EARTHCHECK

BENCHMARKING ASSESSMENT REPORT

DESTINATION BENCHMARKING

REGIÃO AUTÓNOMA DOS AÇORES
PONTA DELGADA, PORTUGAL

REPORT DATE: 13 January 2021

Benchmarking Data Collection Period: 1 January 2019 – 31 December 2019

The planet deserves more than half measures

OVERVIEW

This annual assessment of **Região Autónoma dos Açores** 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] The lead agency responsible for collection, collation and authorisation of the information required by the indicators was the **Região Autónoma dos Açores**.

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

1 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'

2 Produced by the lead agency after consultation with the community and consensus.

3 Person year is equivalent to 365 person days. EarthCheck Communities 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

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

5 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 Community, including waterways. The data is then normalized against the average number of person years per area of the country.

6 Assessed for the lead agency only.

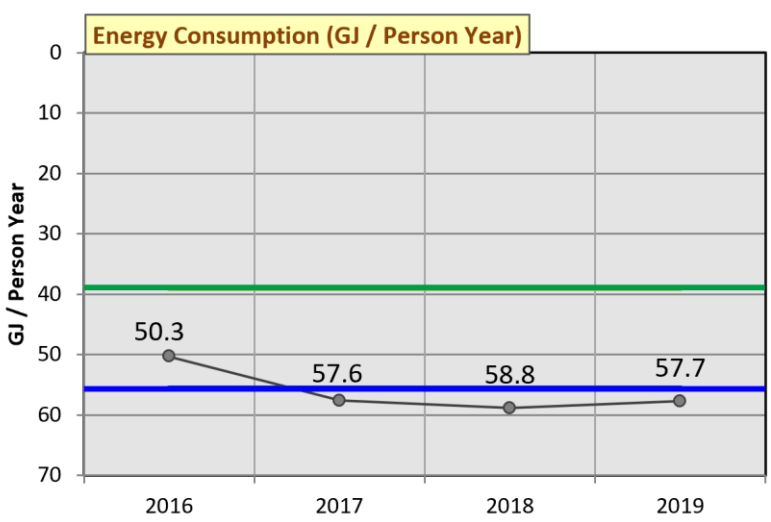
DESTINATION PERFORMANCE BENCHMARKS

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

1. Policy ★

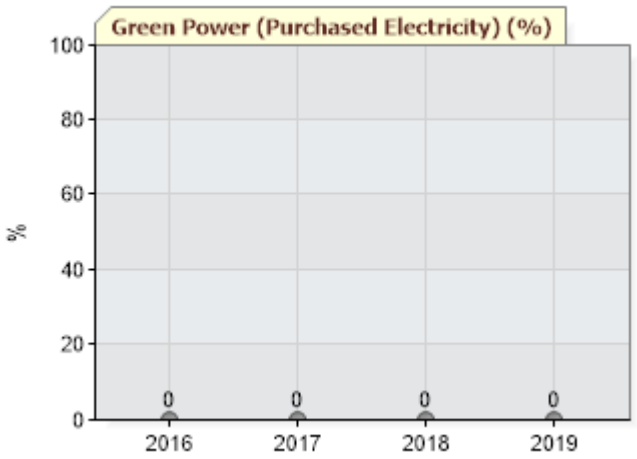
2. Energy

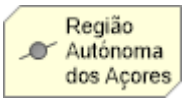
Energy Consumption (GJ / Person Year) ✖



Energy Consumption (GJ / Person Year) for the year 2019 (1 January 2019 – 31 December 2019) was 57.7 GJ / Person Year, which was 3.8% below the Baseline level.

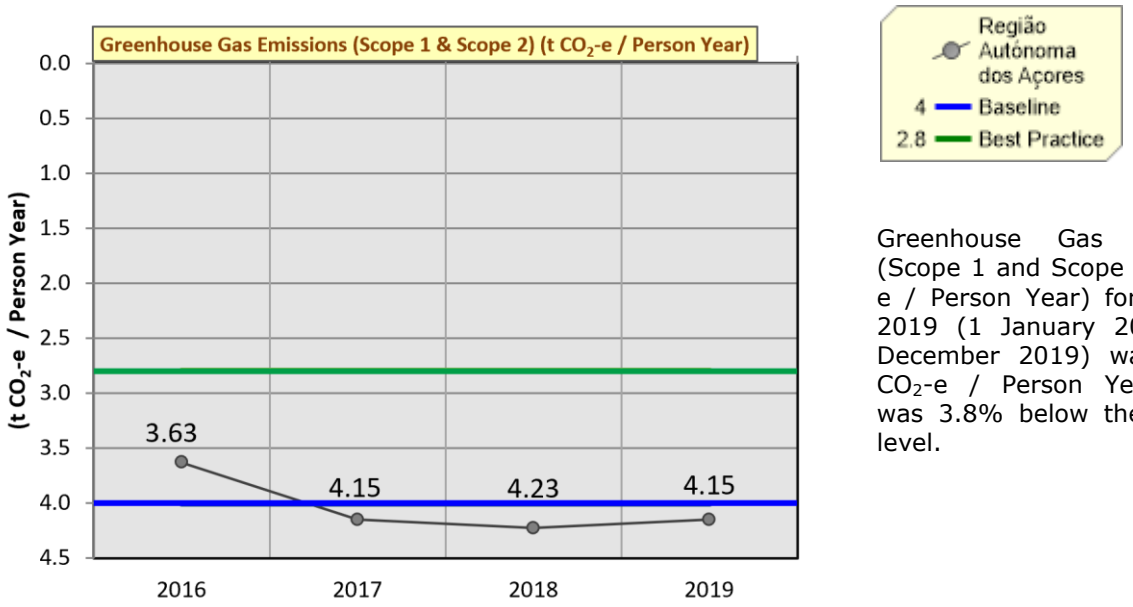
Green Power (Purchased Electricity) (%)





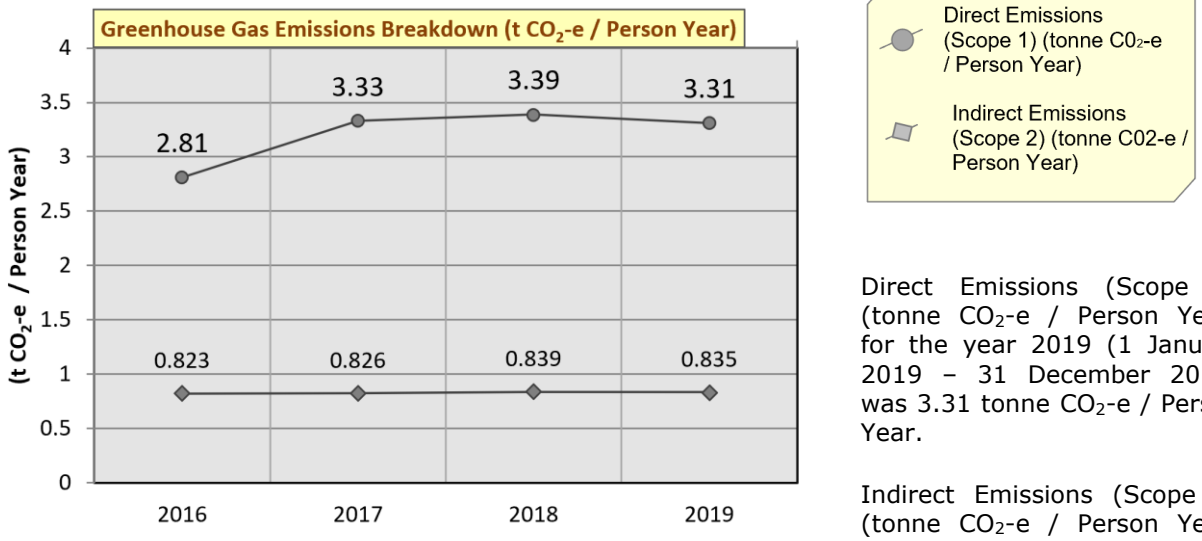
Green Power (Purchased Electricity) (%) for the year 2019 (1 January 2019 – 31 December 2019) was 0%.

