

CENTRALPATTANA

Sustainability Performance

Reports 2023

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Sustainability Performance

This sustainability report of Central Pattana PCL. includes economic, social and environment 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 of the Company and its subsidiaries and associates in Thailand and other countries as mentioned in the Annual Report 2023.
- **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 environment impacts.

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

Boundary of Sustainability Performance Reporting

No.	Property	Social (Employee and Safety)					Environment (Energy, GHG, Water and Waste)				
		2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
Shopping Center		32	32	34	37	38	32	32	34	37	38
1	Central Ladprao	●	●	●	●	●	●	●	●	●	●
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	Central World	●	●	●	●	●	●	●	●	●	●
10	Central Rattanaithibet	●	●	●	●	●	●	●	●	●	●
11	Central Chaengwattana	●	●	●	●	●	●	●	●	●	●
12	Central Pattaya Beach	●	●	●	●	●	●	●	●	●	●
13	Central Udon	●	●	●	●	●	●	●	●	●	●
14	Central Chonburi	●	●	●	●	●	●	●	●	●	●
15	Central Khonkean	●	●	●	●	●	●	●	●	●	●
16	Central Chiangrai	●	●	●	●	●	●	●	●	●	●
17	Central Phitsanulok	●	●	●	●	●	●	●	●	●	●
18	Central Rama 9	●	●	●	●	●	●	●	●	●	●
19	Central Suratthani	●	●	●	●	●	●	●	●	●	●
20	Central Lampang	●	●	●	●	●	●	●	●	●	●
21	Central Ubon	●	●	●	●	●	●	●	●	●	●

Sustainability Performance: Central Pattana

No.	Property	Social (Employee and Safety)					Environment (Energy, GHG, Water and Waste)				
		2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
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	●	●	●	●	●	●	●	●	●	●
32	Central Mahachai	●	●	●	●	●	●	●	●	●	●
33	Central Village	●	●	●	●	●	●	●	●	●	●
34	Central i-City (Malaysia)					●					●
35	Central Ayutthaya				●	●				●	●
36	Central Sri Racha (2021)				●	●				●	●
37	Esplanade Ratchadapisek				●	●				●	●
38	Central Chanthaburi				●	●				●	●
39	Central Westville (Ratchaphruek) (Operated in November 2023)										
Office Properties		7	7	10	7	7	7	7	10	7	7
1	Bangna	●	●	●	●	●	●	●	●	●	●
2	Chaengwattana	●	●	●	●	●	●	●	●	●	●
3	The Offices at CentralwOrld	●	●	●	●	●	●	●	●	●	●
4	Ladprao	●	●	●	●	●	●	●	●	●	●
5	Pinklao Tower A	●	●	●	●	●	●	●	●	●	●
6	Pinklao Tower B	●	●	●	●	●	●	●	●	●	●
7	Rama 9	●	●	●	●	●	●	●	●	●	●
8	G tower Grand Rama 9 ^{*1}			●	●	●			●	●	●

Remarks ^{*1} FY2021, the reporting included social part of G-Tower Grand Rama 9, The Ninth Towers Grand Rama 9 and Unilever House Grand Rama 9 which' has withdrawn in 2022 because they are not the Central Pattana' operational control.

Sustainability Performance: Central Pattana

No.	Property	Social (Employee and Safety)					Environment (Energy, GHG, Water and Waste)				
		2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
9	The Ninth Towers Grand Rama 9 * ¹			●					●	●	●
10	Unilever House Grand Rama 9 * ¹			●					●	●	●
Hotel Properties		NR	NR	NR	NR	6	NR	NR	NR	NR	4
1	Centara Hotel & Convention Center Udon Thani										
2	Hilton Pattaya										
3	Centara Korat * ²				●	●					
4.	Centara Ubon * ² (Operated in March 2023)					●					
5.	GO! Hotel Bowin					●					●
6.	GO! Hotel Banchang (Operated in May 2023)					●					●
7.	GO! Hotel Chonburi					●					●
8	GO! Hotel Siracha					●					●
Residential Properties		NR	NR	NR	NR	NR	NR	NR	NR	NR	1
1	Central City Residence										
2	Escent Chiangmai										
3	Escent Khonkaen										
4	Escent Rayong										
5	Escent Ville Chiangmai										
6	Escent Ville Chiangrai										
7	Escent Nakhonratchasima										
8	Phyll Phahol 34										
9	Escent Ubonratchathani										
10	Escent Park Chiangmai										
11	Escent Rayong II										
12	Escent Korat										
13	Escent Hadyai										
14	Belle Grand Rama 9 * ³									●	●

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

*¹ FY2021, the reporting included social part of G-Tower Grand Rama 9, The Ninth Towers Grand Rama 9 and Unilever House Grand Rama 9 which' has withdrawn in 2022 because they are not the Central Pattana' operational control.

*² Centara Korat Hotel was operated in September, 2022 which Central Pattana has operational control only the social part, so the reporting excluded the environmental data.

*³ The reporting has included data only the retail shopping zone of The Shoppes @ Belle Grand Rama 9.

Sustainability Performance: Central Pattana

No.	Property	Social (Employee and Safety)					Environment (Energy, GHG, Water and Waste)				
		2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
15	Escent Ville Ayutthaya										
16	Phyll Phuket										
17	Niyam Boromratchachonnani										
18	Ninya Kallapapruek										
19	Escent Town Phitsanulok										
20	Nirati Chiangrai										
21	Nirati Bangna										
22	Nirati Donmuang										
23	Escent Avenue Rayong										
24	Escent Phetchaburi										
Central Pattana Head Offices		3	3	4	4	5	3	3	4	4	5
1	CentralwOrld	●	●	●	●	●	●	●	●	●	●
2	Pinklao	●	●	●	●	●	●	●	●	●	●
3	Jewelry Trade Center	●	●	●	●	●	●	●	●	●	●
4	Grand Canal Land			●	●	●			●	●	●
Community Malls *4		NR	NR	NR	15	15	NR	NR	NR	15	15 *6
1	Market Place Bangbon				●	●				●	●
2	Market Place Sukaphiban 3				●	●				●	●
3	Market Place PrachaUtiti				●	●				●	●
4	Market Place Thonglo				●	●				●	●
5	J Avenue (Thonglo 15)				●	●				●	●
6	Market Place Nawamin				●	●				●	●
7	Petchkasem Power Center				●	●				●	●
8	Ekkamai Power Center				●	●				●	●
9	La Villa Ari				●	●				●	●
10	The Avenue Ratchayotin *5										
11	Pattaya Avenue				●	●				●	●

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

*4 Asset Acquisition by Central Pattana PCL. pursuant to the purchase of common shares in Siam Future Development PCL. during July-October, 2021

*5 Central Pattana PCL. has not managing the projects myself.

