



EARTHCHECK

BENCHMARKING ASSESSMENT REPORT

DESTINATION BENCHMARKING

MUNICIPIO DE BAIÃO
PORTO, PORTUGAL



REPORT DATE: June 9, 2022

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

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. 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 ⁴	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)
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
5 Sector Specific	Nitrous Oxides Produced (kg / Person Year / Hectare) Sulphur Dioxide Produced (kg / Person Year / Hectare) Particulate Matter Produced (kg / Person Year / Hectare) Habitat Conservation Area (%) ³ Green Space (%) Destination Safety – Homicide Rate (%) Destination Safety – Theft Rate (%) Destination Safety – Assault Rate (%) Socio-Economic Benefit – Unemployment (%) Accredited Operations (%) Water Samples Passed (%)
6 Lead Agency Performance	Water Savings Rating (Points) Waste Recycling Rating (Points) Paper Products Rating (Points) Cleaning Products Rating (Points) Pesticide Products Rating (Points)
7 Optional Benchmarking Indicators	Complaints (Number of Complaints) Renewable Energy (kWh) Country Products Purchased (%) Staff Training (%)

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 must achieve to meet the requirements of the Company Standard. This review considers "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.

EarthCheck® is a registered trademark of Earthcheck Pty Ltd.

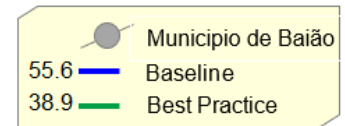
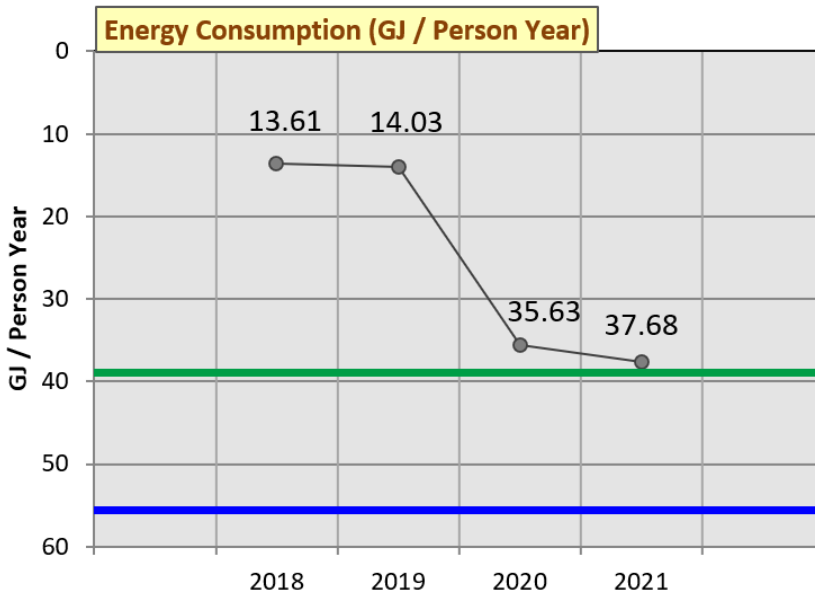
COMMUNITY PERFORMANCE BENCHMARKS

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

1. Policy ★

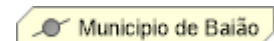
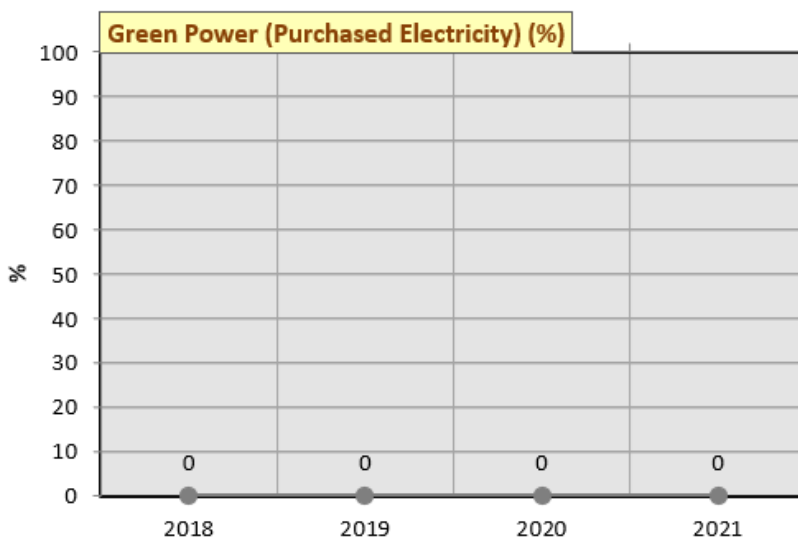
2. Energy

Energy Consumption (GJ / Person Year) ★



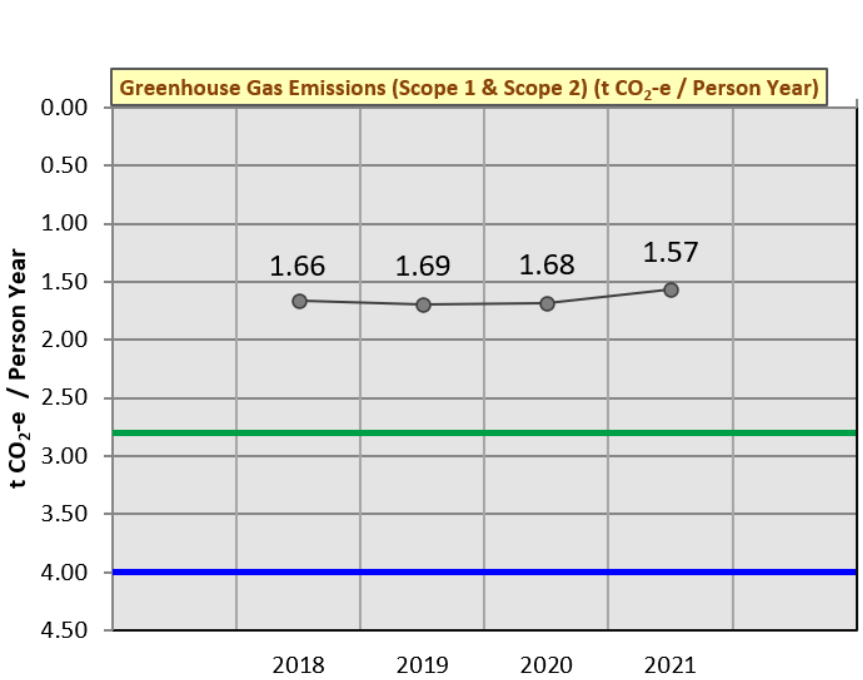
Energy Consumption (GJ / Person Year) for the year 2021 (1 January 2021 – 31 December 2021) was 37.68 GJ / Person Year, which was 0.03% better than the Best Practice level.

Green Power (Purchased Electricity) (%)



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

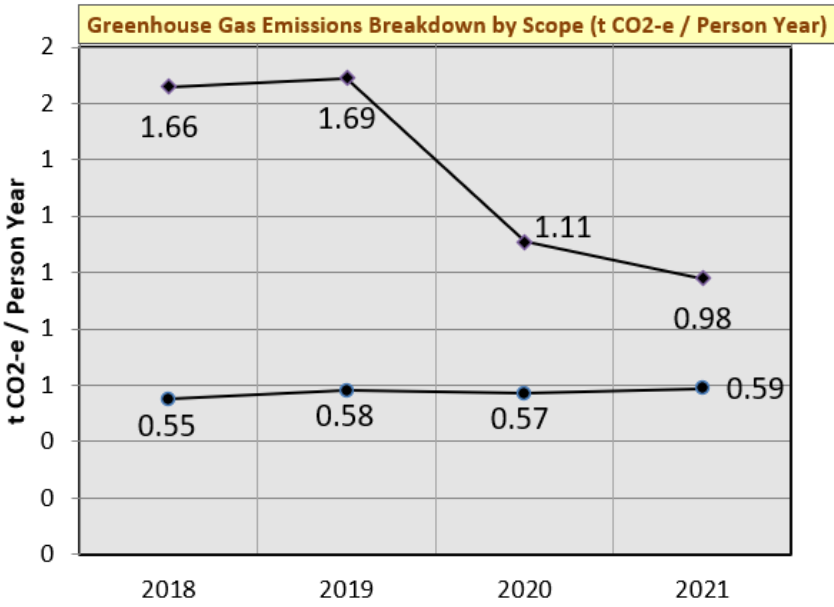
Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO₂-e / Person Year) ★



● Municipio de Baião
— 4 Baseline
— 2.8 Best Practice

Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO₂-e / Person Year) for the year 2021 (1 January 2021 - 31 December 2021) was 1.57 t CO₂-e / Person Year, which was 43.9% better than the Best Practice level.

