

Sustainability Performance

This sustainability report of Central Pattana PCL. is including economic social and environmental aspects according to the company's sustainable development strategy. The contents and details in this report disclose the performance outcomes of the Company and its subsidiaries and associates.

- **Economic:** This report discloses the performance outcomes of the Company and its subsidiaries and associates in Thailand and other country as mentioned in the Annual Report 2019.
- **Social and Environmental:** This report discloses the performance outcomes of the Company and its subsidiaries and associates in Thailand only and any property that has a significant social and environmental impacts.

Boundary of Sustainability Performance Reporting

No.	Property	Social (Employee and Safety)					Environmental (Energy, GHG, Water, and Waste)				
		2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Shopping Center		29	30	32	32	33	29	30	32	32	33
1	Central Lardprao	●	●	●	●	●	●	●	●	●	●
2	Central Ramindra	●	●	●	●	●	●	●	●	●	●
3	Central Pinklao	●	●	●	●	●	●	●	●	●	●
4	Central Marina	●	●	●	●	●	●	●	●	●	●
5	Central Chiangmai Airport	●	●	●	●	●	●	●	●	●	●
6	Central Rama 3	●	●	●	●	●	●	●	●	●	●
7	Central Bangna	●	●	●	●	●	●	●	●	●	●
8	Central Rama 2	●	●	●	●	●	●	●	●	●	●
9	centralwOrld	●	●	●	●	●	●	●	●	●	●
10	Central Rattanaithibet	●	●	●	●	●	●	●	●	●	●
11	Central Chaengwattana	●	●	●	●	●	●	●	●	●	●
12	Central Pattaya	●	●	●	●	●	●	●	●	●	●
13	Central Udon	●	●	●	●	●	●	●	●	●	●
14	Central Chonburi	●	●	●	●	●	●	●	●	●	●
15	Central Khonkaen	●	●	●	●	●	●	●	●	●	●
16	Central Chiangrai	●	●	●	●	●	●	●	●	●	●
17	Central Phitsanulok	●	●	●	●	●	●	●	●	●	●
18	Central Rama 9	●	●	●	●	●	●	●	●	●	●
19	Central Suratthani	●	●	●	●	●	●	●	●	●	●
20	Central Lampang	●	●	●	●	●	●	●	●	●	●
21	Central Ubon	●	●	●	●	●	●	●	●	●	●
22	Central Chiangmai	●	●	●	●	●	●	●	●	●	●
23	Central Hatyai	●	●	●	●	●	●	●	●	●	●
24	Central Samui	●	●	●	●	●	●	●	●	●	●
25	Central Salaya	●	●	●	●	●	●	●	●	●	●
26	Central Rayong	●	●	●	●	●	●	●	●	●	●
27	Central Phuket Central Phuket Festival Central Phuket Floresta	●	●	●	●	●	●	●	●	●	●
28	Central Westgate	●	●	●	●	●	●	●	●	●	●
29	Central Eastville	●	●	●	●	●	●	●	●	●	●
30	Central Nakhon Si		●	●	●	●		●	●	●	●
31	Central Korat			●	●	●			●	●	●

No.	Property	Social (Employee and Safety)					Environmental (Energy, GHG, Water, and Waste)				
		2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
32	Central Mahachai			●	●	●			●	●	●
33	Central i-City										
34	Central Village					●					●
Office Properties		7	7	7	7	7	7	7	7	7	7
1	Lardprao	●	●	●	●	●	●	●	●	●	●
2	Pinklao Tower A	●	●	●	●	●	●	●	●	●	●
3	Bangna	●	●	●	●	●	●	●	●	●	●
4	The Offices at centralwOrld	●	●	●	●	●	●	●	●	●	●
5	Pinklao Tower B	●	●	●	●	●	●	●	●	●	●
6	Chaengwattana	●	●	●	●	●	●	●	●	●	●
7	Rama 9	●	●	●	●	●	●	●	●	●	●
Hotel Properties		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1	Centara Hotel & Convention Centre Udon Thani										
2	Hilton Pattaya										
Residential Properties for Rent		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1	Central City Residence										
Residential Properties for Sale		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1	ESCENT CHIANGMAI										
2	ESCENT KHONKAEN										
3	ESCENT RAYONG										
4	ESCENT VILLE CHIANGMAI										
5	ESCENT VILLE CHIANGRAI										
6	ESCENT NAKHONRATCHASIMA										
7	PHYLL PHAHOL 34										
8	ESCENT UBONRATCHATHANI										
9	ESCENT PARK VILLE CHIANGMAI										
10	NIYHAM BOROMRATCHACHONNANI										
Central Pattana Head Office		3	3	3	3	3	-	3	3	3	3
1	centralwOrld	●	●	●	●	●		●	●	●	●
2	Pinklao	●	●	●	●	●		●	●	●	●
3	Jewelry Trade Center	●	●	●	●	●		●	●	●	●

Remarks

NR = Non-Relevance or not significant to Central Pattana PCL.

