EARTHCHECK

BENCHMARKING ASSESSMENT REPORT

DESTINATION BENCHMARKING

REGIAO AUTONOMA DE MADEIRA
PORTUGAL

REPORT DATE: 18 November 2022

Benchmarking Data Collection Period: 1 January 2021 – 31 December 2021

The planet deserves more than half measures

OVERVIEW

This annual assessment of **Regiao Autonoma De Madeira** was undertaken against EarthCheck benchmarking indicators and checklists developed for EarthCheck and listed below. [1] They have been carefully selected to track performance in key areas of environmental and social performance impact. EarthCheck benchmarking provides an organisation a vehicle for sustainability reporting and is based on the premise of continual improvement. By undertaking a Benchmarking Assessment an organisation meets the requirements of annual benchmarking which includes the collection and submission of benchmarking data to EarthCheck for review and completion of the Benchmarking Assessment Report.[2]

		Indicator Measure (Benchmark)
1	Policy	Policy is produced and in place
2	Energy	Energy Consumption (GJ / Person Year) Green Power (Purchased Electricity) (%)[3] Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO_2-e / Person Year) Greenhouse Gas Emissions Breakdown by Scope (t CO_2-e / Person Year) Indirect Emissions (Scope 3) (kg CO_2-e / Person Year) Greenhouse Gas Emissions Scope 3 Breakdown (t CO_2-e / Person Year)
3	Water	Potable Water Consumption (kL / Person Year) Recycled / Captured Water (%)[3]
4	Waste	Waste Sent to Landfill (m^3 / Person Year) Recycled / Reused / Composted Waste (%)[3] Waste Sent for Incineration (L / Person Year)[3]
5	Sector Specific	Nitrous Oxides Produced (kg / Person Year / Hectare) Sulphur Dioxide Produced (kg / Person Year / Hectare) Particulate Matter Produced (kg / Person Year / Hectare) Water Samples Passed (%) Habitat Conservation Area (%) Green Space (%) Significant Site Maintenance Fund (%) Destination Safety – Homicide Rate (%) Destination Safety – Theft Rate (%) Destination Safety – Assault Rate (%) Socio-Economic Benefit – Unemployment Rate (%) Accredited Operations (%)
		Lead Agency Performance
6	Water Savings	Water Savings Rating (Points)
7	Waste Recycling	Waste Recycling Rating (Points)
8	Paper	Paper Products Rating (Points)

9	Cleaning	Cleaning Products Rating (Points)
10	Pesticides	Pesticide Products Rating (Points)

1 Refer to the EarthCheck Sector Benchmarking Indicator (SBI) document for more information. For frequently asked questions (FAQs) about benchmarking or specific help, please log on to 'My EarthCheck' and visit your EarthCheck Benchmarking software.

2 To meet the requirements stipulated in the EarthCheck Company Standard organisations are required to collect and submit Benchmarking data against each of the Core Benchmarking Indicators by way of annual Benchmarking Assessment, and have in place a repeatable system for accurately recording Benchmarking data including a methodology for calculating the organisation's Activity Measure for each consecutive year.

As a standard policy, all EarthCheck indicators are continuously reviewed, along with the performance levels which operators have to achieve in order to meet the requirements of the Company Standard. This review takes into account "business-as-usual" changes in practices and equipment, and is used to update where appropriate Baseline and Best Practice levels.

3 These indicators are for guidance only and do not affect the overall benchmarking evaluation.

4 There may be a slight variation between total figures presented in the energy table and the data summary due to unit selection and data rounding.

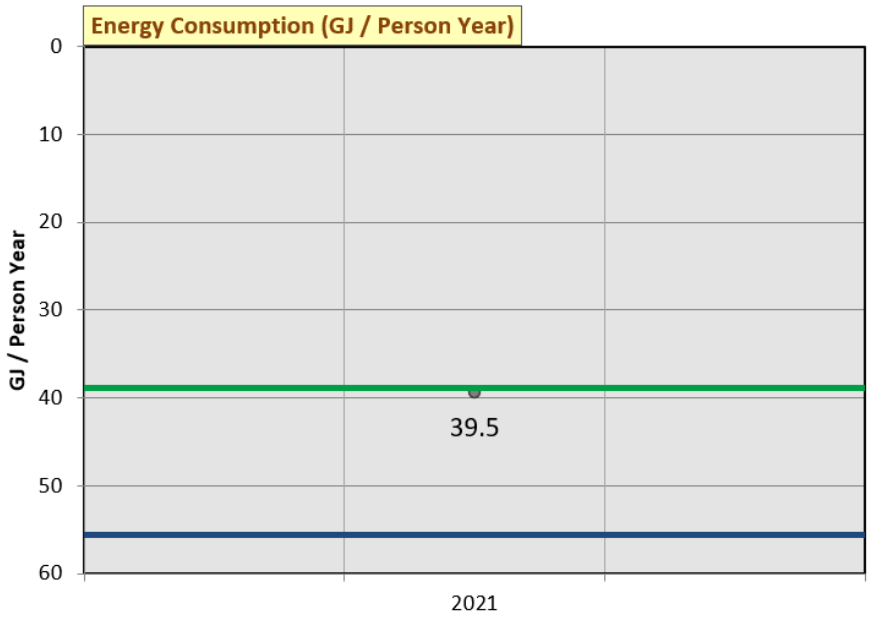
DESTINATION PERFORMANCE BENCHMARKS

Current performance: *Below Baseline ✖* *At or above Baseline ✓* *At or above Best Practice ★*

1. Policy ★

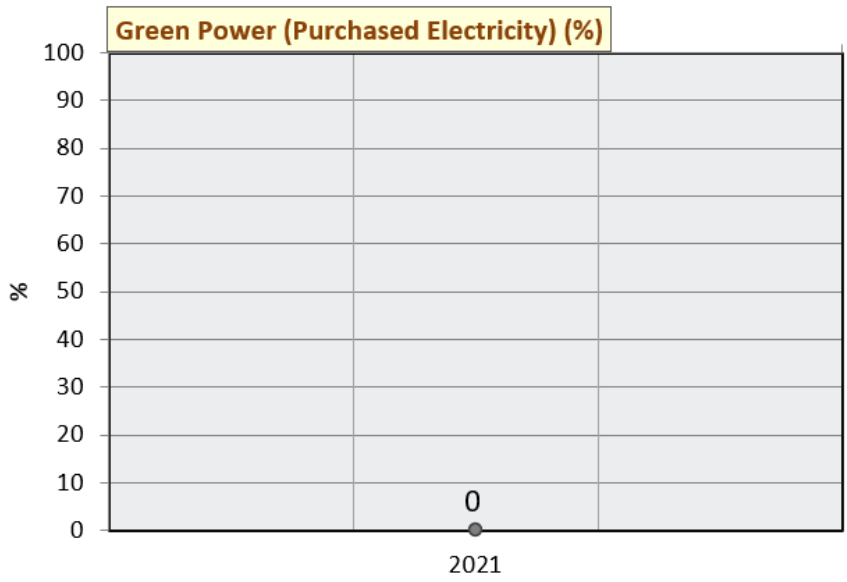
2. Energy

Energy Consumption (GJ / Person Year) ✓



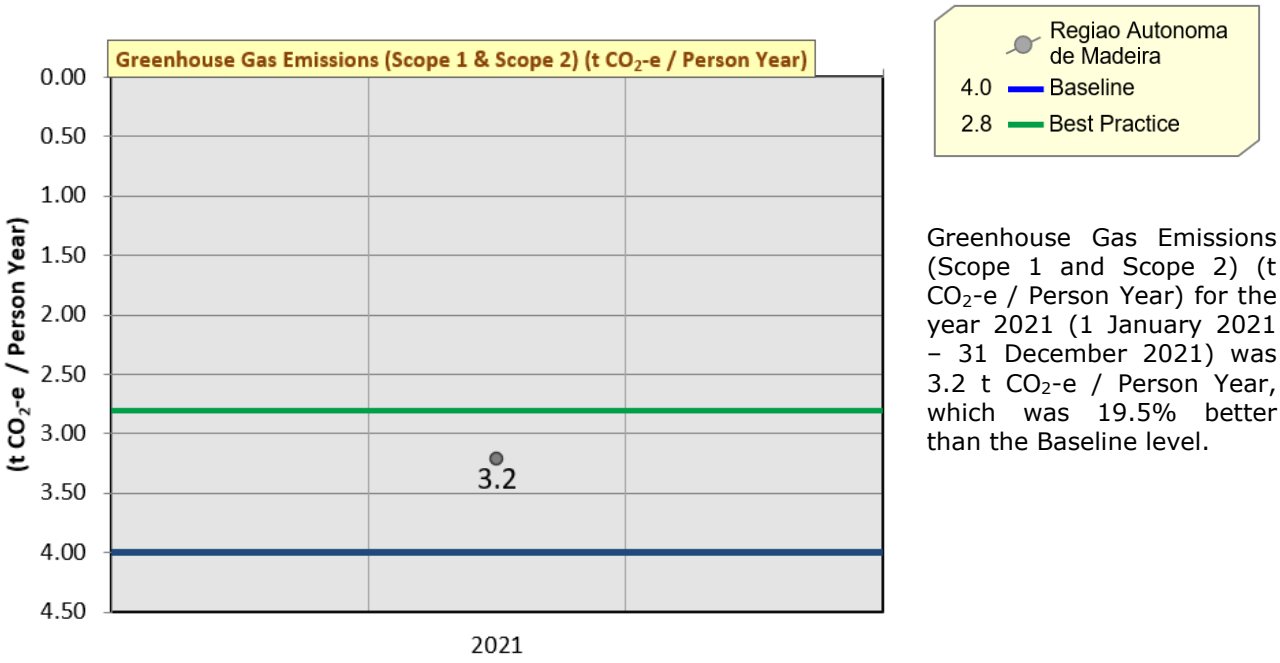
Energy Consumption (GJ / Person Year) for the year 2021 (1 January 2021 – 31 December 2021) was 39.5 GJ / Person Year, which was 29.0% better than the Baseline level.

Green Power (Purchased Electricity) (%)



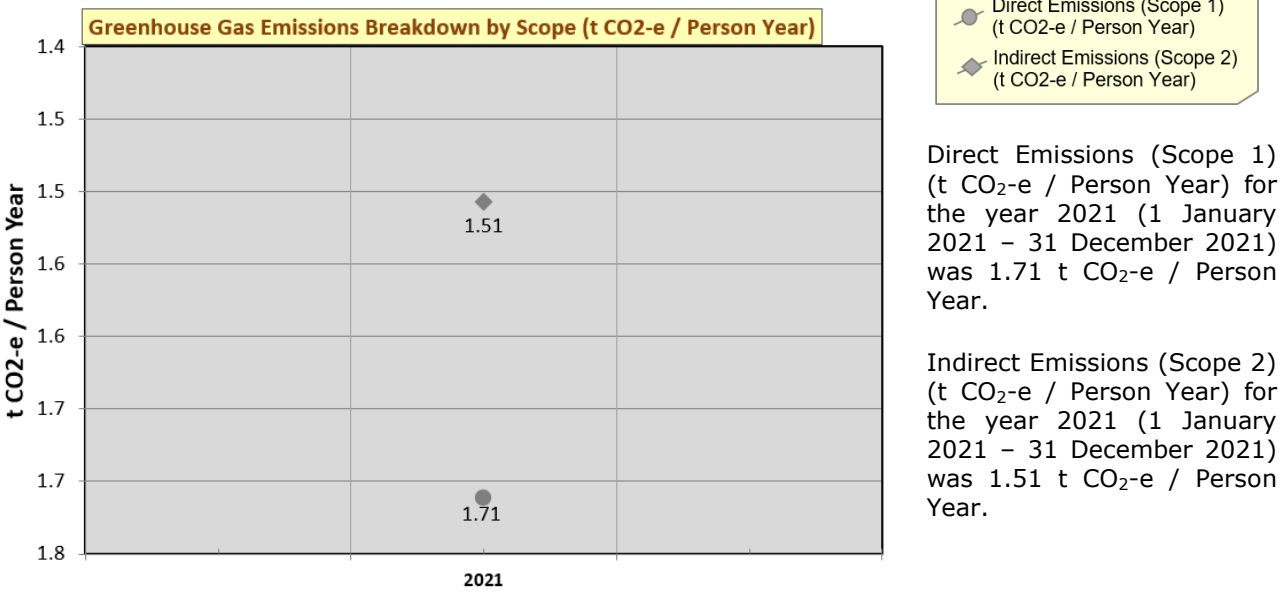
Green Power (Purchased Electricity) (%) for the year 2021 (1 January 2021 – 31 December 2021) was 0%.

Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO_2-e / Person Year)



Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO_2-e / Person Year) for the year 2021 (1 January 2021 – 31 December 2021) was 3.2 t CO_2-e / Person Year, which was 19.5% better than the Baseline level.

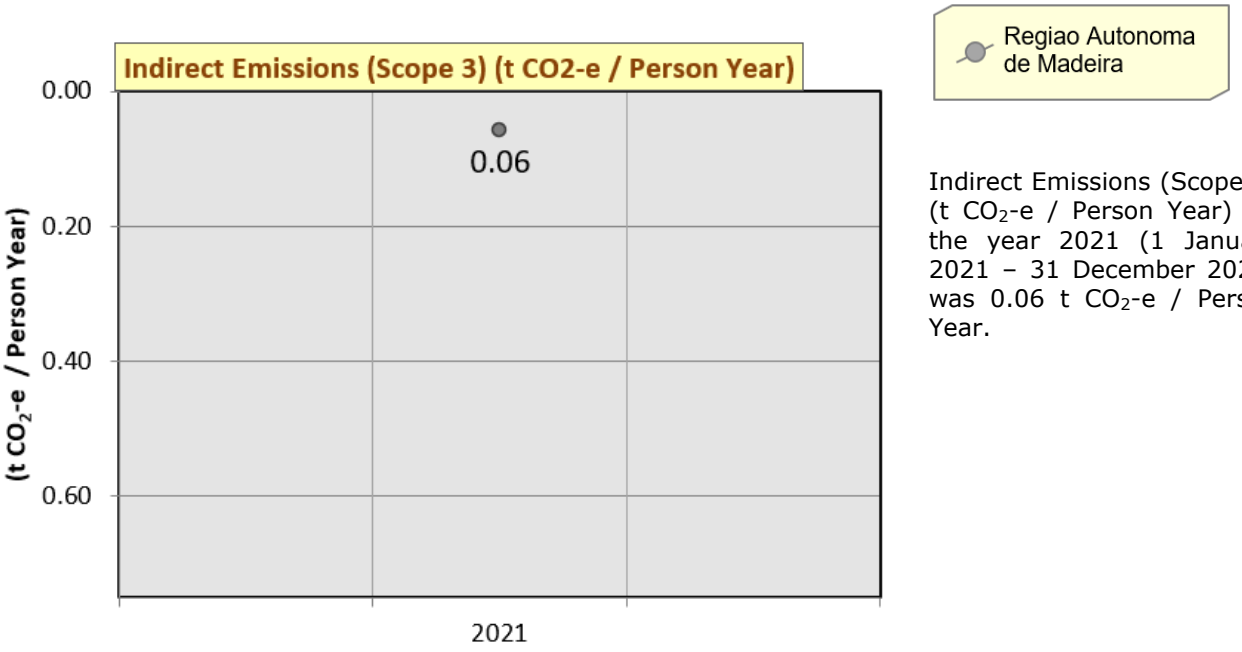
Greenhouse Gas Emissions Breakdown by Scope (t CO_2-e / Person Year)



Direct Emissions (Scope 1) (t CO_2-e / Person Year) for the year 2021 (1 January 2021 – 31 December 2021) was 1.71 t CO_2-e / Person Year.

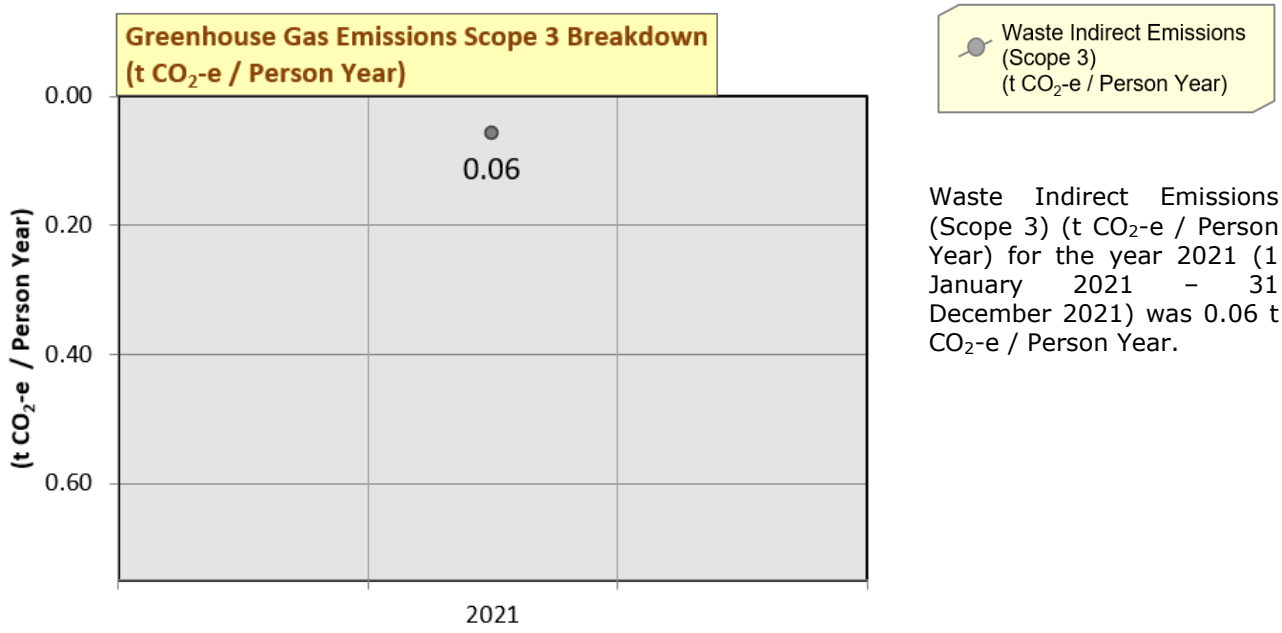
Indirect Emissions (Scope 2) (t CO_2-e / Person Year) for the year 2021 (1 January 2021 – 31 December 2021) was 1.51 t CO_2-e / Person Year.

Indirect Emissions (Scope 3) (t CO_2-e / Person Year)



Indirect Emissions (Scope 3) (t CO_2-e / Person Year) for the year 2021 (1 January 2021 – 31 December 2021) was 0.06 t CO_2-e / Person Year.

Greenhouse Gas Emissions Scope 3 Breakdown (t CO_2-e / Person Year)



Waste Indirect Emissions (Scope 3) (t CO_2-e / Person Year) for the year 2021 (1 January 2021 – 31 December 2021) was 0.06 t CO_2-e / Person Year.

Direct Emissions (Scope 1)							
Stationary Fuel Combustion							
2021							
Type	**Quantity**	**Unit**	**Energy Consumption (MJ)**	**CO_2 Emission Estimate (t CO_2-e)**	**CH_4 Emission Estimate (t CO_2-e)**	**N_2O Emission Estimate (t CO_2-e)**	**Total Emission Estimate (t CO_2-e)**
Diesel	158,541	litres (L)	6,084,407.2	428,311.8	1,618.5	919.0	430,849.3
Natural Gas Liquid - Butane	5,681,901	Kilograms (kg)	276,254,026.6	15,961,957.7	69,616.0	39,532.0	16,071,105.6
Natural Gas Liquid - Propane	10,728,929	Kilograms (kg)	521,640,528.0	30,140,389.7	131,453.4	74,646.8	30,346,489.9
		subtotal	803,978,961.8	46,530,659.2	202,687.9	115,097.8	46,848,444.9
Mobile Fuel Combustion (road)							
2021							
Type	**Quantity**	**Unit**	**Energy Consumption (MJ)**	**CO_2 Emission Estimate (t CO_2-e)**	**CH_4 Emission Estimate (t CO_2-e)**	**N_2O Emission Estimate (t CO_2-e)**	**Total Emission Estimate (t CO_2-e)**
Motor gasoline	39,491,040	litres (L)	1,350,691,486.0	88,922,774.0	898,209.8	2,720,292.7	92,541,276.5
Diesel	101,626,296	litres (L)	3,900,163,174.7	274,551,986.7	404,602.9	3,829,277.7	278,785,867.3
LPG	185,540	Kilograms (kg)	37,166,537.9	2,110,687.7	58,069.0	1,772.8	2,170,529.5
		subtotal	5,288,021,198.6	365,585,448.4	1,360,881.8	6,551,343.2	373,497,673.3
Mobile Fuel Combustion (air)							
2021							
Type	**Quantity**	**Unit**	**Energy Consumption (MJ)**	**CO_2 Emission Estimate (t CO_2-e)**	**CH_4 Emission Estimate (t CO_2-e)**	**N_2O Emission Estimate (t CO_2-e)**	**Total Emission Estimate (t CO_2-e)**
Jet Kerosene	8,657,082	litres (L)	316,684,283.8	21,510,780.0	4,211.9	159,450.5	21,674,442.4
Aviation Gasoline	306	litres (L)	10,105.8	672.0	0.1	5.1	677.3
		subtotal	316,694,389.6	21,511,452.0	4,212.0	159,455.6	21,675,119.7
Mobile Fuel Combustion (water)							
2021							
Type	**Quantity**	**Unit**	**Energy Consumption (MJ)**	**CO_2 Emission Estimate (t CO_2-e)**	**CH_4 Emission Estimate (t CO_2-e)**	**N_2O Emission Estimate (t CO_2-e)**	**Total Emission Estimate (t CO_2-e)**
Diesel	1,977,812	litres (L)	75,903,480.0	5,343,225.5	14,133.2	38,217.4	5,395,576.1
Onsite Renewable Energy Generation							
2021							
Type	**Quantity**	**Unit**	**Energy Consumption (MJ)**	**CO_2 Emission Estimate (t CO_2-e)**	**CH_4 Emission Estimate (t CO_2-e)**	**N_2O Emission Estimate (t CO_2-e)**	**Total Emission Estimate (t CO_2-e)**
Solar	32,931,240	Kilowatt hour (kWh)	118,552,464.0	0.0	0.0	0.0	0.0
Wind	129,603,712	Kilowatt hour (kWh)	466,573,363.2	0.0	0.0	0.0	0.0
Hydro	82,398,438	Kilowatt hour (kWh)	296,634,376.8	0.0	0.0	0.0	0.0
		subtotal	881,760,204.0	0.0	0.0	0.0	0.0
Onsite Wastewater Treatment							
2021							
Type	**Average BOD (mg/L)**	**Wastewater Volume (kL/day)**	**People Serviced per Day**	**Energy Consumption (MJ)**	**CO_2 Emission Estimate (t CO_2-e)**	**CH_4 Emission Estimate (t CO_2-e)**	**N_2O Emission Estimate (t CO_2-e)**	**Total Emission Estimate (t CO_2-e)**
Septic	n/a	n/a	87,560	0.0	0.0	6,040.3	0.0	6,040.3
Aerobic	24.28	21,333.8	n/a	0.0	0.0	357.3	0.0	357.3
			subtotal	0.0	0.0	6,397.7	0.0	6,397.7
			TOTAL (Scope 1)	**7,366,358,234.1**	**438,970,785.1**	**1,588,312.6**	**6,864,114.0**	**447,423,211.7**