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 2019 (1 January 2019 – 31 December 2019) was 4.15 t CO_2-e / Person Year, which was 3.8% below the Baseline level.

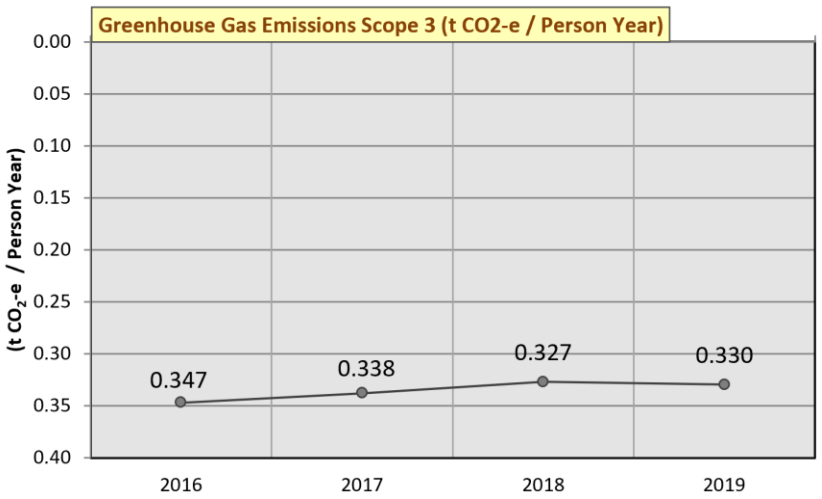
Greenhouse Gas Emissions Breakdown by Scope (tonne CO_2-e / Person Year)



Direct Emissions (Scope 1) (tonne CO_2-e / Person Year) for the year 2019 (1 January 2019 – 31 December 2019) was 3.31 tonne CO_2-e / Person Year.

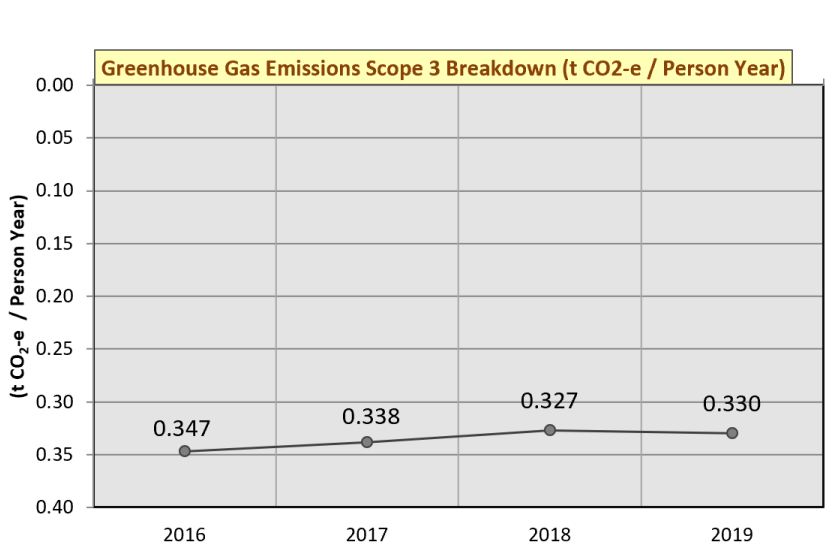
Indirect Emissions (Scope 2) (tonne CO_2-e / Person Year) for the year 2019 (1 January 2019 – 31 December 2019) was 0.835 tonne CO_2-e / Person Year.

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



Indirect Emissions (Scope 3) (tonne CO_2-e / Person Year) for the year 2019 (1 January 2019 – 31 December 2019) was 0.330 tonne CO_2-e / Person Year.

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



Waste Indirect Emissions (Scope 3) (tonne CO_2-e / Person Year) for the year 2019 (1 January 2019 – 31 December 2019) was 21.4 tonne CO_2-e / Person Year.

Direct Emissions (Scope 1)

Stationary Fuel Combustion

2019

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)
Naphtha	6798	litres (L)	207067.3	14.4	0.04	0.04	14.5
Heavy fuel oil	29945069	kilograms (kg)	1270269827.0	93402.9	253.4	224.5	93880.8
LPG	21126861	kilograms (kg)	1099230577.8	62425.3	103.9	30.7	62559.9
		subtotal	2369707472.1	155842.7	357.3	255.2	156455.2

Mobile Fuel Combustion (road)

2019

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	45891840	litres (L)	1569614716.8	103335.6	782.8	3698.0	107816.4
Diesel	108260549	litres (L)	4135217364.1	291098.6	321.7	4749.5	296169.9
		subtotal	5704832080.9	394434.2	1104.6	8447.5	403986.3

Mobile Fuel Combustion (air)

2019

Type	Quantity	Unit	Energy Consumption (MJ)	CO_2 Emission Estimate (t CO_2-e)	CH_4 Emission Estimate (t CO_2-e)	N_2O Emission Estimate (t CO_2-e)	Total Emission Estimate (t CO_2-e)
Jet Kerosene	72912798	litres (L)	2677348099.3	181858.9	26.7	1577.0	183462.5
		subtotal	2677348099.3	181858.9	26.7	1577.0	183462.5

Mobile Fuel Combustion (water)

2019

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	18395091	litres (L)	702635451.4	49462.0	98.1	413.9	49974.0
Heavy fuel oil	2697246	kilograms (kg)	114417175.3	8413.1	16.0	67.4	8496.5
		subtotal	817052626.7	57875.1	114.1	481.2	58470.5

Onsite Wastewater Treatment

2019

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)	162747	365		22454.2		22454.2
		subtotal		22454.2		22454.2

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)
Aerobic (BOD Unknown)	88406	365		7318.4		7318.4
		subtotal		7318.4		7318.4

TOTAL	**11568940279.1**	**790010.9**	**31375.4**	**10760.9**	**832147.1**

Indirect Emissions (Scope 2)

Purchased Electricity

2019								
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)**
812936637	Kilowatt hour (kWh)	0	Portugal	2926571893.2	207554.3	249.1	1791.8	209595.1
			subtotal	2926571893.2	207554.3	249.1	1791.8	209595.1
			TOTAL	**2926571893.2**	**207554.3**	**249.1**	**1791.8**	**209595.1**

Greenhouse Gas Emissions (Scope 1 and Scope 2)					
GRAND TOTAL	**14495512172.3**	**997565.1**	**31624.4**	**12552.7**	**1041742.2**

Indirect Emissions (Scope 3)

