



洋房牌水泥



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Asia Cement (China) Holdings Corporation



2021

Asia Cement (China) Holdings Corporation
2021 Corporate Social Responsibility Report



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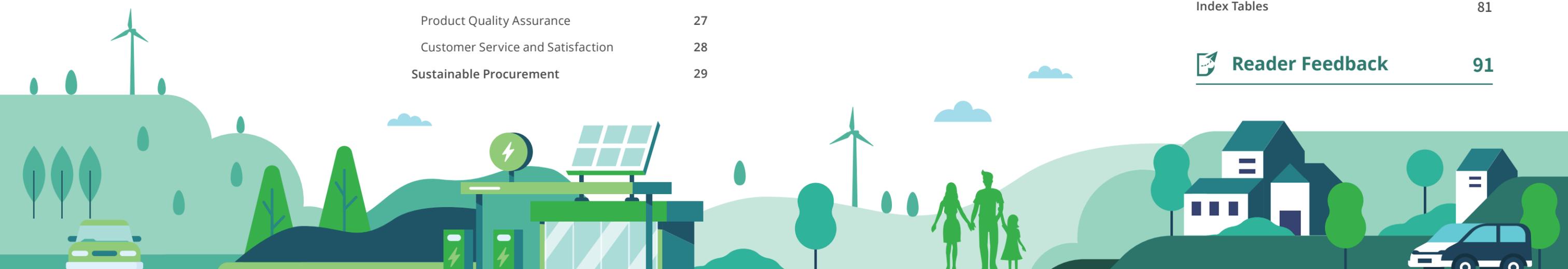
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ABOUT THIS REPORT

Overview

The 2021 Corporate Social Responsibility Report of Asia Cement (China) Holdings Corporation (hereinafter referred to as the "report") is the 8th Corporate Social Responsibility (CSR) report released by Asia Cement (China) Holdings Corporation (hereinafter referred to as "Asia Cement (China)", "the Company" or "we") to present to the stakeholders the Company's management approaches and performance related to sustainable environmental, economic and corporate governance in 2021.

Scope of Reporting

Time range: from January 1, 2021 to December 31, 2021. The report also discloses a small amount of data for previous years and 2022.

Geographic scope: The information about environmental, social and corporate governance disclosed in this report covers the following 17 operating entities under Asia Cement (China):

Type	Name	Address
Integrated cement plants	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 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
Cement grinding plants	Sichuan Lan Feng Cement Co., Ltd. (referred to as "Sichuan Lan Feng")	Middle section of Qinggui Road, Guihua Town, Pengzhou, Chengdu, Sichuan Province
	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
Ready-mixed concrete companies	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
	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 released once a year, which is consistent with the cycle of its financial report release. The previous CSR report was published in May 2021. The next report is expected to be published in May 2023.

Data Source

Data in this report is from Asia Cement (China)'s original internal ledgers, documents and audit reports. Some economic data is from the Company's 2021 annual report, which has been audited by Deloitte. Unless otherwise specified, the amounts in this report are all in Chinese yuan (CNY). The report has been reviewed 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 the contents in this report.

Basis and Reference for Compilation

- The report is compiled in accordance with the "Core" option criteria for the Global Reporting Initiative Standards for sustainability reporting (hereinafter referred to as the "GRI Standards");
- The report complies with the requirements of the Environmental, Social and Governance Reporting Guide (ESG Reporting Guide) issued by the Stock Exchange of Hong Kong;
- The report is prepared with reference to industry standards for construction materials issued by the Sustainability Accounting Standards Board (SASB);
- The report is compiled with reference to the Task Force on Climate-Related Financial Disclosures (TCFD);
- This report is in response to the United Nations Sustainable Development Goals (UN SDGs 2030).

External Verification

This report has been independently verified by the Shanghai Office of TÜV SÜD Certification and Testing (China) Co., Ltd. The statement of verification 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/>.

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MESSAGE FROM THE CHAIRMAN



Asia Cement (China) has actively implemented sustainable development through environment, society and corporate governance. We adhere to the business strategy of "high level of environmental protection, high quality, high efficiency, and low cost". Looking forward, our company will examine CSR from a strategic perspective, integrate it into business strategies with emphasis on sustainability, and solve social issues related to our core businesses. While pursuing enterprise development, we will give back to society, improve our core capabilities and enhance corporate image.

From "green production" to "producing green products"

Asia Cement (China) adheres to the mission of "to be a preferred partner for building sustainable green homeland". We strive to achieve sustainable ESG goals for the environment, corporate governance and social responsibility. We hope to break the stigma in the cement industry of high pollution and high energy consumption. The Company will follow the global trend of energy conservation and carbon reduction, and contribute to China's commitment that reach peak carbon emissions by 2030 and achieve carbon neutrality by 2060.

Providing diversified environmental services through co-processing of cement kilns led by technological innovation

Following the development roadmap of the cement industry, the Company implements green development by combining cement production and solid waste processing. We have built a cement kiln co-processing platform. Our disposal capacity covers domestic waste, municipal sludge, industrial hazardous waste, polluted soil, etc. After continuous exploration and optimization, we have solved major problems regarding odor, leaching, waste residue, dioxin/furan, and greenhouse gas emissions reduction. We hope to eliminate environmental risks and promote safe and harmless disposal. We also improved the utilization of resources and replaced fossil fuels with clean energy to reduce emission of pollutants like nitrogen oxide and carbon dioxide.

Creating a harmonious society with sustainable social care

Due to its particularity, the cement industry is misunderstood by people. We understand that residents around our plants and mines have safety concerns. The principle we uphold is to coexist and prosper with our neighbors.

The Company attaches importance to the safety and rights of local residents and actively engages in sustainable social care. It has exerted great efforts in this regard, such as integrating into local culture, celebrating important local festivals, participating in public welfare undertakings, helping residents repair houses, providing employment opportunities and emergency assistance, establishing Hope Primary Schools, providing saplings for a greener environment and sponsoring local sporting events. By doing so, it is recognized by the local government and villagers.

In addition, the Company held many parent-child activities in 2021. Our employees and their families were invited to visit green mine parks, eco-agricultural parks, and garden areas with a view to let more people know cement companies like Asia Cement (China) can be very environmentally friendly, too!

Looking forward, China's the 14th Five-Year Plan for the National Economic and Social Development and the Outline of Vision for 2035 clearly require to "promote green development". From this perspective, the construction industry will forge ahead on the road of green and high-quality development, promote synchronous development and make strides towards low-carbon, high-end projects. Asia Cement (China) will continue to prevent and control the COVID-19 pandemic and implement safe production standards. It will also carry out environmental protection, energy conservation, consumption reduction and cooperate with national strategies like "carbon peaking" and "carbon neutrality" so as to contribute to environmental improvement. It will continue to make its main businesses stronger, accelerate innovation in digitization and engage in sustainable production chains for the benefit of mankind.

FOOTPRINT IN 2021



ECONOMY

Economic Performance Of Asia Cement (China) In 2021

Total Operating Income 11.76 billion CNY	Total Profits 1.82 billion CNY	Total Assets 21.42 billion CNY
Total tax 1.96 billion CNY	R&D investment 117.89 million CNY	Customer satisfaction 96%



ENVIRONMENT

Environmental Performance Of Asia Cement (China) In 2021

Environmental investment 241.39 million CNY	Amount of industrial waste residues, slag and debris used 7.01 million tons	Greenhouse gas emission intensity 850 Kg CO₂e/ton cement	Total energy savings 176,157 GJ
Total water savings 415,500 tons	Investment in mine construction and management 62.58 million CNY	Number of green mines 6	



SOCIETY

Social performance of Asia Cement (China) in 2021

Local employment rate 75.8%	Employee turnover rate 2.63% a decrease of 26.94% over 2020	Coverage of employee performance review 99.97%	Number of employees with suspected or confirmed occupational diseases 0
Number of deaths at work 0	Investment in occupational health and safety 111.88 million CNY	Expenditures on giving back to communities 1.43 million CNY	



HONORARY TITLES OBTAINED IN 2021

Mar	Honorary Title Outstanding Contribution Award For Industrial Development 2020 Award Winner(s): Jiangxi Ya Dong Awarding Body (Bodies): The CPC Ruichang Municipal Committee & Ruichang Municipal People's Government	Dec	Honorary Title Two-star China Green Building Materials Certification Award Winner(s): Wuhan Ya Li Awarding Body (Bodies): Beijing GJC Certification
Apr	Honorary Title Company With Outstanding Performance Award Winner(s): Jiangxi Ya Dong Awarding Body (Bodies): Jiangxi Province Building Materials Industry Federation	Dec	Honorary Title Best Companies to Work for in Asia 2021 Award Winner(s): Asia Cement (China) Awarding Body (Bodies): HR Asia
Apr	Honorary Title Excellent Company in "Evergreen" Jiangxi Province Chemical Analysis of Cement Award Winner(s): Jiangxi Ya Dong & Nanchang Ya Li Awarding Body (Bodies): Jiangxi Province Building Materials Industry Federation	Nov	Honorary Title Top 100 Manufacturing Company in Chengdu Award Winner(s): Sichuan Ya Dong & Sichuan Lan Feng Awarding Body (Bodies): Chengdu Enterprise Confederation
Apr	Honorary Title Company Having Made Outstanding Contributions to the Fight against the COVID-19 Pandemic Award Winner(s): Hubei Ya Dong Awarding Body (Bodies): Xinzhou District Command Center for COVID-19 Prevention and Control, Wuhan	Nov	Honorary Title Top 100 Enterprise in Jiangxi 2021 Award Winner(s): Jiangxi Ya Dong Awarding Body (Bodies): Jiangxi Enterprise Association & Jiangxi Entrepreneurs Association
Apr	Honorary Title National Green Factory Award Winner(s): Huanggang Ya Dong Awarding Body (Bodies): Ministry of Industry and Information Technology	Oct	Honorary Title Excellent Company in "Tongcan" National Cement Quality Inspection 2021 Award Winner(s): Jiangxi Ya Dong Awarding Body (Bodies): China Building Material Test and Certification Group Co., Ltd. & China National Center for Quality Inspection and Testing of Cement
May	Honorary Title No. 8 Among China's Listed Cement Companies In Comprehensive Strength Award Winner(s): Asia Cement (China) Awarding Body (Bodies): China Cement Association	Oct	Honorary Title Outstanding Contribution Award for Economic Benefits 2021 Award Winner(s): Asia Cement (China) Awarding Body (Bodies): China Cement Association
May	Honorary Title Excellent Company in the Building Materials Industry Award Winner(s): Yangzhou Ya Dong Awarding Body (Bodies): Yangzhou Municipal Building Materials Industry Federation	Aug	Honorary Title Top 40 Industrial Enterprise in Jiujiang Award Winner(s): Jiangxi Ya Dong Awarding Body (Bodies): Jiujiang Municipal Bureau of Industry and Information Technology & Jiujiang Entrepreneurs Association
		May	Honorary Title Outstanding Company in Helping the Disabled during the "Thirteenth Five-Year Plan" Period Award Winner(s): Sichuan Ya Dong & Sichuan Lan Feng Awarding Body (Bodies): Disabled Person Affairs Committee of Pengzhou Municipal People's Government



Upholding the spirit of "Integrity, Diligence, Austerity, Prudence and Innovation", Asia Cement (China) is committed to becoming a large modern cement company with high level of environmental protection high quality, high efficiency and low cost.

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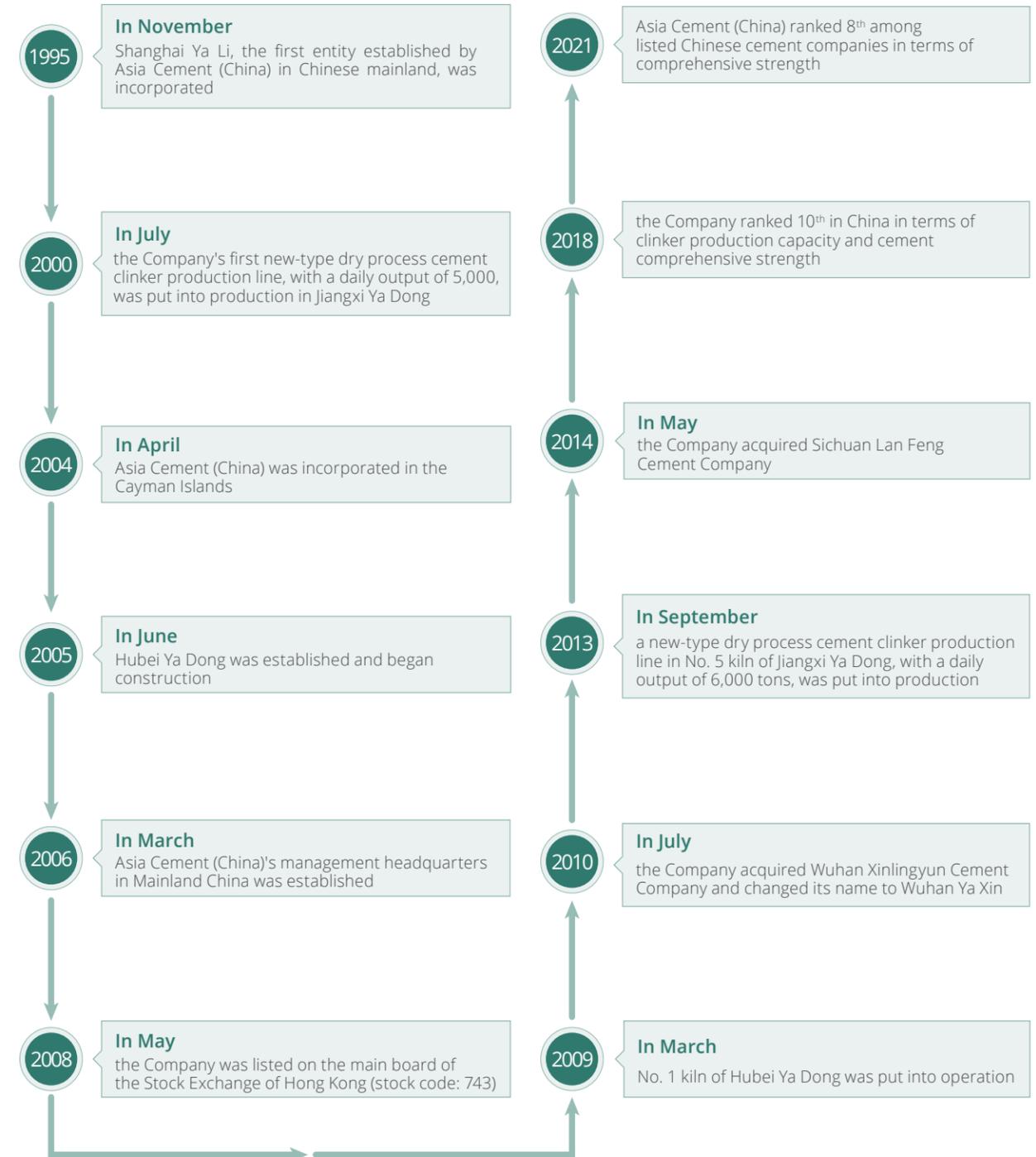
ABOUT US

Asia Cement (China) has been listed on the main board of the Hong Kong Stock Exchange (stock code: 743). It has four types of subsidiaries, i.e., integrated cement plants, cement grinding plants, ready-mixed concrete companies and transportation companies.

Upholding the spirit of "Integrity, Diligence, Austerity, Prudence and Innovation", Asia Cement (China) is committed to becoming a large modern cement company with high level of environmental protection high quality, high efficiency and low cost. We believe that "industrial development and environmental protection can go hand-in-hand". Our comprehensive energy consumption per unit of product is quite low. In addition, we recycle industrial waste residues as an alternative to raw materials and are committed to sewage treatment, mine rehabilitation and environmental greening. The Company has won many awards for energy conservation, mining performance and environmental protection.

In July 2000, Asia Cement (China) put into production its first new-type dry process cement clinker production line. It has a daily output of 5,000 tons and is located in Jiangxi Ya Dong. 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. We hope to reach 50 million tons of production capacity. The Company makes due contributions to the sustainable development of society, environment and economy.

DEVELOPMENT HISTORY



PRODUCTS AND MARKET LAYOUT

Products

The Company mainly manufactures "Skyscraper" brand cements, clinkers, concretes, and aggregates. In 2021, it sold over **29.5** million tons of cements and clinkers.

Market layout

The Company has production or delivery bases in Jiangxi, Hubei, Sichuan, Jiangsu and Shanghai, and sales offices in Jiangxi, Anhui, Jiangsu, Zhejiang, Shanghai, Hubei, Henan, Sichuan and Hunan.



