



EARTHCHECK

# BENCHMARKING ASSESSMENT REPORT

DESTINATION BENCHMARKING

**MUNICIPIO DE BAIÃO**  
PORTO, PORTUGAL



REPORT DATE: 05 December 2019

Benchmarking Data Collection Period: 1 January 2018 – 31 December 2018

*The planet deserves more than half measures*

## OVERVIEW

This annual assessment of **Município de Baião** was undertaken against EarthCheck benchmarking indicators and checklists developed for EarthCheck and listed below. <sup>1</sup> 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.<sup>2</sup>

<b>Indicator Measure (Benchmark)</b>		
<b>1</b>	Policy	Policy is produced and in place <sup>2</sup>
<b>2</b>	Energy	Energy Consumption (GJ / Person Year) <sup>2</sup> Green Power (%) <sup>4</sup> Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO <sub>2</sub> -e / Person Year) <sup>3</sup> Indirect Emissions (Scope 3) (t CO <sub>2</sub> -e / Person Year) <sup>3</sup>
<b>3</b>	Water	Potable Water Consumption (kL / Person Year) <sup>3</sup> Recycled / Captured Water (%) <sup>4</sup>
<b>4</b>	Waste	Waste Sent to Landfill (m <sup>3</sup> / Person Year) <sup>3</sup> Recycled / Reused / Composted Waste (%) <sup>4</sup>
<b>5</b>	Sector Specific	Nitrous Oxides Produced (kg / Person Year / Hectare) <sup>3 5</sup> Sulphur Dioxide Produced (kg / Person Year / Hectare) <sup>3 5</sup> Particulate Matter Produced (kg / Person Year / Hectare) <sup>3 5</sup> Habitat Conservation Area (%) <sup>2</sup> Green Space (%) <sup>2</sup> Significant Site Maintenance Fund (%) Destination Safety – Homicide Rate (%) Destination Safety – Theft Rate (%) Destination Safety – Assault (%) Socio-Economic Benefit – Unemployment Rate (%) Accredited Operations (%) <sup>2</sup>
<b>Lead Agency Performance</b>		
<b>6</b>	Water Savings	Water Savings Rating (Points) <sup>6</sup>
	Waste Recycling	Waste Recycling Rating (Points) <sup>6</sup>
	Paper	Paper Products Rating (Points) <sup>6</sup>
	Cleaning	Cleaning Products Rating (Points) <sup>6</sup>
	Pesticides	Pesticide Products Rating (Points) <sup>6</sup>

<sup>1</sup> Please refer to the relevant EarthCheck Sector Benchmarking Indicator (SBI) document for more details. For frequently asked questions (FAQs) about benchmarking or specific help, please log on to 'My EarthCheck'.

<sup>2</sup> Produced by the lead agency after consultation with the destination and consensus.

<sup>3</sup> Person Year is equivalent to 365 person days. EarthCheck Destinations must also allow for both resident and transient (tourist) populations in indicators assessed on a per person year basis. Tourist activity is classified into an “overnight stay” or “day tripper”. An overnight stay is counted the same as a permanent resident, that is, 1 person day. A day tripper is counted as 0.333 person day.

<sup>4</sup> These indicators are for guidance only and do not affect the overall benchmarking evaluation.

<sup>5</sup> Primary assessed impacts on air quality are emissions due to electricity consumption, vehicular transport, industrial processes and mining. The levels are calculated on a per unit area basis using total emissions and total bounded area of the Destination, including waterways. The data is then normalized against the average number of person years per area of the country.

<sup>6</sup> Assessed for the lead agency only.

EarthCheck® is a registered trademark of Earthcheck Pty Ltd.

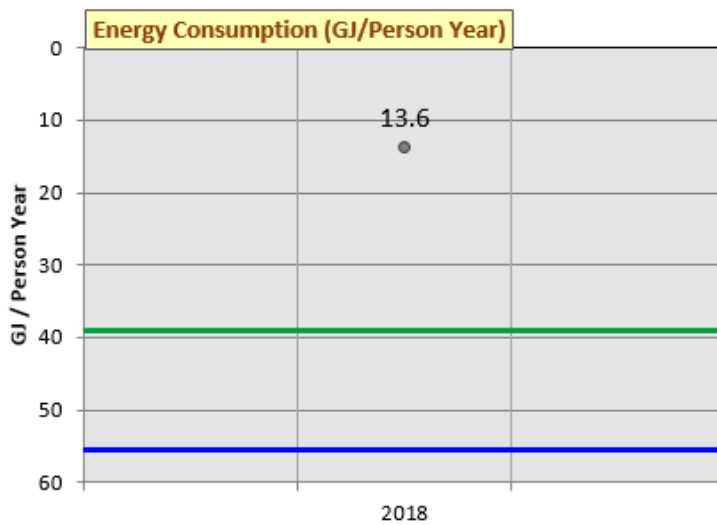
# DESTINATION PERFORMANCE BENCHMARKS

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

## 1. Policy ★

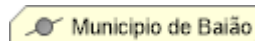
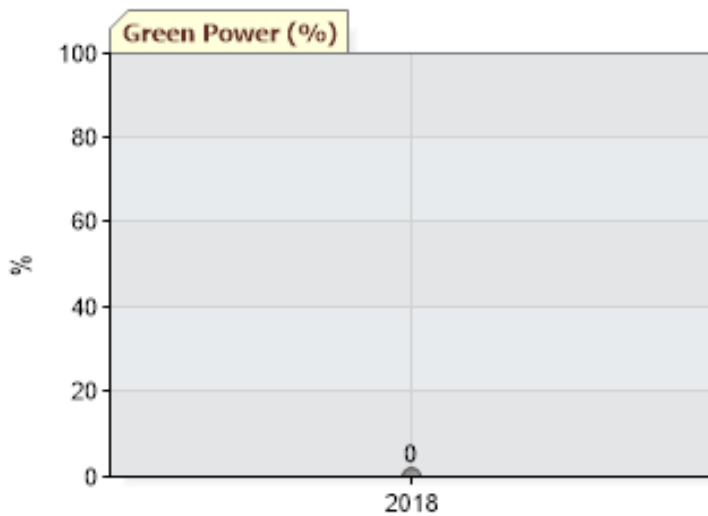
## 2. Energy

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



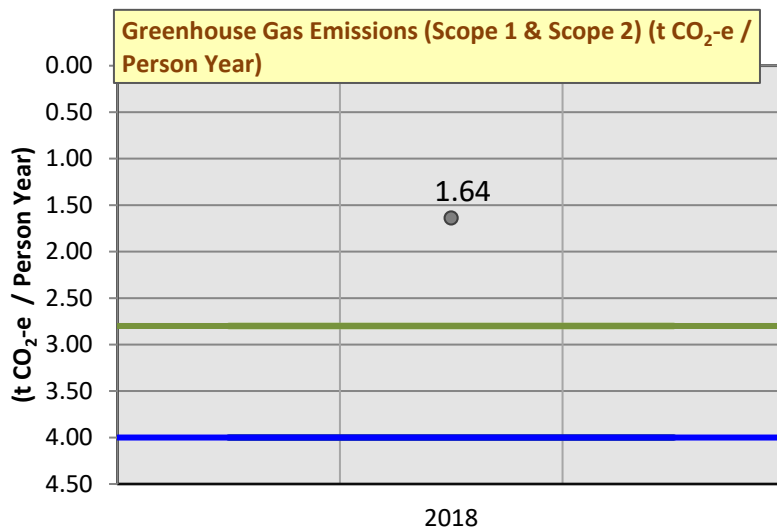
Energy Consumption (GJ / Person Year) for the year 2018 (1 January 2018 - 31 December 2018) was 13.6 GJ / Person Year, which was 65.0% better than the Best Practice level.

