

ESG KEY INDICATORS

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TCC KEY INDICATORS | ENVIRONMENTAL

GHG Emissions in 4 Years | Unit: metric ton of CO₂e

ITEM	2019	2020	2021	2022	
Scope 1	Cement Plants TAIWAN	4,266,390	4,411,086	4,797,296	4,312,390
	RMC Plants TAIWAN	2,088	2,059	1,517	1,776
	Operation Headquarters TAIWAN	142	140	132	146
	TOTAL TAIWAN	4,268,620	4,413,285	4,798,945	4,314,312
Scope 2	Cement Plants TAIWAN	223,096	202,312	212,407	210,273
	RMC Plants TAIWAN	5,010	7,101	6,866	6,571
	Operation Headquarters TAIWAN	1,240	1,199	1,119	1,636
	TOTAL TAIWAN	229,346	210,612	220,392	218,480
Scope 1+2 Total	Cement Plants TAIWAN	4,489,486	4,613,398	5,009,703	4,522,663
	RMC Plants TAIWAN	7,098	9,160	8,383	8,347
	Operation Headquarters TAIWAN	1,382	1,339	1,251	1,782
	TAIWAN	4,497,966	4,623,897	5,019,337	4,532,792
Scope 1	Cement Plants MAINLAND CHINA	31,362,071	31,255,633	25,867,678	20,715,305
	Grinding Stations MAINLAND CHINA	-	-	-	2,815
	TOTAL MAINLAND CHINA	31,362,071	31,255,633	25,867,678	20,718,120
Scope 2	Cement Plants MAINLAND CHINA	1,313,966	1,257,882	1,094,397	846,574
	Grinding Stations MAINLAND CHINA	-	-	-	6,487
	TOTAL MAINLAND CHINA	1,313,966	1,257,882	1,094,397	853,061
Scope 1+2	Cement Plants MAINLAND CHINA	32,676,037	32,513,515	26,962,075	21,561,879
	Grinding Stations MAINLAND CHINA	-	-	-	9,302
	MAINLAND CHINA	32,676,037	32,513,515	26,962,075	21,571,181
Scope 3	Cement Plants TAIWAN	21,083	22,427	28,761	16,709
	Operation Headquarters TAIWAN	942	907	814	719
	Grinding Stations MAINLAND CHINA	-	-	-	0

Note 1: The GHG emissions were inventoried in terms of operational control. The formula used is emissions = activity data × emissions factor (EF) × global warming potential (GWP). (The EF used for Taiwan is subject to the EPA GHG Emissions Factor Management Table (v. 6.0.4); the GWP for the Cement Plants is derived from the IPCC Fourth Assessment Report (2007); the GWP for RMC Plants and Operation Headquarters is derived from the IPCC Sixth Assessment Report (2021). The EF for Mainland China is subject to "Guidelines for Accounting and Reporting Greenhouse Gas Emissions: China Cement Production Enterprises (Trial)", the 2006 IPCC Guidelines for National Greenhouse Gas Inventories and the 2019 Refinement, and the GWP is derived from the IPCC Sixth Assessment Report (2021).)

Note 2: For the data of cement plants in Taiwan in 2022, the Scope 1 draws reference from the EPA GHG Emissions Factor Management Table (v. 6.0.4); the Scope 2 draws reference from the electricity EF of 0.509 kg of CO₂e/kWh from the Bureau of Energy, MOEA in 2021. Note 3: Since 2018, we have been inventorying the most important activity associated with Scope 3 emissions: Upstream Transportation and Distribution, which is verified by a third-party entity and calculated based on the GHG Protocol - Corporate Value Chain (Scope 3) Accounting and Reporting Standard (WRI & WBCSD). Note 4: The GHG emissions from the RMC Plants only factor in the CO₂ emissions from gasoline, diesel (added in 2022), and purchased electricity. Note 5: The disclosure of the GHG emissions from the grinding stations in Mainland China started from 2022, so the data for the previous three years are not available. Note 6: Based on the cementitious materials yield of 5,629,943.3250 metric tons in Taiwan in 2022, the emission intensity in 2022 (Scope 1 & Scope 2) is 0.8033 tCO₂e/metric ton of cementitious materials. Note 7: The base year for GHG inventory in Taiwan is 2016 with the GHG emissions of 4,621,312 metric tons of CO₂e. Note 8: The GHG emissions from Operation Headquarters in Taiwan in 2022 goes up compared to the 2021 level due to the addition of Low-carbon R&D Center in the inventory scope.

Energy Use in 4 Years

ITEM	2019	2020	2021	2022		
Energy Use						
Coal (thousand metric ton)	Cement Plants TAIWAN	708	699	757	703	
	Diesel (KL)	Cement Plants TAIWAN	946	460	981	1,235
		RMC Plants TAIWAN	664	634	450	538
Gasoline (KL)	Operation Headquarters TAIWAN	-	-	4	111	
	Cement Plants TAIWAN	-	-	-	22	
	RMC Plants TAIWAN	158	180	152	165	
Purchased Electricity (GWh)	Operation Headquarters TAIWAN	-	-	2	8	
	Cement Plants TAIWAN	433	412	439	428	
	RMC Plants TAIWAN	9	14	14	13	
Power Generation by Waste Heat Recovery (GWh)	Operation Headquarters TAIWAN	4	3	3	4	
	Cement Plants TAIWAN	100	119	138	108	
	Natural Gas (m ³)	Operation Headquarters TAIWAN	7,073	5,150	3,750	1,723
Coal (thousand metric ton)	Cement Plants MAINLAND CHINA	5,515	5,424	4,446	3,369	
	Diesel (KL)	Cement Plants MAINLAND CHINA	14,413	17,749	16,991	13,239
		Grinding Stations MAINLAND CHINA	35	32	34	15
Gasoline (KL)	Cement Plants MAINLAND CHINA	301	271	340	252	
	Grinding Stations MAINLAND CHINA	13	12	12	10	
	Purchased Electricity (GWh)	Cement Plants MAINLAND CHINA	2,710	2,584	2,272	1,601
Grinding Stations MAINLAND CHINA		-	-	-	15	
Power Generation by Waste Heat Recovery (GWh)		Cement Plants MAINLAND CHINA	1,278	1,283	1,034	811

Note 1: Starting from 2022, the energy consumption will be recorded as whole numbers (rounded to the nearest integer).



Energy Use in 4 Years

ITEM		2019	2020	2021	2022
In terms of Gigajoule (GJ)					
Coal	Cement Plants TAIWAN	16,157,228	16,300,593	17,632,953	16,355,419
	Diesel	33,264	16,168	34,505	43,426
Diesel	RMC Plants TAIWAN	23,348	22,293	15,823	18,917
	Operation Headquarters TAIWAN	-	-	81	3,903
	Gasoline	-	-	-	718
Gasoline	RMC Plants TAIWAN	5,159	5,877	4,963	5,387
	Operation Headquarters TAIWAN	-	-	134	261
Purchased Electricity	Cement Plants TAIWAN	1,558,800	1,481,726	1,580,660	1,540,800
	RMC Plants TAIWAN	33,696	50,219	48,636	46,800
	Operation Headquarters TAIWAN	13,064	12,420	11,700	14,400
Power Generation by Waste Heat Recovery	Cement Plants TAIWAN	361,206	428,486	497,725	388,800
Natural Gas	Operation Headquarters TAIWAN	261	251	139	58
Coal	Cement Plants MAINLAND CHINA	126,966,755	124,879,180	102,356,312	77,566,859
	Diesel	506,807	624,110	597,427	465,515
Diesel	Grinding Stations MAINLAND CHINA	1,216	1,126	1,197	527
	Gasoline	9,818	8,857	11,115	8,228
Gasoline	Grinding Stations MAINLAND CHINA	435	393	386	327
	Purchased Electricity	Cement Plants MAINLAND CHINA	9,756,450	9,303,773	8,179,002
	Grinding Stations MAINLAND CHINA	-	-	-	54,000
Power Generation by Waste Heat Recovery	Cement Plants MAINLAND CHINA	4,600,887	4,620,139	3,723,552	2,919,600
Total	Cement Plants TAIWAN	18,110,498	18,226,973	19,745,843	18,329,162.56
	RMC Plants TAIWAN	62,203	78,389	69,422	71,105
	Operation Headquarters TAIWAN	13,325	12,671	12,054	18,622
	Cement Plants MAINLAND CHINA	141,840,718	139,436,059	114,867,408	86,723,802
	Grinding Stations MAINLAND CHINA	1,651	1,519	1,584	54,854

