



EARTHCHECK

BENCHMARKING ASSESSMENT REPORT

DESTINATION BENCHMARKING

REGIÃO AUTÓNOMA DA MADEIRA

FUNCHAL, PORTUGAL



REPORT DATE: 19 May 2026

Benchmarking Data Collection Period: 1 January 2024 – 31 December 2024

The planet deserves more than half measures

OVERVIEW

This annual assessment of **Região Autónoma da 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) (t 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 (m ³ / Person Year) ³
5	Sector Specific
	Nitrous Oxides Produced (kg / Person Year / Hectare / Hectare)
	Sulphur Dioxide Produced (kg / Person Year / Hectare / Hectare)
	Particulate Matter Produced (kg / Person Year / Hectare / 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)**

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.

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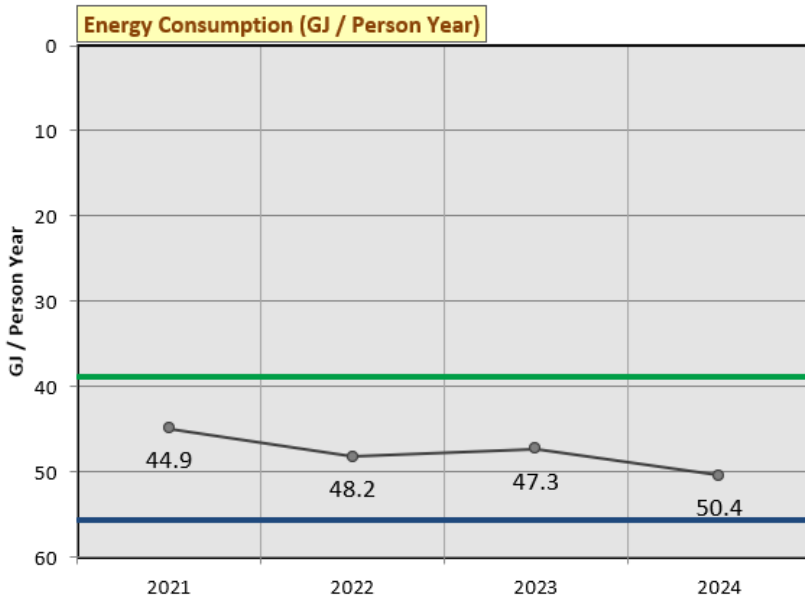
DESTINATION PERFORMANCE BENCHMARKS

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

1. Policy ★

2. Energy

Energy Consumption (GJ / Person Year) ✓



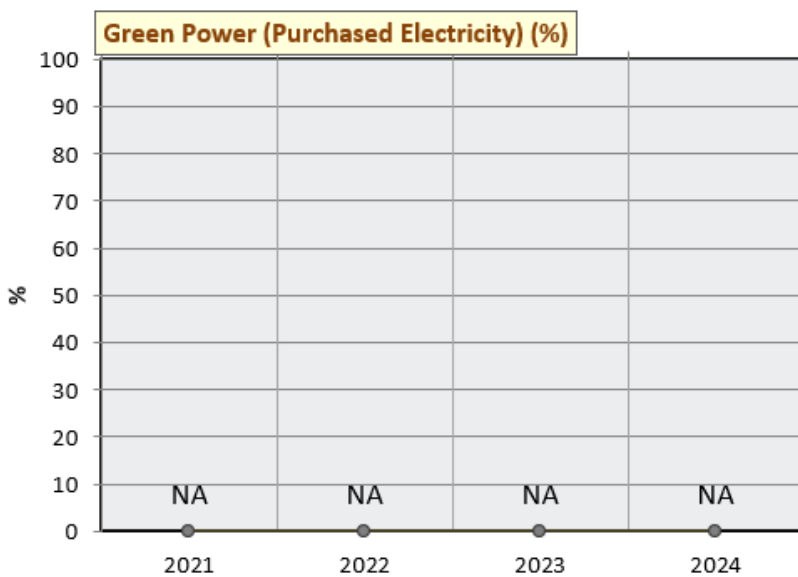
Regiao Autonoma de Madeira

55.6 Baseline

38.9 Best Practice

Energy Consumption (GJ / Person Year) for the year 2024 (1 January 2024 - 31 December 2024) was 50.4 GJ / Person Year, which was 9.2% better than the Baseline level.

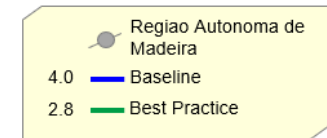
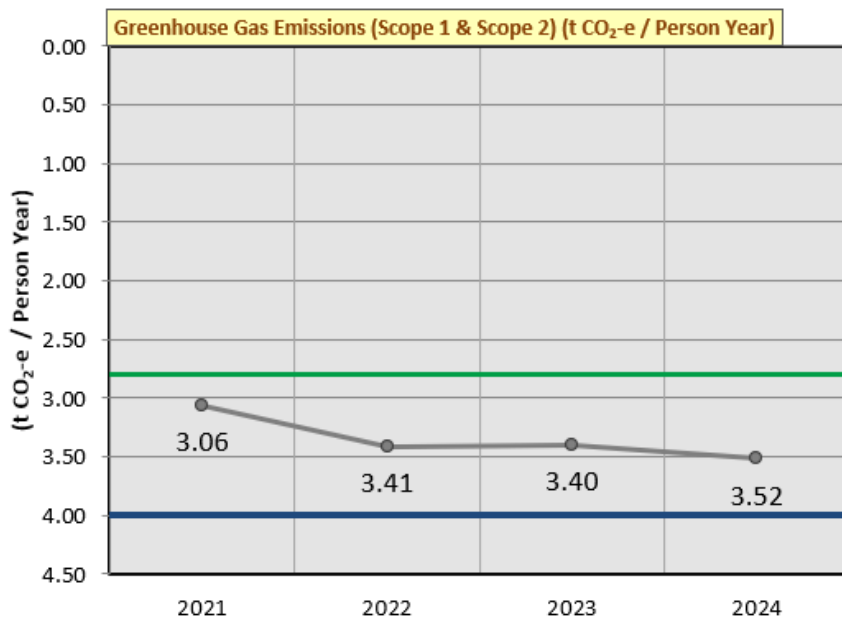
Green Power (Purchased Electricity) (%)



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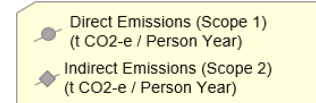
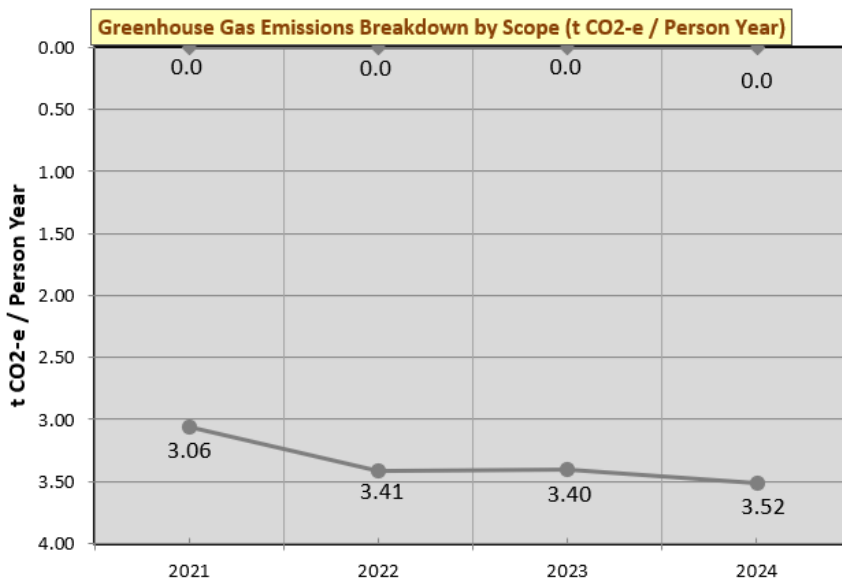
Green Power (Purchased Electricity) (%) for the year 2024 (1 January 2024 - 31 December 2024) is Not Applicable as no Purchased Electricity was reported.

Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO₂-e / Person Year) ✓



Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO₂-e / Person Year) for the year 2024 (1 January 2024 – 31 December 2024) was 3.52 t CO₂-e / Person Year, which was 12.1% better than the Baseline level.

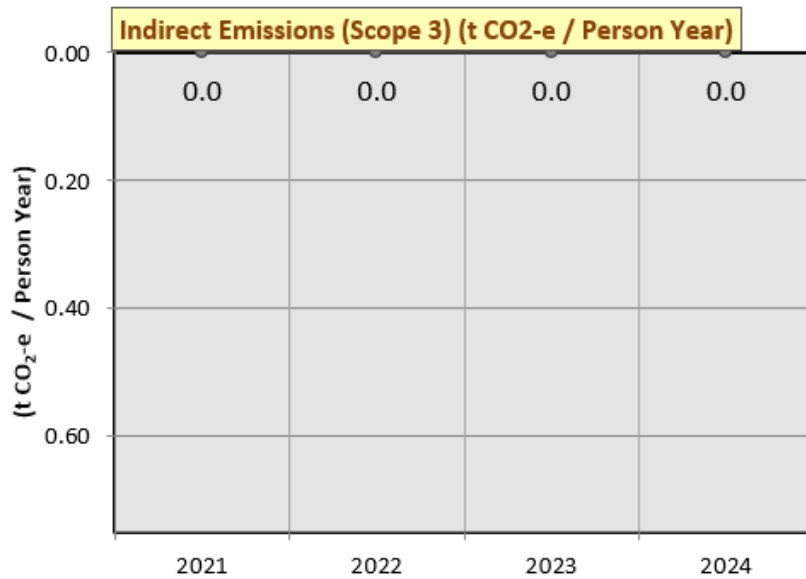
Greenhouse Gas Emissions Breakdown by Scope (t CO₂-e / Person Year)



Direct Emissions (Scope 1) (t CO₂-e / Person Year) for the year 2024 (1 January 2024 – 31 December 2024) was 3.52 t CO₂-e / Person Year.

Indirect Emissions (Scope 2) (t CO₂-e / Person Year) for the year 2024 (1 January 2024 – 31 December 2024) was 0.0 t CO₂-e / Person Year.

