EARTHCHECK

# BENCHMARKING ASSESSMENT REPORT

## DESTINATION BENCHMARKING

**MUNICIPIO DE MELGACO**
MELGACO, PORTUGAL

REPORT DATE: 21 April 2026

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

*The planet deserves more than half measures*

# OVERVIEW

This annual assessment of **Municipio de Melgaco** 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)<br>Green Power (Purchased Electricity) (%)[3]<br>Greenhouse Gas Emissions (Scope 1 and Scope 2) (t $CO_2$-e / Person Year)<br>Greenhouse Gas Emissions Breakdown by Scope (t $CO_2$-e / Person Year)<br>Indirect Emissions (Scope 3) (t $CO_2$-e / Person Year)<br>Greenhouse Gas Emissions Scope 3 Breakdown (t $CO_2$-e / Person Year) |
| **3** | Water | Potable Water Consumption (kL / Person Year)<br>Recycled / Captured Water (%)[3] |
| **4** | Waste | Waste Sent to Landfill ($m^3$ / Person Year)<br>Recycled / Reused / Composted Waste (%)[3] |
| **5** | Sector Specific | Nitrous Oxides Produced (kg / Person Year / Hectare)<br>Sulphur Dioxide Produced (kg / Person Year / Hectare)<br>Particulate Matter Produced (kg / Person Year / Hectare)<br>Water Samples Passed (%)<br>Habitat Conservation Area (%)<br>Green Space (%)<br>Accredited Operations (%)<br>Significant Site Maintenance Fund (%)<br>Destination Safety – Homicide Rate (%)<br>Destination Safety – Theft Rate (%)<br>Destination Safety – Assault Rate (%)<br>Socio-Economic Benefit – Unemployment Rate (%) |
| | | **Lead Agency Performance** |
| **6** | Water Saving | 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.

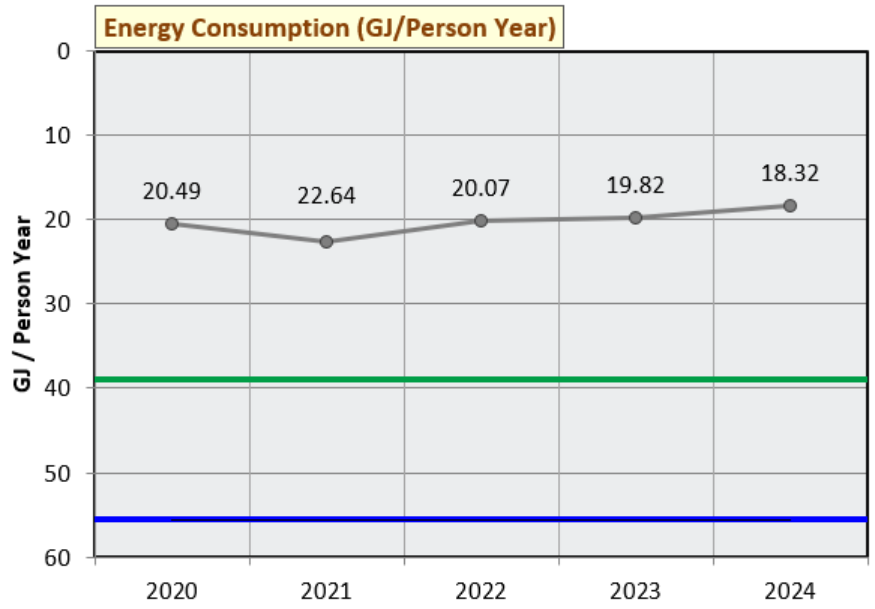
# DESTINATION PERFORMANCE BENCHMARKS

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

## 1. Policy ★

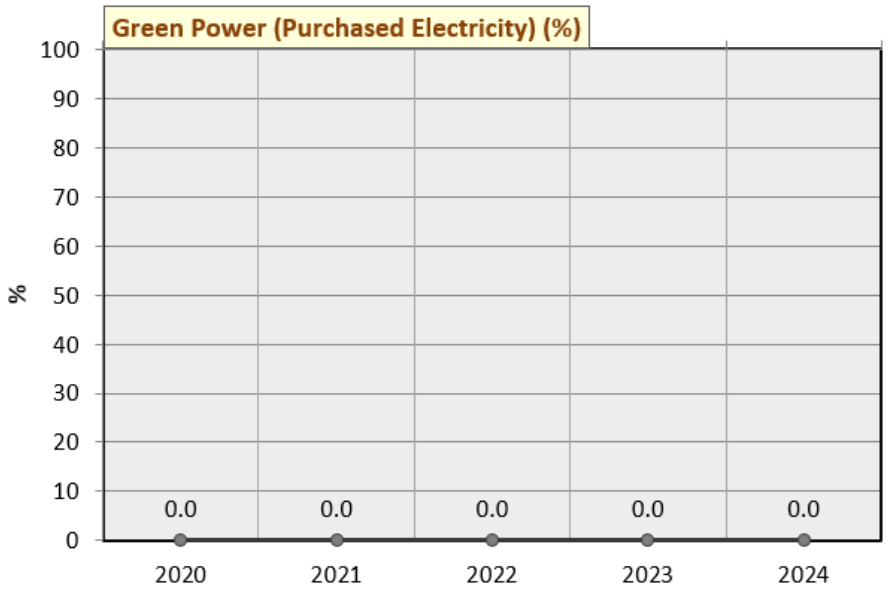
## 2. Energy

### Energy Consumption (GJ / Person Year) ★



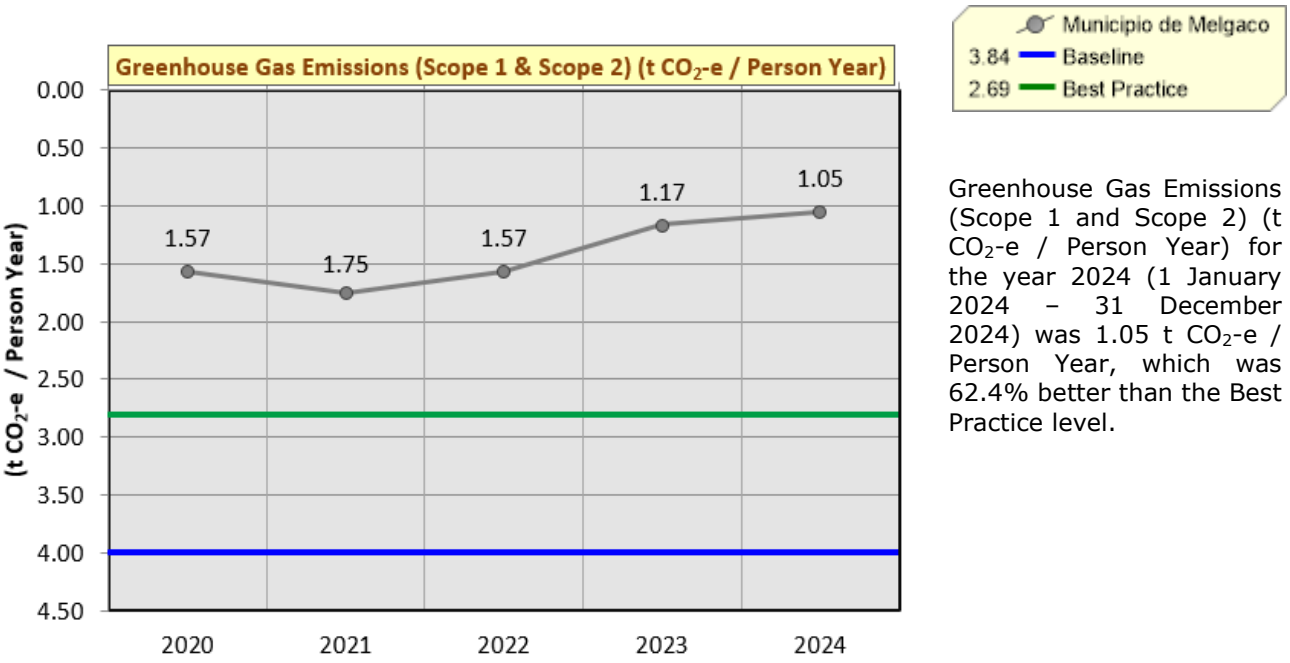

Energy Consumption (GJ / Person Year) for the year 2024 (1 January 2024 – 31 December 2024) was 18.32 GJ / Person Year, which was 52.9% better than the Best Practice level.

### Green Power (Purchased Electricity) (%)



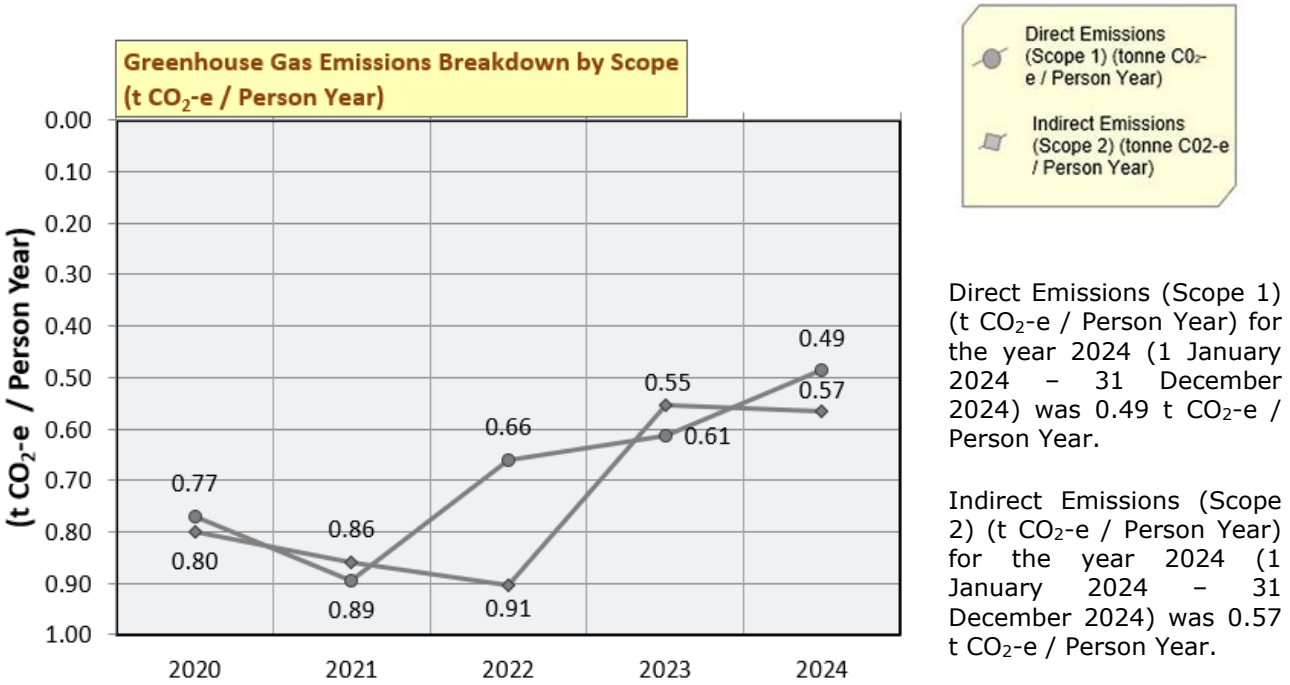

Green Power (Purchased Electricity) (%) for the year 2024 (1 January 2024 – 31 December 2024) was 0%.

