

ENVIRONMENTAL DATA SUMMARY

INTRODUCTION

The environmental data summary discloses the environmental performance of businesses under Ayala Land’s operations in support of our sustainability reporting suite. It should be read in conjunction with:

- [2022 Integrated Report](#) – Ayala Land’s Integrated Report prepared in accordance with the International Integrated Reporting <IR> framework using supplemental guidelines from the Global Reporting Initiative (GRI) Standards, Sustainability Accounting Standards Board (SASB), and Task Force on Climate-related Financial Disclosures (TCFD).
- [Disclosures on Management Approach](#) – Descriptions of how we manage and respond to material economic, environmental and social issues.
- [Four Focus Areas](#) – List and descriptions of economic, environmental and social issues that are material to Ayala Land.
- [Sustainability Reporting Index](#) – Index tables relating to the 2022 Integrated Report and 2022 Sustainability Data Packs with the GRI Standards, SASB Standards and TCFD Recommendations.

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BOUNDARY AND METHODOLOGY

The data summary encompasses environmental data from various businesses under Ayala Land’s operational control for each calendar period. In line with the GHG (Greenhouse Gas) Protocol Corporate Accounting and Reporting Standard, Ayala Land has operational control of a property if it has the full authority to introduce and implement its operating policies for the property. The table below provides an explanation on the methodology of accounting the environmental data of each business unit.

Property	Energy and Emissions
Malls and Offices	<p><i>Energy consumption within the organization:</i> Electricity consumption from common areas and fuel consumption from generator sets and service vehicles.</p> <p><i>Energy consumption outside the organization:</i> Electricity and fuel consumption from leased areas.</p> <p>Emissions per scope: <i>Scope 1:</i> Fuel consumption and refrigerants <i>Scope 2:</i> Electricity consumption from common areas <i>Scope 3:</i> Electricity and fuel consumption from leased areas</p>
Hotels and Resorts	<p><i>Energy consumption within the organization:</i> Electricity consumption from the property and fuel consumption from generator sets, kitchen area and service vehicles.</p> <p><i>Energy consumption outside the organization:</i> Electricity and fuel consumption from locators and long-term leases for hotels.</p> <p>Emissions per scope: <i>Scope 1:</i> Fuel consumption and refrigerants <i>Scope 2:</i> Electricity consumption <i>Scope 3:</i> Electricity and fuel consumption from locators and long-term leases.</p>
Residential Properties	<p><i>Energy consumption outside the organization:</i> Electricity consumption from common areas of residential projects and excludes consumption within individual units.</p> <p>Scope 3 emissions not yet reported; to be reported under “Use of Sold Products” category starting 2022.</p>
Construction Projects	<p><i>Energy consumption within the organization:</i> Electricity consumption from construction sites and fuel consumption from construction stationary and mobile equipment.</p> <p>Emissions per scope: <i>Scope 1:</i> Fuel consumption <i>Scope 2:</i> Electricity consumption</p>
Estates and Carparks	<p><i>Energy consumption within the organization:</i> Electricity consumption from the properties and fuel consumption of generator sets.</p> <p>Emissions per scope: <i>Scope 1:</i> Fuel consumption <i>Scope 2:</i> Electricity consumption</p>
District Cooling Systems	<p><i>Energy consumption within the organization:</i> Fuel consumption and electricity consumption of the district cooling system</p> <p>Emissions per scope: <i>Scope 1:</i> Fuel and refrigerant consumption <i>Scope 2:</i> Electricity consumption</p>
Airline	<p><i>Energy consumption within the organization:</i> Electricity consumption of airline operations and fuel consumption from airline fleets.</p>

Emissions per scope:
 Scope 1: Fuel consumption
 Scope 2: Electricity consumption

Industrial Parks & Warehouses *Energy consumption within the organization:* Electricity consumption from common areas of industrial parks and warehouses under ALLHC.
Energy consumption outside the organization: Electricity consumption from leased areas of industrial parks and warehouses under ALLHC.