Indirect Emissions (Scope 2)								
Purchased Electricity								
2021								
Quantity	**Unit**	**% Green Power**	**Provider**	**Energy Consumption (MJ)**	**CO_2 Emission Estimate (t CO_2-e)**	**CH_4 Emission Estimate (t CO_2-e)**	**N_2O Emission Estimate (t CO_2-e)**	**Total Emission Estimate (t CO_2-e)**
859,405,387	Kilowatt hour (kWh)	0	Empressa Eletricidade Madeira	3,093,859,393.2	0.0	0.0	0.0	398,764.1
			TOTAL (Scope 2)	**3,093,859,393.2**	**438,970,785.1**	**1,581,914.9**	**6,864,114.0**	**398,764.1**

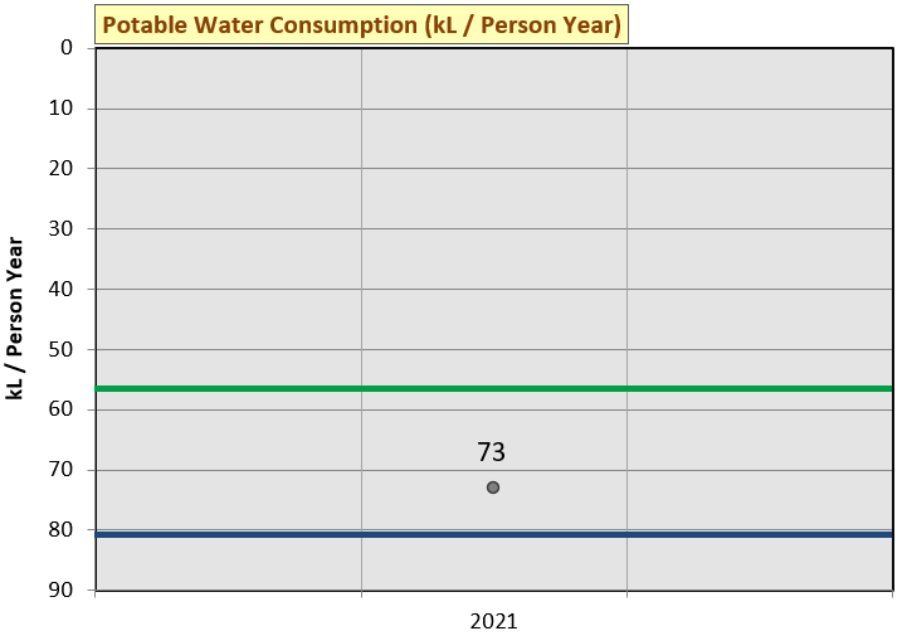
Greenhouse Gas Emissions (Scope 1 and Scope 2)					
GRAND TOTAL (Scope 1 & 2)	**10,460,217,627.3**	**438,970,785.1**	**1,581,914.9**	**6,864,114.0**	**447,821,975.7**

Indirect Emissions (Scope 3)									
Waste Sent to Landfill									
2021									
Quantity	**Unit**	**Type of Landfill**	**Type of Waste**	**Type of Operation**	**Source**	**CO_2 Emission Estimate (t CO_2-e)**	**CH_4 Emission Estimate (t CO_2-e)**	**N_2O Emission Estimate (t CO_2-e)**	**Total Emission Estimate (t CO_2-e)**
1,087	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Unknown (mixed waste types)	Other Operation	International	0.0	1,304.4	0.0	1,304.4

Waste Sent for Incineration								
2021								
Quantity	**Unit**	**Type of Incineration Technology**	**Type of Waste**	**Source**	**CO_2 Emission Estimate (t CO_2-e)**	**CH_4 Emission Estimate (t CO_2-e)**	**N_2O Emission Estimate (t CO_2-e)**	**Total Emission Estimate (t CO_2-e)**
5,477	tonnes (uncompacted)	Continuous Incineration - Stoker	Plastics	International	12,323.3	0.01	0.3	12,323.5
7,433	tonnes (uncompacted)	Continuous Incineration - Stoker	Nappies	International	624.4	0.01	0.4	624.8
4,323	tonnes (uncompacted)	Continuous Incineration - Stoker	Textiles	International	1,037.5	0.01	0.2	1,037.7
				subtotal	13,985.1	0.03	0.9	13,986.0
				TOTAL (Scope 3)	**13,985.1**	**1,304.4**	**0.9**	**15,290.4**

3. Water

Potable Water Consumption (kL / Person Year)

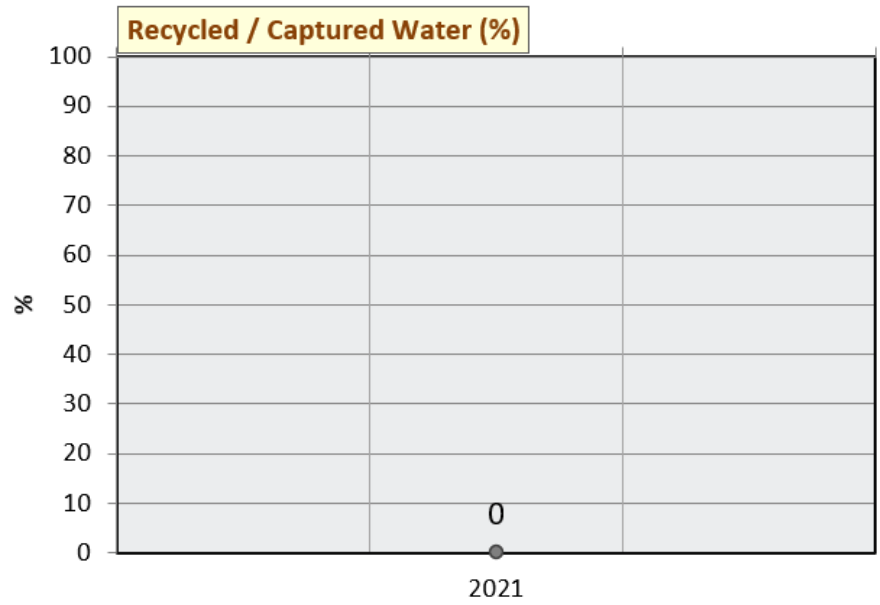


Potable Water Consumption (kL / Person Year) for the year 2021 (1 January 2021 – 31 December 2021) was 73.0 kL / Person Year, which was 9.6% better than the Baseline level.

2021

Quantity	Unit	Potable Water Consumption (kL)
19,317,000	Cubic metres (m^3)	19,317,000.0 kL
	TOTAL	**19,317,000.0 kL**

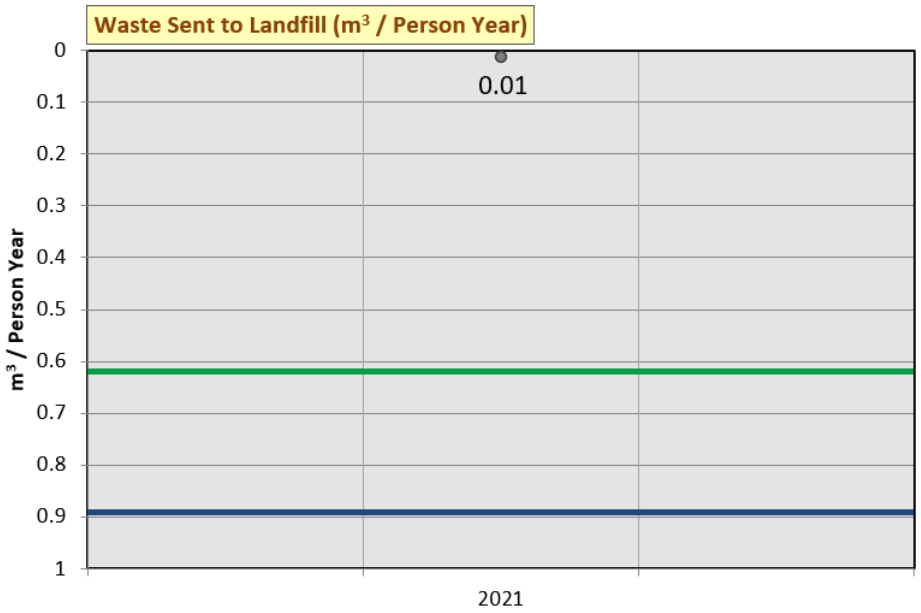
Recycled / Captured Water (%)



Recycled / Captured Water (%) for the year 2021 (1 January 2021 – 31 December 2021) was 0%.

4. Waste

Waste Sent to Landfill (m^3 / Person Year) ★

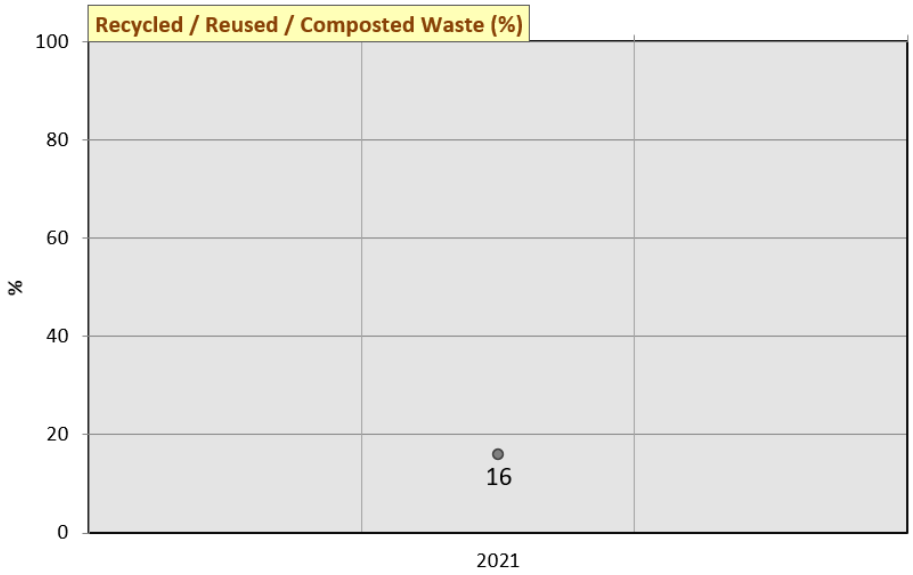


Waste Sent to Landfill (m^3 / Person Year) for the year 2021 (1 January 2021 – 31 December 2021) was 0.01 m^3 / Person Year, which was 97.8% better than the Best Practice level.