Indirect Emissions (Scope 3) (t CO₂-e / Person Year)

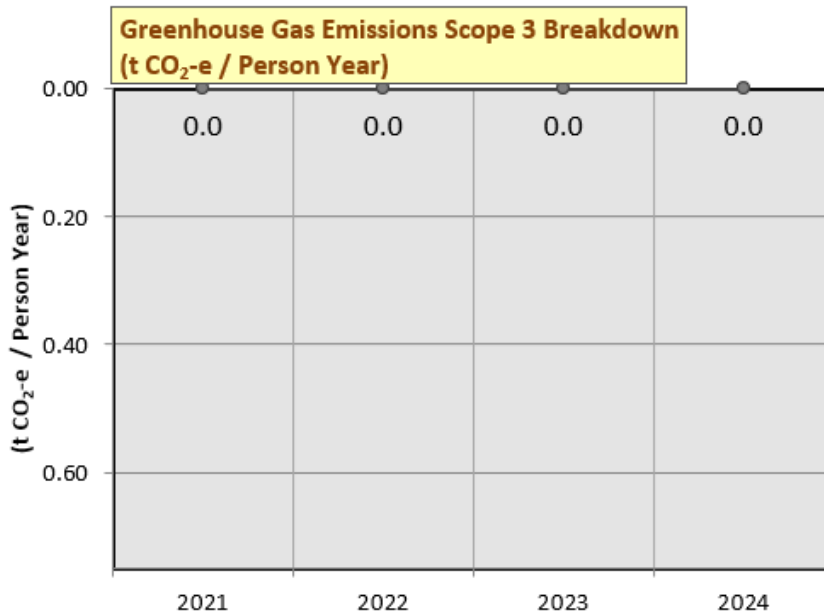


Regiao Autonoma de Madeira

Indirect Emissions (Scope 3) (t CO₂-e / Person Year) for the year 2024 (1 January 2024 – 31 December 2024) was 0.0 t CO₂-e / Person Year.

The member noted that the management of municipal solid waste is undertaken by a company within the regional government; therefore, emissions associated with waste disposal are considered direct emissions (Scope 1).

Greenhouse Gas Emissions Scope 3 Breakdown (t CO₂-e / Person Year)



Transport Indirect Emissions (Scope 3) (kg CO₂-e / Person Year)
 Waste Indirect Emissions (Scope 3) (kg CO₂-e / Person Year)

Waste Indirect Emissions (Scope 3) (t CO₂-e / Person Year) for the year 2024 (1 January 2024 – 31 December 2024) was 0.0 t CO₂-e / Person Year.

The member noted that the management of municipal solid waste is undertaken by a company within the regional government; therefore, emissions associated with waste disposal are considered direct emissions (Scope 1).

Direct Emissions (Scope 1)**Stationary Fuel Combustion****2024**

Type	Quantity	Unit	Energy Consumption (MJ)	CO ₂ Emission Estimate (t CO ₂ -e)	CH ₄ Emission Estimate (t CO ₂ -e)	N ₂ O Emission Estimate (t CO ₂ -e)	Total Emission Estimate (t CO ₂ -e)
Natural Gas Liquid - Propane	10,921,923	kilograms (kg)	508,197,077.2	29,363.6	127.0	71.1	29,566.9
Natural Gas Liquid - Butane	4,921,507	kilograms (kg)	228,997,720.7	13,231.5	57.2	32.1	13,323.1
Natural gas	30,708,950	kilograms (kg)	1,637,708,303.5	82,687.9	212.9	32.8	82,933.3
Heavy fuel oil	111,642,853	kilograms (kg)	4,735,889,824.3	348,230.0	1,278.7	710.4	350,219.1
subtotal			7,110,792,925.7	473,513.0	1,675.8	846.4	476,042.4

Mobile Fuel Combustion (road)**2024**

Type	Quantity	Unit	Energy Consumption (MJ)	CO ₂ Emission Estimate (t CO ₂ -e)	CH ₄ Emission Estimate (t CO ₂ -e)	N ₂ O Emission Estimate (t CO ₂ -e)	Total Emission Estimate (t CO ₂ -e)
Motor gasoline	56,677,439	litres (L)	1,938,508,945.5	127,621.7	1,289.1	3,904.2	132,807.2
Diesel	109,169,688	litres (L)	4,140,369,587.1	291,461.3	430.6	4,065.8	295,953.6
LPG	167,632	kilograms (kg)	8,721,893.0	495.3	13.6	0.4	509.4
subtotal			6,087,600,425.6	419,578.3	1,733.3	7,970.4	429,270.2

Mobile Fuel Combustion (air)**2024**

Type	Quantity	Unit	Energy Consumption (MJ)	CO ₂ Emission Estimate (t CO ₂ -e)	CH ₄ Emission Estimate (t CO ₂ -e)	N ₂ O Emission Estimate (t CO ₂ -e)	Total Emission Estimate (t CO ₂ -e)
Jet Kerosene	14,329,818	litres (L)	524,198,355.8	35,606.2	5.2	262.1	35,876.1

Mobile Fuel Combustion (water)**2024**

Type	Quantity	Unit	Energy Consumption (MJ)	CO ₂ Emission Estimate (t CO ₂ -e)	CH ₄ Emission Estimate (t CO ₂ -e)	N ₂ O Emission Estimate (t CO ₂ -e)	Total Emission Estimate (t CO ₂ -e)
Diesel	1,627,842	litres (L)	61,737,535.7	4,346.0	11.7	30.9	4,388.3

Onsite Wastewater Treatment**2024**

Type	Number of people serviced by system per day	Number of days in use	CO ₂ Emission Estimate (t CO ₂ -e)	CH ₄ Emission Estimate (t CO ₂ -e)	N ₂ O Emission Estimate (t CO ₂ -e)	Total Emission Estimate (t CO ₂ -e)
Septic (BOD Unknown)	81,476	365	--	5,620.6	--	5,620.6
Aerobic (BOD Unknown)	210,864	365	--	8,727.9	--	8,727.9
Subtotal			--	14,348.50	--	14,348.50

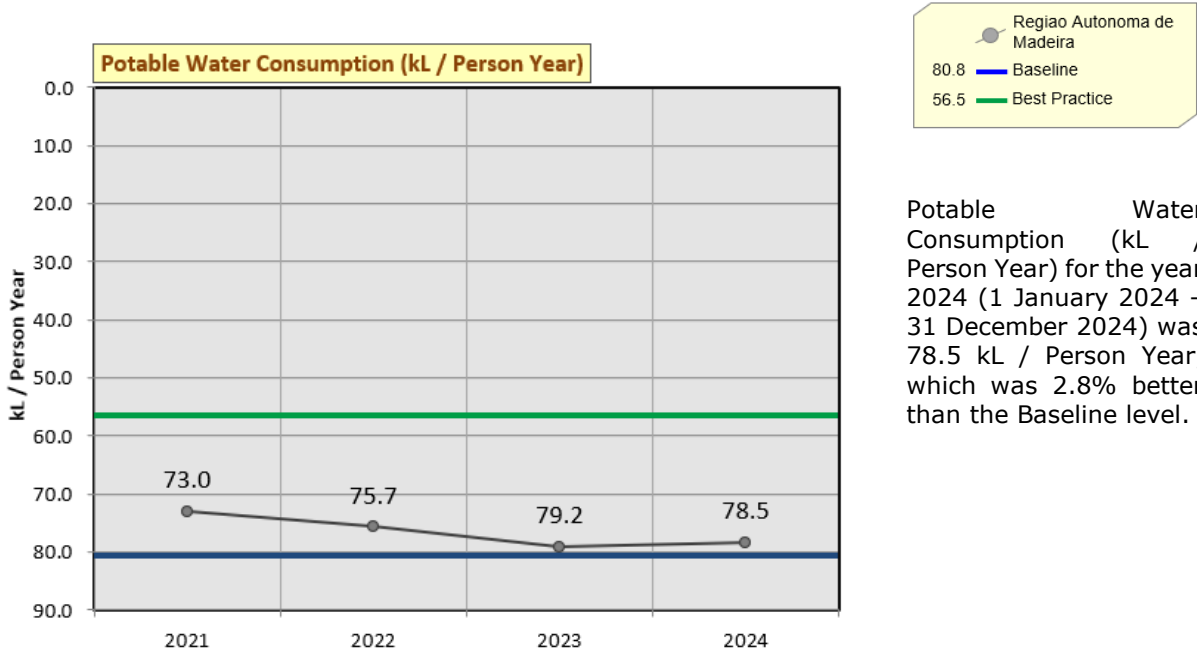
Waste Sent to Landfill**2024**

Quantity	Unit	Type of Landfill	Type of Waste	CO ₂ Emission Estimate (t CO ₂ -e)	CH ₄ Emission Estimate (t CO ₂ -e)	N ₂ O Emission Estimate (t CO ₂ -e)	Total Emission Estimate (t CO ₂ -e)
1,943	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Unknown (mixed waste types)	--	2,331.6	--	2,331.6
183,948	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Inert	--	--	--	-
Subtotal				--	2,331.6	--	2,331.6

Waste Sent for Incineration							
2024							
Quantity	Unit	Type of Incineration Technology	Type of Waste	CO ₂ Emission Estimate (t CO ₂ -e)	CH ₄ Emission Estimate (t CO ₂ -e)	N ₂ O Emission Estimate (t CO ₂ -e)	Total Emission Estimate (t CO ₂ -e)
6,929	tonnes (uncompacted)	Textiles	Continuous Incineration - Stoker	2,032.5	0.4	91.8	2,124.7
14,068	tonnes (uncompacted)	Plastics	Continuous Incineration - Stoker	38,687.0	0.8	186.4	38,874.2
4,281	tonnes (uncompacted)	Nappies	Continuous Incineration - Stoker	439.5	0.2	56.7	496.5
79,865	tonnes (uncompacted)	Unknown (mixed waste types)	Continuous Incineration - Stoker	23,427.1	4.5	1,058.2	24,489.8
subtotal				64,586.1	5.9	1,393.1	65,985.1
TOTAL				13,784,329,242.8	997,629.6	20,112.0	1,028,242.2
Indirect Emissions (Scope 2)							
TOTAL				0.0	0.0	0.0	0.0
Greenhouse Gas Emissions (Scope 1 and Scope 2)							
GRAND TOTAL				13,784,329,242.8	997,629.6	20,112.0	1,028,242.2
Indirect Emissions (Scope 3)							
TOTAL				0.0	0.0	0.0	0.0