Emissions per scope:
 Scope 1: Fuel consumption
 Scope 2: Electricity consumption from common areas
 Scope 3: Electricity consumption from leased areas

Boundary of Environmental Data

No. of Buildings/Projects Covered	2017	2018	2019	2020	2021	2022
Commercial Properties						
Malls	39	39	42	45	45	46
Offices	26	36	43	50	50	49
Hotels	9	10	14	15	15	16
Resorts	6	10	10	10	10	10
District Cooling Systems	5	7	11	12	12	12
Construction Projects	174	248	273	129	129	158
Residential	131	135	149	143	160	160
Estates and Carparks						
Estates	13	20	22	23	30	30
Carparks	9	27	27	27	24	24
Airline ¹	-	-	4	4	4	4
Industrial Parks & Warehouses ²	-	-	-	3	3	3

¹ AirSWIFT operations added starting 2019.

² Operations of industrial parks and warehouses under ALLHC added starting 2020.

ENERGY

This section details energy consumption across Ayala Land's businesses which are sources of greenhouse gas (GHG) emissions under Scope 1, 2 and 3.

Total Energy Consumption³

in mWh	2017	2018	2019	2020	2021	2022
Within the Organization	399,342	488,935	545,416	410,865	437,879	605,477
Commercial Properties	269,456	293,338	346,781	310,454	240,788	417,142
District Cooling Systems ⁴	46,869	71,276	81,763	256	448	143
Construction Projects	74,876	117,647	50,777	63,876	107,493	124,383
Estates and Carparks ⁵	8,142	6,673	7,400	12,280	14,071	5,855
Airlines	-	-	58,696	23,448	27,699	56,876
Industrial Parks	-	-	-	551	817	1,079
Outside the Organization	572,457	484,084	520,980	454,832	532,243	634,659
Commercial Properties	537,055	451,469	462,873	378,308	371,637	526,311
Residential Properties ⁶	35,402	32,615	58,107	75,683	155,328	100,812
Industrial Parks & Warehouses	-	-	-	840	5,278	7,536
Total	971,799	973,019	1,066,397	865,697	970,122	1,240,137

Total Renewable Energy Consumption⁷

in mWh	2017	2018	2019	2020	2021	2022
Within the Organization	20,600	82,259	115,048	189,032	198,482	321,973
Outside the Organization ⁸	40,282	116,471	198,119	252,329	279,948	350,510
Total	60,881	198,730	313,167	441,362	478,430	672,483

Energy Mix - Within the Organization

in mWh	2017	2018	2019	2020	2021	2022
Electricity (Renewable)	5%	17%	21%	43%	45%	53%
Electricity (Non-Renewable)	73%	58%	54%	37%	26%	16%
Fuel	21%	25%	25%	20%	28%	31%

³ Total energy consumption from electricity and fuel use. Operations of AirSWIFT and ALLHC's industrial parks added starting 2019 and 2020 respectively.

⁴ Starting 2020, electricity consumption of district cooling systems has been reallocated under ALI-connected commercial properties (malls, offices, hotels). Remaining energy consumption within the organization in said period comes from fuel use. Share of electricity consumption has been estimated based on BTU consumption.

⁵ For properties and projects with incomplete data, consumption was estimated based on previous month's data.

⁶ Includes only the consumption within common areas. No data available for consumption of unit owners.

⁷ Commercial buildings – malls, offices and hotels – that are contestable (defined as meeting the minimum 500 kW demand per month) are able to purchase electricity from renewable sources through our retail electricity suppliers that secure power purchase agreements with renewable energy providers. Renewable energy sources include geothermal, wind and solar.

⁸ By securing power purchase agreements for malls and offices, our merchants and tenants are also able to consume renewable energy in their leased areas.

Electricity

We collect electricity consumption data monthly. For properties and projects with unavailable data, consumption was estimated based on the previous months or year's data.