2021

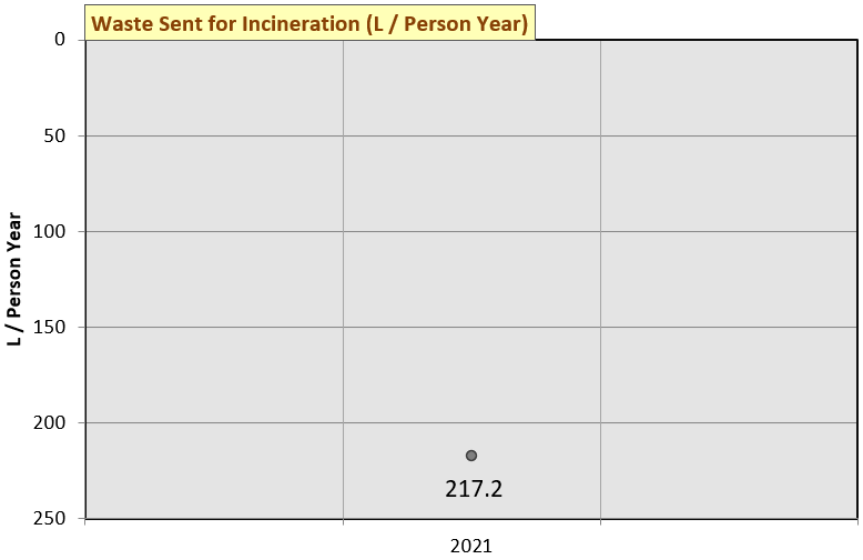
Quantity	Unit	Type of Landfill	Type of Waste	Type of Operation	Waste Sent to Landfill (m^3)
1,087	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Unknown (mixed waste types)	Other Operation	3,623.3 m^3
				TOTAL	**3,623.3 m^3**

Recycled / Reused / Composted Waste (%)



Recycled / Reused / Composted Waste (%) for the year 2021 (1 January 2021 – 31 December 2021) was 16.0%.

Waste Sent for Incineration (L / Person Year)



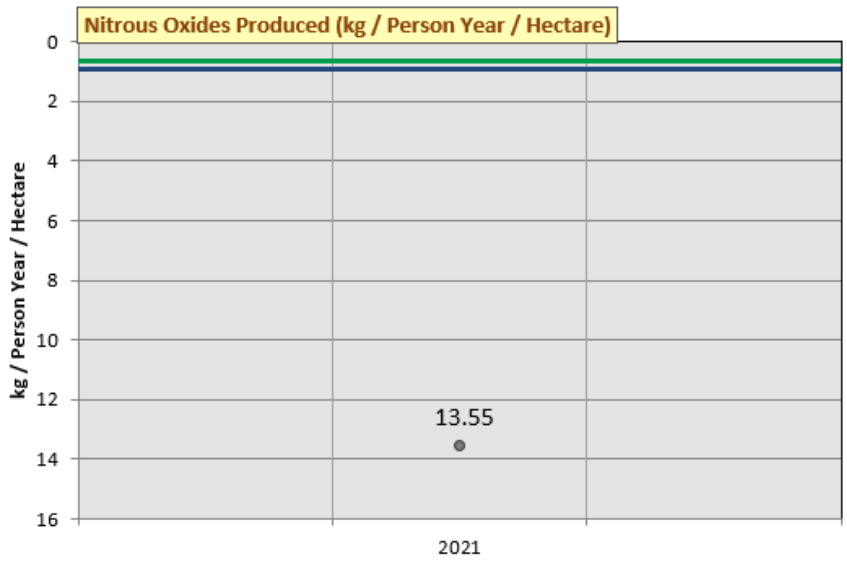
Waste Sent for Incineration (L / Person Year) for the year 2021 (1 January 2021 – 31 December 2021) was 217.2 L / Person Year.

2021

Quantity	Unit	Type of Incineration Technology	Type of Waste	Waste Sent for Incineration (m^3)
7,433	tonnes (uncompacted)	Continuous Incineration - Stoker	Nappies	24,776.7 m^3
5,477	tonnes (uncompacted)	Continuous Incineration - Stoker	Plastics	18,256.7 m^3
4,323	tonnes (uncompacted)	Continuous Incineration - Stoker	Textiles	14,410.0 m^3
			TOTAL	**57,443,333.3 L**

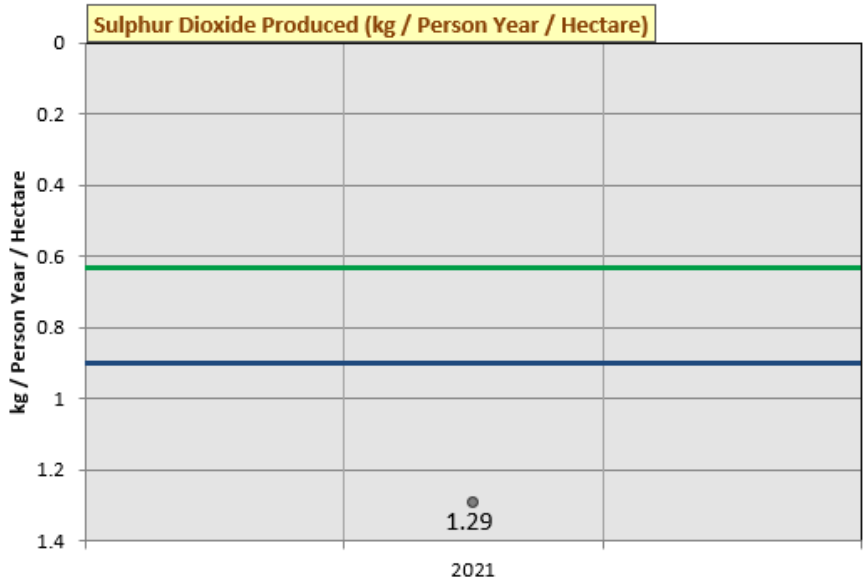
5. Sector Specific

Nitrous Oxides Produced (kg / Person Year / Hectare) ✘



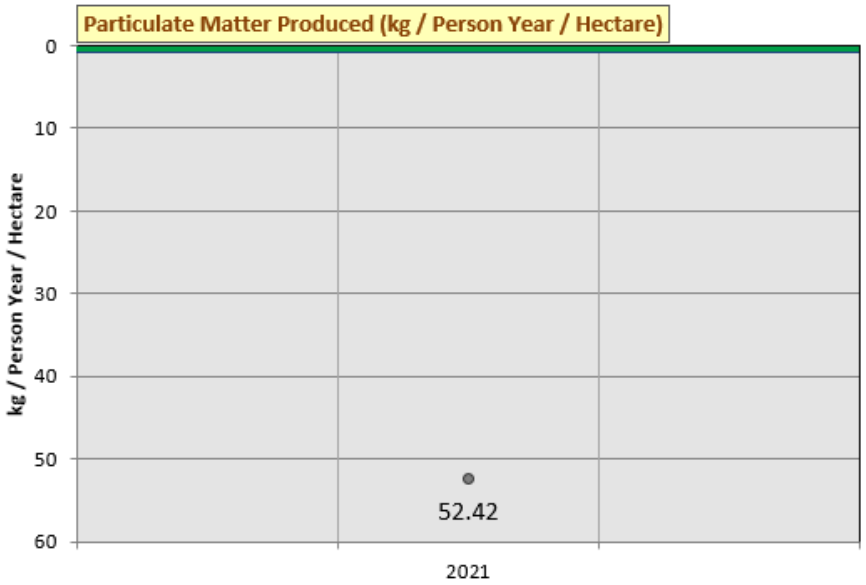
Nitrous Oxides Produced (kg / Person Year / Hectare) for the year 2021 (1 January 2021 – 31 December 2021) was 13.55 kg / Person Year/ Hectare, which was 1,257.0% worse than the Baseline level.

Sulphur Dioxide Produced (kg / Person Year / Hectare)



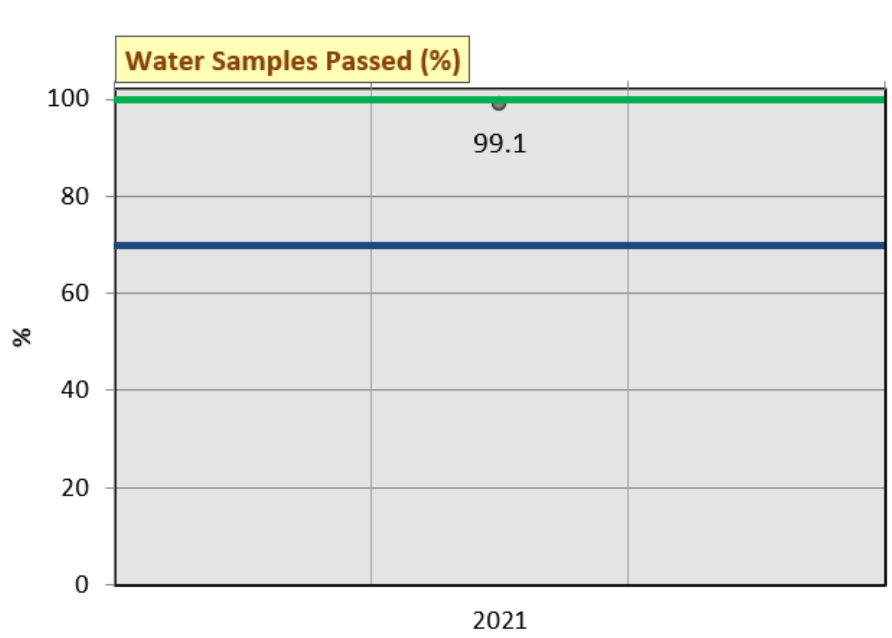
Sulphur Dioxide Produced (kg / Person Year / Hectare) for the year 2021 (1 January 2021 – 31 December 2021) was 1.29 kg / Person Year/ Hectare, which was 43.3% worse than the Baseline level.

Particulate Matter Produced (kg / Person Year / Hectare)



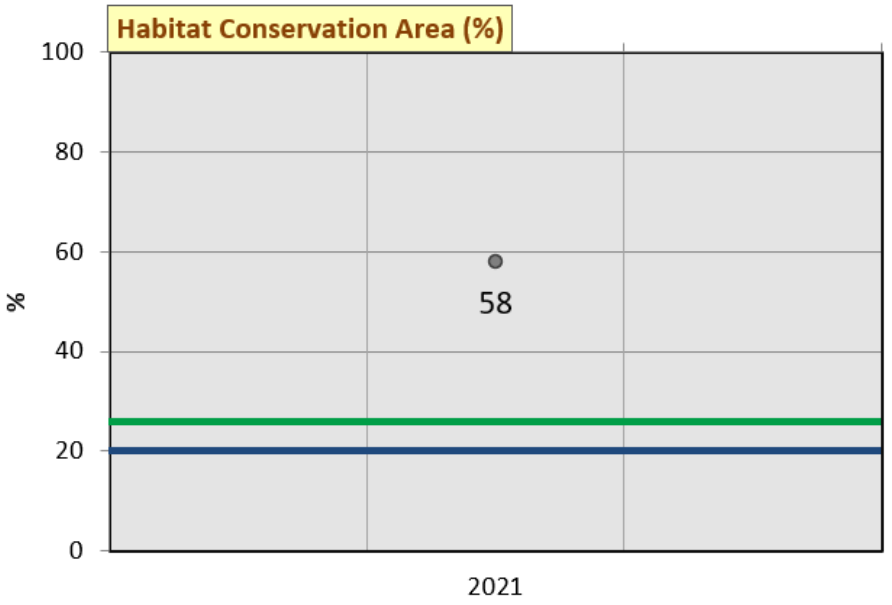
Particulate Matter Produced (kg / Person Year / Hectare) for the year 2021 (1 January 2021 – 31 December 2021) was 52.42 kg / Person Year/ Hectare, which was 7,388.6% worse than the Baseline level.