3. Water

Potable Water Consumption (kL / Person Year) ✓

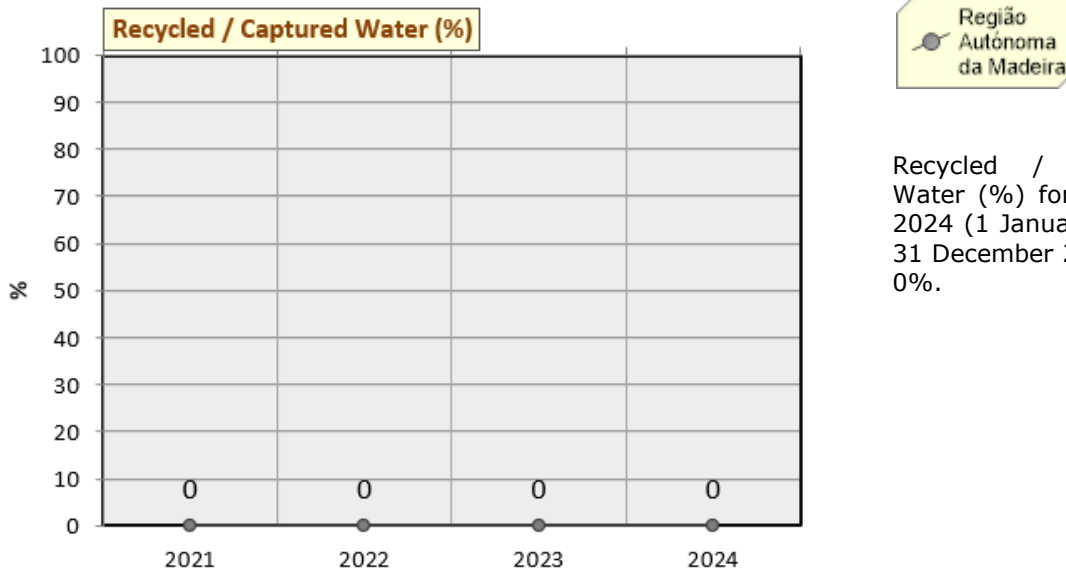


Potable Water Consumption (kL / Person Year) for the year 2024 (1 January 2024 – 31 December 2024) was 78.5 kL / Person Year, which was 2.8% better than the Baseline level.

2024

Quantity	Unit	Potable Water Consumption (kL)
22,938,954	cubic metres	22,938,954.0 kL
	TOTAL	22,938,954.0 kL

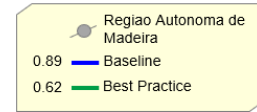
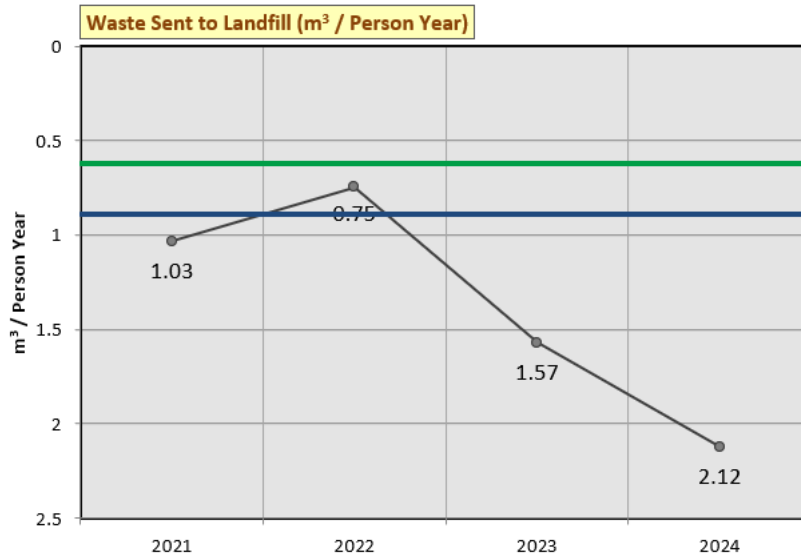
Recycled / Captured Water (%)



Recycled / Captured Water (%) for the year 2024 (1 January 2024 – 31 December 2024) was 0%.

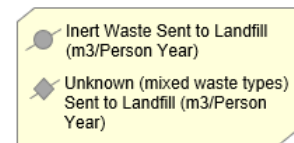
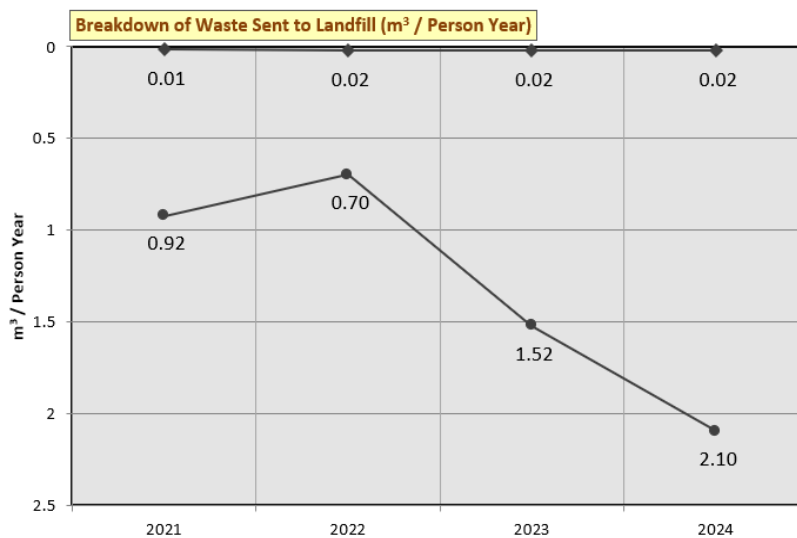
4. Waste

Waste Sent to Landfill (m³ / Person Year) ✕



Waste Sent to Landfill (m³ / Person Year) for the year 2024 (1 January 2024 - 31 December 2024) was 2.12 m³ / Person Year, which was 138.2% below the Baseline level.

Waste Sent to Landfill (m³ / Person Year)



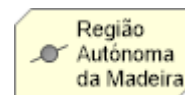
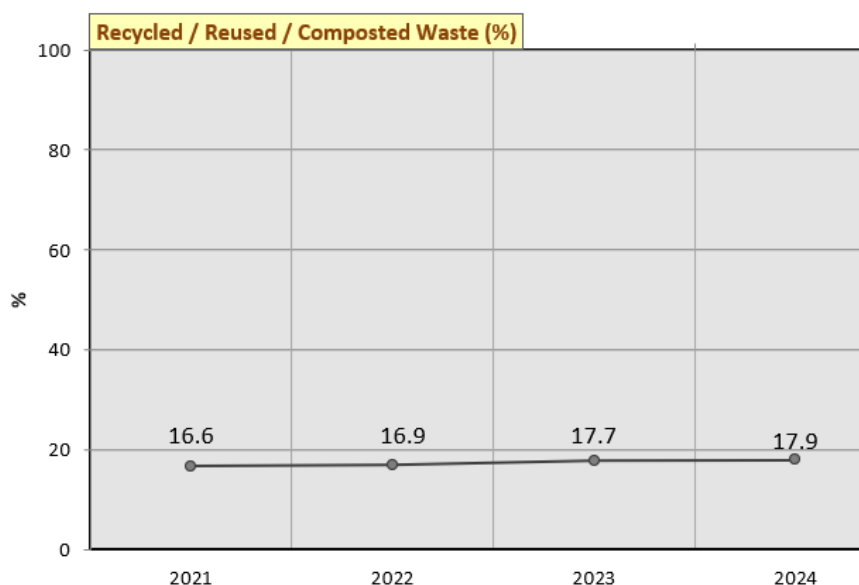
Inert Waste Sent to Landfill (m³ / Person Year) for the year 2024 (1 January 2024 - 31 December 2024) was 2.10 m³

Unknown (mixed waste types) Sent to Landfill (m³ / Person Year) for the year 2024 (1 January 2024 - 31 December 2024) was 0.02 m³

2024

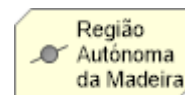
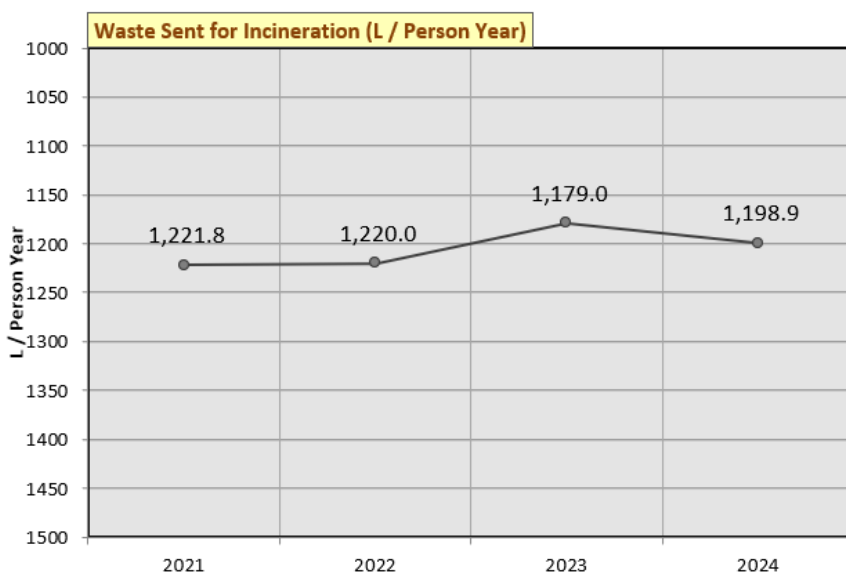
Quantity	Unit	Type of Landfill	Type of Waste	Waste Sent to Landfill (m ³)
1,943	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Unknown (mixed waste types)	6,476.7
183,948	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Inert	613,160
Total				619,636.7 m³

Recycled / Reused / Composted Waste (%)



Recycled / Reused / Composted Waste (%) for the year 2024 (1 January 2024 - 31 December 2024) was 17.9%.

Waste Sent for Incineration (L / Person Year)



Waste Sent for Incineration (L / Person Year) for the year 2024 (1 January 2024 - 31 December 2024) was 1,198 L / Person Year.