Waste Sent to Landfill

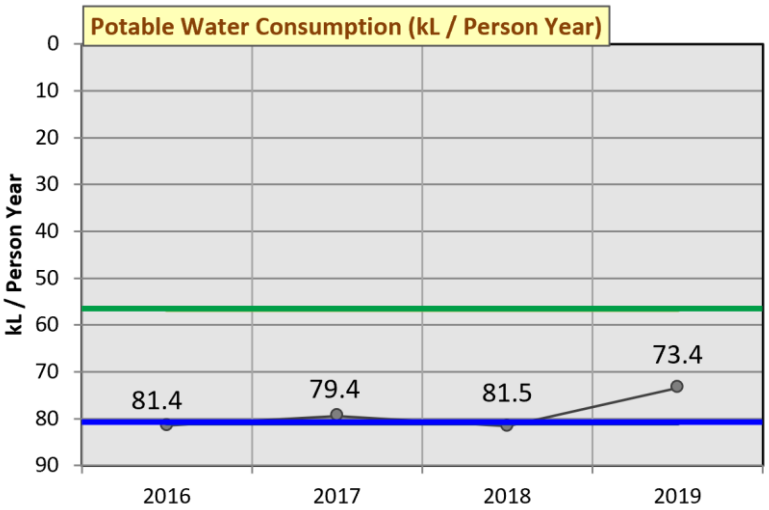
2019								
Quantity	**Unit**	**Type of Landfill**	**Type of Waste**	**Type of Operation**	**Source**	**CO_2 Emission Estimate (t CO_2-e)**	**CH_4 Emission Estimate (t CO_2-e)**	**N_2O Emission Estimate (t CO_2-e)**	**Total Emission Estimate (t CO_2-e)**
65298	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Unknown (mixed waste types)	Other Operation	International	0.0	78357.60	0.0	78357.60
					subtotal	0.0	78357.60	0.0	78357.60

Waste Sent for Incineration

2019								
Quantity	**Unit**	**Type of Incineration Technology**	**Type of Waste**	**Source**	**CO_2 Emission Estimate (t CO_2-e)**	**CH_4 Emission Estimate (t CO_2-e)**	**N_2O Emission Estimate (t CO_2-e)**	**Total Emission Estimate (t CO_2-e)**
2942	tonnes (uncompacted)	Open Burning	Plastics	International	4692.5	19.1	4.4	4716.0
2190	tonnes (uncompacted)	Open Burning	Textiles	International	372.6	14.2	3.3	390.1
0	tonnes (uncompacted)	Open Burning	Rubber and Leather	International	0.0	0.0	0.0	0.0
4056	tonnes (uncompacted)	Open Burning	Nappies	International	241.5	26.4	6.1	274.0
				subtotal	5306.6	59.7	13.8	5380.1
				TOTAL	**5306.6**	**78417.3**	**13.8**	**5380.1**

3. Water

Potable Water Consumption (kL / Person Year)

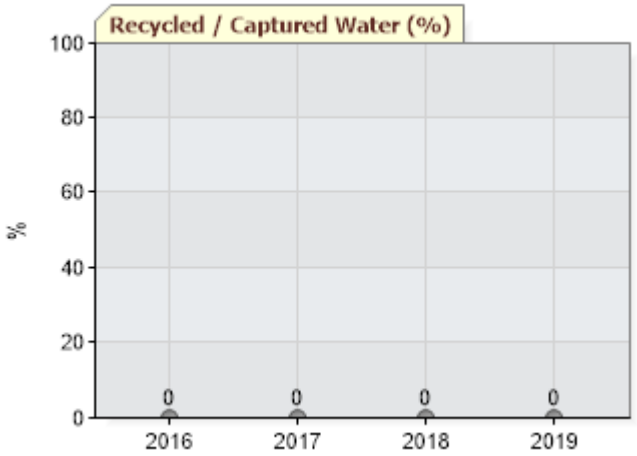


Potable Water Consumption (kL / Person Year) for the year 2019 (1 January 2019 – 31 December 2019) was 73.4 kL / Person Year, which was 9.1% better than the Baseline level.

2019

Quantity	Unit	Potable Water Consumption (kL)
18426597	kilolitres (kL)	18426597.0 kL
	TOTAL	**18426597.0 kL**

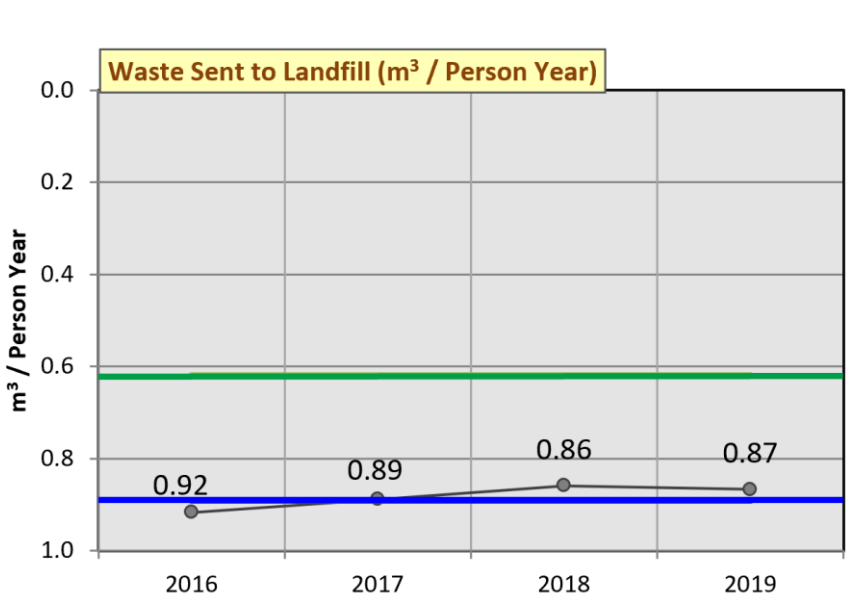
Recycled / Captured Water (%)



Recycled / Captured Water (%) for the year 2019 (1 January 2019 – 31 December 2019) was 0%.

4. Waste

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

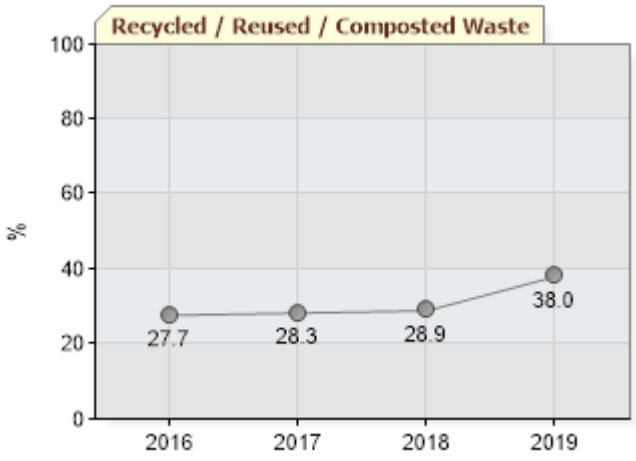


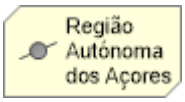
Waste Sent to Landfill (m^3 / Person Year) for the year 2019 (1 January 2019 – 31 December 2019) was 0.87 m^3 / Person Year, which was 2.2% better than the Baseline level.

2019

Quantity	Unit	Type of Landfill	Type of Waste	Type of Operation	Waste Sent to Landfill (m^3)
65298	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Unknown (mixed waste types)	Other Operation	217660.0
				TOTAL	**217660.0 m^3**

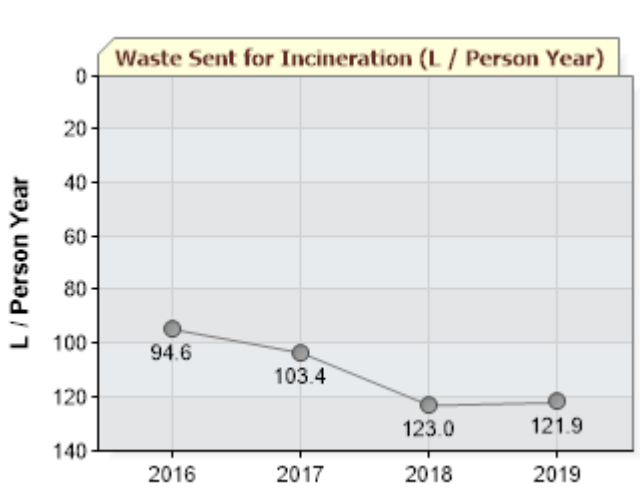
Recycled / Reused / Composted Waste (%)

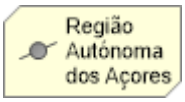




Recycled / Reused / Composted Waste (%) for the year 2019 (1 January 2019 – 31 December 2019) was 38.0%.