Water Samples Passed (%) ✓



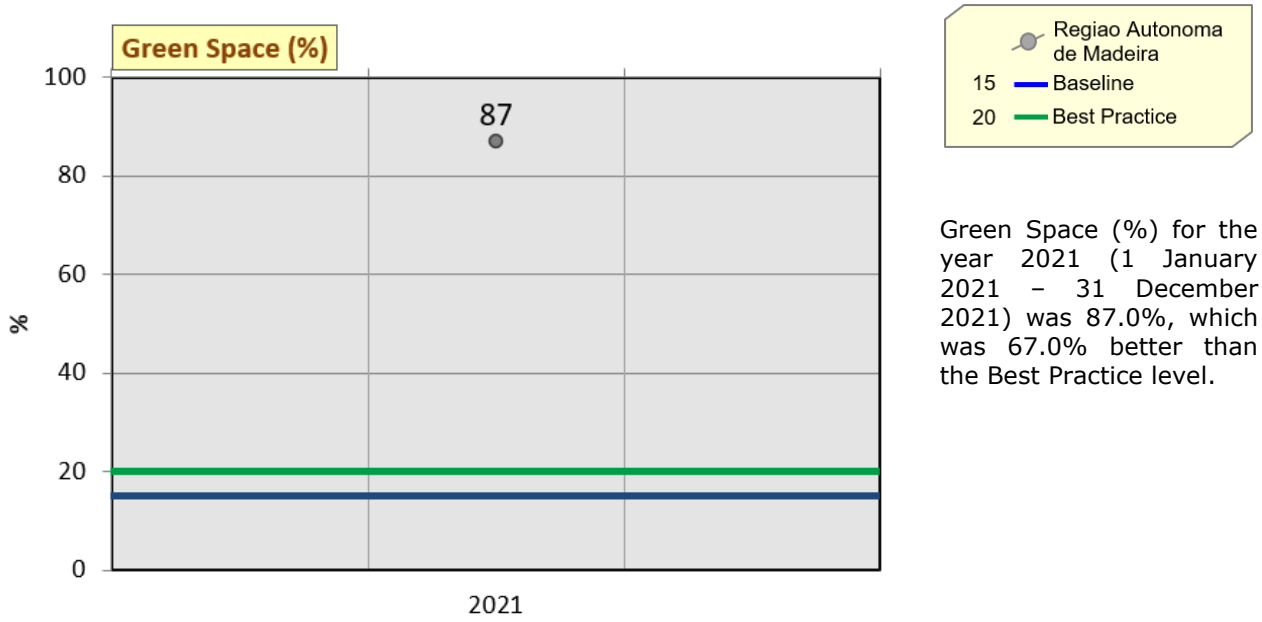
Water Samples Passed (%) for the year 2021 (1 January 2021 – 31 December 2021) was 99.1%, which was 29.1% better than the Baseline level.

Habitat Conservation Area (%) ★



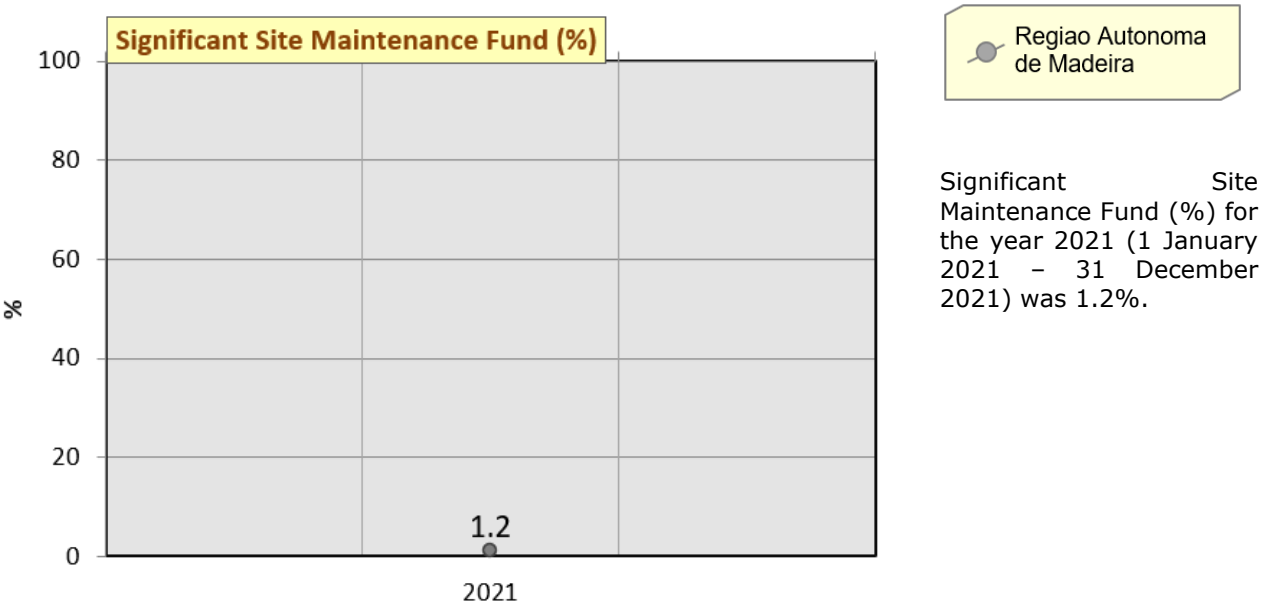
Habitat Conservation Area (%) for the year 2021 (1 January 2021 – 31 December 2021) was 58.0%, which was 32.0% better than the Best Practice level.

Green Space (%) ★



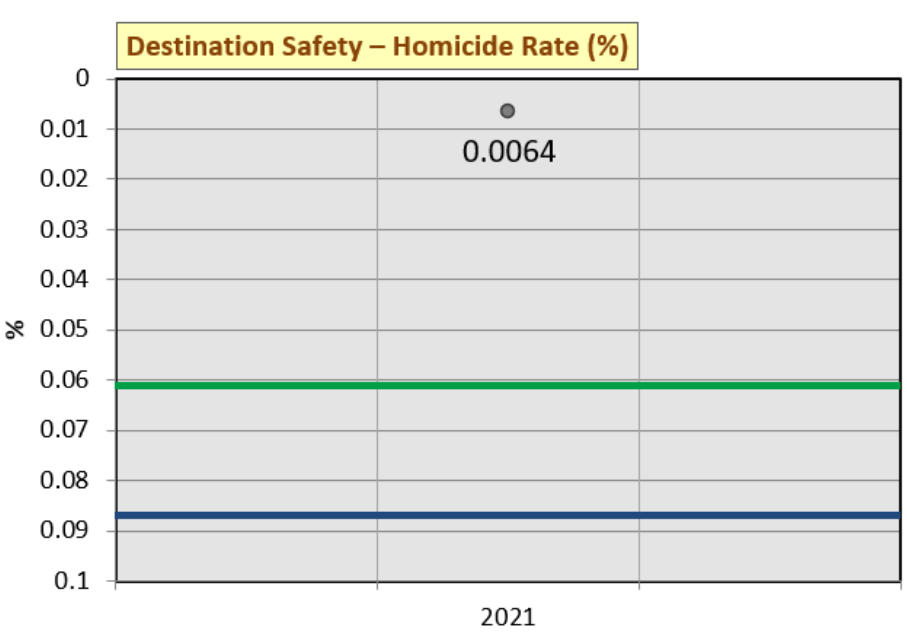
Green Space (%) for the year 2021 (1 January 2021 – 31 December 2021) was 87.0%, which was 67.0% better than the Best Practice level.

Significant Site Maintenance Fund (%)



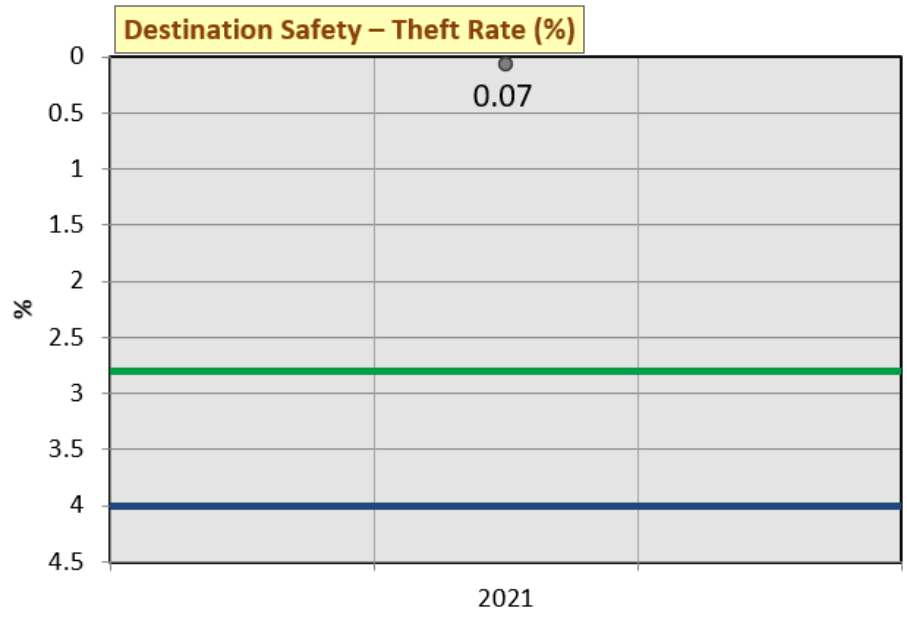
Significant Site Maintenance Fund (%) for the year 2021 (1 January 2021 – 31 December 2021) was 1.2%.

Destination Safety – Homicide Rate (%) ★



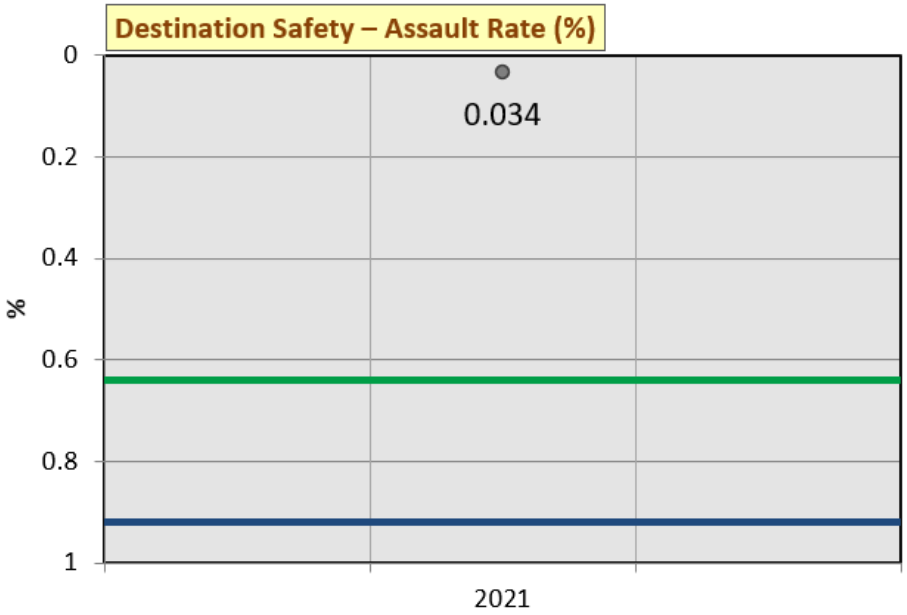
Destination Safety – Homicide Rate (%) for the year 2021 (1 January 2021 – 31 December 2021) was 0.0064%, which was 0.0546% better than the Best Practice level.