*6 The environmental data of **community malls** has included the energy/water consumption and GHG Emission but **excluded 'waste'**

Sustainability Performance: Central Pattana

No.	Property	Social (Employee and Safety)					Environment (Energy, GHG, Water and Waste)				
		2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
12	Nawamin City Avenue 1				●	●				●	●
13	Nawamin City Avenue 2				●	●				●	●
14	Meng Jai (B-Quik) *5										
15	Market Place Nanglinchee				●	●				●	●
16	Market Place Dusit				●	●				●	●
17	Market Place Krungthep Kreetha				●	●				●	●
Shopping Mall *5		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1	Mega Bangna										

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

*4 Asset Acquisition by Central Pattana PCL. pursuant to the purchase of common shares in Siam Future Development PCL. during July-October, 2021

*5 Central Pattana PCL. has not managing the projects myself.

*6 The environmental data of **community malls** has included the energy/water consumption and GHG Emission but **excluded 'waste'**

Financial

GRI Standards	Financial data	Unit	2019	2020	2021	2022	2023
01-1	Revenue from rental & Service, Food Center, Hotel and Real Estate Sales	Baht	38,589,976,689	33,161,114,505	30,397,532,613	38,707,002,647	48,336,843,465
	Cost from rental & Service, Food Center, Hotel and Real Estate Sales		18,086,342,013	15,037,054,727	14,784,102,998	18,032,752,396	21,509,005,158
	Net profit		11,809,251,693	9,616,714,762	7,229,946,898	10,874,379,164	15,232,570,824
	Employee Wages and Benefits		4,279,652,000	3,601,000,000	3,759,000,000	4,360,000,000	5,007,000,000
	Payment to Governments		811,468,750	1,864,971,756	1,789,932,274	2,203,710,145	2,612,976,293
	Taxes paid to the government		2,336,357,717	2,148,442,833	1,798,014,482	2,486,732,972	3,460,587,532
	Dividend per Share (pay in the following year)	Baht/Share	0.80	0.70	0.60	1.15	1.80

Corporate Governance

GRI Standards	Corporate Governance data	Unit	2019	2020	2021	2022	2023
102-22, 405-1	Executive directors	Person	1	1	1	1	1
	Independent directors		4	4	4	4	4
	Other non-executive directors		6	7	7	7	7
	Average board meeting attendance	% per year	90.90	95.87	98.15	98.96	95.83
205-2	Data coverage						
	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
205-3	Number of codes of conduct (Breaches)	Case	0	0	0	20 ^{*7}	9
205-3	Anti-competitive behavior		0	0	0	0	0
206-1	Anti-trust and monopoly legislation		0	0	0	0	0

Remark ^{*7} Due to 2022, The company encouraged employees to be aware of Human Rights Due Diligence and had strictly internal auditing, there have been found the breached of a 'codes of conduct' cases.

However, the Company had no cases of dispute, judgment, litigation or complaint in environmental, social and corporate governance issues. The Company is determined to concisely audit the operations to reduce the corruption problems within the organization to "zero"

Tenant Management and Development

GRI Standards	Tenant Management and Development data	Unit	2019	2020	2021	2022	2023
102-43	Satisfaction Index						
	Overall shopping satisfaction index		80			54* ⁸	35* ⁸
	Shopper satisfaction index on convenience aspect		86			48* ⁸	42* ⁸
	Shopper satisfaction index on safety aspect	%	79			55* ⁸	30* ⁸
	Tenant satisfaction index		83			36* ⁸	43* ⁸
	Data Coverage of tenant satisfaction index		100			43	53
	Complaints						
416-2	Incidents of non-compliance concerning the health and safety impacts of products and service		0	0	0	1	0
417-3	Incidents of non-compliance concerning marketing communications	Case	0	0	0	0	0
418-1	Total number of information security breaches		0	0	0	0	0
	Total number of clients, customers, employees affected by the breaches		0	0	0	0	0
419-1	Non-compliance with laws and regulations in the social and economic area		0	0	0	0	0

Remark: Due to the ongoing pandemic, there were external factors that could affect customer satisfaction. For this reason, “Shopper and Tenant Satisfaction” was removed from our 2020-2021 performance indicators.

*⁸ In 2022, company change the customer satisfaction survey measurement by using Net Promoter Score (NPS) measure taken from asking customers how likely they are to recommend our service to others on a scale of 0-10. In the Net Promoter system, customers are categorized into three groups—promoters (score of 9 and 10), detractors (score of 7 and 8) and passives (score of 0 to 6), NPS is calculated by subtracting the percentage of customers who answer the NPS question with a 6 or lower (detractors) from the percentage of customers who answer with a 9 or 10 (promoters), so our score is lower than the past years.

Corporate Responsibility and Community Development

GRI Standards	Corporate Responsibility and Community Development data	Unit	2019	2020	2021	2022	2023
	Ratio Contribution by type						
	Charitable donations		8.98	17.66	8.70	8.80	13.53
	Community Investment	%	60.32	27.82	27.50	29.63	41.76
	Commercial initiative		30.70	54.52	63.80	61.57	44.71
	Contribution by type		176	98	159	216	170
	Charitable donations		16	17	14	19	23
	Community Investment	Million Baht	106	27	44	64	71
	Commercial initiative		54	54	101	133	76

Employee Management and Engagement

GRI Standards	Employee Management and Engagement data	Unit	2019		2020		2021		2022		2023	
			Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Workforce												
102-8(a)	Workforce											
	Employee	Person	5,093		4,863		4,712		4,991		5,736	
			2,531	2,562	2,404	2,459	2,320	2,392	2,494	2,497	2,873	2,863
102-8(b)	Percentage of female and male workforce	%	50	50	49	51	51	49	50	50	50	50
	Sub-contractor	Person	6,051		3,915		7,293		857,505* ⁹		1,113,746* ⁹	
	Total workforce		11,144		8,778		12,005		862,496		1,119,394	
102-8(c)	Employee by employee status											
	Permanent	Person	2,524	2,558	2,369	2,455	2,269	2,376	2,470	2,493	2,840	2,845
	Contract		7	4	35	4	51	16	24	4	33	18
405-1(b)	Employee by level (include new employee)											
	Top management	Person	4	15	6	13	6	12	7	15	8	13
Middle management	349		296	347	303	355	315	427	359	496	445	
Junior management	517		435	507	428	516	427	579	475	711	559	
Non-management	1,661		1,816	1,544	1,715	1,443	1,638	1,481	1,648	1,658	1,846	
	Employee by age (include new employee)											
	Less than 30 years old	Person	782	585	631	442	485	332	532	323	664	477
Between 30-50 years old	1,628		1,791	1,634	1,816	1,673	1,853	1,762	1,906	1,978	2,091	
More than 50 years old	121		186	139	201	162	207	200	268	231	295	
	Employee by work area (include new employee)											
	Central	Person	1,571	1,739	1,669	1,520	1,706	1,651	1,821	1,565	1,836	1,653
Northeast	162		230	148	217	153	228	163	231	257	326	
South	267		292	239	277	222	257	172	243	246	288	
North	180		237	176	231	155	219	139	208	229	285	
East	183		232	172	214	218	230	199	250	267	261	

Remark: *⁹ Since 2022, The number of Sub-contractors has been expanded to include the number of contractors working in the daily shopping center.