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

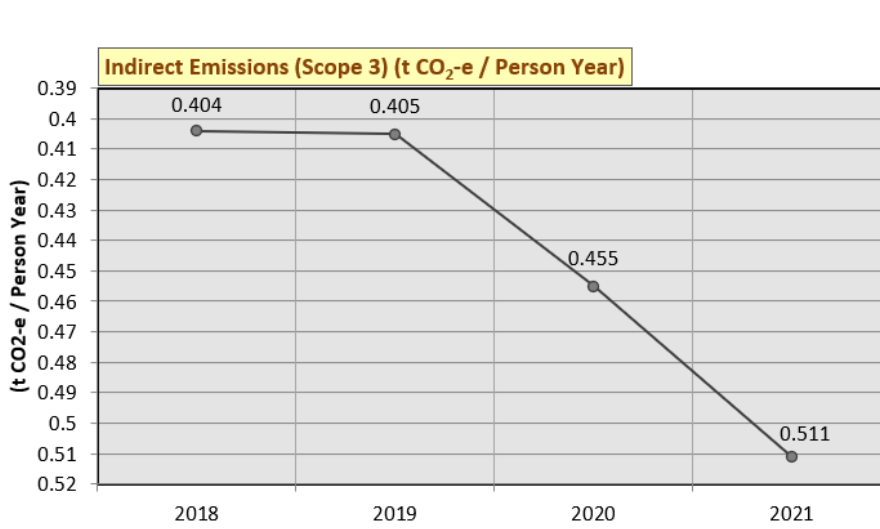


● Direct Emissions (Scope 1) (t CO₂-e / Person Year)
◆ Indirect Emissions (Scope 2) (t CO₂-e / Person Year)

Direct Emissions (Scope 1) (kg CO₂-e / Person Year) for the year 2021 (1 January 2021 - 31 December 2021) was 0.59 tonnes CO₂-e / Person Year.

Indirect Emissions (Scope 2) (kg CO₂-e / Person Year) for the year 2021 (1 January 2021 - 31 December 2021) was 0.98 tonnes CO₂-e / Person Year.

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

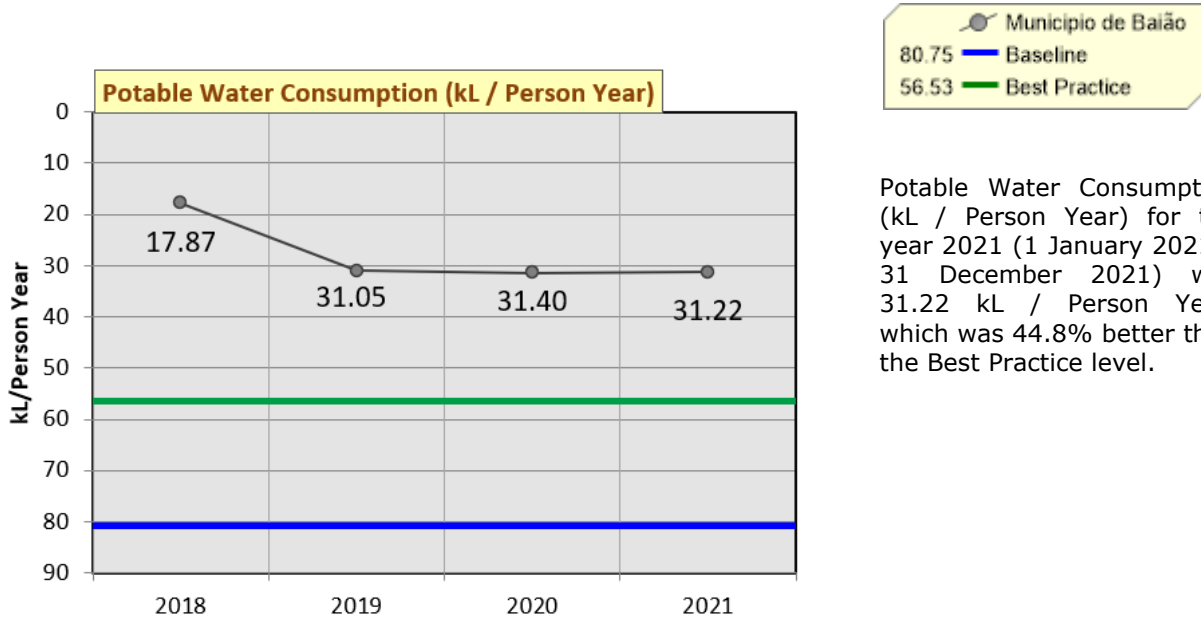


Indirect Emissions (Scope 3) (t CO₂-e / Person Year) for the year 2021 (1 January 2021 - 31 December 2021) was 0.511 tonnes CO₂-e / Person Year.

Direct Emissions (Scope 1)									
Stationary Fuel Combustion									
2021									
Type	Quantity	Unit	Energy Consumption (MJ)	CO ₂ Emission Estimate (t CO ₂ -e)	CH ₄ Emission Estimate (t CO ₂ -e)	N ₂ O Emission Estimate (t CO ₂ -e)	Total Emission Estimate (t CO ₂ -e)		
Diesel	0	litres (L)	0	0	0	0	0		
subtotal			0	0	0	0	0		
Mobile Fuel Combustion (road)									
2021									
Type	Quantity	Unit	Energy Consumption (MJ)	CO ₂ Emission Estimate (t CO ₂ -e)	CH ₄ Emission Estimate (t CO ₂ -e)	N ₂ O Emission Estimate (t CO ₂ -e)	Total Emission Estimate (t CO ₂ -e)		
Motor gasoline	608000	litres (L)	20795107.5	1369.0	13.8	41.9	1424.8		
Diesel	3001201.92	litres (L)	115178626.7	8108.0	11.9	113.1	8233.0		
subtotal			135973734.2	9477.0	25.8	155.0	9657.8		
Onsite Wastewater Treatment									
2021									
Type	Average BOD (mg/L)	Wastewater Volume (kL/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)		
Aerobic (BOD Known)	931	1233	365	0	791.9	0	791.9		
subtotal				0	791.9	0	791.9		
TOTAL		Energy Consumption (MJ)	CO₂ Emission Estimate (t CO₂-e)	CH₄ Emission Estimate (t CO₂-e)	N₂O Emission Estimate (t CO₂-e)	Total Emission Estimate (t CO₂-e)			
		135973734.2	9477.0	817.7	155.0	10449.7			
Indirect Emissions (Scope 2)									
Purchased Electricity									
2021									
Quantity	Unit	% Green Power	Provider	Energy Consumption (MJ)	CO ₂ Emission Estimate (t CO ₂ -e)	CH ₄ Emission Estimate (t CO ₂ -e)	N ₂ O Emission Estimate (t CO ₂ -e)	Total Emission Estimate (t CO ₂ -e)	
34747011	Kilowatt hour (kWh)	0	Portugal EDP	125089239.6	17234.5	14.2	65.5	17314.2	
subtotal				125089239.6	17234.5	14.2	65.5	17314.2	
TOTAL		Energy Consumption (MJ)	CO₂ Emission Estimate (t CO₂-e)	CH₄ Emission Estimate (t CO₂-e)	N₂O Emission Estimate (t CO₂-e)	Total Emission Estimate (t CO₂-e)			
		128509851.6	21097.0	10.9	78.7	21186.7			
Greenhouse Gas Emissions (Scope 1 and Scope 2)									
GRAND TOTAL		Energy Consumption (MJ)	CO₂ Emission Estimate (t CO₂-e)	CH₄ Emission Estimate (t CO₂-e)	N₂O Emission Estimate (t CO₂-e)	Total Emission Estimate (t CO₂-e)			
		261062973.8	26711.6	831.9	220.4	27763.9			
Indirect Emissions (Scope 3)									
Waste Sent to Landfill									
Quantity	Unit	Type of Landfill	Type of Waste	Type of Operation	Source	CO ₂ Emission Estimate (t CO ₂ -e)	CH ₄ Emission Estimate (t CO ₂ -e)	N ₂ O Emission Estimate (t CO ₂ -e)	Total Emission Estimate (t CO ₂ -e)
7522.96	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Unknown (mixed waste types)	Other Operation	International	0	9027.55	0	9027.55
subtotal						0	9027.55	0	9027.55
TOTAL		Energy Consumption (MJ)	CO₂ Emission Estimate (t CO₂-e)	CH₄ Emission Estimate (t CO₂-e)	N₂O Emission Estimate (t CO₂-e)	Total Emission Estimate (t CO₂-e)			
		0	0	9027.55	0	9027.55			

