 **TCC 2020**
ESG INSIGHT

TAIWAN CEMENT CORPORATION



TCC is involved in three core businesses: building materials, energy and waste treatment, with the circular economy vision of zero waste, zero pollution, and zero emissions. TCC identified material issues and topics for sustainable development in accordance with **SASB** and **GRI Standards** to establish management approaches and evaluation mechanisms.

Scope of Business

TCC's core business is the manufacturing and sale of cement products, in addition to the provision of a full range of services by its energy, chemicals, and other divisions. The following outlines the operational focuses of each division in 2020:



Cement Division — production, manufacture and sale of cement and ready-mix concrete (RMC) products.



Chemicals Division — manufacture and sale of chemicals for commercial and industrial use.



Energy Division — planning, development and operation of renewable energy, Hoping Power Plant, and energy storage systems.



Others — including sea and land freight services, the production and sale of refractories, and environmental protection and pollution prevention services.

Current Status of Chemical Engineering Division

TCC Group decided to dispose of all the shares of the chemical engineering division, which consists of one company, Taiwan Prosperity Chemical Corp., and the decision was approved in the BOD meeting on March 19, 2021, considering the business model, financial structure and the comprehensive interests of the TCC Group. After the approval from the authorities, the Company proceeded with the settlement of the shares and there won't be a chemical division anymore. The disposal of stakes in Taiwan Prosperity Chemical Corp. was completed on August 17, 2021.



ENVIRONMENT

Key Environmental Goals and Performance

Air and Carbon Emissions		Base Year 2016, unless otherwise noted				
	Unit	2019 Performance	2020 Performance	2025 Target	2030 Target	2050 Target
Taiwan						TCC Group Target
Carbon Emissions Intensity	tCO ₂ /Metric Ton of Cementitious Materials ²	-5%	-6%	-11% (SBT) ³	-31%	
Mainland China						
Carbon Emissions Intensity	tCO ₂ /Metric Ton of Clinker ²		-3%		-20%	
Taiwan¹						
NOx	%	-13%	-16%	-50%	-70%	BACT ⁵
SOx	%	-29%	-5% ⁴	-30%	BACT ⁵	BACT ⁵
TSP	%	-25%	-43%	-50%	BACT ⁵	BACT ⁵
Mainland China¹						
NOx	%	-32%	-45%	-50%	-70%	BACT ⁵
SOx	%	-52%	-53%	-60%	-70%	BACT ⁵
TSP	%	-39%	-57%	-60%	BACT ⁵	BACT ⁵

1. Carbon Emissions Intensity and Air Emissions are based on cement plants only.

2. Taiwan carbon emissions include cement production, while Mainland China covers only clinker production based on regulatory differences. <https://www.taiwancement.com/en/esgGhgCarbonEmissions.html>

3. SBT (Science Based Target) in line with Science Based Target initiative pursuant to the well-below 2°C scenario.

4. In 2020, TCC's source of limestone was limited due to the environmental impact comparative analysis conducted in the mining areas which resulted in the variation of sulfur contents utilized.

5. BACT (Best Available Control Technology) Minimum.

Waste

	Unit	2020 Performance	2025 Target	2030 Target	2050 Target
Taiwan					
Waste Recovery	Metric Tons	Waste Treatment 1.025 Million	1.25 Million	1.57 Million	2.5 Million
Waste Heat Recovery	% of Total Energy	29%	33-35%		
% of Total Fuels Biomass			10%		
Mainland China					
Waste Recycling	Metric Tons	7.78 Million	10 Million	12.5 Million	15 Million

Renewable Energy & Carbon Capture

	Unit	2020 Performance	2025 Target	2030 Target	2050 Target
Taiwan					
Renewable Energy	MW	35.7MW	Manage 500 MW	Manage 700 MW	Manage 1 GW
Carbon Capture	Metric Tons			100,000 / Year	1,600,000 / Year

Biodiversity

	2020 Performance	2025 Target	2030 Target	2050 Target
Taiwan				
Conservation of Endangered Plant Species (taxa)	33,963	>35,000	>40,000	>45,000
Taiwan & Mainland China				
Mine Restoration	86% Hoping Mine		90% Indigenous tree species restored	95% Indigenous tree species restored
Mining Areas Restored				16 hectares
Average Survival Rate of Plant and Tree Taxa				80%
Saplings Cultivated				25,000

Environmental Metrics TAIWAN

	Unit	2017	2018	2019	2020
GHG Emissions					
Total¹	Metric Ton CO₂e	4,405,123	4,501,593	4,519,601	4,646,754
Scope 1 ¹	Metric Ton CO ₂ e	4,146,431	4,230,680	4,268,478	4,413,158
Scope 2 ¹	Metric Ton CO ₂ e	249,819	255,872	230,040	211,169
Scope 3 ¹	Metric Ton CO ₂ e	8,873	15,041	21,083	22,427
GHG Intensity Taiwan ²	tCO ₂ /Metric Ton of Cementitious Materials	0.83	0.81	0.81	0.81
Energy Management					
Total Energy Consumption³	GJ	18,836,989	17,497,691	17,824,559	17,889,547
Natural Gas	GJ	-	-	-	251
Coal	GJ	17,012,323	15,689,903	16,157,228	16,300,593
Diesel	GJ	79,854	69,059	56,612	38,461
Gasoline	GJ	-	3,918	5,159	5,877
Purchased Electricity	GJ	1,744,812	1,734,811	1,605,560	1,544,365
Renewable Energy	GJ	N/A	92.79	73.80	796.37
Electricity from Waste Heat Recovery	MW	-	74,094	100,335	119,024
Purchased/Used Electricity Ratio	%	-	85%	79%	71%
Waste Heat Recovery	%	-	15%	21%	29%
Air Emissions					
NO _x	Metric Tons	7,035	6,744	6,388	6,164
SO _x	Metric Tons	82	85	79	106
TSP	Metric Tons	587	643	305	249
Direct Mercury	Metric Tons	-	-	0.22172	0.27546
VOC	Metric Tons	0.00656	0.00636	0.00616	0.00457
Emissions Intensity					
NO _x	g/tClinker	1,437	1,293	1,219	1,146
SO _x ⁴	g/tClinker	16	16	15	19
TSP ⁴	g/tClinker	80	74	58	46

1. Scope includes TCC's operation sites in Taiwan, including cement plants, RMC plants and headquarters.

2. Taiwan carbon emissions include lime cement production, while Mainland China covers only clinker production based on regulatory differences.