GRI Standards	Employee Management and Engagement data	Unit	2019		2020		2021		2022		2023	
			Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
	Employee by cultural background (exclude new employee)											
	Central	Person	1,199	1,111	1,347	1,189	1,411	1,285	1,468	1,311	1,434	1,327
	Northeast		313	405	291	406	178	288	119	214	173	240
	South		243	297	267	302	227	262	141	218	196	235
	North		186	242	192	268	163	235	123	205	176	250
	East		150	149	156	165	155	174	121	195	217	231
	West		30	40	30	37	15	20				
	Employee by nationality											
	Thai	Person			4,856		4,703		4,107		5,548	
	Australian				1		1		1		1	
	Canadian				1		1		1		1	
	Icelandic				1		1		1		1	
	Indian				1		1		1		1	
	Singaporean				2		3		2		2	
	Taiwanese				1		1		1		1	
	American				0		1		1		1	
	Vietnamese								0		88	
	Laotian								1		2	
	Thai								1		0	
	Others								1		2	
	Employee by function group											
	Science, Technology, Engineering and Mathematics (STEM) function	Person			529	285	615	323	582	210	575	233
	Revenue generating functions		1,955	2,269	1,875	2,174	1,705	2,069	1,846	2,237	1,938	1,822
	Top management										134	151
	Middle management										484	336
	Junior management										396	242
	Non-management										924	1,093

GRI Standards	Employee Management and Engagement data	Unit	2019		2020		2021		2022		2023	
			Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Equality												
405-2(a)	Employee remuneration											
	Total employee	Million baht							4,360		4,971	
		%							2,188	2,172	2,555	2,416
									50.18	49.82	51.40	48.60
	Ratio of basic salary of female and male employees											
	Top management	Female: Male										1.55
	Middle management										0.93	
	Junior management										1.00	
	Middle and Junior management		0.99	0.99	1.06	0.99	1.01					
	Non-management		1.01	1.00	0.95	0.98	1.01					
	Gender pay gap (hourly rate)											
	Mean gender pay gap	%			7.28	7.82	7.48	5.24				
	Median gender pay gap			7.31	9.88	8.73	8.98					
	Mean bonus gap			13.82	12.63	8.37	11.50					
	Median bonus gap			4.61	9.08	3.53	9.54					
	Number of employees enrolled in provident fund	Person					3,813	3,459				
							-	-	1,799	1,660		
	Ratio of employees enrolled in provident fund	%					76.4	64.24				
	Company's contribution to the provident fund	Million baht					89.25	105.13				
		%					2.05	2.17				
New employee hires and employee turnover												
401-I(a)	New employee											
	Total new employee	Person	728	213	299	876	1,328					
			410	318	121	92	171	128	522	354	721	607
	New employee by age											
	Less than 30 years old	Person	238	180	73	35	86	44	276	153	353	290
	Between 30-50 years old		172	132	45	57	85	83	240	196	358	305
	More than 50 years old		0	6	3	0	0	1	6	5	10	12

GRI Standards	Employee Management and Engagement data	Unit	2019		2020		2021		2022		2023	
			Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
401-I(b)	New employee by level											
	Top management	Person			0		0		0	1	2	0
	Middle management				4		65		74	60	88	100
	Junior management				5		51		70	72	136	104
	Non-management				204		183		378	221	495	403
	New employee by nationality											
	Thai	Person			95		297		874		1,295	
	Others						2		2		33	
	New employee by work area											
	Central	Person	291	226	102	80	92	81	353	254	421	314
	Northeast		15	21	0	3	13	10	44	17	85	86
	South		52	30	2	2	12	1	31	25	65	73
	North		19	14	7	3	1	6	16	3	56	56
	East		33	27	10	4	53	30	78	55	94	78
	New employee hired											
	Ratio of new employee hired	%	14.29		4.38		6.35		17.55		23.16	
			16.20	12.41	5.03	3.74	7.37	5.35	20.93	14.18	12.57	10.59
	Internal mobility											
	Employee transferred to homeland	Person	11		16		77		41		62	
	Initiated turnover (include resignation or due to dismissal, retirement, or death in service)	Person	805		538		558		932		991	
			485	320	304	234	320	238	581	351	568	423
	Initiated turnover by age											
	Less than 30 years old	Person	265	154	152	87	145	78	266	118	212	116
	Between 30-50 years old		208	151	145	130	159	143	22	29	333	262
	More than 50 years old		12	15	7	17	16	17	293	204	23	45
	Initiated turnover by work allocation											
	Head office	Person	126	65	77	57	94	66	145	90	246	150
	Branch		359	255	227	177	226	172	436	261	322	273

Sustainability Performance: Central Pattana

GRI Standards	Employee Management and Engagement data	Unit	2019		2020		2021		2022		2023	
			Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
	Voluntary turnover (resignation)	Person	790		426		470		785		904	
			479	311	249	177	265	205	483	302	531	373
	Voluntary turnover by age											
	Less than 30 years old	Person	265	154	119	65	110	69	199	102	199	106
	Between 30-50 years old		208	148	129	108	147	132	276	188	322	247
	More than 50 years old		6	9	1	4	8	4	8	12	10	20
	Voluntary turnover by work allocation											
	Head office	Person	125	64	72	48	81	61	140	77	232	138
	Branch		354	247	177	129	184	144	343	225	299	235
	Voluntary turnover by tenure group (resignation)											
	Less than 4 months	Person	122	81	80	57	1	5	111	48	147	86
	4 months - 1 year		84	53	0	0	41	29	77	52	135	77
	1-3 years		147	94	90	60	95	57	47	58	56	58
	3-5 years		61	37	39	28	58	48	98	56	62	45
	5-10 years		41	32	34	22	70	66	99	63	85	72
	More than 10 years		24	14	6	10	0	0	51	25	46	35
	Turnover rate by nationality											
	Thai	Person					469		784		520	361
	Others						1		1		23	
	Turnover rate by level											
	Top management	Person					0		0		2	
	Middle management						18		104		142	
	Junior management						56		113		165	
	Non-management						396		568		595	
	Lay-off		0	0	0	0	0	0	0	3	3	
	Head office	Person	0	0	0	0	0	0	0	1	0	2
	Branch		0	0	0	0	0	0	0	2	0	1
	Turnover rate											
	Voluntary turnover	%	15.51		8.76		9.97		15.73		15.76	
	Regrettable loss Rate		8.10		0.95		0.98		2.70		1.52	