3. Water

Potable Water Consumption (kL / Person Year) ★

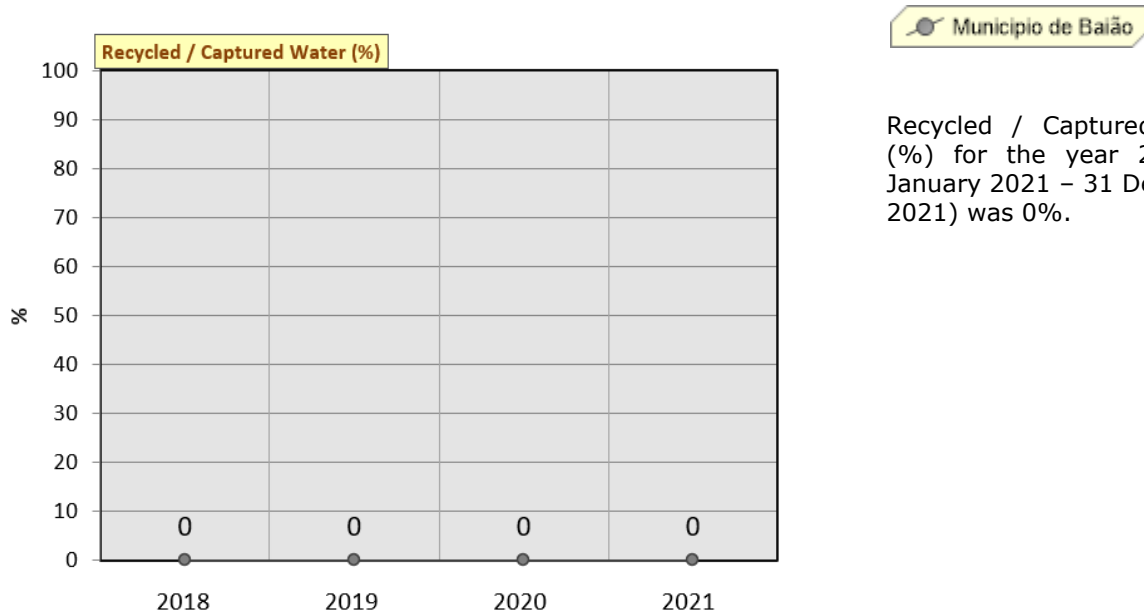


Potable Water Consumption (kL / Person Year) for the year 2021 (1 January 2021 – 31 December 2021) was 31.22 kL / Person Year, which was 44.8% better than the Best Practice level.

2021

Quantity	Unit	Potable Water Consumption (kL)
551441	cubic metres	551441.0 kL
	TOTAL	551441.0 kL

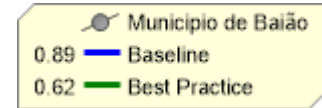
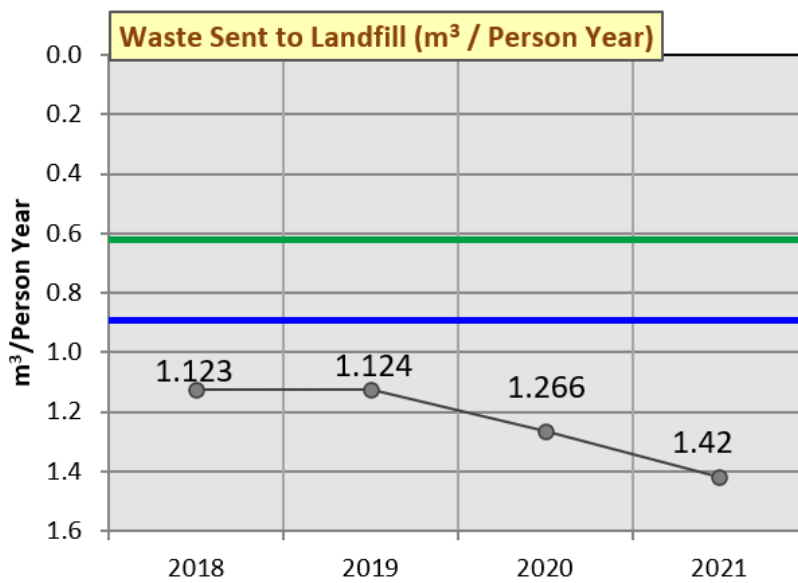
Recycled / Captured Water (%)



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

4. Waste

Waste Sent to Landfill (m³ / Person Year) ✕

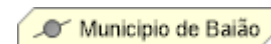
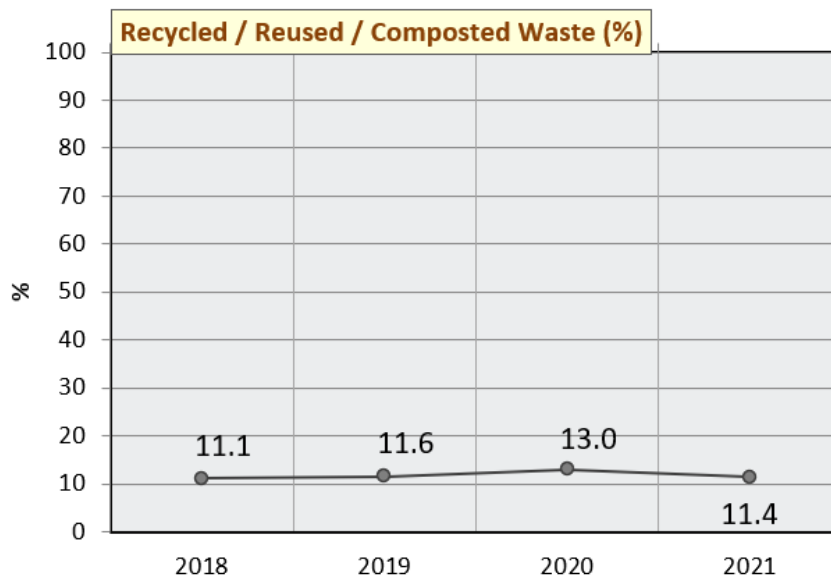


Waste Sent to Landfill (m³ / Person Year) for the year 2021 (1 January 2021 – 31 December 2021) was 1.42 m³ / Person Year, which was 59.55% below the Baseline Level.

2021

Quantity	Unit	Type of Landfill	Type of Waste	Type of Operation	Waste Sent to Landfill (m ³)
7522.96	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Unknown (mixed waste types)	Other Operation	25076.533
				TOTAL	25076.533 m³

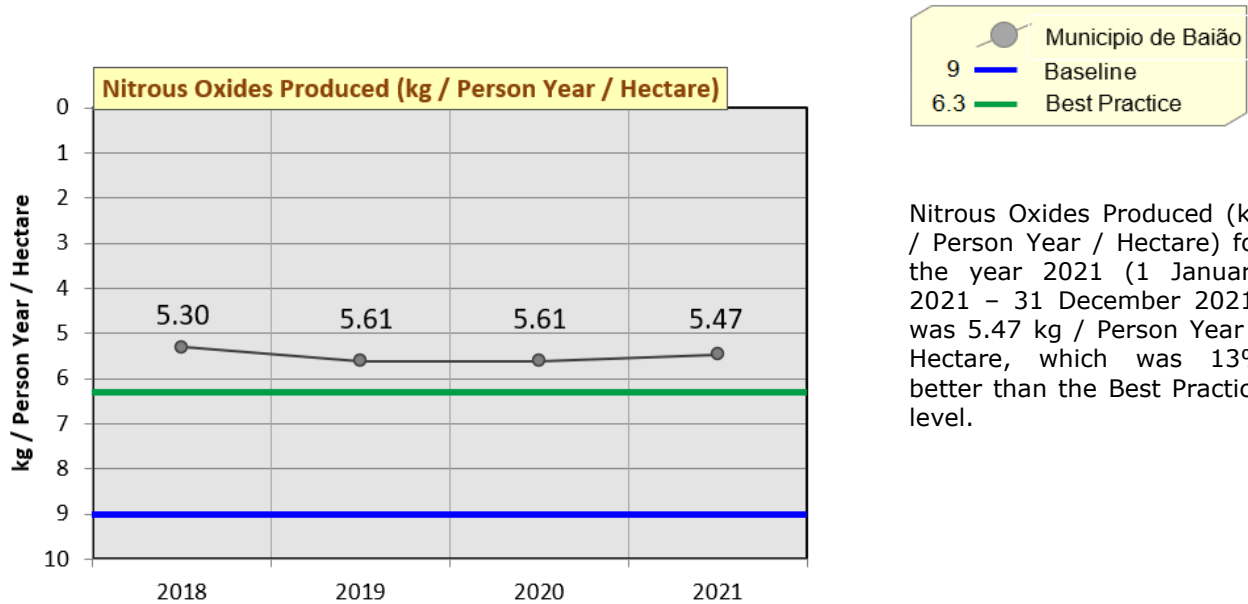
Recycled / Reused / Composted Waste (%)



Recycled / Reused / Composted Waste (%) for the year 2021 (1 January 2021 – 31 December 2021) was 11.4%.