Waste Sent for Incineration (L / Person Year)





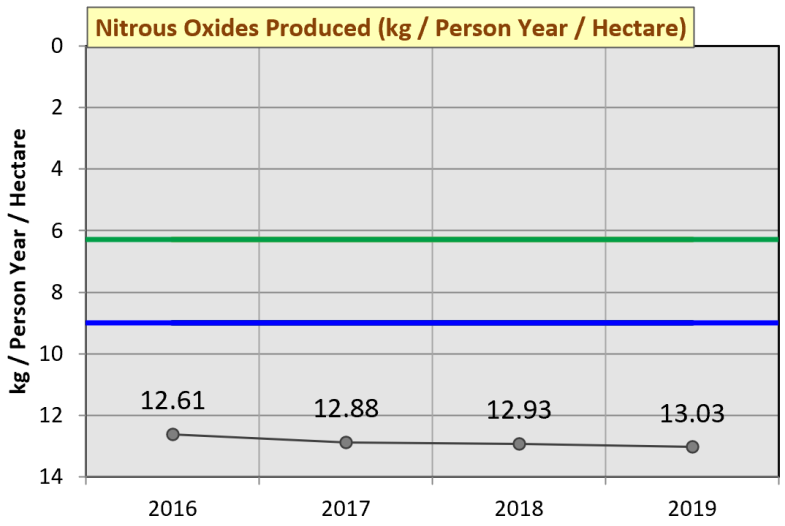
Waste Sent for Incineration (L / Person Year) for the year 2019 (1 January 2019 – 31 December 2019) was 121.9 L / Person Year.

2019

Quantity	Unit	Type of Incineration Technology	Type of Waste	Waste Sent for Incineration (m^3)
2942	tonnes (uncompacted)	Open Burning	Plastics	9806.7 m^3
2190	tonnes (uncompacted)	Open Burning	Textiles	7300.0 m^3
0	tonnes (uncompacted)	Open Burning	Rubber and Leather	0.0 m^3
4056	tonnes (uncompacted)	Open Burning	Nappies	13520.0 m^3
			subtotal	**30626.7 m^3**
			TOTAL	**30626666.7 L**

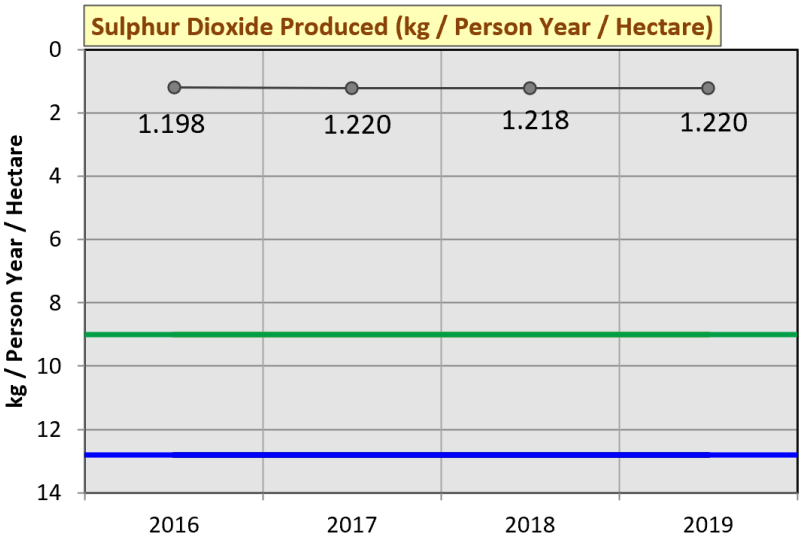
5. Sector Specific

Nitrous Oxides Produced (kg / Person Year / Hectare)



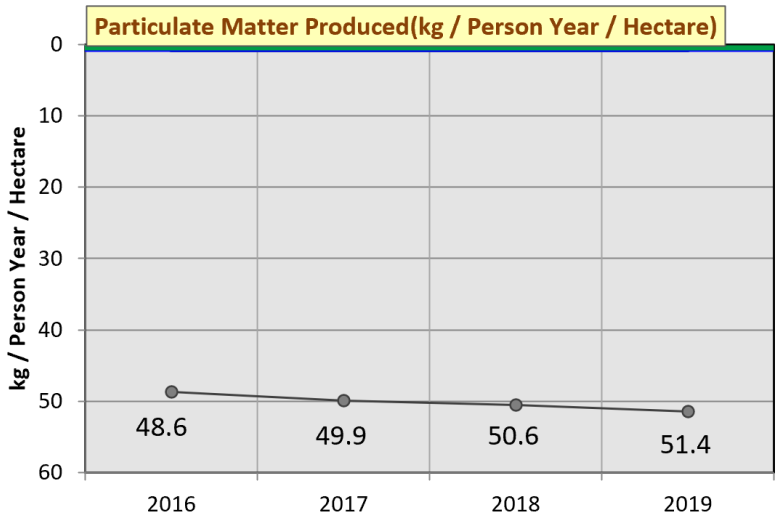
Nitrous Oxides Produced (kg / Person Year / Hectare) for the year 2019 (1 January 2019 – 31 December 2019) was 13.03 kg / Person Year / Hectare, which was 44.8% below the Baseline level.

Sulphur Dioxide Produced (kg / Person Year / Hectare)



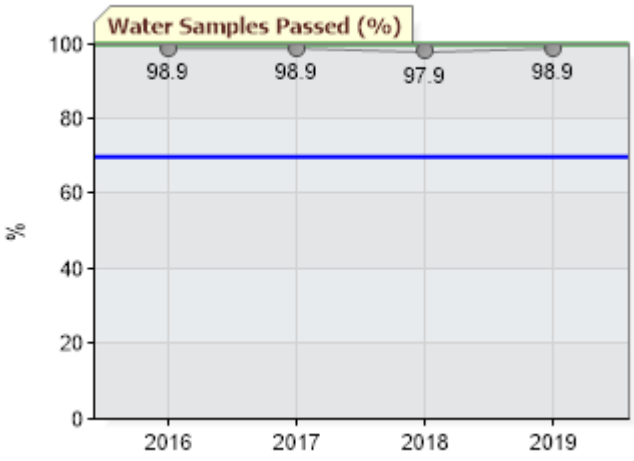
Sulphur Dioxide Produced (kg / Person Year / Hectare) for the year 2019 (1 January 2019 – 31 December 2019) was 1.220 kg / Person Year / Hectare, which was 86.4% better than the Best Practice level.