Electricity Consumption Within the Organization

in mWh	2017	2018	2019	2020	2021	2022
Commercial Properties						
Malls	118,822	136,636	149,773	103,069	106,535	181,465
Offices	72,257	79,836	90,102	103,164	74,473	151,915
Hotels ⁹	35,262	30,748	35,005	37,998	27,024	40,258
Resorts ¹⁰	-	-	-	-	-	29
District Cooling Systems ¹¹	46,869	71,276	81,763	-	-	-
Construction Projects	32,748	42,587	42,932	30,298	45,780	36,051
Estates and Carpark ¹²						
Estates	5,996	2,921	6,369	10,055	10,326	4,801
Carparks	1,792	3,408	892	2,193	2,445	890
Airline	-	-	85	393	63	86
Industrial Parks & Warehouses	-	-	-	551	722	955
Total	313,746	367,413	406,922	348,909	313,932	416,450

Electricity Consumption Outside the Organization

in mWh	2017	2018	2019	2020	2021	2022
Commercial Properties						
Malls	243,459	291,887	303,404	213,085	227,489	257,306
Offices	119,062	116,282	141,757	123,966	106,935	125,735
Hotels	-	7,604	5,954	1,676	6,331	4,896
District Cooling Systems	-	-	-	-	-	-
Residential Properties ¹³	34,895	30,302	56,821	70,369	152,708	98,905
Industrial Parks & Warehouses	-	-	-	840	5,278	7,536
Total	397,416	446,075	507,936	409,937	498,740	494,378

⁹ Starting 2018, hotel consumption has been broken down between short-term occupants classified under electricity within the organization vs long-term leases and other connected properties classified under electricity outside the organization.

¹⁰ Starting 2022, some resort facilities have been sourcing energy through solar panels.

¹¹ Starting 2020, electricity consumption of district cooling systems has been reallocated under ALLI-connected commercial properties (malls, offices, hotels). 2020 and 2021 values restated.

¹² For properties and projects with incomplete data, consumption was estimated based on previous month's data.

¹³ Includes only the consumption within common areas. No data available for consumption of unit owners.

Whole Building Electricity Intensity – Commercial Properties¹⁴

	2018	2019	2020	2021	2022
Malls	215.10	196.72	128.54	152.43	170.23
Offices	163.17	175.85	145.59	139.70	144.50
Hotels	209.69	198.76	220.17	179.90	231.23

Common Area Electricity Intensity – Commercial Properties¹⁵

	2018	2019	2020	2021	2022
Malls	154.13	145.99	94.10	106.57	130.59
Offices	207.71	221.61	182.84	179.34	207.45

Tenant/Merchant Area Electricity Intensity – Commercial Properties¹⁶

	2018	2019	2020	2021	2022
Malls	271.88	245.38	162.99	196.72	190.44
Offices	141.89	154.31	128.52	121.06	125.12

Fuel

This section reports fuel consumption across our businesses. Fuel is consumed for the company's generator sets, service vehicles, kitchen activities, and airline fleets.

Fuel Consumption Within the Organization

in mWh	2017	2018	2019	2020	2021	2022
Stationary						
Diesel	59,854	67,366	60,404	37,233	44,695	68,078
LPG	7,661	6,579	10,883	2,128	2,310	4,878
Unleaded	-	9	181	22	11	-
Gasoline	-	-	39	71	28	-
Mobile						
Diesel	16,238	45,206	6,341	23,283	48,547	58,832
Unleaded	1,843	2,359	2,452	1,044	1,544	2,022
Gasoline	-	4	39	49	110	33
Jet Fuel	-	-	58,156	22,897	26,703	55,184
Total	85,596	121,522	138,495	86,728	123,947	189,027

¹⁴ To consider significant changes in occupancy rate due to the pandemic, intensity has been measured as kWh consumption per sq. meter of occupied floor area. 2019 and 2020 intensities restated.

¹⁵ To consider significant changes in occupancy rate due to the pandemic, intensity has been measured as kWh consumption per sq. meter of occupied common area. 2019 and 2020 intensities restated.