### Green Power (%)



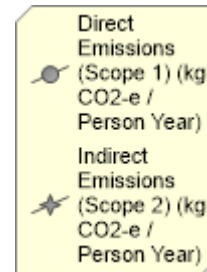
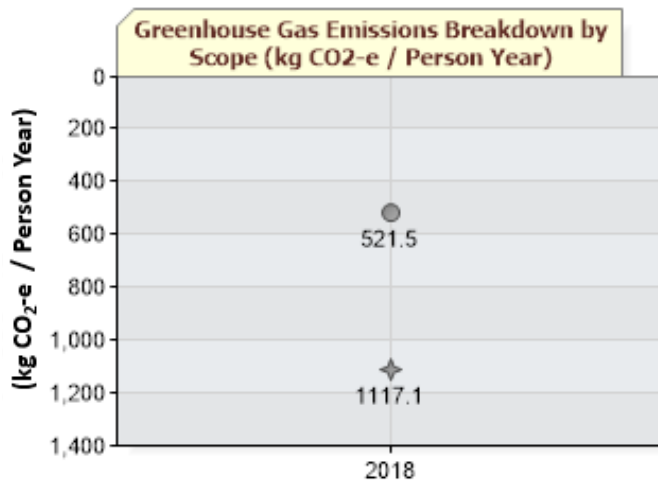
Green Power (%) for the year 2018 (1 January 2018 - 31 December 2018) was 0%.

### Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO<sub>2</sub>-e / Person Year) ★



Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO<sub>2</sub>-e / Person Year) for the year 2018 (1 January 2018 – 31 December 2018) was 1.6 t CO<sub>2</sub>-e / Person Year, which was 41.5% better than the Best Practice level.

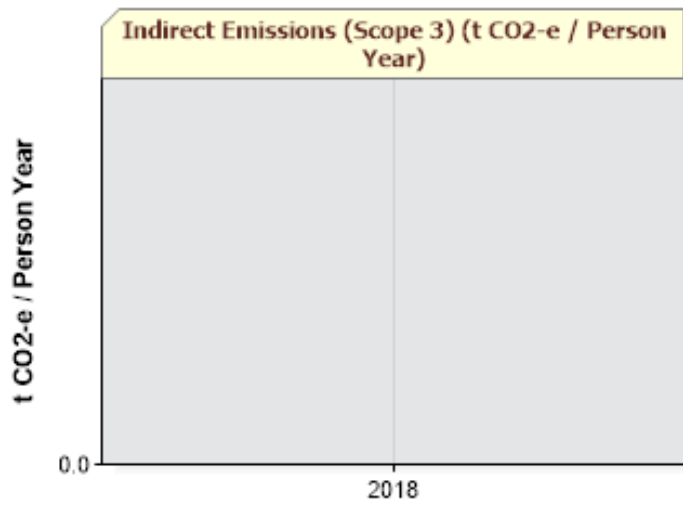
### Greenhouse Gas Emissions Breakdown by Scope (t CO<sub>2</sub>-e / Person Year)



Direct Emissions (Scope 1) (t CO<sub>2</sub>-e / Person Year) for the year 2018 (1 January 2018 – 31 December 2018) was 0.52 t CO<sub>2</sub>-e / Person Year.

Indirect Emissions (Scope 2) (t CO<sub>2</sub>-e / Person Year) for the year 2018 (1 January 2018 – 31 December 2018) was 1.12 t CO<sub>2</sub>-e / Person Year.

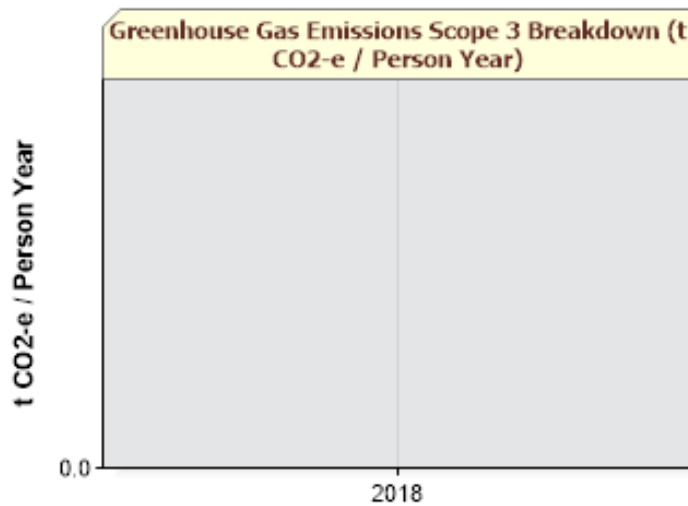
**Indirect Emissions (Scope 3) (t CO<sub>2</sub>-e / Person Year)**



Município de Baião

Indirect Emissions (Scope 3) (t CO<sub>2</sub>-e / Person Year) for the year 2018 (1 January 2018 - 31 December 2018) not measured as no data entered.

**Greenhouse Gas Emissions Scope 3 Breakdown (t CO<sub>2</sub>-e / Person Year)**



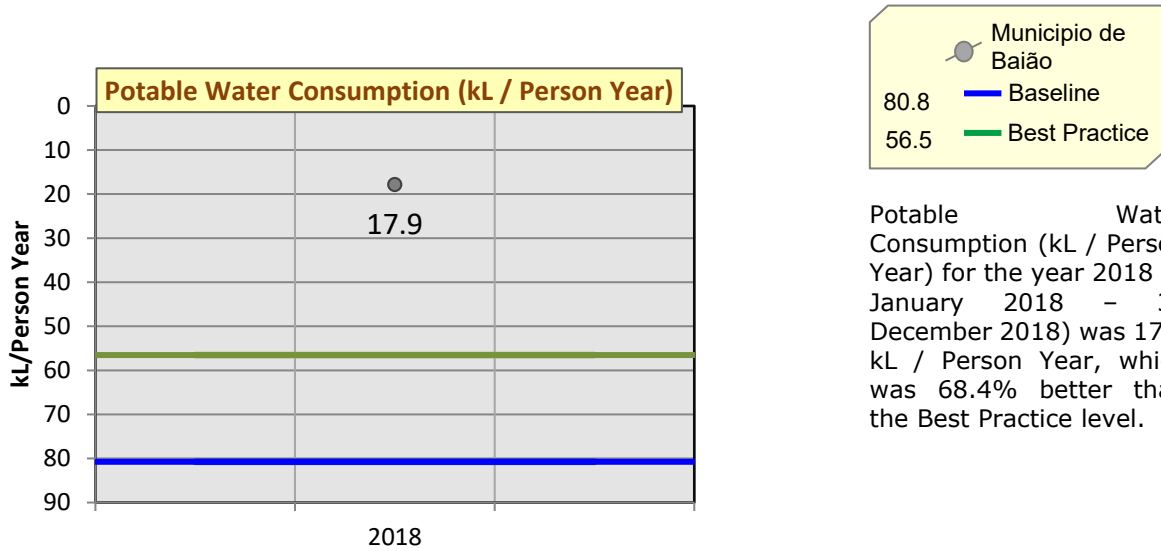
Waste Indirect Emissions (Scope 3) (t CO<sub>2</sub>-e / Person Year)

Waste Indirect Emissions (Scope 3) (t CO<sub>2</sub>-e / Person Year) for the year 2018 (1 January 2018 - 31 December 2018) not measured as no data entered.