Note 1: Heating values of coal for the cement plants in Taiwan are converted per the respective settings of the plants. The converted heating value of coal for the Suao Plant: 5,532.69 kcal/kg; the converted heating value of coal for the Heping Plant: 5,570.14 kcal/kg; the converted heating value of coal for other plants: 5,500 kcal/kg. The values for other items are converted based on the heating values in the Emissions Factor Management Table (v. 6.0.4) released on the Bureau of Energy's website. The values are 5,500 kcal/kg for coal, 8,400 kcal/l for diesel, 7,800 kcal/l for gasoline, 3,600 GJ/GWh for electricity, and 8,000 (kcal/m³) for natural gas. The scope 2 draws reference from the electricity EF of 0.509 kg of CO₂e/kWh from the Bureau of Energy, MOEA in 2021. Note 2: The data of energy use is subject to the reported data to the Bureau of Energy. Note 3: The Cement plants in Taiwan started collecting data on gasoline use in 2022, which were used all by corporate cars. Note 4: The RMC plants in Taiwan started collecting data on gasoline use in 2018. Note 5: The Operation Headquarters in Taiwan started to collect data on natural gas use in 2019, estimated as the natural gas fee of the year/unit fee per kWh. Note 6: Based on the cementitious materials yield of 5,629,943.3250 metric tons in Taiwan in 2022, the unit energy consumption in cementitious materials production is 3.1863 GJ/metric ton of cementitious materials. Note 7: The use of alternative fuels in Taiwan in 2022 increased by approximately 3.5 times compared to the 2021 levels due to the increase in diesel consumption for forklifts in short-barge transportation of feed. Note 8: Based on the concrete yield of 5,061,765 m³ in Taiwan in 2022, the unit energy consumption in concrete production is 0.0140 GJ/m³ of concrete. Note 9: Based on the 184 employees on the Operation Headquarters in Taiwan in 2022, the energy consumption per capita is 99,9630 GJ per capita. Note 10: The purchased electricity includes the electricity consumed by the mining system; nevertheless, now that the mining system is owned by the subsidiary, Ho Sheng Mining Co., Ltd., it is not included in the ISO 14064 GHG inventory data.

Air Pollutant Emissions on Cement Plants | Unit: metric ton

ITEM	2019	2020	2021	2022
TAIWAN				
NOx	6,388	6,164	6,473	5,427
SOx	79	106	113	65
VOCs	0.00616	0.00457	0.00422	0.00428
Particulate Matters	305	249	214	158
Total	6,772	6,519	6,800	5,650
Direct Mercury Emissions	0.221723	0.27546	0.27876	0.226347
MAINLAND CHINA				
NOx	14,973	12,089	9,908	8,207
SOx	1,632	1,293	997	1,096
Particulate Matters	1,051	827	569	317
Total	17,656	14,209	11,474	9,621
Direct Mercury Emissions (Unit mg/m ³)	<0.0001	<0.0001	0.005	0.005

Note 1: The emissions were calculated as the emission factors of the third-party testing multiply by the usage data. Note 2: Starting from Q3 of 2018, heavy metal monitoring data was added at the request of the Environmental Protection Administration. The heavy metals (lead, cadmium, mercury, arsenic, and hexavalent chromium) emitted in 2022 was 0.94517 metric ton. Note 3: Starting from Q4 of 2018, the cement plants reported mercury emissions in accordance with legal requirement. There was no mercury emitted by RMC plants. Note 4: The Hualien Plant did not operate in 2022 and thus had no air emissions. Note 5: The dioxin emissions at the cement plants in Taiwan in 2022 were 0.7576 g I-TEQ. Note 6: The business of our RMC plants was cement product ingredients mixing and transportation and thus had no air pollutant emission. Note 7: Shaoguan Cement Plant in Mainland China was completed construction in November, 2021, thus Shaoguan Plant's air pollution data was included from 2022.

Water Resources Use in 4 Years | Unit: million liters

ITEM	2019	2020	2021	2022
TAIWAN				
Municipal Water Cement Plants	0	0	0	0
Groundwater Cement Plants	1109.18	1,014.34	822.52	829.44
Industrial Water Cement Plants	991.05	1,051.01	1,039.03	819.37
Reclaimed Process Water Cement Plants	23.22	93.48	102.43	112.81
Total Cement Plants	2,123.45	2,158.83	1,963.98	1,761.62
Municipal Water RMC Plants	316.83	368.32	309.77	295.15
Groundwater RMC Plants	85.73	212.58	279.79	343.19
Reclaimed Process Water RMC Plants	247.28	307.39	430.20	448.61
Total RMC Plants	649.84	888.29	1,019.76	1,086.95
Municipal Water Operation Headquarters	17.28	14.96	12.69	13.60



Water Resources Use in 4 Years | Unit: million liters

ITEM	2019	2020	2021	2022
MAINLAND CHINA				
Municipal Water Cement Plants	419.41	438.19	405.19	363.81
Groundwater Cement Plants	124.45	33.60	520.47	350.27
Industrial Water Cement Plants	851.30	634.30	516.49	455.50
Surface water (rivers) Cement Plants	15,590.86	16,184.48	12,318.97	8,324.64
Lake / reservoir Cement Plants	768.03	816.29	348.21	135.32
Rain Cement Plants	0.15	0.16	0.11	6.00
Reclaimed Process Water Cement Plants	14,926.16	15,510.87	11,773.31	9,609.60
Total Cement Plants	32,680.35	33,617.88	25,882.75	19,245.15
Municipal Water Grinding Stations	68.59	62.68	71.22	45.03
Industrial Water Grinding Stations	0	0	4.45	1.43
Total Grinding Stations	68.59	62.68	75.67	46.45

Note 1: The water use data on cement plants is the sum of the reported data. The municipal water use on RMC plants is the sum of water used on the water bills, and the groundwater data is the sum of the reported data, as the water use data is subject to the actual months of water use. The municipal water use data on Operation Headquarters is the sum of water used on the water bills. Note 2: 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 in 2020 is estimated on the basis of sales. Note 3: All the sources of water are freshwater. Note 4: TCC employed WRI's Aqueduct Water Risk Atlas to conduct analysis with the distribution of water resources in Taiwan taken into account. The result revealed that all the operation sites in Taiwan are not located in the regions of high-water stress. Note 5: Since the Hualien Plant did not operate in 2022, the scope of data disclosure for 2022 covers Suao Plant and Hoping Plant. Note 6: Based on the cementitious materials yield of 5,629,943.3250 metric tons in 2022, the water withdrawal intensity per unit cementitious materials is 0.000293 million liters per metric ton of cementitious materials. Note 7: The increase in water use data in Taiwan's RMC Plants in 2022 compared to 2021 is attributed to the expansion of scope. Note 8: The water discharge from cement plants in Mainland China amounted to 2,125.67 million liters, while the water discharge from grinding plants amounted to 5.20 million liters.