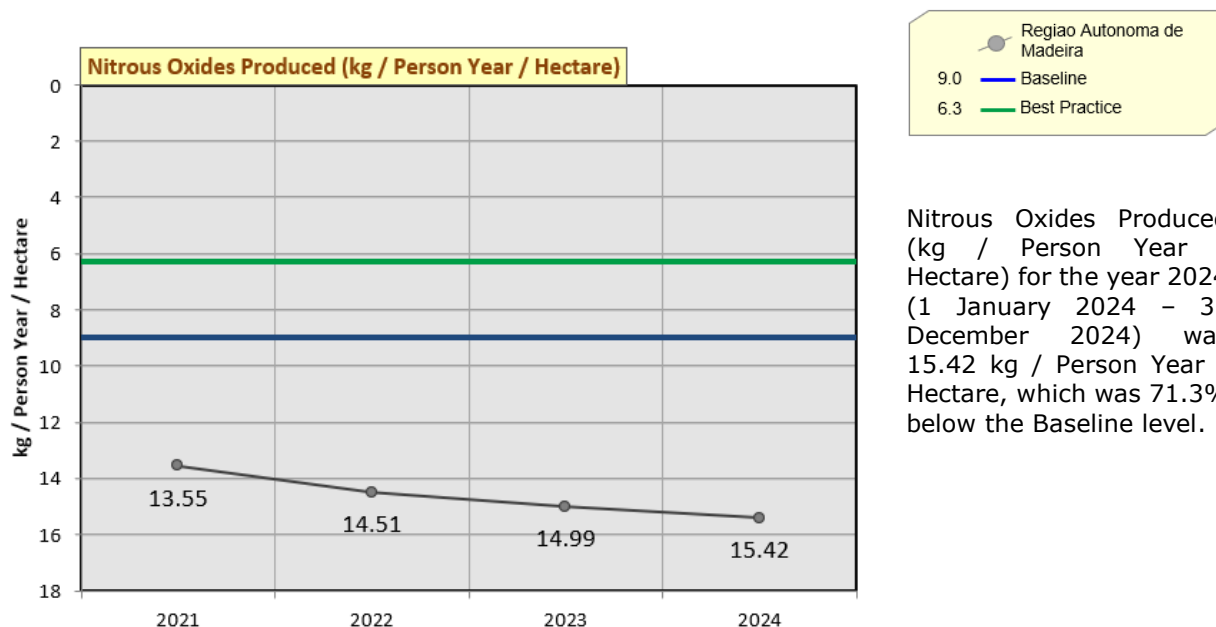
2024

Quantity	Unit	Type of Incineration Technology	Type of Waste	Waste Sent for Incineration (m ³)
6,929	tonnes (uncompacted)	Continuous Incineration - Stoker	Textiles	23,096.7 m ³
14,068	tonnes (uncompacted)	Continuous Incineration - Stoker	Plastics	46,893.3 m ³
4,281	tonnes (uncompacted)	Continuous Incineration - Stoker	Nappies	14,270.0 m ³

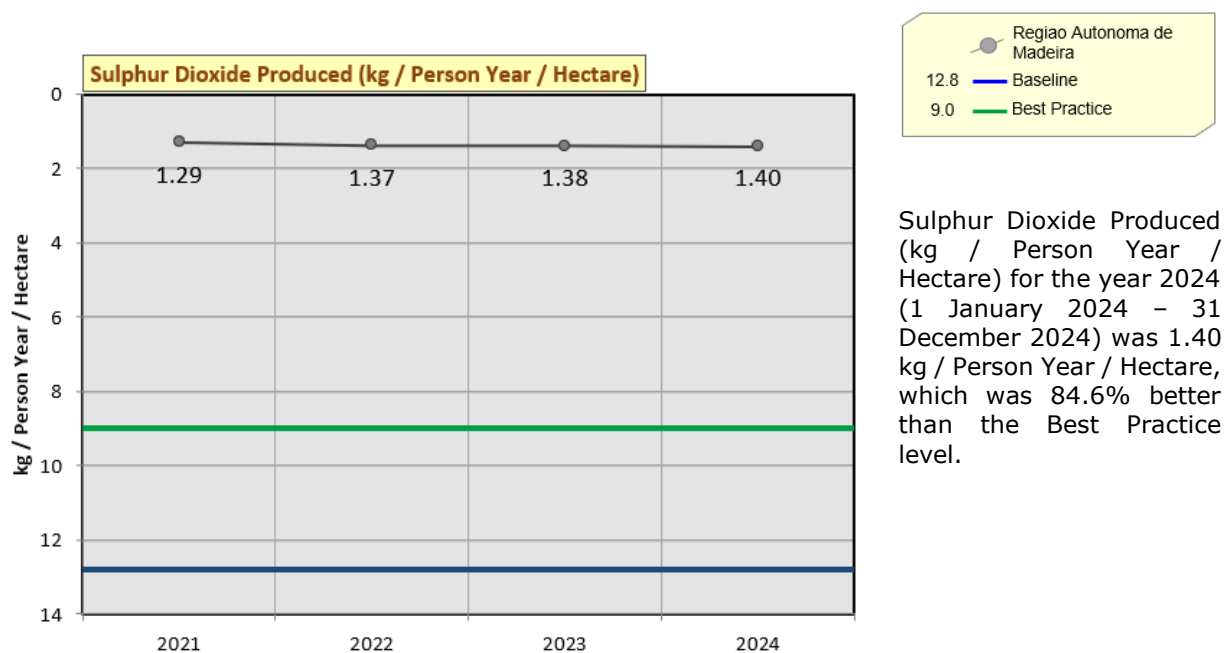
79,865	tonnes (uncompacted)	Continuous Incineration - Stoker	Unknown (mixed waste types)	266,216.7 m ³
			TOTAL	350,476.67 m³

5. Sector Specific

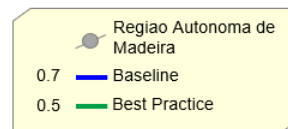
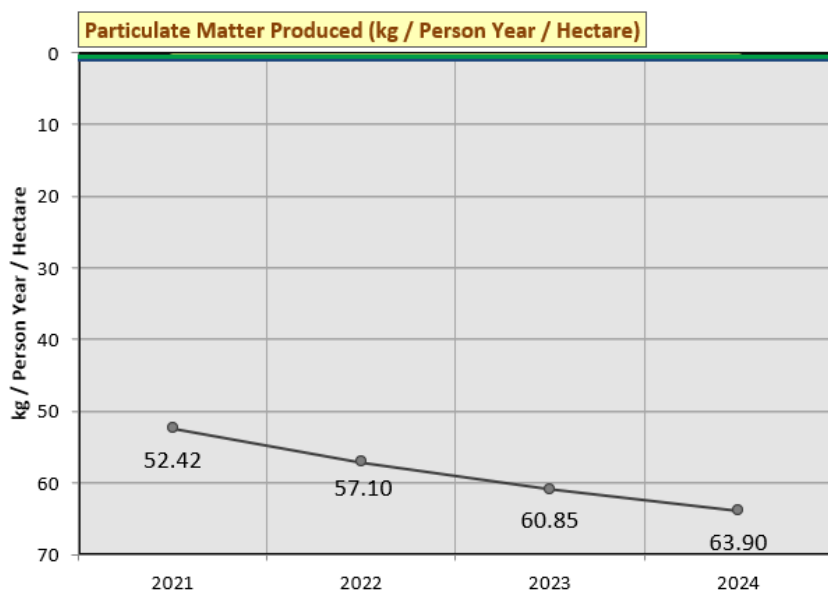
Nitrous Oxides Produced (kg / Person Year / Hectare) ✕



Sulphur Dioxide Produced (kg / Person Year / Hectare) ★

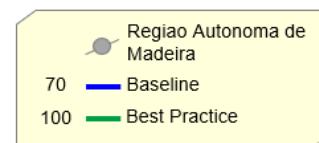
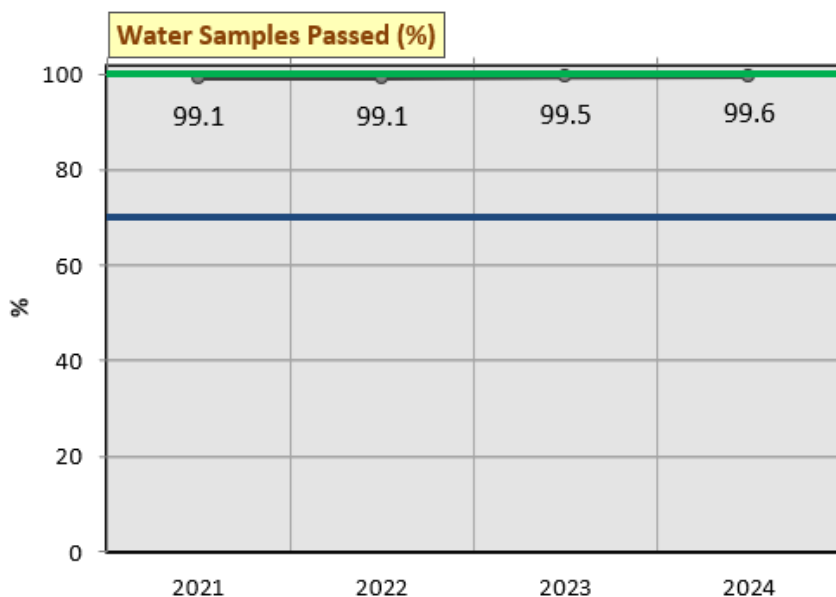


Particulate Matter Produced (kg / Person Year / Hectare) ✕



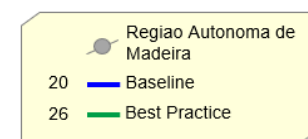
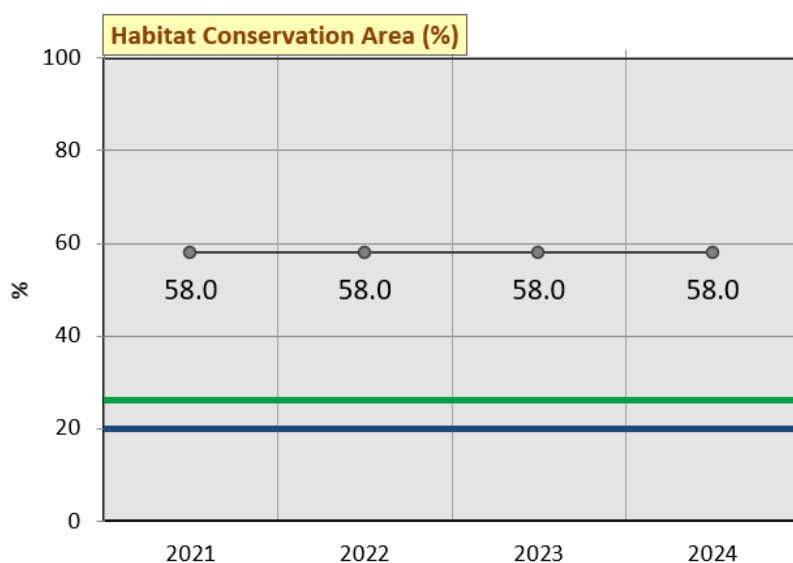
Particulate Matter Produced (kg / Person Year / Hectare) for the year 2024 (1 January 2024 - 31 December 2024) was 63.90 kg / Person Year / Hectare, which was 9028.2% below the Baseline level.