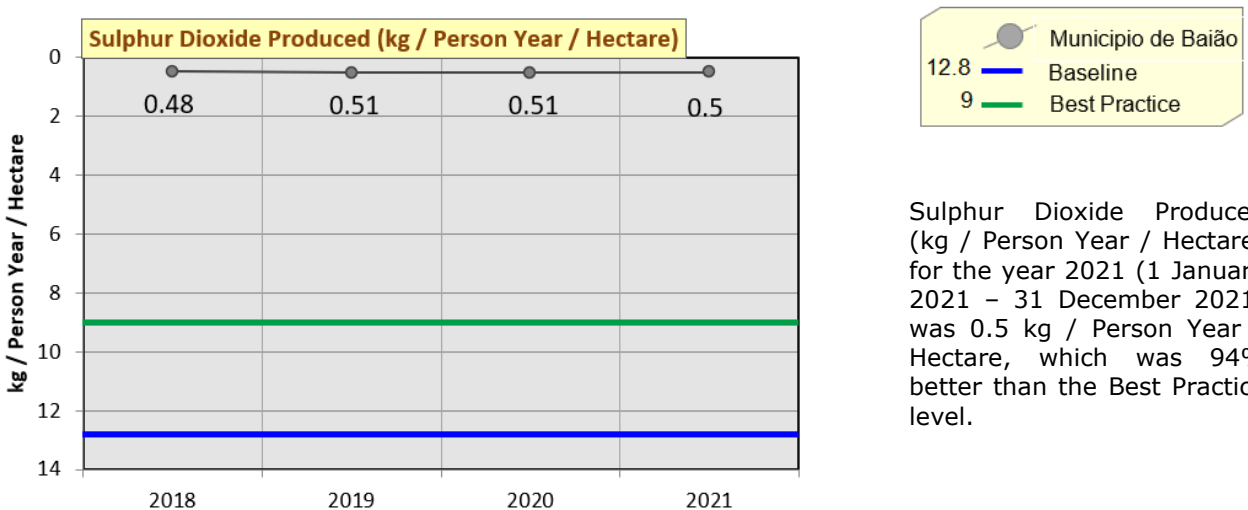
5. Sector Specific

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



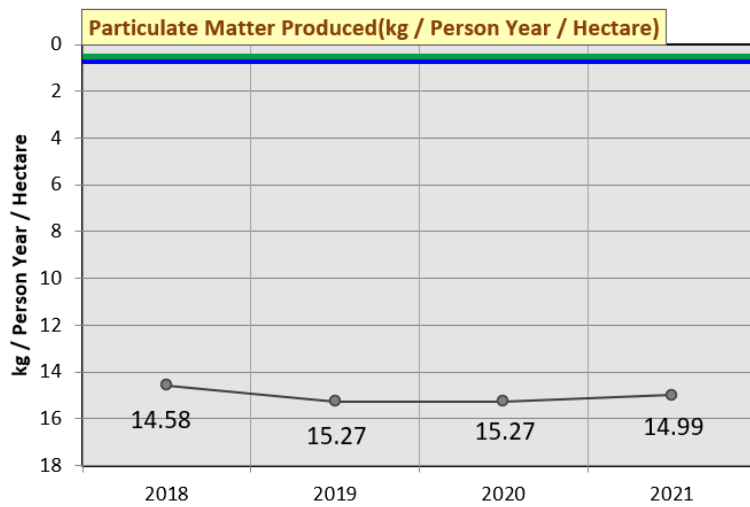
Nitrous Oxides Produced (kg / Person Year / Hectare) for the year 2021 (1 January 2021 – 31 December 2021) was 5.47 kg / Person Year / Hectare, which was 13% better than the Best Practice level.

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



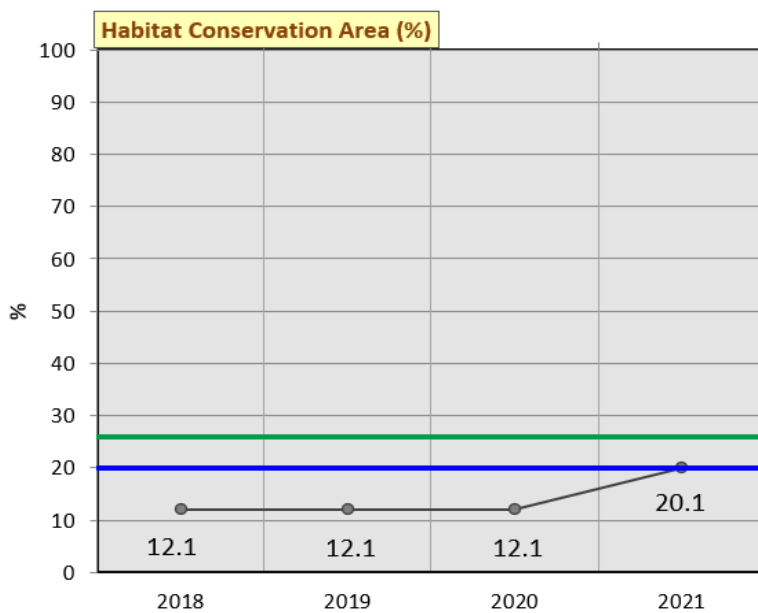
Sulphur Dioxide Produced (kg / Person Year / Hectare) for the year 2021 (1 January 2021 – 31 December 2021) was 0.5 kg / Person Year / Hectare, which was 94% better than the Best Practice level.

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



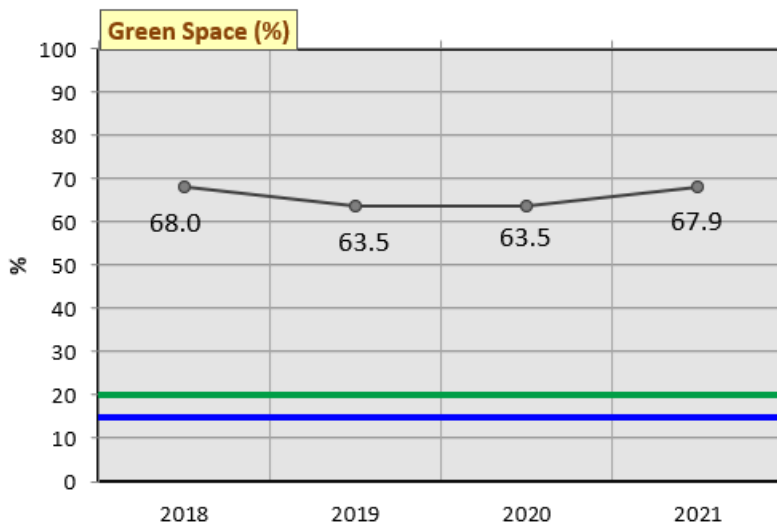
Particulate Matter Produced (kg / Person Year / Hectare) for the year 2021 (1 January 2021 - 31 December 2021) was 14.99 kg / Person Year / Hectare, which was 2,041% below the Baseline level.

Habitat Conservation Area (%) ✔



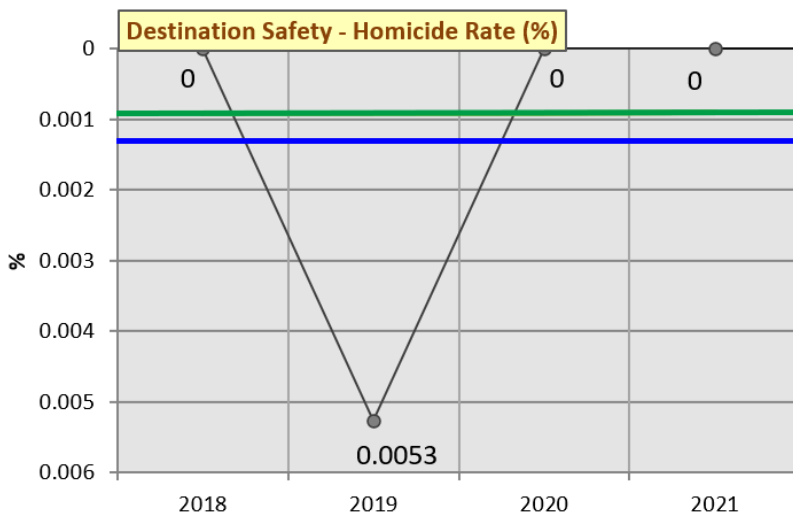
Habitat Conservation Area (%) for the year 2021 (1 January 2021 - 31 December 2021) was 20.1%, which was 0.1% better than the Baseline level.