## 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 2024 (1 January 2024 – 31 December 2024) was 1.05 t $CO_2$-e / Person Year, which was 62.4% better than the Best Practice level.

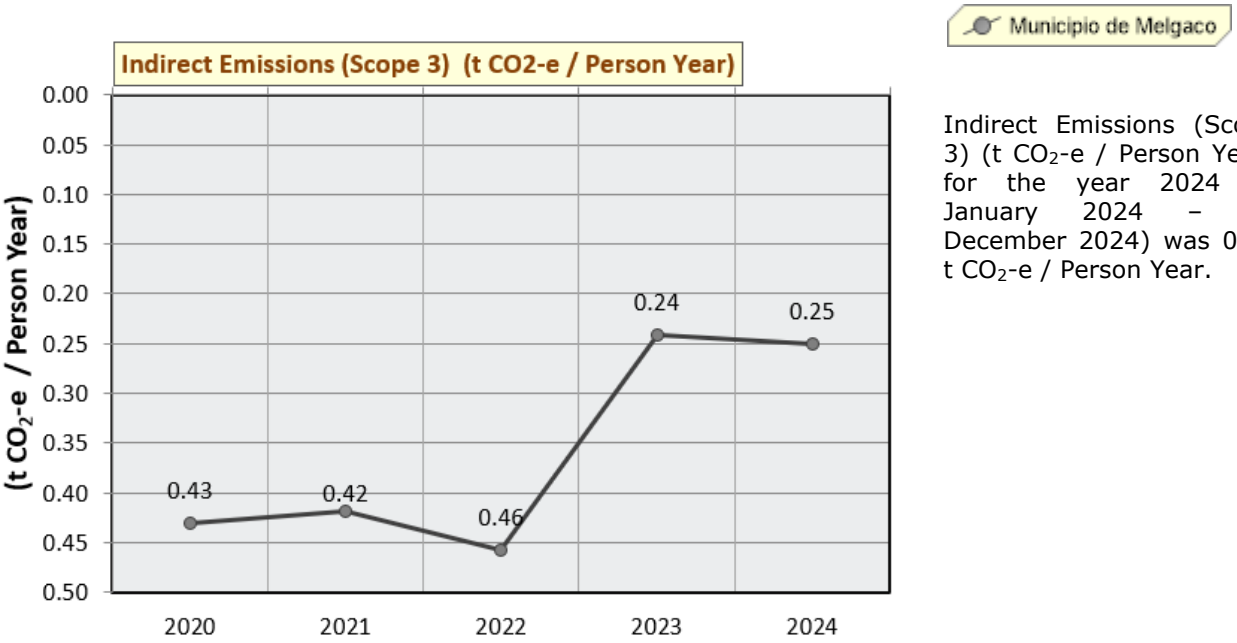
## Greenhouse Gas Emissions Breakdown by Scope (t $CO_2$-e / Person Year)




Direct Emissions (Scope 1) (t $CO_2$-e / Person Year) for the year 2024 (1 January 2024 – 31 December 2024) was 0.49 t $CO_2$-e / Person Year.

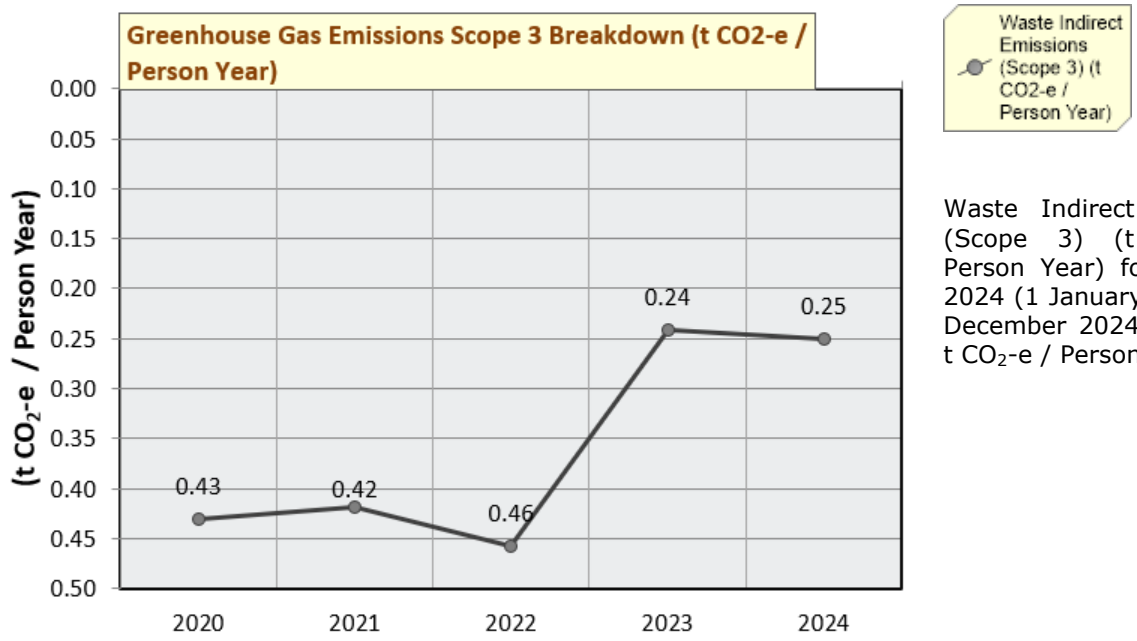
Indirect Emissions (Scope 2) (t $CO_2$-e / Person Year) for the year 2024 (1 January 2024 – 31 December 2024) was 0.57 t $CO_2$-e / Person Year.

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




Indirect Emissions (Scope 3) (t $CO_2$-e / Person Year) for the year 2024 (1 January 2024 – 31 December 2024) was 0.25 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 2024 (1 January 2024 – 31 December 2024) was 0.25 t $CO_2$-e / Person Year.

## Direct Emissions (Scope 1)

### Onsite Renewable Energy Generation

**2024**

| 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 | 795,089 | Kilowatt hour (kWh) | 2,862,320.0 | -- | -- | -- | -- |

### 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) | $N_2O$ Emission Estimate (t $CO_2$-e) | Total Emission Estimate (t $CO_2$-e) |
|---|---|---|---|---|---|---|---|
| Diesel | 162 | tonne | 7,314,300.0 | 514.9 | 2.0 | 1.1 | 517.9 |
| Natural Gas Liquid - Propane | 208 | tonne | 9,678,240.0 | 559.2 | 2.4 | 1.4 | 563.1 |
| Natural Gas Liquid - Butane | 67 | tonne | 3,117,510.0 | 180.1 | 0.8 | 0.4 | 181.4 |
| Wood and wood waste | 92,000 | kilograms (kg) | 1,510,640.0 | 0.0 | 12.1 | 1.5 | 13.6 |
| Natural gas | 134,000 | cubic metres ($m^3$) | 5,372,240.9 | 271.2 | 0.7 | 0.1 | 272.0 |
| | | subtotal | 26,992,930.9 | 1525.5 | 17.9 | 4.5 | 1,548.0 |

### 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) | $N_2O$ Emission Estimate (t $CO_2$-e) | Total Emission Estimate (t $CO_2$-e) |
|---|---|---|---|---|---|---|---|
| Motor gasoline | 116 | tonne | 5,396,320.0 | 355.3 | 3.6 | 10.9 | 369.7 |
| Diesel | 468 | tonne | 21,130,200.0 | 1,487.5 | 2.2 | 20.7 | 1,510.4 |
| | | subtotal | 26,526,520.0 | 1,842.7 | 5.8 | 31.6 | 1,880.1 |

### 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) | $N_2O$ Emission Estimate (t $CO_2$-e) | Total Emission Estimate (t $CO_2$-e) |
|---|---|---|---|---|---|---|
| Septic (BOD Unknown) | 386 | 365 | -- | 26.6 | -- | 26.6 |
| Aerobic (BOD Unknown) | 7,335 | 365 | -- | 303.6 | -- | 303.6 |
| | | subtotal | -- | 330.23 | -- | 330.23 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **TOTAL** | **56,381,771.3** | **3,368.2** | **353.93** | **36.1** | **3,758.33** |

## Indirect Emissions (Scope 2)

### Purchased Electricity

**2024**

| 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) |
|---|---|---|---|---|---|---|---|---|
| 23,628,848 | Kilowatt hour (kWh) | 0 | Portugal | 85,063,852.8 | 4,343.0 | 9.5 | 26.0 | 4,378.4 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **TOTAL** | **85,063,852.8** | **4,343.0** | **9.5** | **26.0** | **4,378.4** |

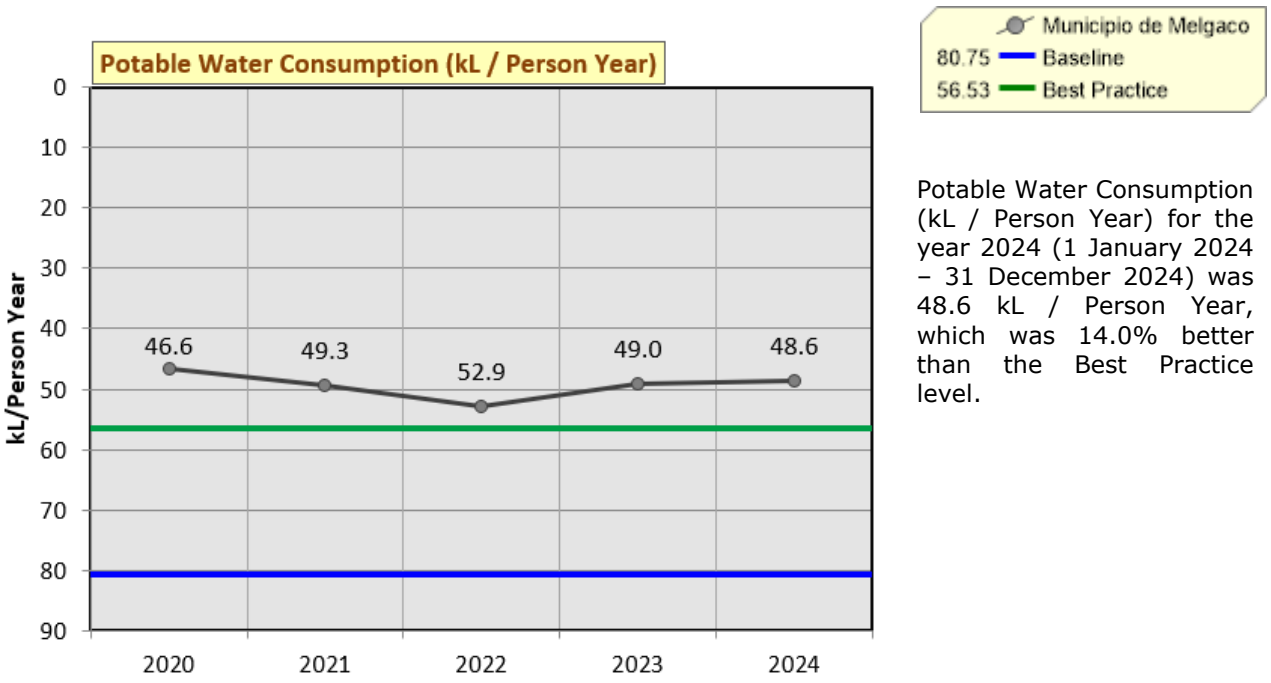
## Greenhouse Gas Emissions (Scope 1 and Scope 2)

| | | | | | |
|---|---|---|---|---|---|
| **GRAND TOTAL** | **141,445,624.1** | **7,711.2** | **363.4** | **62.1** | **8,136.7** |

| Indirect Emissions (Scope 3) | | | | | | | |
|---|---|---|---|---|---|---|---|
| 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)** | **$N_2O$ Emission Estimate (t $CO_2$-e)** | **Total Emission Estimate (t $CO_2$-e)** |
| 1,613 | tonnes (compacted) | Covered and/or managed waste treatment facility | Unknown (mixed waste types) | 0.0 | 1,935.6 | 0.0 | 1,935.6 |
| | | | **TOTAL** | **0.0** | **1,935.6** | **0.0** | **1,935.6** |