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



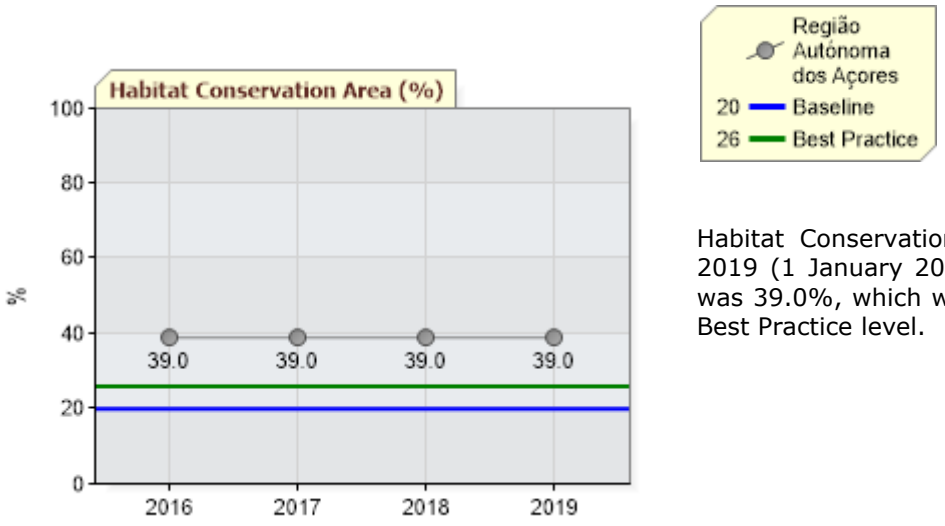
Particulate Matter Produced (kg / Person Year / Hectare) for the year 2019 (1 January 2019 – 31 December 2019) was 51.4 kg / Person Year / Hectare, which was 7,242% worse than the Baseline level.

Water Samples Passed (%) ✓



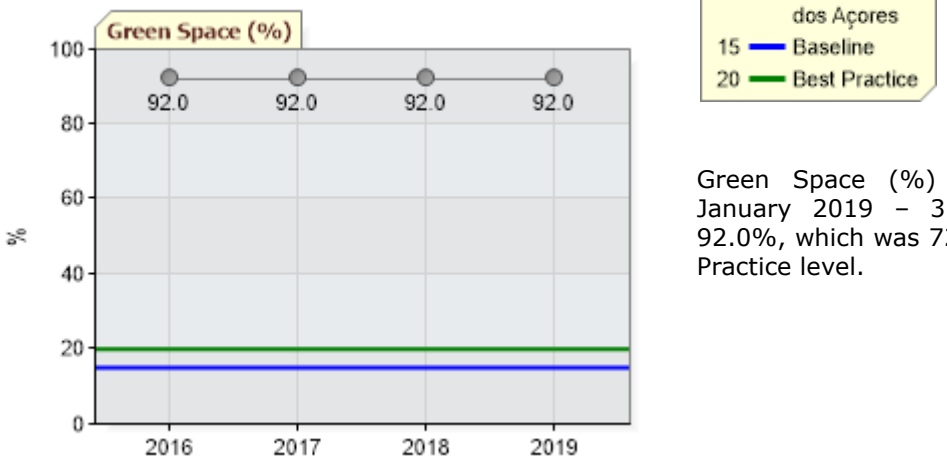
Water Samples Passed (%) for the year 2019 (1 January 2019 – 31 December 2019) was 98.9%, which was 28.9% better than the Baseline level.

Habitat Conservation Area (%)



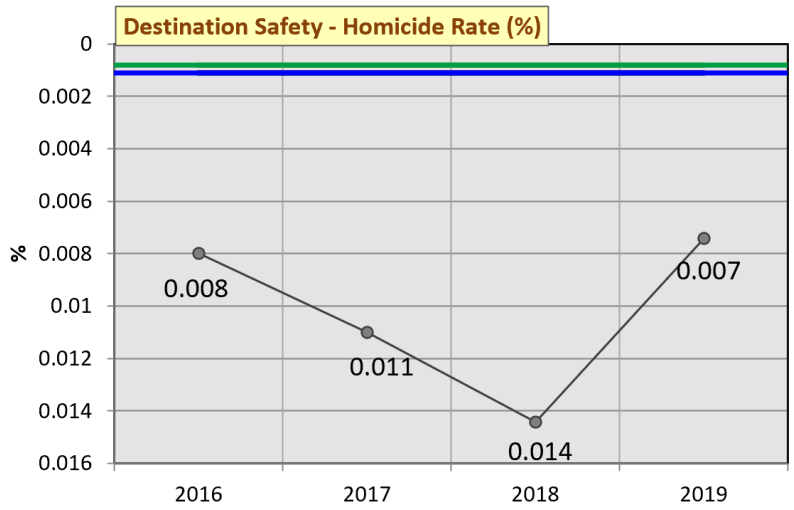
Habitat Conservation Area (%) for the year 2019 (1 January 2019 – 31 December 2019) was 39.0%, which was 13.0% better than the Best Practice level.

Green Space (%)



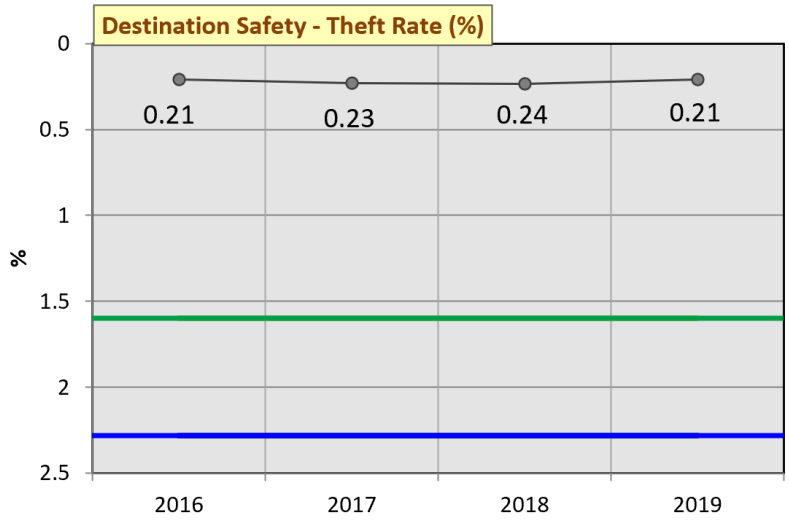
Green Space (%) for the year 2019 (1 January 2019 – 31 December 2019) was 92.0%, which was 72.0% better than the Best Practice level.

Destination Safety – Homicide Rate (%)



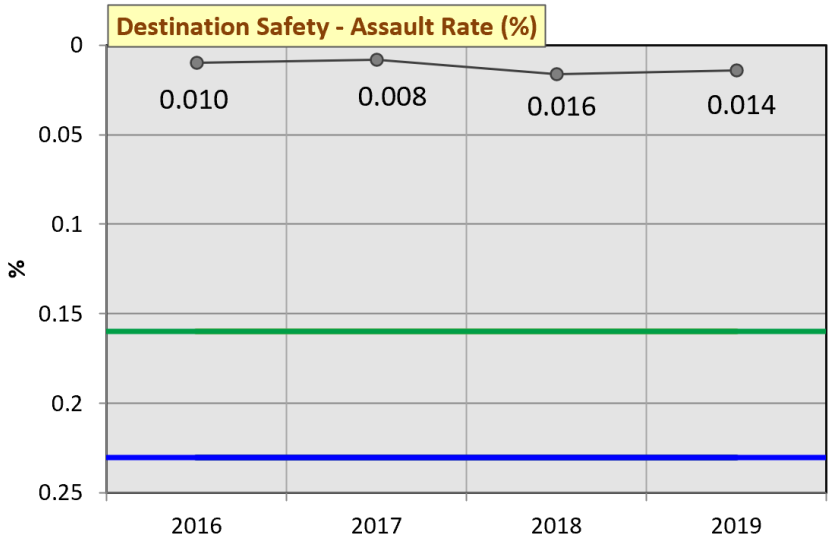
Destination Safety – Homicide Rate (%) for the year 2019 (1 January 2019 – 31 December 2019) was 0.007%, which was 0.0059% below the Baseline level.