Financial

GRI Standards	Data	Unit	2015	2016	2017	2018	2019
201-1	Revenue from Rental & Service, Food Center, Hotel and Real Estate Sales	Baht	24,282,565,410	27,633,700,452	28,785,006,197	33,728,443,355	36,719,391,517
	Cost of Rental & Service, Food Center, Hotel and Real Estate Sales	Baht	12,633,722,533	14,040,598,219	14,518,159,000	16,462,935,795	18,086,342,013
	Net profit	Baht	7,880,309,769	9,243,796,746	13,567,644,892	11,215,652,867	11,738,404,950
	Employee Wages and Benefits	Baht	2,480,522,000	2,800,655,000	3,211,986,000	3,643,533,000	4,279,652,000
	Payment to Governments	Baht	508,714,089	633,460,339	363,859,110	426,332,773	811,468,750
	Taxes paid to the government and local authorities	Baht	1,430,629,709	1,686,336,102	1,794,526,413	2,056,902,384	2,336,357,717
	Dividend per Share (pay in the following year)	Baht/Share	0.70	0.83	1.40	1.10	1.30

Remarks

- Financial information disclosed covers of the Company, its subsidiaries, joint ventures and associates as specified in the Annual Report 2019.
- The figure from 2018 onwards is disclosed and calculate base on the TFRS 15, revenue and cost of food center services is determined by whether or not the company acts as an agent or the principal in the transaction which differ from the figure mentioned on the year 2015-2017. Therefore, the change reflects the revenue and operating cost of food center services. Also, the company has restated the meaning and definition related as mentioned on the Annual Report 2019.

Corporate Governance

GRI Standards	Data	Unit	2015	2016	2017	2018	2019
102-22, 405-1	Governance Structure						
	Executive directors	Person	1	1	1	1	1
	Independent directors	Person	4	4	4	4	4
	Other non-executive directors	Person	7	7	6	6	6
	Board Meeting Attendance						
	Average board meeting attendance	% per year	96.00	86.46	89.77	98.86	90.90
205-2	Communication about Code of Business Conduct with Stakeholders						
	Employee	%	100.00	100.00	100.00	100.00	100.00
	Contractor/Supplier/Services Provider	%	100.00	100.00	100.00	100.00	100.00
	Subsidiaries	%	100.00	100.00	100.00	100.00	100.00
	Joint venture inc. stakes below 51%	%	100.00	100.00	100.00	100.00	100.00
206-1	Number of legal actions pending or completed and in which the organization has been identified as a participant regarding						
	Anti-competitive behavior	Case	None	None	None	None	None
	Anti-trust and monopoly legislation	Case	None	None	None	None	None

Tenant Management and Development

GRI Standards	Data	Unit	2015	2016	2017	2018	2019
102-43	Satisfaction Index						
	Overall shopping satisfaction index	Point	82	82	83	82	80
	Shopper satisfaction index on convenience aspect	Point			80	85	86
	Shopper satisfaction index on safety aspect	Point			79	79	79
	Tenant satisfaction index	Point	77	77	78	80	83
	Data Coverage of tenant satisfaction index	%	100	100	84.4	100	100
416-2	Complaints						
	Incidents of non-compliance concerning the health and safety impacts of products and services	Case	0	0	0	0	0
417-3	Incidents of non-compliance concerning marketing communications	Case	0	0	0	0	0
418-1	Number of substantiated complaints received concerning breaches of customer privacy	Case	0	0	0	0	0
	Total number of identified leaks, thefts, or losses of customer data	Case	0	0	0	0	0
419-1	Non-compliance with laws and regulations in the social and economic area	Case	0	0	0	0	0
N/A	Percentage of complaints about traffic jams	Per total of complaint				33	21