Sustainability Performance: Central Pattana

GRI Standards	Employee Management and Engagement data	Unit	2019		2020		2021		2022		2023		
			Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	
Employee Engagement & Retention													
	Employee Engagement												
	Employee Engagement by gender	%	73		73		83		78		81		
			80	66	79	67			82	73	76	85	
	Employee Engagement by level												
	Executive level (President, Senior Executive Vice President, Executive Vice President)		65		77		87		79		83		
	Management level (Senior Vice President, Vice President, Vice President)	%	62		75		71		68		72		
	Manager level (Assistant Manager, Manager, Senior Manager)		57		72		64		62		66		
	Team Leader level (Senior Officer and Supervisor)		71		84		80		79		82		
	Operation level (Staff)		80		87		86		87		88		
	401-3(a) 401-3(b) 401-3(c) 401-3(e)	Employee Engagement by work allocation											
Head office		%	51		66		61		64		66		
Branch			80		90		84		80		89		
Parental leave													
Number of employees having the right of maternity/parental leave			2,531	2,562	2,404	2,460	2,320	2,392	2,494	2,497	2,835	2,814	
Number of employees using the right of maternity/parental leave		Person	103	0	76	0	69	0	63	0	55	0	
Number of employees returning to work after of maternity/parental leave			92	0	71	0	66	0	54	0	54	0	
Percentage of employees returning to work and remaining at work after of maternity/parental leave		%	89	0	93	0	96	0	86	0	99	0	
Employee Development													
404-1(a)		Training Course	Course	540		310		339		390		471	
	Number of employees training in various course	Person	5,086		4,838		4,624		4,704		5,321		
	Average employees training hours per year	Hour	24		11		25		10		20		
	Employee satisfaction from training	%	92		92		93		87		83		
	Training Cost / FTE	Baht			1,388		1,626		3,002		5,362		
	Number of employees training by age												
	<30 year				429		790		703		944		
	30-50 year	Person			4,190		3,468		3,626		3,928		
	>50 year				219		366		375		449		

GRI Standards	Employee Management and Engagement data	Unit	2019		2020		2021		2022		2023	
			Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
	Number of employees training by level											
	Top management	Person	12	19	21	18	12					
	Middle management		668	721	875	1,075	668					
	Junior management		951	966	1,031	1,151	951					
	Non-management		3,207	2,918	2,777	3,077	3,207					
Employee complains												
	Number of employees’ complaints in relation to labor practices	Case	0	0	0	10	6					
	Number of resolved complaints		0	0	0	9	6					
	Number of pending complaints		0	0	0	1	0					
Promoting employment among various types of people												
	Disabled person											
	The number of disabled employees	Person				1		1				
	The number of employees that the company pays to support						2					
	Area for people with disabilities to sell product		46	48	48	42	45					
	Hiring visually impaired massage therapists for employees					15						
	Ratio of employees supporting disabled persons to total employees	%	0.9	1	1	0.9	1.1					
Collective Bargaining Agreement												
2-30	Total employees covered by collective bargaining agreements	%	100	100	100	100	100					

Definitions and Calculation Methodologies

Company employees are workers under the employment contracts with Central Pattana PLC. They are categorized into four groups, which include Top Management, Middle Management, Junior Management and Non-Management.

- Top Management comprises President, Senior Executive Vice Presidents (SEVPs) and Executive Vice Presidents (EVPs).
- Middle Management comprises Senior Vice Presidents (SVPs), Vice Presidents (VPs), Vice Presidents (AVPs), Senior Managers and Managers.
- Junior Management comprises Assistant Managers and Supervisors.
- Non-Management comprises Senior Officers, Officer and Consultants.

Remarks

- By employment type, our workforce can be categorized into two groups, permanent and contractual employees.
- The total number of employees and contractors reported excludes Grand Canal PLC workforce, which includes 156 employees, 80 male and 76 female, and 215 contractors.
- In 2021, we expanded our reporting boundary to cover contractors, housekeepers and security guards.

Occupational Health and Safety

GRI Standards	Occupational Health and Safety data	Unit	2019		2020		2021		2022		2023	
			Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Occupational Health and Safety												
403-8(a) (2018)	Ratio of employee represent in OHS Committee per total employee (Exclude contract employee)	%	6.69		7.17		7.53		7.20		6.70	
403-9(a) (2018)	Work-related injuries of employee											
	Number of fatalities as a result of work-related injury	Case	2.00		0.00		0.00		0.00		0.00	
	Number of high-consequence work-related injuries (excluding fatalities)		0.00		0.00		0.00		0.00			
	Number of recordable work-related injuries		15.00		7.00		7.00		9.00		4.00	
	Number of Lost Time Injury Frequency Rate (LTIFR)		13.00		6.00		4.00		6.00		1.00	
	Number of hours worked	Hour	11,399,797		10,903,670		11,700,563		11,733,725		11,063,412	
	Rate of fatalities as a result of work-related injury (fatalities)											
	Rate of fatalities as a result of work-related injury per 200,000 hours worked	Case	0.04		0.00		0.00		0.00		0.00	
	Rate of fatalities as a result of work-related injury per 1,000,000 hours worked		0.18		0.00		0.00		0.00			
	Rate of high-consequence work-related injuries (excluding fatalities)											
	Rate of high-consequence work-related injuries 200,000 hours worked	Case	0.00		0.00		0.00		0.00		0.00	
	Rate of high-consequence work-related injuries 1,000,000 hours worked		0.00		0.00		0.00		0.00			
	Rate of recordable work-related injuries (recordable)											
	Rate of recordable work-related injuries per 200,000 hours worked	Case	0.26		0.13		0.12		0.15		0.07	
	Rate of recordable work-related injuries per 1,000,000 hours worked		1.32		0.64		0.60		0.77		0.36	
	Rate of Lost-time injuries frequency rate (LTIFR)											
	Rate of Lost-time injuries frequency rate per 200,000 hours worked	Case	0.23		0.11		0.07		0.10		0.02	
	Rate of Lost-time injuries frequency rate per 1,000,000 hours worked		1.14		0.55		0.34		0.51		0.09	
	Rate of Days away/restricted or transfer rate (DART)											
	Rate of Days away/restricted or transfer rate per 200,000 hours worked	Day	3.82		2.02		1.81		1.19		0.96	
Rate of Days away/restricted or transfer rate per 1,000,000 hours worked	19.12			10.09		9.06		5.97		0.09		

