



EARTHCHECK

BENCHMARKING ASSESSMENT REPORT

DESTINATION BENCHMARKING

NUUK, THE CAPITAL OF GREENLAND

KOMMUNEQARFIK SERMERSOOQ / SERMERSOOQ BUSINESS



REPORT DATE: 27 October 2020

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

The planet deserves more than half measures

OVERVIEW

This annual assessment of **Nuuk, The Capital of Greenland** was undertaken against EarthCheck benchmarking indicators and checklists developed for EarthCheck and listed below. ¹ They have been carefully selected to track performance in key areas of environmental and social performance impact. EarthCheck benchmarking provides an organisation a vehicle for sustainability reporting and is based on the premise of continual improvement. By undertaking a Benchmarking Assessment an organisation meets the requirements of annual benchmarking which includes the collection and submission of benchmarking data to EarthCheck for review and completion of the Benchmarking Assessment Report.²

Indicator Measure (Benchmark)	
1 Policy	Policy is produced and in place
2 Energy	Energy Consumption (MJ / Person Year)
	Green Power (Purchased Electricity) (%) ³
	Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO ₂ -e / Person Year)
	Indirect Emissions (Scope 3) (kg CO ₂ -e / Person Year)
3 Water	Potable Water Consumption (kL / Person Year)
	Recycled / Captured Water (%) ³
4 Waste	Waste Sent to Landfill (m ³ / Person Year)
	Recycled / Reused / Composted Waste (%) ³
	Waste Sent for Incineration (m ³ / Person Year) ³
5 Sector Specific	Nitrous Oxides Produced (kg / Person Year)
	Sulphur Dioxide Produced (kg / Person Year)
	Particulate Matter Produced (kg / Person Year)
	Water Samples Passed (%)
	Habitat Conservation (%) ³
	Habitat Conservation Area (%)
	Green Space (%)
	Destination Safety – Homicide Rate (%)
	Destination Safety – Theft Rate (%)
	Destination Safety – Assault Rate (%)
Accredited Operations (%)	
Lead Agency Performance	
6. Water Savings	Water Savings Rating (Points) ⁶
Waste Recycling	Waste Recycling Rating (Points) ⁶
Paper	Paper Products Rating (Points) ⁶
Cleaning	Cleaning Products Rating (Points) ⁶
Pesticides	Pesticide Products Rating (Points) ⁶

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 destination and consensus.

³ 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.

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 Destination, 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.

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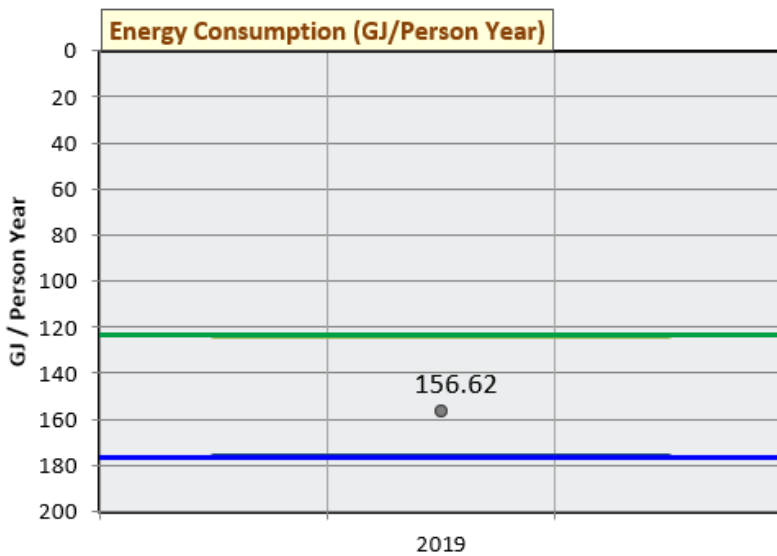
COMMUNITY PERFORMANCE BENCHMARKS

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

1. Policy ★

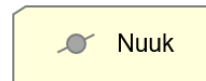
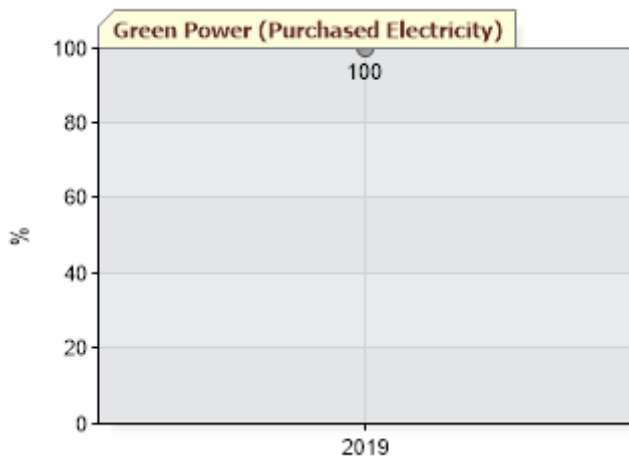
2. Energy

Energy Consumption (GJ / Person Year) ✔



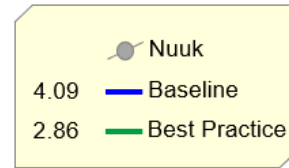
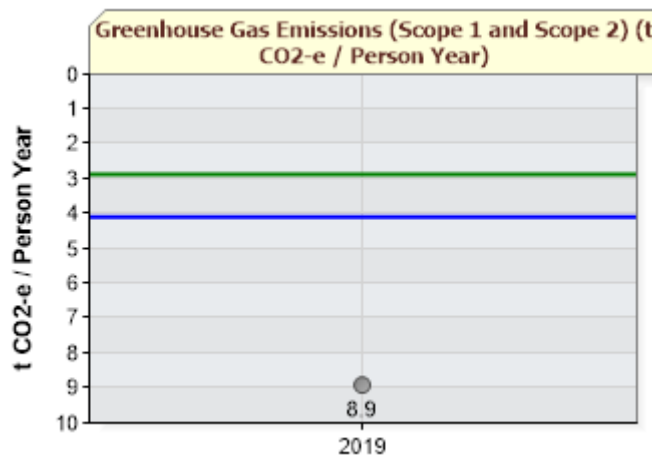
Energy Consumption (GJ / Person Year) for the year 2019 (1 January 2019 – 31 December 2019) was 156.62 GJ / Person Year, which was 11.3% better than the Baseline level.