Direct Emissions (Scope 1)									
Stationary Fuel Combustion									
2018									
Type	Quantity	Unit	Energy Consumption (MJ)	CO <sub>2</sub> Emission Estimate (t CO <sub>2</sub> -e)	CH <sub>4</sub> Emission Estimate (t CO <sub>2</sub> -e)	N <sub>2</sub> O Emission Estimate (t CO <sub>2</sub> -e)	Total Emission Estimate (t CO <sub>2</sub> -e)		
Diesel	2403.84	litres (L)	91819.2	6.5	0.02	0.02	6.5		
subtotal			91819.2	6.5	0.02	0.02	6.5		
Mobile Fuel Combustion (road)									
2018									
Type	Quantity	Unit	Energy Consumption (MJ)	CO <sub>2</sub> Emission Estimate (t CO <sub>2</sub> -e)	CH <sub>4</sub> Emission Estimate (t CO <sub>2</sub> -e)	N <sub>2</sub> O Emission Estimate (t CO <sub>2</sub> -e)	Total Emission Estimate (t CO <sub>2</sub> -e)		
Diesel	2887019.23	litres (L)	110275184.8	7762.8	8.6	126.7	7898.1		
Motor gasoline	570666.67	litres (L)	19518215.1	1285.0	9.7	46.0	1340.7		
Motor gasoline	36000	litres (L)	1231289.3	81.1	0.6	2.9	84.6		
subtotal			131024689.2	9128.9	18.9	175.5	9323.3		
Onsite Wastewater Treatment									
2018									
Type	Number of people serviced by system per day		Number of days in use	CO <sub>2</sub> Emission Estimate (t CO <sub>2</sub> -e)	CH <sub>4</sub> Emission Estimate (t CO <sub>2</sub> -e)	N <sub>2</sub> O Emission Estimate (t CO <sub>2</sub> -e)	Total Emission Estimate (t CO <sub>2</sub> -e)		
Aerobic (BOD Unknown)	8190		365		678.0		678.0		
subtotal					678.0		678.0		
TOTAL			131116508.4	9135.3	696.9	175.6	10007.8		
Indirect Emissions (Scope 2)									
Purchased Electricity									
2018									
Quantity	Unit	% Green Power	Provider	Energy Consumption (MJ)	CO <sub>2</sub> Emission Estimate (t CO <sub>2</sub> -e)	CH <sub>4</sub> Emission Estimate (t CO <sub>2</sub> -e)	N <sub>2</sub> O Emission Estimate (t CO <sub>2</sub> -e)	Total Emission Estimate (t CO <sub>2</sub> -e)	
36121272	Kilowatt hour (kWh)	0	Portugal, EDP	130036579.2	21347.7	11.1	79.6	21438.4	
subtotal				130036579.2	21347.7	11.1	79.6	21438.4	
TOTAL				130036579.2	21347.7	11.1	79.6	21438.4	
Greenhouse Gas Emissions (Scope 1 and Scope 2)									
GRAND TOTAL			261153087.6	30483.0	708.0	255.2	31446.2		
Indirect Emissions (Scope 3)									
Waste Sent to Landfill									
2018									
Quantity	Unit	Type of Landfill	Type of Waste	Type of Operation	Source	CO <sub>2</sub> Emission Estimate (t CO <sub>2</sub> -e)	CH <sub>4</sub> Emission Estimate (t CO <sub>2</sub> -e)	N <sub>2</sub> O Emission Estimate (t CO <sub>2</sub> -e)	Total Emission Estimate (t CO <sub>2</sub> -e)
6464.3	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Unknown (mixed waste types)	Other Operation	International				
subtotal									
TOTAL						0.0	0.0	0.0	0.0

### 3. Water

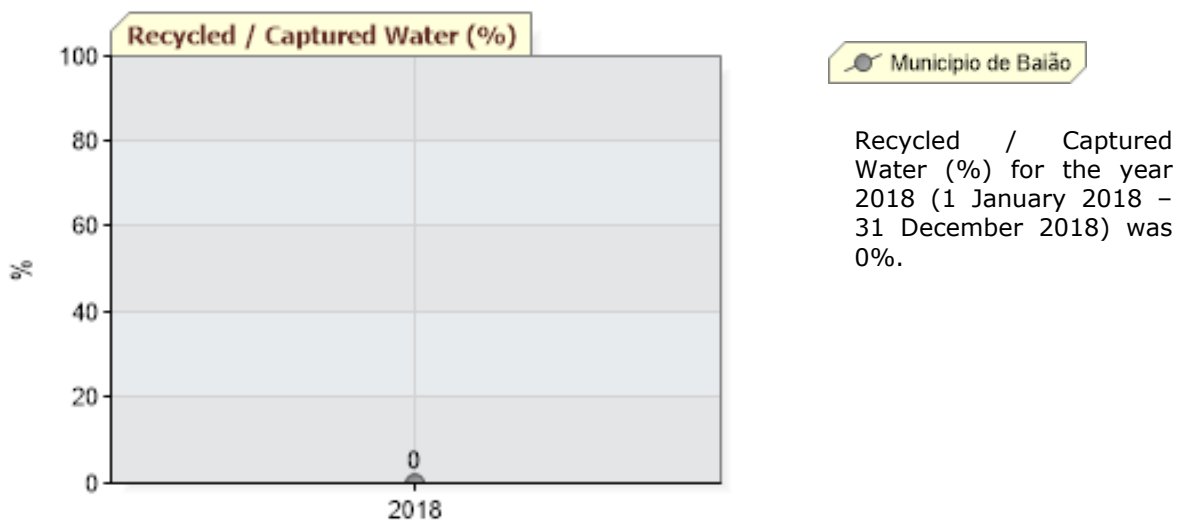
#### Potable Water Consumption (kL / Person Year) ★



#### 2018

Quantity	Unit	Potable Water Consumption (kL)
342868	cubic metres	342868.0 kL
	<b>TOTAL</b>	<b>342868.0 kL</b>

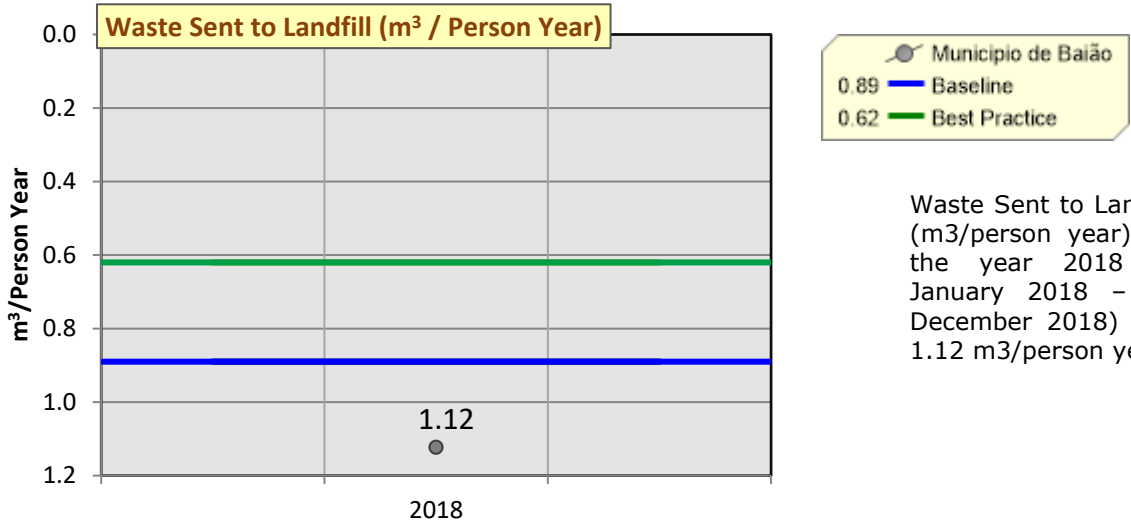
#### Recycled / Captured Water (%)





## 4. Waste

### Waste Sent to Landfill (m<sup>3</sup> / Person Year) ✕

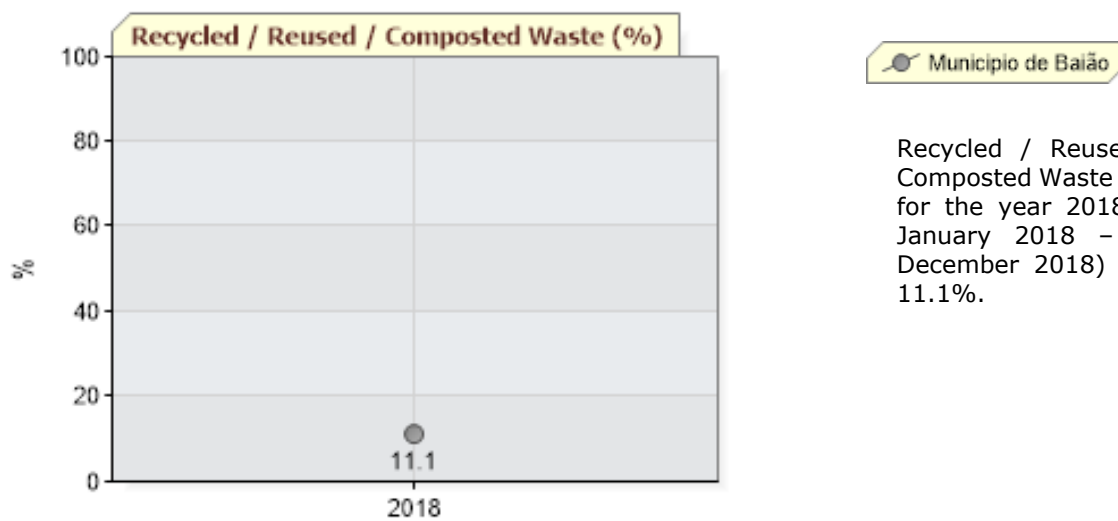


Waste Sent to Landfill (m<sup>3</sup>/person year) for the year 2018 (1 January 2018 – 31 December 2018) was 1.12 m<sup>3</sup>/person year.