Destination Safety – Theft Rate (%)



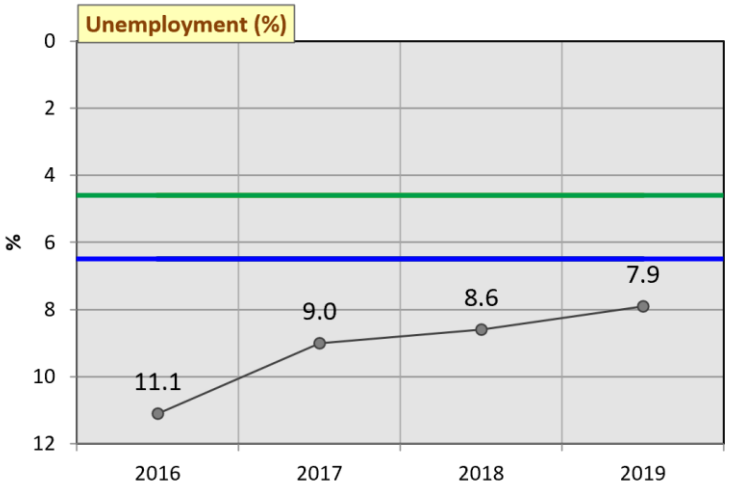
Destination Safety – Theft Rate (%) for the year 2019 (1 January 2019 – 31 December 2019) was 0.21%, which was 1.39% better than the Best Practice level.

Destination Safety – Assault Rate (%)



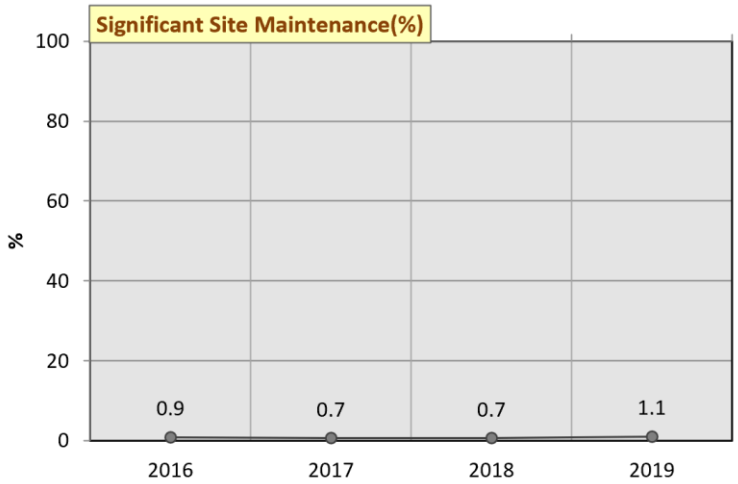
Destination Safety – Assault Rate (%) for the year 2019 (1 January 2019 – 31 December 2019) was 0.014%, which was 0.146% better than the Best Practice level.

Socio-Economic Benefit – Unemployment Rate (%)



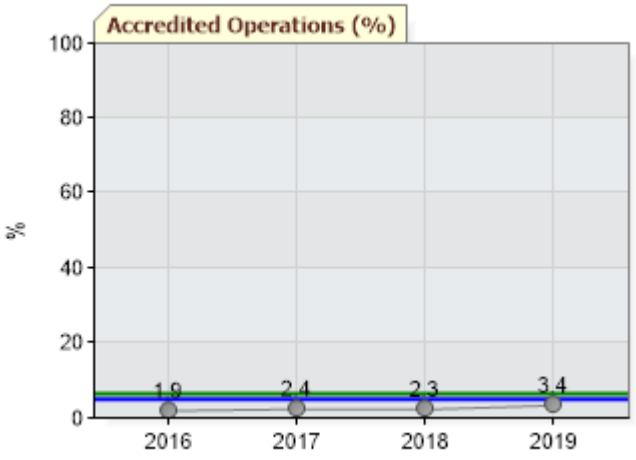
Socio-Economic Benefit – Unemployment Rate (%) for the year 2019 (1 January 2019 – 31 December 2019) was 7.9%, which was 1.4% below the Baseline level.

Significant Site Maintenance Fund (%)



Significant Site Maintenance Fund (%) for the year 2019 (1 January 2019 – 31 December 2019) was 1.1%.

Accredited Operations (%)

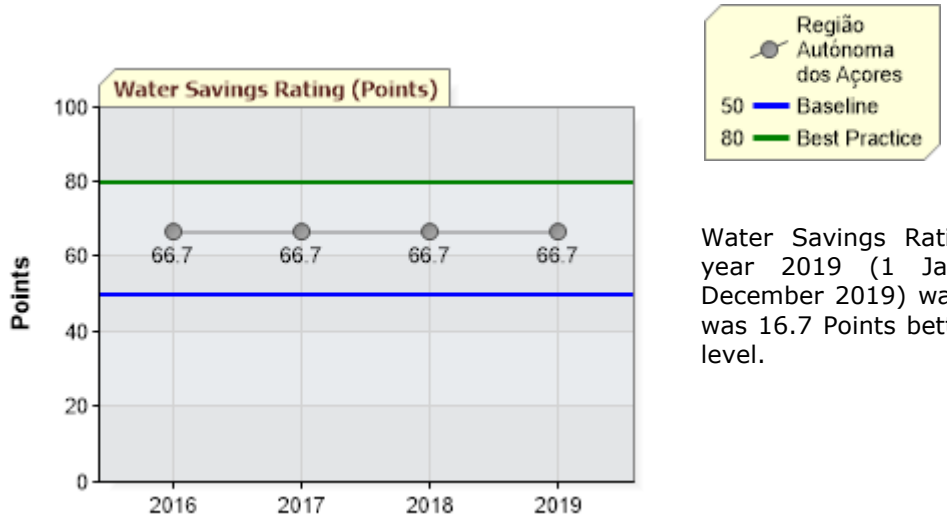


Accredited Operations (%) for the year 2019 (1 January 2019 – 31 December 2019) was 3.4%, which was 1.6% below the Baseline level.

LEAD AGENCY PERFORMANCE

6. Water

Water Savings Rating (Points) ✓

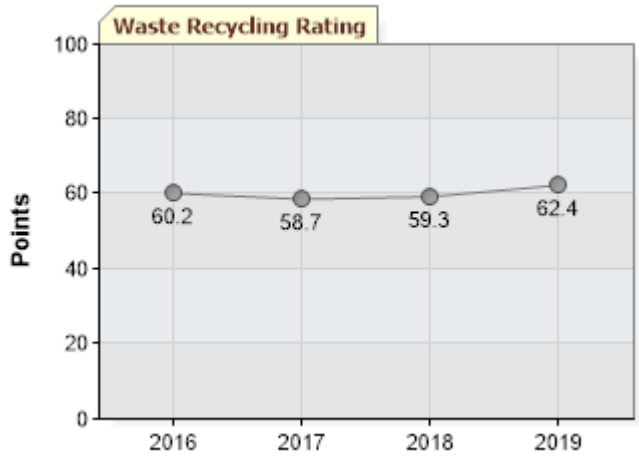


Water Savings Rating (Points) for the year 2019 (1 January 2019 – 31 December 2019) was 66.7 Points, which was 16.7 Points better than the Baseline level.