2022 Water Conservation Projects

Conservation Project	Total Water Saved (Unit: 1 cubic meter)	Cost saved (Unit: NT\$)
TAIWAN		
Membrane Bio-Reactor (MBR)	28,225	1,932,847
Recycling of water in shaft tunnels	8,732	98,322

Consumption of Alternative Raw Materials and Fuels in 2022 | Unit: metric ton

Resource Reused at TCC	Alternative Type	Amount in 2022
TAIWAN		
Calcium Fluoride Sludge	Alternative Raw Material	21,026
MgO-based Desulfurized Inorganic Sludge	Alternative Raw Material	11,291
Coal Ash	Alternative Raw Material	420,886
Desulfurization Gypsum	Alternative Adjunct	247,118

Resource Reused at TCC	Alternative Type	Amount in 2022
Incinerated Recycled Aggregates	Alternative Raw Material	4,766
Reducing Slag from EAF	Alternative Raw Material	96,324
Construction Waste Soil	Alternative Raw Material	237,274
Waste Compression Molding	Alternative Raw Material	456
Slag	Alternative Raw Material	78,342
Waste Ceramic	Alternative Raw Material	5,275
Spent Refractories	Alternative Raw Material	4,329
Air-cooled Slag	Alternative Clinker	1,965
Blast Furnace Slag	Alternative Clinker	7,638
Wood Chips	Alternative Fuel	43,917
Solid Recovered Fuel (SRF)	Alternative Fuel	3,305
Total Resources Reused		1,183,912

Consumption of Raw Materials in 2022 | Unit: metric ton

CATEGORY	Raw Material	Consumption
TAIWAN		
Non-recycled Raw Materials	Limestone	6,610,316
	Silica Sand	33,184
	Imported Low-alkali Cement	140,013
Recycled Raw Materials	Reducing Slag	96,324
	Calcium Fluoride Sludge	21,026
	Construction Waste Soil	237,274
	Alternative Clay	874,649
	Desulfurization Gypsum	247,118
	Coal Ash	420,886
	Slag	176,988
	Others – Industrial Wastes	35,954
Total Amount of Raw Materials		8,893,732
Ratio of Recycled Raw Materials (Recycled Raw Materials/Total Raw Materials)		23.73%



TCC KEY INDICATORS | SOCIAL

Overall Social Welfare Contribution | NTS

Contribution Type	Amount
TAIWAN & MAINLAND CHINA	
Monetary Contribution	33,341,735
Volunteering Hours Contribution	1,314,790
In-kind (Cement) Contribution	1,773,796
Management Costs	3,330,000
Total	39,760,321

Note 1: The volunteering hours are monetized on the basis of the hourly wage of MAs.

Note 2: The scope of data aggregated covers Taiwan and Mainland China.

Parental Leave in 4 Years

ITEM	2019		2020		2021		2022	
	F	M	F	M	F	M	F	M
Employees Eligible for Parental Leave without Pay in the Year (A)	18	59	16	73	22	70	20	74
Employees Applying for Parental Leave without Pay in the Year (B)	1	0	2	1	1	2	6	2
Employees Scheduled to Resume Work in the Year (C)	1	0	3	0	2	2	4	3
Actual Employees Resuming Work (D)	1	0	3	0	1	2	4	1
Employees Continuing Work at TCC after Resumption of Work for 12 Months (E)	3	1	1	0	3	0	1	2
Resumption Rate after Parental Leave without Pay (D/C)	100%	0%	100%	-	50%	100%	100%	33%
Retention Rate One Year after Resumption of Work (E/D in Previous Year)	100%	100%	100%	-	100%	-	100%	100%

Note 1: Full-time employees who have been onboard for at least six months in the year are entitled to parental leave without pay.

Work-related Injuries of Employees in 2022

Occupational Accidents	Work-related Injuries	Recordable Incidents	Near Misses	Fatality Rate	Work-related Injury Rate	Recordable Incident Rate	Near Misses Rate	Lost Days	Lost Days Rate	Working Hours	
										Stipulated	Actual
Operation Headquarters											
0	0	0	0	0	0	0	0	0	0	366,528	372,973
Plants in Taiwan											
0	5	5	0	0	0.4675	0.4675	0	179	18.5	1,934,232	2,138,921
Plants in Mainland China											
0	14	14	0	0	0.1620	0.1620	0	N/A	N/A	N/A	17,279,817

Note 1: Work-related injuries are based on the monthly occupational accident reports submitted by each plant.

Note 2: Fatality Rate = (total number of fatalities / total actual working hours) × 200,000

Note 3: Work-related Injury Rate = (total number of work-related injuries - number of fatalities / total actual working hours) × 200,000. The criteria for work-related injuries are subject to "Regulations of the Examination of Injuries and Diseases Resulting from the Performance of Duties by the Insured Persons of the Labor Insurance Program."

Note 4: Recordable Incident Rate = (number of recordable incidents / total actual working hours) × 200,000

Note 5: Near Misses Rate = (number of near misses / total actual working hours) × 200,000

Note 6: Lost Days Rate = (lost days due to work-related injuries / stipulated working hours) × 200,000

Note 7: The number and rate of critical occupational injuries is 0.

Note 8: The scope of disclosure will expand in 2023 to the disclosures of the data of work-related injuries of employees in Mainland China, and the number of lost working days is scheduled to be disclosed in the 2023 Report.

Work-related Injuries of Contractors in 2022

Occupational Accidents	Work-related Injuries	Recordable Incidents	Near Misses	Fatality Rate	Work-related Injury Rate	Recordable Incident Rate	Near Misses Rate	Working Hours	
								Stipulated	Actual
Contractors Taiwan									
0	3	3	0	0	0.3181	0.3181	0	1,886,035	1,886,035
Contractors Mainland China									
0	0	0	0	0	0	0	0	2,141,193	2,141,193

Note 1: Work-related injuries are based on the monthly occupational accident reports submitted by each plant.

Note 2: Fatality Rate = (total number of fatalities / total actual working hours) × 200,000

Note 3: Work-related Injury Rate = (total number of work-related injuries - number of fatalities / total actual working hours) × 200,000. The criteria for work-related injuries are subject to "Regulations of the Examination of Injuries and Diseases Resulting from the Performance of Duties by the Insured Persons of the Labor Insurance Program."

Note 4: Recordable Incident Rate = (number of recordable incidents / total actual working hours) × 200,000

Note 5: Near Misses Rate = (number of near misses / total actual working hours) × 200,000

Note 6: Certain stipulated working hours and actual working hours are calculated as persons entering the plants × 8 hours

Note 7: The number and rate of critical occupational injuries is 0.



TCC Key Indicators | Governance

2022 TCC Group Tax Information | Unit: NT\$1,000

JURISDICTION	TAIWAN	ASIA	OTHER	TOTAL
Operating Revenue	60,875,665	51,513,531	1,540,510	113,929,706
Profit before Tax	4,953,305	2,690,478	(997,686)	6,646,097
Tax Expense	926,468	1,260,851	301,693	2,489,012
Effective Tax Rate	19%	47%	(30%)	37%
Income Tax Paid	1,540,388	2,345,262	270,547	4,156,197
Effective Tax Rate of the Income Tax Paid	31.10%	87.17%	(27.12%)	62.54%
Cost-to-income Ratio	37	51	12	100

2022 Financial Performance | Unit: NT\$ for EPS & DPS; NT\$1,000 for the remainders

CATEGORY	ITEM	2021	2022
Economic Value Generated	Operating Revenue	107,041,452	113,929,706
	Operating Income (Loss)	19,786,475	1,162,138
	Non-operating Income and Expenses	6,291,609	5,483,959
Economic Value Distributed	Operating Costs	80,391,353	103,794,557
	EPS	3.3	0.74
	DPS	2.0	0.5
	Cash Dividend per Share	1.0	0.5
	Stock Dividend per Share	1.0	0
	Income Tax (TW)	1,421,315	926,468
	Income Tax (Asia)	4,302,206	1,260,851
	Income Tax (Other)	206,866	301,693
	Employee Wages and Benefits	8,561,808	9,769,560
	Community Investments	426,333	276,550
Economic Value Retained	Retained Earnings	6,824,620	66,527,594

Note 1: The DPS, Cash Dividend per Share, and Stock Dividend per Share are to be adopted in the Shareholders' Meeting of 2022.