#### 2018

Quantity	Unit	Type of Landfill	Type of Waste	Type of Operation	Waste Sent to Landfill (m <sup>3</sup> )
6464.3	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Unknown (mixed waste types)	Other Operation	
				<b>TOTAL</b>	<b>0.0 m<sup>3</sup></b>

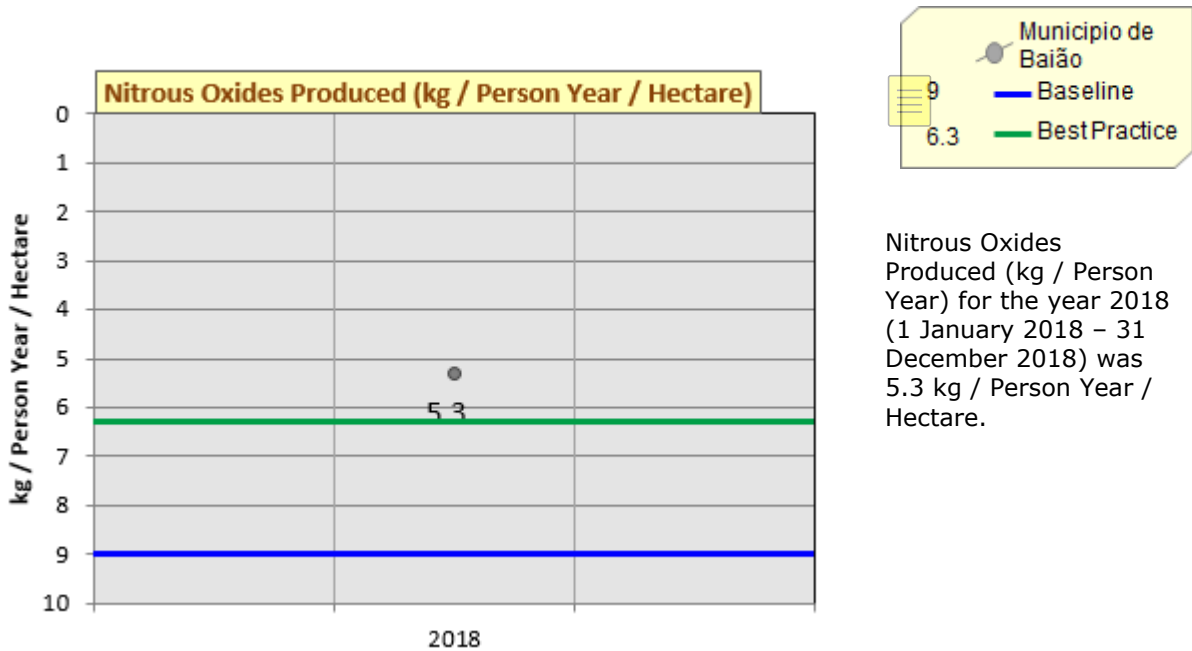
### Recycled / Reused / Composted Waste (%)



Recycled / Reused / Composted Waste (%) for the year 2018 (1 January 2018 – 31 December 2018) was 11.1%.

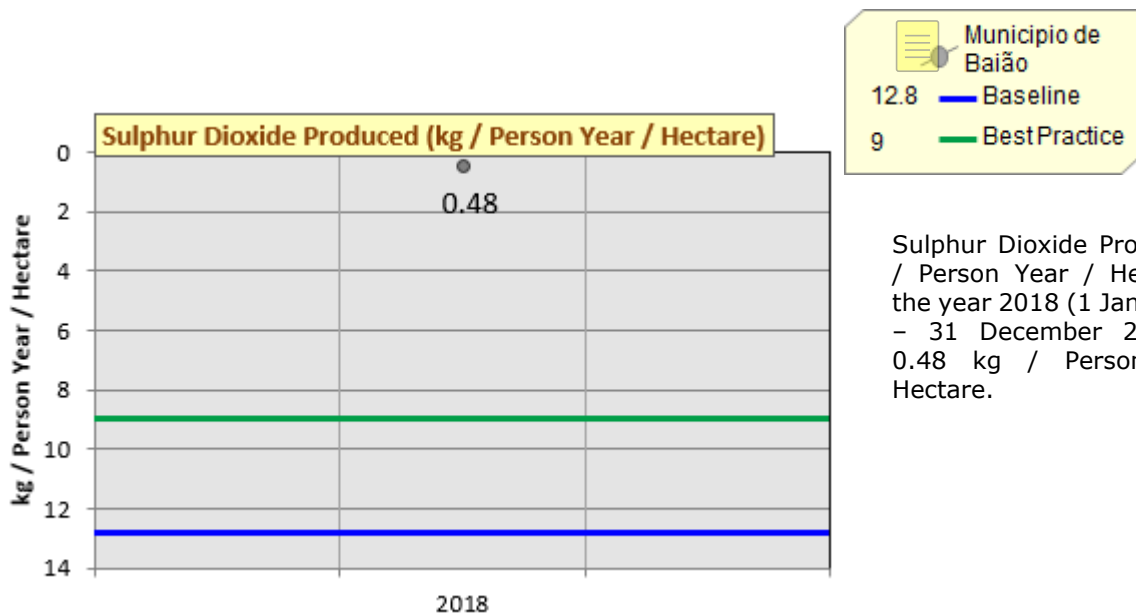
## 5. Sector Specific

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



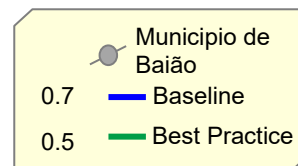
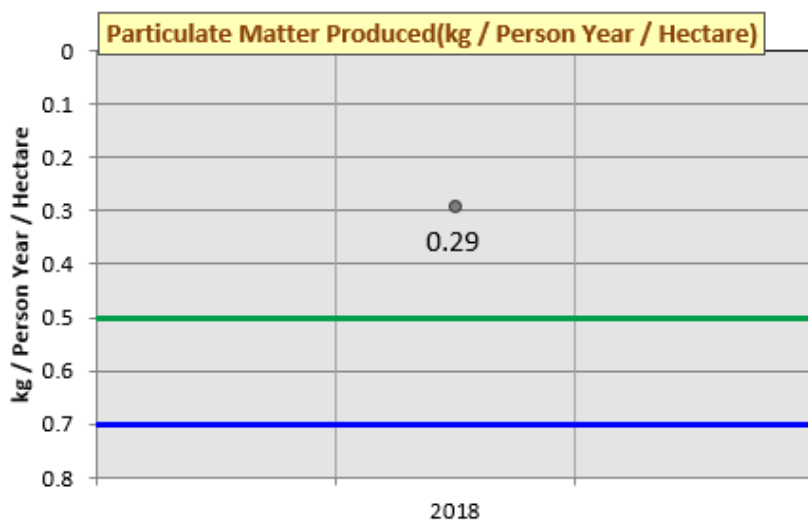
Nitrous Oxides Produced (kg / Person Year / Hectare) for the year 2018 (1 January 2018 – 31 December 2018) was 5.3 kg / Person Year / Hectare.