ENTREPRENEURIAL SPIRIT, MISSION AND VISION

Entrepreneurial spirit
Integrity, diligence, austerity, prudence and innovation

Mission
To be a preferred partner for building sustainable green homeland

Vision
Pursue high level of environmental protection, high quality, high efficiency, low cost, seek innovation, and become a model company in the industry

ASSOCIATIONS JOINED

Entity	Association joined	Role in the association
Asia Cement (China)	World Cement Association	Member
Asia Cement (China)	China Cement Association	Vice President
Jiangxi Ya Dong	China Mining Federation	Member
Jiangxi Ya Dong	Jiangxi Cement Association	Director
Jiangxi Ya Dong	Jiangxi Association for Quality	Director
Jiangxi Ya Dong	Jiangxi Emergency Management Association	Director
Jiangxi Ya Dong	Jiangxi Building Materials Industry Federation	Vice President
Hubei Ya Dong	Hubei Cement Industry Association	Vice President
Hubei Ya Dong	Wuhan Circular Economy Association	Executive Director
Hubei Ya Dong	Wuhan Taiwan-funded Enterprises Association	Member
Huanggang Ya Dong	Huanggang Taiwanese Invested Enterprises Association	Member
Sichuan Ya Dong	Sichuan Certification and Accreditation Association	Director
Sichuan Ya Dong	Chengdu Taiwanese Invested Enterprises Association	Executive Vice President
Sichuan Ya Dong	Sichuan Cement Association	Director
Sichuan Ya Dong	Chengdu Building Materials Industry Association	Vice President
Sichuan Ya Dong	Chengdu Enterprise Confederation	Member
Sichuan Lan Feng	Sichuan Cement Association	Director
Yangzhou Ya Dong	Jiangsu Building Materials Industry Association	Executive Director
Yangzhou Ya Dong	Yangzhou Building Materials Industry Association	Vice President
Yangzhou Ya Dong	Yangzhou Taiwanese Invested Enterprises Association	Vice President
Nanchang Ya Dong	Nanchang Taiwan-funded Enterprises Association	Member
Nanchang Ya Dong	Jiangxi Building Materials Industry Federation	Member
Nanchang Ya Li	JiangXi Association of Bulk Cement and Ready-mixed Concrete	Director



Asia Cement (China) actively integrates sustainable development into its operations. In order to better implement sustainable development, we have established a CSR committee,

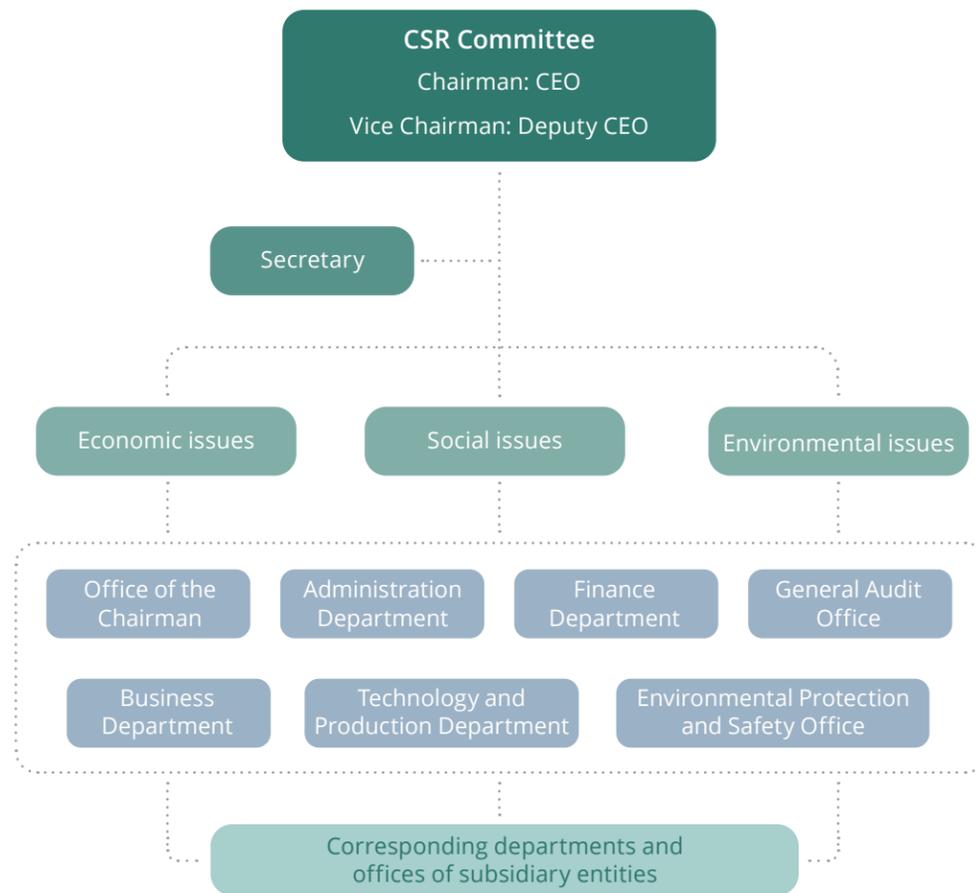
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GOVERNANCE STRUCTURE FOR SUSTAINABLE DEVELOPMENT

Asia Cement (China) actively integrates sustainable development into its operations. In order to better implement sustainable development, we have established a CSR committee, headed by the CEO and director of the secretariat of the Administration Department. Considering sustainable economic, social and environmental development, the Company has assigned seven core departments to coordinate related tasks.

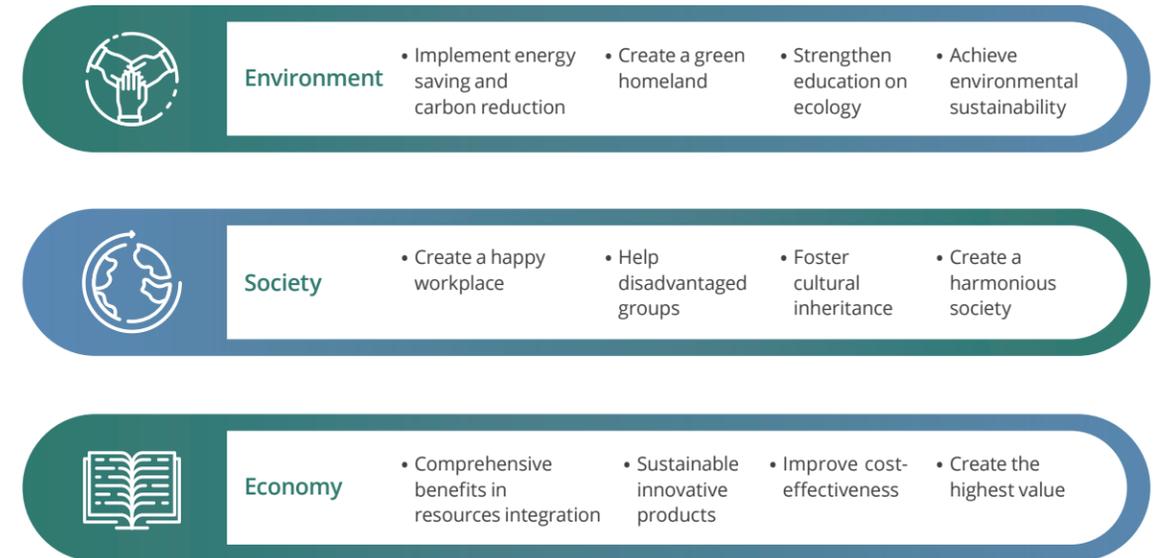
Organizational Structure Of Asia Cement (China) CSR Committee



Responsibilities of the CSR Committee are to discuss, plan and promote the resolution of issues related to the Company's sustainable development, supervise and promote the sustainable development of subsidiaries, report progress to company management, and disclose sustainable development performance to the public.

STRATEGY AND GOALS OF SUSTAINABLE DEVELOPMENT

Asia Cement (China) formulates targeted strategies regarding sustainable environmental, social and economic development. It evaluates the impacts of company operations on sustainable development at home and abroad, and establishes sustainable development goals for mining, circular economy and low-carbon manufacturing. Our goals are based on industry characteristics, stakeholder feedback and expert opinions.

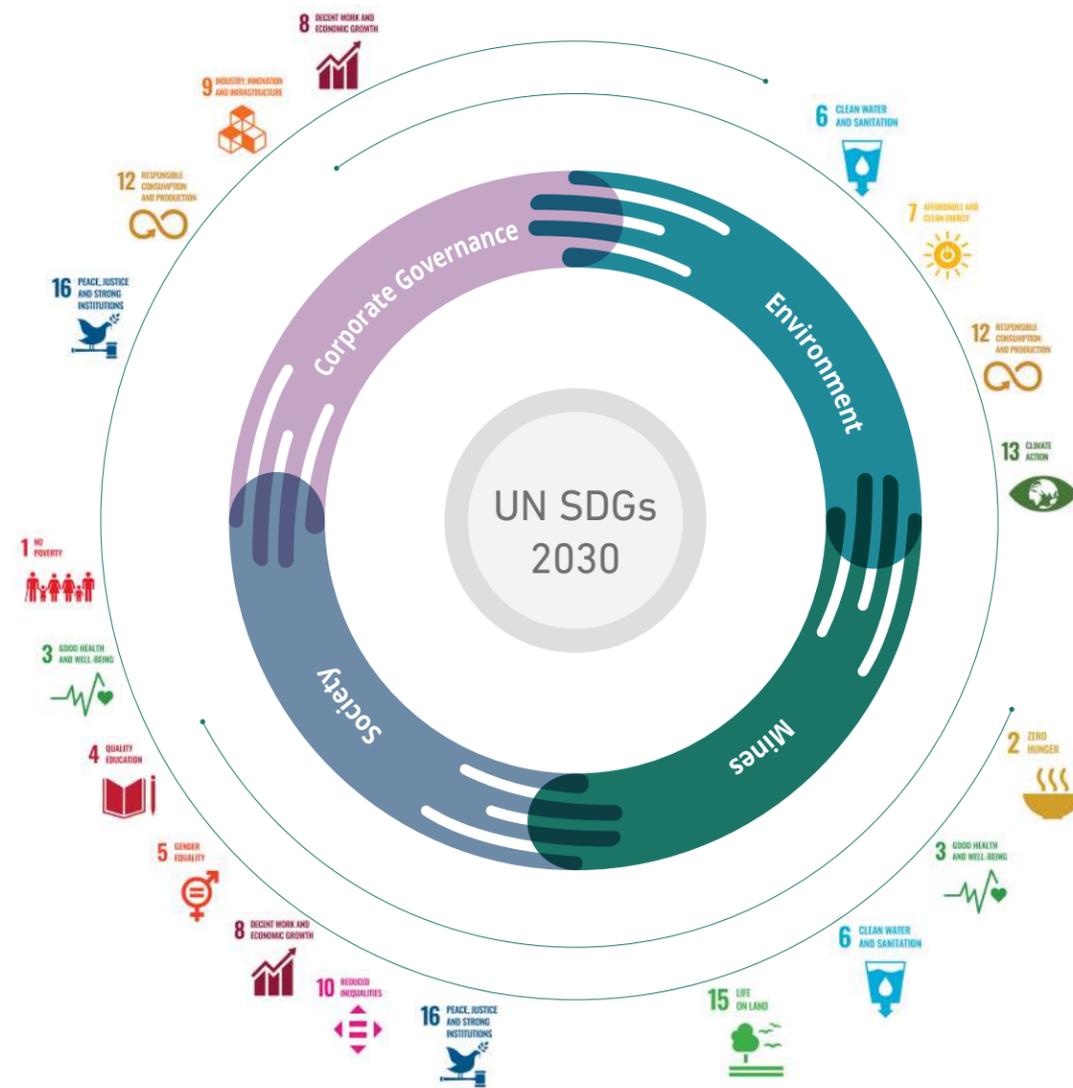


We regularly track and evaluate the completion of sustainable development goals and disclose it to our employees, partners, customers and the public*. We also set future goals after the current year in respect to the Company's plans and trends in the global market.

*Note: Our completion of sustainable development goals in 2021 will be disclosed in corresponding chapters.



RESPONSE TO THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS 2030



STAKEHOLDER ENGAGEMENT

Asia Cement (China) attaches great importance to communication with stakeholders and has established transparent and effective multidirectional communication channels. It responds to the demands and expectations of stakeholders in a timely and effective manner. We communicate with our stakeholders and update our development plans according to their feedback.

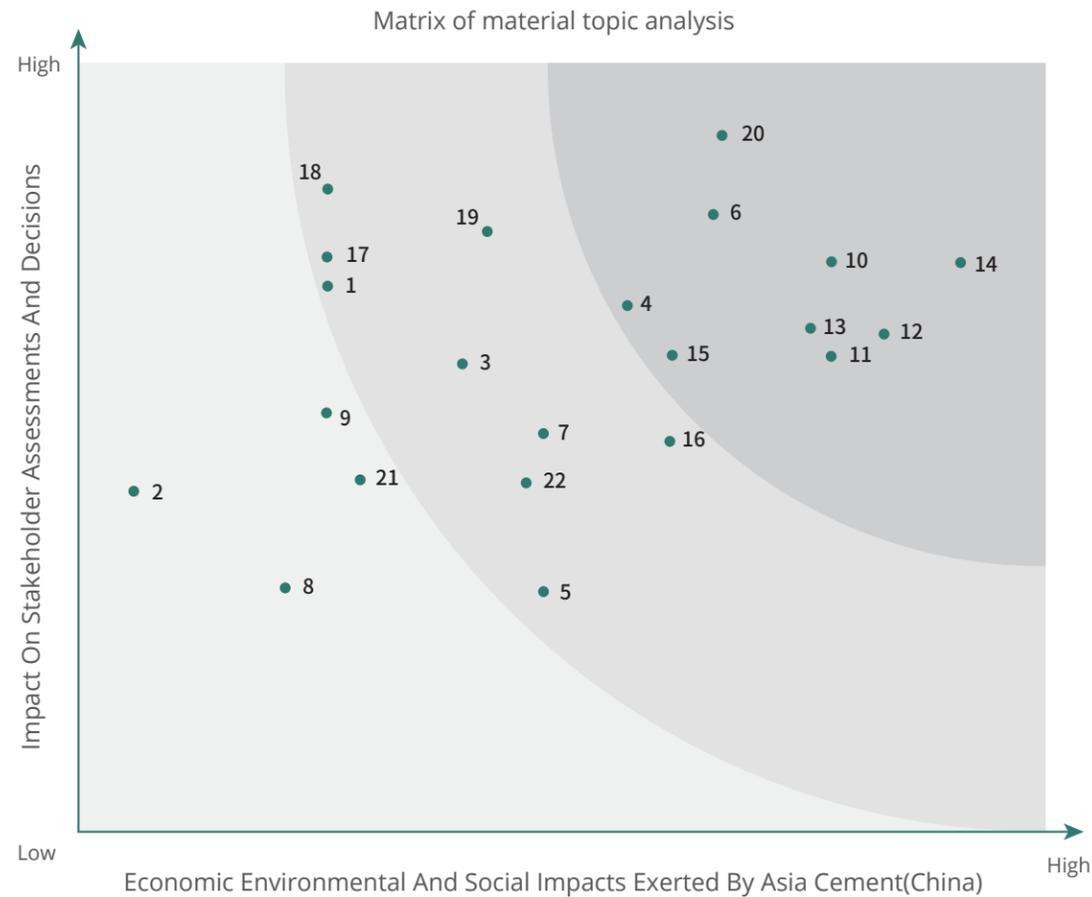
Stakeholder	Issues Of Concern	Main Communication Channels
Employees	Legal employment Employee rights protection Diversity and equal opportunity Training and personal development Occupational health and safety	<ul style="list-style-type: none"> • Training and performance appraisal • Complaints and feedback, Labor union • Employee handbook, Electronic bulletin boards • Employee satisfaction survey
Shareholders and investors	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, CSR reports) • Daily communication (phone calls, emails and meetings)
Clients and partners	Product quality and safety Customer service Information security	<ul style="list-style-type: none"> • Satisfaction survey • Product quality certification and inspection reports • Feedback page on company website • Daily communication (phone calls, emails and meetings)
Suppliers and contractors	Responsible procurement Supplier management Anti-corruption	<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	Economic performance Economic and environmental compliance	<ul style="list-style-type: none"> • Information disclosure • Regulatory briefing, seminars or symposiums • Official documents • Inspection
Non-profit organizations	Response to climate change Green mines Energy conservation	<ul style="list-style-type: none"> • Company website • Participation in non-profit activities • Seminars/symposiums
Industry associations and companies	Economic performance Low-carbon products	<ul style="list-style-type: none"> • Exhibitions and seminars • Industry conferences • Daily communication (phone calls, emails and meetings)
Communities and public media	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)

ANALYSIS OF MATERIAL TOPICS

We built a database of material topics for this report based on the following factors: policy requirements, industry trends, stakeholder demands, operating conditions, sustainable development-related standards, suggestions from experts, internationally accepted GRI standards and SASB standard. The topics have been reviewed by the Company's Board of Directors.

To determine the importance of each topic, we conducted a questionnaire survey on different stakeholders and the Company's management (Board of Directors, supervisory board and senior management with decision-making power over the company) and collected a total of 1,665 questionnaires. According to the score of each topic, we conducted a cross-analysis from two dimensions, the degree of influence on stakeholders' decision-making, the degree of the Company's influence on the environment, society and economy. We then used that analysis to form the matrix of material topics. The matrix divides the materiality of the topics into three levels: high, medium and low. The report responds to all of the topics, with emphasis on those of high materiality.

List of material topics for Asia Cement (China)'s 2021 CSR report



Topics of high materiality

- 4. Business ethics
- 6. Product quality and safety
- 10. Environmental management and compliance
- 11. Energy management
- 12. Water resource management
- 13. Waste management
- 14. Air quality
- 15. Green mine
- 20. Occupational health and safety

Topics of medium materiality

- 1. Economic performance
- 3. Compliance operations and risk management
- 5. Sustainable supply chain
- 7. Circular economy
- 16. Response to climate change
- 17. Employee relations
- 18. Employee rights
- 19. Employee training and development
- 22. Charity

Topics of low materiality

- 2. Structure of the management
- 8. Customer management
- 9. Information security
- 21. Community relations



CORPORATE GOVERNANCE FOR SUSTAINABLE DEVELOPMENT

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Product quality assurance	27
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Sustainable procurement	29

A sound governance structure is the cornerstone of a company's sustainable development.

2021 Footprint

11.76 billion CNY	1.82 billion CNY
Total operating income	Total profits
21.42 billion CNY	1.96 billion CNY
Total assets	Total tax
117.89 million CNY	96%
R&D investment	Customer satisfaction
29.50 million tons	
Product sales volume (cement and clinker)	

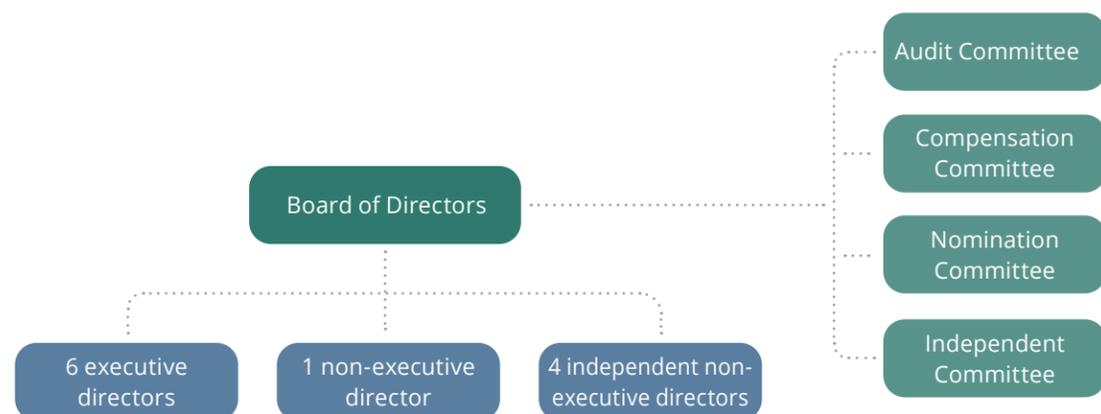
Responded SDGs in this chapter



CORPORATE GOVERNANCE FOR SUSTAINABLE DEVELOPMENT

A sound governance structure is the cornerstone of a company's sustainable development. Asia Cement (China)'s Board of Directors is responsible to shareholders. The number and composition of its 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 policy formulation, strategies, budget, internal control, risk management, major transactions, finance and other major business matters. There are 11 directors, including 6 executive directors, 1 non-executive director and 4 independent non-executive directors with 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 decision-making. All members of the Independent Committee are independent non-executive directors.