Destination Safety – Theft Rate (%) ★



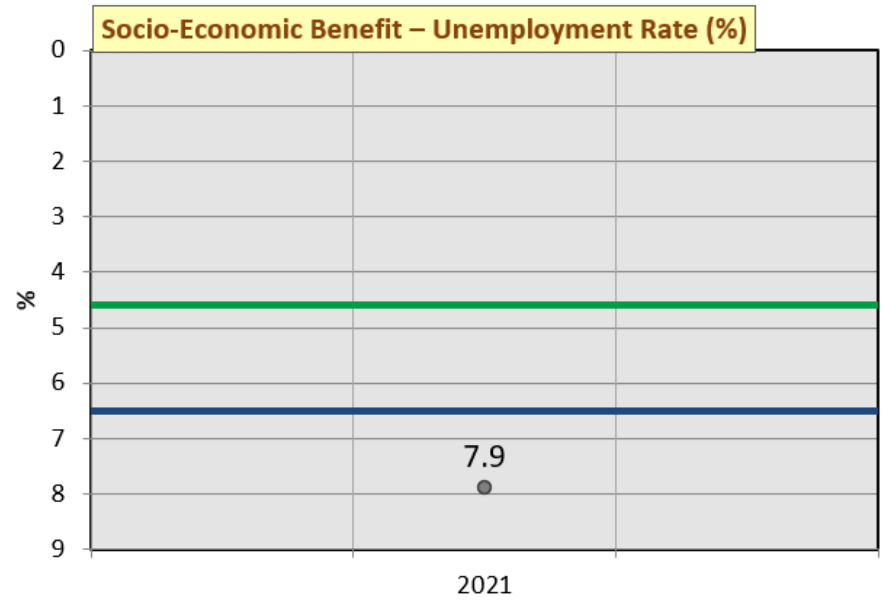
Destination Safety – Theft Rate (%) for the year 2021 (1 January 2021 – 31 December 2021) was 0.07%, which was 2.73% better than the Best Practice level.

Destination Safety – Assault Rate (%) ★



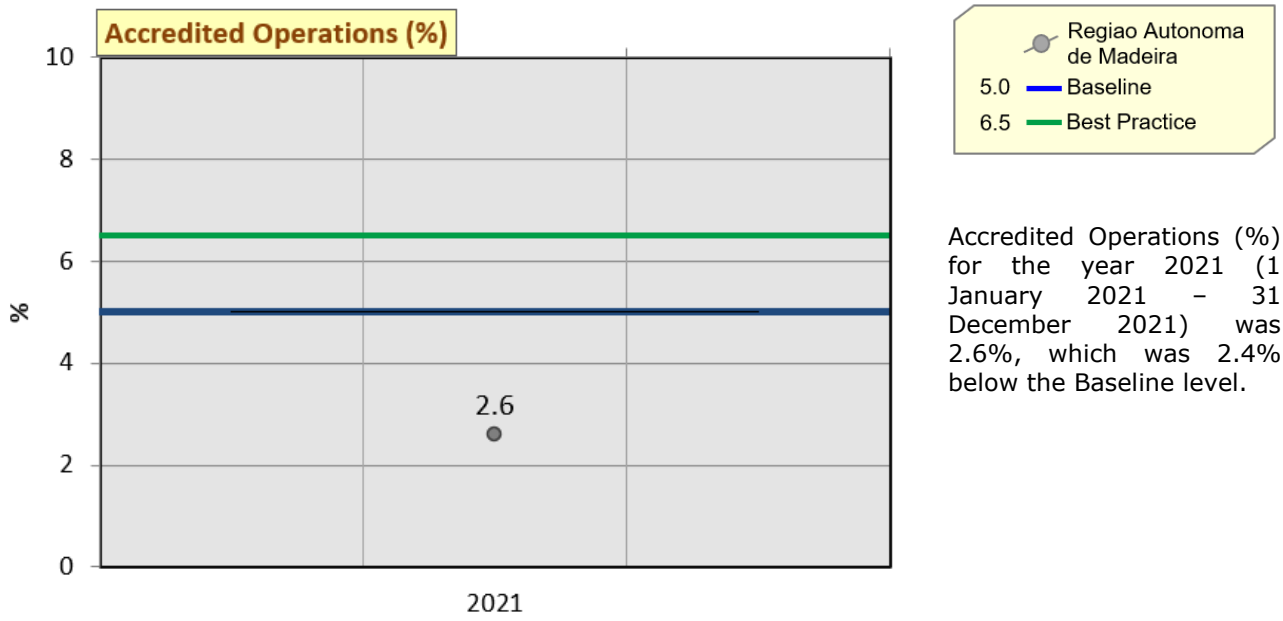
Destination Safety – Assault Rate (%) for the year 2021 (1 January 2021 – 31 December 2021) was 0.034%, which was 0.606% better than the Best Practice level.

Socio-Economic Benefit – Unemployment Rate (%) ✘



Socio-Economic Benefit – Unemployment Rate (%) for the year 2021 (1 January 2021 – 31 December 2021) was 7.9%, which was 1.4% worse than the Baseline level.

Accredited Operations (%)

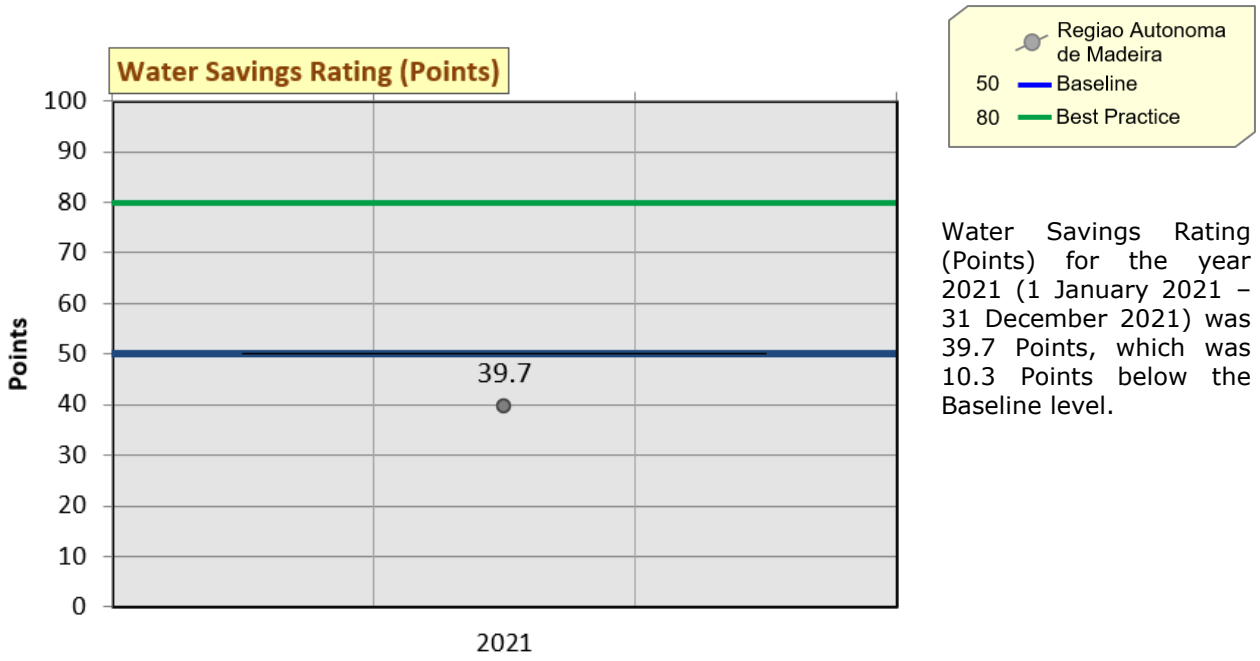


Accredited Operations (%) for the year 2021 (1 January 2021 – 31 December 2021) was 2.6%, which was 2.4% below the Baseline level.

LEAD AGENCY PERFORMANCE

6. Water Savings

Water Savings Rating (Points) ✘

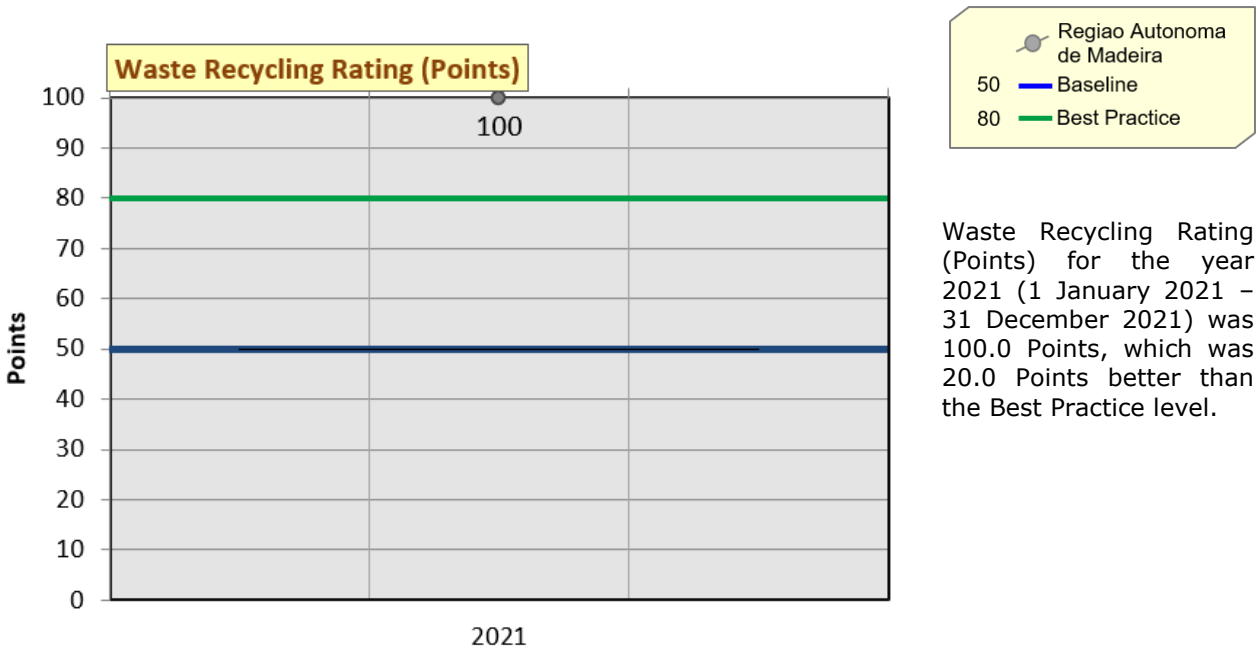


Water Savings Rating (Points) for the year 2021 (1 January 2021 – 31 December 2021) was 39.7 Points, which was 10.3 Points below the Baseline level.