# 3. Water

## Potable Water Consumption (kL / Person Year)

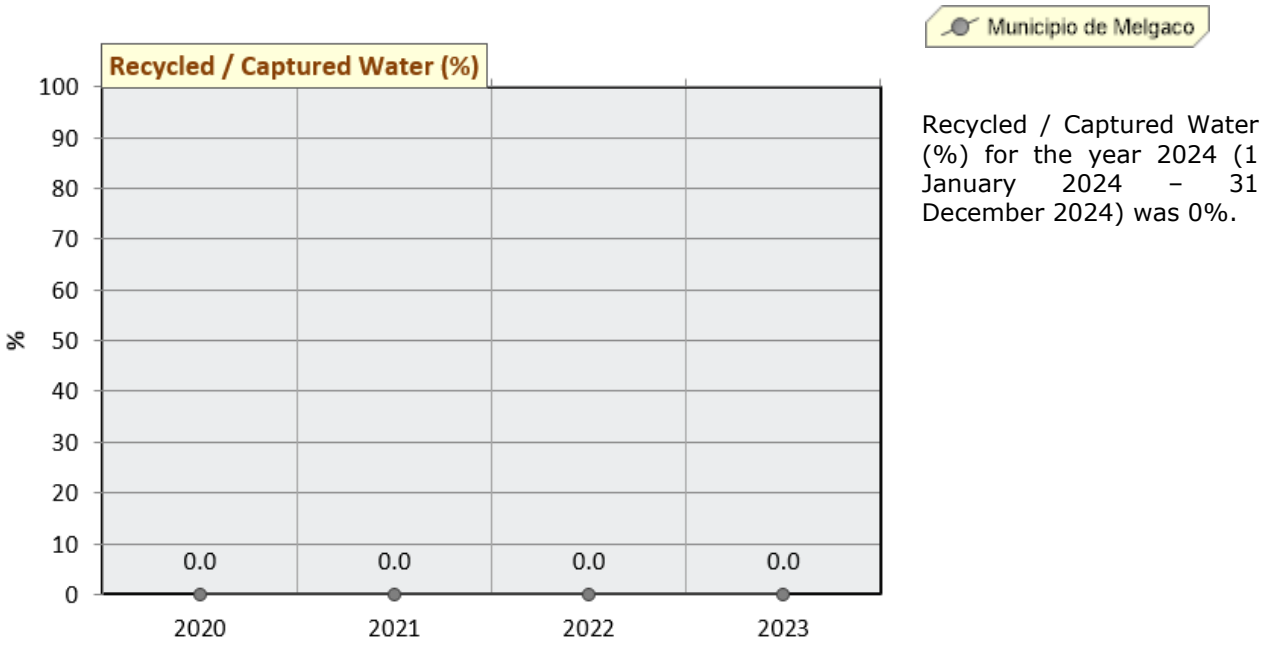



Potable Water Consumption (kL / Person Year) for the year 2024 (1 January 2024 – 31 December 2024) was 48.6 kL / Person Year, which was 14.0% better than the Best Practice level.

**2024**

| Quantity | Unit | Potable Water Consumption (kL) |
|---|---|---|
| 375,238 | kilolitres (kL) | 375,238.0 kL |
| | **TOTAL** | **375,238.0 kL** |

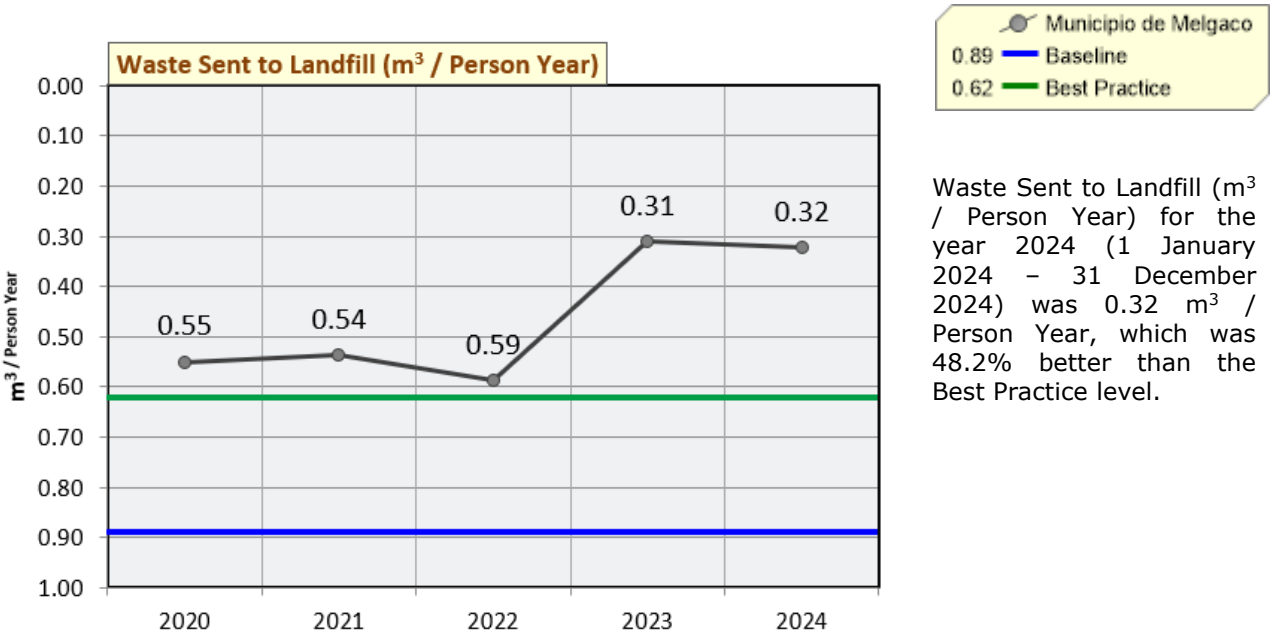
## Recycled / Captured Water (%)




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

# 4. Waste

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

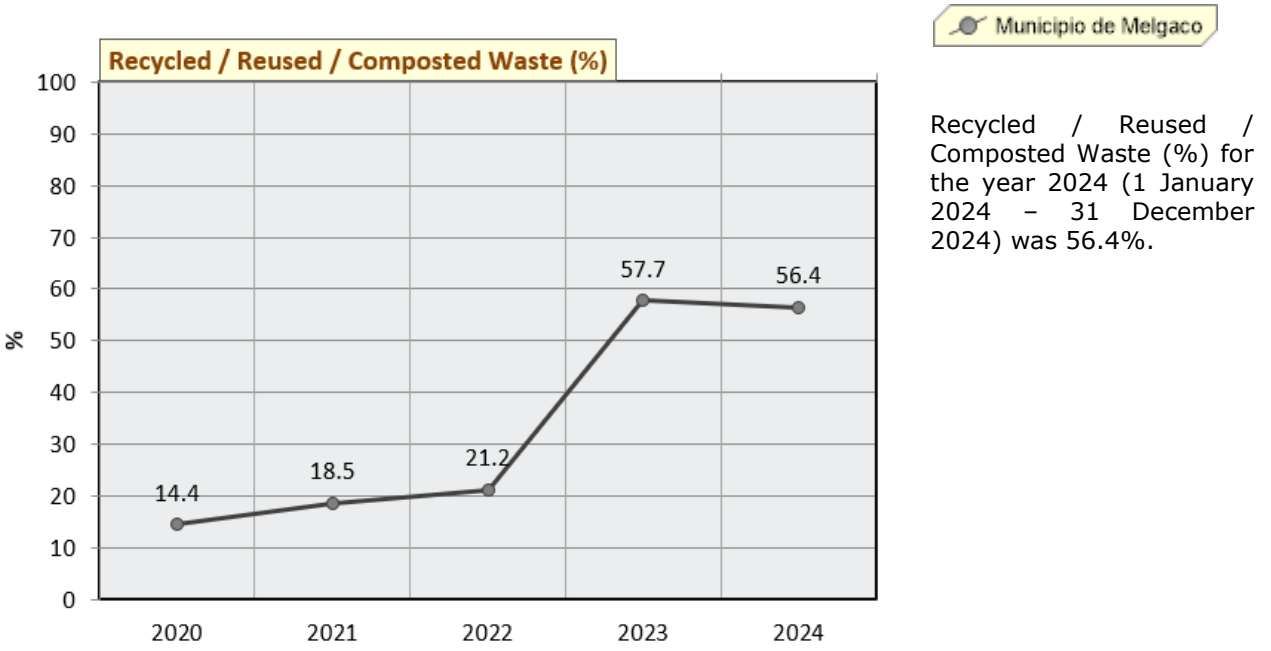



Waste Sent to Landfill ($m^3$ / Person Year) for the year 2024 (1 January 2024 – 31 December 2024) was 0.32 $m^3$ / Person Year, which was 48.2% better than the Best Practice level.

**2024**

| Quantity | Unit | Type of Landfill | Type of Waste | Waste Sent to Landfill ($m^3$) |
|---|---|---|---|---|
| 1,613 | tonnes (compacted) | Covered and/or managed waste treatment facility | Unknown (mixed waste types) | 2,481.5 |
| | | | **Total** | **2,481.5 $m^3$** |

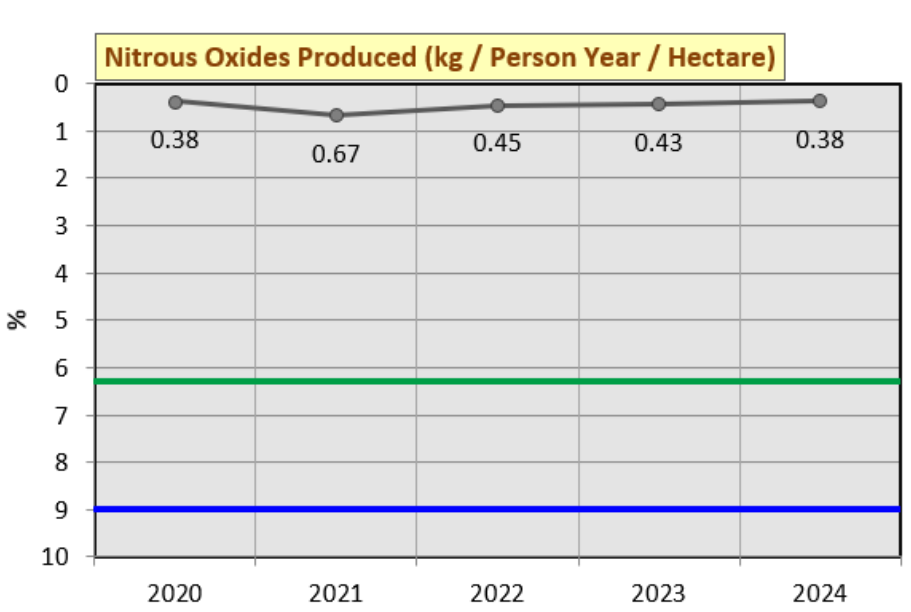
## Recycled / Reused / Composted Waste (%)




Recycled / Reused / Composted Waste (%) for the year 2024 (1 January 2024 – 31 December 2024) was 56.4%.