3. Energy consumption.

4. In 2020, TCC's source of limestone was limited due to the environmental impact comparative analysis conducted in the mining areas which resulted in the variation of sulfur contents utilized.

	Unit	2017	2018	2019	2020
Water Management					
Water Discharge	m ³			444,256	474,227
Cement Plants Water Intensity	m ³ /Metric Ton of Cementitious Materials	0.47	0.43	0.38	0.36
Alternative Materials and Fuels (Cement Plants Only)					
Alternative Fuels Used	%	8	8	8	10
Alternative Materials Used	%	18	19	19	23
Clinker Content in Cement	%	95	95	94	93
Environmental Investments	Million NT\$	Approx. 52	Approx. 64	Approx. 180	Approx. 210

1. Since the Hualien Plant did not operate in 2020, the scope of data disclosure in 2020 covered only the Suao Plant and the Hoping Plant.
2. Based on the clinker yield of 5,381,013 metric tons in 2020, the unit water intensity was 0.004 million liters per metric ton of clinker.
3. All the sources of water are freshwater.
4. The scope of disclosure is the water for which TCC holds water rights. Disclosure of groundwater began in 2019. The water use data for the water for which TCC holds no water rights is estimated on the basis of sales.

Environmental Metrics MAINLAND CHINA

2020 figures include all plants in Mainland China, whereas 2017-2019 figures include only data from Anshun, Yingde, and Guigang Plants.

	Unit	2017	2018	2019	2020
GHG Emissions					
Total	Metric Ton CO₂e		16,782,181	16,463,922	32,512,981
Scope 1 ⁵	Metric Ton CO ₂ e		NA	NA	31,255,099
Scope 2 ⁵	Metric Ton CO ₂ e		NA	NA	1,257,882
GHG Intensity China ⁵	(tCO ₂ /Metric Ton of Clinker)	0.881	0.876	0.872	0.865
Energy Management					
Total Energy Consumption	GJ		82,605,583	77,324,991	135,007,136
Coal	GJ		76,182,142	72,990,784	126,508,867
Diesel	GJ		92,821	76,575	21,648
Gasoline	GJ		525	525	
Purchased Electricity	GJ		6,330,096	4,257,108	8,476,621
Purchased/Used Electricity Ratio	%		61%	62%	61%
Electricity from Waste Heat Recovery ⁶	MW		1,317,532	1,292,718	1,283,372
Energy Intensity	100,000 Tons Cement & Clinker		NA	NA	17,766.43
Air Emissions					
Total Air Emissions	Metric Tons		10,976	8,196	
NOx	Metric Tons		9,964	7,320	914
SOx			246	412	97
TSP			765	464	55
Emissions Intensity					
NOx	g/tClinker	586	523	397	314
SOx ⁷	g/tClinker	75	56	44	33
TSP ⁷	g/tClinker	45	37	27	19
Water Management					
Water Usage Intensity	m ³ /Metric Ton of Cementitious Materials	0.34	0.34	0.33	0.33
Total Water Consumption	m ³		7,345,012	8,439,173	15,564,102
Total Material Consumption	Tons		35,087,772	35,260,474	67,289,451

5. Taiwan carbon emissions include cement production, while Mainland China covers only clinker production based on regulatory differences.
6. Waste Heat Recovered figures include all plants in Mainland China. Scope is TCC operation sites in Mainland China. Kiln utilization rate decreased in 2019 to comply with policy of off-peak production halt in Mainland China.
7. In 2020, TCC's source of limestone was limited due to the environmental impact comparative analysis conducted in the mining areas which resulted in the variation of sulfur contents utilized.

	Unit	2017	2018	2019	2020
Waste Management					
Waste Co-Processing—General & Hazardous Waste ¹	Tons		1,304,926	83,686	7,955,442
Alternative Materials and Fuels					
Alternative Fuels Used	Percentage	1	3	4	5
Alternative Materials Used	Percentage	8	10	17	20
Clinker Content in Cement	Percentage	79	81	81	81

1. For 2020, scope has expanded to include all cement plants in Mainland China.

Certifications

Certification	Location
ISO 14001	TCC Group (Cement Plants, RMC Plants, Headquarters)
ISO 14046	Taiwan (Hoping, Su-Ao plants) ²
ISO 14064	Taiwan, Mainland China
ISO 46001	Planned for 2021
ISO 50001	Taiwan, Mainland China
BS8001	All Cement Plants in Taiwan

2. 100% of cement plants in Taiwan and Mainland China obtained ISO 14046 water footprint certification.

Renewable Raw Materials Management/Green Procurement

TCC proactively reduces mining and procurement of natural raw materials while working on the use of renewable raw materials in the manufacturing process.

Taiwan: Achieved Using 20.06% Renewable Raw Materials (of Total Raw Materials).