Green Power (Purchased Electricity) (%)



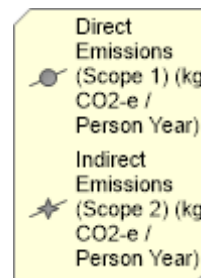
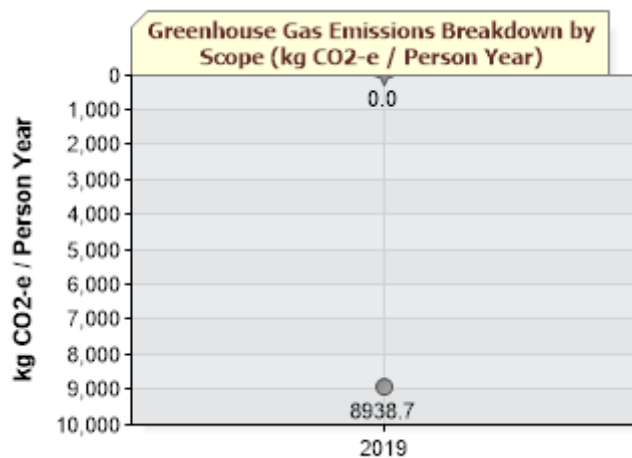
Green Power (Purchased Electricity) (%) for the year 2019 (1 January 2019 – 31 December 2019) was 100%.

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



Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO₂-e / Person Year) for the year 2019 (1 January 2019 – 31 December 2019) was 8.9 t CO₂-e / Person Year, which was 118.7% below the Baseline level.

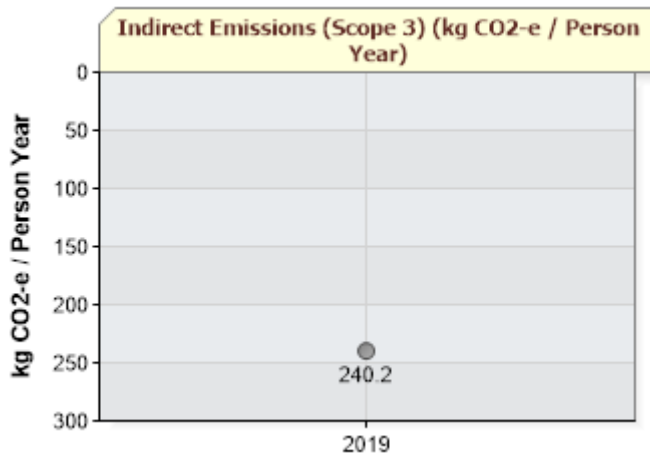
Greenhouse Gas Emissions Breakdown by Scope (kg CO₂-e / Person Year)




Direct Emissions (Scope 1) (kg CO₂-e / Person Year) for the year 2019 (1 January 2019 – 31 December 2019) was 8938.7 kg CO₂-e / Person Year.

Indirect Emissions (Scope 2) (kg CO₂-e / Person Year) for the year 2019 (1 January 2019 – 31 December 2019) was 0.0 kg CO₂-e / Person Year.

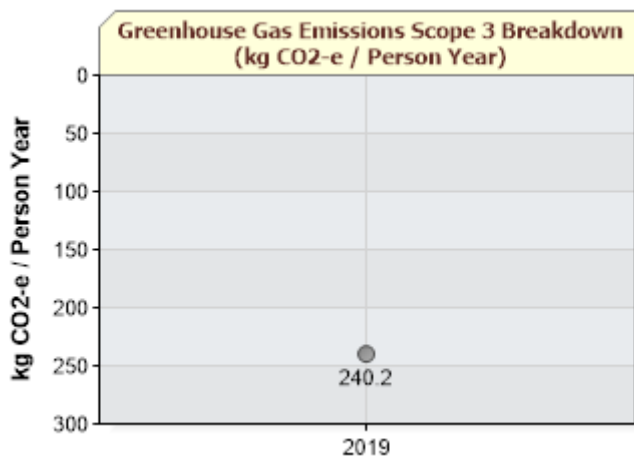
Indirect Emissions (Scope 3) (kg CO₂-e / Person Year)




 Nuuk

Indirect Emissions (Scope 3) (kg CO₂-e / Person Year) for the year 2019 (1 January 2019 – 31 December 2019) was 240.2 kg CO₂-e / Person Year.

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



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

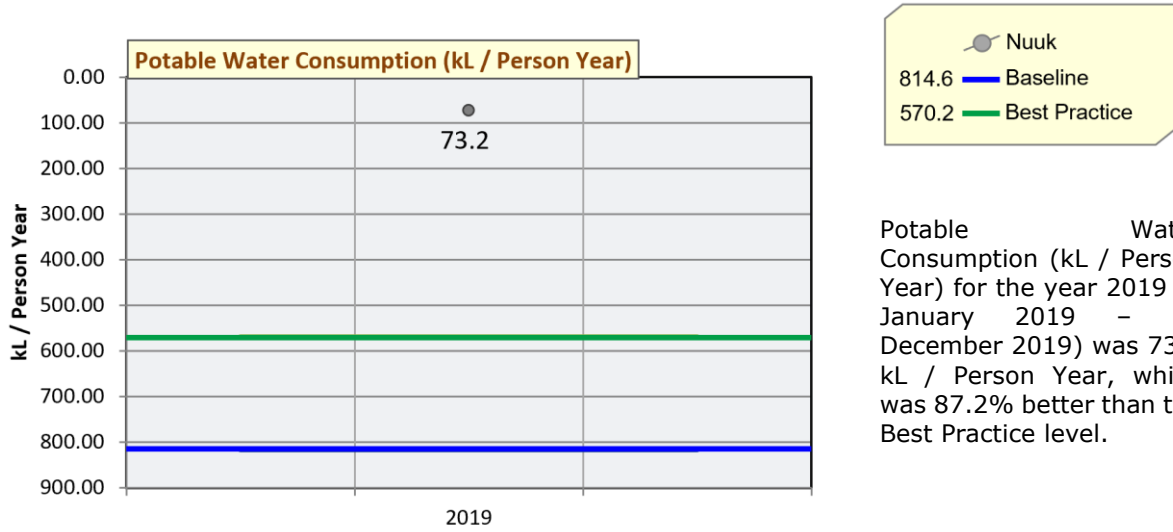
Waste Indirect Emissions (Scope 3) (kg CO₂-e / Person Year) for the year 2019 (1 January 2019 – 31 December 2019) was 240.2 kg CO₂-e / Person Year.

Direct Emissions (Scope 1)									
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 ₂ O Emission Estimate (t CO ₂ -e)	Total Emission Estimate (t CO ₂ -e)		
Diesel	9000000	litres (L)	343772100.0	24199.8	26.7	394.8	24621.4		
Motor gasoline	1000000	litres (L)	34202479.5	2251.7	17.1	80.6	2349.4		
subtotal			377974579.5	26451.6	43.8	475.4	26970.8		
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 ₂ O Emission Estimate (t CO ₂ -e)	Total Emission Estimate (t CO ₂ -e)		
Jet Kerosene	3000000	litres (L)	110159595.0	7482.6	1.1	64.9	7548.6		
subtotal			110159595.0	7482.6	1.1	64.9	7548.6		
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 ₂ O Emission Estimate (t CO ₂ -e)	Total Emission Estimate (t CO ₂ -e)		
Diesel	44000000	litres (L)	1680663600.0	118310.3	234.7	989.9	119534.9		
Motor gasoline	5000000	litres (L)	171012397.5	11258.6	23.9	100.7	11383.2		
subtotal			1851675997.5	129568.9	258.6	1090.6	130918.1		
TOTAL			2339810172.0	163503.1	303.5	1630.9	165437.5		
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 ₂ O Emission Estimate (t CO ₂ -e)	Total Emission Estimate (t CO ₂ -e)	
155260790	Kilowatt hour (kWh)	100	Non-OECD Americas	558938844.0	0.0	0.0	0.0	0.0	
subtotal				558938844.0	0.0	0.0	0.0	0.0	
TOTAL				558938844.0	0.0	0.0	0.0	0.0	
Greenhouse Gas Emissions (Scope 1 and Scope 2)									
GRAND TOTAL				2898749016.0	163503.1	303.5	1630.9	165437.5	
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 ₂ O Emission Estimate (t CO ₂ -e)	Total Emission Estimate (t CO ₂ -e)
2000	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Inert		International	0.0	0.0	0.0	0.0
730	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Food		International	0.0	689.9	0.0	689.9