# 5. Sector Specific

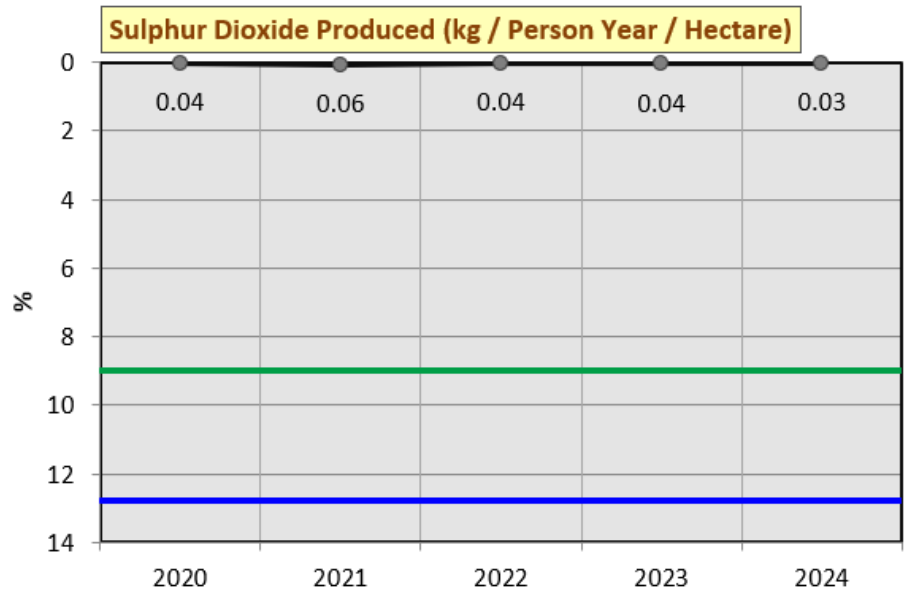
## Nitrous Oxides Produced (kg / Person Year / Hectare)





Nitrous Oxides Produced (kg / Person Year / Hectare) for the year 2024 (1 January 2024 – 31 December 2024) was 0.38 kg / Person Year / Hectare, which was 94.0% better than the Best Practice level.

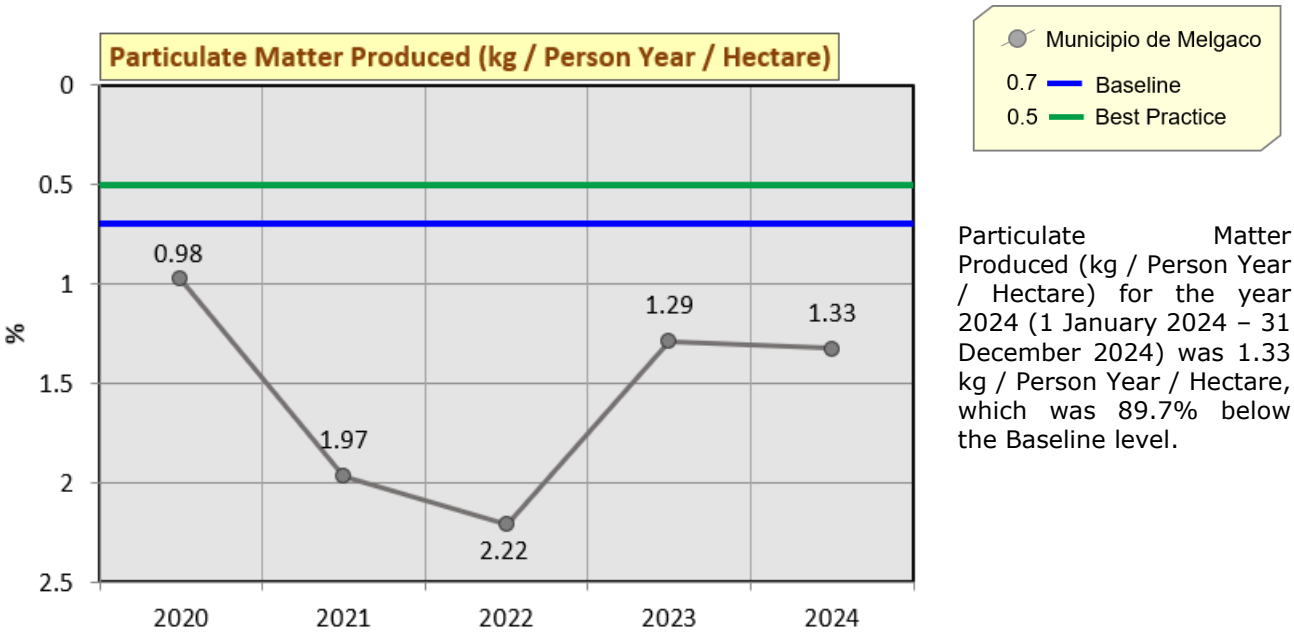
## Sulphur Dioxide Produced (kg / Person Year / Hectare)





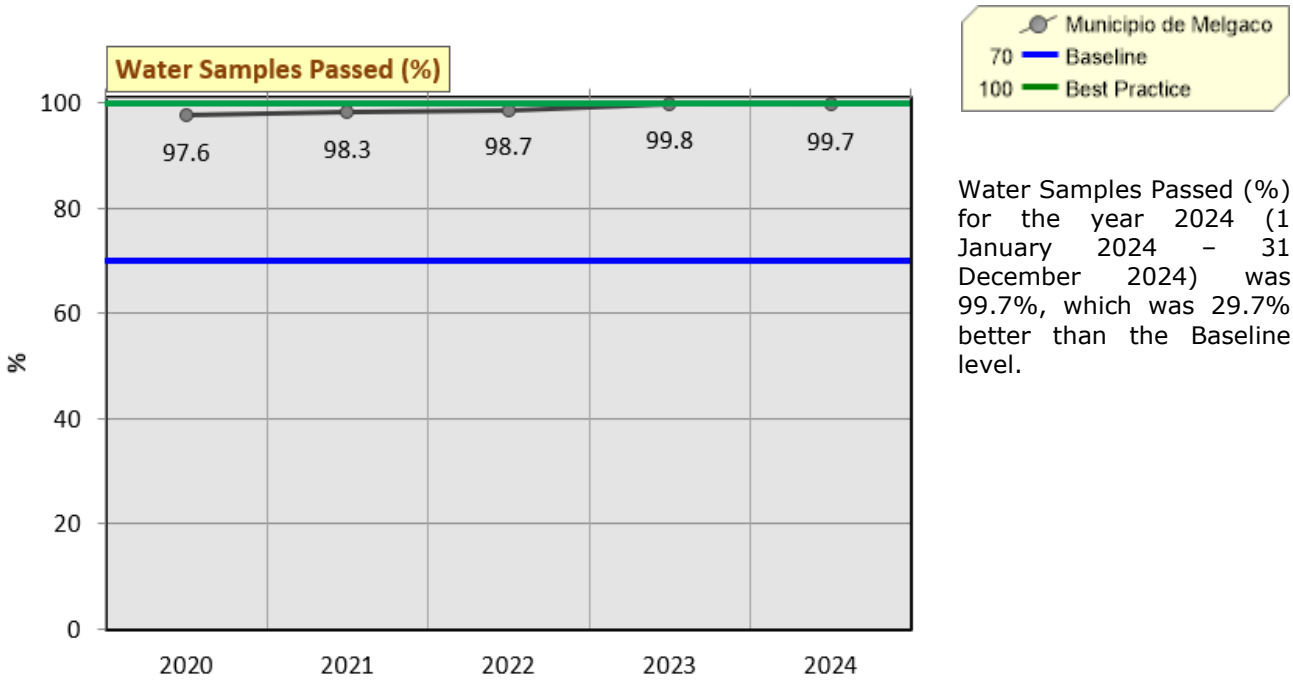
Sulphur Dioxide Produced (kg / Person Year / Hectare) for the year 2024 (1 January 2024 – 31 December 2024) was 0.03 kg / Person Year / Hectare, which was 99.6% better than the Best Practice level.

## Particulate Matter Produced (kg / Person Year / Hectare) ✘



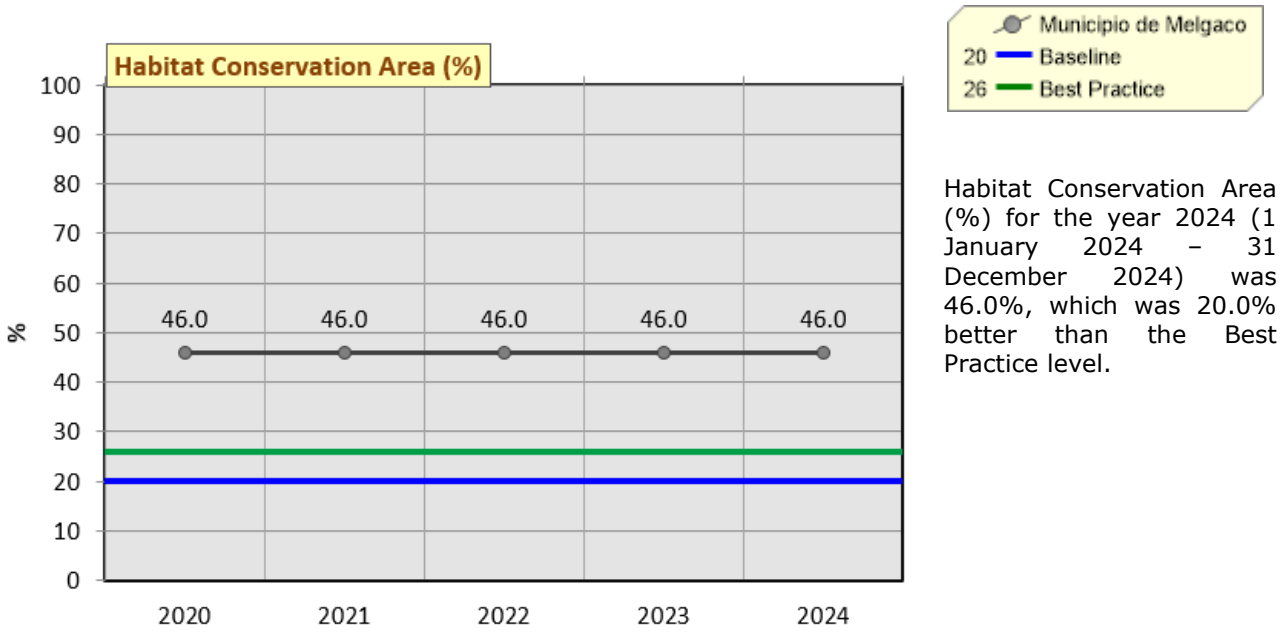

Particulate Matter Produced (kg / Person Year / Hectare) for the year 2024 (1 January 2024 – 31 December 2024) was 1.33 kg / Person Year / Hectare, which was 89.7% below the Baseline level.