Energy Management

TCC stipulates product energy consumption (of coal and electricity) targets and formulates energy-saving plans every year, continues to develop alternative raw materials/fuels, and reviews energy conservation and emission reduction improvement plans at its monthly meetings.

In response to EP100, TCC raises its energy efficiency by installing waste heat recovery system, and introduces flash distillation technology for improved efficiency.

Stronger Carbon Management

Carbon Neutral Concrete by 2050

TCC joined hands with the leading cement enterprises in the world to launch the 2050 Climate Ambition in GCCA. Chairperson Nelson Chang was invited as the moderator to declare the commitment to deliver society with carbon-neutral concrete by 2050.

SBT and Internal Carbon Pricing

TCC formulated its science-based targets (SBT) pursuant to the well-below 2°C scenario. TCC then pushes for seven strategies to reduce carbon emissions and internal carbon pricing while implementing carbon inventory.

- Utilization of Alternative Materials
- Utilization of Alternative Fuels
- Renewable Energy
- Waste Heat Recovery
- Equipment & Process Enhancements
- Carbon Capture
- Afforestation for Carbon Sink

TCC took the trends of external carbon prices and the internal carbon intensity into account, producing an internal carbon price for capital expenditure evaluation.

Carbon Footprint for Cement Products

In 2020, it took the initiative to establish the product category rules (PCR) for the cement products and obtained the first carbon footprint label for cement products in Taiwan.

AI Emission Management System

TCC utilized the big data of plant databases and introduced artificial intelligence, machine learning, and “Life Cycle Assessment” management systems to self-develop a management system of carbon dioxide emission reduction. The system offers individual plants the optimal ratios for processes and carbon dioxide emission reduction approaches, from

target-setting, resource inventory for carbon dioxide emission reduction to big data analytics across plants. It accurately executes and manages the carbon dioxide emission reduction targets in phases and tracks progress while taking it further by linking these results with the internal performance-based bonuses for more effective implementation.

Waste Management

TCC has realized the vision of a zero-waste circular economy by putting to good use the attribute of high temperature in the manufacturing process of the cement industry. For instance, the wastes from employee activities, waste lubricating oils from maintenance, waste refractory bricks, inorganic sludge from sewage treatment are processed into alternative raw materials or fuels on our own.

The general and hazardous industrial wastes are destroyed at high temperatures before recycled back into the manufacturing process for reuse. Valuable industrial wastes such as waste iron are recycled by qualified clearing agencies regularly.

Effluent Management

RMC Plants: Zero wastewater.

RMC Plants: All installed with rainwater and process water reuse and circular treatment equipment for 100% circular use of water resources.

Cement Plants: Installed with wastewater treatment equipment before any discharge. In 2021, an estimate of NT\$30 million are invested for wastewater reuse engineering projects.

Water Footprint and Risk Assessment

TCC's cement plants introduced ISO 14046 to evaluate the potential impacts of water risks to its operations via scenario analysis. Anticipating a reduction in rainfall in the future, TCC considers the water risks to operation sites as "low" considering the minor water demand from the cement industry (dry process), while the water supply far exceeds the water consumption (a daily supply of 4,000 metric tons to the Hoping Plant based on the minimum treatment requirement of the sewage treatment facility). Moreover, TCC employed the WRI Aqueduct Water Risk Atlas to analyze the distribution of water resources in Taiwan, with no operation sites in Taiwan located in high water stress regions.

Water Resources Reclamation

We push for 100% circular utilization of cooling water in the process and 100% water reclamation for reuse, progress is currently underway for cement plants.

Climate Change Response and Management

In 2020, TCC voluntarily introduced the recommendation framework of the Task Force on Climate-related Financial Disclosures (TCFD) and formed interdepartmental workgroups to systematically identify TCC's climate risks and opportunities (details see 2020 TCC CSR page 41). Integrating the existing risk control protocols, TCC regularly submits reports and statuses of climate change responses to the Board of Directors.

TCC Climate Change Governance Structure

Board of Directors

The highest decisions-making body in risk management, responsible for supervision, approval of risk management policies and important systems as well as tracking of execution and performance target attainment.

Risk Management Committee

Responsible for supervising climate-related issues, determining climate-related risks and opportunities, and reviewing and integrating climate risk management reports.

Risk Management Task Force

Formed by senior executives of departments, responsible for evaluation and analysis of climate-related risks and opportunities and execution of strategies and actions.

TCC Biodiversity Management Plan

All the operation sites of TCC have biodiversity management plans in place.

TCC's Biodiversity Management Plan was stipulated in response to Business for Nature, an international initiative comprising 700 international enterprises committed to reducing the loss of natural capital.

Eco-friendly Mining Models

Through the extensive consideration of the indigenous ecological environment, TCC endeavors to restore the original landscape and biodiversity of limestone mines.

SOCIAL



Key Social Goals: Taiwan

Location	2019-2020 Target	2025 Target	2030 Target
1. TCC DAKA 2. CEM*	1. Recognition rate of 70% 2. Two Operational Sites	1. Recognition rate of 85% 2. Coverage of 60% Operational Sites	1. Recognition rate of 95% 2. Coverage of 100% Operational Sites
Cement Academy	Funded more than NT\$6 million	Acu. Total fund of NT\$30 mn	Acu. Total fund of NT\$60 mn
Employee Training and Development	Invested NT\$28 million	Acu. Total investment of NT\$125 mn	Acu. Total Investment of NT\$250 mn
Supplier Management	Audits on 12.4% of suppliers	1. On-site audits of 80% of suppliers 2. Conduct GHG inventory on 100% Critical Tier 1 suppliers	1. On-site audits of 100% of suppliers 2. 50% carbon reduction by Critical Tier 1 suppliers
Risk Management	Established Risk Committee	Recognition, management and mitigation of 7 business risks	Utilize ERM system
Information Security	Established Information Security Management Committee	ISO 27001 certification by 2021	Maintain 0 major information security incident record