Employee Management and Engagement

GRI Standard	Data	Unit	2015		2016		2017		2018		2019	
			Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Workforce												
102-8	Workforce											
	Total workforce	Person	4,085		4,313		4,666		1,1717		11,144	
	Employee	Person	4,085		4,313		4,666		4,911		5,093	
			2,084	2,001	2,185	2,128	2,344	2,322	2,464	2,447	2,562	2,531
	Sub-contractor	Person							6,806		6,051	
	Employee by employee status											
	Permanent	Person	2,081	1,993	2,182	2,119	2,341	2,314	2,461	2,441	2,558	2,524
Contract	Person	3	8	3	9	3	8	3	6	4	7	
405-1	Employee by level (include new employee)											
	Top management	Person	10	4	9	4	11	3	15	3	15	4
	Middle management	Person	233	257	247	265	254	291	271	310	296	349
	Junior management	Person	351	425	366	437	377	457	401	468	435	517
	Non-management	Person	1,490	1,315	1,563	1,422	1,702	1,571	1,777	1,666	1,816	1,661
	Employee by age (include new employee)											
	Less than 30 years old	Person	1,025	743	1,058	775	1,096	806	1,093	806	585	782
	Between 30-50 years old	Person	578	633	595	642	614	677	639	699	1,791	1,628
	More than 50 years old	Person	481	625	532	711	634	839	732	942	186	121
	Employee by workarea (include new employee)											
	Bangkok Metropolitan Region	Person	1,280	1,407	1,332	1,477	1,442	1,596	1,492	1,661	1,571	1,739
	Central	Person										
	North East	Person	190	119	190	121	222	158	228	162	230	162
	South	Person	193	137	235	182	236	206	289	267	292	267
	North	Person	227	177	227	174	231	181	235	174	237	180
	East	Person	194	161	201	174	213	181	220	183	232	183
	West	Person										
	Employee by cultural background (exclude new employee)											
	Bangkok Metropolitan Region	Person	808	859	1,013	1,079	1,062	1,129	1,102	1,194	952	1,063
	Central	Person	50	27	51	26	51	31	45	24	159	136
	North East	Person	167	94	176	110	176	103	196	135	405	313
	South	Person	106	63	155	103	207	138	201	146	297	243

GRI Standard	Data	Unit	2015		2016		2017		2018		2019	
			Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
	North	Person	206	150	213	150	208	160	215	160	242	186
	East	Person	92	56	155	123	170	122	185	150	149	150
	West	Person	11	6	13	9	4	6	33	17	40	30
Equality												
405-2	Ratio of Basic salary of male and female employees											
	Middle and Junior management	Female: Male			1.00	0.96	1.00	1.03	1.00	0.99	1.00	0.99
	Non-management	Female: Male			1.00	1.05	1.00	1.04	1.00	1.03	1.00	1.01
Employment												
401-1	New employee											
	Total new employee	Person	1,390		937		1,099		1,108		728	
			644	746	409	528	466	633	487	621	318	410
	New employee by age											
	Less than 30	Person	337	462	224	335	266	413	302	413	180	238
	Between 30-50	Person	299	283	177	189	190	217	175	205	132	172
	More than 50	Person	8	1	8	4	10	3	10	3	6	0
	New employee by workarea											
	Bangkok Metropolitan Region	Person	411	515	255	363	325	430	312	426	226	291
	Central	Person										
	North East	Person	23	25	14	11	46	55	32	27	21	15
	South	Person	87	74	80	79	29	68	88	121	30	52
	North	Person	21	27	14	24	23	21	20	14	14	19
	East	Person	102	105	46	51	43	59	35	33	27	33
	West	Person										
	New employee hired											
	Rate of new employee hire	% of total employee	34.03		21.73		23.5		22.56		14.29	
			30.90	37.28	18.72	24.81	19.88	27.26	19.76	25.38	12.41	16.20
	Internal mobility											
	Employee transferred to homeland		Person	97		28		76		19		11
Employee Engagement & Retention												
	Employee engagement											
	Employee engagement by gender	% of total employee	57.00		73.00		77.00		73.00		73.00	
									80.00	66.00	79.00	67.00