## Water Samples Passed (%) ✓



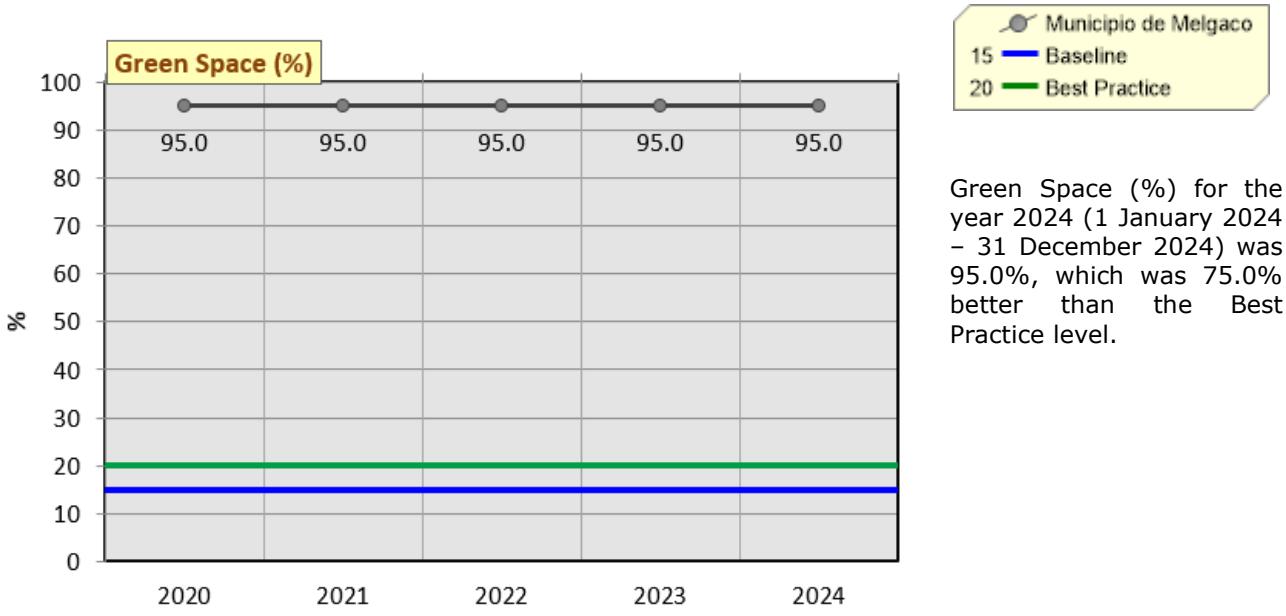

Water Samples Passed (%) for the year 2024 (1 January 2024 – 31 December 2024) was 99.7%, which was 29.7% better than the Baseline level.

## Habitat Conservation Area (%)



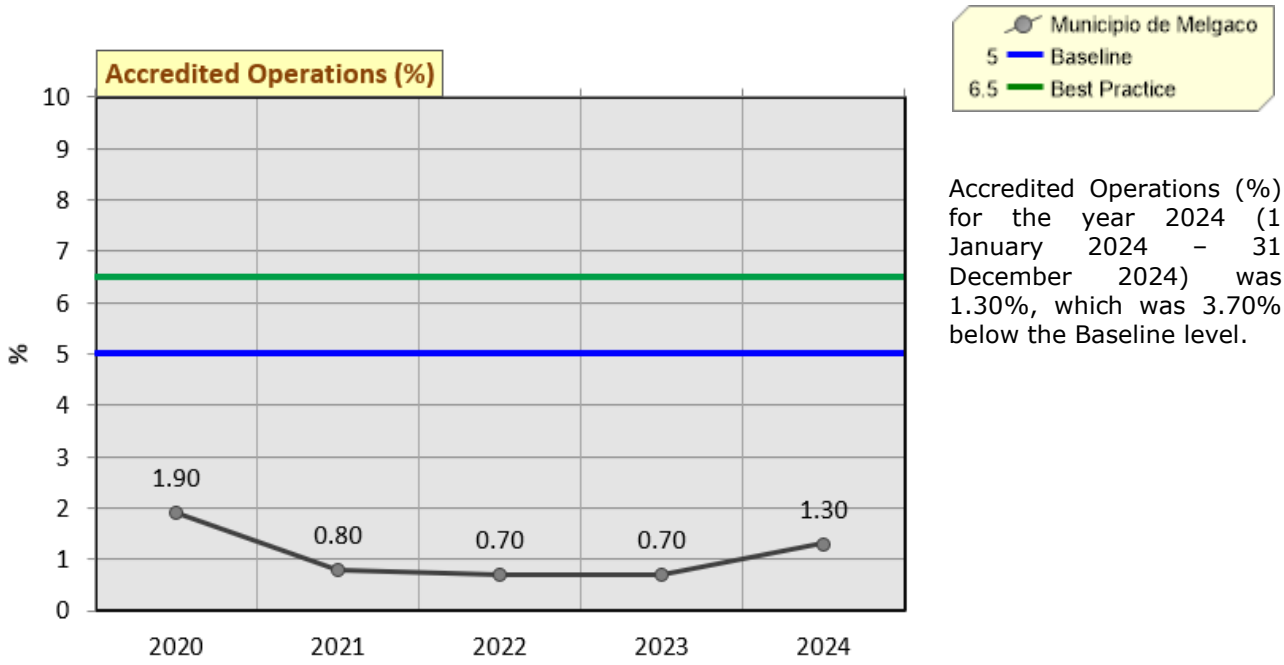

Habitat Conservation Area (%) for the year 2024 (1 January 2024 – 31 December 2024) was 46.0%, which was 20.0% better than the Best Practice level.

## Green Space (%)



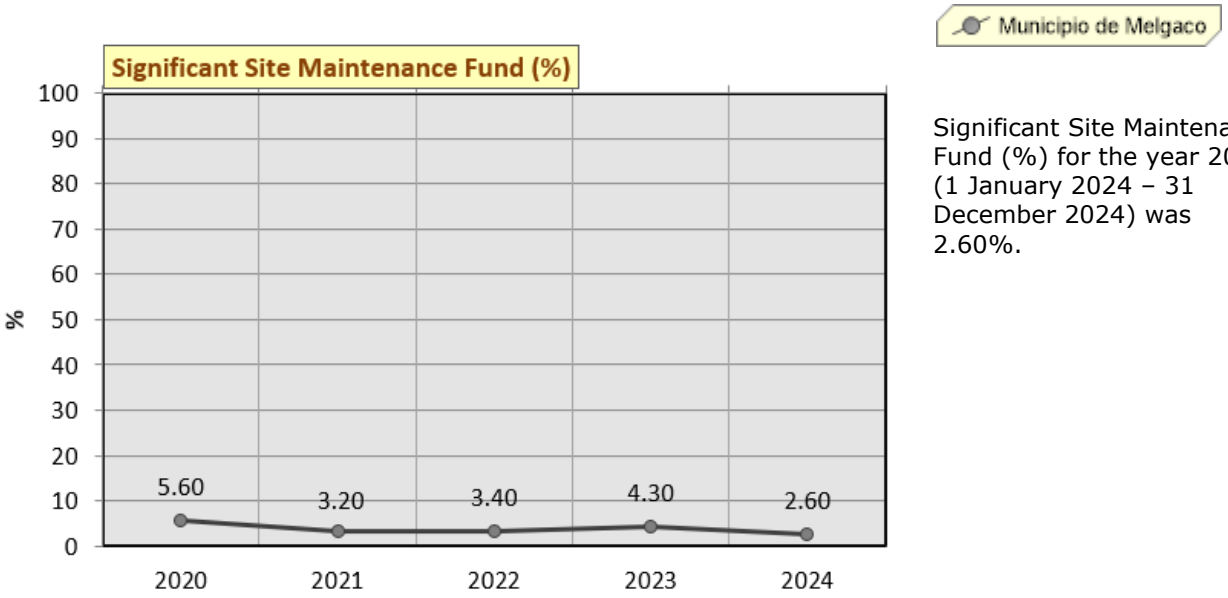

Green Space (%) for the year 2024 (1 January 2024 – 31 December 2024) was 95.0%, which was 75.0% better than the Best Practice level.

## Accredited Operations (%) ✘



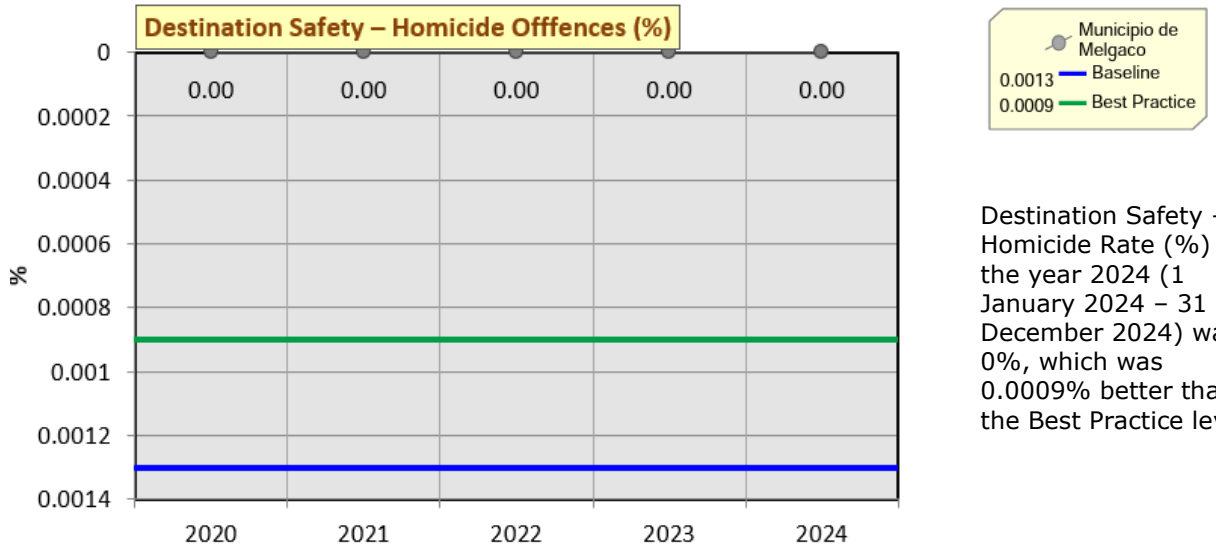

Accredited Operations (%) for the year 2024 (1 January 2024 – 31 December 2024) was 1.30%, which was 3.70% below the Baseline level.