Note 2: The financial data in the 2020 CSR Report encompasses Taiwan Prosperity Chemical Corp., and the financial data such as the operating cost, income taxes, employee salaries and benefits of the company are thus included. Nevertheless, after the disposal of Taiwan Prosperity Chemical Corp. in 2021, Taiwan Prosperity Chemical Corp. would no longer be a business under the TCC Group per IFRS. As such, in compiling the 2021 financial statement, the data of 2020 was required to be adjusted for readers' comparison.

Expenditures on Public Participation in 4 Years | Unit: NT\$

TOTAL AMOUNT ALLOCATED	2019	2020	2021	2022
Political Lobbying, Interest Representation	0	0	0	0
Local, Regional, or National Political Campaigns, Organizations, and Candidates	0	0	0	0
Chambers of Commerce or Tax-Exempt Organizations (e.g. thinktank)	10,936,559	11,832,811	12,286,514	14,340,841
Matters Related to Election or Referendum	0	0	0	0
Total	10,936,559	11,832,811	12,286,514	14,340,841
Information Coverage	100%	100%	100%	100%

Table of Supply Chain Procurement Amount in 2022 | Unit: NT\$

6 CATEGORIES	PROCUREMENT AMOUNT
Raw Materials	12,190,310,808
Outsourcing & Subcontracting	439,700,683
Equipment & Parts	3,601,764,009
Transport	1,428,610,201
Construction	808,748,775
Explosives	31,436,664
Total	18,500,571,140

Education and Training Hours by Age, Gender, and Job Levels in 2022

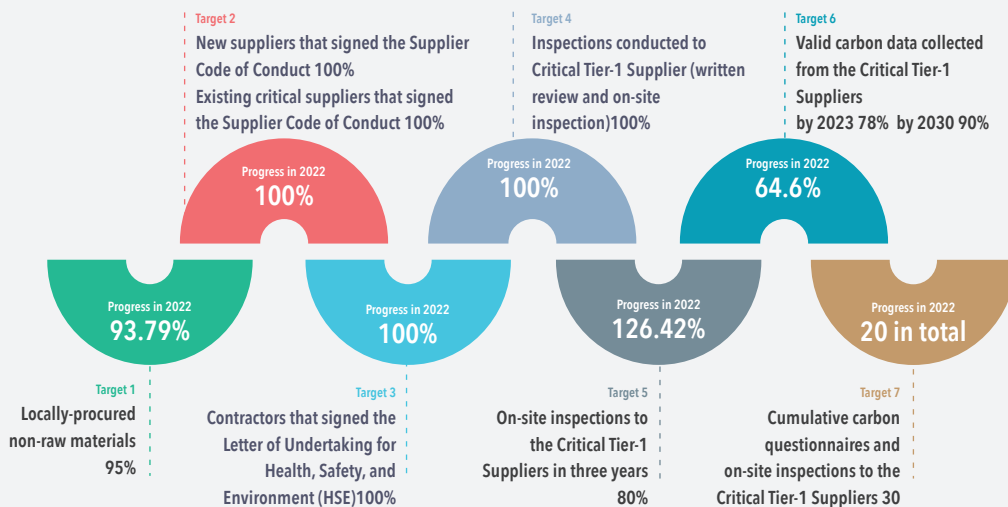
		TRAINING HOURS (UNIT: HOURS)		TOTAL HOURS	AVERAGE HOURS
		FEMALE	MALE		
Age	30 or under	4,647.50	17,486.50	22,134.00	165.18
	31-50	6,273.50	53,916.00	60,189.50	84.65
	51 or above	277.50	1,824.00	2,101.50	6.78
Job Levels	Executives	81.50	557.00	638.50	29.02
	Mid-level Managers	459.50	1,089.00	1,548.50	14.47
	Low-level Managers	2,446.00	7,428.50	9,874.50	114.82
	Professionals	7,194.00	56,889.00	64,083.00	325.29
	Direct Labor	1,017.50	7,263.00	8,280.50	11.14
Total				84,425.00	
Total Hours		11,198.50	73,226.50	84,425.00	73.10
Average Hours		49.33	78.91		

Note 1: Executives are the Assistant Vice President or above. Mid-level managers are Managers or Deputy Managers. Low-level managers are Assistant Managers or Section Chiefs. Professionals are Engineers, Specialists, or Management Associates.

Note 2: The scope of education and training hours covers overseas regions.

7 Targets for Sustainable Supplier Management

Note 1: State-owned businesses are excluded from the scope of the existing critical suppliers in Target 2.



8.2/ TCC GHG Inventory Progress Table

Company Profile

- A Company with a capital of more than NT\$10 billion operating in the steel industry and the cement industry
- A Company with a capital of more than NT\$5 billion but less than NT\$10 billion
- A Company with a capital of less than NT\$5 billion

Sustainable Development Guidemap for TWSE- and TPEX-Listed Companies

- Inventory of the parent company entity
- Inventory of the consolidated financial statements of subsidiaries
- Assurance for the parent company entity
- Assurance for the consolidated financial statements of subsidiaries

Scope	Total Emissions (metric tons of CO ₂ e)	Intensity (metric tons of CO ₂ e thousand NTD) ^(Note 1)	Assurance Provider	Assurance Description
Scope 1				
Parent Company	4,314,312	0.1701	Deloitte	Please refer to the section concerning the ISAE 3000 assurance report
Scope 2				
Parent Company	218,480	0.0086	Deloitte	Please refer to the section concerning the ISAE 3000 assurance report
Scope 3 (Voluntary Disclosure)	17,428			

Note 1: Based on TCC's revenue in 2022 is 25,360,898 thousand dollars.

8.3 / Material Topic Analysis

Dialogues with Sustainability Stakeholders

Pursuant to the AA1000 Stakeholder Engagement Standard (SES), TCC employs the five principles, i.e. Responsibility, Influence, Tension, Diverse Perspectives, and Dependency in identifying 10 stakeholders and ordering the stakeholder significance as follows: government agencies, clients, employees, local communities, shareholders/investors, environmental groups/NGOs, the media, industry associations/industrial and academic organizations, suppliers/contractors, and sustainability associations.

Sustainability Topic Identification

In line with the results of the material topics in 2021 as well as in consideration of the international trends of sustainable development, ESG ratings and benchmarks (MSCI, DJSI, and CDP), ESG standards (GRI Standards and SASB Standards), industry characteristics, and benchmark corporate practices, TCC compiled a list of sustainability topics covering facets of corporate governance, economy, environment, and society.

In 2021, a total of 225 valid stakeholder questionnaires were collected, with which 5 executives of the Company assessed their levels of impact on the Company from the respective topics, financially and non-financially, in the short-/mid-/long-term, producing a list of concerned topics of stakeholders and a list of topics with operational impact. The Corporate Sustainable Development Committee convened a meeting. Based on the results of questionnaire analysis, combined with experiences of stakeholder engagement and the recent trends of sustainable development, the topics include climate actions and net-zero emissions; pollution control and management; legal compliance; resource co-processing; ethical management; local inclusion; green energy and energy storage; sustainable products; workplace health and safety; risk control; operational performances; talent cultivation and development; and biodiversity. Hence, a total of 13 material topics were identified for TCC in 2022.