Water Samples Passed (%) ✓



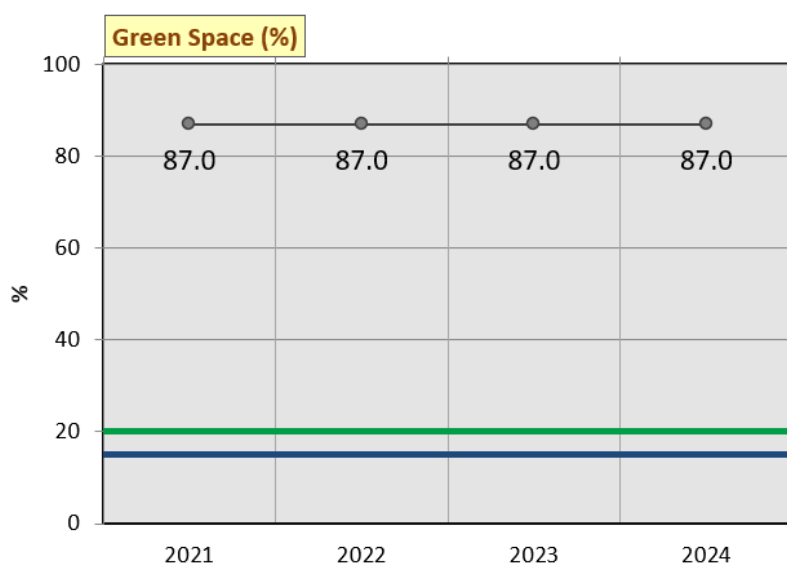
Water Samples Passed (%) for the year 2024 (1 January 2024 - 31 December 2024) was 99.6%, which was 29.6% better than the Baseline level.

Habitat Conservation Area (%) ★



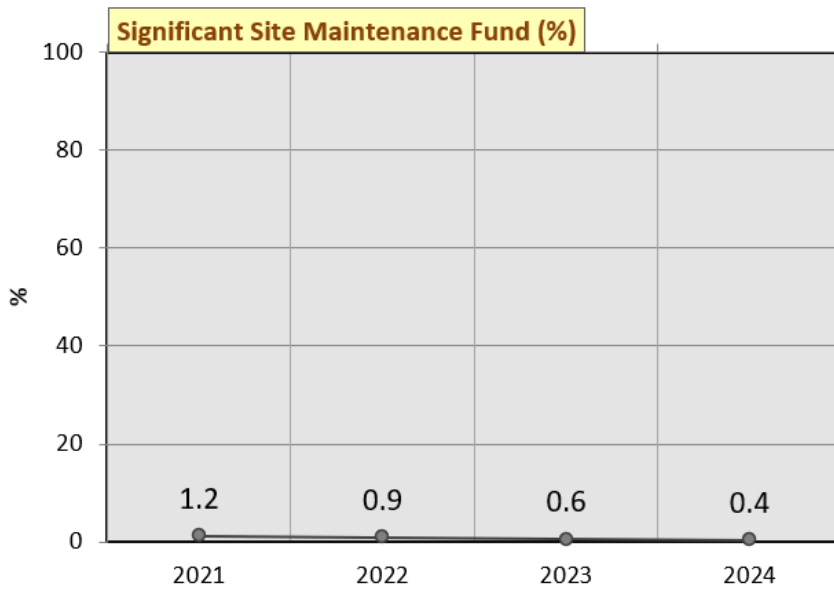
Habitat Conservation Area (%) for the year 2024 (1 January 2024 – 31 December 2024) was 58.0%, which was 32.0% better than the Best Practice level.

Green Space (%) ★



Green Space (%) for the year 2024 (1 January 2024 – 31 December 2024) was 87.0%, which was 67.0% better than the Best Practice level.

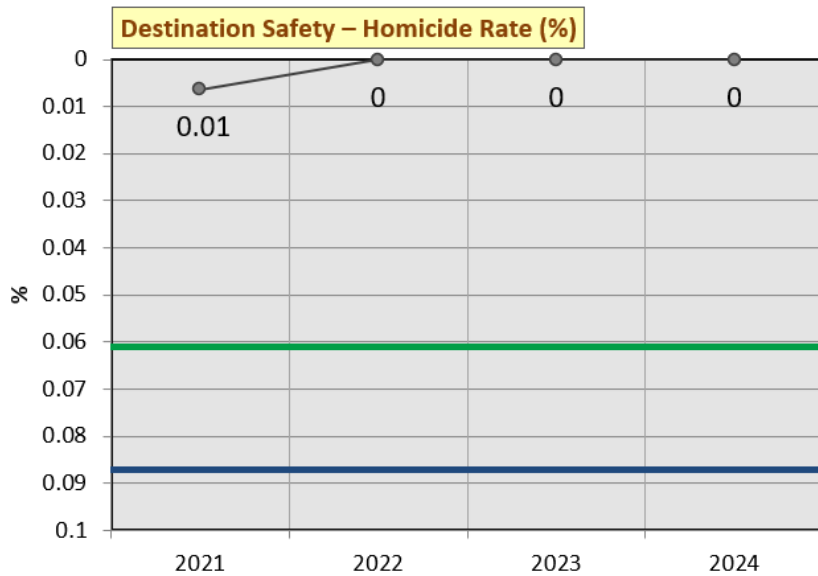
Significant Site Maintenance Fund (%)



Regiao Autonoma de Madeira

Significant Site Maintenance Fund (%) for the year 2024 (1 January 2024 - 31 December 2024) was 0.4%.

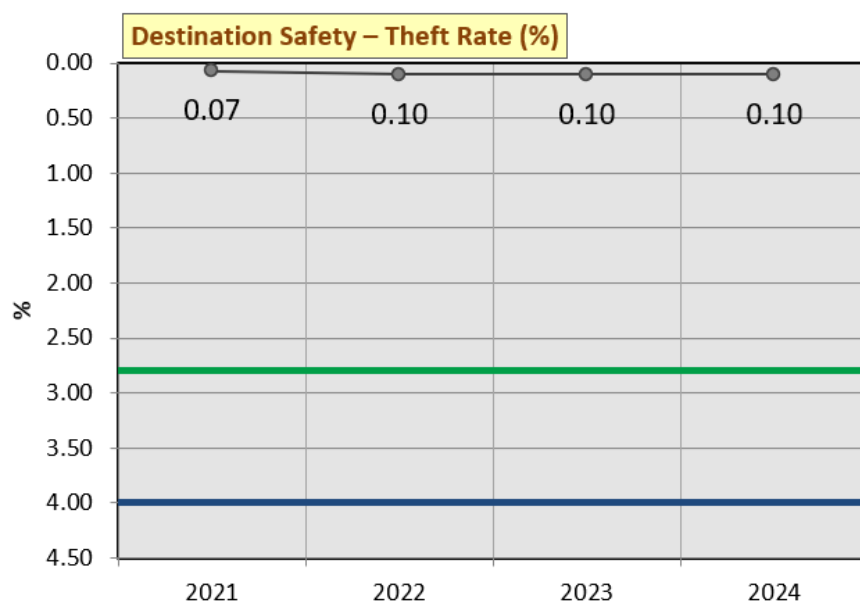
Destination Safety – Homicide Rate (%) ★



Regiao Autonoma de Madeira
 0.087 — Baseline
 0.061 — Best Practice

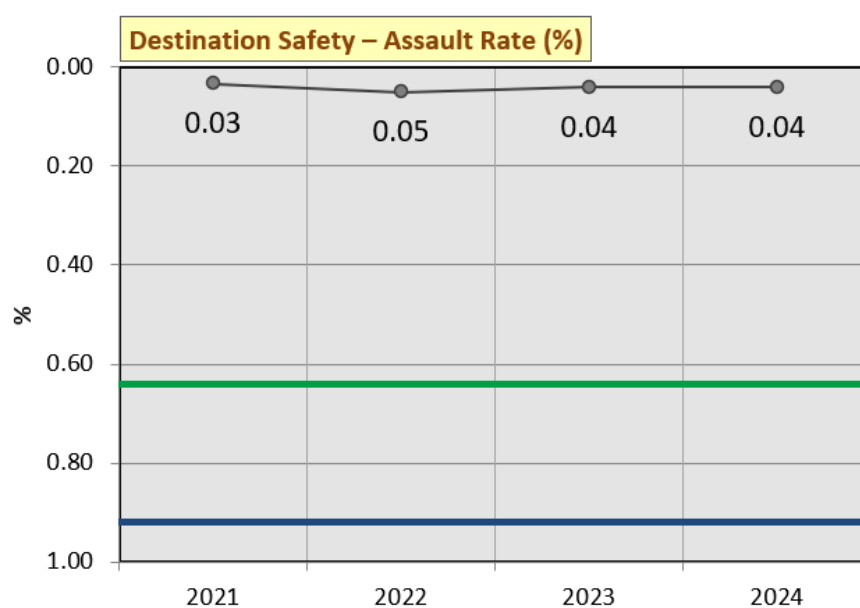
Destination Safety – Homicide Rate (%) for the year 2024 (1 January 2024 - 31 December 2024) was 0%, which was 0.061% better than the Best Practice level.