Certifications

Certification	Location	Verification Authority	Valid Till
ISO 45001	100% cement plants, RMC plants and headquarters	SGS	December 22, 2023

Workforce and Diversity

Contract	Taiwan ¹			Mainland China ²		
	F	M	Total	F	M	Total
Employees with an Open-Ended Contract (Includes Employees on Leave without Pay)	189	892	1,081	1,993	6,543	8,536
Employees with a Fixed Term Contract	1	1	2	0	0	0
Temp Workers	2	0	2	0	0	0

1. Taiwan: 16 individuals with disabilities (in line with relevant laws and regulations) and 66 individuals with indigenous background employed in 2020.
2. Mainland China: Includes all cement plants.



Employee Turnover

Contract	Taiwan			Mainland China		
	F	M	Total	F	M	Total
New Recruits	20	108	128	188	782	970
Ratio	1.85%	9.99%	11.84%	2.2%	9.16%	11.36%
Termination of Employment*	6	64	76	184	694	878
Ratio	0.56%	5.92%	6.48%	2.16%	8.13%	10.29%
Voluntary Termination of Employment*	5	47	52			
Ratio	0.46%	4.35%	4.81%			

Note: Mainland China Termination figures include voluntary, involuntary and retirement.

Taiwan	2017	2018	2019	2020
Turnover Rates	16.87%	11.03%	9.28%	6.48%

Cultivating ESG DNA

Employee Stock Ownership Trust Program

TCC promotes the Employee Stock Ownership Trust Program to all employees in TCC and affiliated enterprises to retain talent and to encourage employees on managing savings and assets. TCC disburses amount equal to the employee contribution. Participation rate in 2020 was 96.95%.

Employee Stock Ownership Trust Program	2019	2020	2025 Target
Participation Rate	92%	96.95%	> 96%

Remuneration Linked to Sustainability Performance

For all employees, the incentive compensation TCC provides, like the quarterly bonus and performance bonus, also take the performances on sustainability indicators like occupational safety, environmental protection and emissions, and energy-saving as well as carbon reduction into account, which underscores TCC's culture of sustainability.

Occupational Health and Safety

TCC holds quarterly OSH Committee meetings and follows up on task implementation and project progress. Each plant established a Quality Assurance (QA) Section to coordinate the management and implementation of plant ESH tasks.

In 2021, TCC further launched the "Occupational Safety Monthly" report mechanism. All the cement plants and RMC plants in Taiwan and Mainland China are required to report monthly, followed by the formulation of recurrence prevention strategies. The report includes the following content:

1. Data of work-related injuries.
2. Description of the nonconformities in safety and health audits and of the improvements.
3. Description of violations by contractors, as well as the handling and results.
4. Content of safety and health education and training.

Contractors undergo OSH education and training, abide by OSH rules and sign the OSH Letter of Undertaking when working at TCC plants.

Workplace Injury

Goals

		Base	2020 Actual	2021 Target	2023 Target
Taiwan	LTIR	Average rate of 2016-2018	-36%	-30%	-35%
	TRIR		-36%	-30%	-35%
Mainland China	LTIR		-62%	-30%	-35%
	TRIR		-60%	-30%	-35%

LTIR= Lost Time Incidents*200,000/hours worked in reporting period.

TRIR= Recordable Incidents*200,000/hours worked in reporting period.

Work hours per year = 200,000 (50 weeks*40 hours per week*100 persons).

TCC Taiwan has Incident Investigation Process in place for reporting material occupational disasters to the Labor Safety and Health Office for subsequent reviews and improvements.

2020	TW Headquarters	Taiwan Plants	TW Contractors
Work Related Injuries	0	1 ¹	0
Injury Rate (IR)	0	0.11	0
Work Related Mortality	0	0	1 ²
Mortality Rate (MR)	0	0	0.13
Lost Days	0	41	0
Lost Day Rate (LDR)	0	5.08	0

1. An employee fell down some stairs. Subsequently, warning signs, handrails, and anti-slip stair treads were added to the stairs.

2. A contractor traffic fatality incident. Safety promotion was enhanced afterward to avoid recurrence.

Salary

Full-Time Non-Managerial Employees' Salaries	2019	2020	Difference
Number of Full-time Non-managerial Employees	965	1,068	+103
Average Salary (NT\$1,000)	1,017	1,095	+78
Median Salary (NT\$1,000)	876	946	+70

Pension

TCC offers a two-track retirement benefits system. Employees aged 60 or above will enjoy greater than 1:1 ratio in the Employee Stock Ownership Trust. In addition, the retired employees are offered one health checkup every 3 years, along with medical, accident, and life insurance coverage.

Labor Management

Taiwan: 100% of employees are covered by collective bargaining agreements.

Taiwan: 96.2% of employees joined labor union.

Parental Leave Over the Past Four Years (Taiwan)

Item	2017		2018		2019		2020	
	F	M	F	M	F	M	F	M
Employees Qualified for Parental Leave Without Pay in the Year (A)	8	58	13	58	18	59	16	73
Employees Applying for Parental Leave Without Pay (B)	1	3	4	0	1	0	2	1
Employees Scheduled to Resume Work in the Year (C)	1	2	3	1	1	0	3	0
Actual Employees Resuming Work (D)	0	2	3	1	1	0	3	0
Employees Continuing Work at TCC after Resumption of Work for 12 Months (E)	0	1	0	2	3	1	1	0
Resumption Rate After Parental Leave Without Pay (D/C)	-	100%	100%	100%	100%	-	100%	-
Retention Rate One Year After Resumption of Work (E/D in Previous Year)	-	100%	-	100%	100%	100%	100%	-





Note: Full-time employees who have been on the job for at least six months in the year are qualified to take parental leave without pay.