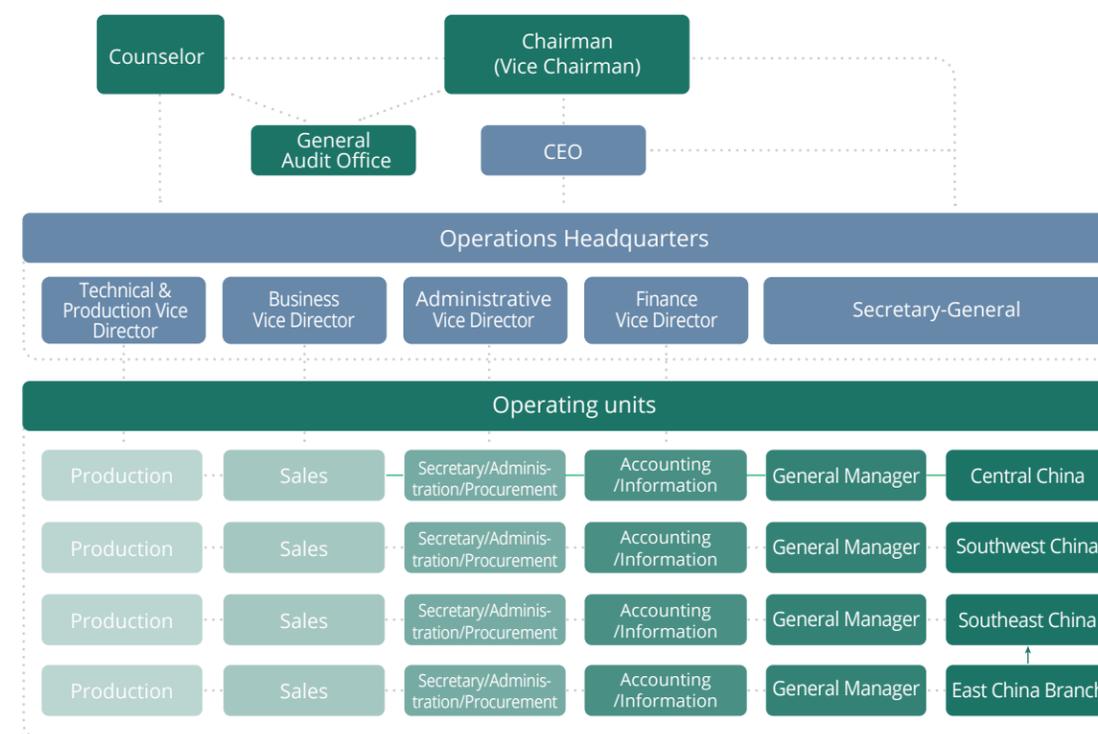


The Company recognizes the importance of board diversity to its governance and has formulated the Board Diversity Policy. The Nomination Committee evaluates the structure, personnel and composition of Board of Directors every year. It takes gender, age, educational background, professional experience, skills, knowledge and industry experience into consideration when nominating directors to create a diverse board structure.

During the reporting period, the Company held 4 board meetings, average director attendance was 95%. During the meetings, 27 resolutions were adopted.

Overview of shareholders meeting, board of directors meeting and professional committee meeting in 2021

Type Of Meetings	Frequency In 2021	Director Attendance
Shareholders meeting	1	91%
Board of Directors meeting	4	95%
Audit Committee meeting	4	100%
Compensation Committee meeting	1	100%
Nomination Committee meeting	1	100%
Independent Committee meeting	1	100%



Organizational Structure Of Asia Cement (China)

COMPLIANCE OPERATION

Asia Cement (China) attaches great importance to risk management. It has formulated internal systems to manage and control sales, procurement, production, investment, information protection and evaluate the risk level of each link of operations. It also takes targeted risk mitigation measures to improve organizational resilience and protect the interests of stakeholders. While achieving operational objectives, the Company ensures the reliability, timeliness, transparency of financial reporting and compliance with relevant regulations.

The Company's Audit Committee assists the Board of Directors in conducting independent reviews on internal control and risk management and supervises the reviews. It also sets up the General Audit Office and regional audit offices to coordinate risk control. This covers compliance management, anti-corruption, anti-unfair competition and other violations of business ethics. Currently, Asia Cement (China) has a total of 24 auditors throughout different entities.

The Company has formulated audit rules to guide internal control in each department and office. The General Audit Office and regional audit offices make annual audit plans according to the result of operational risk assessments and conduct prioritized special audits when temporary management risks occur. The annual plans set the audit frequency based on the number of abnormal situations in the previous audit year. Audit reports are produced to identify non-compliant and illegal behaviors or risks, improve processes and revise internal control systems to prevent the recurrence of misconducts such as fraud. The Company incorporates process improvement and loss recovery into performance evaluation. A reward and punishment system is in place to improve operational process and enhance risk awareness.

Asia Cement (China) adheres to transparent management and proactively accepts public supervision. In 2021, the government conducted a joint inspection on entities under the Company regarding environmental protection, production safety, occupational safety and health, taxation and revealed a total of 49 items for rectification. By the end of the reporting period, all 49 items had been rectified.

The Company attached great importance to the joint inspection. It established a special working group led by the Board of Directors and joined by heads of departments to conduct in-depth analysis and evaluation. The working group quickly solved issues and improved related systems, personnel training and equipment. It also tracked performance to prevent similar incidents and strengthen the Company's compliance management.

BUSINESS ETHICS

Asia Cement (China) strictly follows 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. It abides by international conventions as well as local laws. The Company operates with integrity, follows business ethics and opposes any form of corruption, bribery or unfair competition.

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

The Company advocates an integrity-based corporate culture. It conducts various forms of business ethics awareness seminars and all employees are required to attend. Business ethics management is included in new employee training. In addition to promoting an integrity-based culture, we maintain a transparent supply chain. We promise to create a fair competition between all suppliers and not engage in collusion, which may disrupt fair competition and damage the legitimate rights and interests of other operators. Our Standards of Business Conduct for Suppliers, which is available on company website, clearly regulates suppliers' business ethics-related behaviors, including anti-corruption, unfair competition, conflict of interest and trade secret protection. We agree to the Supplier Responsibility Statement with all suppliers and uphold this standard to ensure that suppliers understand and agree to abide by relevant regulations.

Asia Cement (China) attaches great importance to information security. All employees have signed the Employee Commitment to the Use of IT Equipment, Internet Security and Confidentiality when joining the Company. This covers commitments to comply with the law, protect the Company's confidential information, maintain its equipment and contribute to a safe internet environment. Violators will be investigated for their legal responsibilities.

During the reporting period, 100% of the Company's employees, governance bodies and suppliers were informed of its anti-corruption policies and procedures. 100% of our employees received anti-corruption training. There have been no lawsuits against employee corruption, company corruption or confirmed terminations of business partners due to business ethics violations.

Grievance and Whistle Blowing >

The Company has set up a whistle blowing mechanism to encourage employees, customers and suppliers to report violations of business ethics. There is a whistle blowing mailbox on its website, through which employees, customers and suppliers can report misconducts. Only the vice chairman and the director of the General Audit Office can view this mailbox and reports are strictly confidential. Employees, customers and suppliers can also send a report letter to the working email of the Vice Chairman, Director of the General Audit Office or the audit supervisor of each region. After receiving the report letter, Director of the General Audit Office will assign auditors for investigation and send an audit report to the Vice Chairman for instructions. Relevant departments will handle matters according to the instructions.

The Company strictly prohibits any person from any form of retaliation or discrimination against whistle blowers and protects the legal rights and privacy of whistle blowers. During the reporting period, we received a total of 10 reports, all of which have been handled and concluded.

QUALITY PRODUCTS AND SERVICES

Green Products >

Asia Cement (China) actively contributes to circular economy. It conducts resource conservation and recycling. We reduce natural resources consumption in cement products to reduce environmental impact throughout the entire product life cycle. Under the premise of ensuring product quality, we encourage innovation in raw material extraction, production and other steps and actively develop green and low-carbon products.

In 2021, the Company invested 117.89 million CNY in R&D and held a total of 41 valid patents.

117.89
R&D investment/
million CNY

41
Valid patents in total/
item



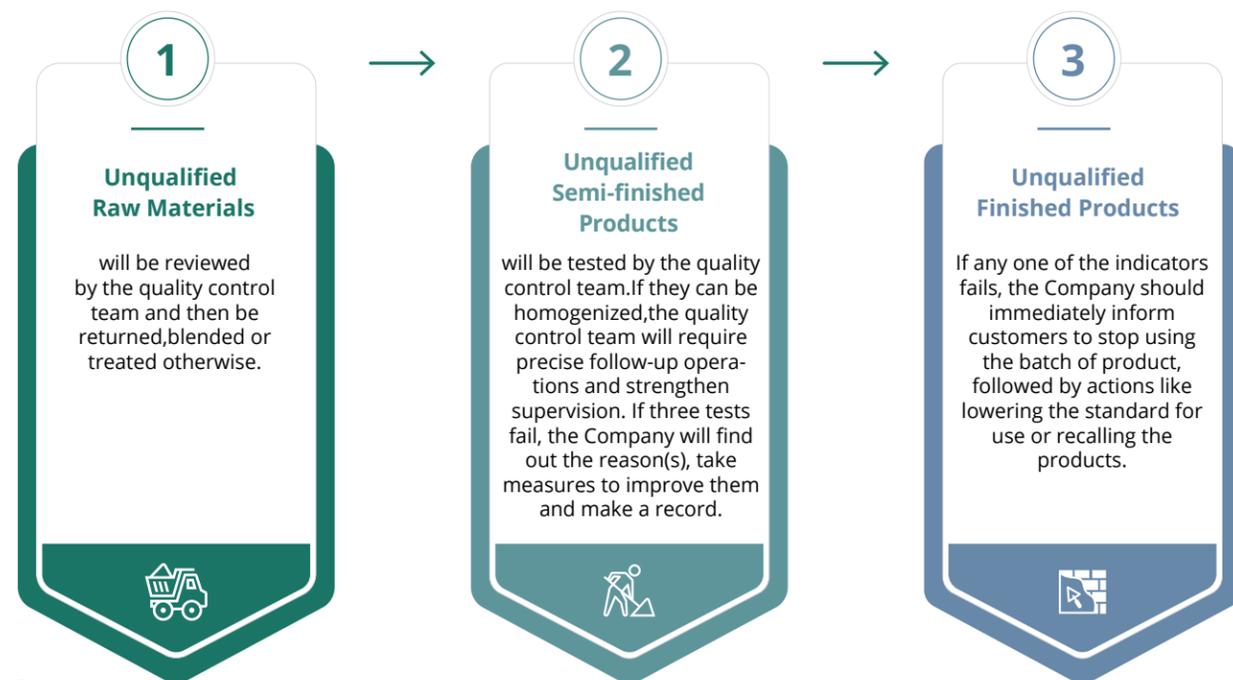
<Wuhan Ya Li's ready-mixed concrete won the two-star China Green Building Material Product Certification>

<Jiangxi Ya Dong obtained low-carbon cement product certification>

Product Quality Assurance >

Asia Cement (China) attaches great importance to product quality and safety, and is committed to providing customers with high-value products. It strictly abides by laws and regulations including the Product Quality Law of the People's Republic of China. All cement plants and ready-mixed concrete companies under it have obtained ISO9001 certification on quality management systems. Cements and clinkers of all types strictly comply with the Implementation Rules for Cement Products Certification and the requirements of the Implementation Rules for Portland Cement and Clinker Products Certification. Cement packaging bags are printed with information required by law, which includes the certification passed (ISO9001 certification on quality management system, ISO14001 certification on environmental management system and GB/T28001 certification on occupational health and safety management system), cement type, implementation standards (such as P.O. 42.5 Ordinary Portland Cement GB175-2007) and storage conditions.

To ensure product quality, the Company has formulated the Standards for Inspection and Control of Raw Materials and Fuels, the Standards for Coal Sampling, Sample Preparation and Testing, the Standards for Inspection and Control of Raw Materials and Clinker Manufacturing Processes, the Standards for Final Inspection and Control of Finished Products, etc. In addition, it has established a three-level inspection mechanism to strictly control the quality of materials (raw materials, fuels), clinkers and cements. As for unqualified products, it has promulgated the Procedures for Controlling Unqualified to regulate unqualified raw materials, semi-finished products and finished products.



Product Quality Management Performance In 2021



Customer Service and Satisfaction >

Asia Cement (China) has a cross-regional sales and transportation network based on transportation lines along the Yangtze River. Its production and delivery bases in Jiangxi, Hubei, Sichuan, Jiangsu, and Shanghai provide customers with comprehensive, fast and convenient delivery services. "Same-day delivery" is available in places near its plants. We actively expand communication with customers through visits, daily communication and customer satisfaction surveys to understand their needs. In 2019, we launched a customer service app and continuously update it. Now the app offers multiple functions like listing, inquiry and consultation, which has improved convenience for customers. In 2021, we upgraded our "one-code pass" delivery system, which provides "no drop off" delivery, and greatly improved customers' delivery experience.

We respect and strictly protect customer privacy. By signing the Employee Commitment to the Use of IT Equipment, Internet Security and Confidentiality, all employees have promised not to disclose, steal or illegally use confidential or customer information. In addition, the Company has formulated the Code of Conduct of Sales Staff to further regulate the use of customer information by sales staff. Their access to customer information should follow work relevance, minimum authorization and approval control. Staff may not use unauthorized sensitive data for the benefit of themselves or others.

Every year, the Company conducts two customer satisfaction surveys through questionnaires issued by sales staff. They cover product quality, service quality, convenience of delivery and contract performance. It analyzes and evaluates survey results, rectifies problems found and improves service quality. In 2021, our customer satisfaction reached 96%, which exceeded the set target. There were no complaints related to invasion of customer privacy, theft or loss of customer information.

SUSTAINABLE PROCUREMENT

Asia Cement (China) attaches great importance to supply chain management. It has formulated the Supplier Management Measures, the Standard Procurement Procedures, the Code of Conduct for Procurement, and the Supplier Code of Conduct to regulate supplier access, evaluation and elimination. Its procurement offices integrated businesses in the southeast, southwest and central China to share procurement resources and commit to building a green, low-carbon, environmentally friendly supply chain.

“ We commit to building a green, low-carbon, environmentally friendly supply chain. ”

The Company adopts a classified supplier management. It evaluates materials, engineering and service suppliers once a year, raw material suppliers every six months and classifies them into grade A (excellent), B (qualified), C (to be observed) and D (eliminated). Grade C suppliers shall receive in-depth investigations by the Company and rectify problems found within a time limit as required. Grade D suppliers shall not be included in our supplier list within two years. While evaluating suppliers, we take social responsibility and environment-related factors into consideration. We also value supplier capacity. Safety and occupational health training to all engineering suppliers (contractors) and technical guidance to contractors are provided to help them work safely.

“ Safety and occupational health training to all engineering suppliers (contractors) and technical guidance to contractors are provided to help them work safely. ”



Suppliers of Asia Cement (China)



On-site guidance on engineering supplier's construction work

We actively promoted energy conservation and emissions reduction in the supply chain, requiring all agreement-signing contractors to abide by our regulations on water conservation and energy conservation. Announcements were issued to inform our contractors of energy conservation, emissions reduction and safety and health requirements in a timely manner.

1,280

Total number of suppliers

213

Number of new suppliers in 2021

46%

Local purchasing rate*

* 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)

2021 Supplier Management Performance

100%

Percentage of new suppliers selected using environmental and social criteria

100%

Percentage of suppliers having received environmental and social impact assessments

4

Number of suppliers terminated due to actual and potential significant negative environmental impacts

0

Number of suppliers with actual and potential significant negative social impacts

SUSTAINABILITY FOR A LOW-CARBON FUTURE

Smart cement manufacturing 4.0	33
Materials	33
Response to climate change	35
Energy management	35
Greenhouse gas emissions	37
Water resource management	41
Pollution control	43
Wastewater	43
Air Pollutants	43
Solid waste	44

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.

Footprint in 2021

241.39 million CNY
Environmental investment

7.01 million tons
Amount of industrial waste residues, slag and debris used

415,500 tons
Total water savings

850 kg CO₂e/ton cement
Greenhouse gas emission intensity

176,157 GJ
Total energy savings

Responded SDGs in this chapter



SUSTAINABILITY FOR A LOW-CARBON FUTURE

Asia Cement (China) highly values environmental protection. We implement green management, green development and strictly abide by 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. The Company has established a sound environmental management system. Its integrated cement plants have all passed the environmental management system certification. 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.

Huanggang Ya Dong has been selected into the "5th Batch of Green Factories" in China. In order to further promote green manufacturing, Asia Cement (China) adopted advanced clean production technology and efficient terminal treatment equipment, eliminated outdated equipment, established resource recovery mechanisms and optimized its energy structure. We aim to develop into a modern cement company with high level of environmental protection high quality, high efficiency and low cost.

During the reporting period, Asia Cement (China) invested 241.39 million CNY in environmental protection.

SMART CEMENT MANUFACTURING 4.0

Asia Cement (China) follows national policies to produce high-quality "Skyscraper" cements in a low-carbon and environmentally friendly manner. We aim to create an intelligent cement company that manufactures high quality products with low energy consumption and low carbon emissions. In addition, we upgraded equipment with greater automation, improved production efficiency, product quality and established a cement 4.0 system through machine learning. This system will increase output, reduce energy consumption and optimize quality.

Goals of smart cement manufacturing 4.0



Intelligent

Manufacture green and diversified cement products



Reduced Emission

Reduce greenhouse gas emission



Automatic

Reduce labor intensity and improve automation rate



Responsible

Undertake corporate social responsibility

MATERIALS

The main natural raw materials used in cement manufacturing are limestone, clay, sandstone and iron ore. Cement manufacturing is an important way to reuse industrial waste. Asia Cement (China) is committed to developing green technologies and improving environmentally friendly processes for circular economy. In the raw meal production stage, it uses industrial waste slag like limestone powder, converter slag, non-ferrous metal

slag, electric furnace slag and tailings to reduce the use of limestone, sandstone, iron ore and other resources and reduce dependence on natural mineral resources. In the cement production stage, it replaces part of clinkers and natural gypsum with industrial waste residues like fly ash, coal slag, limestone powder, non-ferrous metal ash, desulfurized gypsum, phosphogypsum, construction waste and slag. We continuously improve the utilization of solid wastes and increase the proportion of industrial waste residues such as slag, steel slag and fly ash to replace natural mineral raw materials.