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



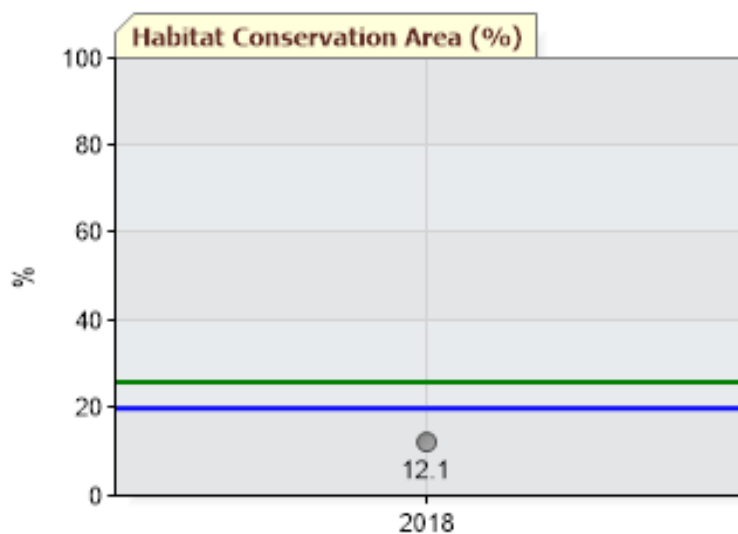
Sulphur Dioxide Produced (kg / Person Year / Hectare) for the year 2018 (1 January 2018 – 31 December 2018) was 0.48 kg / Person Year / Hectare.

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



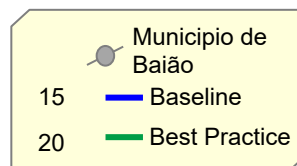
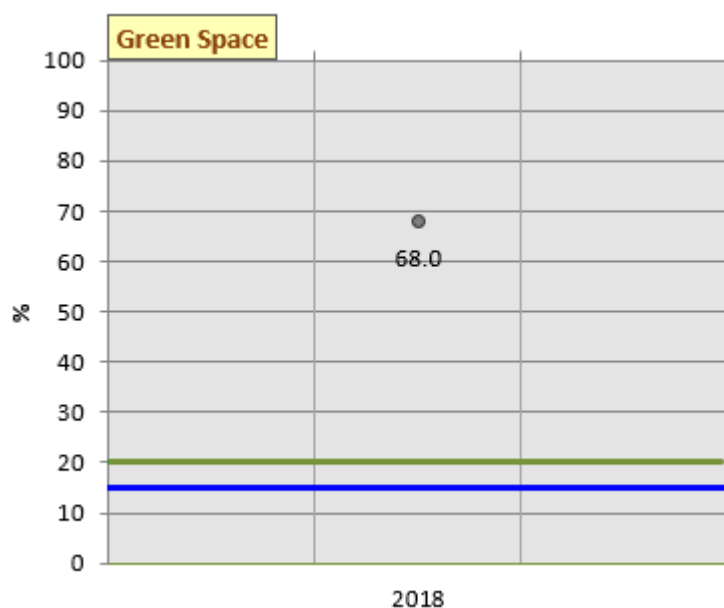
Particulate Matter Produced (kg / Person Year / Hectare) for the year 2018 (1 January 2018 – 31 December 2018) was 0.29 kg / Person Year / Hectare.

## Habitat Conservation Area (%) ✕



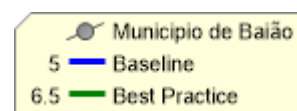
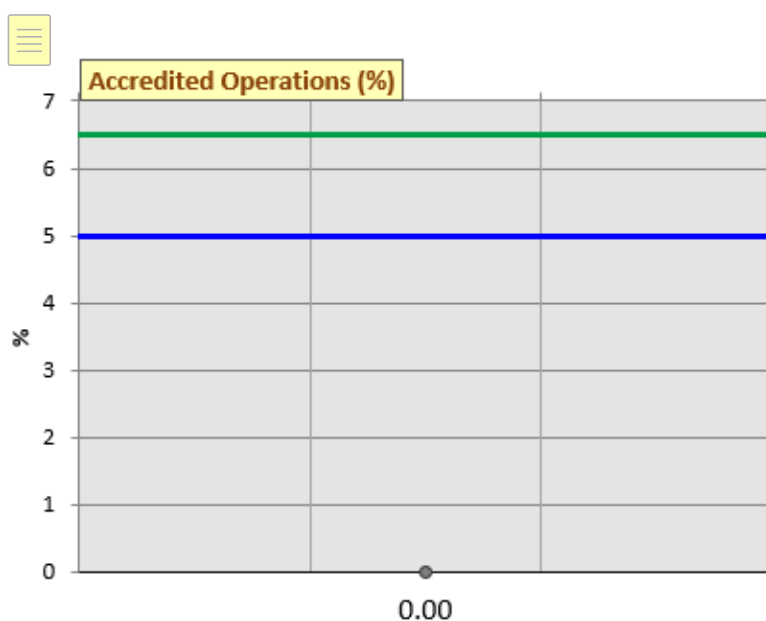
Habitat Conservation Area (%) for the year 2018 (1 January 2018 – 31 December 2018) was 12.1%, which was 7.9% below the Baseline level.

## Green Space (%) ★



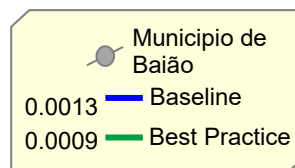
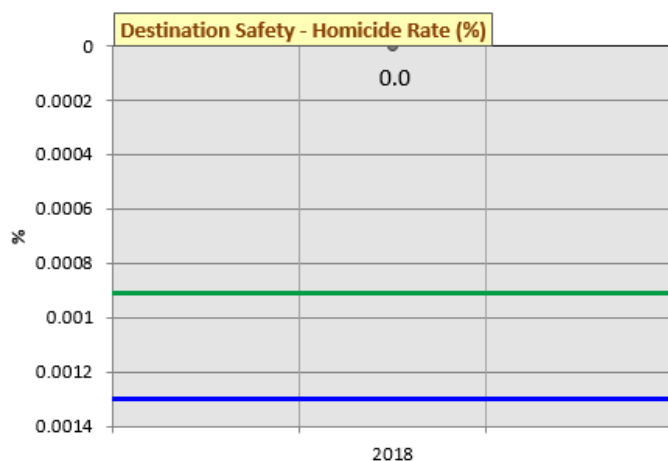
Green Space (%) for the year 2018 (1 January 2018 – 31 December 2018) was 68.0%, which was 48.0% better than the Best Practice level.

## Accredited Operations (%) ✘



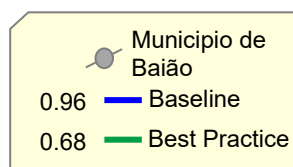
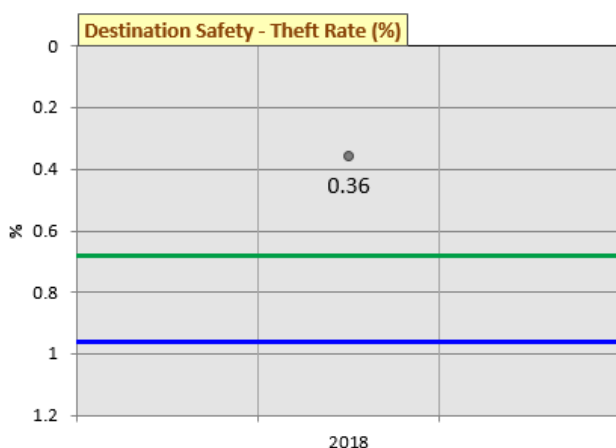
Accredited Operations (%) for the year 2018 (1 January 2018 – 31 December 2018) was 0%, which was 5.0% below the Baseline level.

## Destination Safety – Homicide Rate (%) ★



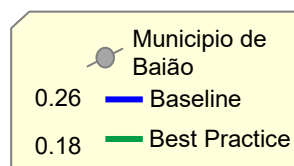
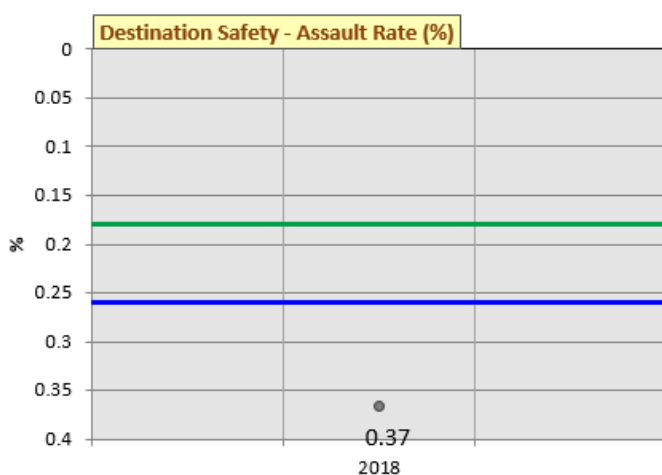
Homicide Rate for the year 2018 (1 January 2018 – 31 December 2018) was 0.0%, which was 0.00091% better than the Best Practice level.