Assessment Process for Stakeholders and Material Topics

STEP	STEP-1 Identify stakeholders	STEP-2 Compile topics of concern	STEP-3 Assess impact topics	STEP-4 Determine material topics	STEP-5 Examine topics
ACTION	Heads of various departments in the Company fill in the stakeholder identification questionnaire to determine the importance of stakeholders to the Company and identify key stakeholders.	Based on the results of stakeholder identification, the opinions and areas of concern of the stakeholders are obtained via questionnaires or interviews, so as to analyze the levels of impact of the respective topics.	The management of the Company conduct impact analysis for the impacts to corporate operation and risks from various sustainability topics to determine the levels of impact of these topics on the Company.	Based on the topics of stakeholders and their impacts on the Company, the result of topic assessments is mapped out in a materiality matrix as a reference to determine the materiality thereof.	The results of material topic identification are examined and compared to the material topics of the previous year to ensure compliance with the sustainability context and comprehensiveness.
QUANTIFIED PERFORMANCE	10 categories of stakeholders identified	225 valid questionnaires / 1 face-to-face seminar	Opinions of 5 executives / resolution of Corporate Sustainable Development Committee	13 material topics identified	100% conformity of the topics to the sustainability and comprehensiveness requirements

Materiality Matrix

Corporate Governance

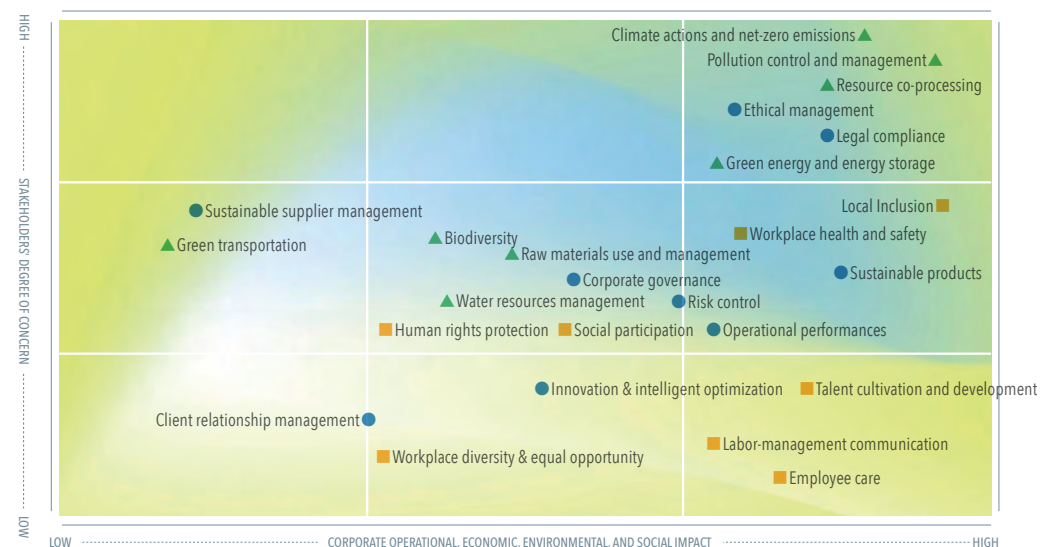
- Ethical management ● Operational performances ● Risk control
- Legal compliance ● Innovation & intelligent optimization
- Sustainable products ● Sustainable supplier management
- Client relationship management ● Corporate governance

Environment

- ▲ Climate actions and net-zero emissions ▲ Resource co-processing
- ▲ Green energy and energy storage
- ▲ Raw materials use and management
- ▲ Pollution control and management ▲ Water resources management
- ▲ Biodiversity ▲ Green transportation

Society

- Human rights protection ■ Workplace diversity & equal opportunity
- Workplace health and safety ■ Talent cultivation and development
- Labor-management communication ■ Local Inclusion
- Social participation ■ Employee care





8.4 / Stakeholder Engagement

Stakeholder Policy

TCC seeks a balanced relationship between human civilization and nature and stresses on the communication between industry and society. The three cornerstones are Reasonable Profits (G), Mutual Benefit with Earth (E), and Human Well-Being (S).

The purpose of the stakeholder engagement policy is to offer an overall framework for TCC to engage in communication and interaction with stakeholders across all the activities of TCC.

- 1 Respond and protect the legal rights and interests of stakeholders.
- 2 Encourage stakeholders to participate in the corporate businesses and the communities the Company operates in to bring about shared sustainable values for all.
- 3 Strengthen the bilateral communication with stakeholders, build the sense of trust, and establish long-term, stable, and firm relationships via various channels.
- 4 Improve stakeholders' level of identity with the sustainable development and ESG of the Company, including items pertaining to professional development diversity.
- 5 Maintain sustainable actions in different countries and industries through the above mentioned framework.

In addition to the rules stated above, the Board of Directors may approve any other corporate policy concerning specific stakeholder(s) as well.

Pursuant to the GRI Standards and AA1000 SES, TCC employs the five principles, i.e. Responsibility, Influence, Tension, Diverse Perspectives, and Dependency, as well as the three steps of Identify, Analyze, and Determine to examine the sustainability topics, perform materiality analysis, and align the strategies and long-term goals of TCC on sustainability management. Meanwhile, they serve as the guidelines for the preparation of Sustainability Report so as to inventory the status of sustainability of the Company, promote ongoing improvement of various organizations, and create shared values for the society and the Company.

TCC values the opinions of our stakeholders, actively communicating and engaging to capture material sustainability topics, which are incorporated in the corporate sustainable development blueprint. In line with the nature of the industry and with reference to the GRI Standards, SASB Standards, and Dow Jones Sustainability Index (DJSI) as well as AA1000 SES, it employs the five principles, i.e. Responsibility, Influence, Tension, Diverse Perspectives, and Dependency in the identification and ordering of stakeholder significance. Upholding the spirit of open transparency, TCC discloses information through a variety of communication channels, ensuring effective and quality communication results with our stakeholders. TCC systematically designed sustainability topic survey questionnaires, with which it collects and analyzes feedbacks of stakeholders; meanwhile, TCC evaluates the impacts and risk levels of sustainability topics on corporate operation, identifying material topics to prioritize responses and reactions to meet the expectations of stakeholders toward TCC. In addition, TCC values expectations of our stakeholders for the Company and incorporates the topics of concern as the reference for corporate operation and sustainable development blueprint, so that TCC may better promote sustainable management, fulfilling our corporate social responsibility. TCC is convinced that only with smooth and effective communication channels with our stakeholders can TCC capture the pulses in the markets, economy, society, and environment, and ultimately put TCC's sustainability missions of "Nature First" and "Benefit to Society" into action.

Industry Associations/Sustainability Initiatives & Organizations

TCC supports and participates in the initiatives relevant to the issues of climate change, circular economy, biodiversity, and new technology R&D. Also, TCC proactively engages with various associations on sustainability topics. For instance, TCC presented on GCCA as well as formulated the carbon neutrality route for the cement industry together with our fellow peers worldwide. In addition, TCC has been actively involved in the seminars and the domestic public hearings on laws and regulations concerning sustainability, assisted in the development of Guidelines for Safety and Health at Work for the Cement Industry, and translated the Circular Transition Indicators (CIT) and Water Circularity Metric (WCM). Meanwhile, echoing with the international trends, TCC joined the Taiwan Nature Positive Initiative and signed the Business for Nature "Make it Mandatory" aligned with the UN SDGs. Together with experts, scholars, peers, and predecessors, TCC learns and exchanges on sustainability practices.

Association	Board of Directors /Supervisors	Professional Committee	Membership	Topic(s) for Collaboration
Climate Group			▲	EP100
Global Cement and Concrete Association (GCCA)			▲	Green procurement issues Low-carbon products Net-zero emissions issues
International Corporate Governance Network (ICGN)			▲	
Morgan Stanley Capital International (MSCI)			▲	Information of international ratings
The Third Wednesday Club	▲		▲	
Chinese National Association of Industry and Commerce, Taiwan	▲		▲	
Chinese Institute of Mining & Metallurgical Engineers			▲	
Taiwan Corporate Governance Association			▲	
Taiwan-Turkey Business Association			▲	
CNS Certification Mark Association			▲	
Chinese Arbitration Association, Taipei			▲	
Cranes and Hoist Equipment Association, R.O.C.			▲	
Kaohsiung City Renwu Industrial Park Manufacturers' Association			▲	
The Institute of Internal Auditors –Chinese Taiwan			▲	
CWS			▲ ▲	Team Leader of "Social Participation", Sustainability Capacity-building Workshop