TCC Management Associate Program (Taiwan)

TCC has initiated its Management Associate Program (MAP) since 2007. Cross-factory learning, management and application, learning outcomes evaluation, horizontal and vertical connections, and business thinking are arranged to actively cultivate young talent with an international vista and huge ambitions. TCC recruited 402 MAs as of 2020 with a retention rate of 59%.

Talent Development

The funds invested in education and training totaled NT\$20,555,109.

Job Levels	Taiwan ¹			Mainland China		
			Total Hours			Total Hours
Executives	63.5	188	251.5	-	495	495
Senior Supervisors	520.5	1,625	2,145.5	117	1,318	1,435
Junior Supervisors	518	1,542	2,060	608	2,782	3,390
Professionals	14,845	61,965	76,810	806	704	1,510
Direct Labor	559	5,780.5	6,339.5	9,563	51,451	61,014
Total Hours	16,505	71,100.5	87,606.5	11,094	56,750	67,844
Average Hours	87.3	79.7	81	3	6	5

1. Taiwan total training hours including programs for overseas personnel.

Supply Chain Management (Taiwan)

TCC Group established Supplier Management Policy, Supplier Code of Conduct, and Green Procurement Policy to jointly protect the environment, human rights, and sustainable resources for businesses with the suppliers. A joint effort to promote corporate social responsibility and a sustainable supply chain.

TCC assigns tiers and types to its suppliers for effective management. Critical Tier 1 Supplier has a major impact on the TCC's production quality or delivery schedule, or that reaches a certain procurement amount or ratio, which requires to be managed and evaluated. As of the end of 2020, Critical Tier 1 Suppliers numbered 93, accounting for 90.38% of the total procurement amount.

Sustainable Supplier Management Achievement Rate

In 2020, TCC further amended the "Supplier Management Policy" and "Supplier Code of Conduct" to include important policies on legal mineral sourcing, local procurement, and green procurement.

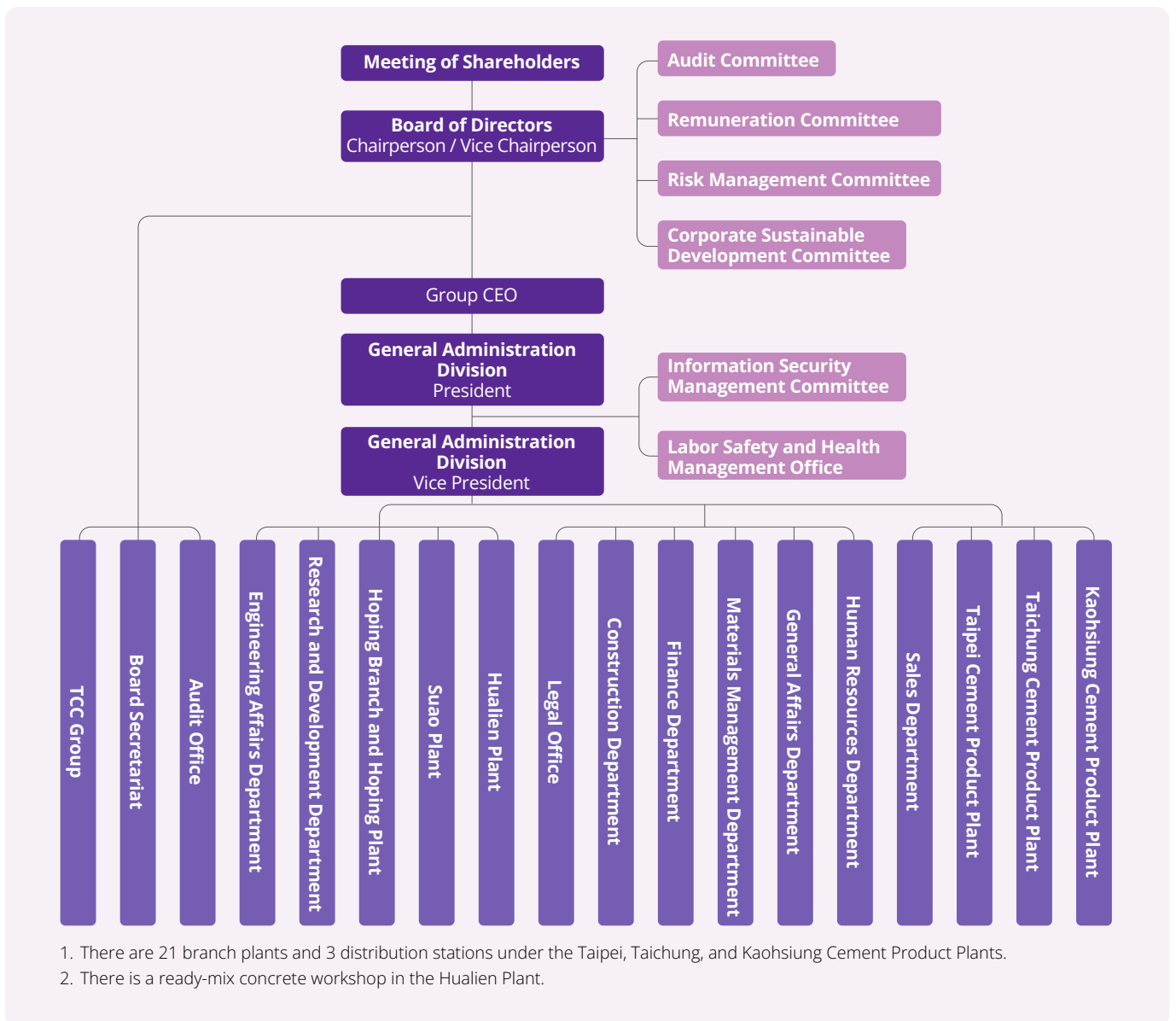
Goals	2020 Goal	Achievement
1 Non-raw Material Goods Procured Locally	95%	94.58%
2 New Suppliers That Signed the Supplier Code of Conduct	100%	100%
(Δ)Existing Key Suppliers That Signed The Supplier Code of Conduct	60%	89.25%
3 Contractors That Signed The Contractor Safety and Health Pledge	100%	100%
4 Critical Tier 1 Suppliers That Underwent Inspections	100%	100%
	2020-22 Goal	Achievement
5 Critical Tier 1 Suppliers That Underwent an On-site Inspection Once Every Three Years (2020-2022 Period)	By 2020: 20% By 2021: 40% By 2022: 80%	2020: 20.16%
	2025 Goal	2030 Goal
Critical Tier 1 Suppliers GHG Inventory	100%	
Critical Tier 1 Suppliers Carbon Reduction		50%