Destination Safety – Theft Rate (%) ★



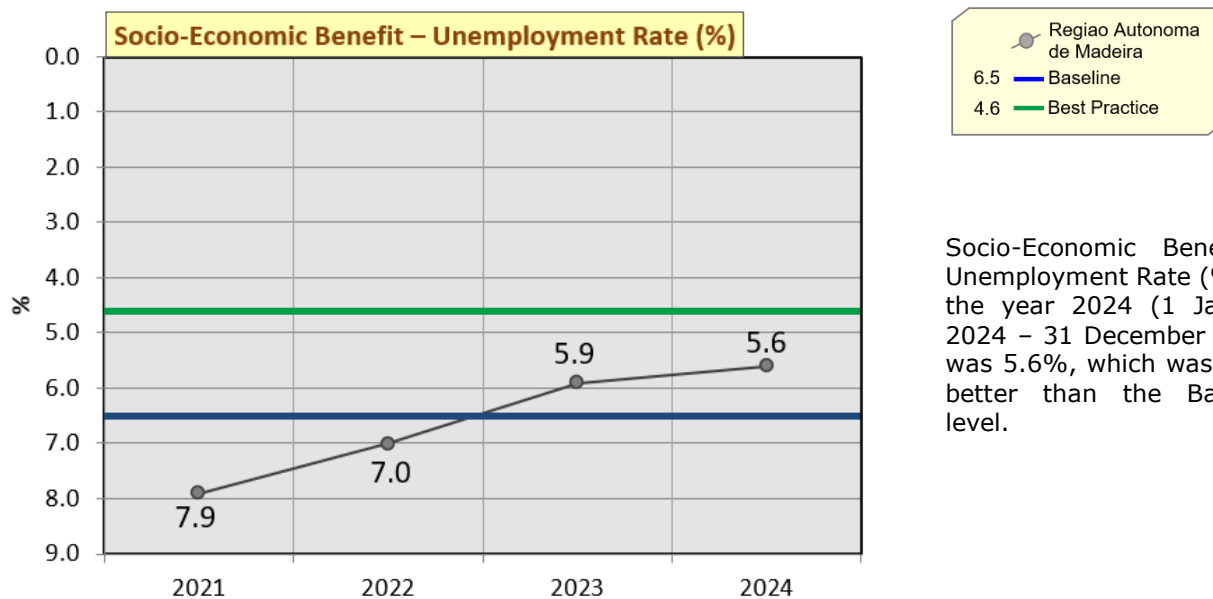
Destination Safety – Theft Rate (%) for the year 2024 (1 January 2024 – 31 December 2024) was 0.10%, which was 2.7% better than the Best Practice level.

Destination Safety – Assault Rate (%) ★



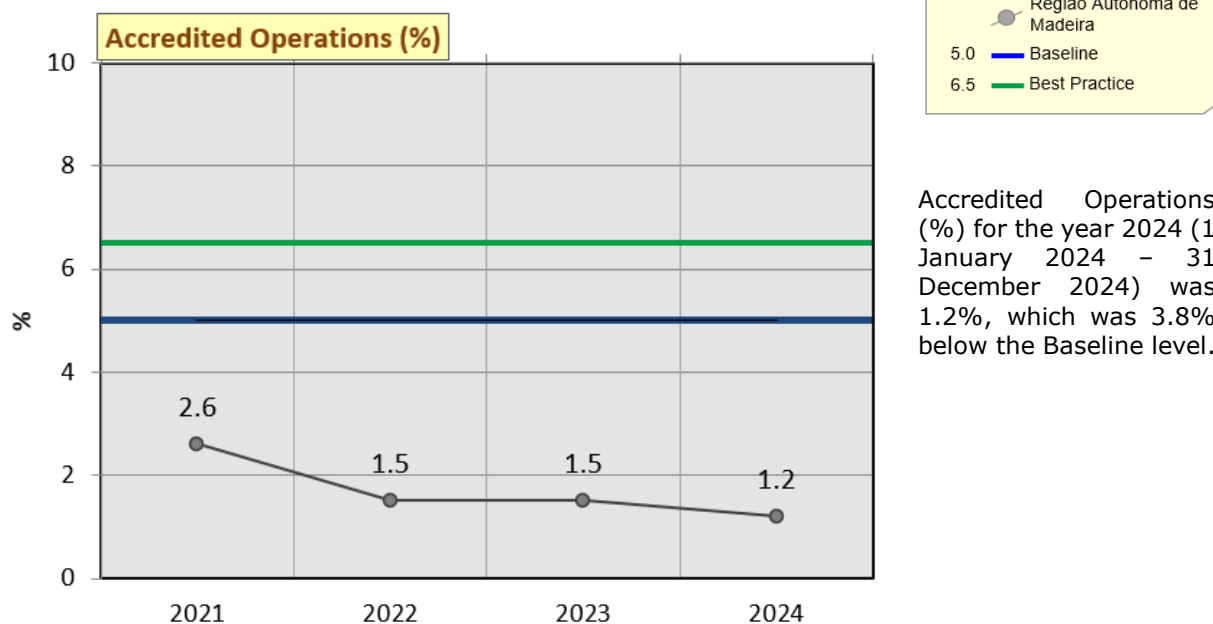
Destination Safety – Assault Rate (%) for the year 2024 (1 January 2024 – 31 December 2024) was 0.04%, which was 0.6% better than the Best Practice level.

Socio-Economic Benefit – Unemployment Rate (%) ✓



Socio-Economic Benefit – Unemployment Rate (%) for the year 2024 (1 January 2024 – 31 December 2024) was 5.6%, which was 0.9% better than the Baseline level.

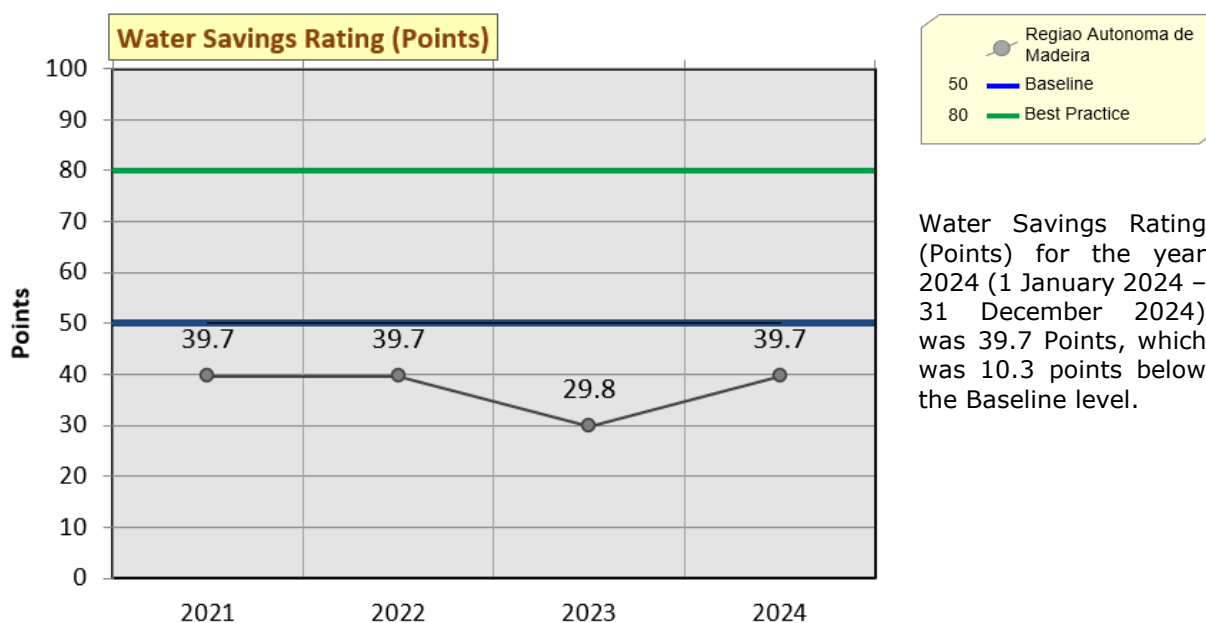
Accredited Operations (%) ✗



Accredited Operations (%) for the year 2024 (1 January 2024 – 31 December 2024) was 1.2%, which was 3.8% below the Baseline level.