Sustainability Performance: Central Pattana

GRI Standards	Occupational Health and Safety data	Unit	2019		2020		2021		2022		2023	
			Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
403-9(b) (2018)	Rate of Lost workday rate (LWR)											
	Rate of Lost workday rate per 200,000 hours worked	Day	0.00		0.00		0.00		0.00		0.00	
	Rate of Lost workday rate per 1,000,000 hours worked		0.00		0.00		0.00		0.00		0.00	
	Absentee Rate (AR)	%	1.10		0.58		1.16		0.00		0.00	
	Work-related injuries of contractor											
	Number of fatalities as a result of work-related injury	Case			0.00		0.00		1.00		3.00	
	Number of high-consequence work-related injuries (excluding fatalities)				0.00		0.00		0.00		0.00	
	Number of recordable work-related injuries				1.00		4.00		25.00		129.00	
	Number of Lost Time Injury Frequency Rate (LTIFR)	Hour			1.00		4.00		6.00		11.00	
	Number of hours worked				4,107,982		64,305,863		64,357,045		40,467,136	
	Rate of fatalities as a result of work-related injury (fatalities)											
	Rate of fatalities as a result of work-related injury per 200,000 hours worked	Case			0.00		0.00		0.00		0.01	
	Rate of fatalities as a result of work-related injury per 1,000,000 hours worked				0.00		0.00		0.02		0.07	
	Rate of high-consequence work-related injuries (excluding fatalities)											
	Rate of high-consequence work-related injuries 200,000 hours worked	Case			0.00		0.00		0.00		0.00	
	Rate of high-consequence work-related injuries 1,000,000 hours worked				0.00		0.00		0.00		0.00	
	Rate of recordable work-related injuries (recordable)											
	Rate of recordable work-related injuries per 200,000 hours worked	Case			0.05		0.01		0.08		0.02	
	Rate of recordable work-related injuries per 1,000,000 hours worked				0.24		0.06		0.39		0.12	
	Rate of Lost-time injuries frequency rate (LTIFR)											
	Rate of Lost-time injuries frequency rate per 200,000 hours worked	Case			0.05		0.01		0.02		0.05	
	Rate of Lost-time injuries frequency rate per 1,000,000 hours worked				0.24		0.06		0.09		0.27	

Sustainability Performance: Central Pattana

GRI Standards	Occupational Health and Safety data	Unit	2019		2020		2021		2022		2023	
			Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
403-10(a) (2018)	Rate of Days away/restricted or transfer rate (DART)											
	Rate of Days away/restricted or transfer rate per 200,000 hours worked	Day			0.15		0.31		0.22		0.01	
	Rate of Days away/restricted or transfer rate per 1,000,000 hours worked				0.73		1.54		1.12		0.07	
	Rate of Lost workday rate (LWR)											
	Rate of Lost workday rate per 200,000 hours worked	Day			0.00		0.00		0.00		0.00	
	Rate of Lost workday rate per 1,000,000 hours worked				0.00		0.00		0.00		0.00	
	Work-related ill health of employee											
	Number of fatalities as a result of work-related ill health (Fatality)	Case			0.00		0.00		0.00		0.00	
	Number of recordable work-related ill health (recordable)				0.00		0.00		0.00		0.00	
	403-10(b) (2018)	Rate of Occupational Illness Frequency Rate (OIFR)										
Rate of Occupational Illness Frequency Rate per 200,000 hours worked		Case			0.00		0.00		0.00		0.00	
Rate of Occupational Illness Frequency Rate per 1,000,000 hours worked					0.00		0.00		0.00		0.00	
Work-related ill health of contractor												
Number of fatalities as a result of work-related ill health (Fatality)		Case			0.00		0.00		0.00		0.00	
Number of recordable work-related ill health (recordable)					0.00		0.00		0.00		5.00	
Rate of Occupational Illness Frequency Rate (OIFR)												
Rate of Occupational Illness Frequency Rate per 200,000 hours worked		Case			0.00		0.00		0.00		0.00	
Rate of Occupational Illness Frequency Rate per 1,000,000 hours worked				0.00		0.00		0.00		0.00		

Definitions and calculation guidelines

Definitions and Recording Criteria

Below are the definitions and recording criteria used by Central Pattana Plc to calculate, collect and report occupational health and safety statistics:

- **Work-hours** Total number of working hours.
- **Work-related fatalities** as a result of injuries that occur from work or activity of the Company.
- **Recordable work-related injuries** Medical Treatment Injuries: MTIs that resulted in a certain level of treatment given by health professionals to combat injury, disease or disorder, which includes suturing of any wound, casting, surgeries (major and minor), detoxification, gastric lavage, Sodium Chloride IV Infusion, blood transfusion, administration of oxygen, CPR, medication dispensing, rehabilitation and loss or removal of an organ, as well as restricted work activity or death. MTIs do not include the following:
 - First aid
 - Medical visits for the purpose of observation or consultation
 - Diagnostic procedures including x-rays, ultrasound, blood tests, prescription medication solely for diagnostic purposes (e.g., mydriatics)
- **High-consequence work-related injuries** Work-related injuries that result in time away from work where a full recovery cannot be made within 180 days.
- **Lost Time Injury Frequency Rate: LTIFR** The rate of work-related injuries that result in time away from work.
- **Days Away/Restricted or Transfer Rate: DART** The rate of work-related injuries and diseases that result in time away from work, restricted work activity or job transfer.
- **Lost Workday Rate: LWR** The rate of work-related injuries and diseases of high-consequence that result in time away from work where a full recovery cannot be made within 180 days.
- **Occupational Illness Frequency Rate: OIFR** The rate of occupational illnesses that result in time away from work.

Method for Calculating Work-Hours

- Number of employee work-hours
= Working hours (hour) = Number of worker x scheduled workday x number of working hour per day

Calculation Guidelines

- **Rate of fatalities as a result of work-related injuries**
=
$$\frac{\text{number of fatalities as a result of work – related injuries} \times [200,000 \text{ or } 1,000,000]}{\text{number of hour worked}}$$
- **Rate of high-consequence work-related injuries (excluding fatalities)**
=
$$\frac{\text{number of high – consequence work – related injuries (excluding fatalities)} \times [200,000 \text{ or } 1,000,000]}{\text{number of hour worked}}$$
- **Rate of recordable work-related injuries**
=
$$\frac{\text{number of recordable work – related injuries} \times [200,000 \text{ or } 1,000,000]}{\text{number of hour worked}}$$
- **Lost-time injuries frequency rate: LTIFR**
=
$$\frac{\text{number of Lost – time injuries frequency} \times [200,000 \text{ or } 1,000,000]}{\text{number of hour worked}}$$

Sustainability Performance: Central Pattana

- Lost-time injuries frequency rate: OIFR**

$$= \frac{\text{number of Lost – time Occupational illness frequency} \times [200,000 \text{ or } 1,000,000]}{\text{number of hour worked}}$$
- Days away/Restricted or Transfer rate: DART**

$$= \frac{\text{Total Number of Days away/restricted or transfer from injuries and illness} \times [200,000 \text{ or } 1,000,000]}{\text{number of hour worked}}$$
- Lost Workday Rate: LWR**

$$= \frac{\text{Total Number of Lost Days from injuries and illness of high – consequence work} \times [200,000 \text{ or } 1,000,000]}{\text{number of hour worked}}$$
- Absentee Rate: AR**

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

Remarks

- FY2021 data includes the number of work-hours and the number of work-related injuries and occupational diseases of Grand Canal Land PLC, which comprises G Tower, the Ninth Tower, Unilever House, the Shoppes at Belle and Head Office.
- In 2021, we expanded our reporting boundary further to cover contractors including housekeepers and security guards, in addition to contractors in construction and renovation projects, which have been included since 2020.