## Destination Safety – Theft Rate (%) ★



Theft Rate for the year 2018 (1 January 2018 – 31 December 2018) was 0.36%, which was 0.32% better than the Baseline Level.

## Destination Safety – Assault Rate (%) ✘

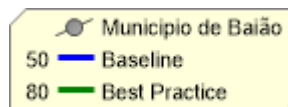
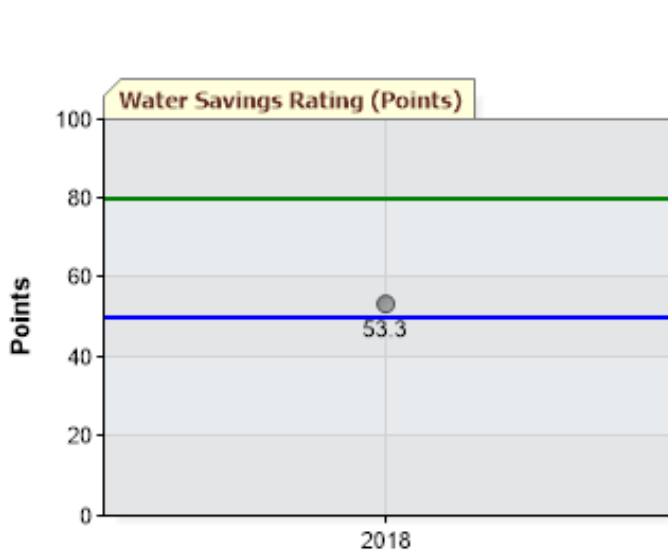


Assault Rate for the year 2018 (1 January 2018 – 31 December 2018) was 0.37%, which was 0.11% below the Baseline Level.

## Lead Agency Performance

### Water

#### Water Savings Rating (Points) ✓

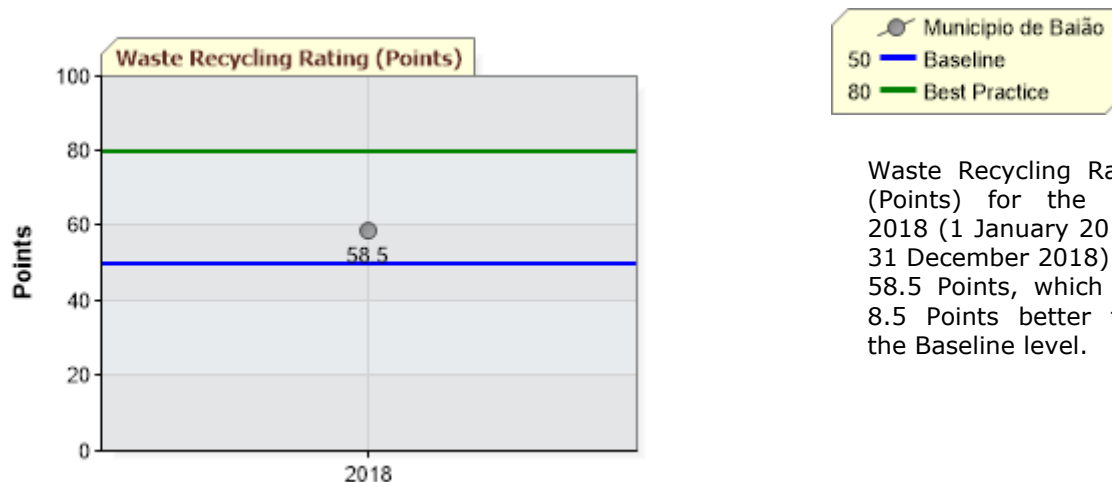


Water Savings Rating (Points) for the year 2018 (1 January 2018 – 31 December 2018) was 53.3 Points, which was 3.3 Points better than the Baseline level.

Water Savings Measures	Frequency / Percentage Rating	Water Savings Rating (Points)
Check for leaks	Every week	100.0 Points
Low/dual flush toilets	40-59%	65.1 Points
Low flow tap fittings	40-59%	65.1 Points
Low flow shower fittings	0%	0.0 Points
Water sprinklers used after dark	80-99%	88.9 Points
Minimal irrigation landscaping	1-19%	54.0 Points
Use of recycle/grey/rain water	0%	0.0 Points
	<b>Overall Rating:</b>	<b>53.3 Points</b>

## Waste

### Waste Recycling Rating (Points) ✓

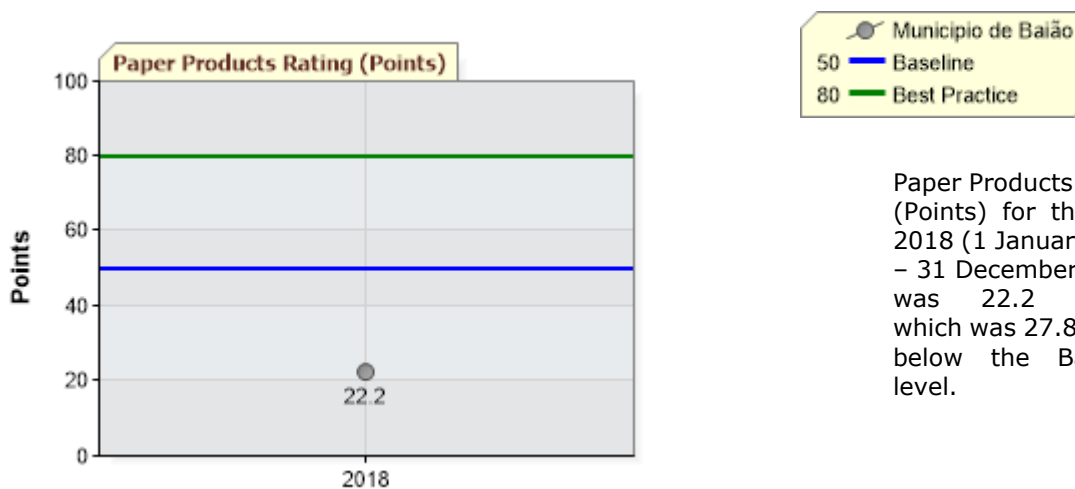


Waste Recycling Rating (Points) for the year 2018 (1 January 2018 – 31 December 2018) was 58.5 Points, which was 8.5 Points better than the Baseline level.

Waste Recycling Measures	Frequency / Percentage Rating	Waste Recycling Rating (Points)
Glass	1-19%	54.0 Points
Paper/card	1-19%	54.0 Points
Iron & steel (ferrous metals)	Relevant / Not Available	50.0 Points
Other metals (non-ferrous)	Relevant / Not Available	50.0 Points
Plastics	1-19%	54.0 Points
Rubber	Not Relevant / Not Available	
Green waste	80-99%	88.9 Points
	<b>Overall Rating:</b>	<b>58.5 Points</b>

