4 Reduction of energy consumption	32
GRI 303: Water and Effluents 2018	302-5 Reductions in energy requirements of products and services	/
	3-3 Management of material topics	35
	303-1 Interactions with water as a shared resource	35
	303-2 Management of water discharge-related impacts	35
	303-3 Water withdrawal	36
GRI 304: Biodiversity 2016	303-4 Water discharge	36
	303-5 Water consumption	/
	3-3 Management of material topics	43
	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	/
GRI 304: Biodiversity 2016	304-2 Significant impacts of activities, products and services on biodiversity	43
	304-3 Habitats protected or restored	43
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	/

	DISCLOSURE	Page
GRI 305: Emissions 2016	3-3 Management of material topics	33
	305-1 Direct (Scope 1) GHG emissions	33
	305-2 Energy indirect (Scope 2) GHG emissions	33
	305-3 Other indirect (Scope 3) GHG emissions	/
	305-4 GHG emissions intensity	33
	305-5 Reduction of GHG emissions	33
	305-6 Emissions of ozone-depleting substances (ODS)	/
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	38
GRI 306: Waste 2020	3-3 Management of material topics	39
	306-1 Waste generation and significant waste-related impacts	39
	306-2 Management of significant waste-related impacts	39
	306-3 Waste generated	39
	306-4 Waste diverted from disposal	39
	306-5 Waste directed to disposal	39
GRI 308: Supplier Environmental Assessment 2016	3-3 Management of material topics	24
	308-1 New suppliers that were screened using environmental criteria	24
	308-2 Negative environmental impacts in the supply chain and actions taken	24
GRI 401: Employment 2016	3-3 Management of material topics	45
	401-1 New employee hires and employee turnover	46
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	47
	401-3 Parental leave	48

	DISCLOSURE	Page
GRI 402: Labor/ Management Relations 2016	3-3 Management of material topics	45
	402-1 Minimum notice periods regarding operational changes	/
GRI 403: Occupational Health and Safety 2018	3-3 Management of material topics	52
	403-1 Occupational health and safety management system	52
	403-2 Hazard identification, risk assessment, and incident investigation	55
	403-3 Occupational health services	55
	403-4 Worker participation, consultation, and communication on occupational health and safety	53
	403-5 Worker training on occupational health and safety	53
	403-6 Promotion of worker health	55
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	55
	403-8 Workers covered by an occupational health and safety management system	53
	403-9 Work-related injuries	55
403-10 Work-related ill health	55	
GRI 404: Training and Education 2016	3-3 Management of material topics	50
	404-1 Average hours of training per year per employee	50
	404-2 Programs for upgrading employee skills and transition assistance programs	51
GRI 405: Diversity and Equal Opportunity 2016	404-3 Percentage of employees receiving regular performance and career development reviews	51
	3-3 Management of material topics	45
	405-1 Diversity of governance bodies and employees	46
	405-2 Ratio of basic salary and remuneration of women to men	47

DISCLOSURE		Page
GRI 406: Non-discrimination 2016	3-3 Management of material topics	45
	406-1 Incidents of discrimination and corrective actions taken	45
GRI 407: Freedom of Association and Collective Bargaining 2016	3-3 Management of material topics	45
	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	/
GRI 408: Child Labor 2016	3-3 Management of material topics	45
	408-1 Operations and suppliers at significant risk for incidents of child labor	45
GRI 409: Forced or Compulsory Labor 2016	3-3 Management of material topics	45
	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	/
GRI 410: Security Practices 2016	3-3 Management of material topics	/
	410-1 Security personnel trained in human rights policies or procedures	/
GRI 411: Rights of Indigenous Peoples 2016	3-3 Management of material topics	/
	411-1 Incidents of violations involving rights of indigenous peoples	/
	3-3 Management of material topics	56
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	56
	413-2 Operations with significant actual and potential negative impacts on local communities	56
GRI 414: Supplier Social Assessment 2016	3-3 Management of material topics	24
	414-1 New suppliers that were screened using social criteria	24
	414-2 Negative social impacts in the supply chain and actions taken	24

DISCLOSURE		Page
GRI 415: Public Policy 2016	3-3 Management of material topics	/
	415-1 Political contributions	/
	3-3 Management of material topics	25
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	25
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	25
	3-3 Management of material topics	27
	417-1 Requirements for product and service information and labeling	27
GRI 417: Marketing and Labeling 2016	417-2 Incidents of non-compliance concerning product and service information and labeling	27
	417-3 Incidents of non-compliance concerning marketing communications	27
	3-3 Management of material topics	27
GRI 418: Customer Privacy 2016	3-3 Management of material topics	27
	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	27