Environmental Resource Management

GRI Standards	Environmental Resource Management data	Unit	2019 (Base Year)	2020	2021	2022	2023	Compared with based year
Energy Consumption within the organization								
302-1(a)	Total fuel consumption from non-renewable sources	MWh	130,201	95,115	84,285	108,309	123,257	-5.3%
	Diesel		2,313	1,792	1,548	1,819	1,745	
	Gasoline		2,886	2,037	1,344	1,482	1,902	
	LPG		124,987	91,276	81,381	104,997	119,599	
	Oil		14.28	9.74	12.14	11.18	10.97	
302-1(b)	Self-generated electricity from renewable sources							
	Onsite Solar		9,045	12,566	19,317	22,003	26,011	+187.6
	Purchased Electricity							
	From non-renewable sources: Grid non-renewable electricity (Metropolitan Electricity Authority and Provincial Electricity Authority)		1,125,302	895,030	709,228	921,850	1,039,694	-7.6%
	Generated on-site solar and procured by the Company via PPA contract		-	-	-	-	-	
	Offsite renewable energy		-	-	-	-	500	
302-2(a)	Total Non-Renewable Energy Sold		696,132	501,381	413,800	557,128	625,235	-10.2%
	Electricity sold to tenant		571,421	410,330	332,525	452,282	505,803	
	LPG sold to tenant		124,711	91,052	81,275	104,846	119,432	
302-1(e)	Total net energy consumption within organization		568,416	501,329	399,030	495,034	564,228	-0.7%
	From non-renewable sources		559,371	488,763	379,713	473,031	537,717	-3.9%
	From renewable sources		9,045	12,566	19,317	22,003	26,511	+193.1%
	Total net electricity consumption within organization		562,926	497,267	396,020	491,571	560,903	-0.5%
	From non-renewable sources		553,881	484,700	376,703	469,568	534,392	-3.6%
	From renewable sources		9,045	12,566	19,317	22,003	26,511	+193.1%
302-3	Energy Intensity	kWh/ Square meter						
	Total energy consumption (RE and Non-RE)		334.64	265.07	205.91	256.79	285.74	-14.6%
	Total energy consumption within organization (RE and Non-RE)		150.42	132.53	101.08	120.82	135.54	-9.9%
	Total energy consumption within organization (Non-RE only)		148.03	129.21	96.19	115.45	129.17	-12.7%
	Total energy consumption by tenants (Non-RE only)		184.22	132.54	104.83	135.97	150.20	-18.5%

Sustainability Performance: Central Pattana

GRI Standards	Environmental Resource Management data	Unit	2019 (Base Year)	2020	2021	2022	2023	Compared with based year
	Electricity Intensity							
	Total Electricity consumption (Non-RE and RE)		300.18	239.93	184.56	230.36	256.13	-14.7%
	Electricity consumption within organization (Non-RE and RE)	kWh/	148.97	131.45	100.32	119.97	134.74	-9.5%
	Electricity consumption within organization (Non-RE only)	Square meter	146.57	128.13	95.43	114.60	128.37	-12.4%
	Electricity consumption by tenants (Non-RE only)		51.22	108.47	84.24	110.38	121.51	-19.6%
	Percentage of renewable energy per total net energy consumption							
	Overall	%	0.72	1.25	2.38	2.09	2.19	+205.7%
	Within the organization		1.59	2.51	4.84	4.44	4.61	+189.7%
	Percentage of renewable electricity per total net electricity consumption							
	Overall	%	0.80	1.38	2.65	2.33	2.50	+211.2%
	Within the organization		1.61	2.53	4.88	4.48	4.64	+188.6%
	Total area of the assets in portfolio	Sq.m.	3,778,831	3,782,812	3,947,521	4,097,345	4,162,786	
	Data coverage by area	%	100.0	100.0	95.4	100.0	100.0	

Definitions and calculation guidelines

Energy

The total energy consumption comprises fuel combustion (non-renewable), electricity and renewable energy (solar energy).

- Total fuel consumption = The sum of energy consumed for each energy source X the calorific value of each fuel.
- Conversion Factors based on the Annual Thailand Energy Report and Department of Alternative Energy Development and Efficiency.
- Total energy consumption within organization = non-renewable energy + renewable energy + electricity purchased – electricity sold to tenants.

Offsite renewable energy means renewable energy procured by the Company through RECs and/or Power Purchase Agreement (PPA). In 2023, we purchased renewable energy certificates (I-RECs), which equivalent to 500 MWh of renewable energy

Total area of the assets

The total area of assets in the company's portfolio includes the gross leasable area (GLA) and common areas, excluding parking. GLA specifically refers to tenant spaces. Common areas encompass spaces shared with customers or tenants, over which the company has operational control. These may include entrance areas, corridors, lifts, escalators, waste storage areas, etc. The areas are used for the Environmental Resource Management sections including Energy, Water, GHG and Waste.

Intensity

Energy intensity is calculated based on gross leasable area (GLA). GLA includes all rental areas and common areas in the shopping centers.

Base Year

Our base year for the calculation of environmental impact is FY2019.

Energy data for the years 2019-2022 has been changed due to the additional data collection of I-City.

Sustainability Performance: Central Pattana

GRI Standards	Indicator	Environmental Resource Management data	Unit	2019 (Base Year)	2020	2021	2022	2023	Compared with based year
Water and Effluents									
303-3 (2018)	All Areas	Water withdrawal from all areas (TDS ≤ 1,000 mg/L)	Cubic Meter	12,374,469	9,145,548	7,315,916	10,161,080	11,820,101	-4.5%
		Municipal water/Third-party water		12,096,258	8,939,478	7,115,264	9,948,389	11,605,870	
		Ground water		278,211	206,070	199,443	210,996	211,116	
		Rainwater/Surface water		-	0	1,210	1,695	3,114	
	Water Stress Areas	Water withdrawal from all areas (TDS > 1,000 mg/L)		-	-	-	-	-	-
		Water withdrawal from all areas with water stress (TDS ≤ 1,000 mg/L)		2,698,339	2,002,662	1,669,162	2,354,999	2,922,220	+8.3%
		Municipal water/Third-party water		2,497,647	1,880,415	1,568,988	2,251,717	2,789,823	
		Ground water		200,692	122,247.00	100,174	103,282	132,397	
		Rainwater/Surface water		-	-	-	-	-	
		Water withdrawal from all areas with water stress (TDS > 1,000 mg/L)		-	-	-	-	-	-
	Total water withdrawal (All areas)	Municipal water/Third-party water + Groundwater + Rainwater/Surface water		12,374,469	9,145,548	7,315,916	10,161,080	11,820,101	-4.5%
303-4 (2018)	All Areas	Water discharge by destination to all areas (TDS ≤ 1,000 mg/L)	Cubic Meter	5,910,763	4,158,903	3,648,103	4,851,246	5,135,802	
		Surface water		5,910,763	4,158,903	3,648,103	4,851,246	5,135,802	
		Seawater		-	-	-	-	-	
		Groundwater		-	-	-	-	-	
		Third-party water		-	-	-	-	-	
		Water discharge by destination to all areas (TDS > 1,000 mg/L)		1,924,596	1,332,767	1,093,330	1,730,271	2,467,105	
		Third-party water : wastewater		1,924,596	1,332,767	1,093,330	1,708,406	2,439,976	
		Third-party water : Oil&Grease and sewage		-	-	-	21,864	27,129	
	Water Stress Areas	Water discharge by destination to all areas with water stress (TDS ≤ 1,000 mg/L)		1,624,907	1,161,081	987,984	1,396,250	1,583,929	
		Surface water		1,624,907	1,161,081	987,984	1,396,250	1,583,929	
		Seawater		-	-	-	-	-	
		Groundwater		-	-	-	-	-	
		Third-party water		-	-	-	-	-	