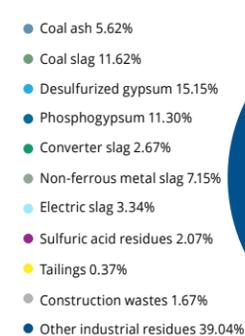
We also make use of technologies in cement production to dispose of general solid wastes such as municipal waste, domestic sewage and domestic sludge. As cement kilns have high temperature, alkalinity and large capacity, we put eligible solid wastes (before or after pretreatment) in them to reduce energy consumption. It is worth noting that the high temperature in kilns can effectively remove toxic and harmful substances such as dioxins and furans. We also use co-processing in solid waste disposal to avoid harm to the environment and improve resource utilization. This contributes to a sustainable green development. During the reporting period, we co-processed nearly 70,000 tons of waste-derived fuel (RDF), domestic sewage sludge and refrigerator plant insulation materials.

During the reporting period, a total of about 7.01 million tons of industrial waste residues, slag and debris were used.

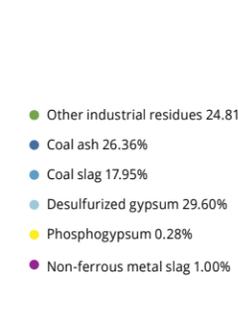
In 2021, the amount of materials used by integrated cement plants and cement grinding plants under Asia Cement (China) are as follows

Entities	Materials used	Unit	Volume of use
Integrated Cement Plants	Limestone	Ton	47,614,354.14
	Clay	Ton	1,414,489.00
	Sandstone	Ton	3,468,169.00
	Industrial wastes	Ton	4,430,625.70
	Slag	Ton	896,750.46
	Crumbs	Ton	773,268.84
	Co-processing materials	Ton	69,464.00
Cement Grinding Plants	Limestone	Ton	82,052.90
	Industrial wastes	Ton	414,758.56
	Slag	Ton	493,367.00

Use Of Industrial Residues By Integrated Cement Plants



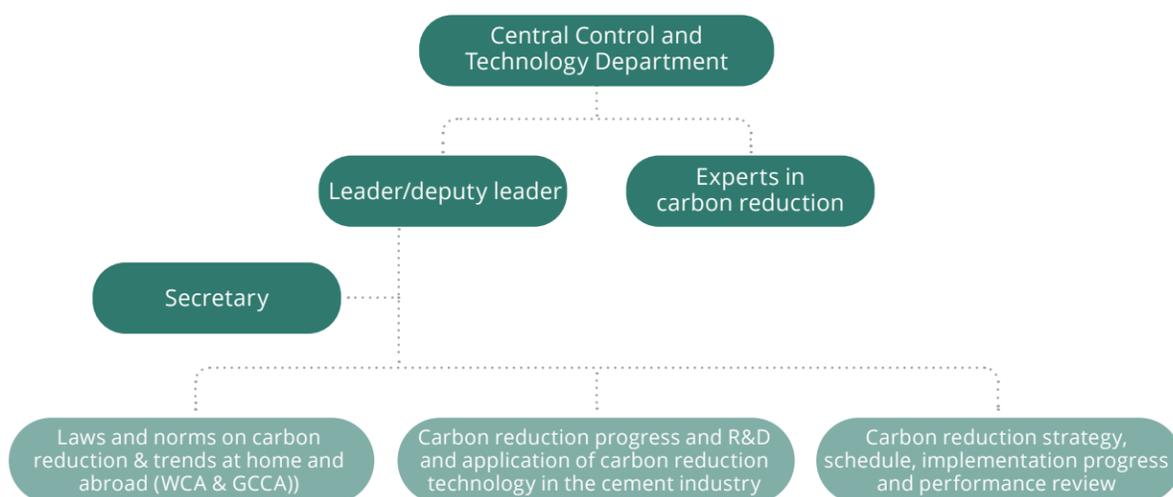
Use Of Industrial Residues By Cement Grinding Plants



RESPONSE TO CLIMATE CHANGE

Asia Cement (China) contributed to China's "Carbon Peaking" and "Carbon Neutrality" goal. In May 2021, it established an action group for carbon emissions reduction, which formulated targeted measures for all entities of the Company. High temperature cement kilns can effectively decompose industrial, agricultural and domestic waste. We have developed alternative fuels, expanded cement kiln co-processing, optimized clinker rate values (KH, N, P) and used catalysts to reduce the proportion of clinkers in cements. We have also replaced part of clinkers with industrial waste residues, replaced natural gypsum with industrial by-product gypsum, used cement grinding aids to reduce comprehensive energy consumption and recycled construction wastes. By doing so, we not only improved waste recycling and reduced resource consumption, but also mitigated negative impacts on the environment due to waste landfilling.

Organizational chart of Asia Cement (China) Carbon Reduction Team



Energy management >

To effectively protect the environment, reduce energy consumption and improve economic efficiency, we established an energy management system in 2014 to rationalize and refine energy consumption per unit of products. As at the end of the reporting period, all of our integrated cement plants have obtained the ISO50001 certification on energy management systems. The Company implements its own Operating Procedures for Energy Management to monitor all activities, identify factors that affect energy consumption, ensure the accuracy of energy consumption and improve its energy efficiency. In order to ensure the effectiveness of energy control, the Company gives energy targets for graded implementation. We also call for other stakeholders in the supply chain to uphold a green value chain.

We have saved energy through multiple methods

Process flow



- Improved technologies to reduce heat loss, shorten runtime and optimize equipment efficiency, such as controlling moisture in feedstock
- Eliminated motors with high energy consumption

Energy structure



- Used clean energy (solar energy)
- Reduced coal consumption by using alternative energy (biomass energy)
- Reduced energy consumption by improving the usability of raw meals with the help of additives

Personnel



- Offered knowledge and professional skills training of staff
- Raised staff awareness

During the reporting period, we took the following measures

- Jiangxi Ya Dong improved the process of No. 6, No. 7 and No. 8 cement mills. Previously, all raw materials were poured directly into roller presses. After the improvement, they were first screened in V-shaped separators so that fine materials were no longer ground in roller presses, which helps reduce power consumption.
- Jiangxi East changed its central air compressors in No. 4 kiln to variable frequency air compressors to reduce power consumption.
- Jiangxi East used the potential energy produced by the drop of the conveyor belt to generate electricity.
- Biomass-derived fuels were used to reduce coal consumption.
- Hubei Ya Dong changed the under-rated power of variable frequency motors for its No. 1 preheater windmill from 1,000kW to 1,300kW to reduce power consumption.
- Huanggang Ya Dong replaced the tubes of the after quenching chamber (AQC) boiler into grate coolers to improve the efficiency of power generation from waste heat.
- Sichuan Lan Feng and Wuhan Ya Xin installed online neutron analysis equipment to reduce coal consumption by increasing production stability and improving the quality of clinkers.

Energy saving performance in 2021



113,692.75 GJ
Coal saved



62,463.58 GJ
Power saved



0.65 GJ
Fuel saved

Asia Cement (China) uses coal, electricity, diesel, gasoline and natural gas. Some of its outlets use solar energy and biomass fuel. The Company follows the Specification for Equipping and Managing Energy Measuring Instruments in the Building Materials Industry (GB/T24851-2010) to measure electricity use through manual meter reading and calculate the output and consumption of clinkers and cements through truck scales, batching scales and monthly inventory check. It also follows the Norm of Energy Consumption per Unit of Cement (GB16780-2012) to conduct statistical accounting of comparable energy consumption and verify energy performance against benchmarks.

Energy use by subsidiaries of Asia Cement (China)

Entity	Energy used	Unit	2019	2020	2021
Integrated cement plants	Coal	GJ	79,491,220	75,809,581	77,665,319
	Diesel fuel	GJ	302,253	299,491	323,475
	Biomass fuel	GJ	/	/	45,166
	Purchased electricity	GJ	6,531,998	6,174,421	5,854,567
	Total energy consumption	GJ	86,325,471	82,283,493	83,888,527
Ready-mixed concrete companies	Diesel fuel	GJ	8,844	5,419	3,366
	Purchased electricity	GJ	11,455	10,101	8,595
	Total energy consumption	GJ	20,299	15,520	11,961
Cement grinding plants	Coal	GJ	374,886	258,792	163,911
	Diesel fuel	GJ	1,410	918	39,829
	Purchased electricity	GJ	515,209	486,361	434,988
Total energy consumption	GJ	891,505	746,071	638,728	
Transportation companies	Natural gas	GJ	5,066	12,570	12,444
	Gasoline	GJ	450	295	278
	Diesel fuel	GJ	127,031	110,528	115,815
	Purchased electricity	GJ	1,969	1,438	1,319
Total energy consumption	GJ	87,371,791	83,169,915	84,669,071	
Energy consumption intensity	GJ/10,000 CNY output		69.29	76.84	72.02
Energy consumption per unit of cement	GJ/ton cement		3.33	3.40	3.34

Note: The units are converted according to the General Rules for Calculation of the Comprehensive Energy Consumption (GB/T2589-2020).

Power generation from waste heat

All of our integrated cement plants have been equipped with power generation systems from low-temperature waste heat. We can efficiently recover waste heat from kilns and convert it into electrical energy. This helps reduce the loss of unused energy, greatly cut down coal consumption, and lower greenhouse gas emissions.

Power generation from waste heat		Proportion to total electricity (energy consumption)	
2021	2,272,243.39GJ	2021	27.23%
2020	2,210,573.74GJ	2020	27.09%
2019	2,228,341.64GJ	2019	25.97%

Greenhouse gas emissions >

Asia Cement (China) implements 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. It also propels low-carbon production, builds green cement factories, promotes harmless co-processing, clean production processes, verifies the carbon footprint from Portland cement, formulates a scientific carbon neutralization path, and increases the coverage of low-carbon products certification.

Asia Cement (China) incorporates climate-related risk and opportunity management into its organizational risk management and strategic planning. In order to disclose climate-related information, we refer to Task Force on Climate-related Financial Disclosures (TCFD).

Climate-related financial disclosure framework

- Corporate governance**
Asia Cement (China)'s governance on climate-related risks and opportunities
- Corporate strategy**
Actual and potential impacts of climate-related risks and opportunities on Asia Cement (China)'s business, strategy and financial planning
- Risk management**
Asia Cement (China)'s procedures for identifying, assessing and managing climate-related risks
- Indicators and targets**
Indicators and targets for assessing and managing climate-related risks and opportunities

Governance

Asia Cement (China) CSR Practice Policy has been issued upon approval by the Chairman, which regulates various possible risks that the Company should assess, manage and report to the Board of Directors.

The Board of Directors is the highest decision-making unit for climate-related risks and opportunities. It audits and supervises issues related to environmental performance and climate change. This includes tracking the progress of climate change action plans and targets in annual CSR reports.

Climate change strategies are mainly aimed at	Products	Develop new low-carbon products and services
	Supply chain	Implement the low-carbon decision to replace raw fuels with circular economy
	Adaptation and mitigation	Promote the construction of renewable energy facilities and co-processing of hazardous wastes in cement kilns
	Low-carbon investment	Implement low-carbon transformation based on the "carbon peaking" and "carbon neutrality" goal
	Operating activities	Incorporate energy conservation, carbon emissions reduction and energy efficiency as important goals Respond to operational shocks brought by physical risks of climate change

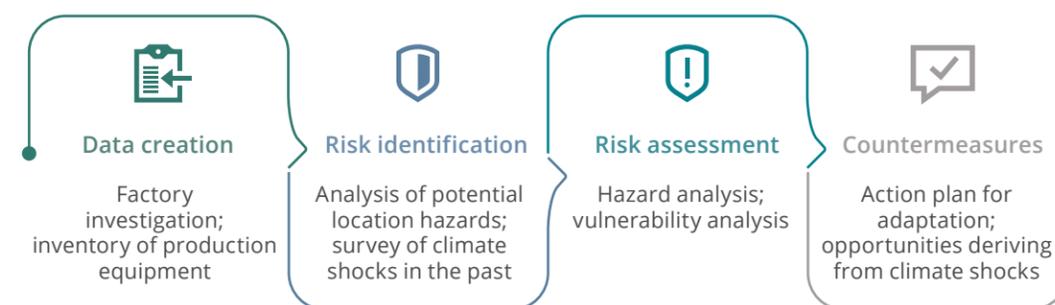
Planning against financial impacts brought by climate change

Asia Cement (China) identifies and assesses financial impacts brought by climate change. They mainly include possible increases in operating expenses, increased capital expenditures on low-carbon technologies and rising raw material costs. The financial impact index is risk impact amount/EBITDA (net income with interest, taxes, depreciation, and amortization added back), which assesses the ratio of the amount of potential financial impact of short-, medium- and long-term risks to EBITDA. If the ratio is greater than 1%, it is considered to have substantial financial impacts.

Risks and opportunities

Asia Cement (China) has a process for identifying, assessing, managing and mitigating risks of climate change. This serves to enhance its ability to adapt against related impacts. Targeted mitigation measures are also available.

Process of assessing risks brought by climate change



Risks of climate change

- Production**
Coal/heavy oil shortage, transportation of raw fuels and finished products
- Assets**
Direct operating losses caused by wind disasters, rainstorms, floods, landslides, earthquakes, etc.
- Personnel**
Occupational disasters and supply chain problems (shortage of electricity, water and raw materials)

Assessment of risks and opportunities from climate change faced by Asia Cement (China) and corresponding action plans

Type of risks	Item	Climate-related risks	Risk management and action plan
Transition risks	Regulations	"Carbon Peaking" and "Carbon Neutrality" and "Carbon Neutrality" policy, the Greenhouse Gas Emissions Reduction and Management Law	Implement energy conservation and carbon emissions reduction; purchase renewable energy certificates
	Technology	Technological transformation costs and rising raw material costs	Integrate energy saving and intelligent development, promote low-carbon cement manufacturing and fuel conversion, use renewable energy and energy with low carbon footprint
	Market	New product development and changing customer needs	Analyze the risk of being substituted by other company's products, compare our advantages and disadvantages with other materials
	Goodwill	Changes in customers' or the society's impression of the Company	Control the total amount and intensity of energy consumption, save water, create green mines, provide humanistic care, launch charity activities
Physical risks	Acute	Extreme weather such as floods and typhoons affect production facilities or transportation and cause operational losses	Develop emergency response plan against disasters
	Chronic	Potential safety hazards in the working environment affect the safety and health of employees	Monitor relevant climate risks

Type of opportunities	Climate-related opportunities	Opportunity management and action plan
Resource efficiency	Develop circular economy and reduce operating costs	Transform production equipment to increase efficiency, and recycle waste for reuse
Energy source	"Waste treatment": disposal of municipal waste, sludge, industrial hazardous waste, etc. in co-processing kilns	Increase alternative raw material procurement channels, improve resource substitution, diversity, plan for sustainable mining and participate in renewable energy projects
Products and services	Develop special cements, low-carbon products, conduct reconstruction after extreme climate change	Develop innovative sustainable products, new low-emission products and services to benefit from shifting customer preferences, find business opportunities from post-disaster reconstruction
Market	Increase market capacity and market share	Diversify operations, create new sources of profit and seize favorable opportunities during the low-carbon transition
Adaptability	Build long-term resilience to climate change	Incorporate climate change factors into business strategies, increase investment in low-carbon product R&D and production process improvement

Climate change adaptation and mitigation

Mitigation

Participated in the voluntary reduction plan put forth by the Ministry of Industry and Information Technology and industry associations.	Set up environmental protection and energy conservation signs in office areas and factories to raise employee awareness.	Actively engaged in carbon emissions trading and continuously promoted energy conservation and carbon emissions reduction.
Built a real-time monitoring and forecasting system for pollutant discharge, effectively managed pollutants and controlled air pollution.	Developed innovative sustainable products, promoted the construction of renewable energy facilities and carried out co-processing of hazardous wastes in cement kilns.	Continues to promote water management.

Adaptation

Formulated and executed the Measures for Emergency Notification and Management and the Measures for Response to Major Disasters.	Assessed risk and purchased insurances to moderately reduce the impacts of climate change on finance and management.	Adjusted development strategies and analyzed the possible impacts of regulatory scenarios on operations by reviewing current and expected national policies in response to climate change. This included restrictions on pollutant emissions, energy efficiency standards, carbon emissions trading, product standards, mandatory participation in trading.
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Climate change indicators and targets

Asia Cement (China) formulated key performance indicators for climate change, which include water, energy, waste management, and greenhouse gas emissions. We improved the performance of key indicators for the next year based on annual assessment results, company plans and opportunities in global markets.

During the reporting period, Asia Cement (China) emitted a total of 21,468,846.63 tCO₂e of greenhouse gases, including 20,447,944.29 tCO₂e of direct emissions and 1,020,902.34 tCO₂e of indirect emissions. The emission intensity was 850kgCO₂e/ton cement.

Greenhouse gases discharged by Asia Cement (China)

Entity	Emission of greenhouse gases	Unit	2019	2020	2021
Integrated cement plants	Total direct emissions (scope1)	tCO ₂ e	20,918,433.25	19,765,630.15	20,420,878.92
	Total indirect emissions (scope2)	tCO ₂ e	954,839.23	911,763.97	942,804.37
	Total emissions (scope1+2)	tCO ₂ e	21,873,272.48	20,677,394.13	21,363,683.29
Ready-mixed concrete companies	Total direct emissions (scope1)	tCO ₂ e	672.94	412.23	258.48
	Total indirect emissions (scope2)	tCO ₂ e	4,560.29	3,960.35	3,655.62
	Total emissions (scope1+2)	tCO ₂ e	5,233.23	4,372.58	3,914.10
Cement grinding plants	Total direct emissions (scope1)	tCO ₂ e	34,397.18	24,800.04	18,326.88
	Total indirect emissions (scope2)	tCO ₂ e	87,346.83	84,912.45	74,249.70
	Total emissions (scope1+2)	tCO ₂ e	121,744.01	109,712.49	92,576.58
Transportation companies	Total direct emissions (scope1)	tCO ₂ e	9,296.14	8,094.86	8,480.01
	Total indirect emissions (scope2)	tCO ₂ e	287.52	209.96	192.65
	Total emissions (scope1+2)	tCO ₂ e	9,583.66	8,304.82	8,672.66
Total GHG emissions		tCO ₂ e	22,009,833.38	20,799,784.02	21,468,846.63
GHG emission intensity		tCO ₂ e/10,000 CNY output	17.46	19.22	18.26
GHG emission per unit of cement		kgCO ₂ e/ton cement	844	853	850

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.