Green Space (%) ★



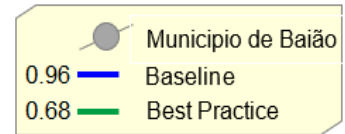
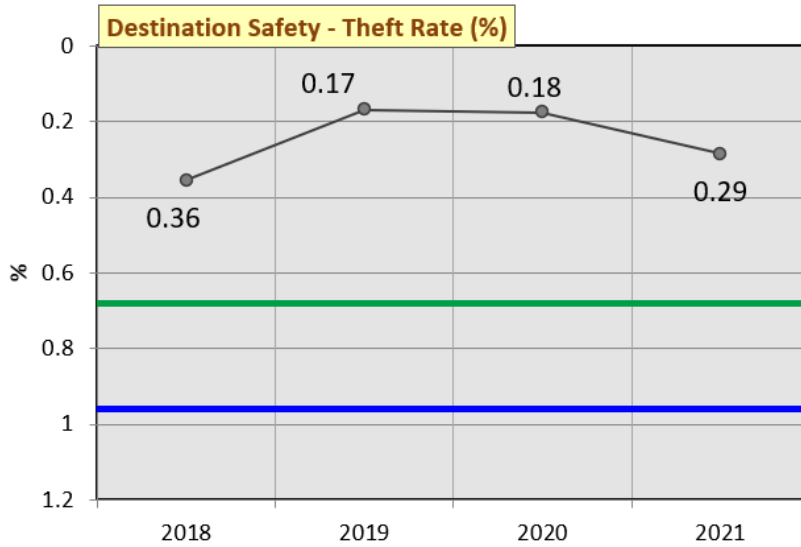
Green Space (%) for the year 2021 (1 January 2021 – 31 December 2021) was 67.9%, which was 47.9% better than the Best Practice level.

Destination Safety – Homicide Rate (%) ★



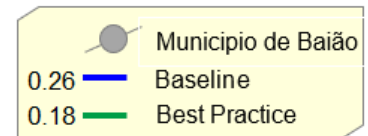
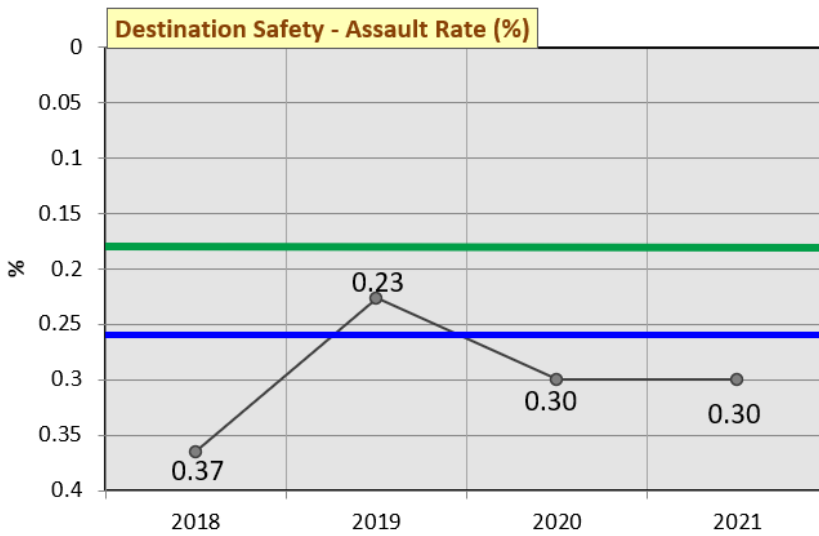
Homicide Rate for the year 2021 (1 January 2021 – 31 December 2021) was 0%, which was 0.0009% better than the Best Practice level.

Destination Safety – Theft Rate (%) ★



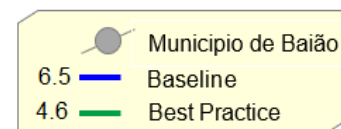
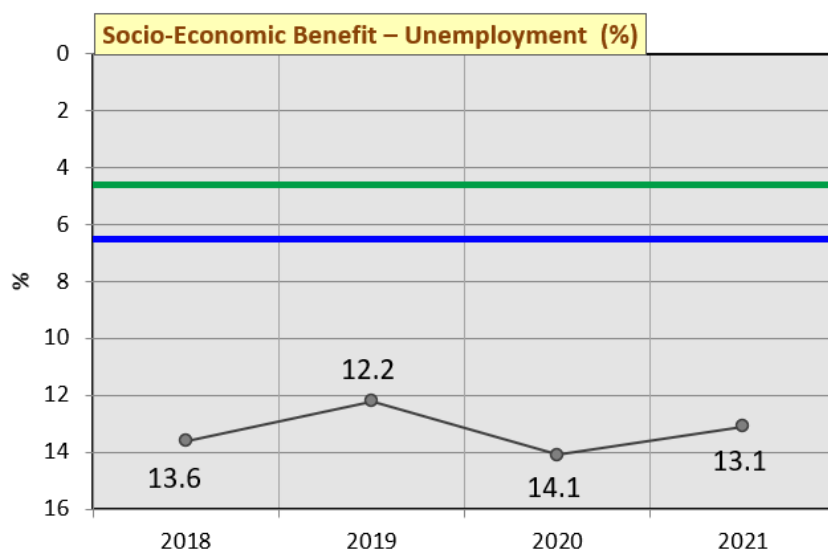
Theft Rate for the year 2021 (1 January 2021 – 31 December 2021) was 0.29%, which was 0.39% better than the Best Practice Level.

Destination Safety – Assault Rate (%) ✖



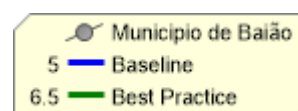
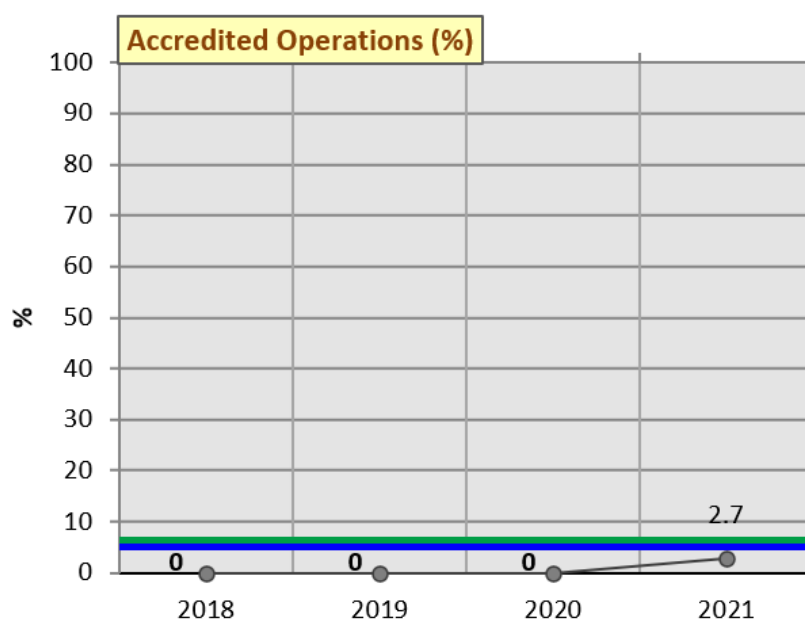
Assault Rate for the year 2021 (1 January 2021 – 31 December 2020) was 0.30%, which was 0.04% below the Baseline Level.

Socio-Economic Benefit – Unemployment (%) ✕



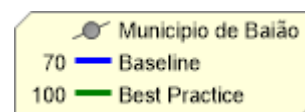
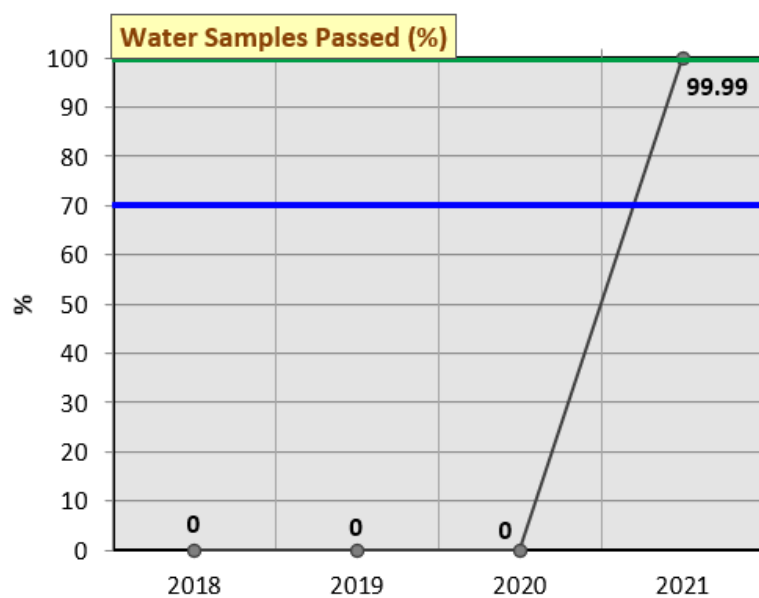
Unemployment Rate for the year 2021 (1 January 2021 – 31 December 2021) was 13.1%, which was 6.6% below the Baseline Level.