560	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Concrete / metal / plastics / glass		International	0.0	0.0	0.0	0.0	
subtotal						0.0	689.9	0.0	689.9	
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 ₂ O Emission Estimate (t CO ₂ -e)	Total Emission Estimate (t CO ₂ -e)		
12800	tonnes (uncompacted)	Continuous Incineration - Stoker	Textiles	International	3754.7	0.03	0.6	3755.3		
subtotal						3754.7	0.03	0.6	3755.3	
TOTAL						3754.7	689.9	0.6	4445.2	

3. Water

Potable Water Consumption (kL / Person Year) ★

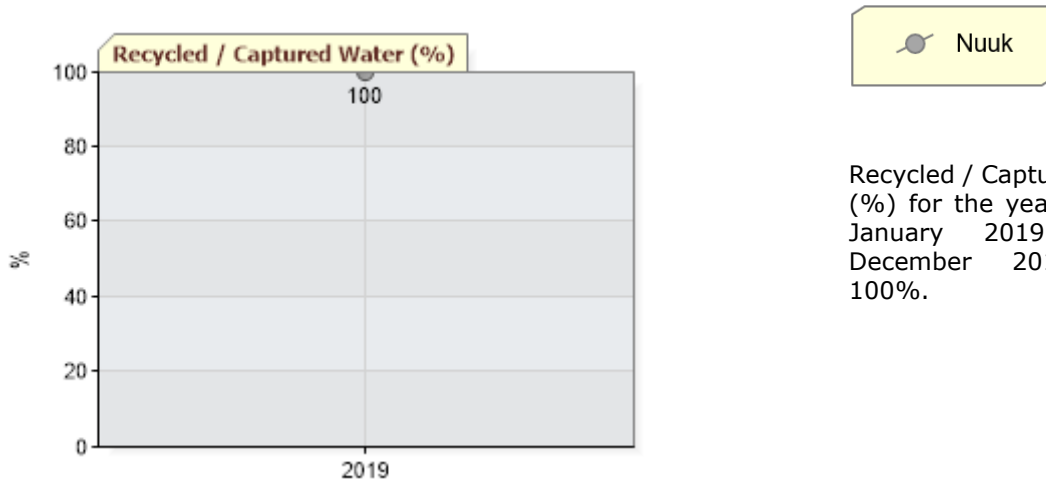


Potable Water Consumption (kL / Person Year) for the year 2019 (1 January 2019 - 31 December 2019) was 73.2 kL / Person Year, which was 87.2% better than the Best Practice level.

2019

Quantity	Unit	Potable Water Consumption (kL)
1354221	cubic metres	1354221.0 kL
	TOTAL	1354221.0 kL

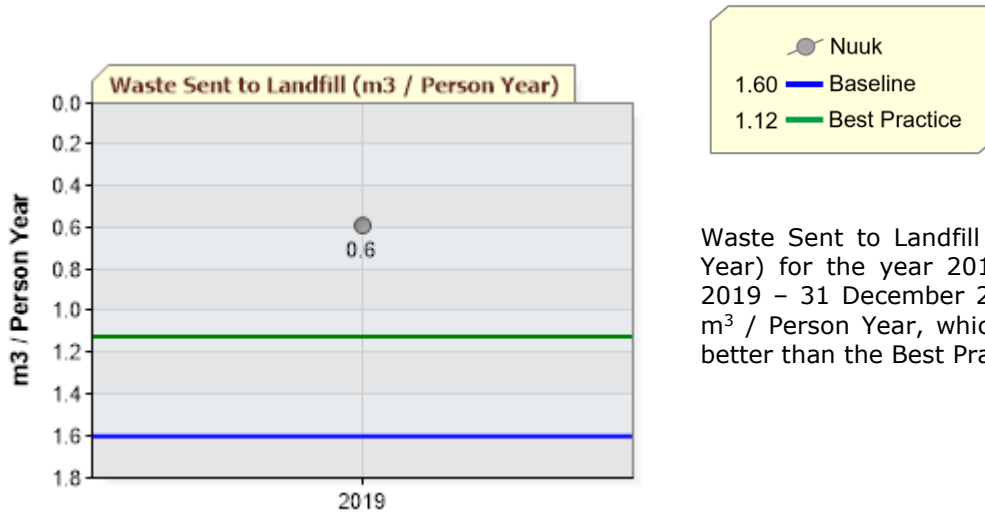
Recycled / Captured Water (%)



Recycled / Captured Water (%) for the year 2019 (1 January 2019 - 31 December 2019) was 100%.

4. Waste

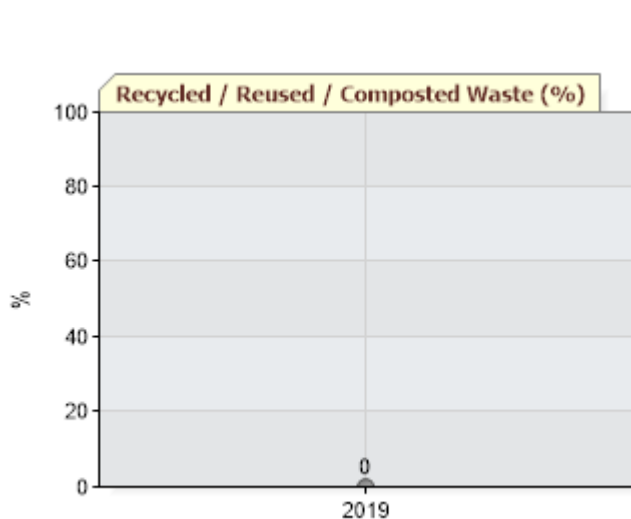
Waste Sent to Landfill (m³ / Person Year) ★



2019

Quantity	Unit	Type of Landfill	Type of Waste	Type of Operation	Waste Sent to Landfill (m ³)
2000	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Inert	-	6666.7 m ³
730	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Food	-	2433.3 m ³
560	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Concrete / metal / plastics / glass	-	1866.7 m ³
				TOTAL	10966.7 m³