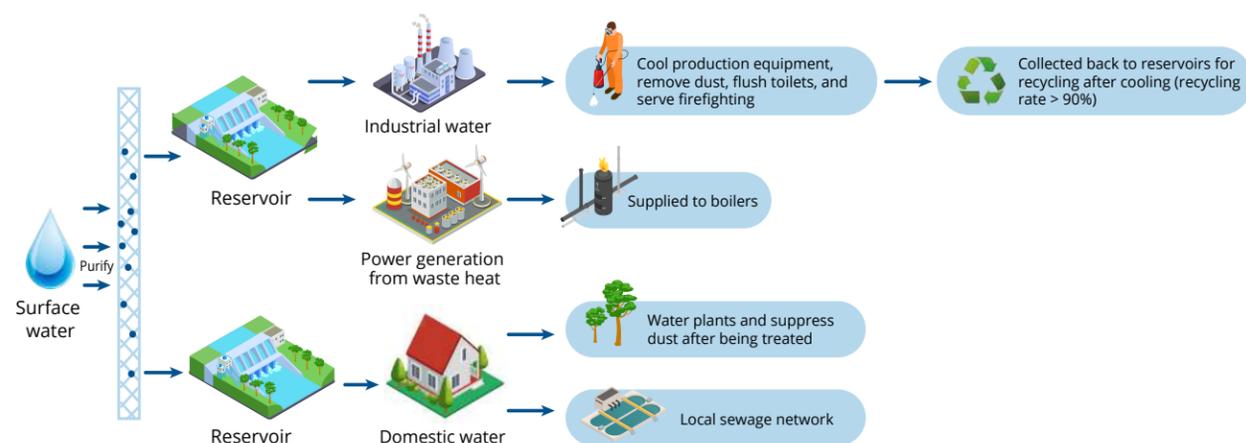
WATER RESOURCE MANAGEMENT

Asia Cement (China) conscientiously implements national strategy for ecological civilization construction. Focusing on scientific and rational water use with higher efficiency, we save water from multiple aspects and implement long-term management for water conservation to achieve sustainability.

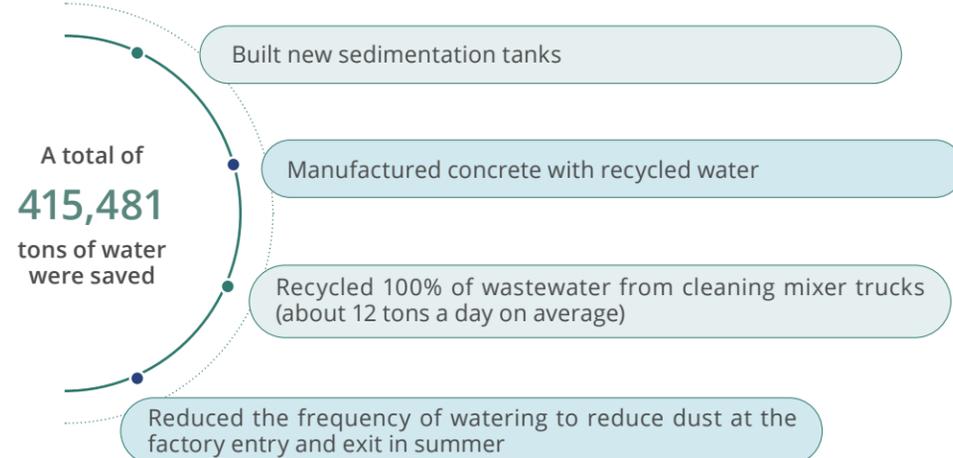
The main water sources of entities under Asia Cement (China) are third-party water supply, surface water and rainwater (reservoirs on mines). We track water sources of each entity. Most water used by integrated cement plants comes from the Yangtze River, which has rich water resources. In the meanwhile, we also pay attention to water quality and regulation risks, which are constantly monitored and evaluated.

We attach great importance to water resources management, and have set up a water saving management team. We also formulated the Water Management Measures, the Water Saving Management System, the Water and Electricity Management System and Reward-penalty System. We measure water flow, water consumption of each workshop, and maintain water facilities to prevent leakage. Following the Water Law of the People's Republic of China, the Law of the People's Republic of China on the Promotion of Clean Production, we audit water consumption every year and issue the Water Use Self-Assessment Report to seek opportunities to save water. We also distribute leaflets, make broadcasts and launch education activities to raise employee awareness of water conservation.

Asia Cement (China) uses water for industrial production, power generation from waste heat and domestic purposes. All of its integrated cement plants (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 domestic use.



During the reporting period, we took the following measures to save water



Water use by the Company

Entity	Water balance	Unit	2019	2020	2021	
Integrated cement plants	Surface water	Ton	7,907,694	7,930,422	8,051,780	
	Groundwater	Ton	186	25,023	428	
	Municipal water supply	Ton	295,434	296,077	350,721	
	Rainwater	Ton	290,000	306,643	398,316	
	Total water withdrawal	Ton	8,493,314	8,558,165	8,801,245	
	Total discharge	Ton	73,000	86,366	87,618	
	Total water circulation	Ton	205,131,876	216,722,922	216,721,105	
	Water recycling rate	%	96	96	96	
	Water consumption	Ton	8,420,314	8,471,799	8,713,627	
	Ready-mixed concrete companies	Surface water	Ton	24,600	28,200	22,000
Groundwater		Ton	109,640	77,087	37,916	
Municipal water supply		Ton	89,653	117,551	92,536	
Rainwater		Ton	64,223	35,108	18,366	
Total water withdrawal		Ton	288,116	257,946	170,818	
Total discharge		Ton	10,543	7,014	8,777	
Total water circulation		Ton	47,499	44,329	45,477	
Water recycling rate		%	14	15	21	
Water consumption		Ton	277,573	250,932	162,041	
Cement grinding plants		Municipal water supply	Ton	116,696	95,630	71,526
	Total water withdrawal	Ton	116,696	95,630	71,526	
	Total discharge	Ton	22,812	18,295	24,773	
	Total water circulation	Ton	34,059	28,001	22,743	
	Water recycling rate	%	23	23	24	
	Water Consumption	Ton	93,884	77,335	46,753	
	Transportation companies	Municipal water supply	Ton	38,101	19,523	15,663
		Total water withdrawal	Ton	38,101	19,523	15,663
		Total discharge	Ton	5,000	5,000	5,000
		Water consumption	Ton	33,101	14,523	10,663

POLLUTION CONTROL

Asia Cement (China) pays high attention to pollution management. 100% of wastes generated by its production bases are treated, and 100% of pollutants are discharged after gaining permits. With the help of pollutant treatment facilities, we reduced 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 are responsible to monitor wastewater discharge and disclose information to ensure that wastewater is treated properly.

Integrated cement plants under Asia Cement (China) adopt dry process, no wastewater is directly generated from production. Wastewater only comes from plant sewer lines. The wastewater enters their wastewater 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.

Air Pollutants

Nitrogen oxides (NO_x), sulfur dioxide (SO₂) and particulate matters are characteristic pollutants in the exhaust gas of the cement industry. On the basis of the Emission Standard for Air Pollutants in the Cement Industry (GB4915-2013), we improve our exhaust gas treatment capacity and reduce emissions.



Technologies for air pollutants control and emission reduction

Particulate Matter

Asia Cement (China) adopts the most advanced dust collection equipment and uses dust collector bags to collect fine particulate matters such as raw fuel and cement. In addition, we design and install dust collection equipment such as hoods for cement bag loading machines. As a result, we control the concentration of dust emissions in workshops to less than 1.5mg/m³ and greatly improve the working environment for staff.

During the reporting period, we completed the transformation of 14 sets of electrostatic precipitators into bag precipitators. Particulate matter emissions in all subsidiaries reached A-level of the Technical Guidelines to Prepare Emergency Emission Reduction Measures for Key Industries during Heavy Pollution Weather.

NO_x

We adopted low-nitrogen combustion and Selective Non-catalytic Reduction (SNCR) for denitrification. A large amount of CO gas is generated from low-nitrogen combustion to reduce NO_x and greatly lower NO_x content in exhaust gas. After that, SNCR is applied, in which ammonia water is sprayed into ascending channels to reduce NO_x in tail gas in kilns. In this way, NO_x emissions are controlled, ammonia water consumption is reduced and the unit heat consumption of clinkers is slightly lowered.

SO₂

- Use low-sulfur raw fuel to control SO₂ emissions at the source;
- Spray calcium hydroxide powder into the preheater to solidify SO₂ and reduce SO₂ emissions;
- Reintroduce the deacidified hot raw material into the preheater and absorb SO₂ with calcium oxide;
- Conduct wet desulfurization with raw material powder, SO₂ is absorbed by calcium carbonate;
- Conduct composite desulfurization water agent and powder are used together to reduce SO₂ emissions.

In 2022, we plan to

- transform 11 kilns of integrated cement plants (No. 2 and No. 3 kilns of Jiangxi Ya Dong, No. 1 and No. 2 kilns of Huanggang Ya Dong, Hubei Ya Dong and Sichuan Lan Feng, No. 1, No. 2 and No. 3 kilns of Wuhan Ya Xin and Sichuan Ya Dong) for SCR denitration. After the transformation is complete, NO_x emissions will be less than 50mg/m³.
- Hubei Ya Dong will first transform No. 2 kiln to desulfurize hot raw materials. Sichuan Ya Dong and Sichuan Lan Feng will work for A-level certification for environmental performance.



Emissions of conventional air pollutants

Entity	Air pollutants	Unit	2019	2020	2021	
Integrated cement plants	Nitrogen oxides (NO _x)	Ton	8,400.89	10,032.62	9,405.37	
	Sulphur dioxide (SO ₂)	Ton	1,578.08	935.00	698.74	
	Particulate matter	Ton	677.49	483.25	389.95	
	Soot	Kiln head	mg/m ³	6.40	5.00	4.20
		Kiln tail	mg/m ³	6.10	4.80	4.80
Cement grinding companies	Nitrogen oxides (NO _x)	Ton	130.29	102.91	103.81	
	Sulphur dioxide (SO ₂)	Ton	3.71	3.71	18.23	
	Particulate matter	Ton	26.79	10.97	16.16	
	Soot	mg/m ³	31.20	19.77	17.31	

In addition to conventional air pollutants, we monitored other indicators on a regular basis, such as 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 accordance 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).

Solid waste

Main hazardous waste generated by Asia Cement (China) is engine oil, batteries and oil drums. We control hazardous waste generated from production in accordance with the law 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). We entrust qualified third parties to dispose of hazardous wastes in an environmental-friendly manner and file the disposal with the environmental protection authority.

We store hazardous waste in storage rooms built in accordance with Standard for Pollution Control on Hazardous Waste Storage (hardened ground, anti-seepage paint, oil guide groove, airtight containers are required to prevent water, rain and penetration). We keep a ledger of hazardous waste in and out of storage rooms. Before each transfer, staff would fill in an electronic application form. Our transportation vehicles meet the standard for hazardous waste transportation and have been registered at the ecology and environment authority. The Company strictly follows national laws and regulations to dispose of hazardous waste in a safe manner.

We classify non-hazardous solid waste before disposal to increase recycling. In addition, we incinerate solid waste selected for final disposal and recover the energy generated. 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 non-hazardous solid waste from daily production. This includes recycling particulate matters collected by dust collectors and recycling plastic and paper in office.

During the reporting period							
Hazardous solid waste	8,143 ton generated	8,139 ton diverted from disposal	99.95% accounting	Non-hazardous solid waste	1,375 ton generated	1,327 ton diverted from disposal	97.79% accounting

Note: Diverted quantity from disposal contains the quantity of solid waste of which the energy was recycled after incineration.

SUSTAINABLE MINES FOR A GREENER ENVIRONMENT

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Water resource management in mines	52
Environmental governance in mines	53

By promoting reasonable use of resources, energy conservation, emission reduction and environmental protection, the Company achieves coordinated economic, ecological and social benefits in resource development.

Footprint in 2021

62.58 million CNY

Investment in mine construction and management

6

Number of green mines

Responded SDGs in this chapter



SUSTAINABLE MINES FOR A GREENER ENVIRONMENT

Asia Cement (China) upholds coordinated, green, open and shared development. It has prepared green mine construction plans and implementation plans based on each mine 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). The plans focus on management of mining environments, resource development, integrated resource utilization, energy saving, emissions reduction, technological innovation, digital mining and corporate image. By promoting reasonable use of resources, energy conservation, emission reduction and environmental protection, the Company achieves coordinated economic, ecological and social benefits in resource development.

During the reporting period, we invested a total of 62.58 million CNY in mine construction and governance.

Mining governance in 2021	Jiangxi Ya Dong	Huanggang Ya Dong	Sichuan Ya Dong
Investment (CNY)	16,544,312	13,490,000	32,547,067
Environment of mining areas (item)	46	7	4
Resource development (item)	72	1	0
Integrated use of resources (item)	2	7	0
Energy saving and emissions reduction (item)	17	1	8
Scientific and technological innovation and digital mining (item)	13	1	0
Corporate image management (item)	18	1	1
Total engineering projects (item)	168	18	13

Green mines

the Company owned 10 mines, 6 of which had obtained the national green mine certification. In 2021, there was no abnormality during inspection by the government. Sichuan Ya Dong (Woniuping mine) did not participate in the appraisal of green mines due to the delay of government recognition of ownership of the mine. Jiangxi East (Huawu integrated clay sandstone mine and Bao'anshan clay mine) participated in the appraisal for green mines in 2021, originally scheduled for 2022.

Jiangxi Ya Dong: Matou limestone mine, Xinwutian limestone mine, Xiazhang limestone mine

Huanggang Ya Dong: Benji Mountain limestone mine, Yuanyi Mountain limestone mine, Zhongjian Bay sand shale mine

We set 8 targets in disclosure, review their completion annually and optimize them for the next year.

Disclosure item	Indicator	2021 Performance
1. 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 to be collected to the 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. In 2021, our ore recovery rate exceeded 98%.
2. Vibration induced by blasting	Ensure the safe allowable particle vibration velocity of protected objects is <1.5cm/sec in accordance with the Blasting Safety Regulations (GB6722-2014)	In 2021, digital electronic detonators and high-precision non-electric Orica detonators were used in all mines for deep hole-by-hole blasting, which effectively reduced vibration induced by blasting.
3. Soil and water conservation in mining areas	Comply with Level 1 standard in Table 4 of the Integrated Wastewater Discharge Standard (GB8978-1996)	In 2021, all quarterly soil and water samples were lower than the limits of Level 1 standard.
4. Monitoring of mining area safety	Monitor slope stability according to the Technical Code for Non-coal Open-pit Mine Slope Engineering (GB51016-2014)	In 2021, the error of slope displacement monitoring points on mining sections in real-time/monthly/yearly monitoring was less than 1mm.
5. Environmental monitoring of mining areas	Control noise to comply with Class 2 limits in the Environmental Noise Emission Standard at the Boundary of Industrial Enterprises GB 12348-2008, and exhaust gas to meet the limits in Table 2 of the Emission Standard of Air Pollutants for Cement Industry (GB 4915-2004)	In 2021, the observed noise and particulate matter emissions were both below the standard limits. The monitoring results are disclosed to the public in real time.
6. Green coverage rate of mining areas	Achieve 100% green coverage rate of mining areas in accordance with the Green Mine Construction Specification of Cement Limestone Industry (DZ/T 0318-2018)	In 2021, all possible areas were completed. The total completed mining areas reached 60.9 hectares.
7. Green mine assessment	Be included into the list of green mines above the provincial level by 2022	In 2021, Jiangxi Yadong's Huawu integrated clay sandstone mine and Bao'anshan clay mine were under evaluation for green mines.
8. Local employee ratio in factories and mines	Employ at least 60% of local residents as factory and mine workers	In 2021, among factory and mine workers, 81.9% are local residents.

DIGITAL MINES

Huanggang Ya Dong, Jiangxi Ya Dong and Sichuan Ya Dong have built 3D visualization modules, which can fully display production, reclamation, greening and environmental monitoring (such as dust and noise). The 3D measurement tools have a model elevation and level measurement accuracy above 10cm/pixel. They can achieve 1:500 measurement, which helps reduce staff workload. Remote video monitoring displays mine location, boundaries, mining videos, output, vehicle satellite positioning, mining rights, out-of-bounds alarm and out-of-bounds records in a three-dimensional scenario. Managers can manage and control important links such as mining, processing, and production in real time through remote command and promote safe operations. Video surveillance of important locations such as maintenance areas, living areas, and oil depots greatly protects the property of mining enterprises and reduces the occurrence of theft.

Digital mining

In the first half of 2021, China Mobile built 2 base stations in Sichuan Ya Dong's mine, covering the whole mine with 4G network. In the second half of the year, a real-world 3D visualization system, an online environmental monitoring system and an intelligent video monitoring system were completed.



Sichuan Ya Dong's real-world 3D visualization system

In 2022, we plan to build a centralized control room for mining crushers, use autonomous vehicles in Jiangxi Ya Dong; apply vehicle dispatch systems (which covers quality management, production statistics, oil depot management and equipment health management, etc.) in Sichuan Yadong; install equipment management systems and a centralized control system for mine crushers in Huanggang Ya Dong.

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 dust (PM_{2.5}, PM₁₀), noise and displays related information on the large outdoor display.



Online environment monitoring in Jiangxi Ya Dong's Huawu integrated clay sandstone mine

All mines affiliated to the Company use high-precision non-electric Orica detonators for deep hole-by-hole blasting. These detonators effectively reduce noise, dust and vibration generated by blasting. Sichuan Ya Dong and Jiangxi Ya Dong have introduced digital electronic detonators with better safety features to improve blasting in complex environments. Their detonation system and control software reduce the time of network deployment. With a safe, reliable and clear operation process, the detonators not only improve work efficiency, but also instantly control flow direction as they have safety and information functions not available in traditional detonators. When any of the detonation locations, time or operator is incorrect, the detonators will not detonate. In this case, the detonation system will report the situation to the management department. This is beneficial to safety and internal management. In addition, in order to ensure slope stability at the end of mining and reduce damages to the integrity of the rock mass, Jiangxi Ya Dong has designed and fully implemented presplit blasting of finished slopes.