Accredited Operations (%) ✕



Accredited Operations (%) for the year 2021 (1 January 2021 – 31 December 2021) was 2.7%, which was 2.3% below the Baseline level.

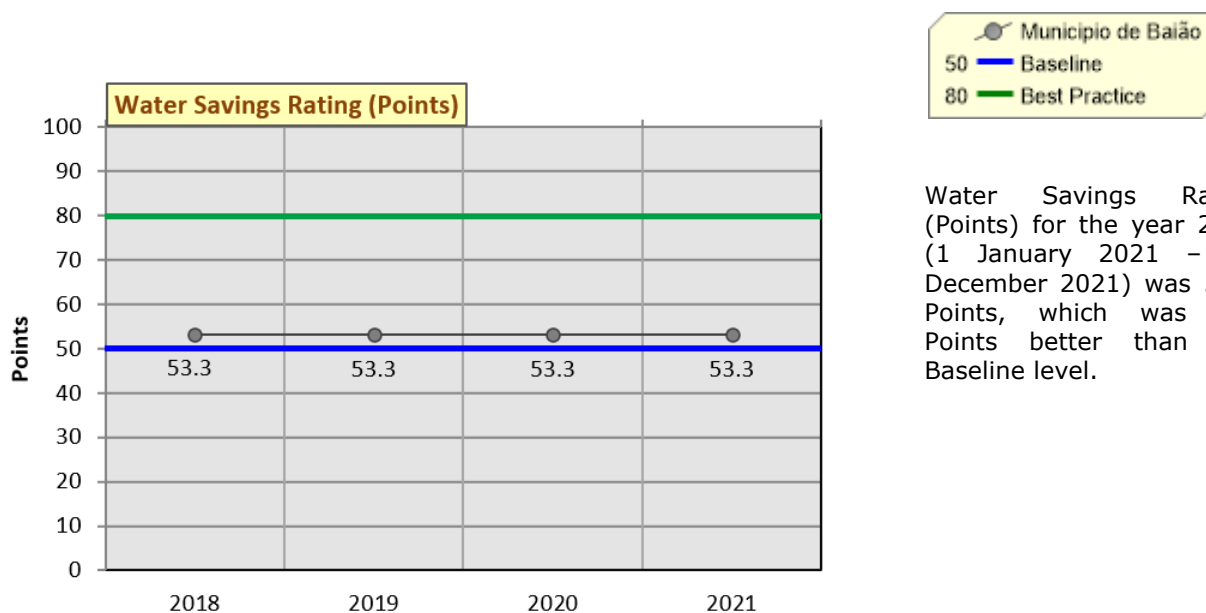
Water Samples Passed (%) ✓



Water Samples Passed (%) for the year 2021 (1 January 2021 - 31 December 2021) was 99.9%, which was 29.99% better than the Baseline level.

6. Lead Agency Performance

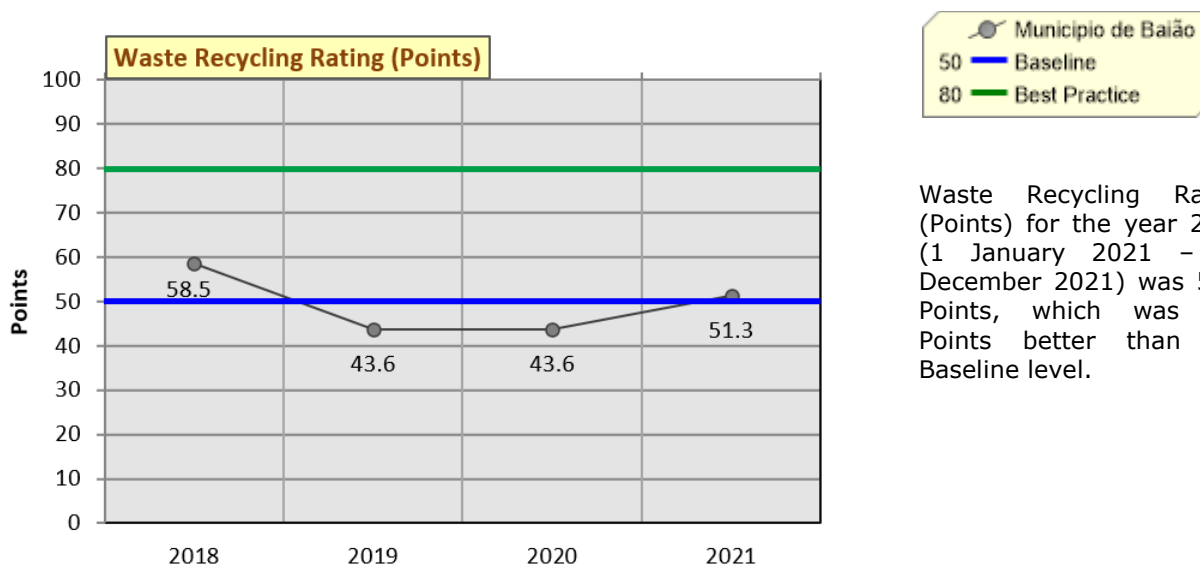
Water Savings Rating (Points) ✓



Water Savings Rating (Points) for the year 2021 (1 January 2021 – 31 December 2021) 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/rainwater	0%	0.0 Points
	Overall Rating:	53.3 Points

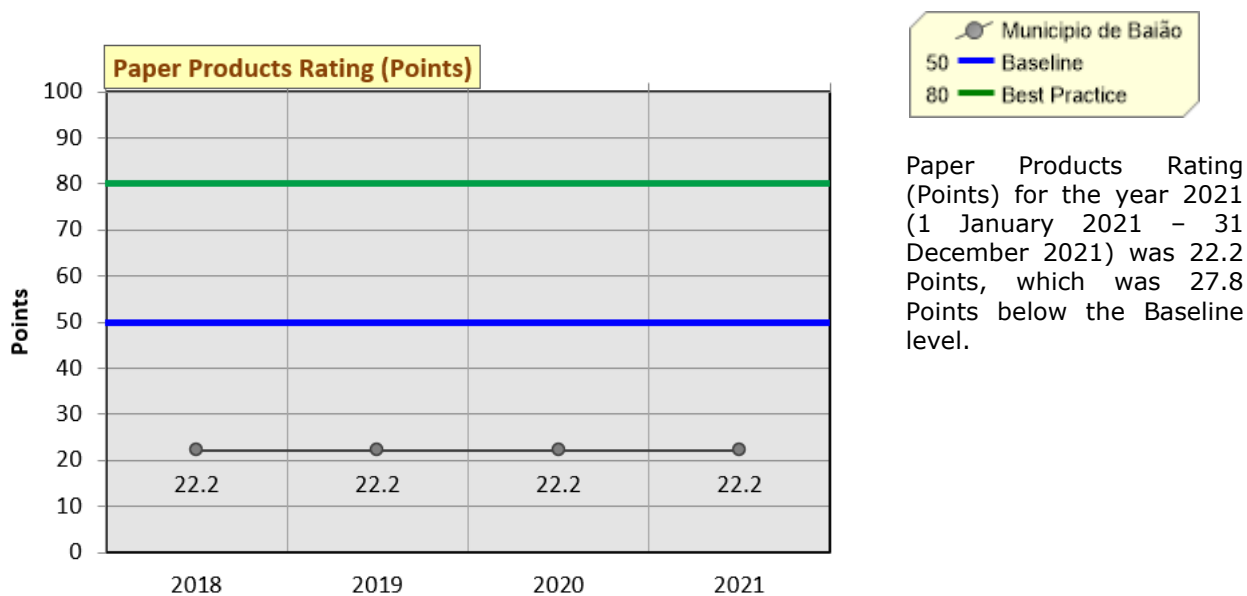
Waste Recycling Rating (Points) ✓



Waste Recycling Rating (Points) for the year 2021 (1 January 2021 - 31 December 2021) was 51.3 Points, which was 1.3 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)	1-19%	54.0 Points
Other metals (non-ferrous)	1-19%	54.0 Points
Plastics	1-19%	54.0 Points
Rubber	0%	0.0 Points
Green waste	80-99%	88.9 Points
	Overall Rating:	51.3 Points