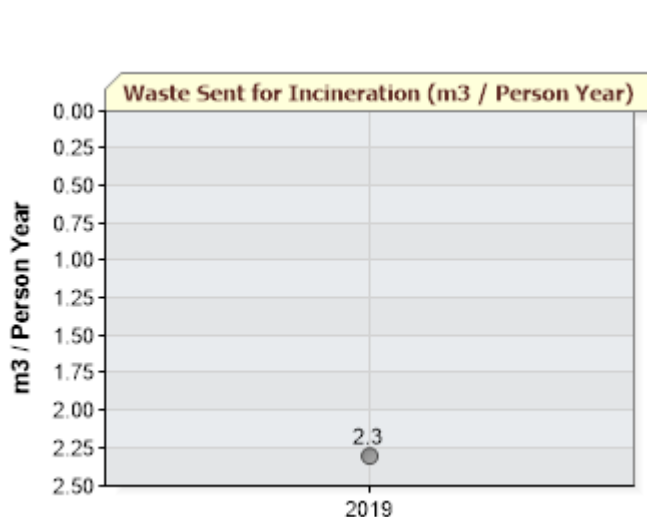
Recycled / Reused / Composted Waste (%)



Nuuk

Recycled / Reused / Composted Waste (%) for the year 2019 (1 January 2019 – 31 December 2019) was 0%.

Waste Sent for Incineration (m³ / Person Year)



Nuuk

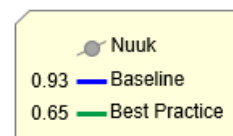
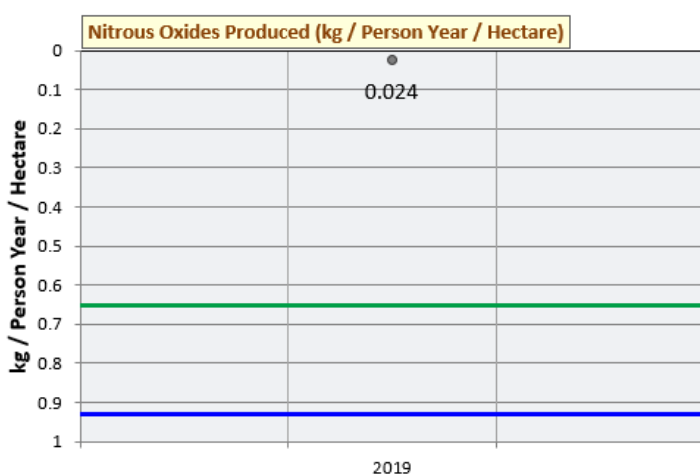
Waste Sent for Incineration (m³ / Person Year) for the year 2019 (1 January 2019 – 31 December 2019) was 2.3 m³ / Person Year.

2019

Quantity	Unit	Type of Incineration Technology	Type of Waste	Waste Sent for Incineration (m ³)
12800	tonnes (uncompacted)	Continuous Incineration - Stoker	Textiles	42666.7 m ³
			TOTAL	42666.7 m³

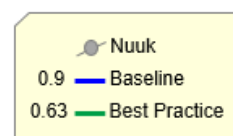
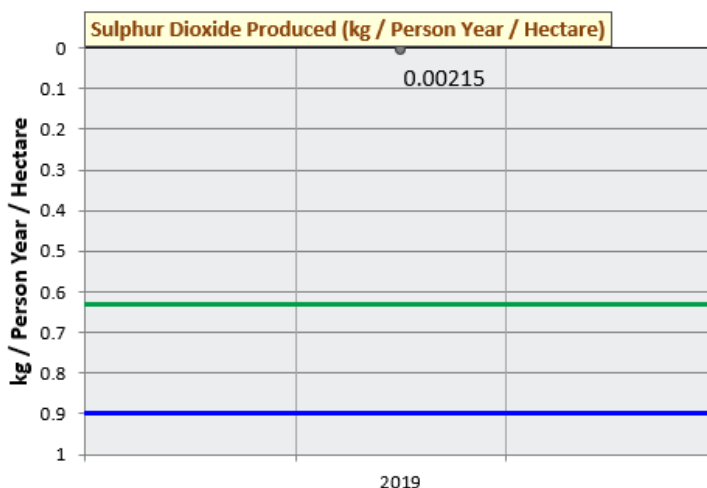
5. Sector Specific

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



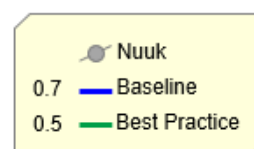
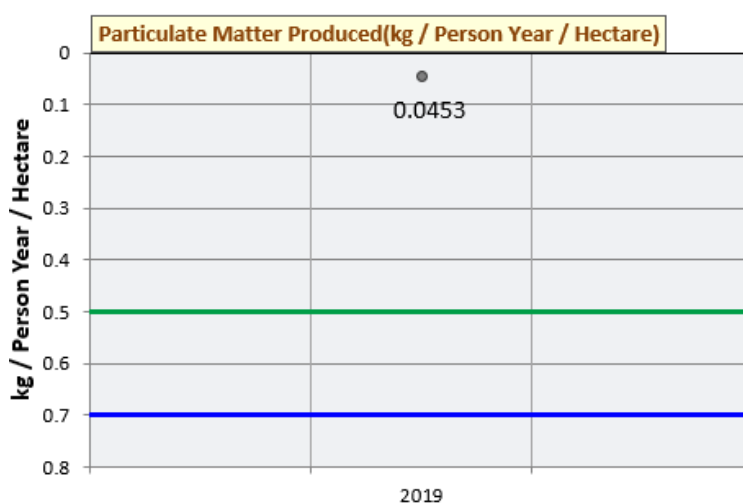
Nitrous Oxides Produced for the year 2019 (1 January 2019 – 31 December 2019) was 0.024 kg / Person Year / Hectare, which was 96.3% better than the Best Practice level.

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



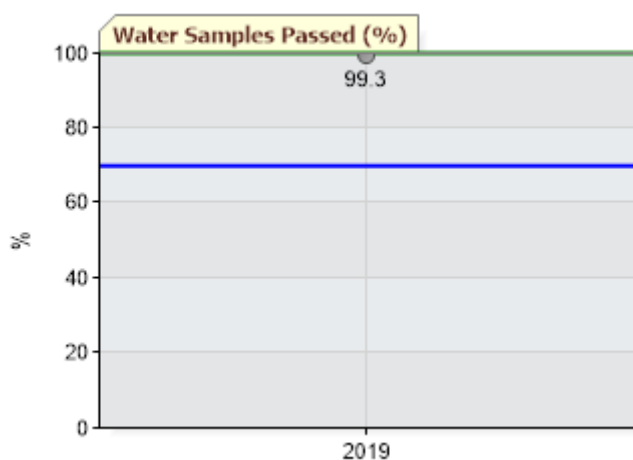
Sulphur Dioxide Produced for the year 2019 (1 January 2019 – 31 December 2019) was 0.00215 kg / Person Year / Hectare, which was 99.7% better than the Best Practice level.