Association	Board of Directors /Supervisors	Professional Committee	Membership	Topic(s) for Collaboration
Taiwan Photovoltaic Industry System Association	▲		▲	Assist the association members to promote fishery and electricity symbiosis
Tainan City General Industrial Association			▲	
Taiwan Institute for Sustainable Energy				
Taiwan Bio-energy Technology Development Association				
Taiwan Cement Manufacturers' Association	▲	▲	▲	Guidelines for Safety and Health at Work for the Cement Industry
Taiwan Marble Association	▲	▲	▲	
Taiwan Concrete Institute	▲	▲	▲	Concrete quality/engineering specifications
Taiwan Institute of Directors	▲		▲	
Taiwan Electric Power Association		▲	▲	
Taiwan Carbon Capture Storage and Utilization Association			▲	
Taiwan Business Council for Sustainable Development		▲	▲	Founding member of Taiwan Nature Positive Initiative Traditional Chinese translation of the Circular Transition Indicators (CIT) Traditional Chinese translation of the Water Circularity Metric (WCM)
Monte Jade Science and Technology Association of Taiwan			▲	
Taiwan Accreditation Foundation			▲	
Cross-Strait CEO Summit	▲		▲	
Yilan County Industrial Association			▲	
Chinese Alliance for Solidarity Association in Canada			▲	
Chinese Blood Donation Association			▲	
Taiwan Society for Circular Economy			▲	
Taiwan Stock Affairs Association			▲	
Hualien County Industrial Association			▲	
Kaohsiung Chamber of Industry			▲	
Chinese International Economic Cooperation Association			▲	

Association	Board of Directors /Supervisors	Professional Committee	Membership	Topic(s) for Collaboration
Association of Taiwan Net Zero Emissions	▲		▲	Involvement in Cement Industry Net Zero Symposium
New Taipei City Industrial Association			▲	
Accounting Research and Development Foundation			▲	
Chiayi Hsien Industrial Association			▲	
Minsyong (with Touciao) Industrial Park Manufacturers Association			▲	
Kaohsiung Linhai Industrial Park Manufacturers Association			▲	
Taiwan Ready-Mixed Concrete Industry Association	▲	▲	▲	Business/technical exchange
Taichung City Ready-Mixed Concrete Industry Association	▲		▲	Business/technical exchange
ACPAC			▲	Exchange of information on the Asian cement market
Taiwan Electrical and Electronic Manufacturers' Association			▲	
Taiwan Photovoltaic Industry Association	▲		▲	Support to the association members in solar power plant development
Center for Corporate Sustainability			▲	Participation in the climate change simulator workshop
Business for Nature			▲	Business For Nature "Call to Action" Business For Nature "Make it Mandatory"
Taiwan Electric Vehicle (EV) Power Charging Technology Promotion Alliance			▲	Understanding the latest developments in EV charging system specifications and regulations and communication with peers to capture the development trends
ESG Global Views Common Good Ecosphere			▲	



Participation Concerning Policies and Regulations

Organization	Topic for Participation	Contributions of TCC
Environmental Protection Department	Air Pollution Emission Standards	The actual emissions of airborne particulate matters from the manufacturing process of TCC are registered through the system on a quarterly basis.
National Fire Agency Industrial Technology Research Institute	NFPA855, UL9540A, and other fire safety and safety standards	<p>After communicating and explaining the contents and concepts of fire safety and safety standards such as NFPA855 and UL9540A with the National Fire Agency, the Fire Prevention Division agreed to amend the fire safety guidelines for outdoor energy storage. The contents amended include:</p> <ul style="list-style-type: none"> ▀ The proviso was added to the capacity limit specified in Article 7 of the guidelines; the original regulation was limited to only 50 kWh per unit. ▀ Explanation was made concerning the illogicality and issues with design and installation in Article 4 to 6 of the guidelines, and approval was obtained from the NFA for exemption (performance-based regulations) by means of risk assessment or emergency contingency, or certification against the international standards like IEC62933 or UL9540. ▀ Article 7 of the guidelines stipulates that installation of a firewall with 2-hour fire rate can reduce the distance required for the installation of energy storage system to a location away from buildings, public roads, or parking lots from thirty meters to three meters, allowing compliance by NHOA.TCC with the use of UHPC plates with fire-resistance in line with the 2-hour curve of temperature increase of CNS12514-1/-8, certified by a TAF-accredited laboratory with report presented.
Taipei City Government	Safety of energy storage cabinet	TCC participated in the seminar on fire safety regulations, suggested that the fire safety certification for UHPC cabinets could be proposed by the American UL Standards, with UL 263: Fire Tests of Building Construction and Material + UL 10C: Standard for Positive Pressure Fire Tests of Door Assemblies and UL 1479 Standard Method of Fire Tests Through-Penetration Firestops + NFPA 5000: Building Construction and Safety Code for certification, along with assessments with the corresponding European Standards, in an attempt to sold the products worldwide.
Industrial Development Bureau, MOEA	The Program for Green Factory Label System and Clean Production Assessment Mechanism	The Green Factory Program was executed by the Foundation of Taiwan Industry Service, which TCC assisted in the evaluation and discussion of the green environment sustainable optimization indicators questionnaire.
Financial Supervisory Commission Environmental Protection Administration Ministry of Economic Affairs Ministry of Transportation and Communications Ministry of the Interior	Taiwan Sustainable Taxonomy	TCC was involved in the pilot, including the on-site interviews and fill-out of the pilot questionnaire to firstly understand the material content of the taxonomy and the policy direction of the competent authority, followed by feedbacks on the fill-out of the questionnaire to help optimize the content of the guidebook and Q&A content.



Participation in International Organizations and Initiatives

Global Cement and Concrete Association - Low Carbon Procurement Task**Performance in 2022**

- Definition of low-carbon products for manufacturers
- Procurement regulations stipulated by policy makers to assist in carbon reduction purposes
- Green building and procurement policies for the proportion of green construction materials used formulated by governments

Contributions of TCC

TCC exchanged with the concrete manufacturers and experts in the world and worked together to define appropriate low-carbon procurement to achieve carbon reduction.

BCSD Taiwan**Performance in 2022**

- Review of the Chinese Version of WBCSD Circular Economy Program 3.0
- Sharing of TCC experience on the BCSD workshop

Contributions of TCC

TCC experience was aligned with international standards for improvement; TCC discussed and promoted the concept of circular economy with corporate partners to accelerate the transition of the enterprises of Taiwan; TCC engaged in interactions across sectors in the circular economy workshop for mutual exchanges and brainstorming for new cooperation models.

Asian Cement Producers Amity Club**Performance in 2022**

- Annual joint meeting to discuss demands and trends on the market
- Joint discussion for issues on the market and negotiation
- Exchange on cement production and demand volume in various countries

Contributions of TCC

The cement manufacturers and associations as well as representatives from various countries met together for market exchanges and international market trend forecast to establish harmonious market operations.

CDP Climate Change**Performance in 2022**

- 2022 Carbon Disclosure Project CDP Climate Change A-
- 2022 Supplier Engagement Rating (SER) Supplier Engagement Leader "A"

Contributions of TCC**Government agencies**

TCC actively participated in discussions and meetings of the Environmental Protection Administration, provided industry experience and relevant activity data, and assisted the competent authority in formulating corresponding climate policies.

Clients

TCC actively promoted low-carbon products and encouraged ready-mixed concrete (RMC) customers to apply for green building certification.

Suppliers

Suppliers were required to complete the annual CO₂ calculations to ensure suppliers' carbon emissions performance

Domestic/International industrial associations

In response to the Global Cement and Concrete Association (GCCA), TCC has been funding the Taiwan Cement Manufacturers' Association (TCMA), Taiwan Concrete Institute (TCI), and Taiwan Institute for Sustainable Energy (TAISE) to promote the achievement of the national sustainable development goals.

CDP Water Security**Performance in 2022**

- 2022 CDP Water "B"

Contributions of TCC**Government agencies**

TCC complied with the water management policies and relevant actions of governments in a timely manner through official documents and active attention to changes in laws and regulations.

Clients

TCC provided information related to water resources when customers visited the plants for customers to understand the importance of water resources use reduction and recycling, and reduced water use by recycling of water resources.

Suppliers

All new suppliers were required to sign the Supplier Code of Conduct, which includes environmental objectives related to water resources management.