Jiangxi Ya Dong implemented presplit blasting of finished slopes, having maintained the integrity and stability of rock mass

Staff work in strict accordance with mineral resources development, utilization plans, preliminary design, safety facility design and inspect slopes throughout mining. The head of mining will regularly inspect the site. They will immediately suspend work if they find pumice or umbrella rock and restore work after safety issues are resolved.

- In 2021, Jiangxi Ya Dong entrusted Sinosteel Ma'anshan General Institute of Mining Research Co., Ltd. to analyze the slope stability of limestone mines in Xiazhang, Matou and Xinwutian and monitored the mines according to the analysis;
- Sichuan Ya Dong monitored and measured finished slopes in Majialiangzi every quarter, with 10 monitoring points;
- Huanggang Ya Dong completed analysis and evaluation of slope stability in October 2021. It systematically analyzed slope stability, deformation, failure mechanisms and the process of typical slope evolution through geological analysis and finite element numerical simulation, and put forward targeted suggestions. In December 2021, it completed the construction of the online slope monitoring system, which is capable of monitoring the displacement of finished slopes and dump site as well as rainfall.

站点	时间	X	Y	H	DX(mm)	DY(mm)	DH(mm)	DXY(mm)	VX	VY	VH	状态
4、八里头最终边坡	2021-11-20 08:58:04	3312916.577	541062.654	209.200	-2.73	0.67	-23.20	2.87	4.44	1.96	-14.48	正常
6、中间湾最终边坡	2021-11-20 08:59:59	3313649.421	540467.783	67.678	-7.07	1.60	-16.23	7.25	-1.70	2.60	5.90	正常
3、阳城山最终边坡	2021-11-20 08:59:59	3312732.349	541464.153	267.011	-4.43	-1.63	-16.30	4.72	2.20	0.70	2.80	正常
1、阳城山老排土场	2021-11-20 08:59:59	3312289.271	540836.119	176.952	-3.83	-2.43	-2.70	4.54	4.10	-4.40	-5.20	正常
5、莲花山最终边坡	2021-11-20 08:59:59	3313339.195	540483.281	136.127	-4.33	6.10	-15.30	7.46	-1.30	-2.20	-1.90	正常
2、青壁山排土场	2021-11-20 08:59:59	3312077.544	541435.414	230.955	-2.83	-1.90	-4.83	3.41	1.20	1.10	6.10	正常

Online slope monitoring system of Huanggang Ya Dong

OCCUPATIONAL HEALTH AND SAFETY IN MINES

We provide safety education for employees and contractors, investigate safety issues and conduct emergency drills to ensure safety.



In 2021, **Jiangxi Ya Dong** offered 12 safety training sessions for employees and contractors, with a total of 723 person-time participants. It launched 3 major quarterly investigations of safety issues in its mines and found 238 issues. All issues were general safety issues and have been rectified. It also organized 4 emergency drills, including 1 integrated emergency drill (for oil depot fire), 1 special emergency rescue drill (for vehicle injuries), and 2 on-site disposal drills (for explosion and mechanical injuries).



Sichuan Ya Dong organized 12 safety training sessions for employees and contractors. It also launched 1 comprehensive safety drill, 5 special emergency drills (for flood control, fire, collapse, container explosion, and blasting) and 15 on-site disposal drills.



Huanggang Ya Dong provided 23 safety training sessions for employees and contractors, covering 694 people. It also carried out 12 investigations of safety issues. This identified and rectified 174 general safety issues. In May 2021, it launched an emergency drill on mine collapse and landslide.



Safety education by Jiangxi Ya Dong



Emergency preparedness drill by Sichuan Ya Dong

WATER RESOURCE MANAGEMENT IN MINES

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.

- **Jiangxi Ya Dong** has built water and soil conservation facilities. There are about 8,000 meters of drainage ditches in its limestone mines and 5,000 meters of drainage ditches in its sandstone mines. Its limestone mines have a large four-level sedimentation tank (11,000 m³ for level one, 12,000 m³ for level two, 2,000 m³ for level three, and 800 m³ for level four). Sandstone mines have three large sedimentation tanks (with a capacity of 15,000 m³, 1,200 m³, and 2,000 m³).
- In 2021, **Sichuan Ya Dong** hardened 2,000 meters of drainage ditches in its limestone mines and monitored two outlets for external discharge on a regular basis. The ditches follow the natural terrain. There is a 200-meter long drainage ditch on one side of the main transportation road and a 6-kilometer long drainage ditch on one side of uphill road.
- **Huanggang Ya Dong** repaired 1,000 meters of drainage ditches on the inner side of the uphill road to its mine. The surface runoff is guided to road drainage system built based on the terrain. It is diverted with intermediate dissipating tanks or turning backs, collected into the low sedimentation tank and discharged after clarification. Huanggang Ya Dong regularly sample and monitor water quality at external discharge outlets to ensure compliance with drainage regulations.



Level-two sedimentation tank of Jiangxi Ya Dong



The four-level sedimentation tank of Jiangxi Ya Dong

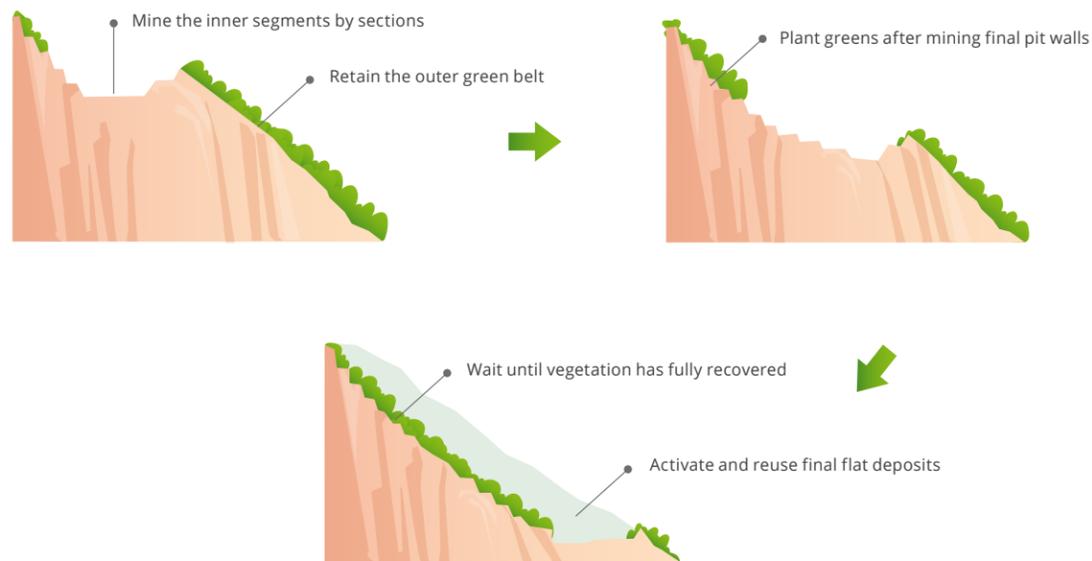


Surface runoff clarification and collection in Jiangxi Ya Dong

ENVIRONMENTAL GOVERNANCE IN MINING

Mine restoration

All the mines of Asia Cement (China) implement their own environment restoration and land reclamation plans. Mining sections are 12 meters high, 4 meters wide, less-than-70 degree slope and 50-55 degree overall slope to ensure safe operations. After finishing mining each section, we immediately stack soil on the platform and plant greens to achieve re-greening and ecological restoration. We also manage the environment while mining to rebuild the landscape with the surrounding environment and reduce costs.



- 1 Sichuan Ya Dong reduced the exposed area of Woniuping mine
- 2 Jiangxi Ya Dong's Matou limestone mine is in harmony with the surrounding landscape
- 3 Huanggang Ya Dong's Benjishan mine is in harmony with the surrounding landscape
- 4 Aerial view of the entrance of Huanggang Ya Dong's Benjishan mine

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 the year.



Landscape at the entrance of Sichuan Ya Dong's mining area



Panorama of landscape at the entrance of Sichuan Ya Dong's mining area

Ordered mining and restoration (Jiangxi Ya Dong's Huawu sandstone mine)



Dust control in mining

To reduce the spread of dust, we continuously spray water on mines with 12 sprinkler trucks in total. Some road sections (a total of 2,100 meters) are equipped with automatic sprinklers. We also hardened transportation roads and crusher dumping platforms to facilitate mud and dust control.

- Jiangxi Ya Dong hardened 1,500 meters of road in its mine areas and installed two new water passages in its batching mine.
- Huanggang Ya Dong completed the closing of crusher discharge ports in Yangcheng Mountain and Lianhua Mountain mines in July 2021. The hardening of Lianhua Mountain crushing square and the road at office entrance was completed on August 20 (which cover about 3,150 m²).
- Sichuan Ya Dong built walls on both sides of No. 1 and No. 3 crushers, and sealed No. 5 and No. 10 transfer stations.



Hardened road by Huanggang Ya Dong



Closed crusher discharge port by Sichuan Ya Dong

Biodiversity

We cover soil and grow grass in areas not mined to reduce exposed area and visual impact. In 2021, Jiangxi Ya Dong greened a total of 17 hectares (10 hectares of limestone mining area and 7 hectares of sand shale mining area) with 17,000 trees and seeds (1,000 kg for *Pennisetum alopecuroides* (L.) Spreng, 1,000 kg *Trifolium repens* L., 1,000 kg *Cynodon dactylon* (L.) Pers., 500 kg *Lolium perenne* L., 500 kg *Paspalum wetsfeteini* Hackel, 100 kg *Cosmos bipinnata* Cav., 100 kg *Zinnia elegans* Jacq., 100 kg *Cleome spinosa* Jacq., and 100 kg *Papaver rhoeas* L.). It 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 2021, it transplanted a total of 14,000 plants to bare mining areas.

During the reporting period, Huanggang Ya Dong covered soil and planted saplings on 0.42 hectares of final pit slopes. It transplanted 50 local saplings, 270 kg of other trees, 270 kg of grass; cultivated 1,000 *Sapindus mukorossi* Gaertn. saplings, 100 *Photinia × fraseri* Dress trees, 50 *Styphnolobium japonicum* (L.) Schott trees, and 100 *Sabina pingii* var. *wilsonii* trees; cultivated 200 *Photinia × fraseri* Dress salplings, 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.

In 2021, Sichuan Ya Dong greened 45 hectares of mining area with 1,500 trees and 500 kg grass seeds. It installed a greenhouse seedling cultivation system (16mL*16mW*4.8mH) in June 2021, and plans to start nursery in the spring of 2022.



Jiangxi Ya Dong's nursery was open to outsiders



Jiangxi Ya Dong's nursery

Comprehensive utilization of resources

Jiangxi Ya Dong and Huanggang Ya Dong produce building aggregates with high-magnesium limestone that cannot be used as cement raw materials. The powder from aggregate production are used as cement ingredients. Waste rocks are almost fully utilized. In 2021, Jiangxi Ya Dong produced about 2.79 million tons of building aggregates with high-magnesium limestone, utilized 1 million tons of topsoil and recycled 600,000 tons of water resources from its four-level sedimentation tank. The amount of waste rock used accounted for 17.88% of total resource utilization.

In 2021, Huanggang Ya Dong used 2.87 million tons of resources, including 0.45 million tons of limestone for cement (high-magnesium waste rock, Maokou formation, interlayer soil, interlayer stone, surface soil, fissure soil) and 1.31 million tons of high-magnesium waste rock for side materials. The amount of waste rock used accounted for 47.73% of total resource utilization.

Sichuan Ya Dong fully utilized low-quality limestone and topsoil. In 2021, it used about 1.02 million tons of resources and produced 9.26 million tons of limestone for cement. Its utilization rate of high-alumina interlayer soil and stone was about 11%.

The average integrated utilization rate of waste rock in all mines of Asia Cement (China) was about 19.25%.



At the 3rd China Cement Intelligence Summit, Asia Cement (China) gave a keynote speech and submitted a paper.



SUSTAINABLE SOCIETY FOR GREATER RESPONSIBILITIES

Employee rights	59
Employee development	66
Health and safety	68
Giving back to the society	77

In 2021, Asia Cement (China) participated in the selection of HR Asia, a leading human resources publication in Asia, and won the "Best Companies to Work for in Asia".

Footprint in 2021

75.8%

Local employment rate

2.63%

Employee turnover rate
a decrease of 26.94% over 2020

99.97%

Coverage of employee performance review

0

Number of employees with suspected or confirmed occupational diseases

0

Number of deaths at work

111.88 million CNY

Investment in occupational health and safety

1.43 million CNY

Expenditures on giving back to communities

Responded SDGs in this chapter



SUSTAINABLE SOCIETY FOR GREATER RESPONSIBILITIES

Adhering to the "people-oriented" concept, Asia Cement (China) regards employees as its greatest wealth and implements "integrity, diligence, austerity, prudence and innovation" into corporate culture. It provides good salary and benefits, smooth career development, considerate care and a safe working environment for employees.

In 2021, Asia Cement (China) participated in the selection of HR Asia, a leading human resources publication in Asia, and won the "Best Companies to Work for in Asia" award.



CEO of Asia Cement (China) attended the online award ceremony



Asia Cement (China) won the "Best Companies to Work for in Asia"

EMPLOYEE RIGHTS

The Company protects the rights and interests of employees in accordance with 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, the Special Rules on the Labor Protection of Female Employees, the United Nations Universal Declaration of Human Rights, the International Labor Organization Declaration on Fundamental Principles and Rights at Work and other laws. Over the years, we have kept improving the protection of employee rights. The Company also gives more rights and interests to employees, so that they can share its development results.

Efforts against forced labor	Asia Cement (China) promises not to use or support the use of forced labor in any form. We fully control modern slavery risks such as bonded labor, use of prisoners, human trafficking, collection of deposits, seizure of documents or property, restriction of personal freedom, deduction or arrears of wages and benefits, forced overtime, restrictions on resignation and ensure that all employment relationships are established on a voluntary basis.
Prohibition of child labor and protection of young workers	Asia Cement (China) promises not to employ or support the employment of children under the age of 16. All HR staff responsible for employee recruitment have received due training to ensure that employees of appropriate age are employed. When underage workers are employed, the Company would offer special protection for them in accordance with the law.
No harassment and abuse	Asia Cement (China) implements its own Management Measures for Reward and Punishment, which prohibits any form of sexual harassment, sexual abuse, corporal punishment, mental or physical oppression, verbal abuse, threats, etc.
Anti-discrimination	Asia Cement (China) does not allow any discrimination based on race, skin color, age, gender, sexual orientation, ethnicity, disability, pregnancy, religion, political affiliation, association membership or marital status in employment and actual work. It treats every employee fairly and equally. All employees have equal opportunities for employment, training and promotion, and enjoy the same benefits.
Right to free association	Asia Cement (China) respects the freedom of association of employees. Employees can communicate openly with management about working conditions and management issues without fear of retaliation, threats or harassment.
Compensation and benefits	Asia Cement (China) advocates more pay for more work and treats employees fairly. It hopes to attract outstanding talents through competitive salary and benefits in accordance with its Compensation Management Measures and Bonus Distribution Measures. The compensation of employees consists of fixed salary, additional remuneration by managers, monthly production sales bonus, full attendance bonus, annual attendance bonus, year-end bonus, employee bonus (i.e. dividend), contribution bonus, etc. In addition, there are minimum wage provisions. When employees take too many leaves of absence or sick leaves or the Company's revenue declines, and employee salary is lower than the local minimum wage, the Company would make up the difference in accordance with the Measures for Employee Leaves to protect their basic rights and interests. This is included in the labor contract and the salary settlement system.
Working hours	Asia Cement (China) arranges work based on the labor law to ensure the health of employees. We advocate voluntary overtime for all employees.
Protection of vulnerable groups	The Company highly values the protection of the rights and interests of female employees. The Measures for Employee Leaves clearly stipulates that female employees are entitled to maternity leave and parental leave in accordance with the law. We give special care to female employees during pregnancy, maternity and breastfeeding and fully protect their statutory rights and benefits.

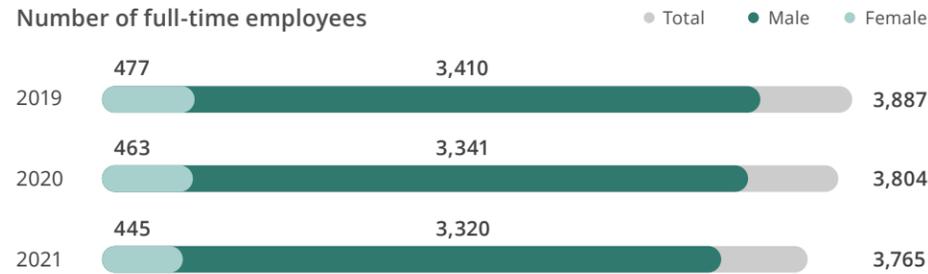
Employee communication

Asia Cement (China) offers multiple communication channels for employees, and sincerely listens to and responds their demands and suggestions in a timely manner. If employees are unreasonably treated in the workplace, or if they find violations of regulations or illegal activities, they can report and appeal to company website or the mailbox of senior supervisors of audit offices. The Company will investigate in accordance with relevant regulations and principles and punish personnel concerned if verified.

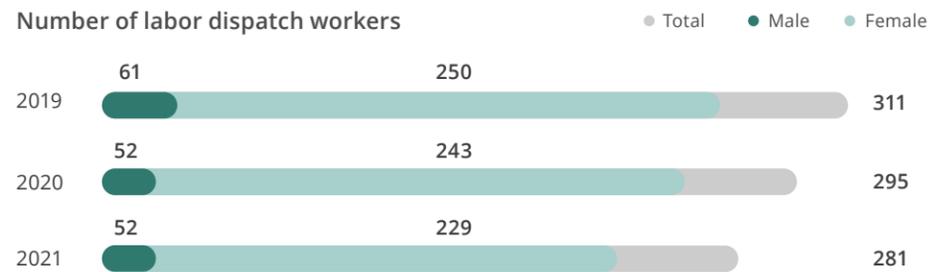
During the reporting period, the Company did not receive any grievances or complaints about forced labor, child labor, harassment, abuse, discrimination or other situations in which the rights and interests of employees were infringed.