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



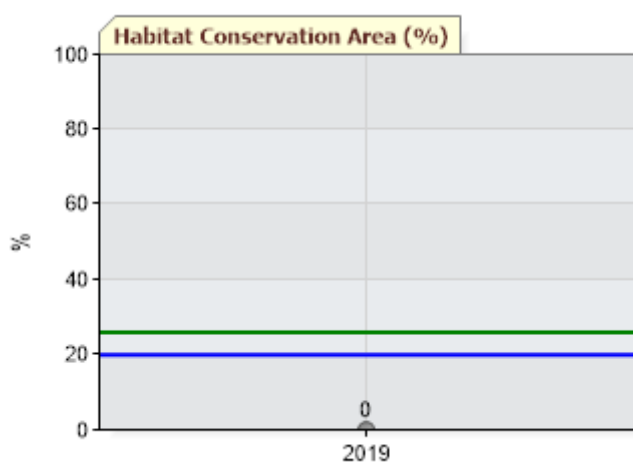
Particulate Matter Produced (kg / Person Year) for the year 2019 (1 January 2019 – 31 December 2019) was 0.0453 kg / Person Year / Hectare, which was 90.9% better than Best Practice.

Water Samples Passed (%) ✓



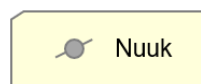
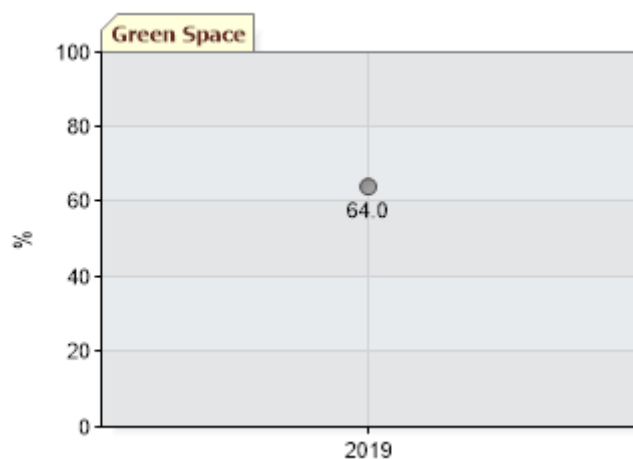
Water Samples Passed (%) for the year 2019 (1 January 2019 – 31 December 2019) was 99.3%, which was 29.3% better than the Baseline level.

Habitat Conservation Area (%) ✗



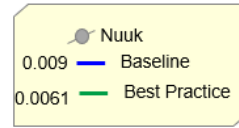
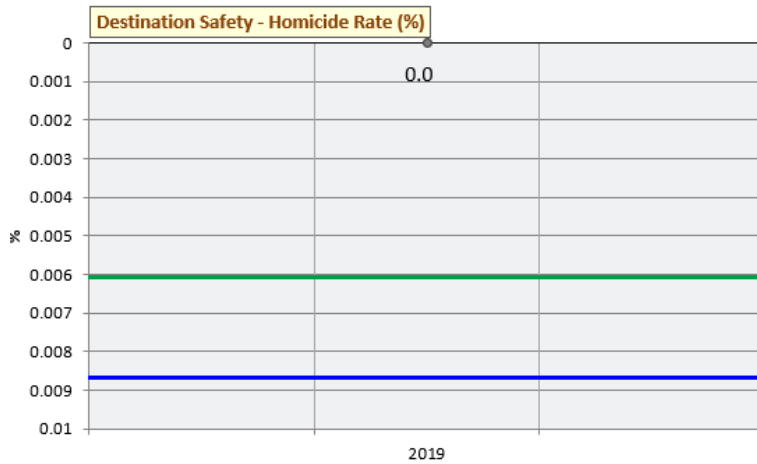
Habitat Conservation Area (%) for the year 2019 (1 January 2019 – 31 December 2019) was 0%, which was 20.0% below the Baseline level.

Green Space (%) ★



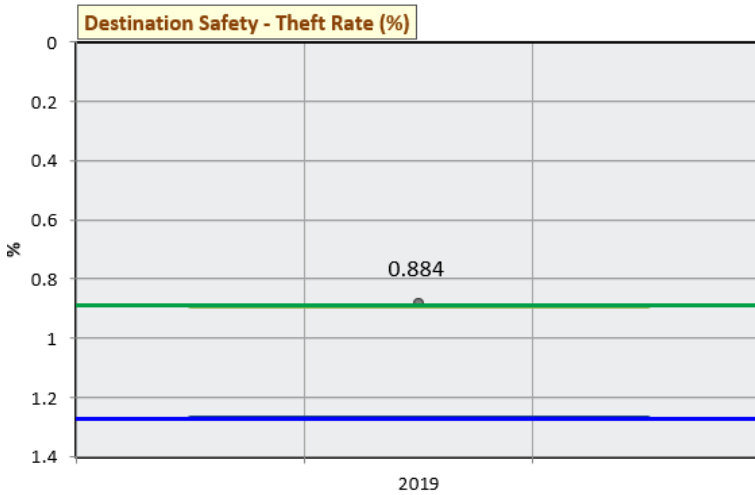
Green Space (%) for the year 2019 (1 January 2019 - 31 December 2019) was 64.0%, which was 44.0% better than the Best Practice level.

Destination Safety – Homicide Rate (%) ★



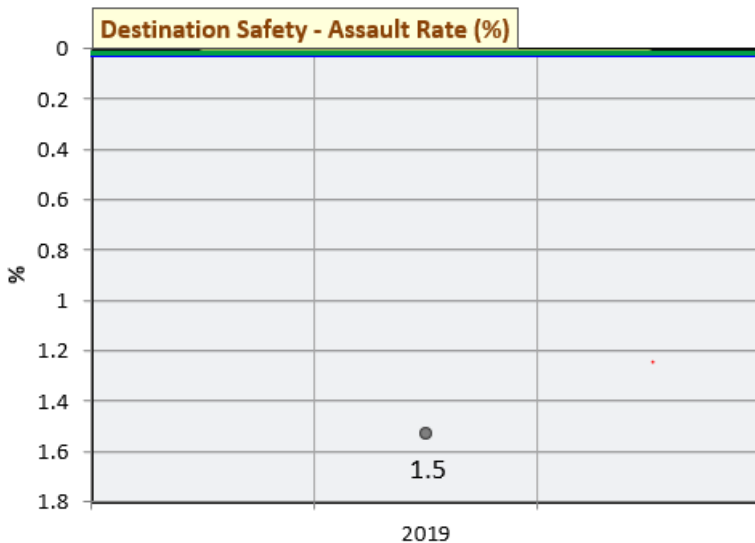
Homicide Rate for the year 2019 (1 January 2019 – 31 December 2019) was 0.024, which was 96.3% better than the Best Practice level.