Local communities

TCC participated in relevant meetings of industrial parks to communicate directly with residents of local communities, made the water use of TCC transparent, and explained the water management reduction targets and the related action plans of TCC.

Stakeholder Engagement in 2022

Stakeholder

Government Agencies

Quantified Communication Performance in 2022

3

SIGNIFICANCE TO TCC

A significant stakeholder that cares about TCC's legal compliance results in economy, environment, and society and has influences on the industry's development and policy implementation

TOPICS OF CONCERN

- ▲ Legal compliance
- ▲ Local Inclusion
- ▲ Climate actions and net-zero emissions
- ▲ Client relationship management
- ▲ Pollution control and management

MEANS OF ENGAGEMENT TO IDENTIFY THE POSITIVE AND NEGATIVE, ACTUAL AND POTENTIAL IMPACTS

- ▲ Updates of information on the corporate website and the Market Observation Post System (MOPS) to actively communicate the actions of TCC externally
- ▲ Active participation in interviews, seminars, conferences to capture stakeholders' needs
- ▲ Bilateral communication with stakeholders via official document and correspondence from time to time

ENGAGEMENT PERFORMANCE IN 2022

- ▲ Promotion of "Introduction to Controlled Foreign Company (CFC)" by the Zhongnan Office, National Taxation Bureau of Taipei, Ministry of Finance organized
- ▲ 2 meetings with the researchers and specialists from the Central Bank annually

STAKEHOLDER

Employees

Quantified Communication Performance in 2022

725

SIGNIFICANCE TO TCC

A key stakeholder and the crucial human capital to TCC for ongoing breakthroughs and innovations

TOPICS OF CONCERN

- ▲ Ethical management ▲ Operational performances ▲ Employee care ▲ Corporate governance
- ▲ Climate actions and net-zero emissions

MEANS OF ENGAGEMENT TO IDENTIFY THE POSITIVE AND NEGATIVE, ACTUAL AND POTENTIAL IMPACTS

- ▲ Human rights due diligence conducted regularly to capture the human rights risks for employees for implementation of mitigation and compensation strategies
- ▲ Employee engagement survey executed annually to probe into the actual needs of employees and enhance their sense of identity
- ▲ Annual performance appraisal and interviews to establish communication channels between two parties
- ▲ Quarterly labor-management meetings, union meetings, employee welfare meetings, and Town Hall Meetings
- ▲ Employee mailbox set up to check employee feedbacks and respond to employee needs in a timely manner
- ▲ Publication of TCC Technology Journal to deepen employees' understanding of the Company

ENGAGEMENT PERFORMANCE IN 2022

- ▲ 1 Employee due diligence per year
- ▲ 1 performance appraisal per year
- ▲ Overtime Home Late Plan to pay for the taxi home by TCC to take care of the employees that clock out late due to project emergency or ad-hoc tasks with 253 accesses to date (as of April 2023)
- ▲ 42 TCC retirees invited from all over Taiwan for a two-day and one-night visit to learn about the latest development at TCC
- ▲ Various types of sports activities held to promote the health of employees with a total of 361 people participating in the walking competition, walking 109,722,086 steps, in 2022
- ▲ 21 labor-management meetings called
- ▲ 25 employee welfare meetings called
- ▲ 17 union meetings called
- ▲ 3 Town Hall Meetings convened
- ▲ TCC Technology Journal: "Cement Fantasy Technology Journal" published on a yearly basis and distributed to departments for employees to read and better understand the direction of corporate operations and the short-, mid-, and long-term focused works

STAKEHOLDER

Clients

Quantified Communication Performance in 2022

325

SIGNIFICANCE TO TCC

A stakeholder that cares about the quality of TCC's products and services as well as our operations, compliance, and environmental protection efforts

TOPICS OF CONCERN

- ▲ Sustainable products ▲ Ethical management ▲ Green transportation
- ▲ Pollution control and management ▲ Client relationship management

MEANS OF ENGAGEMENT TO IDENTIFY THE POSITIVE AND NEGATIVE, ACTUAL AND POTENTIAL IMPACTS

- ▲ Annual client satisfaction survey on a regular basis, with the results of which to optimize client interactions
- ▲ Bilateral communication with clients via telephone and external mailbox from time to time
- ▲ Annual response to CDP questionnaire to disclose the sustainability information of TCC

ENGAGEMENT PERFORMANCE IN 2022

- ▲ 1 Client Satisfaction Survey

STAKEHOLDER

Shareholders /Investors

Quantified Communication Performance in 2022

12

SIGNIFICANCE TO TCC

The stakeholder that is the main financing source of TCC and that cares the most for the operational performance and sustainable development of the Company

TOPICS OF CONCERN

- ▲ Operational performances ▲ Ethical management ▲ Risk control ▲ Green energy and energy storage
- ▲ Pollution control and management

MEANS OF ENGAGEMENT TO IDENTIFY THE POSITIVE AND NEGATIVE, ACTUAL AND POTENTIAL IMPACTS

- ▲ Annual general meeting (AGM)
- ▲ Updates of information on the corporate website and the MOPS on a regular basis
- ▲ Replies to shareholders' questions by phone or mail from time to time

ENGAGEMENT PERFORMANCE IN 2022

- ▲ 1 AGM held ▲ 8 board meetings held ▲ 1 institutional investor conference organized by TCC
- ▲ 1 public institutional investor conference attended ▲ 1 NDR organized
- ▲ Information on the corporate website and the MOPS updated on a regular basis
- ▲ Inquiries from shareholders answered

STAKEHOLDER

Local Communities

Quantified Communication Performance in 2022

1,544

SIGNIFICANCE TO TCC

The most concerned stakeholder that lives close to TCC operation sites and thus is most affected by TCC's operations

TOPICS OF CONCERN

- ▲ Social participation ▲ Ecological restoration ▲ Resource co-processing
- ▲ Pollution control and management ▲ Raw materials and water resources management
- ▲ Legal compliance ▲ Local Inclusion

MEANS OF ENGAGEMENT TO IDENTIFY THE POSITIVE AND NEGATIVE, ACTUAL AND POTENTIAL IMPACTS

- ▲ Social Return on Investment (SROI) for community impact assessment
- ▲ Annual visits to local communities and schools to better bilateral communication
- ▲ Promotion of sustainability ideas via featured program (Hoping Energization)
- ▲ Communication via phone and email from time to time
- ▲ Timely update of information on the corporate website and social media (LINE, fan page, etc.) to deepen the knowledge of stakeholders on TCC's actions
- ▲ Active participation in the industrial park meetings to communicate the impact of TCC's actions with stakeholders

ENGAGEMENT PERFORMANCE IN 2022

- ▲ Annual semester result presentation organized at the 4 Cement Academies in Taiwan, attended by a total of 345 students, parents, and teachers, in 2022
- ▲ Cement Academy Scholarship disbursed to 112 students
- ▲ The collaboration with Dong Ao Elementary School (IYO Tribe, Dongyue Village in Dongao), Nanao Township, officially inaugurated in 2022 with "After-school Mentoring Program" launched to support the 52 students of the school
- ▲ Home Repair Service with 761.5 hours of service delivered for a total of 183 cases
- ▲ Hoping Care Bus between the Heping Village and the Downtown Hualien, serving 452 passengers in total
- ▲ Hoping Energization co-organized with Heping Elementary School with 400 villagers and 134 groups of children and parents reached



STAKEHOLDER

Environmental Groups/NGOs

Quantified Communication Performance in 2022

177

SIGNIFICANCE TO TCC

A stakeholder that cares for TCC's effort in environmental protection, employee care, and communication with neighboring communities while pushing TCC for improvement

TOPICS OF CONCERN

- ▲ Legal compliance
- ▲ Social participation
- ▲ Green transportation
- ▲ Ecological restoration/Biodiversity
- ▲ Corporate governance and ethical management
- ▲ Resource co-processing
- ▲ Climate actions and net-zero emissions
- ▲ Green energy and energy storage