GRI Standard	Data	Unit	2015		2016		2017		2018		2019		
			Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
401-3	Initiated turnover by age (include resignation or due to dismissal, retirement, or death in service)	Person	812		707		744		860		805		
	Less than 30 years old	Person	194	310	168	245	158	271	189	297	154	265	
	Between 30-50 years old	Person	145	159	128	150	132	161	163	189	151	208	
	More than 50 years old	Person	4	0	10	6	17	5	15	7	15	12	
	Initiated turnover by work allocation (include resignation or due to dismissal, retirement, or death in service)	Person	343	469	306	401	307	437	367	493	320	485	
	Head office	Person	47	118	44	115	67	139	59	135	65	126	
	Branch	Person	296	351	262	286	240	298	308	358	255	359	
	Voluntary turnover by age (resignation)	Person	636		598		611		725		790		
	Less than 30 years old	Person	142	238	137	200	120	219	146	245	154	265	
	Between 30-50 years old	Person	119	133	108	137	118	137	144	169	148	208	
	More than 50 years old	Person	4	0	10	6	14	3	14	7	9	6	
	Voluntary turnover by work allocation (resignation)	Person	636		598		611		725		790		
	Head office	Person	41	104	37	109	59	130	58	128	64	125	
	Branch	Person	224	267	218	234	193	229	246	293	247	354	
	Voluntary turnover by tenure group (resignation)	Person	636		598		611		725		790		
	less than 4 months	Person	119	160	72	131	88	135	102	158	81	122	
	4 months - 1 year	Person	34	53	60	61	37	53	34	63	53	84	
	1-3 years	Person	51	86	60	65	66	100	74	105	94	147	
	3-5 years	Person	55	58	48	69	42	55	67	76	37	61	
	5-10 years	Person									32	41	
	More than 10 years	Person	6	14	15	17	19	16	27	19	14	24	
	Lay-off	Person	0	0	0	0	0	0	0	0	0	0	
	Head office	Person	0	0	0	0	0	0	0	0	0	0	
	Branch	Person	0	0	0	0	0	0	0	0	0	0	
	Turnover rate												
	Voluntary turnover	% of total employee	15.57%		13.87%		13.09%		14.76%		15.51%		
	Regrettable loss Rate	% of total employee	6.30%		5.80%		4.90%		6.60%		8.10%		
	Parental leave												
	Number of employees having the right of maternity/ parental leave	Person	2,084	2,001	2,185	2,128	2,344	2,322	2,464	2,447	2,562	2,531	
	Number of employees using the right of maternity/ parental leave	Person	0	57	0	61	0	67	0	81	0	103	

GRI Standard	Data	Unit	2015		2016		2017		2018		2019	
			Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
	Number of employees returning to work after maternity/ parental leave	Person	0	54	0	59	0	66	0	73	0	92
	Percentage of employees returning to work and remaining at work after maternity/parental leave	%	N/A	94.74	N/A	96.72	N/A	98.51	N/A	90.12	N/A	89.32
Employee Development												
404-1	Training Course	Course	75		73		378		477		540	
	Number of employees training in various courses	Person							5,010		5,086	
	Percentage of employees training in various courses	%							94.00		97.48	
	Training hour	Hour	20.00		21.00		25.41		26.70		24.00	
	Employee satisfaction from training	%			85.89		92.00		91.90		91.70	
	Employee promotion rate	%	35.00	65.00	45.00	55.00	54.00	46.00	41.00	59.00	44.63	55.37
Occupational Health and Safety												
403-1	Ratio of employee represent in OHS Committee per total employee (exclude contract employee)	% of total employee					8.06		7.55		6.69	
403-2(a)	Injury rate (IR)											
	Injury rate per 200,000 hours worked	Person					0.12		0.13		0.26	
	Injury rate per 1,000,000 hours worked	Person					0.58		0.64		1.32	
	Occupational Disease Rate (ODR)											
	Occupational Disease Rate per 200,000 hours worked	Person					0.00		0.00		0.00	
	Occupational Disease Rate per 1,000,000 hours worked	Person					0.00		0.00		0.00	
	Lost Day Rate (LDR)											
	Lost Day Rate per 200,000 hours worked	Lost day					0.74		1.23		3.83	
	Lost Day Rate per 1,000,000 hours worked	Lost day					3.68		6.13		19.16	
	Absentee Rate (AR)	%	2.07		2.16		1.08		1.36		1.10	
Fatalities	Person	0		0		0		0		2		
Employee complaints												
	Number of employees' complaints in relation to labor practices	Case	0		0		0		0		0	
	Number of resolved complaints	Case	0		0		0		0		0	
	Number of pending complaints	Case	0		0		0		0		0	
Promoting employment among various types of people												
	Disabled person											
	Employment of disabled	Person	1									
	Area for people with disabilities to sell products	Person	38				45		46		46	