## Significant Site Maintenance Fund (%)



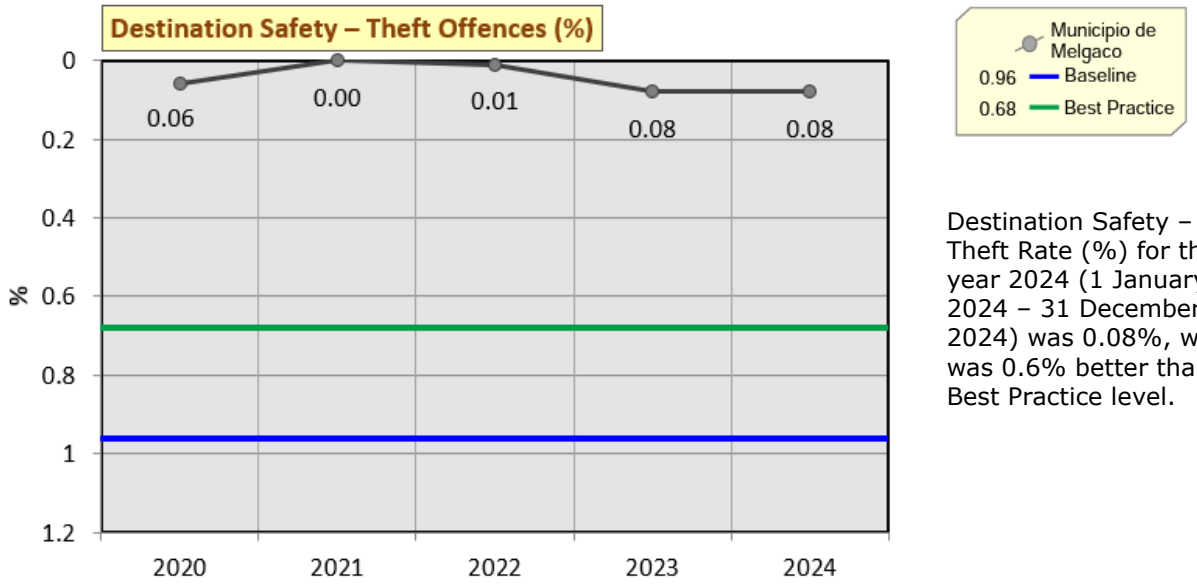

Significant Site Maintenance Fund (%) for the year 2024 (1 January 2024 – 31 December 2024) was 2.60%.

## Destination Safety – Homicide Rate (%) ★



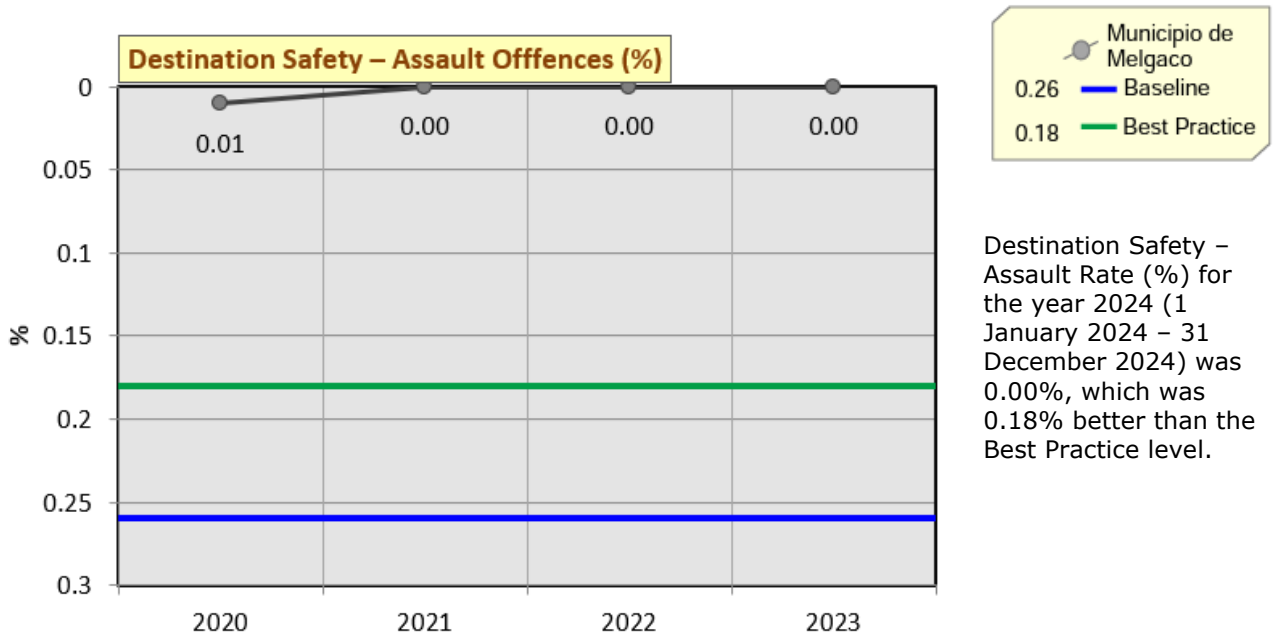

Destination Safety – Homicide Rate (%) for the year 2024 (1 January 2024 – 31 December 2024) was 0%, which was 0.0009% better than the Best Practice level.

## Destination Safety – Theft Rate (%) ★



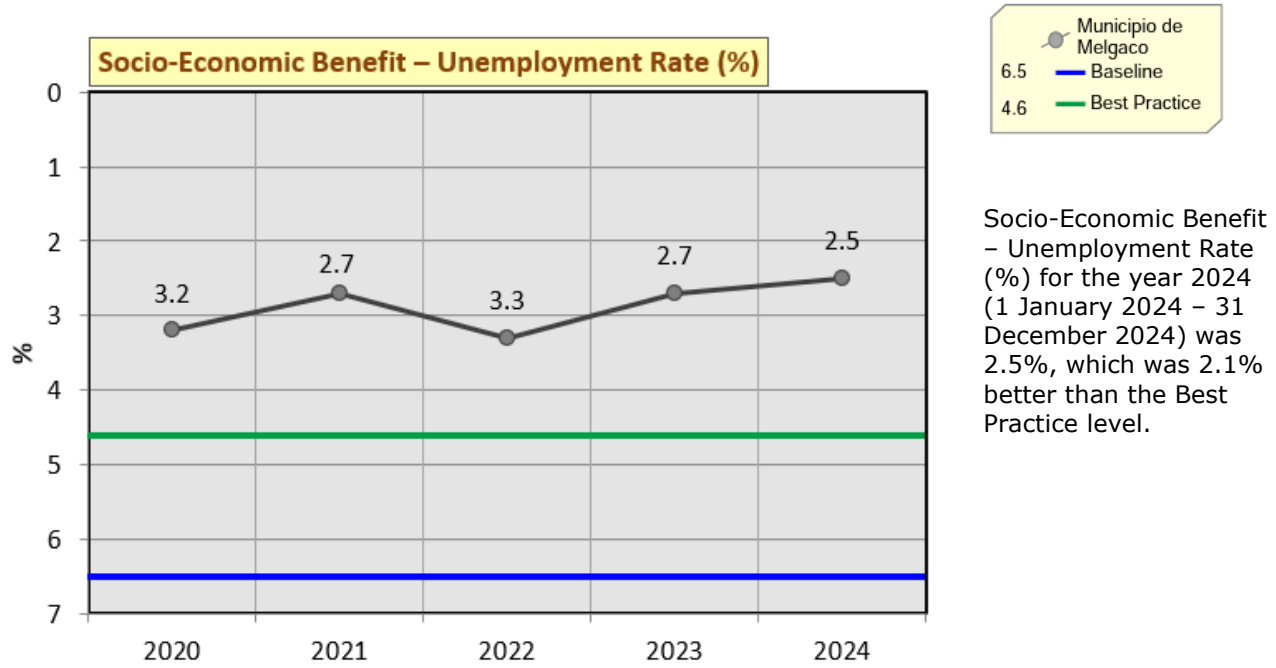

Destination Safety – Theft Rate (%) for the year 2024 (1 January 2024 – 31 December 2024) was 0.08%, which was 0.6% better than the Best Practice level.

## Destination Safety – Assault Rate (%) ★




Destination Safety – Assault Rate (%) for the year 2024 (1 January 2024 – 31 December 2024) was 0.00%, which was 0.18% better than the Best Practice level.

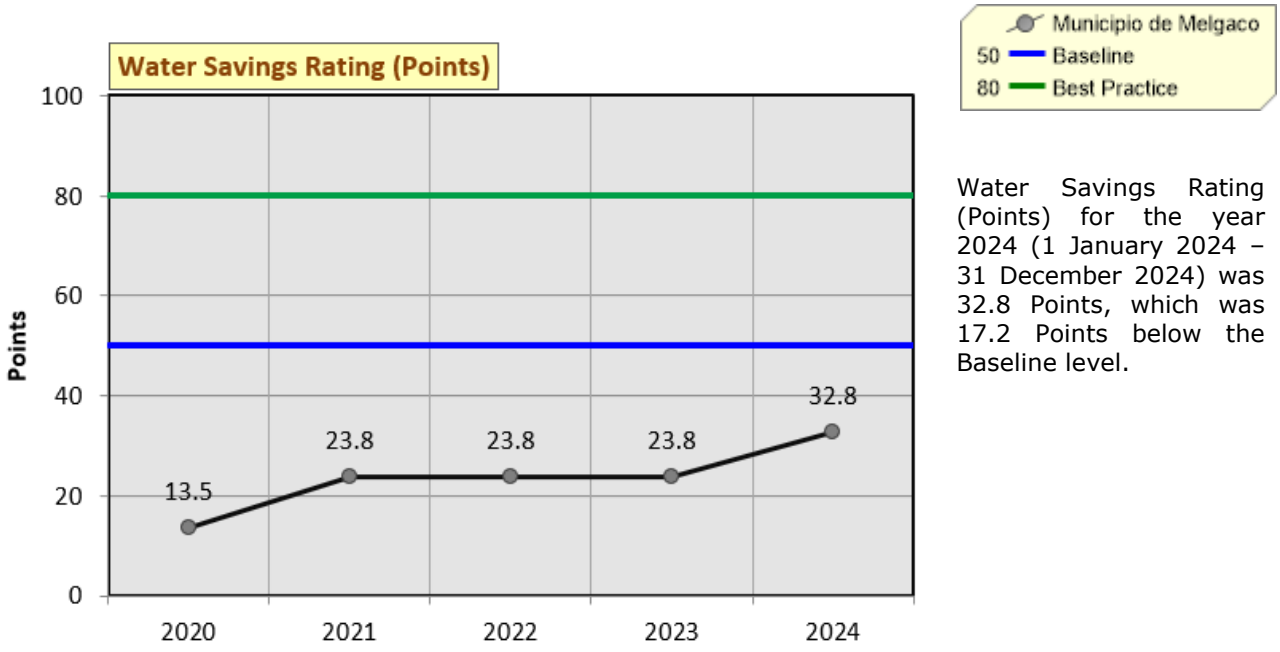
## Socio-Economic Benefit – Unemployment Rate (%) ★




Socio-Economic Benefit – Unemployment Rate (%) for the year 2024 (1 January 2024 – 31 December 2024) was 2.5%, which was 2.1% better than the Best Practice level.