## Paper

### Paper Products Rating (Points) ✕



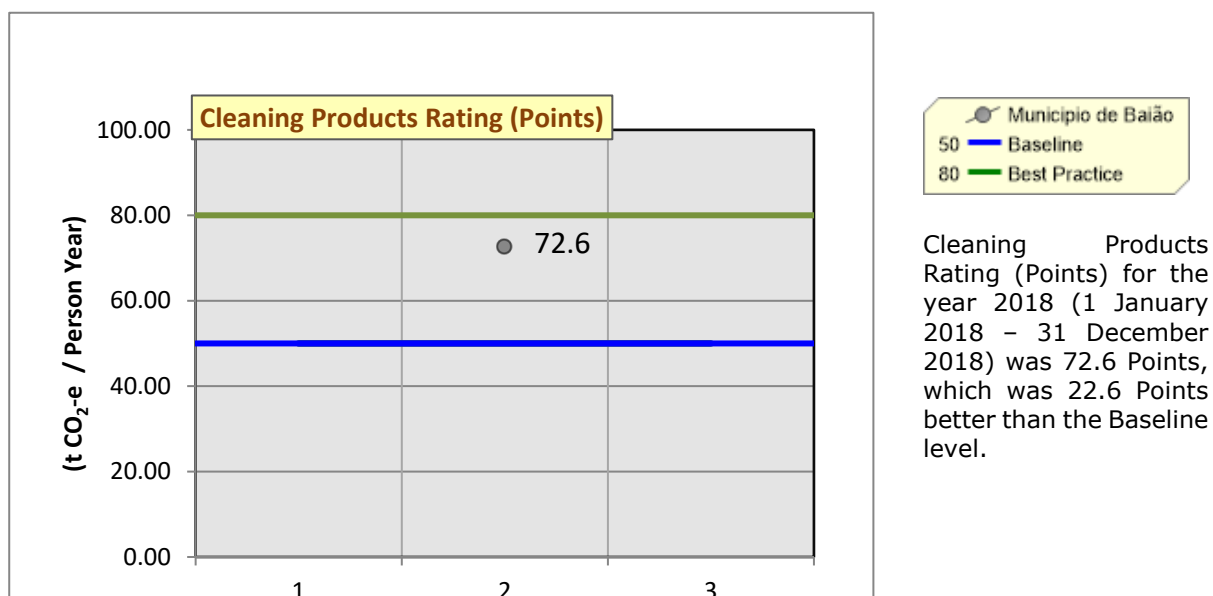
Paper Products Rating (Points) for the year 2018 (1 January 2018 – 31 December 2018) was 22.2 Points, which was 27.8 Points below the Baseline level.

Paper Products Measures	Frequency / Percentage Rating	Paper Products Rating (Points)
Office paper	80-99%	88.9 Points
Serviettes	0%	0.0 Points
Tissues	Not Relevant / Available	
Toilet tissue	0%	0.0 Points
Paper towels	0%	0.0 Points
	<b>Overall Rating:</b>	<b>22.2 Points</b>



## Cleaning

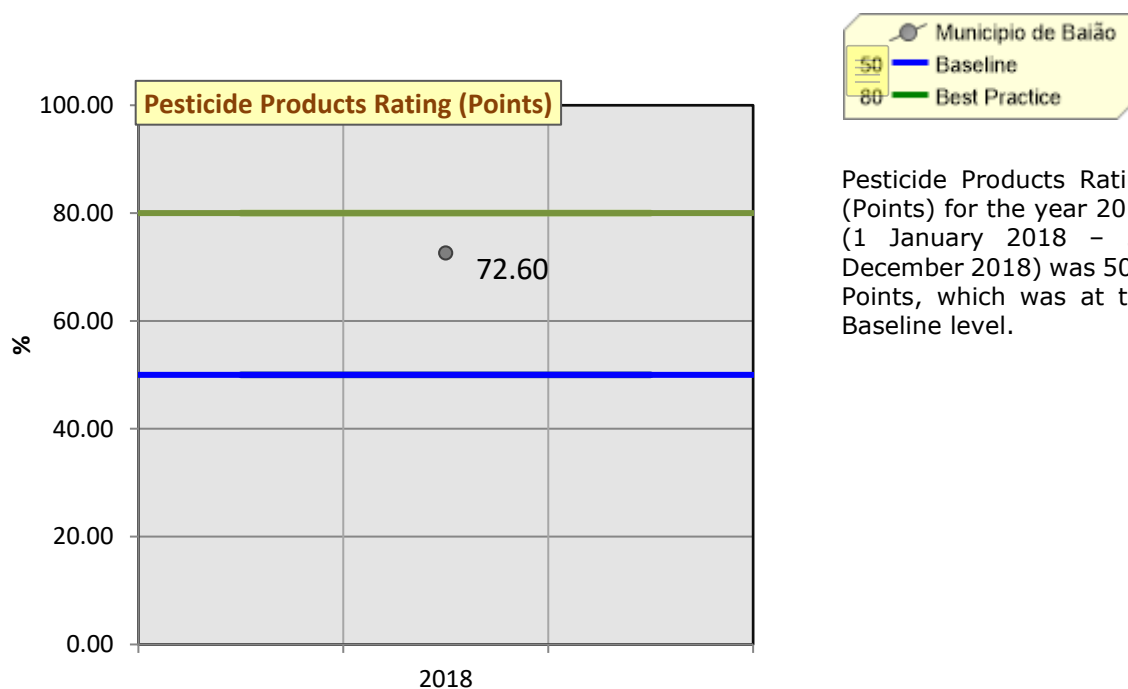
### Cleaning Products Rating (Points) ✓



Cleaning Products Measures	Frequency / Percentage Rating	Cleaning Products Rating (Points)
Hard floor cleaners	Not Relevant / Available	100.0 Points
Carpet cleaners	Not Relevant / Available	100.0 Points
Interior surface cleaners	1-19%	54.0 Points
External surface cleaners	Not Relevant / Available	100.0 Points
Glass cleaners	0%	0.0 Points
Detergents	1-19%	54.0 Points
Personal hygiene	100%	100.0 Points
	<b>Overall Rating:</b>	<b>72.6 Points</b>

## Pesticides

### Pesticide Products Rating (Points) ✓



Pesticide Products Rating (Points) for the year 2018 (1 January 2018 – 31 December 2018) was 50.0 Points, which was at the Baseline level.

Pesticide Products Measures	Frequency / Percentage Rating	Pesticide Products Rating (Points)
Weed killers	Not Relevant / Available	100.0 Points
Fungal killers	0%	0.0 Points
Rodent killers	Not Relevant / Available	100.0 Points
Insect killers	0%	0.0 Points
	<b>Overall Rating:</b>	<b>50.0 Points</b>

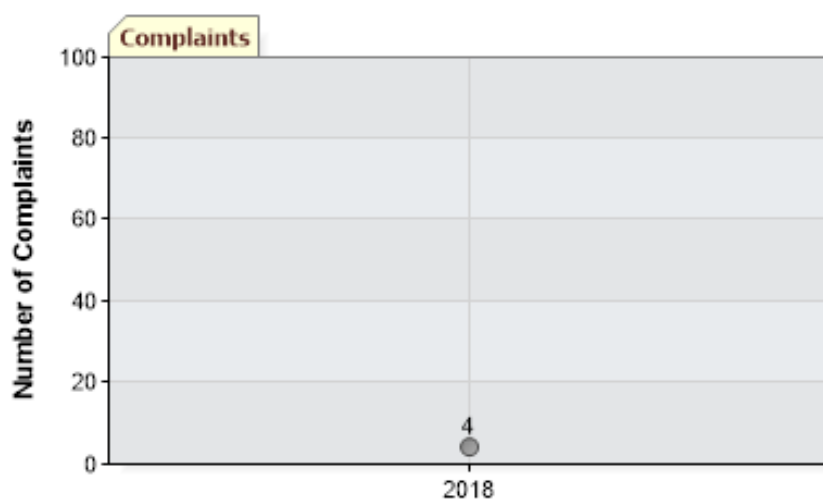
## OPTIONAL BENCHMARKING INDICATORS

**Município de Baião** has also nominated optional Operation Selected and Specified Indicator/s that they consider relevant to their specific operation and locality. The Operation Selected and Specified Indicator/s do not form part of the formal annual benchmarking exercise.

### 1. Selected Indicators

Selected Indicators are from a supplied list of EarthCheck indicators.

#### Complaints



*The supplied data has been compiled by **Município de Baião** in the prescribed manner, authorised by a senior executive of the destination and submitted for an annual assessment.*

---

## CONCLUSION AND RECOMMENDATIONS

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

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

From the benchmarking data provided, nine indicators, *Energy Consumption, Greenhouse Gas Emissions (Scope 1 and Scope 2), Potable Water Consumption, Nitrous Oxide Produced, Sulphur Dioxide Produced, Particulate Matter Produced, Green Space, Homicide Rate and Theft Rate*, are at or above the Best Practice level.

The six indicators that fell below the Baseline level were *Waste Sent to Landfill, Paper Products Rating, Unemployment Rate, Habitat Conservation Area, Assault Rate and Accredited Operations*.