GRI Standard	Data	Unit	2015		2016		2017		2018		2019	
			Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
	Area for people with disabilities to sell products	Shopping center					20		21		21	
	Skill development for disabled person	Person					145		199		611	
	Student											
	Work Integrated Learning program	Person	17		15		14		14		14	

Definitions and calculation guidelines

Central Pattana 's employees are workers under employment contracts with CENTRAL PATTANA PUBLIC COMPANY LIMITED; they are classified into four groups, as Top Management, Middle Management, Junior Management and Non-Management

- **Top Management** includes those from the level of President, Senior Executive Vice President (SEVP) and Executive Vice President (EVP)
- **Middle Management** includes those from level from Senior Vice President (SVP), Vice President (VP), Assistant Vice President (AVP), Senior Manager and Manager
- **Junior Management** includes those from level from Assistance Manager and Supervisor.
- **Non-Management** includes those from level from Senior Officer, Officer, Operator and Consultant.

The above employees are also classified in accordance with the employment contracts, i.e., permanent and contract employees.

Calculation of Working Hours

Calculate working hour by dividing employees into 2 groups: office workers (working 5 days a week) and shifts workers (working 6 days a week), each employee having different working hours according to position and responsibility. By using the following formula:

$$\text{working hours (hour)} = \text{Number of worker} \times \text{scheduled workday} \times \text{working hour}$$

Safety Data Recording

The Company records safety data from work by calculating and collecting occupational and health information as follows

- **Day** means scheduled workday.
- **Injury** is a Medical Treatment Injury (MTI) that requires medical attention, to fight injuries or diseases or disorders such as wounds, splinters, surgery (small or large), washing, gingivitis, saline, blood, oxygen, CPR, including rehabilitation until the injured body is returned to normal, but does not include the following:
 - In case of visiting a doctor for symptoms or consulting a doctor.
 - In the case of a medical diagnostic process, such as X-ray examination, ultrasound, blood test or diagnostic drug (e.g., retinopathy for diagnostic purposes)
- **Lost Time Injuries** are injuries that lead to absence of one day or more (starting from the day of absence after the day the incident occurs).
- **A severe accident** is an accident resulting in the employee being unable to work for more than 3 days or causing loss of life or died
- **Work-related fatalities** are accident due to work or the activities of the company that cause injury or sickness until death.

Calculation of OHS**Injury Rate: IR**

$$= \frac{\text{number of injuries} \times 1,000,000}{\text{number of hours worked}}$$

Occupational Disease Rate: ODR

$$= \frac{\text{number of occurrence of occupational diseases} \times 1,000,000}{\text{number of hours worked}}$$

Lost Day Rate: LDR

$$= \frac{\text{days lost due to injuries/diseases} \times 1,000,000}{\text{number of hours worked}}$$

Note information refer to the report of accident, illness or injury and request for compensation. According to the Workmen's Compensation Act, BE 2537 (Form 16 : *Occupational Injury Notification from employer and injured employee and Claim form*)

Absentee Rate: AR

$$= \frac{\text{Number of lost day injuries and other occupational diseases that are not excused} \times 100}{\text{Total number of operating day in a year}}$$

Note

- In the year 2019, there was a change in allocation of employees by work location. Therefore, the database has been adjusted from 2015 to 2018 in order to be compare with the data in 2019
- Information refer to the record of Human Resources Information System (HRIS) based on the number of sick days leave and sick day leave without pay.

Corporate Responsibility and Community Development

GRI Standards	Data	Unit	2015	2016	2017	2018	2019
403-8	Contribution by type						
	Charitable donations	%	1.76	1.39	45.13	8.43	8.98
	Community Investment	%	14.74	16.50	6.96	66.00	60.32
	Commercial initiative	%	83.50	82.11	47.91	25.57	30.70
	Contribution by type						
	Charitable donations	Baht	77,800,000.00	1,000,000.00	32,400,000.00	28,500,000.00	15,800,000.00
	Community Investment	Baht	-	11,900,000.00	5,000,000.00	233,400,000.00	106,100,000.00
	Commercial initiative	Baht	418,000,000.00	299,200,000.00	177,400,000.00	167,600,000.00	54,000,000.00
	Time Contribution						
	Volunteer hour	hour	743	318	4,500	8,508	18,040
	Volunteering activity	activity	89	53	54	51	134
	Employee participate in volunteering activity	person	554	318	1,774	2,115	3,927