Destination Safety – Theft Rate (%) ★



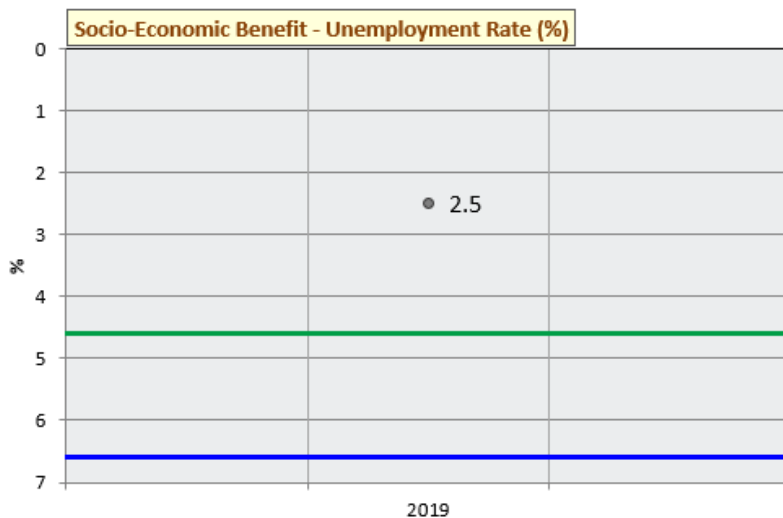
Theft Rate for the year 2019 (1 January 2019 – 31 December 2019) was 0.884%, which was 0.006% better than the Best Practice level.

Destination Safety – Assault Rate (%) ✘



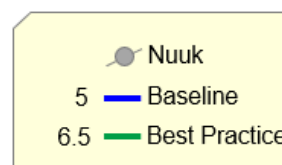
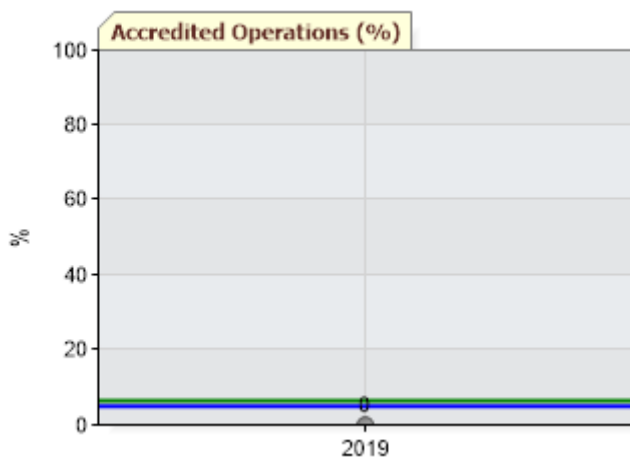
Assault Rate for the year 2019 (1 January 2019 – 31 December 2019) was 1.5%, which was 1.477% below the Best Practice level.

Socio-Economic Benefit – Unemployment Rate (%) ★



Unemployment Rate (%) for the year 2019 (1 January 2019 – 31 December 2019) was 2.5%, which was 2.1% better than the Best Practice level.

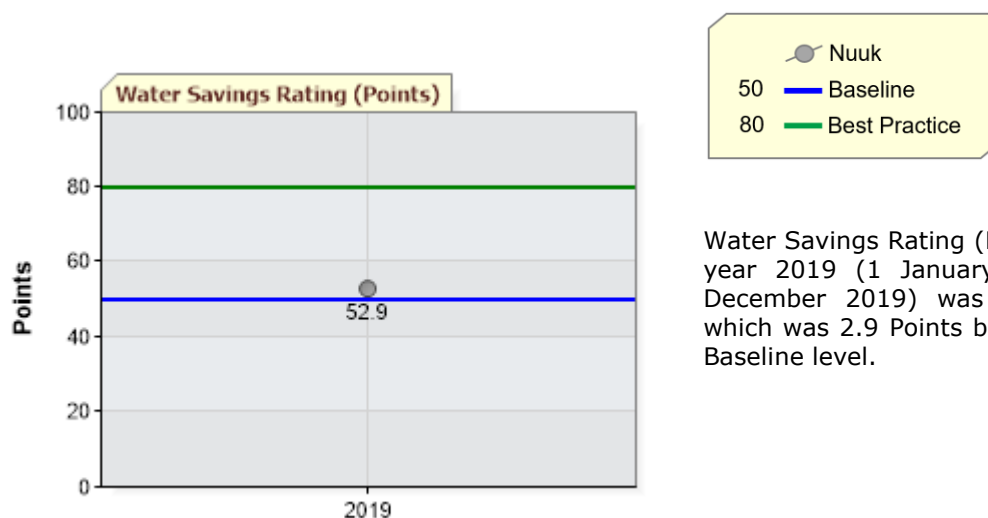
Accredited Operations (%) ✘



Accredited Operations (%) for the year 2019 (1 January 2019 – 31 December 2019) was 0%, which was 5.0% below the Baseline level.

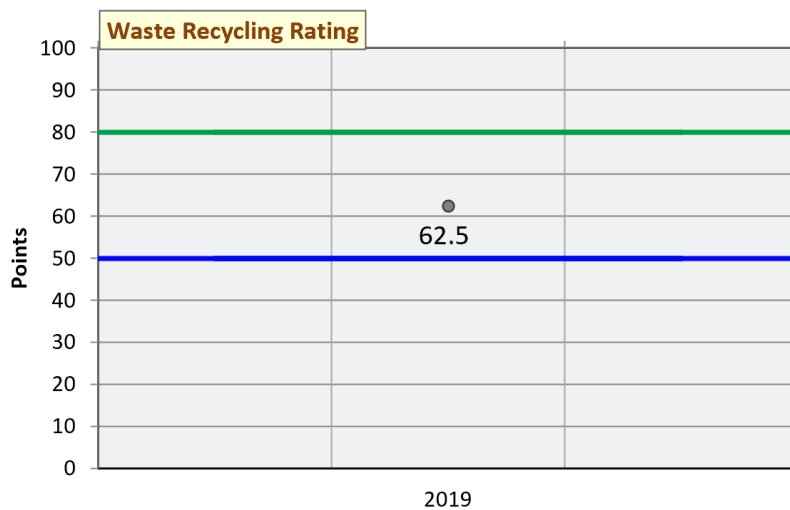
6. Lead Agency Performance

Water Savings Rating (Points) ✓



Water Savings Measures	Frequency / Percentage Rating	Water Savings Rating (Points)
Check for leaks	Every 6 months	58.8 Points
Low/dual flush toilets	100%	100.0 Points
Low flow tap fittings	0%	0.0 Points
Low flow shower fittings	Not Relevant / Not Available	
Water sprinklers used after dark	Not Relevant / Not Available	
Minimal irrigation landscaping	Not Relevant / Not Available	
Use of recycle/grey/rain water	Not Relevant / Not Available	
	Overall Rating:	52.9 Points