# 6. Water Savings

**Water Savings Rating (Points)** ✘

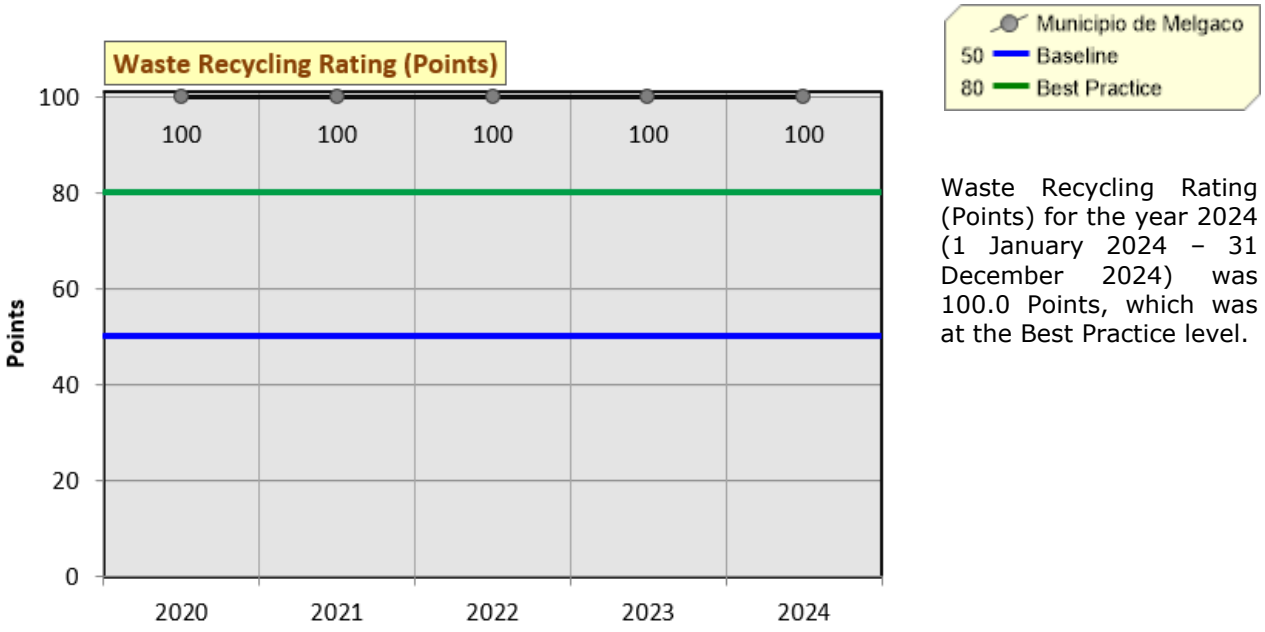



Water Savings Rating (Points) for the year 2024 (1 January 2024 – 31 December 2024) was 32.8 Points, which was 17.2 Points below the Baseline level.

| Water Savings Measures | Frequency / Percentage Rating | Water Savings Rating (Points) |
|---|---|---|
| Check for leaks | Once a year | 54.0 Points |
| Low/dual flush toilets | 1-19% | 54.0 Points |
| Low flow tap fittings | 0% | 0.0 Points |
| Low flow shower fittings | 0% | 0.0 Points |
| Water sprinklers used after dark | 80-99% | 88.9 Points |
| Minimal irrigation landscaping | Not Relevant / Not Available | |
| Use of recycle/grey/rain water | 0% | 0.0 Points |
| | **Overall Rating:** | **32.8 Points** |

# 7. Waste Recycling

## Waste Recycling Rating (Points) ★

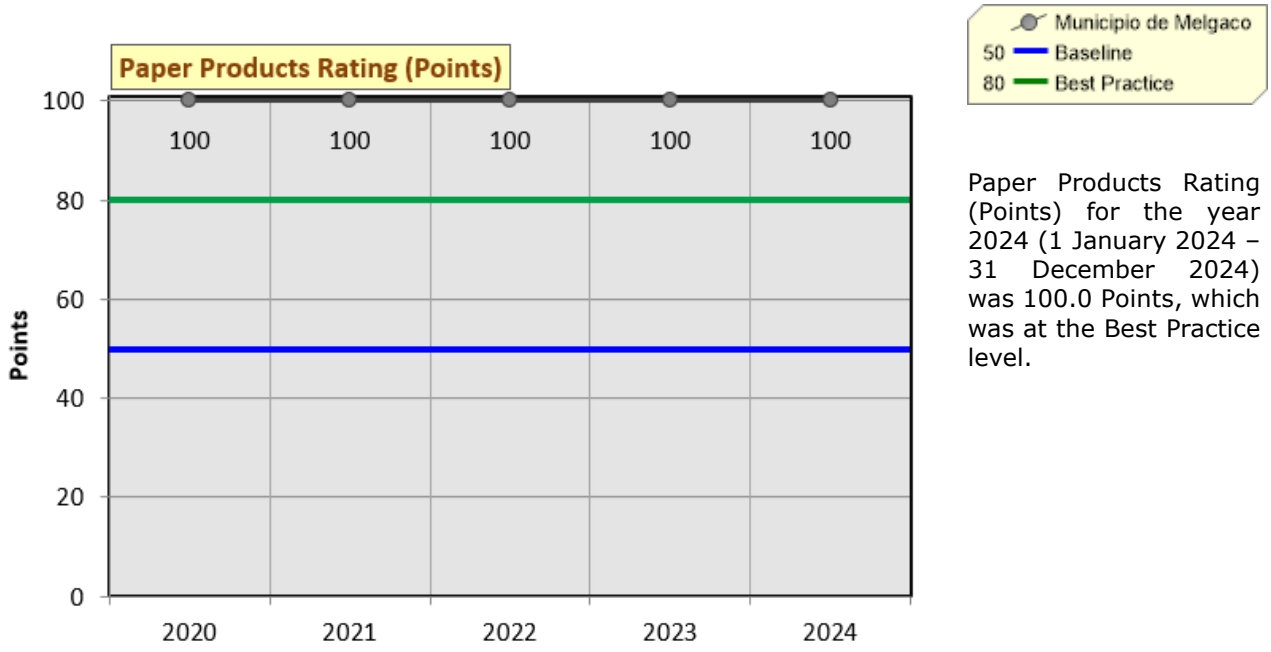



Waste Recycling Rating (Points) for the year 2024 (1 January 2024 – 31 December 2024) was 100.0 Points, which was at the Best Practice level.

| 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 | 100% | 100.0 Points |
| | **Overall Rating:** | **100.0 Points** |

# 8. Paper

## Paper Products Rating (Points) ★

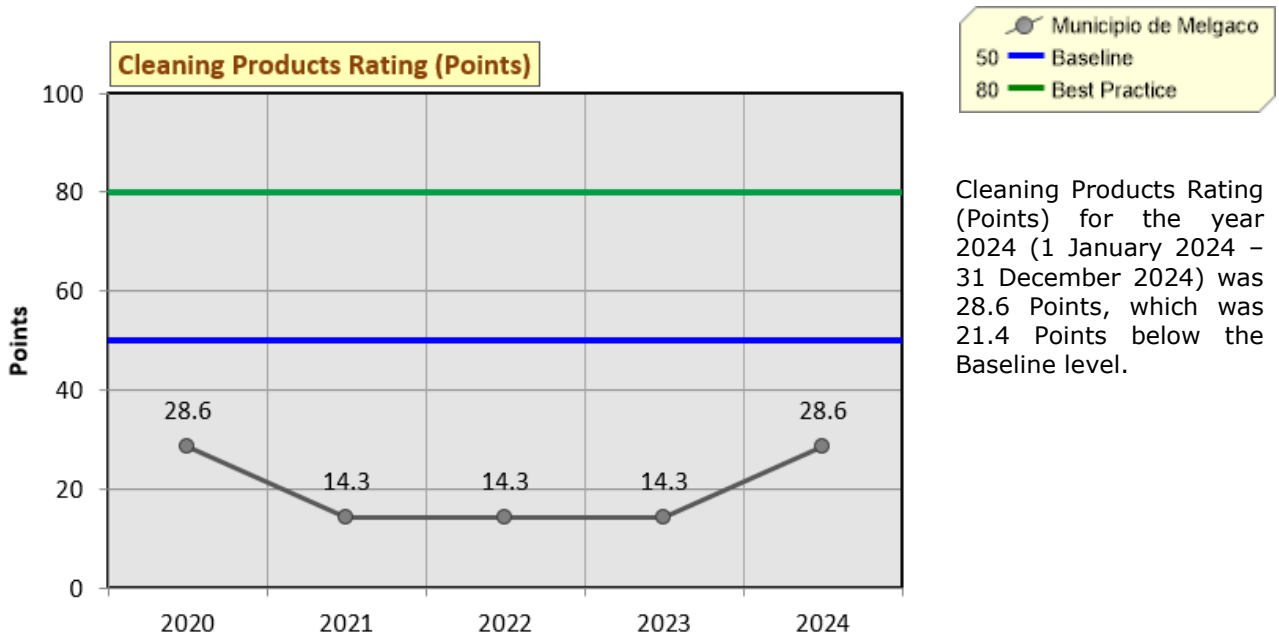



Paper Products Rating (Points) for the year 2024 (1 January 2024 – 31 December 2024) was 100.0 Points, which was at the Best Practice level.

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

# 9. Cleaning

## Cleaning Products Rating (Points)

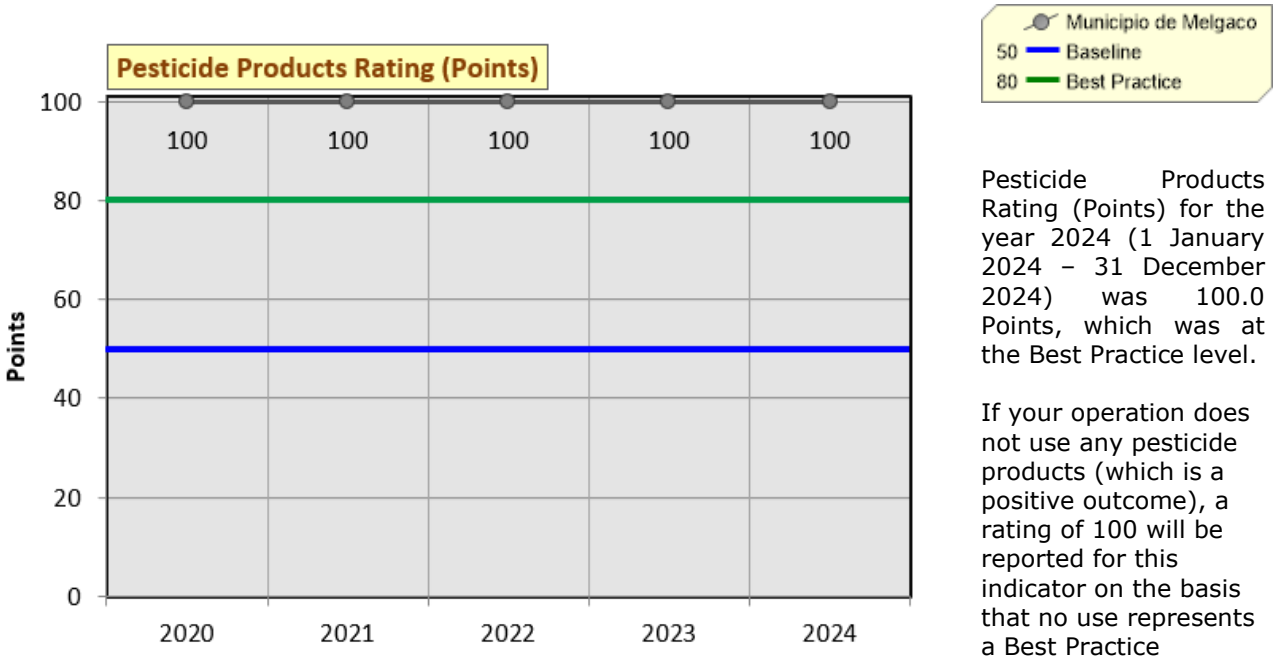



Cleaning Products Rating (Points) for the year 2024 (1 January 2024 – 31 December 2024) was 28.6 Points, which was 21.4 Points below the Baseline level.

| Cleaning Products Measures | Frequency / Percentage Rating | Cleaning Products Rating (Points) |
|---|---|---|
| Hard floor cleaners | 100% | 100.0 Points |
| Carpet cleaners | Not Relevant / Not Available | 100.0 Points |
| Interior surface cleaners | 0% | 0.0 Points |
| External surface cleaners | 0% | 0.0 Points |
| Glass cleaners | 0% | 0.0 Points |
| Detergents | 0% | 0.0 Points |
| Personal hygiene | 0% | 0.0 Points |
| | **Overall Rating:** | **28.6 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 at 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 **Municipio de Melgaco** in the prescribed manner, authorised by a senior executive of the company and submitted for an annual assessment.*

# CONCLUSION AND RECOMMENDATIONS

Congratulations, **Municipio de Melgaco** has met the requirements to be recognised as an EarthCheck Benchmarked Destination.