Water Savings Measures	Frequency / Percentage Rating	Water Savings Rating (Points)
Check for leaks	Never	0.0 Points
Low/dual flush toilets	100%	100.0 Points
Low flow tap fittings	100%	100.0 Points
Low flow shower fittings	Not Relevant / Not Available	
Water sprinklers used after dark	Not Relevant / Not Available	
Minimal irrigation landscaping	Not Relevant / Not Available	
Use of recycle/grey/rain water	Not Relevant / Not Available	
	Overall Rating:	**66.7 Points**

7. Waste

Waste Recycling Rating (Points)

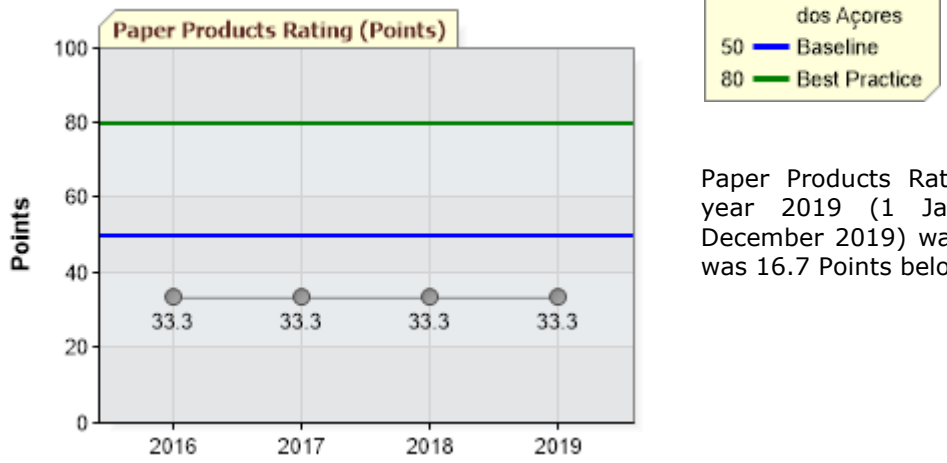


Waste Recycling Rating (Points) for the year 2019 (1 January 2019 – 31 December 2019) was 62.4 Points, which was 12.4 Points better than the Baseline level.

Waste Recycling Measures	Frequency / Percentage Rating	Waste Recycling Rating (Points)
Glass	40-59%	65.1 Points
Paper/card	40-59%	65.1 Points
Iron & steel (ferrous metals)	40-59%	65.1 Points
Other metals (non-ferrous)	40-59%	65.1 Points
Plastics	20-39%	58.8 Points
Rubber	20-39%	58.8 Points
Green waste	20-39%	58.8 Points
	Overall Rating:	**62.4 Points**

8. Paper

Paper Products Rating (Points)



Paper Products Rating (Points) for the year 2019 (1 January 2019 – 31 December 2019) was 33.3 Points, which was 16.7 Points below the Baseline level.

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

9. Cleaning

Cleaning Products Rating (Points) ★

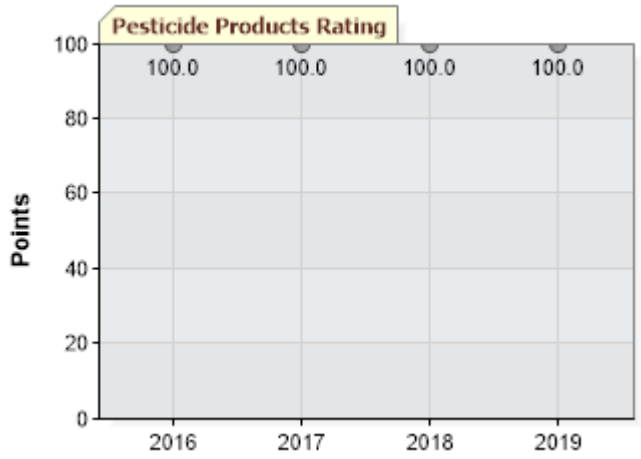
Cleaning Products Rating (Points) for the year 2019 (1 January 2019 – 31 December 2019) was 100.0 Points, which was 20.0 Points better than the Best Practice level.

If your operation does not use any cleaning 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.

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	Not Relevant / Not Available	100.0 Points
External surface cleaners	Not Relevant / Not Available	100.0 Points
Glass cleaners	Not Relevant / Not Available	100.0 Points
Detergents	Not Relevant / Not Available	100.0 Points
Personal hygiene	Not Relevant / Not Available	100.0 Points
	Overall Rating:	**100.0 Points**

10. Pesticides

Pesticide Products Rating (Points) ★



Pesticide Products Rating (Points) for the year 2019 (1 January 2019 – 31 December 2019) was 100.0 Points, which was 20.0 Points better than the Best Practice level.

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

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

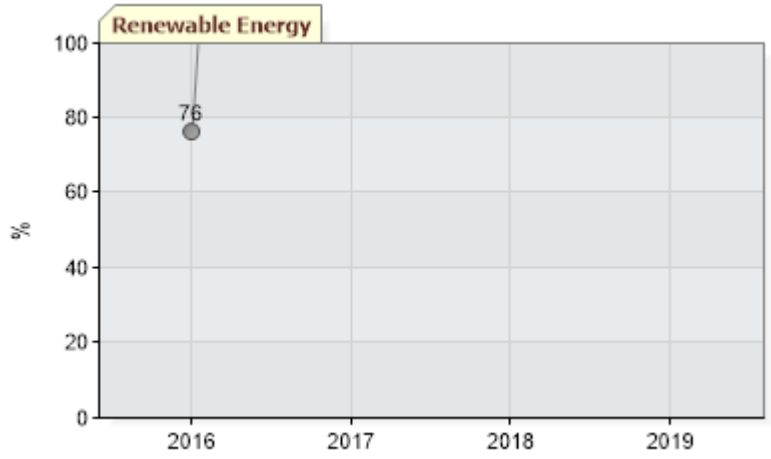
Optional Benchmarking Indicators

Região Autónoma dos Açores 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.

Renewable Energy



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

Conclusion And Recommendations

Congratulations, **Região Autónoma dos Açores** has met the requirements to be recognised as an EarthCheck Benchmarked Community.

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

From the benchmarking data provided, seven indicators, *Sulphur Dioxides Produced, Theft Rate, Assault Rate, Cleaning Products Rating, Pesticide Products Rating, Habitat Conservation Area,* and *Green Space,* are at or above the Best Practice level.

The eight indicators that fell below the Baseline level were *Energy Consumption, Greenhouse Gas Emissions (Scope 1 and Scope 2), Nitrous Oxides Produced, Particulate Matter Produced, Homicide Rates, Unemployment Rate, Paper Products Rating,* and *Accredited Operations*.

The rating for Paper Products was 16.7 Points below the Baseline level. **Região Autónoma dos Açores** 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 Nitrous Oxides Produced was 44.8% below the Baseline, while the Particulate Matter Produced was 7,242% below the Baseline level. **Região Autónoma dos Açores** 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 Homicide Rate is 0.0059% below the Baseline. **Região Autónoma dos Açores** 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 Energy Consumption was 3.8% below the Baseline level and the value for Greenhouse Gas Emissions was also 3.8% below the Baseline level. **Região Autónoma dos Açores** is encouraged to review all its existing energy consumption and demand patterns for both facilities (e.g. use of low wattage, energy saving light fittings and timers to switch-off lights) and vehicles (e.g. reducing the number of journeys).

Região Autónoma dos Açores is encouraged to continue to make improvements in the above indicator/s and to ensure that any indicator/s below baseline is addressed in the organisation's risk assessment and long term sustainability approach.

Improvements in all the EarthCheck indicators will not only help the environment, but can also help reduce operational costs. Due to the positive commitment that **Região Autónoma dos Açores** 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, the **Região Autónoma dos Açores** is encouraged to

ensure that Energy Consumption, Greenhouse Gas Emissions (Scope 1 and Scope 2), Paper Products Rating, and Accredited Operations are at Baseline performance or better. In line with EarthCheck Policy this would enable the **Região Autónoma dos Açores** to continue to meet the benchmarking requirements of the EarthCheck program.