Sustainability Performance: Central Pattana

GRI Standards	Indicator	Environmental Resource Management data	Unit	2019 (Base Year)	2020	2021	2022	2023	Compared with based year
303-4 (2018)		Water discharge by destination to all areas with water stress (TDS > 1,000 mg/L)		0.00	0.00	0.00	0.00	110,140.00	
		Third-party water: wastewater	Cubic	-	-	-	-	-	
		Third-party water: Oil & Grease and sewage	Meter	0.00	0.00	0.00	0.00	110,140.00	
303-4 (2018)	Total water discharge (All areas)	Surface water + groundwater + seawater + third-party water		7,835,359	5,491,670	4,741,433	6,581,517	7,602,907	-3.0%
303-4 (clause 2.4.2)		Water discharge by level of treatment		7,835,359	5,491,670	4,741,433	6,581,517	7,602,907	
		No Treatment	Cubic	-	1,754	-	21,864	27,128	
		Primary Treatment	Meter	1,924,596	1,332,767	1,093,330	1,708,406	2,439,976	
		Water discharge level of treatment		1,924,596	4,157,149	3,648,103	4,851,246	5,135,802	
303-5 (2018)	All areas	Total water consumption from all areas	Cubic Meter	4,539,110	3,653,878	2,574,483	3,579,563	4,217,194	-7.1%
	Areas with water stress	Total water consumption from all areas with water stress	Cubic Meter	1,073,432	841,581	681,178	958,749	1,228,151	+14.4%
		Total water intensity	Cubic Meter/sq.m.	1.20	0.97	0.65	0.87	1.01	-15.7%
		Total recycled water	Cubic Meter	520,300	446,663	423,895	585,474	617,371	+18.7%
			%	4.20%	4.88%	5.79%	5.76%	5.22%	+24.2%
		Data coverage by area	%	100.0	100.0	89.8	97.6	100.0	

Definitions and calculation guidelines

Our water management comprises water supplied from external water sources, treated wastewater, water discharge and recycled water. Water use efficiency and water risk assessments are conducted as part of our water management.

- **Water withdrawal** The sum of all water drawn from surface water, groundwater, seawater, or a third party for any use over the course of the reporting period.
- **Water consumption** includes water supply and recycled water that is withdrawn and is not returned to the source because of evaporation and transpiration, for instance.
- **Water reuse** The amount of water reused after being treated in onsite wastewater treatment systems designed specifically for our shopping centers and buildings.
- **Water discharge** Treated water discharged to the public sanitary sewer systems.

Stages of wastewater treatment

- **Primary treatment** Physical treatment before the water is discharged to municipal treatment ponds (Central World, Central Lardprao, Central Pattaya Beach, Central Marina, Central Sriracha and Pattaya Avenue).
- **Secondary treatment** Physical and biological treatment through Sequence Batch Reactor (SBR) and Deep Shaft systems.
- **Water stress area** Areas with insufficient water to sustainably meet long-term demand. They include areas with high levels of baseline water stress where our shopping centers are located.

Water Intensity is calculated based on gross leasable area (GLA). GLA includes all rental areas and common areas in the shopping centers.

Base Year

- Our base year for the calculation of environmental impact is FY2019.
- Water data for the years 2019-2022 has been changed due to the additional data collection of I-City.

Sustainability Performance: Central Pattana

GRI Standards	Environmental Resource Management data	Unit	2019 (Base Year)	2020	2021	2022	2023	Compared with based year
Greenhouse Gas Emissions								
305-1	Direct emissions of greenhouse gas (Scope 1)	tCO ₂ e	10,116	9,326	4,779	2,481	4,779	-52.8%
	Fuel combustion		1,427	1,055	783	353	1,006	-29.5%
	Fugitive emissions		8,689	8,271	3,996	2,128	3,773	-56.6%
305-2	Indirect emissions of greenhouse gas (Scope 2)		326,670	261,008	198,338	252,605	271,899	-16.8%
	Location-based		326,670	261,908	198,338	252,605	272,149	
	Market-based		326,670	261,008	198,338	252,605	271,899	
	Total scope 1&2 emissions		336,786	270,334	203,116	255,087	276,678	-17.8%
305-3	Other indirect emissions of greenhouse gas (Scope 3)		540,707	429,071	299,209	379,289	416,849	-22.9%
	1. Purchased goods and services : municipal water		6,181	4,570	3,658	5,064	6,254	+1.2%
	5. Waste generated in operations: landfill disposal		160,576	115,811	99,782	111,362	117,663	-26.7%
	6. Business travel		2,196	585	143	246	424	-80.7%
	9. Downstream transportation and distribution : Waste transportation		8,541	5,639	1,489	5,775	8,117	-68.8%
	13. Downstream leased assets : electricity sold to tenants		334,859	281,764	175,659	233,006	257,237	-23.2%
	13. Downstream leased assets : LPG sold to tenants		28,354	20,701	18,478	23,837	27,154	-4.2%
	Total scope 1&2&3 emissions		877,493	699,405	502,326	634,376	688,079	-21.6%
305-4	Greenhouse gas emission intensity							
	Scope 1 direct emissions per unit area	kgCO ₂ e / Square meter	2.68	2.47	1.21	0.61	1.15	-57.1%
	Scope 2 indirect emissions per unit area		86.45	69.00	50.24	61.65	65.32	-24.4%
	Scope 3 other indirect emissions per unit area		143.09	113.43	75.80	92.57	100.14	-30.0%
	Scope 1&2 emissions per unit area		89.12	71.46	51.45	62.26	66.46	-25.4%
	Scope 1&2&3 emissions per unit area		232.21	184.89	127.25	154.83	166.60	-28.3%
	Data coverage by area	%	100	100	95.5	100	100	

Definitions and calculation guidelines

Greenhouse Gas

Our GHG emissions reporting covers CO₂, CH₄, N₂O, HFCs, PFCs and SF₆. Emissions are measured in carbon dioxide equivalents using the Global Warming Potentials (GWPs) established by the Intergovernmental Panel on Climate Change 2006 (IPCC) and emissions factors according to the IPCC and Thailand Greenhouse Gas Management Organization (TGO).