The value for Waste Sent to Landfill was 25.8% lower than the baseline level. High level for this indicator may reflect assessing the volume of disposal bins and/or garbage trucks as full when they are not. In addition, disposal of large quantities of low-density, uncompacted waste (e.g. paper and packaging, or green waste such as branches and/or large leaves) can also have an adverse impact on the overall volume. Furthermore, if the situation is that the **Município de Baião** does not have ready access to appropriate external recycling facilities (for paper, cardboard, metals, plastics etc.), then the difficulties operations may face in disposing of waste off-site in an environmentally friendly manner is recognised. However, if this is the case, the **Município de Baião** should indicate this in their submission and is encouraged to review existing practices and procedures in order to not only more accurately assess, but also reduce, the amount of material that has to be sent to landfill. The latter can include increasing on-site recycling and reuse (e.g. green wastes), donating recyclable materials to local crafts and trades people, and avoiding purchases with excessive disposable packaging.

The rating for Paper Products was 27.8% below the Baseline level. The **Município de Baião** 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.

The value for Habitat Conservation Area was 12.1%, whereas Baseline was 20%. The **Município de Baião** is encouraged to promote habitat conservation of land, wetlands and waterways to aid biodiversity conservation and support habitat protection within the region.

The percentage of Assault Rate is 0.11% below the Baseline. The **Município de Baião** is encouraged to work with the local hotel and tourism association to identify common threats and how they could assist the community in providing more support to the police in reporting of crime.

The value for Accredited Operations was 0%. The **Município de Baião** is encouraged to promote environmental accreditation to hotels, restaurants and other business within the destination.

The **Município de Baião** is encouraged to continue to make improvements in the above indicators and to ensure that any indicators 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 **Município de Baião** has demonstrated to the environment, the assessors are confident that they can maintain or improve performance, where appropriate and practical, in all indicators. Over the next 12 months, the **Município de Baião** is encouraged to ensure that Waste Sent to Landfill, Paper Products Rating, Unemployment Rate, Habitat Conservation Area, Assault Rate and Accredited Operations are at Baseline performance or better. In line with EarthCheck Policy this would enable the **Município de Baião** to continue to meet the benchmarking requirements of the EarthCheck program.



EARTHCHECK

**Benchmarks Assessed by EarthCheck**

# SUMMARY OF SUPPLIED BENCHMARKING DATA

## Activity Measures

Person Years	19190.48
Total Destination Area	17450

## Supplied Benchmarking Data

### Energy

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

Supplied	261153.1 GJ
Calculated	13.609 GJ / Person Year
Baseline	55.5643 GJ / Person Year
Best Practice	38.8950 GJ / Person Year
Difference	65.0% better than the Best Practice level

#### Green Power (%)

Supplied	0%
Calculated	0%

#### Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO<sub>2</sub>-e / Person Year)

Supplied	31446.2 t CO <sub>2</sub> -e
Calculated	1.6 t CO <sub>2</sub> -e / Person Year
Baseline	4 t CO <sub>2</sub> -e / Person Year
Best Practice	2.8 t CO <sub>2</sub> -e / Person Year
Difference	41.5% better than the Best Practice level

#### Direct Emissions (Scope 1) (kg CO<sub>2</sub>-e / Person Year)

Supplied	10007819.2 kg CO <sub>2</sub> -e
Calculated	521.5 kg CO <sub>2</sub> -e / Person Year

#### Indirect Emissions (Scope 2) (t CO<sub>2</sub>-e / Person Year)

Supplied	21438.4 t CO <sub>2</sub> -e
Calculated	1.1 t CO <sub>2</sub> -e / Person Year

#### Indirect Emissions (Scope 3) (t CO<sub>2</sub>-e / Person Year)

Supplied	0.0 t CO <sub>2</sub> -e
Calculated	0.0 t CO <sub>2</sub> -e / Person Year

#### Waste Indirect Emissions (Scope 3) (t CO<sub>2</sub>-e / Person Year)

Supplied	0.0 t CO <sub>2</sub> -e
Calculated	0.0 t CO <sub>2</sub> -e / Person Year

### Water

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

Supplied	342868.0 kL
Calculated	17.9 kL / Person Year
Baseline	80.75 kL / Person Year
Best Practice	56.53 kL / Person Year
Difference	68.4% better than the Best Practice level

#### Recycled / Captured Water (%)

Supplied	0%
Calculated	0%

#### Water Savings Rating (Points)

Supplied	53.3 Points
Calculated	53.3 Points
Baseline	50 Points
Best Practice	80 Points
Difference	3.3 Points better than the Baseline level

### Waste

#### Waste Sent to Landfill (m<sup>3</sup> / Person Year)

Calculated	1.12 m <sup>3</sup> / Person Year
Baseline	0.89 m <sup>3</sup> / Person Year
Best Practice	0.62 m <sup>3</sup> / Person Year
Difference	25.84% below the Baseline level

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

Supplied	11.1%
Calculated	11.1%

#### Waste Recycling Rating (Points)

Supplied	58.5 Points
Calculated	58.5 Points
Baseline	50 Points
Best Practice	80 Points
Difference	8.5 Points better than the Baseline level

## Paper

### Paper Products Rating (Points)

Supplied	22.2 Points
Calculated	22.2 Points
Baseline	50 Points
Best Practice	80 Points
Difference	27.8 Points below the Baseline level

## Cleaning

### Cleaning Products Rating (Points)

Supplied	72.6 Points
Calculated	72.6 Points
Baseline	50 Points
Best Practice	80 Points
Difference	22.6 Points better than the Baseline level

## Pesticides

### Pesticide Products Rating (Points)

Supplied	50.0 Points
Calculated	50.0 Points
Baseline	50 Points
Best Practice	80 Points
Difference	at the Baseline level

## Sector Specific

### Total CO<sub>2</sub>-e Produced (t CO<sub>2</sub>-e / Person Year)

Supplied	0.0 t CO <sub>2</sub> -e
Calculated	0.0 t CO <sub>2</sub> -e / Person Year
Baseline	8.6 t CO <sub>2</sub> -e / Person Year
Best Practice	6 t CO <sub>2</sub> -e / Person Year
Difference	100% better than the Best Practice level

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

Supplied	90002.76 kg
Calculated	5.28 kg / Person Year / Hectare

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

Supplied	8140.03 kg
Calculated	0.48 kg / Person Year / Hectare

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

Supplied	4978.16 kg
Calculated	0.29 kg / Person Year / Hectare

### Habitat Conservation Area (%)

Supplied	12.1%
Calculated	12.1%
Baseline	20 %
Best Practice	26 %
Difference	7.9% below the Baseline level

### Green Space (%)

Supplied	68.0%
Calculated	68.0%
Baseline	15 %
Best Practice	20 %
Difference	48.0% better than the Best Practice level

### Habitat Conservation (%)

Supplied	12.1%
Baseline	20%
Best Practice	26%

### Significant Site Maintenance Fund (%)

Supplied	0.4%
----------	------

### Destination Safety – Homicide Rate (%)

Supplied	0 offences per 19,153 population
Calculated	0.0%
Baseline	0.0013%
Best Practice	0.00091%
Difference	0.00091% better than the Best Practice Level.

### Destination Safety – Theft Rate (%)

Supplied	68 offences per 19,153 population
Calculated	0.36%
Baseline	0.96%
Best Practice	0.68%
Difference	0.32% better the Best Practice Level

### Destination Safety – Assault Rate (%)

Supplied	70 offences per 19,153 population
Calculated	0.37%
Baseline	0.26%
Best Practice	0.18%
Difference	0.11% lower the Baseline Level

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

Supplied	13.6%
Baseline	6.5%
Best Practice	4.6%
Difference	7.1% worse than the Baseline Level

### Accredited Operations (%)

Supplied	0%
----------	----



---

Baseline	5 %
Best Practice	6.5 %
Difference	5.0% below the Baseline 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 most 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<sup>3</sup>) or litres (L)). These are: 1 kg (uncompacted waste) = 0.00333333 m<sup>3</sup> or 3.33333 L and 1 kg (compacted waste) = 0.00153846 m<sup>3</sup> 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, considers "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., halfway between Baseline and Best Practice).