¹⁶ To consider significant changes in occupancy rate due to the pandemic, intensity has been measured as kWh consumption per sq. meter of occupied leasable area. 2019 and 2020 intensities restated.

Fuel Consumption Within the Organization

in mWh	2017	2018	2019	2020	2021	2022
Commercial Properties						
Malls	9,846	7,193	4,927	5,303	7,752	4,819
Offices	2,833	4,834	12,424	5,268	7,259	3,393
Hotels	6,351	5,493	10,196	5,379	2,650	10,389
Resorts	24,084	28,598	44,354	13,856	15,095	24,874
District Cooling Systems				256	448	143
Construction Projects	42,127	75,060	7,845	33,578	61,713	88,131
Estates and Carparks ¹⁷						
Estates	354	337	95	19	847	113
Carparks	-	7	44	14	453	51
Airline	-	-	58,611	23,055	27,635	56,790
Industrial Parks & Warehouses ¹⁸	-	-	-	-	96	124
Total	85,596	121,522	138,495	86,728	123,947	189,027

Fuel Consumption Outside the Organization

in mWh	2017	2018	2019	2020	2021	2022
Stationary						
Diesel	507	1,515	1,142	6,586	3,170	2,081
LPG	174,535	35,695	11,759	38,310	29,929	138,179
Unleaded	-	550	-	-	15	-
Mobile						
Diesel	-	215	-	-	289	22
Unleaded	-	33	144	-	100	-
Total	175,041	38,009	13,045	44,895	33,503	140,282

Fuel Consumption Outside the Organization¹⁹

in mWh	2017	2018	2019	2020	2021	2022
Commercial Properties						
Malls	149,540	174,535	35,695	11,759	38,310	138,179
Resorts ²⁰	-	-	-	-	1,272	196
Residential Properties	-	507	2,314	1,286	5,314	1,907
Total	149,540	175,041	38,009	13,045	44,895	140,282

¹⁷ For properties and projects with incomplete data, consumption was estimated based on previous month's data.

¹⁸ Starting 2021, fuel consumption of industrial parks & warehouses has been included.

¹⁹ No data available for tenants of industrial parks.

²⁰ Starting 2020, fuel consumption of resort locators has been included.

EMISSIONS

Emissions declared are market-based and are computed using the control approach of the GHG Protocol Corporate Accounting and Reporting Standard. For Scope 1 emissions, reference for the GWPs (global warming potential) is the 2014 IPCC 5th Assessment Report, with gases including carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Emission factors used come from the Philippine Department of Energy.

For properties that shifted to purchasing electricity from renewable energy power plants which are accompanied by iRECs (International REC Standard) certification, Scope 2 and 3 emissions are considered zero from the date of shifting.

Total Emissions

in t-CO ₂ e	2017	2018	2019	2020	2021	2022
Scope 1	16,750	30,772	62,770	41,940	61,236	46,717
Scope 2	275,489	257,679	214,227	133,299	73,316	73,664
Scope 3 ²¹	340,273	286,930	218,501	96,479	47,848	68,051

Scope 1 Emissions

in t-CO ₂ e	2017	2018	2019	2020	2021	2022
Commercial Properties						
Malls	2,022	1,831	1,258	1,352	6,978	1,223
Offices	664	1,231	3,164	1,343	1,849	855
Hotels	940	1,340	2,492	1,346	462	2,608
Resorts	6,062	7,249	11,266	3,517	3,867	6,294
District Cooling Systems ²²	459	-	22,223	20,423	25,495	49
Construction Projects	6,500	19,033	8,537	8,520	15,650	21,838
Estates and Carparks						
Estates	96	86	24	5	223	22
Carparks	7	2	11	4	116	13
Airline	-	-	13,795	5,431	6,572	13,783
Industrial Parks & Warehouses ²³	-	-	-	-	24	31
Total	16,750	30,772	62,770	41,940	61,236	46,717

²¹Includes emissions from downstream leased assets only. Other emission categories will be reported in 2023 report.