6. Water Savings

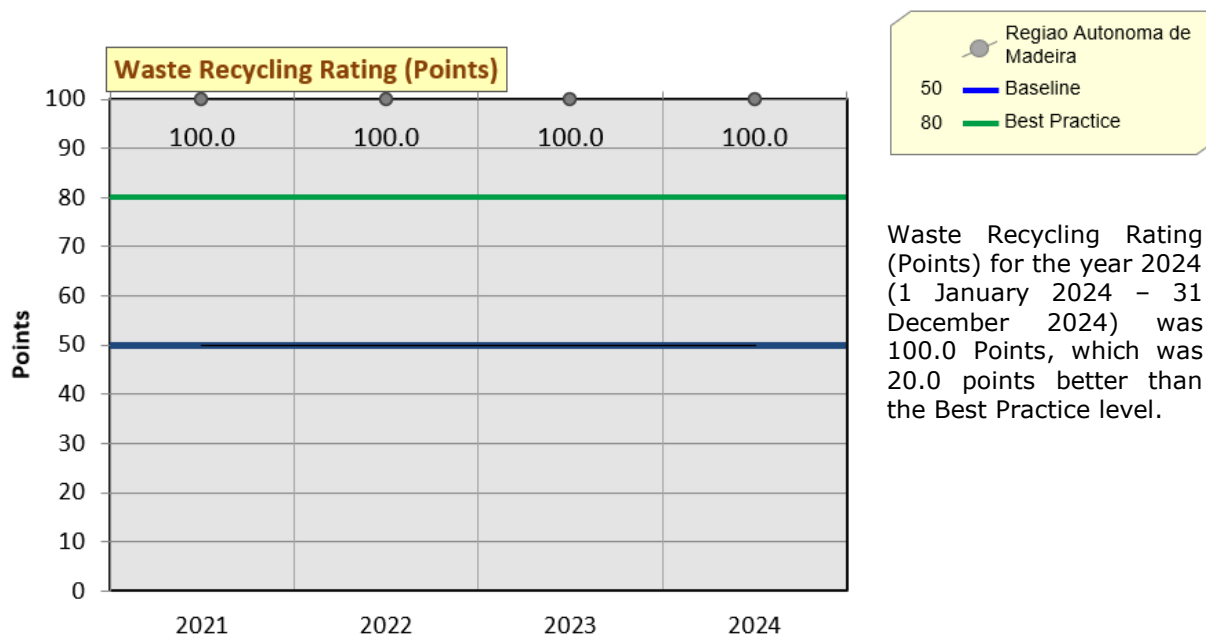
Water Savings Rating (Points) ✕



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

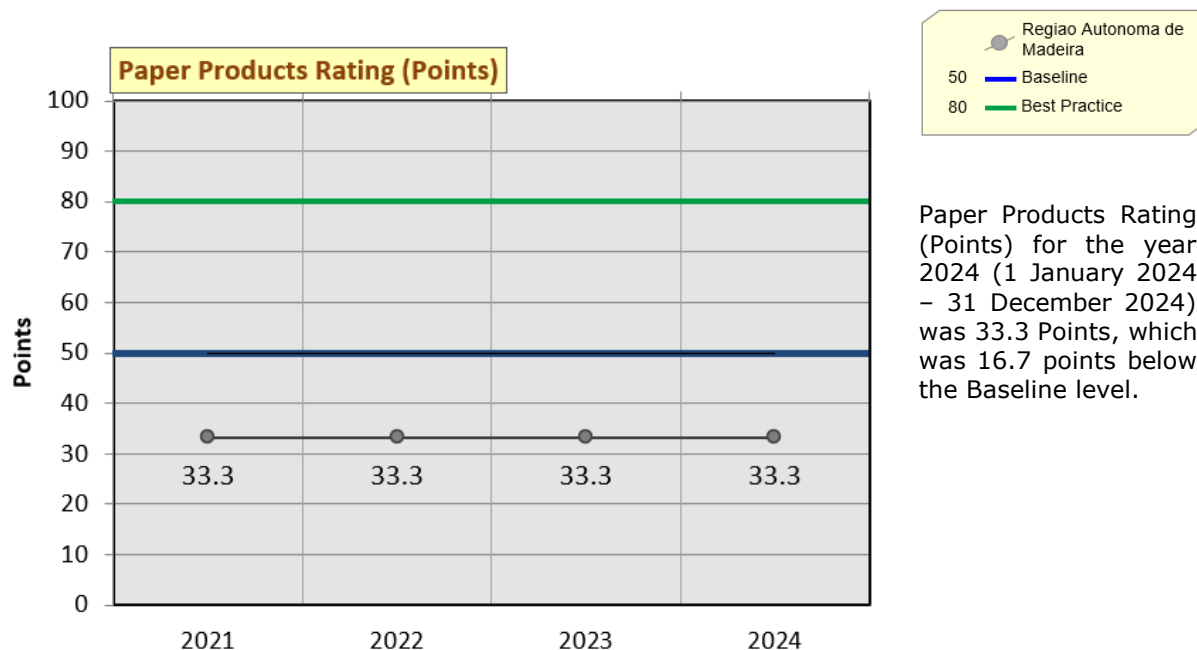
Waste Recycling Rating (Points) ★



Waste Recycling 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

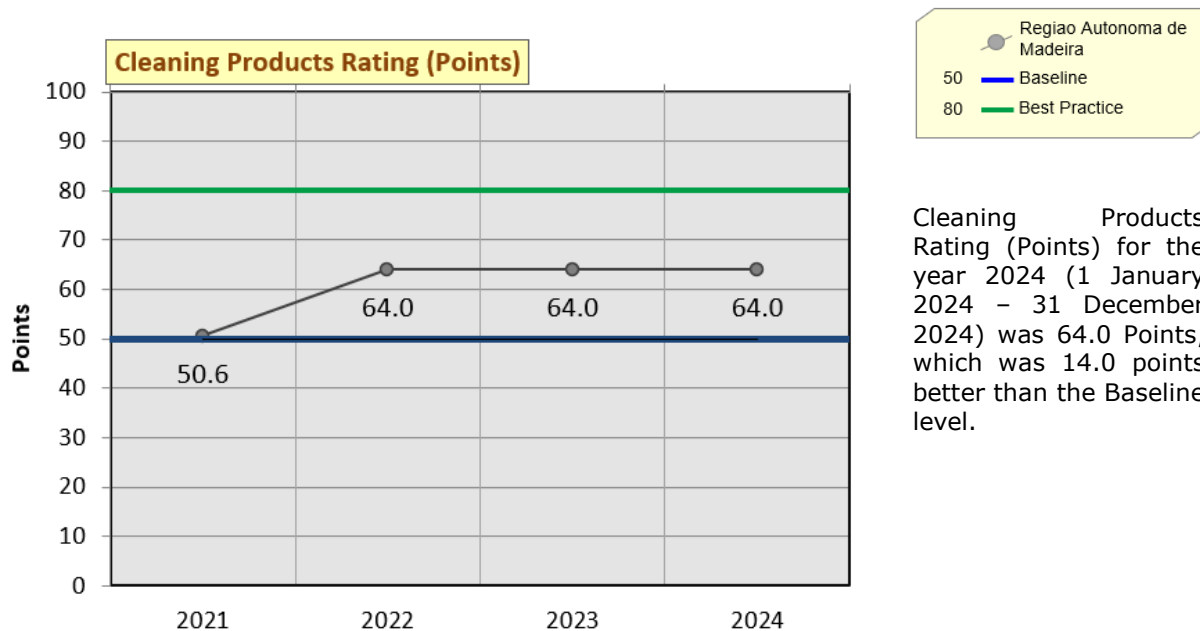
Paper Products Rating (Points) ✕



Paper Products 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) ✓

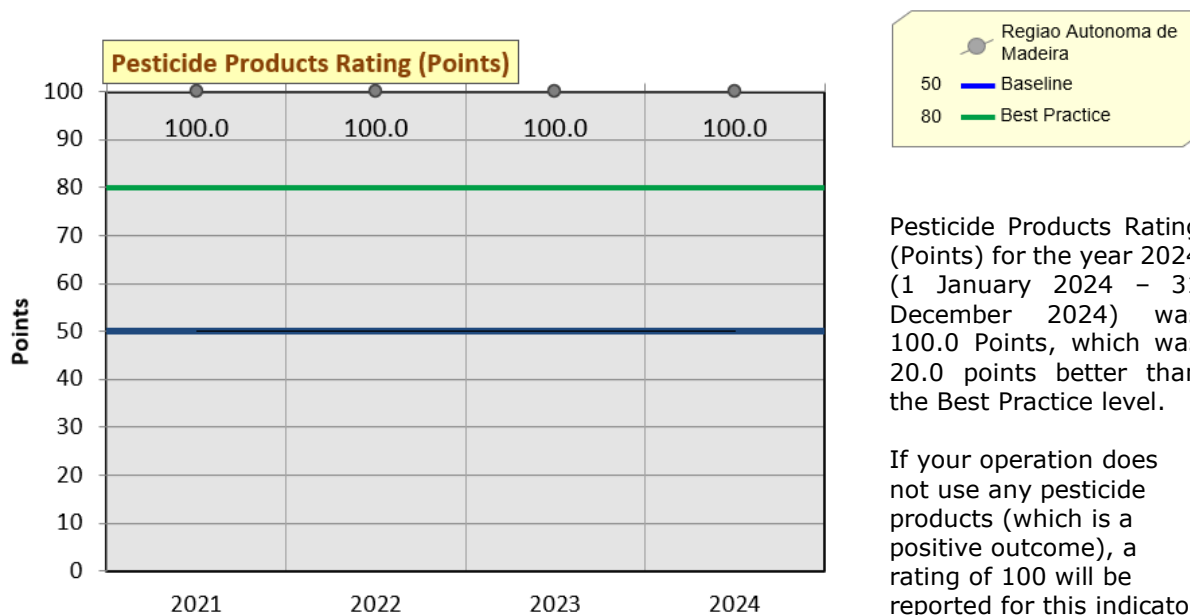


Cleaning Products Rating (Points) for the year 2024 (1 January 2024 - 31 December 2024) was 64.0 Points, which was 14.0 points better than the Baseline level.

Cleaning Products Measures	Frequency / Percentage Rating	Cleaning Products Rating (Points)
Hard floor cleaners	40-59%	65.1 Points
Carpet cleaners	Not Relevant / Not Available	100.0 Points
Interior surface cleaners	20-39%	58.8 Points
External surface cleaners	Not Relevant / Not Available	100.0 Points
Glass cleaners	0%	0.0 Points
Detergents	20-39%	58.8 Points
Personal hygiene	40-59%	65.1 Points
	Overall Rating:	64.0 Points

10. Pesticides

Pesticide Products Rating (Points) ★



Pesticide Products Rating (Points) for the year 2024 (1 January 2024 - 31 December 2024) was 100.0 Points, which was 20.0 points better than the Best Practice level.

If your operation does not use any pesticide products (which is a positive outcome), a rating of 100 will be reported for this indicator on the basis that no use represents a Best Practice achievement.

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

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

CONCLUSION AND RECOMMENDATIONS

Congratulations, **Região Autónoma da Madeira** has met the requirements to be recognised as an EarthCheck Benchmarked Destination.

In addition to having a Sustainability Policy in place, 14 of the assessed EarthCheck indicators are at or above the Baseline level.

From the benchmarking data provided, seven indicators, *Habitat Conservation Area, Sulphur Dioxide Produced, Green Space, Destination Safety - Homicide Rate, Destination Safety - Theft Rate, Waste Recycling Rating, and Pesticide Products Rating*, are at or above the Best Practice level.

The six indicators that fell below the Baseline level were *Waste Sent to Landfill, Nitrous Oxides Produced, Particulate Matter Produced, Accredited Operations, Water Savings Rating, and Paper Products Rating*.

The Waste Sent to Landfill was recorded at 138.2% below the baseline level. The total Waste Sent to Landfill was predominantly composed of Inert (Concrete) Waste, representing 98.95% of the total, with the remaining 1.05% classified as Unknown (mixed waste types).

The values for Nitrous Oxides Produced and Particulate Matter Produced were below the Baseline level. **Região Autónoma da 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 3.8% worse than the Baseline level. **Região Autónoma da 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. **Região Autónoma da 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). **Região Autónoma da 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. **Região Autónoma da 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.

Região Autónoma da 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 **Região Autónoma da 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 line with EarthCheck Policy this would enable **Região Autónoma da Madeira** to continue to meet the benchmarking requirements of the EarthCheck program.