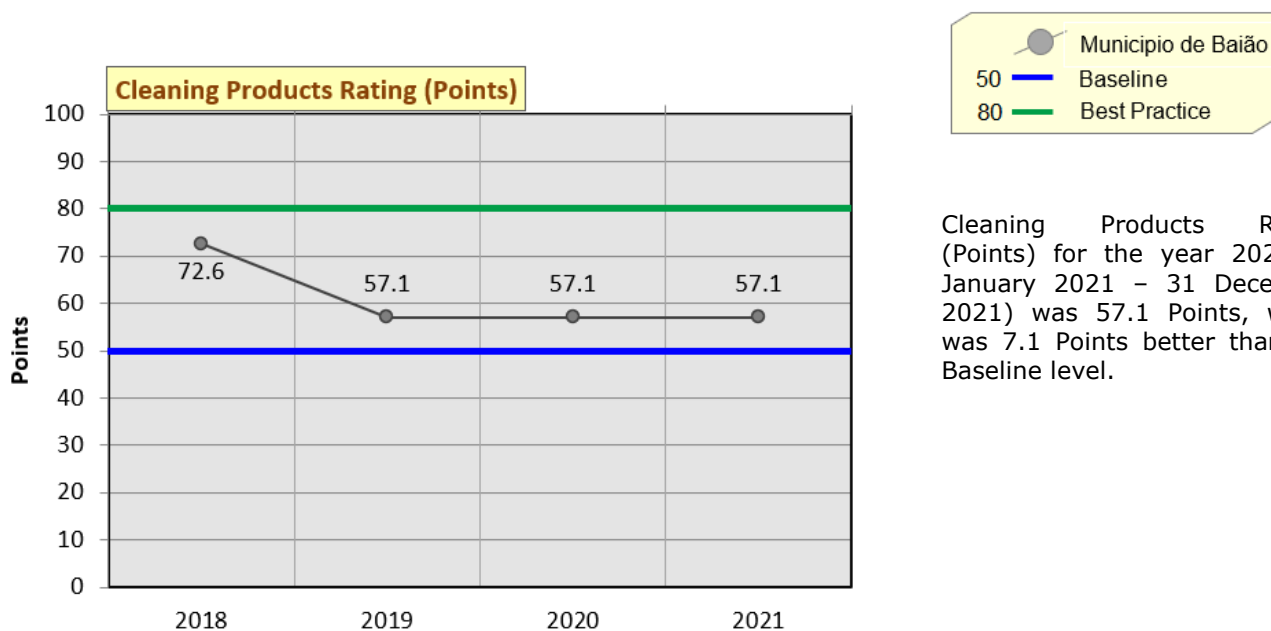
Paper Products Rating (Points) ✕



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

Cleaning

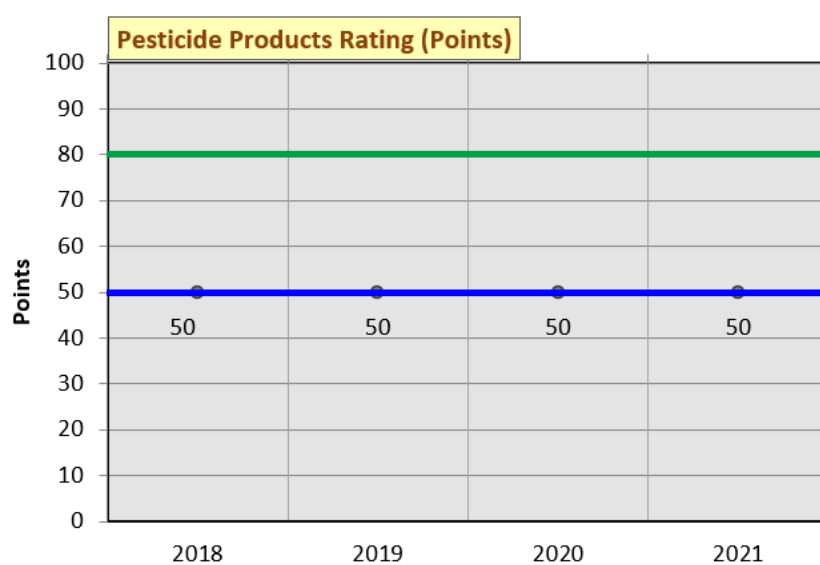
Cleaning Products Rating (Points) ✓



Cleaning Products Rating (Points) for the year 2021 (1 January 2021 – 31 December 2021) was 57.1 Points, which was 7.1 Points better than the Baseline level.

Cleaning Products Measures	Frequency / Percentage Rating	Cleaning Products Rating (Points)
Hard floor cleaners	Not Relevant / Not Available	100.0 Points
Carpet cleaners	Not Relevant / Not Available	100.0 Points
Interior surface cleaners	0%	0.0 Points
External surface cleaners	Not Relevant / Not Available	100.0 Points
Glass cleaners	0%	0.0 Points
Detergents	0%	0.0 Points
Personal hygiene	100%	100.0 Points
	Overall Rating:	57.1 Points

Pesticide Products Rating (Points) ✓



Pesticide Products Rating (Points) for the year 2021 (1 January 2021 – 31 December 2021) was 50.0 Points, which was at the Baseline level.

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

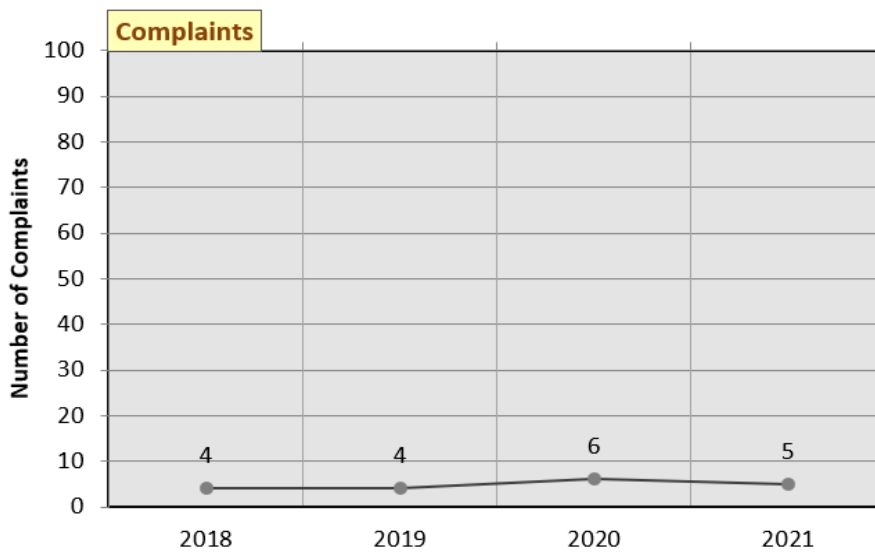
OPTIONAL BENCHMARKING INDICATORS

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.

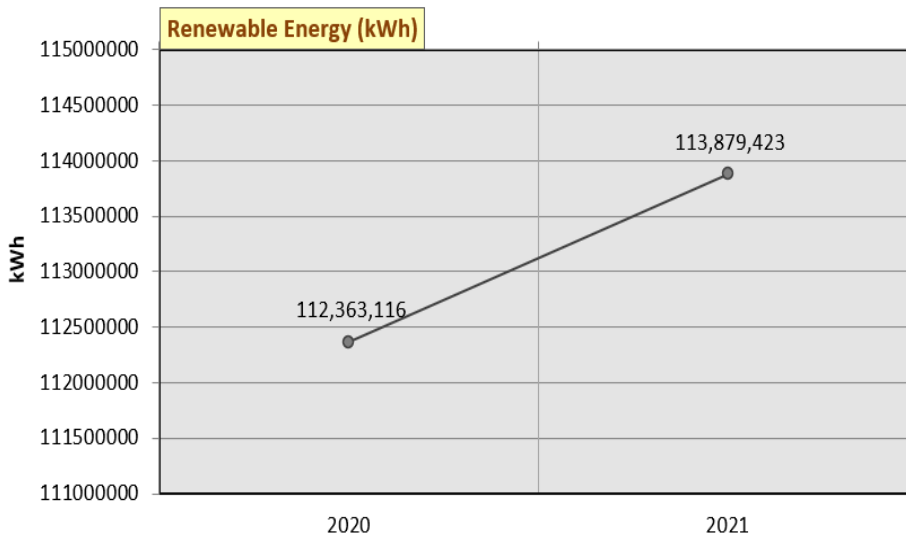
Selected Indicators

Selected Indicators are from a supplied list of EarthCheck indicators.