²² Per the property managers, consumption for other DCS were integrated in the ALI-connected commercial properties during the data reporting.

²³ Emissions from fuel consumption reported starting 2021.

Scope 2 Emissions

in t-CO ₂ e	2017	2018	2019	2020	2021	2022
Commercial Properties						
Malls	109,939	105,039	78,814	39,618	7,645	6,122
Offices	69,538	42,114	31,781	44,181	13,074	24,268
Hotels	31,061	24,265	29,546	16,160	9,889	10,036
Resorts	-	108	-	-	-	-
District Cooling Systems ²⁴	40,122	56,782	48,692	7,262	7,007	-
Construction Projects	19,633	25,569	20,964	18,190	27,372	28,109
Estates and Carparks						
Estates	4,129	1,765	3,845	6,012	6,397	3,743
Carparks	1,067	2,037	533	1,311	1,462	694
Airline	-	-	51	235	38	67
Industrial Parks & Warehouses	-	-	-	329	431	425
Total	275,489	257,679	214,227	133,299	73,316	73,664

Scope 3 Emissions²⁵

in t-CO ₂ e	2017	2018	2019	2020	2021	2022
Downstream Leased Assets						
Malls	244,353	231,636	162,578	50,455	24,537	47,359
Offices	95,920	47,234	49,951	43,797	19,717	20,018
Hotels	-	8,060	5,972	1,284	195	-
Resorts ²⁶	-	-	-	440	243	50
Industrial Parks & Warehouses ²⁵	-	-	-	502	3,156	624
Total	340,273	286,930	218,501	96,479	47,848	68,051

Emissions Intensity²⁷

in kg-CO ₂ e/sqm GFA	2017	2018	2019	2020	2021	2022
Malls	59.35	53.24	34.10	7.99	3.49	1.93
Offices	60.02	35.25	20.39	14.88	10.15	14.20
Hotels	195.40	132.67	136.62	73.04	53.34	28.73

WATER

This section details water consumption across Ayala Land's businesses.

Water Consumption Within the Organization

in cum	2017	2018	2019	2020	2021	2022
Commercial Properties ²⁸						

²⁴ Electricity Consumption of DCS and hence its emission is reallocated to the malls or offices.

²⁵ Covers only downstream leased assets. Other scope 3 categories to be reported in 2023.

²⁶ Starting 2020, emissions from energy consumption of resort and industrial parks and warehouse locators have been included.

²⁷ To take into account significant changes in occupancy rate in light of the pandemic, intensity has been measured as kg-CO₂e of Scope 2 and 3 emissions per sq. meter of occupied floor area. Emissions intensities restated.

²⁸ Starting 2020, offices and resorts' water consumption has been broken down between consumption in common areas (within the organization) vs leased areas (outside the organization). Disaggregation for hotels and malls done in 2021 and 2022, respectively.

Malls	5,749,802	6,084,565	6,332,352	3,932,443	3,692,426	5,175,366
Offices	2,150,160	2,587,337	2,589,591	1,180,002	1,088,351	1,005,067
Hotels	283,893	382,476	403,740	318,544	272,505	393,332
Resorts	84,333	112,921	97,843	2,384	53,859	117,459
District Cooling Systems	361,256	233,669	161,816	440,598	408,938	417,468
Construction Projects	965,762	3,379,158	944,626	1,328,528	1,698,557	1,424,409
Estates and Carparks ²⁹						
Estates	814,588	489,603	107,442	698,271	390,173	384,930
Carparks	73,973	95,059	20,460	65,552	52,447	52,447
Airline	-	-	6,000	2,335	1,535	2,549
Industrial Parks & Warehouses	-	-	-	32,928	1,101	6,923
Total	10,483,767	13,364,788	10,663,870	8,001,587	7,659,894	8,979,952