GOVERNANCE

Organization Chart



1. There are 21 branch plants and 3 distribution stations under the Taipei, Taichung, and Kaohsiung Cement Product Plants.
2. There is a ready-mix concrete workshop in the Hualien Plant.

Board of Directors

- Re-election of Board of Directors held on 2021/7/5.
- Reduced number of board seats from 19 to 15, with 1/3 independent directors.
- Increased board diversity.

Title	Director	Gender	Age	Executive position in TCC Group ¹	Time on Board (Years) ²	Attendance (2020, %)
Chairperson	An-Ping (Nelson) Chang	M	> 50	CEO	28	100
Director	Jong-Peir Li	M	> 50		4	100
Director	Kung-Yi Koo	M	30- 50		5	100
Director	Kang-Lung (Jason) Chang	M	30- 50		10	82
Director	Kenneth C.M. Lo	M	> 50		10	73
Director	Chi-Te Chen	M	> 50		37	91
Director	Por-Yuan Wang	M	> 50		13	100
Director	Chi-Chia Hsieh	M	> 50		19	91
Director	Chien Wen	M	> 50		4	100
Director	Chun-Ying Liu	F	30- 50		4	100
Independent Director	Yu-Cheng Chiao	M	> 50		10	73
Independent Director	Victor Wang	M	> 50		9	100
Independent Director	Lynette Ling-Tai Chou	F	> 50		4	100
Independent Director	Mei-Hwa Lin	F	> 50			Newly Elected 2021/7/5
Independent Director	Shiou Ling Lin	F	> 50			

1. For concurrent positions at TCC, please refer to 2020 TCC Annual Report p13-32 (pdf p9-18), p39-42 (pdf p22-23).

2. Chun-Ying Liu was appointed on 2021/9/1.

Members from Previous Term

Director	Eric T. Wu	M	> 50		15	45
Director	Chi-Wen Chang	M	> 50		5	82
Director	Nan-Chou Lin	M	30- 50		15	91
Director	Tzun-Yen Yu	M	> 50		15	91
Director	Chih-Chung Tsai	M	> 50		3	100
Independent Director	Chih-Jen Sheng	M	> 50		4	91

Functional Committees

Audit Committee

Member	Name	Board Title	Attendance in Person (%) ³
Convener	Victor Wang	Independent Director	100
Member	Yu-Cheng Chiao	Independent Director	73
Member	Lynette Ling-Tai Chou	Independent Director	100
Member	Mei-Hwa Lin	Independent Director	Newly Appointed 2021/7/5
Member	Shiou Ling Lin	Independent Director	Newly Appointed 2021/7/5
Previous Term's Member	Chih-Jen Sheng	Independent Director	91

3. Audit Committee held 11 meetings from 2020/01 till 2021/03.

Remuneration Committee

Member	Name	Board Title	Attendance in Person (%) ⁴
Convener	Yu-Cheng Chiao	Independent Director	83
Member	Victor Wang	Independent Director	83
Member	Lynette Ling-Tai Chou	Independent Director	100
Member	Mei-Hwa Lin	Independent Director	Newly Appointed 2021/7/5
Member	Shiou Ling Lin	Independent Director	Newly Appointed 2021/7/5
Previous Term's Member	Chih-Jen Sheng	Independent Director	100