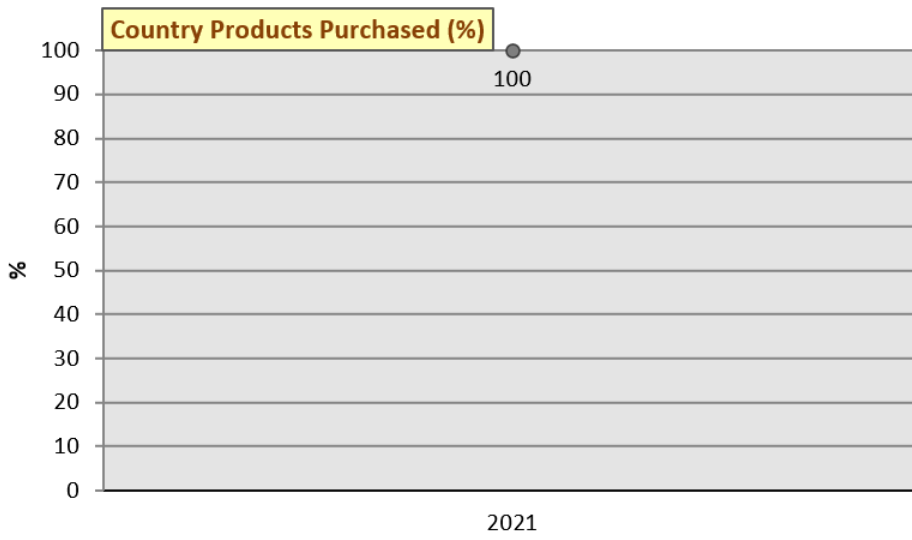
Complaints (Number of Complaints)



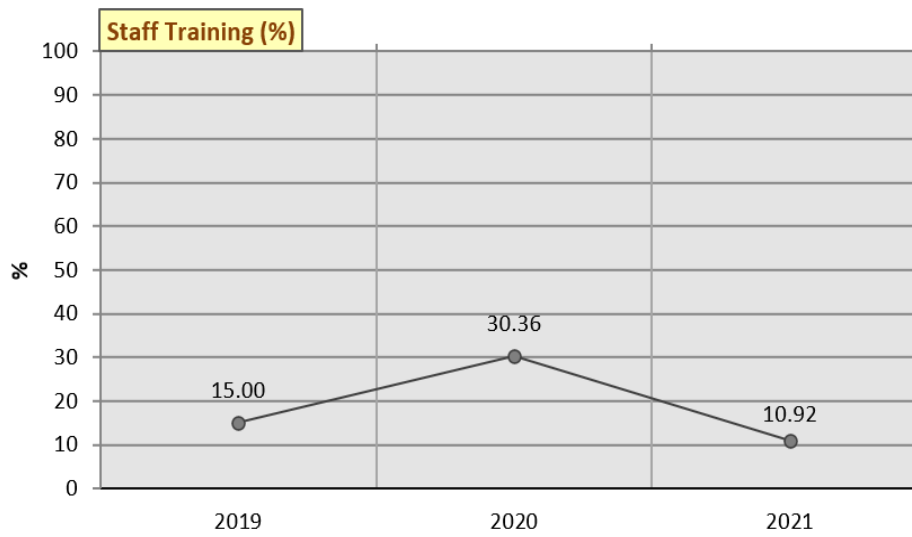
Renewable Energy (kWh)



Country Products Purchased (%)



Staff Training (%)



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

CONCLUSION AND RECOMMENDATIONS

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

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

From the benchmarking data provided, eight indicators, *Energy Consumption, Greenhouse Gas Emissions (Scope 1 and Scope 2), Potable Water Consumption, Nitrous Oxides Produced, Sulphur Dioxide Produced, Green Space, Homicide Rate and Theft Rate* are at or above the Best Practice level, which is an achievement to be commended.

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

The value for Waste Sent to Landfill was 1.42 m³ / Person Year. A high level for this indicator may be a reflection of 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 **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, **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 value for Particulate Matter Produced was 2.041% below the Baseline level. **Município de Baião** 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 percentage of Assault Rate is 0.04% below the Baseline. **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 2.7%. **Município de Baião** is encouraged to further promote environmental accreditation to hotels, restaurants, and other business within the destination

The rating for Paper Products was 22.2 points. **Município de Baião** is 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.

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. In particular, over the next 12 months, **Município de Baião** is encouraged to ensure that Waste Sent to Landfill, Particulate Matter Produced, Habitat Conservation Area, Accredited Operations, Destination Safety – Assault Rate, Socio-Economic Benefit Unemployment, Waste Recycling Rating and Paper Products Rating are at Baseline performance or better. In line with EarthCheck Policy this would enable **Município de Baião** to continue to meet the benchmarking requirements of the EarthCheck program.

APPENDIX

SIGNIFICANT SITE MAINTENANCE FUND

The Benchmarking Assessors sought clarification with regards to an increase in the percentage of *Destination Authority budget allocated to maintenance of significant sites*.

The **Município de Baião** provided the following response for clarification:

“The increase was due to the investment in the requalification works of the Monastery of Santo André de Ancede and in the construction of the new Municipal Library.”

Therefore, the Benchmarking Assessors retained the figures.

STATIONARY FUEL COMBUSTION

The Benchmarking Assessors sought clarification with regards to *Diesel* consumption being 0 for this period.

The **Município de Baião** provided the following response for clarification:

“Yes, the data is correct. We collect our data from the online database - Pordata and from the General Directorate of Energy and Geology/Ministry of Environment and Climate Action (DGEG/MAAC). We are unable to provide objective reasons to explain this value, however, it can be partly explained by the installation and distribution of natural gas in the municipality.”

Therefore, the Benchmarking Assessors maintained the data.



EARTHCHECK

Benchmarks Assessed by EarthCheck

SUMMARY OF SUPPLIED BENCHMARKING DATA

Activity Measures

Person Years	17662.39
Total Destination Area	17450

Supplied Benchmarking Data

Energy

Energy Consumption (GJ / Person Year)

Supplied	261062.97 MJ
Calculated	14780.7 GJ / Person Year
Baseline	55.6 GJ / Person Year
Best Practice	38.9 GJ / Person Year
Difference	62.0% better than the Best Practice level

Green Power (Purchased Electricity) (%)

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

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

Supplied	27763.9 t CO ₂ -e
Calculated	1.57 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	43.9% better than the Best Practice level

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

Supplied	10449684.0 kg CO ₂ -e
Calculated	0.59 tonnes CO ₂ -e / Person Year

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

Supplied	17314.2 t CO ₂ -e
Calculated	0.98 t CO ₂ -e / Person Year

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

Supplied	9027.55 t CO ₂ -e
Calculated	0.511 t CO ₂ -e / Person Year

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

Supplied	9027.55 t CO ₂ -e
Calculated	0.511 t CO ₂ -e / Person Year

Water

Potable Water Consumption (kL / Person Year)

Supplied	551441.0 kL
Calculated	31.22 kL / Person Year
Baseline	80.75 kL / Person Year
Best Practice	56.53 kL / Person Year
Difference	44.8% better than the Best Practice level

Recycled / Captured Water (%)

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

Water Savings Rating (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 (m³ / Person Year)

Supplied	25077 m ³
Calculated	1.42 m ³ / Person Year
Baseline	0.89 m ³ / Person Year
Best Practice	0.62 m ³ / Person Year

Recycled / Reused / Composted Waste (%)

Calculated	11.4%
------------	-------

Waste Recycling Rating (Points)

Calculated	51.3 Points
Baseline	50 Points
Best Practice	80 Points
Difference	1.3 Points better than the Baseline level

Paper

Paper Products Rating (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)

Calculated	57.1 Points
Baseline	50 Points
Best Practice	80 Points
Difference	7.1 Points better than the Baseline level

Pesticides

Pesticide Products Rating (Points)

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

Sector Specific

Nitrous Oxides Produced (kg / Person Year / Hectare)

Calculated	5.47 kg / Person Year / Hectare
Baseline	9.0 kg / Person Year / Hectare
Best Practice	6.3 kg / Person Year / Hectare
Difference	13% better than the Best Practice level

Sulphur Dioxide Produced (kg / Person Year / Hectare)

Calculated	0.5 kg / Person Year / Hectare
Baseline	12.8 kg / Person Year / Hectare
Best Practice	9 kg / Person Year / Hectare
Difference	94% better than the Best Practice level

Particulate Matter Produced (kg / Person Year / Hectare)

Calculated	14.99 kg / Person Year
Baseline	0.7 kg / Person Year / Hectare
Best Practice	0.5 kg / Person Year / Hectare
Difference	2041% below the Baseline level

Water Samples Passed (%)

Supplied	99.9%
Baseline	70 %
Best Practice	100 %
Difference	29.9% better than the Baseline level

Habitat Conservation Area (%)

Supplied	20.1%
Baseline	20 %
Best Practice	26 %
Difference	0.1% better than the Baseline level

Green Space (%)

Supplied	67.9%
Baseline	15 %
Best Practice	20 %
Difference	47.9% better than the Best Practice level

Accredited Operations (%)

Supplied	2.7%
Baseline	5 %
Best Practice	6.5 %
Difference	2.3% below the Baseline level

Destination Safety

Destination Safety

Homicide Rate (%)

Calculated	0%
Baseline	0.0013%
Best Practice	0.0009%
Difference	0.0009% better than the Best Practice level

Theft Rate (%)

Calculated	0.29%
Baseline	0.96%
Best Practice	0.68%
Difference	0.39% better than the Best Practice level

Assault Rate (%)

Calculated	0.30%
Baseline	0.26%
Best Practice	0.18%
Difference	0.04% below the Baseline level

Socio-Economic Benefit

Unemployment Rate (%)

Calculated	13.1%
Baseline	6.5%
Best Practice	4.6%
Difference	6.6% 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 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).