Water Consumption Outside the Organization

in cum	2017	2018	2019	2020	2021	2022
Commercial Properties ²⁵						
Malls	-	-	-	-	-	117,147
Offices	-	-	-	784,761	536,785	710,219
Hotels	-	-	-	-	7,926	-
Resorts	-	-	-	10,197	9,609	14,817
Estate	-	-	-	-	-	5,243
Residential Properties	2,384,517	1,441,748	1,636,698	3,571,176	5,028,602	5,028,602
Industrial Parks & Warehouses	-	-	-	26,416	41,387	112,969
Total	2,384,517	1,441,748	1,636,698	4,392,550	5,624,310	5,988,998

Whole Building Water Intensity³⁰

	Unit	2018	2019	2020	2021	2022
Malls	cum/sqm GFA	2.99	2.59	1.59	1.64	2.27
Offices	cum/sqm GFA	1.60	1.79	1.48	1.26	1.33
Hotels	cum/ sqm GFA	2.09	1.99	2.03	1.51	2.12

MATERIALS

This section details materials – cement and rebars – consumed by our construction operations.

Total Materials Consumption

in metric tonnes	2017	2018	2019	2020	2021	2022
Cement	355,876	277,718	249,660	169,612	173,327	191,400
Rebars/Steel	165,625	171,756	196,031	89,042	82,025	61,791

²⁹ For properties and projects with unavailable data, consumption was estimated based on previous year's data.

³⁰ To consider significant changes in occupancy rate due to the pandemic, intensity is measured as cubic meter consumption per sq. meter of occupied floor area.

WASTE

This section details solid and hazardous waste generated from our properties and projects as reported by our haulers. Waste generation includes operational waste and construction waste.

Total Solid Waste Generation and Diversion

in metric tonnes³¹	2017	2018	2019	2020	2021	2022
<i>Total Waste Generated</i>	36,775	47,352	43,515	25,486	21,558	26,241
<i>Waste Sent to Landfill</i>	31,876	41,214	35,574	19,798	16,480	21,037
Residual ³²	16,867	25,867	20,948	10,186	9,777	12,248
Food	10,467	8,749	10,593	3,355	4,865	6,578
Compostable ³³	4,542	6,598	4,033	6,257	1,838	2,211
<i>Waste Diverted from Landfill</i>	4,899	6,138	7,941	5,688	5,078	5,204
Sent to Recyclers ³⁴	4,899	6,138	7,894	5,641	5,022	4,905
Plastics Collected from Ecohubs	-	-	32	46	56	106
Plastics Processed for ALI projects	-	-	1	28	75	130
Plastics Stored for non-ALI projects ³⁵	-	-	2	1	-	-
Food Composted	-	-	15	1	-	192

Construction Waste Generation

in cubic meter³⁶	2017	2018	2019	2020	2021	2022
<i>Total Waste Generated</i>	838,520	799,116	1,230,603	885,144	1,136,685	366,690
<i>Waste Sent to Landfill</i>	644,280	608,452	724,002	541,595	443,307	265,452
<i>Waste Diverted from Landfill & Sent to Recyclers</i>	194,240	190,664	506,600	343,549	693,378	101,238

³¹ Total waste generated across all businesses, measured in tonnes.

³² All other solid waste that are non-food and non-compostable.

³³ Includes landscape waste such as leaves, shrubs, tree trimmings, and grass clippings

³⁴ Includes traditional recyclables such as paper, cartons, glass bottles and aluminum cans.

³⁵ Plastics that are processed in Arca South ecohub and used for construction materials for non-ALI projects.

³⁶ Additional waste from construction activities measured in cubic meters. Due to the varying densities of construction materials, waste in cubic meters is reported separately from waste in metric tonnes.