Hong Kong Stock Exchange ESG Reporting Guide

Index	Subject Areas, Aspects, General Disclosures and KPIs	Pages
A.Environment		
	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 nonhazardous waste. Note: Air emissions include NO _x , SO _x , and other pollutants regulated under national laws and regulations. Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride. Hazardous wastes are those defined by national regulations.	33,38,39
Aspect A1: Emissions	KPI A1.1 The types of emissions and respective emissions data	33,38,39
	KPI A1.2 Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	33
	KPI A1.3 Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	39
	KPI A1.4 Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	39
	KPI A1.5 Description of emissions target(s) set and steps taken to achieve them.	31,34
	KPI A1.6 Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	23,39
	General Disclosure Policies on the efficient use of resources, including energy, water and other raw materials. Note: Resources may be used in production, in storage, transportation, in buildings, electronic equipment, etc.	31,35
Aspect A2: Use of Resources	KPI A2.1 Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (in thousand kWh) and intensity (e.g. per unit of production volume, per facility).	32
	KPI A2.2 Water consumption in total and intensity (e.g. per unit of production volume, per facility).	32
	KPI A2.3 Description of energy use efficiency target(s) set and steps taken to achieve them.	31
	KPI A2.4 Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	35
	KPI A2.5 Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	N/A

Index	Subject Areas, Aspects, General Disclosures and KPIs	Pages
Aspect A3: The Environment and Natural Resources	General Disclosure Policies on minimising the issuer's significant impacts on the environment and natural resources.	30
	KPI A3.1 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	30-39
Aspect A4: Climate Change	General Disclosure Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.	31
	KPI A4.1 Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	31,34
B.Social		
Employment and Labour Practices		
Aspect 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	45
	KPI B1.1 Total workforce by gender, employment type (for example, full- or parttime), age group and geographical region.	46
	KPI B1.2 Employee turnover rate by gender, age group and geographical region.	46
Aspect 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.	52
	KPI B2.1 Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	55
	KPI B2.2 Lost days due to work injury.	55
	KPI B2.3 Description of occupational health and safety measures adopted, and how they are implemented and monitored.	52-55
Aspect B3: Development and Training	General Disclosure Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities. Note: Training refers to vocational training. It may include internal and external courses paid by the employer.	50

Index	Subject Areas, Aspects, General Disclosures and KPIs	Pages
Aspect B3: Development and Training	KPI B3.1 The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	50
	KPI B3.2 The average training hours completed per employee by gender and employee category.	50
Aspect 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.	45
	KPI B4.1 Description of measures to review employment practices to avoid child and forced labour.	45
	KPI B4.2 Description of steps taken to eliminate such practices when discovered.	45
Operating Practices		
Aspect B5: Supply Chain Management	General Disclosure Policies on managing environmental and social risks of the supply chain.	24
	KPI B5.1 Number of suppliers by geographical region.	24
	KPI B5.2 Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	24
	KPI B5.3 Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	24
	KPI B5.4 Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	24
Aspect 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.	25,27
	KPI B6.1 Percentage of total products sold or shipped subject to recalls for safety and health reasons.	25
	KPI B6.2 Number of products and service related complaints received and how they are dealt with.	27
	KPI B6.3 Description of practices relating to observing and protecting intellectual property rights.	26

Index	Subject Areas, Aspects, General Disclosures and KPIs	Pages
Aspect B6: Product Responsibility	KPI B6.4 Description of quality assurance process and recall procedures.	25
	KPI B6.5 Description of consumer data protection and privacy policies, and how they are implemented and monitored.	27
Aspect 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.	19
	KPI 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.	19
	KPI B7.2 Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	19
	KPI B7.3 Description of anti-corruption training provided to directors and staff.	19
Community		
Aspect 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.	56
	KPI B8.1 Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	56
	KPI B8.2 Resources contributed (e.g. money or time) to the focus area.	57

SASB Construction Material Standard Index

Topic	Accounting metric	Description
Greenhouse Gas Emissions	Gross global Scope 1 emissions (tCO ₂ e)	19,530,747.67
	Percentage covered under emissions-limiting regulations (%)	/
	Discussion of long-term and short-term strategy or plan to manage Scope	P31-P34
	NO _x (t)	6,625.62
	SO _x (t)	626.42
Air Quality	PM10 (t)	252.69
	Dioxins/furans (ngTEQ/m ³)	0.04
	VOCS (t)	/
	PAHS (t)	/
	Heavy metals (sum up of TI, Cd, Pb) (mg/m ³)	0.01
Energy Management	Total energy consumed (GJ)	81,470,091
	Percentage of grid electricity (%)	7.30
	Percentage of renewable (%)	0.04
Water Management	Total freshwater withdrawn (t)	8,026,757
	Percentage recycled (%)	P36-P37
	Percentage in regions with High or Extremely High Baseline Water Stress (%)	0

Topic	Accounting metric	Description
Waste Management	Amount of waste generated (t)	16,299.82
	Percentage hazardous (%)	15.11
	Percentage recycled (%)	95.92
Biodiversity Impacts	Description of environmental management policies and practices for active sites	43
	Terrestrial acreage disturbed, percentage of impacted area restored (%)	/
Workforce Health & Safety	Total accidental injury frequency rate (FR)	1.64
	Near miss frequency rate (NMFR) (%)	/
	Fulltime employees and contract employees(case)	0
Product Innovation	Percentage of products that qualify for credits in sustainable building design and construction certifications	/
	Total addressable market and share of market for products that reduce energy, water, and/or material impacts during usage and/or production	/
Pricing Integrity & Transparency	Total amount of monetary losses as a result of legal proceedings associated with cartel activities, price fixing, and anti-trust activities	0



洋房牌水泥

Asia Cement (China) Holdings Corporation