APPENDIX

ADDITIONAL INFORMATION

Prior to the data submission, the **Região Autónoma dos Açores** provided the following comments:

> *"Lorenzo hurricane affected some islands."*

MOBILE FUEL COMBUSTION (WATER)

The Benchmarking Assessors sought clarification with regards to a significant reduction in the *Mobile Fuel Combustion (Water)* fuel sources.

Região Autónoma dos Açores provided the following response for clarification:

> *"The values are correct. This is a very volatile market and not exactly due to maritime traffic (packers and container ships). The shipowners (owners of the ships) are always looking for places where the price is cheaper to supply the ships and since they all have a very wide range, they only supply in the ports of the Azores is when the price is really attractive to them."*

Therefore the Benchmarking Assessors maintained the figures.

STATIONARY FUEL COMBUSTION

The Benchmarking Assessors sought clarification with regards to a significant reduction in naphtha usage.

Região Autónoma dos Açores provided the following response for clarification:

> *"The values are correct. The trend will be for the consumption value of Naphta to be increasingly residual. The so-called lighting oil has been used mainly for washing parts in auto workshops. As a practice that is prohibited in environmental terms, since the waste was generally destined for domestic sewage, tighter inspections have been carried out in this sector, so now the workshops are increasingly choosing to use detergent products suitable for the effect. The abnormal value of 2018 could be explained by a possible unusual production of purges from the Jet A1 reservoirs (maintenance of tanks) and placing on the market due to lack of storage space."*

Therefore the Benchmarking Assessors maintained the initial data submission.

WATER SAVINGS

The Benchmarking Assessors sought clarification with regards to significant changes in the responses to the *Water Savings* indicator.

Região Autónoma dos Açores provided the following response for clarification:

> *"We changed this data because we don't know where the DMO structure is going to be from now on. However, taking into account that we are talking about 2019, and not 2020, we can keep the same values as the previous year 2018."*

Therefore the Benchmarking Assessors updated the 2019 responses to reflect that of 2018.

PAPER PRODUCTS

The Benchmarking Assessors sought clarification with regards to significant changes in the responses to the *Paper Products* indicator.

Região Autónoma dos Açores provided the following response for clarification:

> *"We changed this data because we don't know where the DMO structure is going to be from now on. However, taking into account that we are talking about 2019, and not 2020, we can keep the same values as the previous year 2018."*

Therefore the Benchmarking Assessors updated the 2019 responses to reflect that of 2018.

PURCHASED ELECTRICITY

The Benchmarking Assessors sought clarification with regards to green power being newly reported on.

Região Autónoma dos Açores provided the following response for clarification:

> *"Yes, the values are correct. There is sale and consumption of renewable energy (green) to the grid. Probably in previous years we should have also put here the% renewable energy that is applicable. Failing to do so, you must have considered that all electricity is non-renewable and this increases as access to GHG. If EarthCheck is willing to make this correction for the previous years, the values are: 2016 (33.08%); 2017 (36.63%); 2018 (38.25%). Sorry for this, but as a recent process, we are all learning from it."*

The EarthCheck software takes into consideration a region's grid electricity, specifically the amount of renewable energy that is provided by the grid. Therefore the renewable energy used by the local grid is already factored into greenhouse gas calculations, consequently the Benchmarking Assessors maintained the *Green Power Percentage* as 0%.

EARTHCHECK

Benchmarks Assessed by EarthCheck

Summary Of Supplied Benchmarking Data

Activity Measures

Person Years	251149
Total Destination Area	232655

Supplied Benchmarking Data

Energy

Energy Consumption (GJ / Person Year)

Supplied	14495512.172 GJ
Calculated	57.72 GJ / Person Year
Baseline	55.56 GJ / Person Year
Best Practice	38.90 GJ / Person Year
Difference	3.8% below the Baseline level

Green Power (Purchased Electricity) (%)

Supplied	0%

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

Supplied	1041.74 t CO_2-e
Calculated	4.15 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	3.8% below the Baseline level

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

Supplied	832147.1 t CO_2-e
Calculated	3.3 t CO_2-e / Person Year

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

Supplied	209595136.4 kg CO_2-e
Calculated	834.5 kg CO_2-e / Person Year

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

Supplied	82772.9 t CO_2-e
Calculated	0.330 t CO_2-e / Person Year

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

Supplied	82772.9 t CO_2-e
Calculated	0.330 t CO_2-e / Person Year

Water

Potable Water Consumption (kL / Person Year)

Supplied	18426597.0 kL
Calculated	73.4 kL / Person Year
Baseline	80.75 kL / Person Year
Best Practice	56.53 kL / Person Year
Difference	9.1% better than the Baseline level

Recycled / Captured Water (%)

Supplied	0%

Water Savings Rating (Points)

Calculated	66.7 Points
Baseline	50 Points
Best Practice	80 Points
Difference	16.7 Points better than the Baseline level

Waste

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

Calculated	0.87 m^3 / Person Year
Baseline	0.89 m^3 / Person Year
Best Practice	0.62 m^3 / Person Year
Difference	2.2% better than the Baseline level

Recycled / Reused / Composted Waste (%)

Supplied	38.0%

Waste Recycling Rating (Points)

Calculated	62.4 Points
Baseline	50 Points
Best Practice	80 Points
Difference	12.4 Points better than the Baseline level

Waste Sent for Incineration (L / Person Year)

Supplied	30626666.7 L

Calculated	121.9 L / Person Year

Paper

Paper Products Rating (Points)

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

Cleaning

Cleaning Products Rating (Points)

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

Pesticides

Pesticide Products Rating (Points)

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

Sector Specific

Nitrous Oxides Produced (kg / Person Year /Hectare)

Calculated	13.03 kg / Person Year / Hectare
Baseline	9.0 kg / Person Year / Hectare
Best Practice	6.3 kg / Person Year / Hectare
Difference	44.8% below the Baseline level

Sulphur Dioxide Produced (kg / Person Year / Hectare)

Calculated	1.22 kg / Person Year / Hectare
Baseline	12.8 kg / Person Year / Hectare
Best Practice	9.0 kg / Person Year / Hectare
Difference	86.4% better than the Best Practice level

Particulate Matter Produced (kg / Person Year / Hectare)

Calculated	51.4 kg / Person Year / Hectare
Baseline	0.7 kg / Person Year / Hectare
Best Practice	0.49 kg / Person Year / Hectare
Difference	7242% below the Baseline level

Water Samples Passed (%)

Calculated	98.9%
Baseline	70 %
Best Practice	100 %
Difference	28.9% better than the Baseline level

Habitat Conservation Area (%)

Supplied	39.0%
Calculated	39.0%
Baseline	20 %
Best Practice	26 %
Difference	13.0% better than the Best Practice level

Green Space (%)

Calculated	92.0%
Baseline	15 %
Best Practice	20 %
Difference	72.0% better than the Best Practice level

Accredited Operations (%)

Supplied	3.4%
Calculated	3.4%
Baseline	5 %
Best Practice	6.5 %
Difference	1.6% below the Baseline level

Habitat Conservation (%)

Supplied	39.0%

Significant Site Maintenance Fund (%)

Supplied	1.1%

Destination Safety

Homicide Rate (%)

Calculated	0.007 %
Baseline	0.0011 %
Best Practice	0.0008 %
Difference	0.0059% below the Baseline level

Theft Rate (%)

Calculated	0.21 %
Baseline	2.28 %
Best Practice	1.60 %
Difference	1.39% better than the Best Practice level

Assault Rate (%)

Calculated	0.014 %
Baseline	0.23 %
Best Practice	0.16 %
Difference	0.146 % better than the Best Practice level

Socio-economic Benefit

Unemployment Rate (%)

Calculated	7.9 %
Baseline	6.5 %
Best Practice	4.6 %
Difference	1.4% 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 (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).