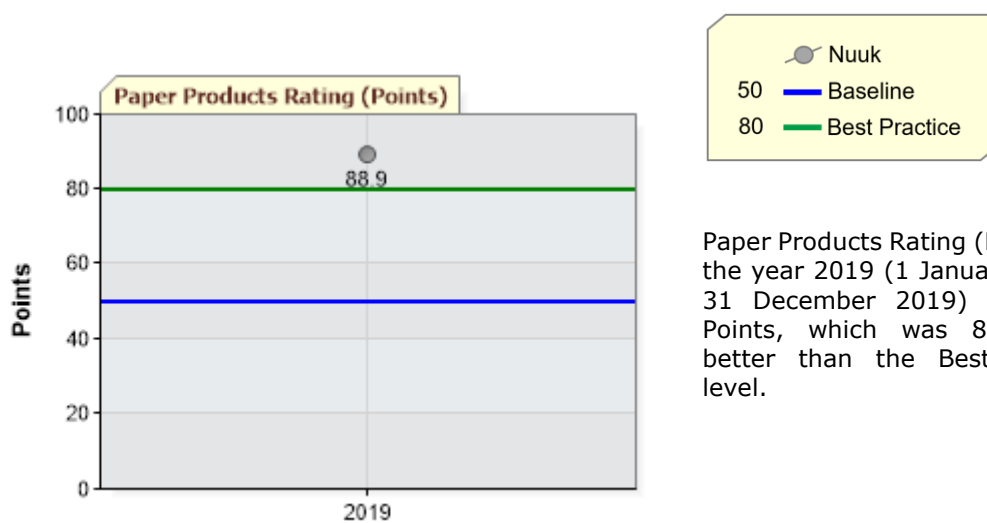
Waste Recycling Rating (Points) ✓



Waste Recycling Rating (Points) for the year 2019 (1 January 2019 – 31 December 2019) was 62.5 Points, which was 12.5 Points better than the Baseline level.

Waste Recycling Measures	Frequency / Percentage Rating	Waste Recycling Rating (Points)
Glass	80-99%	88.9 Points
Paper/card	Not Relevant / Not Available	
Iron & steel (ferrous metals)	80-99%	88.9 Points
Other metals (non-ferrous)	80-99%	88.9 Points
Plastics	1-19%	54.0 Points
Rubber	1-19%	54.0 Points
Green waste	0%	0.0 Points
	Overall Rating:	62.5 Points

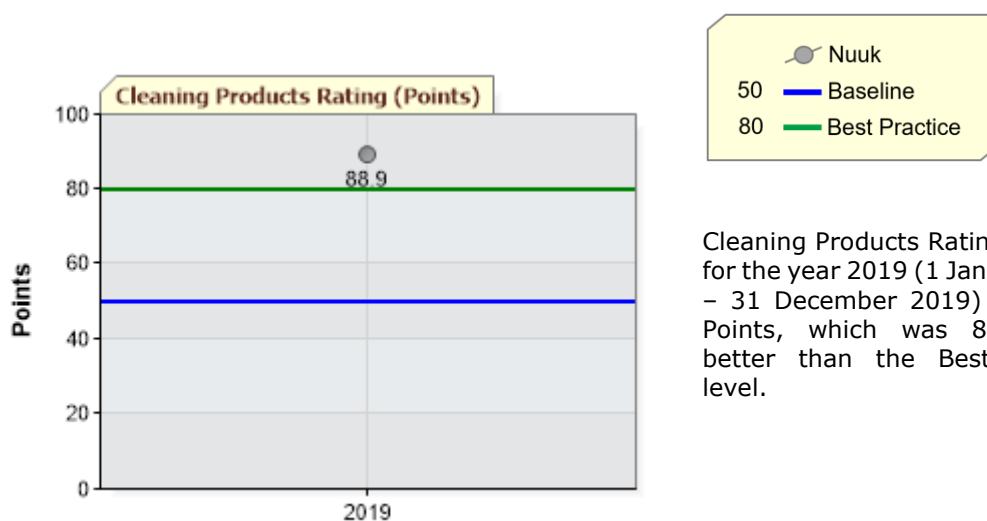
Paper Products Rating (Points) ★



Paper Products Rating (Points) for the year 2019 (1 January 2019 – 31 December 2019) was 88.9 Points, which was 8.9 Points better than the Best Practice level.

Paper Products Measures	Frequency / Percentage Rating	Paper Products Rating (Points)
Office paper	80-99%	88.9 Points
Serviettes	80-99%	88.9 Points
Tissues	80-99%	88.9 Points
Toilet tissue	80-99%	88.9 Points
Paper towels	80-99%	88.9 Points
	Overall Rating:	88.9 Points

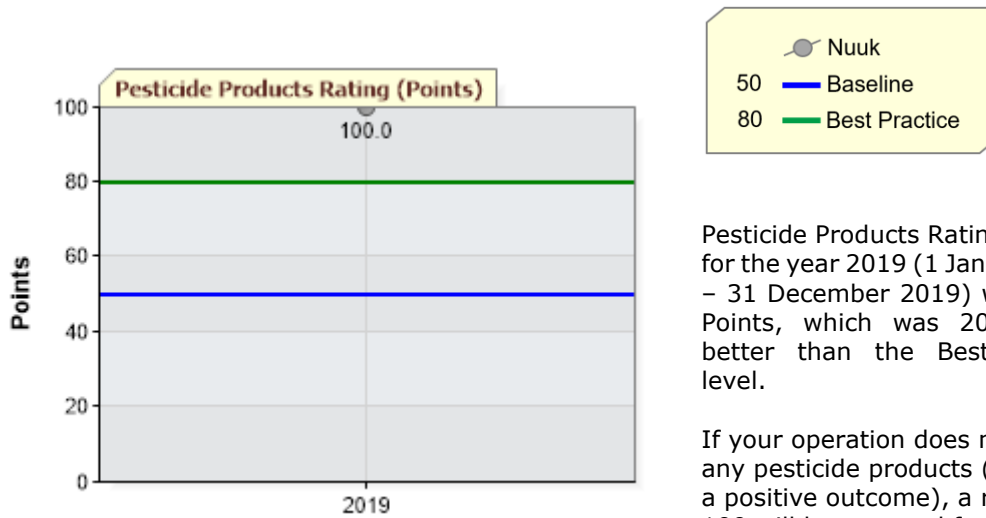
Cleaning Products Rating (Points) ★



Cleaning Products Rating (Points) for the year 2019 (1 January 2019 – 31 December 2019) was 88.9 Points, which was 8.9 Points better than the Best Practice level.