MEANS OF ENGAGEMENT TO IDENTIFY THE POSITIVE AND NEGATIVE, ACTUAL AND POTENTIAL IMPACTS

- ▲ Communication via phone or email from time to time for better bilateral communication
- ▲ Timely update of corporate website for transparent disclosures on the sustainability actions of TCC

ENGAGEMENT PERFORMANCE IN 2022

- ▲ "Our National Park Taroko Event" organized by Jane Goodall Institute Taiwan at TCC DAKA, attended by approximately 150 people from Heping Elementary School, Hualien Tongmen Elementary School, Sanzhan Elementary School, Jingmei Elementary School, and Si Pao Primary School to interact with the booths
- ▲ Engagement with Kids' Bookhouse, Taiwan Sea Turtle Conservation Society, Green Bunny Studio, Taiwan Marine Education Center of Yilan County, Environmental Protection Bureau of Yilan County, and the Northern Branch, Coast Guard Administration, Ocean Affairs Council on the Hundred People Waste Reduction Beach Cleanup Event at Hanben
- ▲ 27 group tours to TCC DAKA



STAKEHOLDER

Media

Quantified Communication Performance in 2022

768

SIGNIFICANCE TO TCC

A stakeholder that helps TCC disclose sustainable measures

TOPICS OF CONCERN

- ▲ Operational performances
- ▲ Climate actions and SBTs
- ▲ Ecological restoration
- ▲ Innovation & intelligent optimization
- ▲ Waste co-processing
- ▲ Human rights protection and employee care
- ▲ Circular economy
- ▲ Sustainable products
- ▲ Raw materials and water resources management

MEANS OF ENGAGEMENT TO IDENTIFY THE POSITIVE AND NEGATIVE, ACTUAL AND POTENTIAL IMPACTS

- ▲ Media delegation tour organized to deepen stakeholders' knowledge of TCC
- ▲ Communication via phone or email from time to time
- ▲ Corporate website, Facebook Page/WeChat official account/Instagram for timely communication of the sustainability actions of TCC

ENGAGEMENT PERFORMANCE IN 2022

- ▲ 3 press conferences
- ▲ 38 press releases
- ▲ Media delegation of 20 journalists to the inauguration ceremony for NHOA.TCC charging station at TCC DAKA
- ▲ 40 people from Wealth Magazine arranged for the visit to TCCGE Changbin Plant and Tainan Plant of E-One Moli Energy Corp.
- ▲ Posts on Facebook Page: 321 posts
- ▲ Instagram: 5 posts
- ▲ TCC Group YouTube: 13 videos
- ▲ Attendance to "ESG Summit" organized by Accounting Research and Development Foundation
- ▲ Attendance to "Asia-Pacific Forum & Exposition for Sustainability" organized by TAISE



STAKEHOLDER

Industry Associations /Industrial & Academic Organizations

Quantified Communication Performance in 2022

3

SIGNIFICANCE TO TCC

A stakeholder that is a fellow partner to jointly promote the industry's development and offer advice and exchange ideas in business operation

TOPICS OF CONCERN

- ▲ Innovation & intelligent optimization
- ▲ Sustainable products
- ▲ Circular economy
- ▲ Waste co-processing
- ▲ Climate actions and SBTs
- ▲ Climate actions and net-zero emissions
- ▲ Green energy and energy storage
- ▲ Legal compliance

MEANS OF ENGAGEMENT TO IDENTIFY THE POSITIVE AND NEGATIVE, ACTUAL AND POTENTIAL IMPACTS

- ▲ Bilateral communication through topical meetings or via phone, official document, and email from time to time
- ▲ Regular attendance in the meetings of the CNS Technical Committee annually
- ▲ Regular attendance in the association board of directors' engagement/sales/technical committee to share the industrial practices of TCC
- ▲ Timely update of corporate website information

ENGAGEMENT PERFORMANCE IN 2022

- ▲ Participation in GCCA meetings on carbon reduction pathways; discussion and amendment to the 2050 Roadmap for concrete in response to COP26; and SBT for cement on the 1.5°C net-zero emissions pathway guidelines; totally over 36 video conferences
- ▲ Participation in the government's meetings on strategies for Net Zero by 2050 and carbon reduction pathways to offer recommendations on regulation amendments
- ▲ Participation in the revision of CNS15286 Blended hydraulic cements, adding Type IL (Portland Limestone Cement) and Type IT (Ternary Blended Cement), besides the existing Type IS (Portland Blast Furnace Cement) and Type IP (Portland Pozzolan Cement), totally 4 types of cement



STAKEHOLDER

Suppliers /Contractors

Quantified Communication Performance in 2022

1,173

SIGNIFICANCE TO TCC

A business partner to TCC in product manufacturing and quality improvement as well as a stakeholder to work together on environmental sustainability issues

TOPICS OF CONCERN

- ▲ Supplier management
- ▲ Corporate governance and ethical management
- ▲ Client relationship management
- ▲ Operational performances
- ▲ Workplace health and safety

Means of Engagement to Identify the Positive and Negative, Actual and Potential Impacts

- ▲ 2 Sustainability Governance Workshops organized annually to communicate sustainability-related practices with stakeholders and boost the sustainability management intensity of suppliers
- ▲ Bilateral communication via external mailboxes, phone, and email from time to time
- ▲ Annual audits to ensure sustainability practices of suppliers
- ▲ A supplier suggestion mailbox on the corporate website for timely response to suppliers' needs
- ▲ Tender meetings from time to time

Engagement Performance in 2022

- ▲ Supplier Convention on Sept. 14, 2022, attended by 331 suppliers
- ▲ Annual written audit to 216 suppliers completed
- ▲ 255 contractor meetings, safety meetings, and education and trainings organized
- ▲ 169 sessions of ethical management trainings organized for contractors
- ▲ 170 mails received by the supplier suggestion mailbox in 2022
- ▲ The 1st Supplier Sustainability Governance Workshop organized on Nov. 23, 2022, divided into 2 sessions in the morning and afternoon, respectively, attended by 25 suppliers (32 individuals)



STAKEHOLDER

Sustainability
AssociationsQuantified
Communication
Performance
in 2022

31

SIGNIFICANCE TO TCC

A stakeholder that focuses on TCC's awareness of sustainability trends and builds a sustainable future with TCC

TOPICS OF CONCERN

- ▲ Climate actions and SBTs
- ▲ Waste co-processing
- ▲ Raw materials and water resources management
- ▲ Pollution control and management
- ▲ Workplace health and safety

MEANS OF ENGAGEMENT TO IDENTIFY THE POSITIVE AND NEGATIVE, ACTUAL AND POTENTIAL IMPACTS

- ▲ Active participation in sustainability exchange activities to share on the sustainability practices of TCC
- ▲ Bilateral communication via phone and email from time to time

ENGAGEMENT PERFORMANCE IN 2022

Company Information Exchange

- ▲ Information sharing via My Low-carbon Travel
- ▲ Information sharing on TCC Shareholders' meeting to exchange on the three axes of the sustainable transition at TCC
- ▲ Information sharing on TCC DAKA charging station opening

Event Participation

- ▲ 4 sessions of CWS sustainability capacity-building workshop as the team leader for the social participation session
- ▲ CSRone 8th International Conference on Sustainability Trends 2022
- ▲ BCSD Taiwan's "Taiwan Nature Positive Initiative Platform Presentation" as a speaker to talk on a company's role in the global biodiversity framework after 2020
- ▲ BCSD Taiwan's "Circular Transition Indicators Workshop" as a speaker to talk on the corporate circular strategies
- ▲ BCSD Taiwan's "Net-zero Transition Strategy Results Forum" and "2021 CDP Presentation in Taiwan"
- ▲ International Climate Development Institute (ICDI) "COP27 Nature-based Solutions Carbon Trading Trend Forum"
- ▲ Review of the Chinese version of WBCSD Circular Economy Program 3.0; sharing of TCC experience on the BCSD workshop based on the experience of a large traditional manufacturer