In addition to having a Sustainability Policy in place, 15 of the assessed EarthCheck indicators is at or above the Baseline level.

From the benchmarking data provided, 15 indicator(s), *Energy Consumption, Greenhouse Gas Emissions (Scope 1 and Scope 2), Potable Water Consumption, Waste Sent to Landfill, Nitrous Oxides Produced, Sulphur Dioxide Produced, Habitat Conservation Area, Green Space, Destination Safety - Homicide Rate, Destination Safety – Theft Rate, Destination Safety - Assault Rate, Unemployment Rate, Waste Recycling Rating, Waste Recycling Rating, Pesticide Products Rating,* are at or above the Best Practice level.

The four indicator(s) that fell below the Baseline level were *Particulate Matter Produced, Water Savings Rating, Cleaning Products Rating, and Accredited Operations*.

The value for Water Saving was 17.2 Points below the Baseline level. **Municipio de Melgaco** 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). **Municipio de Melgaco** 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 value for Cleaning Products was 21.4 Points below the Baseline level. **Municipio de Melgaco** are encouraged, therefore, to review existing practices and procedures. This review should aim to look to increasing where practical the use of biodegradable chemicals in order to replace and phase out those that are non-biodegradable, and more likely to cause environmental harm.

**Municipio de Melgaco** 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 **Municipio de Melgaco** 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,**Municipio de Melgaco** is encouraged to ensure that Water Savings Rating, Cleaning Products Rating, and Accredited Operations are at Baseline performance or better. In line with EarthCheck Policy this would enable **Municipio de Melgaco** to continue to meet the benchmarking requirements of the EarthCheck program.

# APPENDIX

## ASSAULT OFFENCES

The Benchmarking Assessors sought clarification regarding number of assault offences which was reported as '0%'.

**Municipio de Melgaco** provided the following response for clarification:

> *"Following your request, we confirm that the value regarding Assault Offences data remains 0, in line with previous years. These figures are obtained from the **Ministry of Justice**, reported by the Police, as shown in the attached evidence "13b.Furtos_Roub_estatísticasjustiça2024", where the indicator referenced is "Roubo…". As you can see this lines are null."*

Therefore, the Benchmarking Assessors maintained the original data.

## ONSITE RENEWABLE ENERGY GENERATION

The Benchmarking Assessors sought clarification regarding the increase in 'Solar' energy generation.

**Municipio de Melgaco** provided the following response for clarification:

> *"Concerning the **Onsite Renewable Energy Generation (Solar)** data, these values were obtained from the Portuguese Directorate-General for Energy and Geology (DGEG), and correspond to the official figures for 2024, as seen in "05.ConsumoEletricidadeMelgaco2024", under the indicator "Autoconsumo.*
>
> *Solar energy production has indeed increased significantly in the territory due to the substantial investment in solar energy systems in recent years. This upward trend is expected to continue, with further growth anticipated in the coming years. The Municipality is undertaking a project to establish a 6-hectare photovoltaic park, comprising approximately 10,000 solar panels, intended to supply power to local business districts, municipal buildings, and to support the production of green hydrogen. This initiative forms part of the Action Plan submitted to EarthCheck as part of the certification process. The installation is expected to have a capacity of 5.5 MW and is projected to be fully operational by 2026/2027. The solar panels have already been installed."*

Therefore, the Benchmarking Assessors maintained the original data.

## STATIONARY FUEL COMBUSTION

**Municipio de Melgaco** provided the following information regarding the newly reported 'Natural Gas' fuel source.

> *"Please note that natural gas has been included in this year's data, as it became available for consumption in 2024 and partially replaced butane and propane. This transition accounts for the decrease observed in the consumption of these two gases."*

Therefore, the Benchmarking Assessors maintained the original data.

EARTHCHECK

**Benchmarks Assessed by EarthCheck**

# Summary Of Supplied Benchmarking Data

## Activity Measures

| | |
|---|---|
| Person Years | 7,721 |
| Total Destination Area | 23,825 |

## Supplied Benchmarking Data

### Energy

#### Energy Consumption (GJ / Person Year)

| | |
|---|---|
| Supplied | 141,445.6 GJ |
| Calculated | 18.3 GJ / Person Year |
| Baseline | 55.6 GJ / Person Year |
| Best Practice | 38.9 GJ / Person Year |
| Difference | 52.9% better than the Best Practice level |

#### Green Power (Purchased Electricity) (%)

| | |
|---|---|
| Supplied | 0% |
| Calculated | 0% |

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

| | |
|---|---|
| Supplied | 8,136.7 t $CO_2$-e |
| Calculated | 1.1 t $CO_2$-e / Person Year |
| Baseline | 4 t $CO_2$-e / Person Year |
| Best Practice | 2.8 t $CO_2$-e / Person Year |
| Difference | 62.4% better than the Best Practice level |

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

| | |
|---|---|
| Supplied | 3,758 t $CO_2$-e |
| Calculated | 0.49 t $CO_2$-e / Person Year |

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

| | |
|---|---|
| Supplied | 4,378.4 t $CO_2$-e |
| Calculated | 0.57 kg $CO_2$-e / Person Year |

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

| | |
|---|---|
| Supplied | 1,935.6 t $CO_2$-e |
| Calculated | 0.25 t $CO_2$-e / Person Year |

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

| | |
|---|---|
| Supplied | 1,935.6 t $CO_2$-e |
| Calculated | 0.25 t $CO_2$-e / Person Year |

### Water

#### Potable Water Consumption (kL / Person Year)

| | |
|---|---|
| Supplied | 375,238 kL |
| Calculated | 48.6 kL / Person Year |
| Baseline | 80.75 kL / Person Year |
| Best Practice | 56.53 kL / Person Year |
| Difference | 14.0% better than the Best Practice level |

#### Recycled / Captured Water (%)

| | |
|---|---|
| Supplied | 0% |
| Calculated | 0% |

### Waste

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

| | |
|---|---|
| Supplied | 2,481.5$m^3$ |
| Calculated | 0.32 $m^3$ / Person Year |
| Baseline | 0.89 $m^3$ / Person Year |
| Best Practice | 0.62 $m^3$ / Person Year |
| Difference | 48.2% better than the Best Practice level. |

#### Recycled / Reused / Composted Waste (%)

| | |
|---|---|
| Supplied | 56.4% |
| Calculated | 56.4% |

### Sector Specific

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

| | |
|---|---|
| Supplied | 0.38 kg / Person Year / Hectare |
| Calculated | 0.38 kg / Person Year / Hectare |
| Baseline | 9.0 kg / Person Year / Hectare |
| Best Practice | 6.3 kg / Person Year / Hectare |
| Difference | 94.0% better than the Best Practice level |

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

| | |
|---|---|
| Supplied | 0.03 kg / Person Year / Hectare |
| Calculated | 0.03 kg / Person Year / Hectare |

| | |
|---|---|
| Baseline | 12.8 kg / Person Year / Hectare |
| Best Practice | 9.0 kg / Person Year / Hectare |
| Difference | 99.6% better than the Best Practice level |

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

| | |
|---|---|
| Supplied | 1.33 kg / Person Year / Hectare |
| Calculated | 1.33 kg / Person Year / Hectare |
| Baseline | 0.7 kg / Person Year / Hectare |
| Best Practice | 0.5 kg / Person Year / Hectare |
| Difference | 89.7% below the Baseline level |

### Water Samples Passed (%)

| | |
|---|---|
| Supplied | 99.7% |
| Calculated | 99.7% |
| Baseline | 70 % |
| Best Practice | 100 % |
| Difference | 29.7% better than the Baseline level |

### Habitat Conservation Area (%)

| | |
|---|---|
| Supplied | 46.0% |
| Calculated | 46.0% |
| Baseline | 20 % |
| Best Practice | 26 % |
| Difference | 20.0% better than the Best Practice level |

### Green Space (%)

| | |
|---|---|
| Supplied | 95.0% |
| Calculated | 95.0% |
| Baseline | 15 % |
| Best Practice | 20 % |
| Difference | 75.0% better than the Best Practice level |

### Accredited Operations (%)

| | |
|---|---|
| Supplied | 1.3% |
| Calculated | 1.3% |
| Baseline | 5 % |
| Best Practice | 6.5 % |
| Difference | 3.7% below the Baseline level |

### Significant Site Maintenance Fund (%)

| | |
|---|---|
| Supplied | 2.6% |
| Calculated | 2.6% |

### Destination Safety – Homicide Rate (%)

| | |
|---|---|
| Supplied | 0.0% |
| Calculated | 0.0% |
| Baseline | 0.0013 % |
| Best Practice | 0.0009 % |
| Difference | 0.0009% better than the Best Practice level |

### Destination Safety – Theft Rate (%)

| | |
|---|---|
| Supplied | 0.08% |
| Calculated | 0.08% |
| Baseline | 0.96 % |
| Best Practice | 0.68 % |
| Difference | 0.6% better than the Best Practice level |

### Destination Safety – Assault Rate (%)

| | |
|---|---|
| Supplied | 0.0% |
| Calculated | 0.0% |
| Baseline | 0.26 % |
| Best Practice | 0.18 % |
| Difference | 0.18% better than the Best Practice level |

### Socio-Economic Benefit – Unemployment Rate (%)

| | |
|---|---|
| Supplied | 2.5% |
| Calculated | 2.5% |
| Baseline | 6.5% |
| Best Practice | 4.6 % |
| Difference | 2.1% better than the Best Practice level |

## Water Savings

### Water Savings Rating (Points)

| | |
|---|---|
| Supplied | 32.8 Points |
| Calculated | 32.8 Points |
| Baseline | 50 Points |
| Best Practice | 80 Points |
| Difference | 17.2 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 | At the Best Practice level |

## Paper

### Paper Products Rating (Points)

| | |
|---|---|
| Supplied | 100.0 Points |
| Calculated | 100.0 Points |
| Baseline | 50 Points |
| Best Practice | 80 Points |
| Difference | At the Best Practice level |

## Cleaning

### Cleaning Products Rating (Points)

| | |
|---|---|
| Supplied | 28.6 Points |
| Calculated | 28.6 Points |
| Baseline | 50 Points |
| Best Practice | 80 Points |
| Difference | 21.4 Points below the Baseline level |

## Pesticides

### Pesticide Products Rating (Points)

| | |
|---|---|
| Supplied | 100.0 Points |
| Calculated | 100.0 Points |
| Baseline | 50 Points |
| Best Practice | 80 Points |
| Difference | At 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).