Employee structure

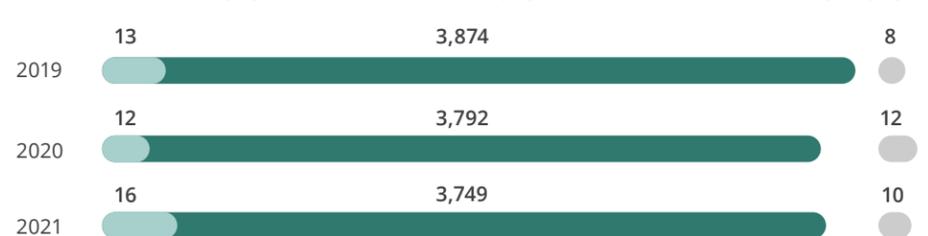
Number of full-time employees



Number of labor dispatch workers



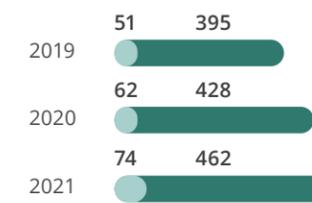
Number of disabled employees, Han employees, and ethnic minority employees



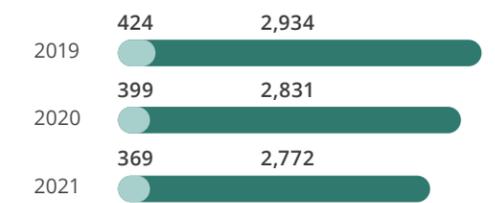
Senior employee Level 14 (inclusive) or above



Mid-level employees Grades 10-13



Junior employees Grade 9 (inclusive) or below

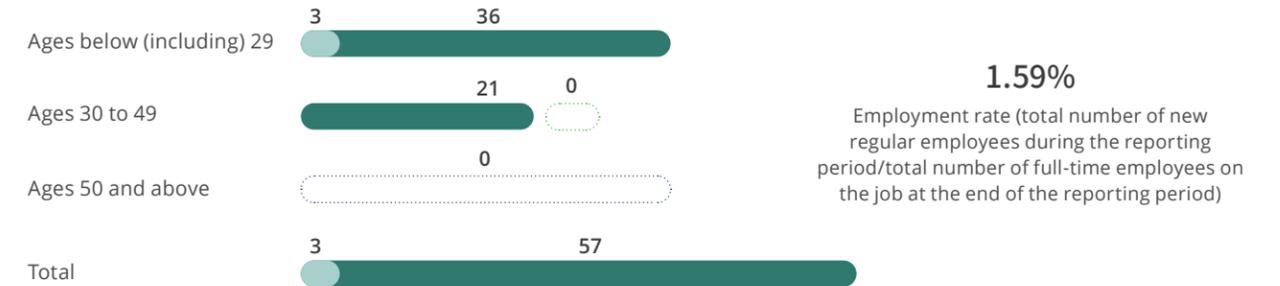


Number of local employees



Note: Local employees refer to employees whose household is registered within the city where the Company (its entities) is located.

Number of new regular employees during the reporting period



Number of full-time employees that resigned during the reporting period



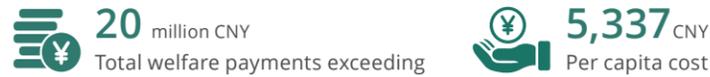
In 2021, Asia Cement (China)

13.57% Employee employment rate increased compared with 2020

26.94% The employee turnover rate is lower than that in 2020

Employee benefits

To show our appreciation of employees, all subsidiaries of Asia Cement (China) have set up employee welfare committees, which continuously improve employee welfare based on various needs in accordance with the Administrative Measures for Employee Welfare Committees. We provide a full range of allowances to employees, such as meal allowances, festival allowances (Spring Festival, Dragon Boat Festival, Mid-Autumn Festival), year-end parties, travel allowances, self-help benefits, birthday gifts, wedding, funeral and maternity cash gifts. In 2021, Asia Cement China disbursed over 20 million CNY of subsidies, a per capita amount of 5,337 CNY.



Allowances issued by Asia Cement (China) in 2021

unit: CNY



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 by employees of Asia Cement (China) from 2019 to 2021

Item	2019	2020	2021
Total number of employees taking maternity leave and paternity leave	223	169	155
Number of male employees taking paternity leave	192	137	123
Number of female employees taking maternity leave	32	32	32
Total number of employees returning to work after a leave	219	166	155
Number of male employees returning to work after a leave	189	137	123
Number of female employees returning to work after a leave	30	29	32
Return rate	98.21%	98.22%	100%
Total number of employees who have stayed for 12 months after returning to work	214	162	153
Number of male employees who have stayed for 12 months after returning to work	186	136	122
Number of female employees who have stayed for 12 months after returning to work	28	26	31
Retention rate	97.72%	97.59%	98.71%

Note: 1. Return rate = total number of employees returning to work after a leave / total number of employees taking maternity leave and 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

Club activities

Asia Cement (China) values employee happiness. It supports employees to join or set up leisure clubs based on personal interests and organize activities. There are basketball courts, football fields, tennis courts, badminton halls, table tennis rooms, libraries, gymnasiums and yoga studios. A variety of activities like ball games, endurance running and team sports are held on a regular basis. Employees also attend competitions held by the local community. The activities not only enrich the life of employees, but also promote an active lifestyle. During the reporting period, the clubs organized a total of 118 activities and received more than 100,000 CNY of funding from the Company.



Basketball



Running around the city



Tennis



Football



Running

Employee care

Busy work and tight schedules reduce the time for employees to reunite with their families. In order to improve the families' understanding of the Company and promote our corporate culture, we invite them to visit the Company to show them the environment and production process. The purpose is to promote a work life balance and improve employees' sense of belonging and pride. Jiangxi Ya Dong held the first "Family Day" in 2021, which attracted over 200 employees and their family members. The event was well received and will be held at other subsidiaries in the future.



Warm-up



Children's games



Family games



Drawing competition

EMPLOYEE DEVELOPMENT

Talents are the most important asset of Asia Cement (China). To ensure employees are competent, the Company has developed a complete training system and offers targeted training for employees at different stages of career development. In 2021, it provided a total of 8,028 training opportunities.

	Professional skills training, three-level occupational health and safety training, on-the-job mentoring training (passing on experience), for new recruits.	7,205 training opportunities were offered, which totaled 5,710 hours
	Training on special techniques, special operations, English training	777 training opportunities totaling 11,609 hours were offered
	Elite training for managers, focusing on organizational skills and personal development	46 training opportunities totaling 3,526 hours were provided

Training offered by Asia Cement (China) from 2019 to 2021

	2019	2020	2021
Total hours of training	48,908	43,603	40,297
Total training hours for male employees	43,127	38,296	35,352
Total training hours for female employees	5,781	5,307	4,945
Total number of training opportunities	3,560	4,198	8,028
Total number of training opportunities for male employees	3,123	3,687	7,079
Total number of training opportunities for female employees	437	511	949
Average training hours per employee	13.7	10.4	5.0
Average training hours for male employees	13.8	10.4	5.0
Average training hours for female employees	13.2	10.4	5.2

Note: As offline training in 2021 was impacted by the COVID-19 pandemic, employee training hours in 2020 and 2021 were shorter than that of 2019.



Elite training

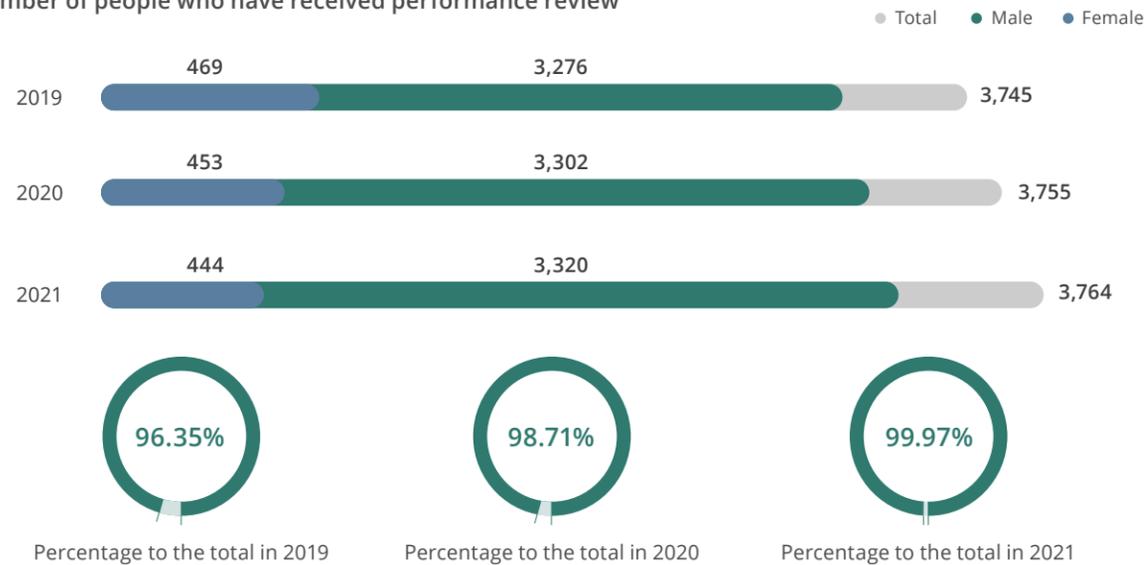


To better meet the needs of Chinese market, Asia Cement (China) transformed from a grade-based to post-based human resources management system in 2021. It reshaped organization, budgeted posts and the compensation system. We implement equal pay for equal work. In the meanwhile, we have formulated supporting measures such as the *Organizational Structure and Post Management Measures*, the *Grade and Post Appointment Measures*, and the *Post Agency and Part-time Management Measures*.

The Company also raises employee compensation regularly to reach the top 25% rank on the market. It increased full salary by 22% (38 million CNY in total) in 2020 and increased fixed salary by 15% (38.48 million CNY in total).

The Company conducts an objective and fair review of employee performance every year, which covers work performance, attendance, work ability, learning and personal development. In 2021, it improved employee performance evaluation and formulated the Performance Evaluation Management Measures. Employee performance evaluation is linked with net profits, environmental protection, work safety, attendance, rewards and demerits to stimulate employees' sense of competition and responsibility. In 2021, the Company raised employee salary by 2% based on performance evaluation for 400,000 CNY/month. Except for those enrolled after December, 99.97% of incumbents participated in performance review.

Number of people who have received performance review



The Company has formulated the Organizational Structure and Post Management Measures. It provides employees with multiple paths of career development based on integrated training and assessment. It has both managing talents and professional staff.

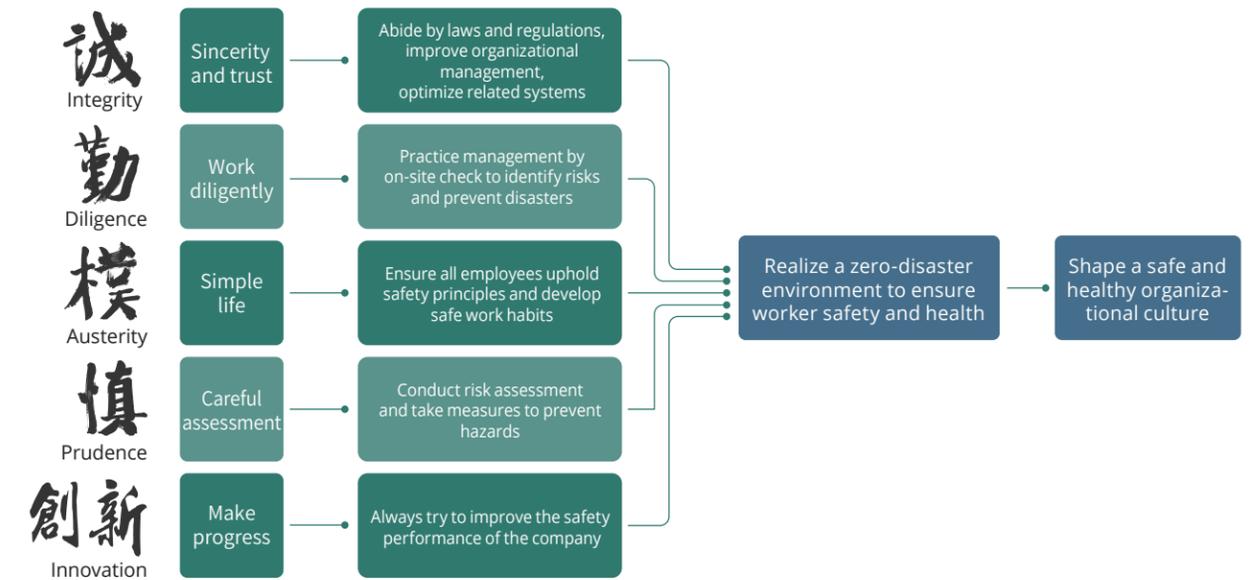
Management	A low-level → middle-level → high-level career development path for managers supported by targeted training and job rotations.
Professional skills	A career development path for technicians, engineers, managers, and specialists for professional and technical personnel supported by targeted training and job rotations if they'd like to transfer to management position.

In 2021, Asia Cement (China)



HEALTH AND SAFETY

Asia Cement (China) is committed to creating a healthy and safe working environment. We integrate the business philosophy of "integrity, diligence, austerity, prudence and innovation" into health and safety management and strictly abide by laws. While improving management, we conduct prudent risk assessment on each operation, implement operating procedures and provide training for all employees to promote "safety first". Our management conducts spot checks to prevent accidents. We constantly improve safety measures to create a safe working environment and ensure the health of our workers.



System building

During production and operations, the Company strictly abides by 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* and other laws. It promotes standardized production safety, occupational health and safety management to systematically improve occupational health and ensure employee health.

Asia Cement (China) has a sound organizational structure for safety management. Its subsidiaries set up their respective safety production committee with their general manager/director serving as the chairperson. The committee consists of department heads, professionals, and employee representatives, which guarantees the right of employees to participate in the Company's safety meetings. It holds a meeting once a month to review safety policies, operations, potential hazards, form opinions, and solve issues.

Composition of "safety production committees" in subsidiaries

Subsidiary	Member	Chairperson	Number of department heads and professionals	Number of employee representatives	Employee representation ratio
Jiangxi Ya Dong		General manager	74	19	20%
Huanggang Ya Dong		General manager	20	13	39%
Hubei Ya Dong		General manager	18	13	42%
Hubei Ya Li		General manager	6	9	60%
Wuhan Ya Dong		General manager	18	5	22%
Wuhan Ya Li		General manager	6	7	54%
Wuhan Ya Xin		General manager	15	1	7%
Yangzhou Ya Dong		General manager	23	10	30%
Taizhou Ya Dong		Director	6	1	17%
Sichuan Ya Dong		General manager	29	8	22%
Sichuan Ya Li		General manager	5	2	29%
Sichuan Ya Li		General manager	8	2	20%
Sichuan Lan Feng		General manager	18	6	25%
Chengdu Ya Li		General manager	10	3	23%
Jiangxi Ya Li		General manager	12	7	37%
Nanchang Ya Li		General manager	10	12	55%
Nanchang Ya Dong		General manager	10	1	10%

Contractor safety

Asia Cement (China) incorporates contractors into safety management and treats them as our own employees. It not only requires them to abide by our safety policy, but also 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 and reduce occupational injuries.



Safety training for contractors

According to statistics, falling from heights is a major safety hazard. The Company regards it as a "safety red line" and enhances publicity to reduce the risk of its happening. Should there are any violations, the contractor's key card will be taken and contractor will not be allowed to enter the plant again and will receive economic fine.

Occupational hazard prevention

Asia Cement (China) assesses occupational hazards such as noise, dust, and high temperature in production sites. We have formulated relevant standards based on assessment results. We conduct occupational hazard management in accordance with the law, namely entrusting qualified institutions to inspect occupational hazard sites every year. We publish the results in the workshop, on the canteen bulletin board and the company website. In addition, We arrange physical examinations to maintain the occupational health of employees.



Occupational Health Management policies and guidance board in a prominent position in the workshop

The Company controls occupational hazards from the source by improving processes and engineering. It also takes integrated measures to strengthen personnel management, thus minimizing the impacts of occupational hazards. For example, we adopt the following measures to control noise from cement production lines:

- 1 Installed advanced low-noise equipment, including fans and air compressors.
- 2 Improved the level of automation of technological processes, reduced the number of fixed positions in the workshop and inspected equipment on a regular basis to reduce the time employees are exposed to noise.
- 3 Secured large equipment that produces loud noise such as mills and fans to the ground with vibration isolators or self-installed vibration isolation devices; installed damping vibration reductions for pipe shells and sound insulation cover for aerodynamic machinery made of sheet metals; installed noise reduction equipment on airflow channels of equipment that generates noise.
- 4 Set up soundproof control rooms in raw material mills, coal mills, cement mills, and air compressor stations; ensure central control rooms, central labs, offices that require low noise are far away from noise sources and are installed with double-layer soundproof glass on doors and windows.
- 5 Inform employees about pre-job notification, on-site warnings and notification of physical exam results, distribute labor protection products free of charge and post occupational hazard warnings and guidelines at the worksite.



Reduce exposure time to noise through automatic controlling system



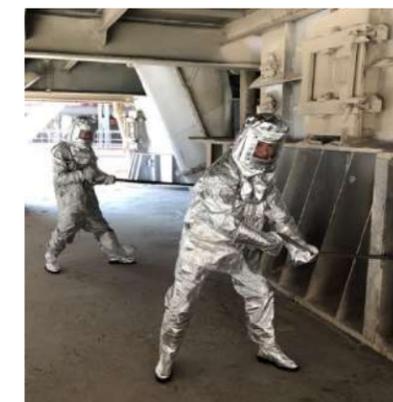
Reduce noise pollution through soundproof control rooms



Increase vibration isolation and noise reduction devices for equipment with loud noises



High temperature is one of the main occupational hazards for cement companies, which is caused by preheaters, cement rotary kilns, and coolers. The Company provides employees with personal protective equipment such as protective clothing, high temperature shoes and safety helmets. Rest rooms are equipped with air conditioners and showers.



Protective clothing for workers at high temperature posts



Eliminate high temperature risks through temperature monitoring

In addition, the Company improves environmental safety in workplaces with high risks such as high altitude, electric shock, scaffolding, falling objects and provides employees with the necessary personal protective equipment. It also enhances employee safety awareness through education and training, hazard prediction and implements routine safety inspections. These measures have effectively avoided the occurrence of hazards.

In 2021, no employees of Asia Cement (China) suffered from occupational diseases stipulated. The occupational disease rate (ODR) was 0%.