APPENDIX

COMMENTS REGARDING WASTE EMISSIONS

Região Autónoma da Madeira provided the following details upon submitting their data:

"Emissions associated with waste incineration and landfilling should be reported under Scope 1, as these are direct emissions. This is because all waste treatment operations take place within the Autonomous Region of Madeira and the waste therefore remains within the region. With regard to incineration, it is important to note that waste undergoes energy recovery at the Meia Serra facility. This process should be understood not merely as incineration, but as an energy recovery system that captures heat for electricity generation.

In the Autonomous Region of Madeira, the management of municipal solid waste, including incineration and landfill disposal, is undertaken by ARM – Águas e Resíduos da Madeira, S.A., a company within the Regional Public Business Sector, operating under the authority of the Regional Government of Madeira.

Given that both ARM and the Destination Management Organisation (DMO) form part of the regional governmental structure, in our opinion that waste management is the direct responsibility of the destination itself, rather than that of an independent third party. It is also relevant to note that, as an island territory, the waste remains within the region. Accordingly, these services are provided by a public entity under the jurisdiction of the regional authority."

Therefore, the Benchmarking Assessors ensured that waste emissions were categorised as direct emissions, as opposed to the typical scope 3. This was retroactively applied to previous years also.

WASTE SENT FOR INCINERATION

Região Autónoma da Madeira provided the following details upon submitting their data:

"The Regional Environment Directorate (DRAM) has requested an update of the incinerated waste figures based on recent regional waste characterization studies. The table below presents the values for 2021 to 2024. The main change concerns the quantity of incinerated plastic, which was previously partly included under "Other Waste." The total incinerated waste remains essentially unchanged, but a reclassification from "Other Waste" to "Plastic" was made following a more detailed analysis of the mixed waste received at Meia Serra.

The 2024 data has already been entered into MyEarthCheck; however, there appears to be a system bug that changes all categories to 'Textiles' after a new

login (see attached files). We request that the 2021–2024 figures be updated in the Benchmarking Report in accordance with the attached table.”

Waste Sent for Incineration (ton)

Type of Waste	Type of Incineration	2021 (ton)	2022 (ton)	2023 (ton)	2024 (ton)
Textiles	Continuous incineration – Stoker	4282	5144	4084	6929
Rubber and Leather	Continuous incineration – Stoker	0	0	0	0
Plastics	Continuous incineration – Stoker	10052	15053	13277	14068
Nappies	Continuous incineration – Stoker	8235	5835	4575	4281
Outros	Continuous incineration – Stoker	74394	76440	79647	79865
TOTAL		96 963	102 472	101 582	105 143

Therefore, the Benchmarking Assessors updated the figures accordingly. The exiting unit of tonnes (uncompacted) was maintained.

WASTE SENT TO LANDFILL

Região Autónoma da Madeira provided the following details upon submitting their data:

“As reporting on construction and demolition waste is now required, we have compiled the data for waste sent to landfill and waste diverted for recovery for the years 2021 to 2024, as shown in the table below.

Since the MyEarthCheck platform does not currently include a specific category for this type of waste within the landfill section, we would appreciate your guidance on where the 2024 data should be entered, bearing in mind that this waste is predominantly inert and non-hazardous.

For the previous years, we kindly ask whether the values already reported can be adjusted on your side, as we do not have the ability to amend historical submissions on the platform.”

In tonnes	2021	2022	2023	2024
Sent to landfill (uncompacted waste, covered landfill)	80 953	61 169	133 571	183 948
Diverted for recovery	21	829	647	19 249
Total CDW generated	80 974	61 998	134 218	203 197

Therefore, the Benchmarking Assessors added the top row as Inert waste sent to landfill, for previous periods.

RECYCLED / REUSED / COMPOSTED WASTE

Região Autónoma da Madeira provided the following details upon submitting their data:

"The Regional Directorate for the Environment also holds data on used tyres generated in the region, all of which are fully diverted for recovery. Although these quantities are relatively small when compared to total waste generation, we would like this data to be included in the Benchmarking Report going forward. Including this information results in a slight increase in the overall recycling rates, as shown below. For 2024, a recycling rate of 17,9% has already been entered on MyEarthCheck. We would therefore appreciate it if the figures for 2021, 2022 and 2023 could be updated accordingly in the Benchmarking Report."

	2021	2022	2023	2024
% of waste recycled, reused or composted	16,6%	16,9%	17,7%	17,9%

Therefore, the Benchmarking Assessors amended the past data accordingly.



EARTHCHECK

Benchmarks Assessed by EarthCheck

SUMMARY OF SUPPLIED BENCHMARKING DATA

Activity Measures

Person Years	292,339
Total Destination Area	80,110

Supplied Benchmarking Data

Energy

Energy Consumption (GJ / Person Year)

Supplied	14,744,622.0 GJ
Calculated	50.44 GJ / Person Year
Baseline	55.6 GJ / Person Year
Best Practice	38.9 GJ / Person Year
Difference	9.2% better than the Baseline level

Green Power (Purchased Electricity) (%)

Supplied	0%
Calculated	0%

Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO₂-e / Person Year)

Supplied	1,028,242.1 t CO ₂ -e
Calculated	3.52 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	12.1% better than the Baseline level

Direct Emissions (Scope 1) (t CO₂-e / Person Year)

Supplied	1,028,242.1 t CO ₂ -e
Calculated	3.52 t CO ₂ -e / Person Year

Indirect Emissions (Scope 2) (t CO₂-e / Person Year)

Supplied	0.0 t CO ₂ -e
Calculated	0.0 t CO ₂ -e / Person Year

Indirect Emissions (Scope 3) (t CO₂-e / Person Year)

Supplied	0.0 t CO ₂ -e
Calculated	0.0 t CO ₂ -e / Person Year

Waste Indirect Emissions (Scope 3) (kg CO₂-e / Person Year)

Supplied	0.0 t CO ₂ -e
Calculated	0.0 t CO ₂ -e / Person Year

Water

Potable Water Consumption (kL / Person Year)

Supplied	22,938,954.0 kL
Calculated	78.47 kL / Person Year
Baseline	80.8 kL / Person Year
Best Practice	56.5 kL / Person Year
Difference	2.8% better than the Baseline level

Recycled / Captured Water (%)

Supplied	0%
Calculated	0%

Waste

Waste Sent to Landfill (m³ / Person Year)

Supplied	619,636.7 m ³
Calculated	2.12 m ³ / Person Year
Baseline	0.89 m ³ / Person Year
Best Practice	0.62 m ³ / Person Year
Difference	138.2% below the Baseline level

Recycled / Reused / Composted Waste (%)

Supplied	17.9%
Calculated	17.9%

Waste Sent for Incineration (m³ / Person Year)

Supplied	350,476.7 m ³
Calculated	1.2 m ³ / Person Year

Sector Specific

Nitrous Oxides Produced (kg / Person Year / Hectare)

Supplied	15.42 kg / Person Year / Hectare
Calculated	15.42 kg / Person Year / Hectare
Baseline	0.93 kg / Person Year / Hectare
Best Practice	0.65 kg / Person Year / Hectare
Difference	71.3% below the Baseline level

Sulphur Dioxide Produced (kg / Person Year / Hectare)

Supplied	1.40 kg / Person Year / Hectare
Calculated	1.40 kg / Person Year / Hectare
Baseline	0.90 kg / Person Year / Hectare
Best Practice	0.63 kg / Person Year / Hectare
Difference	84.6% better than the Best Practice level

Particulate Matter Produced (kg / Person Year / Hectare)

Supplied	63.90 kg / Person Year / Hectare
Calculated	63.90 kg / Person Year / Hectare
Baseline	0.7 kg / Person Year / Hectare
Best Practice	0.5 kg / Person Year / Hectare
Difference	9,028.2% below the Baseline level

Water Samples Passed (%)

Supplied	99.6%
Calculated	99.6%
Baseline	70%
Best Practice	100%
Difference	29.4% better than the Baseline level

Habitat Conservation Area (%)

Supplied	58.0%
Calculated	58.0%
Baseline	20%
Best Practice	26%
Difference	32% better than the Best Practice level

Green Space (%)

Supplied	87.0%
Calculated	87.0%
Baseline	15%
Best Practice	20%
Difference	67% better than the Best Practice level

Significant Site Maintenance Fund (%)

Supplied	0.4%
Calculated	0.4%

Destination Safety – Homicide Rate (%)

Supplied	0%
Calculated	0%
Baseline	0.087%
Best Practice	0.061%
Difference	0.061% better than the Best Practice level

Destination Safety – Theft Rate (%)

Supplied	0.1%
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Calculated	0.1%
Baseline	4.0%
Best Practice	2.8%
Difference	2.7% better than the Best Practice level

Destination Safety – Assault Rate (%)

Supplied	0.04%
Calculated	0.04%
Baseline	0.92%
Best Practice	0.64%
Difference	0.6% better than the Best Practice level

Socio-Economic Benefit – Unemployment Rate (%)

Supplied	5.6%
Calculated	5.6%
Baseline	6.5%
Best Practice	4.6%
Difference	0.9% better than the Baseline level

Accredited Operations (%)

Supplied	1.2%
Calculated	1.2%
Baseline	5.0%
Best Practice	6.5%
Difference	3.8% 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	64.0 Points
Calculated	64.0 Points
Baseline	50 Points
Best Practice	80 Points
Difference	14 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 (m³) or litres (L)). These are: 1 kg (uncompacted waste) = 0.00333333 m³ or 3.33333 L and 1 kg (compacted waste) = 0.00153846 m³ 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).

Performance Metrics

EarthCheck applies a standardised methodology for the calculation and reporting of benchmarking indicators across all participating members. This includes the use of established waste density conversion factors to enable the consistent conversion of reported waste data into a common unit (m³) within the EarthCheck system.

The density factors currently applied are derived from third-party research sources and are uniformly implemented across all waste categories to ensure comparability, consistency, and integrity of results across different regions, sectors, and reporting entities. It is acknowledged that the composition and density of specific waste streams such as construction and demolition waste (CDW), may vary by region and may differ from the standardised factors applied within the EarthCheck methodology. In particular, higher densities may be observed in certain contexts, including within the Autonomous Region of Madeira.

However, for the purposes of benchmarking, a consistent conversion approach is maintained across all members and waste types. This ensures that reported performance metrics remain comparable within the global benchmarking framework.