Environmental Resource Management

GRI Standards	Data	Unit	2015	2016	2017	2018	2019
Energy Consumption							
302-1(a)	Fuel	GJ	N/A	24,997.24	15,207.78	18,955.03	19,695.57
	Diesel	GJ		6,918.13	6,087.91	8,032.85	8,259.75
	Benzene	GJ		17,467.81	7,740.91	9,552.61	10,389.28
	LPG	GJ		611.31	1,349.04	1,327.46	995.14
	Oil	GJ			29.92	42.11	51.40
302-1(b)	Renewable energy						
	Solar energy	GJ	561.60	460.80	3,236.40	22,231.17	32,562.92
		MWh	156.00	128.00	899.00	6,175.33	9,045.25
302-1(c)	Energy purchased from outside						
	Electricity purchased from grid	GJ	3,046,194.00	3,321,118.80	3,252,508.95	3,401,379.74	3,559,925.70
		MWh	846,165.00	922,533.00	903,474.71	944,827.71	988,868.25
302-1(d)	Electricity sold to tenants						
	Electricity sold to tenants	GJ	1,585,483.20	1,746,802.80	1,706,791.91	1,806,557.22	1,839,931.00
		MWh	440,412.00	485,223.00	474,108.86	501,821.45	511,091.94
302-1(e)	Total energy consumption within organization						
	Total non-renewable energy consumption (Fuel + Electricity)	GJ	1,460,710.80	1,599,313.24	1,560,925.14	1,613,777.55	1,739,690.27
		MWh	405,753.00	444,253.68	433,590.32	448,271.54	483,247.30
	Total energy consumption (Renewable + Non-Renewable)	GJ	1,461,272.40	1,599,774.04	1,564,161.54	1,636,008.72	1,772,253.18
		MWh	405,909.00	444,381.68	434,489.32	454,446.87	492,292.55
	Ratio of energy consumption within organization						
	Ration of renewable energy per total energy consumption	%	0.00	0.00	0.00	0.01	0.02
302-3	Total energy intensity (renewable + non-renewable energy) per unit area	kWh/ sq.m.	155.89	166.65	153.50	152.10	162.69
	Total electricity intensity per unit area	kWh/ sq.m.	155.89	164.05	152.00	150.34	160.88
Water Consumption							
303-1(a)	Total volume of water withdrawn	m ³	9,275,438	10,144,326	9,955,206	10,540,083.00	10,906,424.10
	Municipal water	m ³	9,275,438	10,144,326	9,955,206	10,328,177.00	10,628,213.00
	Ground water	m ³				211,906.00	278,211.10

GRI Standards	Data	Unit	2015	2016	2017	2018	2019
303-3(a)	Total volume of water recycled						
	Total volume of water recycled	m ³	206,839.00	205,157.00	233,417.00	310,052.99	520,299.85
303-3(b)	Percentage recycled water per the total water withdrawal	%	2.23	2.02	2.34	2.94	4.77
	Total water intensity						
	Total water intensity (water withdrawal + recycled water) per unit area	m ³ / sq.m.	3.64	3.88	3.60	3.63	3.78
Greenhouse Gas							
305-1	Direct emissions of greenhouse gas (Scope 1)	tCO ₂ e	3,979.00	4,302.52	3,789.15	4,103.52	6,077.46
305-2	Indirect emissions of greenhouse gas (Scope 2)	tCO ₂ e	201,749.00	254,797.05	249,933.86	257,873.94	278,113.59
305-3	Other indirect emissions of greenhouse gas (Scope 3)	tCO ₂ e	191,416.00	270,231.21	283,575.89	299,733.37	305,102.72
	Electricity sold to tenants	tCO ₂ e				292,110.27	297,506.62
	Municipal water	tCO ₂ e				5,235.60	5,400.20
	Business travel	tCO ₂ e				2,387.50	2,195.90
305-4	GHG emission intensity						
	Direct emissions of greenhouse gas (Scope 1) per unit area	kgCO ₂ e / q.m.	1.53	1.61	1.34	1.37	2.01
	Indirect emissions of greenhouse gas (Scope 2) per unit area	kgCO ₂ e / sq.m	77.48	95.55	88.30	86.31	91.91
	Other indirect emissions of greenhouse gas (Scope 3) per unit area	kgCO ₂ e / sq.m	73.51	101.34	100.18	100.32	100.83
	Direct and indirect emissions of greenhouse gas (Scope 1&2) per unit area	kgCO ₂ e / sq.m	79.01	97.17	89.63	87.68	93.92
	Direct, indirect and other indirect emissions of greenhouse gas (Scope 1&2) per unit area	kgCO ₂ e / sq.m	152.52	198.51	189.82	188.01	194.75
Solid Waste (Garbage)							
306-2	Hazardous waste by disposal methods	Ton	N/A	N/A	N/A	N/A	12.09
306-2(a)	Incineration	Ton					7.86
	Recycling	Ton					4.23
306-2(b)	Non-hazardous waste by disposal methods	Ton	66,534.00	76,611.00	107,390.00	84,312.00	70,234.07
	Landfill	Ton	66,534.00	76,597.00	107,323.00	84,273.00	68,070.86