Water Savings Measures	Frequency / Percentage Rating	Water Savings Rating (Points)
Check for leaks	Once a year	54.0 Points
Low/dual flush toilets	40-59%	65.1 Points
Low flow tap fittings	0%	0.0 Points
Low flow shower fittings	Not Relevant / Not Available	
Water sprinklers used after dark	Not Relevant / Not Available	
Minimal irrigation landscaping	Not Relevant / Not Available	
Use of recycle/grey/rain water	Not Relevant / Not Available	
	Overall Rating:	**39.7 Points**

7. Waste Recycling

Waste Recycling Rating (Points) ★

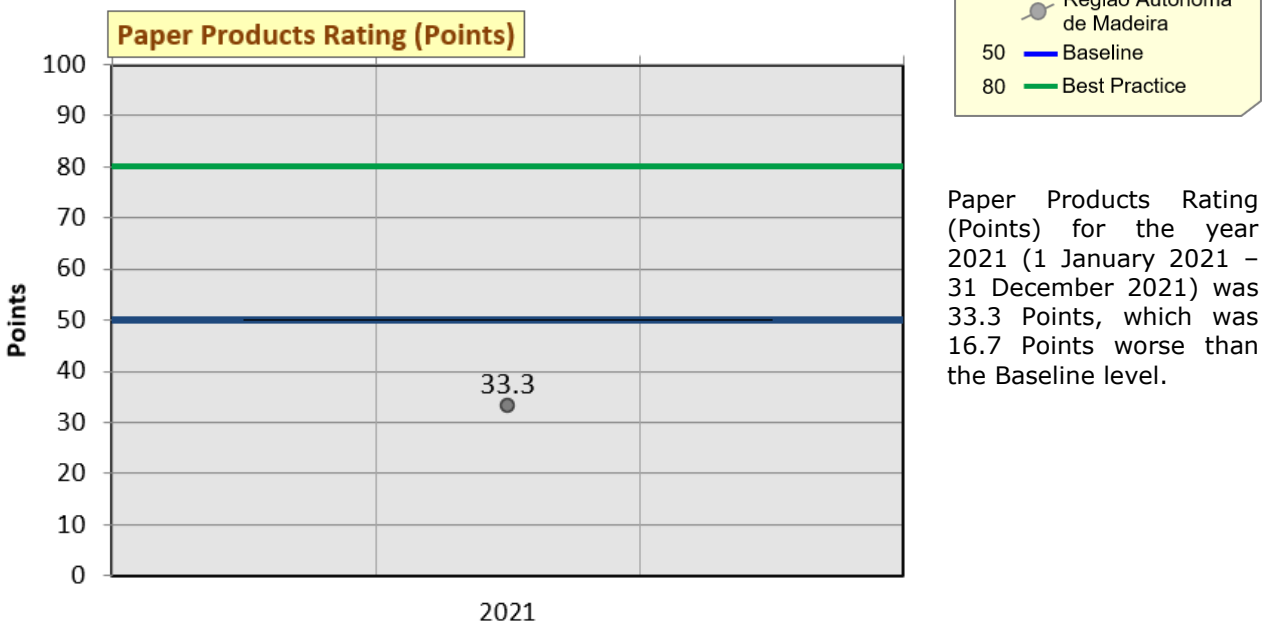


Waste Recycling Rating (Points) for the year 2021 (1 January 2021 – 31 December 2021) was 100.0 Points, which was 20.0 Points better than the Best Practice level.

Waste Recycling Measures	Frequency / Percentage Rating	Waste Recycling Rating (Points)
Glass	100%	100.0 Points
Paper/card	100%	100.0 Points
Iron & steel (ferrous metals)	Not Relevant / Not Available	
Other metals (non-ferrous)	Not Relevant / Not Available	
Plastics	100%	100.0 Points
Rubber	Not Relevant / Not Available	
Green waste	Not Relevant / Not Available	
	Overall Rating:	**100.0 Points**

8. Paper

Paper Products Rating (Points)

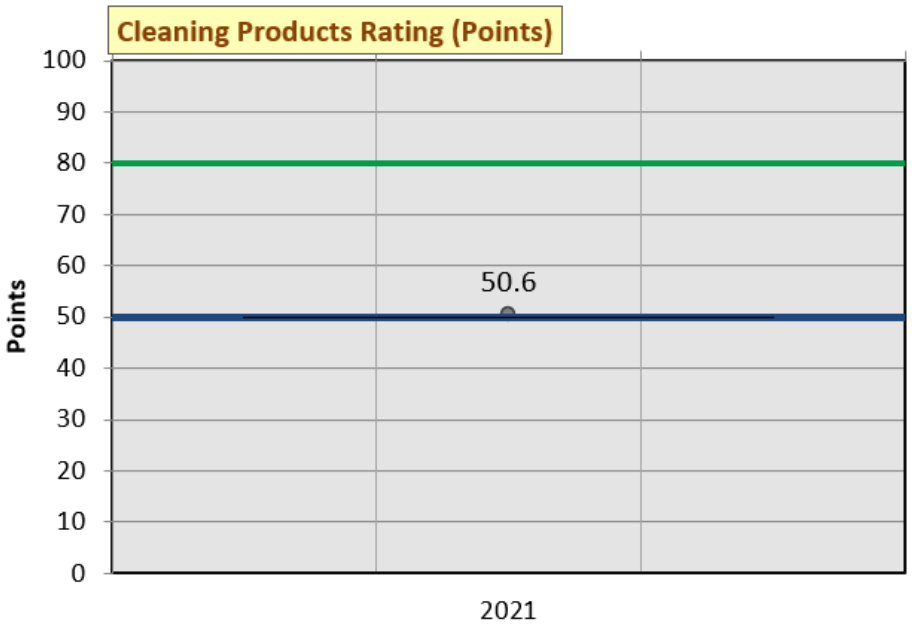


Paper Products Rating (Points) for the year 2021 (1 January 2021 – 31 December 2021) was 33.3 Points, which was 16.7 Points worse than the Baseline level.

Paper Products Measures	Frequency / Percentage Rating	Paper Products Rating (Points)
Office paper	0%	0.0 Points
Serviettes	Not Relevant / Not Available	
Tissues	Not Relevant / Not Available	
Toilet tissue	100%	100.0 Points
Paper towels	0%	0.0 Points
	Overall Rating:	**33.3 Points**

9. Cleaning

Cleaning Products Rating (Points)

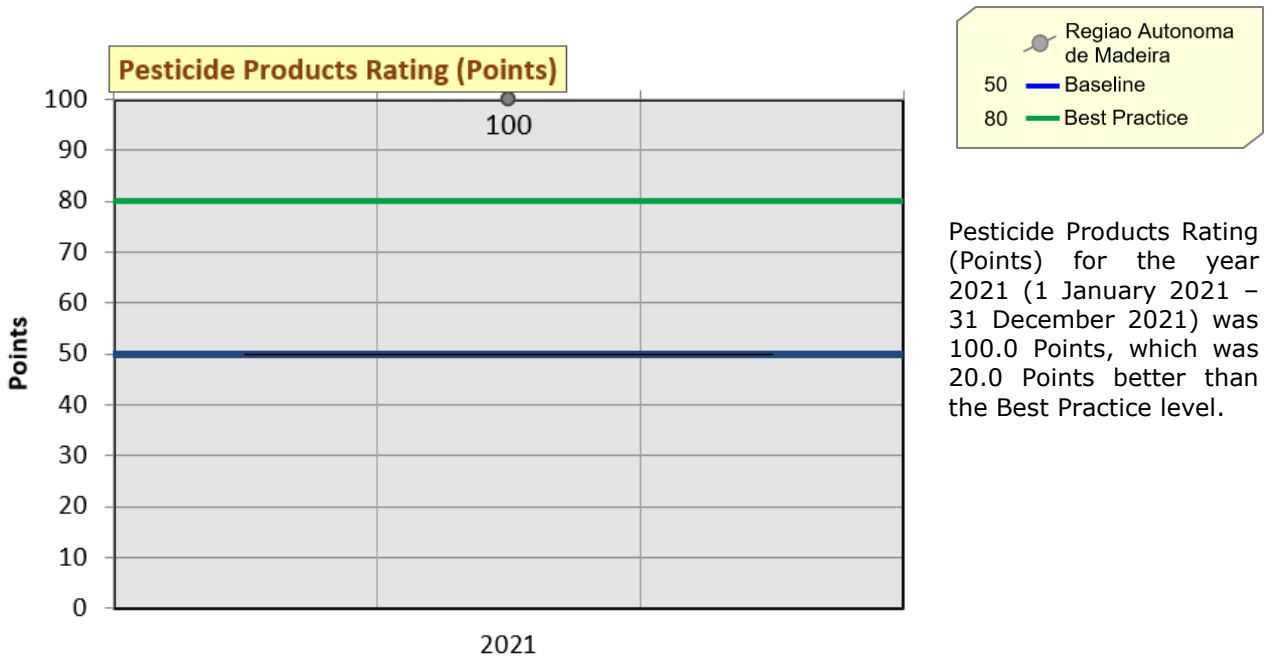


Cleaning Products Rating (Points) for the year 2021 (1 January 2021 – 31 December 2021) was 50.6 Points, which was 0.6 Points better than the Baseline level.

Cleaning Products Measures	Frequency / Percentage Rating	Cleaning Products Rating (Points)
Hard floor cleaners	0%	0.0 Points
Carpet cleaners	Not Relevant / Not Available	100.0 Points
Interior surface cleaners	1-19%	54.0 Points
External surface cleaners	Not Relevant / Not Available	100.0 Points
Glass cleaners	0%	0.0 Points
Detergents	Not Relevant / Not Available	100.0 Points
Personal hygiene	0%	0.0 Points
	Overall Rating:	**50.6 Points**

10. Pesticides

Pesticide Products Rating (Points) ★



Pesticide Products Rating (Points) for the year 2021 (1 January 2021 – 31 December 2021) was 100.0 Points, which was 20.0 Points better than the Best Practice level.

Pesticide Products Measures	Frequency / Percentage Rating	Pesticide Products Rating (Points)
Weed killers	Not Relevant / Not Available	100.0 Points
Fungal killers	Not Relevant / Not Available	100.0 Points
Rodent killers	Not Relevant / Not Available	100.0 Points
Insect killers	Not Relevant / Not Available	100.0 Points
	Overall Rating:	**100.0 Points**

Optional Benchmarking Indicators

Regiao Autonoma de Madeira did not submit data for any of the optional Operation Selected and Specified Indicators. These indicators do not form part of the formal annual benchmarking exercise.

*The supplied data has been compiled by **Regiao Autonoma de Madeira** in the prescribed manner, authorised by a senior executive of the company and submitted for an annual assessment.*

Conclusion And Recommendations

Congratulations, **Regiao Autonoma de Madeira** has met the requirements to be recognised as an EarthCheck Benchmarked Community.

In addition to having a Sustainability Policy in place, 13 of the assessed EarthCheck indicator(s) are at or above the Baseline level.

From the benchmarking data provided, eight indicator(s), *Waste Sent to Landfill, Habitat Conservation Area, Green Space, Destination Safety - Homicide Rate, Destination Safety - Theft Rate, Destination Safety - Assault Rate, Waste Recycling Rating, and Pesticide Products Rating,* are at or above the Best Practice level.