1. **Reporting Boundary** The organizational boundary includes operational emissions from subsidiaries, associates, joint ventures and other companies under the operational control of Central Pattana PLC.
 - 1.1 Direct emissions (Scope 1) are emissions that occur from sources that are controlled or owned by Central Pattana. They comprise emissions from fuel combustion, fleet vehicles (owned by Central Pattana) and fugitive emissions of GHG from refrigerants, Sulfur Hexafluoride (SF₆) from high-voltage switchgears and CO₂ from fire extinguishing agents.
 - 1.2 Indirect emissions (Scope 2) are emissions that occur from energy purchased from external sources for use across Central Pattana's operations. Our indirect emissions are from the consumption of electricity only.
 - 1.3 Other indirect emissions (Scope 3) include those arising from activities associated with Central Pattana. Examples include business travel by taxi, bus, airplane, train, boat, or hired vehicle; use of city water; tenants' consumption of fuel (such as LPG gas) and electricity; and waste management and transportation.
2. **Emissions Reporting**
 - 2.1 Direct emission (Scope 1) The volume of fuel that is combusted (by weight or quantity), e.g., the quantity of fuel oil or natural gas consumed x GHG emission rate based on the 2006 IPCC Guidelines
 - 2.2 Indirect emission (Scope 2) includes indirect emissions from the generation of purchased or acquired electricity from grid. The GHG Protocol defines two calculation methods for the measurement of Scope 2 emissions
 - Location-based methods based on average energy generation emission factors for defined geographic locations, including local, subnational, or national boundaries
 - Market-based method calculates GHG emissions based on the emissions from the generators from which the reporter contractually purchases electricity, either bundled with contractual instruments or on their own. This includes power purchase agreements (PPAs), energy attribute certificates (RECs), and carbon credits.
 - 2.3 Other indirect emission (Scope 3) is considered for operational carbon emissions of building that occurs in a company's value chain. Total 5 categories in scope 3 are considered for the Company:
 - Category 1 Purchased goods and services include emissions from water usage
 - Category 5 Waste generated in operations include emissions from third-party disposal and treatment of waste generated in the reporting company's owned or controlled operations
 - Category 6 Business travel includes emissions from the transportation of employees for business related activities in vehicles owned or operated by third parties, such as aircraft, trains, buses, and passenger cars.
 - Category 9 Downstream transportation and distribution include emissions from waste transportation to and from disposal site.
 - Category 13 Downstream leased assets include emissions from the operation of assets that are owned by the Company and leased to other entities. This includes fuel combustion and electricity use of tenants under leasing arrangements.
3. **Measurement** Based on the Greenhouse Gas Protocol: The GHG Protocol Corporate Accounting and Reporting Standard Revised Edition and Thailand Greenhouse Gas Management Organization (TGO) guidelines for assessment of Carbon Footprint of Organization (CFO).

Intensity

- Greenhouse gas emissions is calculated based on gross leasable area (GLA). GLA includes all rental areas and common areas in the shopping centers.

Base Year

- Our base year for calculating environmental impact is FY2019. We use a market-based approach for comparing GHG emissions with the base year.
- Greenhouse gas data for the years 2019-2022 has been changed from the previous year's report due to the additional data collection of central I-City.

Remark

- In 2023, we purchased 900 tCO₂e of carbon credits under T-VER program and 500 I-RECs, equivalent to 250 tCO₂e. These carbon offsets are used to compensate for emissions arising in 2020 and 2023, respectively.

GRI Standards	Environmental Resource Management data	Unit	2019	2020**	2021**	2022**	2023**
Waste							
306-3 (2020)	Waste generation	Metric tons	70,246.16	52,786.29	45,691.06	60,825.35	71,845.00
	Hazardous waste				18.36	7.42	10.71
	Electronic waste (E-waste)			8.80	4.26	9.86	6.68
	Infectious waste			19.61	22.53	23.00	27.75
	General waste		68,070.86	49,962.95	43,009.43	47,922.43	50,630.14
	Incineration with energy recovery (RDF)				55.56	6,398.26	9,229.80
	Recycle waste (plastic, paper, metal, can, glass)		1,987.90	2,344.67	2,189.35	5,958.48	10,777.32
	Preparation food		175.31	450.25	391.57	505.90	1,162.59
306-4 (2020)	Waste diverted from disposal	Metric tons	2,167.44	2,803.73	2,585.18	6,474.24	11,946.59
	Hazardous waste		4.23	8.80	4.26	9.86	6.68
	Recycling/ Reclaim (Hazardous waste, E-waste)		4.23	8.80	4.26*	9.86*	6.68*
	Non-hazardous waste		2,163.21	2,794.93	2,580.92	6,464.38	11,939.91
	Recycling		1,987.90	2,344.39	2,189.35	5,958.48	10,777.32
	Composting		175.31	450.25	391.57	505.90	1,162.59
	Reuse (waste for art)			0.29	-	-	-
306-5 (2020)	Waste directed to disposal	Metric tons	68,078.72	49,982.56	43,105.88	54,351.11	59,898.40
	Hazardous waste		7.86	19.61	40.89	30.42	38.46
	Incineration (Infectious waste)		7.86	19.61	22.53	23.00	27.75
	Incineration (General hazardous waste)				18.36	7.42	10.71
	Non-hazardous waste		68,070.86	49,962.95	43,064.99	54,320.69	59,859.94
	General waste		68,070.86	49,962.95	43,009.43	47,922.43	50,630.14
	Incineration with energy recovery (RDF)				55.56	6,398.26	9,229.80
	Waste generated rate	Kilogram/person	0.12	0.17	0.18	0.16	0.17
	Diversion rate	%	3.08	5.31	5.66	10.64	16.63
	Waste Prevention (Organic waste into agriculture)	Metric tons	-	424.47	2,446.46	6,125.83	10,210.58
	Data coverage by area	%	80.1	80.1	86.0	87.8	90.2

Definitions and calculation guidelines

- **Waste generated** by the operations and activities of Central Pattana PLC and Grand Canal PLC. The total amount of waste reported is determined by weighing or estimation.
- **Waste diverted from disposal** Waste sent for offsite reuse, recycling and other recovery operations.
- **Waste directed to disposal** Waste disposed of in landfills or through incineration with/without energy recovery offsite.
- **Waste generation rate** Calculated from the amount of total waste generated divided by customer traffic.
- **Waste diversion rate** Calculated from the amount of total waste diverted and total waste generated.
- **RDF:** Refuse Derived Fuel is the combustible sub-fraction of municipal solid waste that undergoes physical treatment including sorting, size reduction and dehydration to produce fuel with high heat with sizes and characteristics according to the purpose of use that is easy for transport. It is suitable for use as substitute or secondary fuels for industrial or community use or in community waste to energy plants or solid waste incinerators.

Remarks

- * The amount of hazardous recycled waste included e-waste only.
- ** There has been a change in the amount of waste due to an increase in waste from the I-CITY shopping center.