GRI Standards	Data	Unit	2015	2016	2017	2018	2019
	Recycling	Ton		14.00	67.00	39.00	1,987.90
	Composting	Ton					175.31
	Total waste disposal	Ton	66,534.00	76,611.00	107,390.00	84,312.00	70,246.16
	Waste to landfill intensity per customers visit	kg/head	0.21	0.24	0.27	0.16	0.12

Definitions and calculation guidelines

The environmental aspect information comes from different sources, e.g. recording gauges, accounting evidences, operating processes and data evaluation on quality principles.

Energy

Total energy consumption is including energy from fuel combustion, electricity and renewable energy (solar energy)

- Total fuel consumption = the sum of all types of fuel resource consumption x its heating value (in each) - Unit in GJ
- Conversion Factors are referred from to the Annual Thailand Energy Report, Department of Alternative Energy Development and Efficiency
- Electricity consumption = The sum of electricity used (in kWh) x 3.6 - Unit in GJ per month)
- Total energy consumption within organization = Fuel consumption from non-renewable + renewable energy + Electricity purchased – Electricity sold to tenants

Greenhouse Gas (GHG)

Reporting scope of GHG emissions covers CO₂, CH₄, and N₂O which are calculated and shown in the form of CO₂ equivalent that generates GWP (Global Warming Potential) specified by IPCC specification (Intergovernmental Panel on Climate Change 2006). Meanwhile, the figure of emission factors is referred from IPCC and Thailand Greenhouse Gas Management Organization (Public Organization)

1. Report Boundaries

- 1.1 Direct emissions (Scope 1) occur from fuel or natural gas combustion and the leakage of methane gas from wastewater treatment, septic tank, refrigerant, fire extinguisher (CO₂) and Sulfur Hexafluoride (SF₆) through operating processes and activities under the Company's monitoring, control and management.
- 1.2 Indirect emissions (Scope 2) occur mainly from electricity, bought from external sources for CPN's operations only.
- 1.3 Other indirect emissions (Scope 3) occur from staff travels by taxis, buses, airplanes, train boat and car rent, water usage and electricity usage of tenants.

2. Report on Emission

- 2.1 Direct GHG Emissions (Scope 1) is based on fuel consumption (by weight or quantity), e.g. the quantity of oil or natural gas x GHG emission rate, as suggested in the 2006 IPCC guidelines.
- 2.2 Indirect emissions (Scope 2) occur mainly from electricity, bought from external sources for CPN's operations only.
- 2.3 Other indirect emissions (Scope 3) occur from staff travels by taxis, buses, airplanes, train boat and car rent, water usage and electricity usage of tenants.

3. Assessment Method according to The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard Revised Edition and TGO guideline for carbon footprint assessment.

Intensity

Reporting on energy, water, emission and waste are calculated per unit area and number of customers visited the properties as follow

- Energy intensity, water intensity and emission intensity calculate per gross leasable area (GLA). The GLA is including leasable areas and common areas.
- Waste intensity is calculated per customers visited the properties.

Water

Water management involves water from external sources, recycled water, discharged wastewater and reused water. Evaluation of water utilization efficiency and risks from different water sources is in place.

Water from external sources is used for the Company's activities. The information is extracted from the accounting evidence or water supply meter reading.

Recycled water refers to the amount of reused water consumption after wastewater is treated through the wastewater management processes. Water management is in place at the Company's shopping center and the Company's office buildings.

Waste

Waste management covers total waste generated through CPN's operations and activities. The quantity of waste is based on valid estimation.

Base Year

The base year for calculation on environmental aspect is FY2015.