Total Hazardous Waste Generation³⁷

in tonnes	2018	2019	2020	2021	2022
D406 ULAB ³⁸	12	150	34	42	36
D407 CFL ³⁹	16	114	30	26	20
I101 Used Industrial Oil	78	42	19	87	45
J201 Containers	-	10	16	12	9
M506 WEEE ⁴⁰	2	19	60	28	23
H802 Grease Wastes	-	-	-	-	3
F601 Paint/Organic Sludge	-	-	-	-	1
M501 Infectious Wastes	-	-	-	-	<1
M503 Pharmaceuticals and Drugs	-	-	-	-	<1
M507 Special Wastes	-	-	-	-	1
in '000 liters	2018	2019	2020	2021	2022
I101 Used Industrial Oil	-	-	-	-	20
I102 Vegetable Oil Including Sludge	-	-	-	-	5
I104 Oil-contaminated Materials	-	-	-	-	1

Hazardous Waste Diversion and Disposal 2022

	% Recycled⁴¹	% Stored On-Site
D406 ULAB ³⁷	19%	81%
I101 Used Industrial Oil	38%	62%
M506 WEEE ³⁹	1%	99%

³⁷ Started reporting HW from Malls and Resorts. HW from ALLHC, Construction Projects, and ALICAP will be reported in 2023.

³⁸ ULAB – Used Lead Acid Batteries

³⁹ CFL – Compact Fluorescent Lightbulbs

⁴⁰ WEEE – Waste Electrical and Electronic Equipment (e-waste)

⁴¹ Commonly generated hazardous waste – lead acid batteries (D406) and industrial oil (I101) for generator sets, and waste electronic (M506) – are recycled through the Bantay Kalikasan program of ABS-CBN Lingkod Kapamilya Foundation, Inc.

CARBON NEUTRALITY

This section reports company performance in line with its [carbon neutrality](#) goal by 2022.

Emissions under the carbon neutrality scope are composed of scope 1 and 2 emissions from commercial properties (malls, offices, hotels, resorts).

Emissions under Carbon Neutrality Scope

in t-CO ₂ e	2018	2019	2020	2021	2022 ⁴²
Gross Emissions from BAU Scenario ⁴³	244,046	280,272	261,985	214,832	302,377
Less:					
Emissions Reductions from Renewable Energy	(60,869)	(121,951)	(154,403)	(163,946)	(250,723)
Carbon Stored in Carbon Forests ⁴⁴	(415.17)	(1,245.48)	(2,490.96)	(4,151.60)	(6,227.41)
Net Emissions	182,762	157,076	105,091	46,734	45,428

Buildings with Renewable Energy Sources⁴⁵

in t-CO ₂ e	2017	2018	2019	2020	2021	2022
Total	14	34	51	57	65	87
% to Total (in sqm GLA) ⁴⁶	20%	48%	59%	73%	85%	91%

Carbon Forest Sites

Forest Site	Project Area (hectares)	2022 Carbon stock (t-CO ₂ e) ⁴⁵
Alaminos	133	15,906
Cebu	124	11,091
Davao	50	7,021
Lio	80	7,954
Nuvali	120	Ongoing remeasurement
Sicogon	80	Ongoing remeasurement
Total	586	41,972

⁴² Ongoing verification by a third-party.

⁴³ Emissions if properties had not shifted to renewable energy sources (business-as-usual scenario). BAU emissions include emissions from DCS of malls and offices from fuel and electricity consumption.

⁴⁴ Carbon stored in carbon forests were restated to account for the carbon removals only. Values only include removals from Alaminos, Cebu, Davao, and Lio and are undergoing 3rd-party verification.

⁴⁵ Commercial buildings – malls, offices and hotels – that are contestable (defined as meeting the minimum 500 kW demand per month) are able to purchase electricity from renewable sources through our retail electricity suppliers that secure power purchase agreements with renewable energy providers.

⁴⁶ Percentage share of buildings with renewable energy sources as measured in sq. meters of GLA of malls and offices.

Carbon Forest Activities

	2018	2019	2020	2021	2022
Total area allocated (hectares)	560	586	586	586	586
Total area planted (hectares) ⁴⁷	31	32	24	36	23
Trees planted per year	42,057	35,620	25,415	56,510	56,681
Volunteers mobilized per year	1,449	4,177	635	486	500

FOUR FOCUS AREAS

This section reports company performance in line with metrics under [Four Focus Areas](#).