Physical exam to maintain occupational health



On-site safety risk inspection



Mobilization for security inspection

Health and safety training

While creating a healthy and safe working environment, Asia Cement (China) also exerts efforts to improve employees' safety awareness. In addition to recruiting professional talents from colleges and universities every year, it conducts on-the-job training lectured by outstanding department heads and employees. To improve the occupational safety awareness and occupational skills of all employees, the Company invites its own lecturers or those from other institutions to share safety production knowledge. The training covers pre-job three-level safety education, job safety, professional skills, occupational safety laws and professional qualifications.



Safety education for new employees



Meeting of safety production committee

In June 2021, in response to the Office of Work Safety Committee of the State Council and the Ministry of Emergency Management, we launched "safe production month" activities focusing on "implementing safety responsibilities and promoting safe development". The "safe production month" consists of "awareness week, training week, assessment week and summary week".

Awareness week	Improve awareness through training sessions and take promotion photos.
Training week	Make employees proficient in operation procedures, familiar with job risks and safety responsibilities, understand past accidents, causes and prevention measures. Carry out assessment on employees based on the Company's safe production responsibility system;
Assessment week	Subsidiaries conduct self-examination based on "five ones" and "ten checks" for safe production; Subsidiaries conduct self-examination based on the "Three-Year Action for Special Rectification of Work Safety"; Department heads organize a special safety hazard investigation and implement closed-loop management; Inspect places prone to accidents, with frequent occurrence of accidents, or have caused casualties.
Summary week	Prepare a summary report of the safe production month.

In the past three years, Asia Cement (China) offered 132,807 hours of job skills and safety training in 15,786 training opportunities.

Emergency management

In order to improve its ability to respond to unexpected accidents, prevent the expansion or escalation of incidents and minimize losses, Asia Cement (China) has established an emergency management mechanism in accordance with the Regulation on Emergency Responses to Work Safety Accidents. It also carries out drills to improve employees self-rescue and mutual rescue capabilities in the event of an emergency.

On July 23, 2021, the second manufacturing team, the secretariat the environmental protection and work safety office of the second factory of Jiangxi Ya Dong jointly launched an emergency rescue drill against heat stroke.



Emergency rescue drill against heat stroke

On June 16, 2021, the stack affairs team organized an emergency drill against "collapse of the cement warehouse".



On June 24, 2021, the mining team conducted a fire drill.



On November 17, 2021, the port affairs team carried out an emergency response drill against oil leakage from ships in special terminals.



Safe production performance

Asia Cement (China) promulgates safety production goals and performance appraisal standards every year in accordance with safety production policy, objectives and indicator management procedures. Its environmental protection and work safety office conduct regular inspections on all subsidiaries, performance evaluations once a month, and reports the situation to the work safety committee.

Safe production goals



Indicators for work safety assessment of Asia Cement (China) in 2021	Safety level	Major occupational accidents	General occupational accidents	Total working hours	Accidental injury frequency rate (FR)	Accidental injury severity rate (SR)	Frequency severity index (FSI)
Performance	Safe	0	20	9,931,680	2.01	47	0.31

Note: 1. FR = number of disability injuries × 1,000,000 / total working hours
 2. SR = number of disability injury days × 1,000,000 / total working hours
 3. FSI = square root of FR × SR / 1,000 FSI

In 2021, Asia Cement (China) invested a total of 111.8 million CNY for safety related work.

Caring for employees' mental health

We are very concerned about the mental health of our employees. To relieve their psychological pressure and ease their emotions, our subsidiaries invite local psychological counseling institutions and hospitals to give lectures on mental health. This includes mental disease prevention, how to regulate emotions and maintaining mental health in the workplace. Employees can also seek consultation on psychological problems for free by calling the hotline. In addition, we have trained our own professional mental health counselors, who regularly receive expert training on the identification of mental health problems, emotional regulation, and stress management.



Mental health lectures

Prevention and control of the COVID-19 pandemic

In 2021, the COVID-19 pandemic continued to spread around the world. The Company strictly followed pandemic prevention and control policies, and established a mechanism to protect the health of employees and others. It paid close attention to the situation of the pandemic in places concerned, updated prevention and control measures and informed its subsidiaries of related measures. All employees entering and leaving office areas, plants, mines and ports must receive temperature testing and complete disinfection as required. Public areas such as staff canteens, office spaces were disinfected and ventilated every day. Employees were encouraged to get vaccinated. Large activities like training and meetings were suspended or held online.



Temperature check before entering the plant



Office area disinfection



Canteen disinfection

GIVING BACK TO THE SOCIETY

Communities are vital stakeholders in our operations and important participants in our sustainable development. We uphold "create a happy workplace, help disadvantaged groups, foster cultural inheritance, and build an inclusive society". We have been giving back to communities and supporting local education over the years to fulfill the mission of "to be a preferred partner for building sustainable green homeland".

Asia Cement (China) integrates corporate development and social responsibility. Before building a new plant, we assess impacts on local communities, understood their demands, actively participated in their development and established a partnership with them.

In 2021, Asia Cement (China) invested about 1.43 million CNY in giving back to communities.

Asia Cement (China) has offered material and financial assistance to many schools since its establishment to support their development. In March 2021, Jiangxi Ya Dong donated 100 tons of PC42.5 cement (valuing 42,500 CNY) to Matou Ya Dong Hope Primary School to maintain campus facilities.



Jiangxi Ya Dong donated cement to Ya Dong Hope Primary School in Matou Town, Ruichang

In 2019, Jiangxi Ya Dong invested in an abandoned refrigeration working site for mechanical processing and gradually built it into an ecological agricultural tourism park named Ya Dong Ecological Park. The park integrates functions of modern agriculture, sightseeing and livestock. While improving the integrated utilization of land, it improves the environment around the mine through growing fruits and vegetables. The park is currently divided into four areas: leisure area, agricultural tourism area, orchard area and livestock area, which are all open to the public.

Every year, Ya Dong Ecological Park provides more than 50,000 kilograms of vegetables and fruit to the Company's canteens, helping reduce the food cost, improve the quality of food, and allow employees to eat safer green food. It also offers job opportunities for local communities and a leisure environment for employees and local residents. Every year, the Company hosts "Bring your kid to work day" for employees to experience the joy of a good harvest. Currently, the park receives 20-30 visits from provincial and municipal government departments and large enterprises every year, who speak highly of the park.



The first "Bring your kid to work day" for employees was held in Ya Dong Ecological Park in July 2021

In 2008, the Company donated 15 million CNY for the construction of Xinxing Ya Dong Primary School in Pengzhou, Sichuan Province and established the "Employee Education Fund" to encourage teachers and students. Since then, every year on Teachers' Day and Children's Day, Sichuan Ya Dong would send staff to the school to attend celebration activities and present awards to the top ten teachers and top ten students (1,000 CNY/person).



Sichuan Ya Dong participated in the celebration of Xinxing Ya Dong Primary School

To care about left-behind children in remote mountainous areas, the government of Zhaochen Town, Ruichang, Jiangxi Province reached an agreement with the China Social Welfare Foundation on the Free Lunch Fund. Asia Cement (China) sponsored 210,000 CNY to the fund, which was allocated to five schools in Zhaochen Town to provide free lunch for 984 students and 96 teachers.

INDEPENDENT VERIFICATION STATEMENT



To the management team and stakeholders of Asia Cement (China) Holdings Corporation,

TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch (hereinafter referred to as "TÜV SÜD") has been engaged by Asia Cement (China) Holdings Corporation (hereinafter referred to as "Asia Cement (China)" or "the Company") to perform an independent third-party verification on 2021 Corporate Social Responsibility Report of Asia Cement (China). (hereinafter referred to as "the Report"). During this verification, TÜV SÜD's verification team strictly abided by the contract signed with Asia Cement (China) and provided verification regarding the Report in accordance with the provisions agreed by both parties and within the authorized scope stipulated in the contract.

This Independent Verification Statement is based on the data and information collected by Asia Cement (China) and provided to TÜV SÜD. The scope of verification is limited to the said information. Asia Cement (China) shall be held accountable for authenticity and completeness of the provided data and information.

Scope of Verification

Time frame of this verification:

- The Report contains the data disclosed by Asia Cement (China) during the reporting period from January 1st, 2021 to December 31st, 2021, including environmental, social and corporate governance information and data, methods for management of substantial issues, actions/measures and the Company's sustainable development performance during the reporting period.

Physical boundary of this verification:

- Remote verification took place due to Covid-19 pandemic.
- The following information and data are beyond the scope of this verification:
 - Any information and contents beyond the reporting period of this Report;
 - The data and information on suppliers, partners and other third parties of Asia Cement (China); and
 - The financial data and information disclosed in this Report that have been audited by an independent third party are not verified again herein.

Limitations

- This verification was performed at aforementioned physical boundary. The process applied a sampling of data and information in The Report and no branch or subsidiary was visited during the aforesaid verification; and
- The Company's standpoint, opinions, forward-looking statements and predictive information as well as the historical data and information before January 1st, 2021 are beyond the scope of this verification.

Basis for the Verification

This verification process was conducted by TÜV SÜD's expert team who are highly experienced in the environmental, social, corporate governance and other relevant issues and this team drew the conclusions thereof. The verification referred to the following standards:

- AA1000AS v3
- GRI Standards 2016, 2018, 2020 Version
- The Stock Exchange of Hong Kong Limited: the Environmental, Social and Governance Reporting Guide set out in Appendix 27 to the Main Board Listing Rules
- TÜV SÜD Procedure of Verification on Sustainability Report

To perform adequate verification in accordance with the contract and provide reasonable verification for the conclusions, the verification team conducted the following activities:

- Preliminary investigation of the relevant information before the verification;
- Confirmation of the presence of the highly substantial issues and performance in the Report;
- Remote review of all supporting documents, data and other information provided by Asia Cement (China); tracing and verification of key performance information;
- Special interview with the representative of Asia Cement (China); interviews with the employees related to collection, compilation and reporting of the disclosed information; and
- Other procedures deemed necessary by the verification team.

Verification Conclusions

During this verification process, we verified the relevant data of the following disclosure items in the Report.,

Environmental

- Greenhouse Gas Emission
- Energy consumption
- Water resource
- Air pollution
- Solid waste
- Investment on Environmental Protection
- Energy and Water Conservation
- Number of Green Mines

Social

- Customer satisfaction
- Customer complaint management
- Total number of employees
- Overview of employee diversity
- New employees overview
- Employee turnover overview
- Employee satisfaction
- Safety education and training
- Training data for 2021
- Sharing benefits with communities
- Employee occupational health and safety situation

Economic/Governance

- Governance structure
- Compliance
- Business ethics
- Sustainable sourcing
- Product quality management performance

Based on our verification, we consider the data disclosed in the Report of Asia Cement (China) for the year 2021 to be reliable, consistent and substantial, and the information disclosed is objective, true, complete and clear, and no systematic or substantial problems have been identified, and we have issued the verification opinion with limited assurance accordingly.

The verification team has drawn the following conclusions on this Report:

Materiality	The Company has established a prioritization process for material issues, identified sustainable development topics that are highly relevant to the industry, prioritized the topics and disclosed the Company's sustainability goal, actions and performance data. The content of the Report is material.
Quantitative	The key indicators disclosed by the Company are quantitative. Reference standards and/or calculation methods were indicated for the disclosed environmental data.
Consistency	The disclosure statistical method that the Company used is consistent. Consistent performance in relevant areas was reflected through consistent data.
Balance	During the process of preparing the Report, the balance of the Report was adequately considered, where both positive and negative impacts are disclosed.

Recommendations on Continuous Improvement

- It is recommended that the company disclose Scope 3 GHG emissions in the next annual report.

Statement on Independence and Verification Capability

TÜV SÜD is a trusted partner of choice for safety, security and sustainability solutions. It specializes in testing, certification, auditing and advisory services. Since 1866, TÜV SÜD has remained committed to its purpose of enabling progress by protecting people, the environment and assets from technology-related risks. Today, TÜV SÜD is present in over 1,000 locations worldwide with its headquarters in Munich, Germany. TÜV SÜD has been committed to sustainable development and actively promotes environmental protection related projects. Over the years, TÜV SÜD has been actively expanding its performance in energy management, renewable resources, and electric automobiles, etc., helping its customers meet sustainable development needs.

TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch is one of TÜV SÜD's global branches and has an expert team whose members have professional background and rich industrial experiences.

TÜV SÜD and Asia Cement (China) are two entities independent of each other and both TÜV SÜD and Asia Cement (China) and their branches or stakeholders have no conflict of interest. No member of the verification team has business relationship with the Company. The verification is completely neutral. All the data and information in the Report are provided by Asia Cement (China). TÜV SÜD has not been involved in preparation and drafting of the Report, except for the verification itself and issuance of the verification statement.

Signature

On Behalf of TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch

TÜV SÜD Sustainability Authorized Signatory Officer

16-April, 2022 Shanghai, China

Note: In case of any inconsistency or discrepancy, the simplified Chinese version of this verification statement shall prevail, while the English translation is used for reference only.

APPENDICES

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	Disclosure 102-5 Ownership and legal form	P1	
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GRI Standard	Disclosure	Page number(s)	Omission
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Hong Kong Stock Exchange ESG Reporting Guide

Index	Subject Areas, Aspects, General Disclosures and KPIs	Pages
A Environmental		
Aspect A1: Emissions	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste. 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.	P33-P44
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Index	Subject Areas, Aspects, General Disclosures and KPIs	Pages
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	KPI A1.3 Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P44
	KPI A1.4 Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P44
	KPI A1.5 Description of emissions target(s) set and steps taken to achieve them.	P36
	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.	P44
	Aspect A2: Use of Resources	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.
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).		P36
KPI A2.2 Water consumption in total and intensity (e.g. per unit of production volume, per facility).		P42
KPI A2.3 Description of energy use efficiency target(s) set and steps taken to achieve them.		P36
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.		P41
KPI A2.5 Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.		N/A
Aspect A3: The Environment and Natural Resources	General Disclosure Policies on minimising the issuer's significant impacts on the environment and natural resources.	P33
	KPI A3.1 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	P33-P44
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.	P37
	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.	P38
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	P59

Index	Subject Areas, Aspects, General Disclosures and KPIs	Pages
Aspect B1: Employment	KPI B1.1 Total workforce by gender, employment type (for example, full- or parttime), age group and geographical region.	P61
	KPI B1.2 Employee turnover rate by gender, age group and geographical region.	P62
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.	P69
	KPI B2.1 Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	P76
	KPI B2.2 Lost days due to work injury.	P76
	KPI B2.3 Description of occupational health and safety measures adopted, and how they are implemented and monitored.	P51, P68-P77
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.	P66-P67
	KPI B3.1 The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	P66
	KPI B3.2 The average training hours completed per employee by gender and employee category.	P66
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.	P59-P60
	KPI B4.1 Description of measures to review employment practices to avoid child and forced labour.	P60
	KPI B4.2 Description of measures to review employment practices to avoid child and forced labour.	P60
Operating Practices		
Aspect B5: Supply Chain Management	General Disclosure Policies on managing environmental and social risks of the supply chain.	P29
	KPI B5.1 Number of suppliers by geographical region.	P29
	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.	P29
	KPI B5.3 Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	P29
	KPI B5.4 Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	P29

Index	Subject Areas, Aspects, General Disclosures and KPIs	Pages
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.	P27
	KPI B6.1 Percentage of total products sold or shipped subject to recalls for safety and health reasons.	P28
	KPI B6.2 Number of products and service related complaints received and how they are dealt with.	P28
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	KPI B6.4 Description of quality assurance process and recall procedures.	P27
	KPI B6.5 Description of consumer data protection and privacy policies, and how they are implemented and monitored.	P28
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.	P25
	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.	P25
	KPI B7.2 Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	P25
	KPI B7.3 Description of anti-corruption training provided to directors and staff.	P25
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.	P77
	KPI B8.1 Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	P77-P78
	KPI B8.2 Resources contributed (e.g. money or time) to the focus area.	P77

SASB Construction Material Standard Index

Topic	Accounting Metric	Description	Chapter
Greenhouse Gas Emissions	Gross global Scope 1 emissions (tCO ₂ e)	20447944.29	Response to Climate Change-Greenhouse Gas Emission
	Percentage covered under emissions-limiting regulations (%)	-	
	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Refer to P37	
Air Quality	NO _x (t)	9509.18	Pollution Control-Air Pollutants
	SO _x (t)	716.97	
	PM10 (t)	406.11	

Topic	Accounting Metric	Description	Chapter
Air Quality	Dioxins/furans (ngTEQ/m ³)	0.03	Pollution Control-Air Pollutants
	VOCs (t)	-	
	PAHs (t)	-	
	Heavy metals (sum up of TI, Cd, Pb) (mg/m ³)	0.089	
Energy Management	Total energy consumed (GJ)	84669071	Response to Climate Change - Energy Management
	Percentage of grid electricity (%)	7.44	
	Percentage of alternative (%)	2.68	
	Percentage of renewable (%)	0.05	
Water Management	Total freshwater withdrawn (t)	9059252	Water Resource Management
	Percentage recycled (%)	Refer to P42	
	Percentage in regions with High or Extremely High Baseline Water Stress (%)	0	
Waste Management	Amount of waste generated (t)	9518	Pollution Control - Solid Waste
	Percentage hazardous (%)	85.56	
	Percentage recycled (%)	99.45	
Biodiversity Impacts	Description of environmental management policies and practices for active sites	Refer to P55	Environmental Governance in Mines - Biodiversity
	Terrestrial acreage disturbed, percentage of impacted area restored (%)	-	
Workforce Health & Safety	Total accidental injury frequency rate (FR)	2.01	Health and Safety-Safe Production Performance
	Near miss frequency rate (NMFR) (%)	-	
	Fulltime employees and (b) contract employees (case)	0	
Product Innovation	Percentage of products that qualify for credits in sustainable building design and construction certifications	-	Quality Products and Services - Green products
	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	Business Ethics

UN SDGs 2030 Index

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READER FEEDBACK

Dear reader:

Thank you for reading this report!

This is the eighth CSR report of Asia Cement (China). We sincerely look forward to your valuable comments and suggestions, and will be very happy to adopt them so as to make improvements. Please answer the following questions to give us feedback:

1. What is your overall assessment of this report?

2. What do you think of the quality of information disclosed in the report?

3. What part of the report are you most interested in?

4. What else do you need to know that is not disclosed in this report?

5. Do you have any suggestions for our future CSR work (or sustainable development) and CSR report release?

Please leave your personal information if you wish, so that we can timely respond to your comments and suggestions:

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