The seven indicator(s) that fell below the Baseline level were *Nitrous Oxides Produced, Sulphur Dioxide Produced, Particulate Matter Produced, Socio-Economic Benefit - Unemployment Rate, Accredited Operations, Water Savings Rating, and Paper Products Rating*.

The values for Nitrous Oxides Produced, Sulphur Dioxide Produced, and Particulate Matter Produced were all below the Baseline level. **Regiao Autonoma de Madeira** is encouraged to promote the use of public transport within the destination and to investigate opportunities of switching to cleaner and more efficient combustion fuels (e.g. renewables, LPG) and processes.

The value for Accredited Operations was 2.4% worse than the Baseline level. **Regiao Autonoma de Madeira** is encouraged to promote environmental accreditation to hotels, restaurants and other business within the destination

The value for Water Saving was 10.3 Points below the Baseline level. **Regiao Autonoma de Madeira** are encouraged, therefore, to review current on-site water use and the possibility of increasing on-site recycling and reuse (e.g. using non-hazardous rain water and/or grey water for watering plants and washing exterior surfaces). **Regiao Autonoma de Madeira** are also encouraged to regularly check for possible leaks, and fitting (where appropriate) water saving devices such as low-flow shower heads and dual flush toilet cisterns.

The rating for Paper Products was 16.7 Points below the Baseline level. **Regiao Autonoma de Madeira** are encouraged, therefore, to further investigate available ecolabel or recyclable paper products (for office paper, serviettes, tissues, toilet tissue, and paper towels). Products which carry an ecolabel usually avoid the use of chlorine-based bleaches, and use biodegradable inks and dyes and use timber from sustainable plantations. Sourcing these types of products minimises the consumption of natural resources and results in the reduction of greenhouse gas emissions associated with raw material consumption.

Regiao Autonoma de Madeira is encouraged to continue to make improvements in the above indicator/s and to ensure that any indicator/s below baseline is addressed in the organisation's risk assessment and long term sustainability approach.

Improvements in all the EarthCheck indicators will not only help the environment, but can also help reduce operational costs. Due to the positive commitment that **Regiao Autonoma de Madeira** has demonstrated to the environment, the assessors are confident that they can maintain or improve performance, where appropriate and practical, in all indicators. In particular over the next 12 months, **Regiao Autonoma de Madeira** is encouraged to ensure

that Water Savings Rating, Habitat Conservation Area, and Accredited Operations are at Baseline performance or better. In line with EarthCheck Policy this would enable **Regiao Autonoma de Madeira** to continue to meet the benchmarking requirements of the EarthCheck program.

Benchmarks Assessed by EarthCheck

Summary Of Supplied Benchmarking Data

Activity Measures

Person Years	264,531
Total Destination Area	80,110

Supplied Benchmarking Data

Energy

Energy Consumption (GJ / Person Year)

Supplied	10,441,634.4 GJ
Calculated	39.5 GJ / Person Year
Baseline	55.6 GJ / Person Year
Best Practice	38.9 GJ / Person Year
Difference	29.0% better than the Baseline level

Green Power (Purchased Electricity) (%)

Supplied	0%
Calculated	0%

Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO_2-e / Person Year)

Supplied	851,493.3 t CO_2-e
Calculated	3.2 t CO_2-e / Person Year
Baseline	4.0 t CO_2-e / Person Year
Best Practice	2.8 t CO_2-e / Person Year
Difference	19.5% better than the Baseline level

Direct Emissions (Scope 1) (t CO_2-e / Person Year)

Supplied	452,729.2 t CO_2-e
Calculated	1.71 t CO_2-e / Person Year

Indirect Emissions (Scope 2) (t CO_2-e / Person Year)

Supplied	398,764.1 t CO_2-e
Calculated	1.51 t CO_2-e / Person Year

Indirect Emissions (Scope 3) (t CO_2-e / Person Year)

Supplied	15,290.4 t CO_2-e
Calculated	0.06 t CO_2-e / Person Year

Waste Indirect Emissions (Scope 3) (t CO_2-e / Person Year)

Supplied	15,290.4 t CO_2-e
Calculated	0.06 t CO_2-e / Person Year

Water

Potable Water Consumption (kL / Person Year)

Supplied	19,317,000.0 kL
Calculated	73.0 kL / Person Year
Baseline	80.8 kL / Person Year
Best Practice	56.5 kL / Person Year
Difference	9.6% better than the Baseline level

Recycled / Captured Water (%)

Supplied	0%
Calculated	0%

Waste

Waste Sent to Landfill (m^3 / Person Year)

Supplied	3,623.3 m^3
Calculated	0.01 m^3 / Person Year
Baseline	0.89 m^3 / Person Year
Best Practice	0.62 m^3 / Person Year
Difference	97.8% better than the Best Practice level

Recycled / Reused / Composted Waste (%)

Supplied	16.0%
Calculated	16.0%

Waste Sent for Incineration (L / Person Year)

Supplied	57,443.3 m^3
Calculated	217.2 L / Person Year

Sector Specific

Nitrous Oxides Produced (kg / Person Year / Hectare)

Calculated	13.55 kg / Person Year / Hectare
Baseline	0.93 kg / Person Year / Hectare
Best Practice	0.65 kg / Person Year / Hectare
Difference	1,357% worse than the Baseline level

Sulphur Dioxide Produced (kg / Person Year / Hectare)

Calculated	1.29 kg / Person Year / Hectare
Baseline	0.90 kg / Person Year / Hectare
Best Practice	0.63 kg / Person Year / Hectare
Difference	43.3% worse than the Baseline level

Particulate Matter Produced (kg / Person Year / Hectare)

Calculated	52.42 kg / Person Year / Hectare
Baseline	0.7 kg / Person Year / Hectare
Best Practice	0.5 kg / Person Year / Hectare
Difference	7,388.6% worse than the Baseline level

Water Samples Passed (%)

Supplied	99.1%
Calculated	99.1%
Baseline	70%
Best Practice	100%
Difference	29.1% better than the Best Practice level

Habitat Conservation Area (%)

Supplied	58.0%
Calculated	58.0%
Baseline	20%
Best Practice	26%
Difference	32.0% better than the Best Practice level

Green Space (%)

Supplied	87.0%
Calculated	87.0%
Baseline	15%
Best Practice	20%
Difference	67.0% better than the Best Practice level

Significant Site Maintenance Fund (%)

Supplied	1.2%
Calculated	1.2%

Destination Safety – Homicide Rate (%)

Supplied	0.0064%
Calculated	0.0064%
Baseline	0.087%
Best Practice	0.061%
Difference	0.0546% better than the Best Practice level

Destination Safety – Theft Rate (%)

Supplied	0.07%
Calculated	0.07%
Baseline	4.0%
Best Practice	2.8%
Difference	2.73% better than the Best Practice level

Destination Safety – Assault Rate (%)

Supplied	0.034%
Calculated	0.034%
Baseline	0.92%
Best Practice	0.64%
Difference	0.606% better than the Best Practice level

Socio-Economic Benefit – Unemployment Rate (%)

Supplied	7.9%
Calculated	7.9%
Baseline	6.5%
Best Practice	4.6%
Difference	1.4% below the Baseline level

Accredited Operations (%)

Supplied	2.6%
Calculated	2.6%
Baseline	5%
Best Practice	6.5%
Difference	2.4% below the Baseline level

Lead Agency Performance

Water Savings

Water Savings Rating (Points)

Supplied	39.7 Points
Calculated	39.7 Points
Baseline	50 Points
Best Practice	80 Points
Difference	10.3 Points below the Baseline level

Waste Recycling

Waste Recycling Rating (Points)

Supplied	100.0 Points
Calculated	100.0 Points
Baseline	50 Points
Best Practice	80 Points
Difference	20.0 Points better than the Best Practice level

Paper

Paper Products Rating (Points)

Supplied	33.3 Points
Calculated	33.3 Points
Baseline	50 Points
Best Practice	80 Points
Difference	16.7 Points below the Baseline level

Cleaning

Cleaning Products Rating (Points)

Supplied	50.6 Points
Calculated	50.6 Points
Baseline	50 Points
Best Practice	80 Points
Difference	0.6 Points better than the Baseline level

Pesticides

Pesticide Products Rating (Points)

Supplied	100.0 Points
Calculated	100.0 Points
Baseline	50 Points
Best Practice	80 Points
Difference	20.0 Points better than the Best Practice level

DETERMINATION OF BASELINE AND BEST PRACTICE LEVELS

General
The values for the Baseline and Best Practice levels for each indicator are derived from extensive worldwide research into available and appropriate case studies, industry surveys, engineering design handbooks, energy, water and waste audits, and climatic and geographic conditions.

National and regional data for per capita energy use, greenhouse gas and other emissions, wastes to landfill and water consumption, where available provide background data for normalisation of the expected performance values for per customer or employee, and/or overall performance of an enterprise being benchmarked. They are used to gauge the regional or national situation and environmental performances that an enterprise is based in, and hence what are reasonable levels to expect the enterprise to achieve.

A benchmarking result at, or above, the Baseline level demonstrates to all stakeholders that the enterprise is achieving above average performance. A result below the Baseline level indicates that an enterprise can and should carry out actions that will make beneficial improvements in performance.

Consideration of Climate
A major determinant of energy consumption in some sectors, primarily those centred on buildings such as accommodation, visitor centres and administration offices will be the dominant climatic conditions in which the enterprise is located. In general, to maintain the same level of indoor comfort, enterprises operating in hot or cold climates will consume more energy than those in temperate climates.

Similarly, it is recognised that in certain sectors a major determinant of potable water consumption will be the climate in which an enterprise is located, in particular those with large grounds and/or significant water-based facilities or activities. That is, enterprises located in hot climates are more likely to consume more potable water than equivalent ones located in cooler climates. Factors that are likely to lead to a higher level of potable water consumption, for example in the accommodation sector, include increased evaporation rates of swimming pools, personal bathing and irrigation demands of grounds. In consideration of this factor, Baseline and Best Practice levels can vary in relation to country location.

Waste Sent to Landfill
The benchmark indicator used for Waste Sent to Landfill is given in litres as waste bins are usually calibrated by volume, and it has been found that the majority of operations do not have access to the weight of material disposed of. However, if a weight is supplied, standard factors are used to convert from weight (e.g., kilograms (kg)) to volume (e.g., cubic metres (m^3) or litres (L)). These are: 1 kg (uncompacted waste) = 0.00333333 m^3 or 3.33333 L and 1 kg (compacted waste) = 0.00153846 m^3 or 1.53846 L.

Operations should make note of the level of compaction when submitting data for assessment by EarthCheck.

Review of Performance Levels
The Baseline and Best Practice performance levels for EarthCheck indicators are continuously reviewed and are likely to change over time. This review by a team of international experts, takes into account "business-as-usual" changes in practices, equipment and facilities, as well as regulations and general improvement trends in performance and procedures. This review is used to update the levels of Baseline and Best Practice, and provides useful feedback to the user of the indicators.

The list below summarises the basic generic rules used to determine Baseline and Best Practice levels for EarthCheck indicators.

- If relevant enterprise sector specific case studies are not available for a type of activity in a designated region, then national averages will be used to ascertain the Baseline level. In this case, the Best Practice level will be set at a minimum of 30% better performance than the Baseline.

- If case study or national data are not available for a specific indicator, then the first enterprise that benchmarks will have its results set as 15% better than Baseline (i.e., half way between Baseline and Best Practice).