4. Remuneration Committee held 6 meetings from 2020/01 till 2021/03.

Executive Remuneration

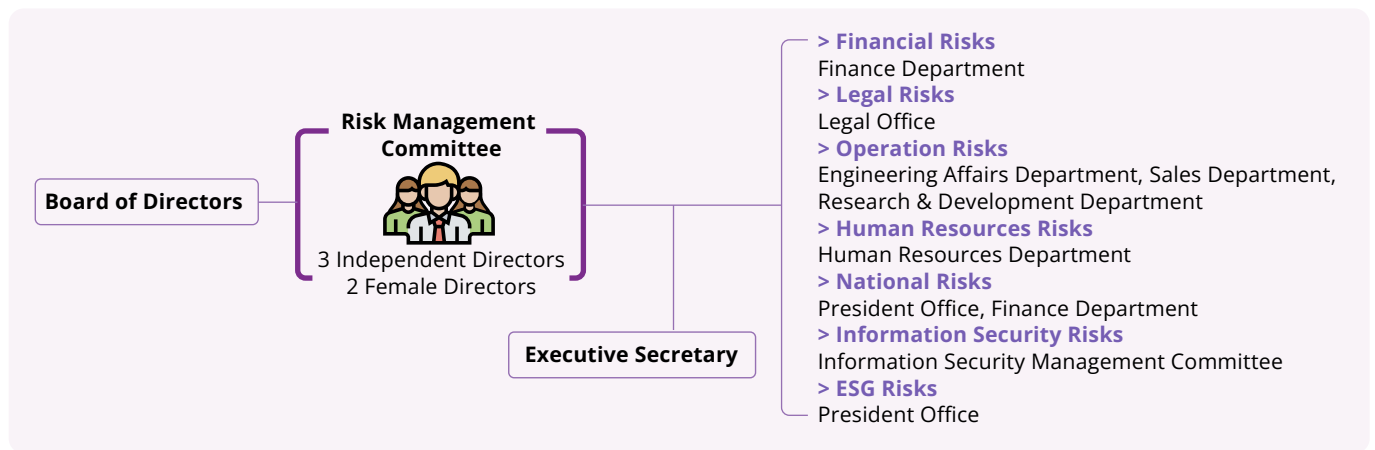
The President's performance as well as related salary and remuneration policies, mechanisms, standards, and structure are evaluated by the Remuneration Committee based on the contributions to the Company's operations before being submitted to the Board for approval. Apart from the linkage to performances, the evaluation scope for salary and remuneration also encompasses the non-financial performances such as corporate governance, green finance, social care, and environmental sustainability.

Risk Management Committee

Member	Name	Board Title	Background in Risk Management	Attendance in Person (%) ¹
Convener	Shiou Ling Lin	Independent Director	V	Newly Appointed 2021/7/5
Member	Victor Wang	Independent Director	V	100%
Member	Lynette Ling-Tai Chou	Independent Director	V	100%
Previous Term's Member	Jong-Peir Li	Director	V	100%

1. Risk Management Committee held 2 meetings in 2020.

The Board of Directors approved to upgrade the "Risk Management Team" to "Risk Management Committee" that answers directly to the Board of Directors in May 2020. Two meetings were held in 2020. The Risk Management Committee is composed of executives of related departments to address seven major risks.



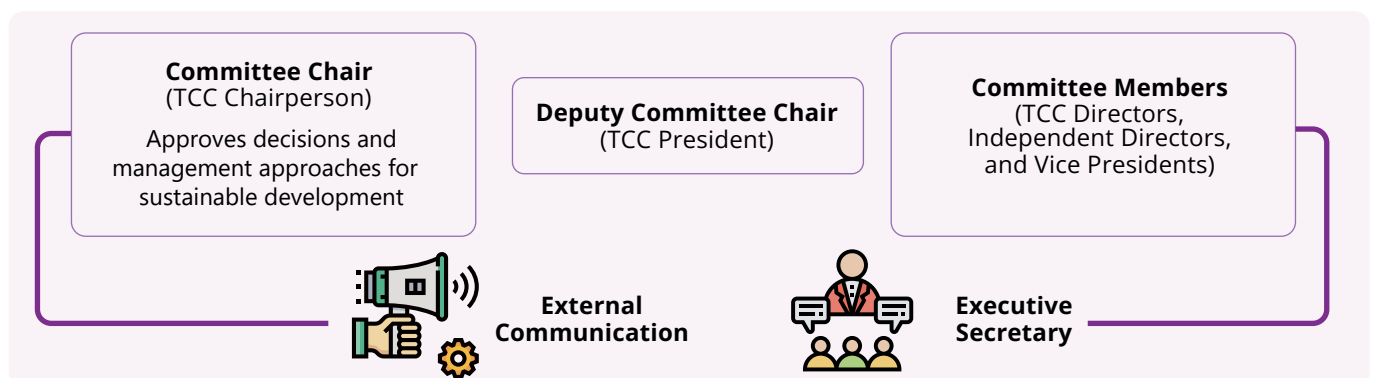
Corporate Sustainable Development Committee

Extending beyond regulatory requirements, TCC established Corporate Sustainable Development Committee on July 15, 2021 that answers directly to the Board of Directors to promote and execute corporate sustainability, ethical management and social responsibility practices.

Member	Name	Board Title
Convener	An-Ping (Nelson) Chang	Chairperson
Member	Jong-Peir Li	Director
Member	Victor Wang	Independent Director

Five functional units:

- Ethical Governance and Risk Management
- Circular Manufacturing
- Sustainable Environment and Products
- Care for employees
- Social Care



Moreover, the Committee will convoke relevant departments to set up ESG task forces. Meanwhile, TCC will examine at regular intervals with action plans for the three other facets, i.e., "TCFD for finance," "information security," and "sustainable supply chain," to strengthen the corporate constitution.

Committee's Agenda in 2020

Offering a Possible Pathway to Carbon Neutrality by 2050 for the Taiwanese Cement Industry	<ul style="list-style-type: none"> • Attainment of the Goal of Carbon Neutrality
Establishment of Carbon Emission Standards for the Cement Industry in Taiwan	<ul style="list-style-type: none"> • The First Carbon Footprint Label for Cement Products in Taiwan
Enhancement of Climate Risk Governance	<ul style="list-style-type: none"> • Introduction of the TCFD Evaluation Mechanism • Risk Management Executive Committee
TCC DAKA Innovative Model for Local Inclusion	<ul style="list-style-type: none"> • New Factory-Community Relationship • National Recognition • Social Impact Evaluation (SROI)
All-Round Protection Expanded to Employees' Families and Contractors	<ul style="list-style-type: none"> • TCC Pandemic Response Command Center • TCC Talk Mechanism • Epidemic Care • Employment Counseling
Enhanced Water Management	<ul style="list-style-type: none"> • Water Footprint Inventory and Verification • Wastewater Management Target
World-Class Biodiversity Management	<ul style="list-style-type: none"> • Biodiversity Management Plan (BMP)
Establishing the Sustainable Management Benchmark for the Supply Chains in Traditional Industries	<ul style="list-style-type: none"> • Supply Chain Sustainability Conference
Ethical Risk Management	<ul style="list-style-type: none"> • Introduction of ISO 37001 Anti-Bribery Management System
Information Security Upgrade	<ul style="list-style-type: none"> • ISO 27001 Information Security Management System