Site Resilience

Green Space in Ayala Land Developments⁴⁸

in hectares	2018	2019	2020	2021	2022
Total Recorded Green Space	301	418	980	1,075	1,152
Estates	301	333	785	880	957
Residential Developments ⁴⁹	-	85	195	195	195

Native Trees in Ayala Land Developments

in hectares	2019	2020	2021	2022
Total Recorded Native Trees	86,361	103,942	105,291	105,291
Native Tree Share in Estates ⁵⁰				
Established Estates	39%	39%	44%	45%
Emerging Estates	71%	72%	71%	71%
Estates under Planning	88%	89%	87%	85%

Biodiversity

	2018	2019	2020	2021	2022
Total Recorded IUCN Red-List Species ⁵¹	52	57	66	66	66
Critically Endangered	2	2	3	3	3
Endangered	7	7	12	12	12
Near Threatened	18	20	20	20	20
Vulnerable	25	28	31	31	31

⁴⁷ To add to 396 hectares of already existing early secondary growth forest.

⁴⁸ Green space refers to parks and open spaces that are covered with greenery.

⁴⁹ No data for 2022 Residential Development and hence, 2021 value was used. Will be restated in 2023.

⁵⁰ Native tree share is measured as the percentage of trees from the total tree population that are native. Changes in native tree share are due to newly recorded trees in Ayala Land developments.

⁵¹ Number of threatened species as identified by the International Union for Conservation of Nature (IUCN) that are found in Ayala Land developments – El Nido and Anvaya. No updated studies conducted as of 2022.

	in hectares
Total area with high biodiversity value	4,870
Anvaya Cove	470
El Nido	323
Alviera	1,125
Nuvali	1,860
Sicogon	1,092

Pedestrian Mobility and Transit Connectivity

Transit Connectivity in Ayala Land Developments

P2P Buses ⁵²	2018	2019	2020	2021	2022
Bus Routes in ALI Malls and Estates	19	25	20	19	25
Average Daily Passengers ⁵³	14,593	21,850	8,451	7,770	10,173

Bike Lanes in Estates⁵⁴

In kilometres	2020	2021	2022
Bonifacio Global City	13.6	20.5	20.5
Makati Central Business District	6.57	6.57	6.57
Nuvali	-	7	7
Total	20.17	34.07	34.07

Resource Efficiency

LEED-Certified Buildings in Ayala Land Commercial Portfolio

	2018	2019	2020	2021	2022
Total # of Buildings	6	11	11	11	14
Office	5	9	9	9	12
Hotel	1	2	2	2	2
% to Total					
Office (in GLA)	6%	9%	9%	9%	9%
Hotel (in # of rooms)	10%	14%	13%	13%	13%

LEED-Certified Buildings as of 2022

	Property Type	Certification
One Evotech	Office	Silver
Teleperformance Cebu	Office	Gold
Bonifacio Stopover	Office	Gold
Vertis Corporate Center 1	Office	Certified
Vertis Corporate Center 2	Office	Certified
Vertis Corporate Center 3	Office	Certified

⁵² Following the Metro Manila Bus Rationalization Program implemented by the DOTr-Land Transportation Franchising and Regulatory Board in June 2020, the P2P bus routes have decreased starting 2020.

⁵³ Lower average daily passengers starting 2020 due to the pandemic.

⁵⁴ Shared bike lanes with lane markings, bollards, and/or safety signages. Values from 2020 to 2021 corrected.

SEDA Nuvali	Hotel	Silver
SEDA Vertis North	Hotel	Gold
High Street South Corporate Plaza 1	Office	Gold
High Street South Corporate Plaza 2	Office	Gold
MDC Corporate Center	Office	Gold
ATG Tower 2	Office	Gold
Ayala North Exchange Tower 1	Office	Certified
Ayala North Exchange Tower 2	Office	Certified