Whistleblower Channel

TCC official website and internal portal both have an employee suggestion inbox: TCCsuggestion@taiwancement.com

Confidential and secure whistleblower channel: employees and external stakeholders can provide suggestions or notify of any wrongdoing via tccwhistle@taiwancement.com

The Reporting Mechanism for Violation of Code of Conduct was amended to clearly define the scope of application while introducing mechanisms like confidentiality in the investigation process and whistleblower protection. Reports can be made via email, post or in person, see TCC website for further details.

Cases Reported, 2018-2021 (Jan.-Jul.)

Year	Whistleblower Inbox	Audit Committee Inbox	Employee Grievances Inbox	Cases Reported Regarding Violations of Ethical Management Policies
2018	4	N/A	3	4
2019	0	1	7	2
2020	10	1	12	13
2021 (Jan.-Jul.)	2	1	5	4

Controversies and Responses

TCC was issued 5 penalties in 2020, a total fine of NT\$1,599,800, where two fines were over USD10,000.

Relevant violations have been corrected, including submission of the reduction plan for runoff pollution caused by wastewater, installing retaining walls at catch drains, renovating concrete retaining walls to prevent sewage seepage, adding checkpoints of runoff wastewater (rainwater) drains to the inspection routes on PDA, as well as the replacement of pumping equipment. Moreover, awareness is built internally to prevent any violations in the future.

Certifications

Certification	Verification Authority	Valid Till	
ISO 27001	Information Security Management	BSI	January 4, 2024
ISO 37001	Anti-Bribery Management System	BSI	August 5, 2024

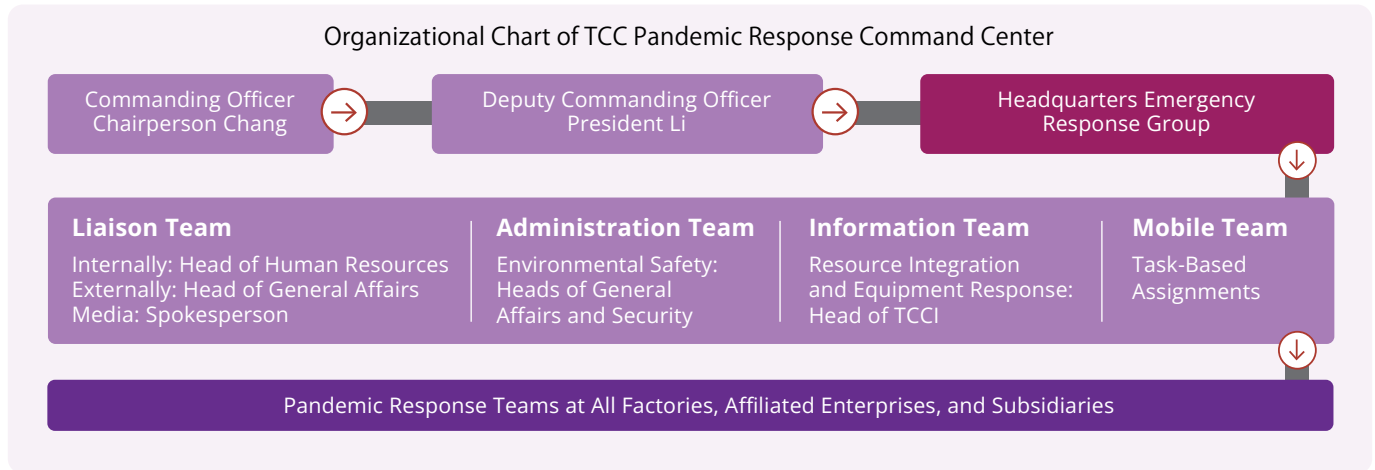
Anti-Bribery and Anti-Corruption/Ethics

TCC introduced ISO 37001 anti-bribery management to strengthen ethical operation management and improve management of bribery and corruption risks.

In 2020, there was one case of embezzlement. After investigations, one individual directly involved was dismissed. Two executives in the chain of command were given demerits. Relevant business management units were required to review the case thoroughly and make improvements in the future. Education and training related to the “Code of Ethical Conduct” shall be enhanced comprehensively.

COVID-19 Response

Phase I: Emergency Response Plan with the Highest Standard for Pandemic Prevention Efforts



- Group-wide epidemic care project – stay home paid leave upon any physical discomfort.
- Office level access control measures at Headquarters.
- Care Platform established for employees to report health conditions.
- TCC offered quarantine hotels for employees returning from abroad.

Phase II: Physical/Mental Care for Employees, Vaccination and the Care Platform

- Pandemic reporting system: understand “home quarantine” and “home isolation” status. Assessment of work resumption status and dynamic pandemic response strategies.
- Workplace measures: alternate work schedules, teleconferencing, reassign employees stationed abroad, online town hall meetings and year-end banquet.
- Safety measures: thermal imagers, masks, flu vaccinations.

Phase III: Assessment of Potential Risks for Preemptive Measures

- 3 high potential risks: exposure to confirmed cases; manpower shortage; operation suspensions.
- 3 mid-low risk: shortages in supplies; environment safety; work efficiency.