Cleaning Products Measures	Frequency / Percentage Rating	Cleaning Products Rating (Points)
Hard floor cleaners	80-99%	88.9 Points
Carpet cleaners	80-99%	88.9 Points
Interior surface cleaners	80-99%	88.9 Points
External surface cleaners	80-99%	88.9 Points
Glass cleaners	80-99%	88.9 Points
Detergents	80-99%	88.9 Points
Personal hygiene	80-99%	88.9 Points
	Overall Rating:	88.9 Points

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 / Available	100.0 Points
Fungal killers	Not Relevant / Not Available	100.0 Points
Rodent killers	Not Relevant / Available	100.0 Points
Insect killers	Not Relevant / Available	100.0 Points
	Overall Rating:	100.0 Points

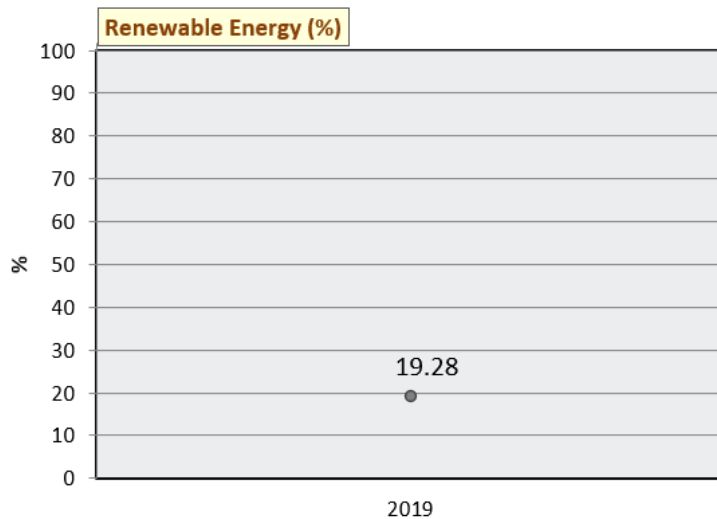
OPTIONAL BENCHMARKING INDICATORS

Nuuk, The Capital of Greenland, 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.

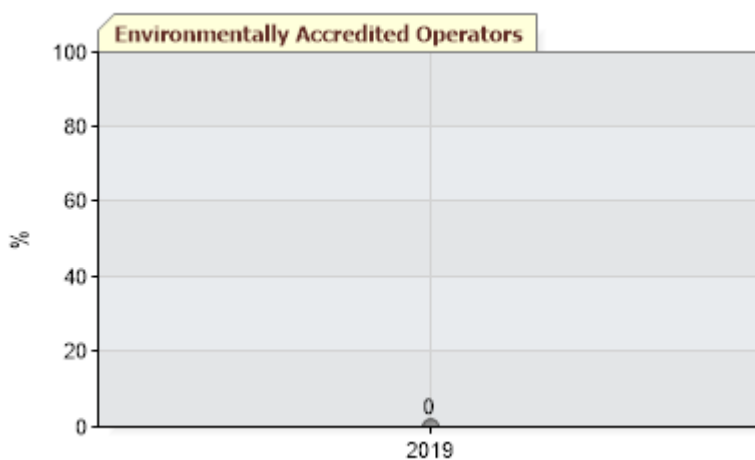
1. Selected Indicators

Selected Indicators are from a supplied list of EarthCheck indicators.

Renewable Energy



Environmentally Accredited Operators



The supplied data has been compiled by **Kommuneqarfik Sermersooq / Sermersooq Business** in the prescribed manner, authorised by a senior executive of the company and submitted for an annual assessment.

CONCLUSION AND RECOMMENDATIONS

Congratulations, **Nuuk, The Capital of Greenland**, has met the requirements to be recognised as an EarthCheck Benchmarked Community.

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

From the benchmarking data provided, twelve indicators, *Potable Water Consumption, Waste Sent to Landfill, Paper Products Rating, Cleaning Products Rating, Pesticide Products Rating, Nitrous Oxides Produced, Sulphur Dioxides Produced, Particulate Matter Produced, Homicide Rate, Theft Rate, Unemployment and Green Space*, are at or above the Best Practice level.

The three indicators that fell below the Baseline level were *Greenhouse Gas Emissions (Scope 1 and Scope 2), Habitat Conservation Area, Assault Rate and Accredited Operations*.

The value for Greenhouse Gas Emissions was 118.7% below the Baseline level. **Nuuk, The Capital of Greenland** 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).

The value for Habitat Conservation Area was 0%. However, as clarified during the benchmarking process, this only takes into consideration the city area, and if the scope was extended a much higher figure would be represented.

The value for Accredited Operations was 0%, which was 5.0% lower than the baseline level. **Nuuk, The Capital of Greenland** is encouraged to promote environmental accreditation to hotels, restaurants and other business within the destination

The percentage of **Assault Rate** is 1.5%. **Nuuk, The Capital of Greenland** 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.

Nuuk, The Capital of Greenland 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 **Nuuk, The Capital of Greenland** 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 **Nuuk, The Capital of Greenland** is encouraged to ensure that Greenhouse Gas Emissions (Scope 1 and Scope 2), Habitat Conservation Area, and Accredited Operations are at Baseline performance or better. In line with EarthCheck Policy this would enable the **Nuuk, The Capital of Greenland** to continue to meet the benchmarking requirements of the EarthCheck program.

APPENDIX

ADDITIONAL INFORMATION

Prior to the data submission it was communicated that **Nuuk** was unable to accurately separate the *Mobile Fuel Combustion (Road)* and *Mobile Fuel Combustion (Water)*. **Nuuk** provided the following methodology as to how these indicators were separated:

“As a little background information, Nuuk is isolated. You cannot drive to anywhere. There are no roads out of the city. Hence, water and air transport are the only transportation modes available, and therefore, many private people have boats. Furthermore, we have cruise ships, fishing and cargo vessels bunkering in Nuuk, which highly affects this indicator.

Nuuk does not have data available for separate types of combustion. We only have data for types of fuel, i.e. jet fuel, diesel and petrol.

This data is not publically available. We received the data from Niels Chemnitz, niz@kni.gl, Logistics Manager at Polar Oil (a subsidiary of KNI) which is the sole supplier of fuels in Greenland and Nuuk.

The data for 2019 was:

Jet fuel A-1: 3 mil liters

Diesel: 53 mil liters

Gasoline: 6 mil liters

The distribution of diesel and gasoline between road and water is based on an estimate from Niels Chemnitz (see the attached email). We have reached out to the finals vendors of the fuel but they have no records of what is sold to marine and road purposes. Therefore, Niels Chemnitz’ estimate is that 83% of diesel and gasoline is marine consumption and 17% is road consumption. None is stationary consumption.”

Fuel type and total	Water		Road		Air	
	%	Mio liters	%	Mio liters	%	Mio liters
Jet fuel A-1: 3 mil liters	0%	0	0%	0	100%	3
Diesel: 53 mil liters	83%	44 mil	17%	9 mil	0%	0
Gasoline: 6 mil liters	83%	5 mil	17%	1 mil	0%	0

HABITAT CONSERVATION (BIODIVERSITY)

The Benchmarking Assessors sought clarification with regards to the indicator *Habitat Conversation (Biodiversity)* being reported as 0%.

The **Nuuk** provided the following response for clarification:

“Habitat conservation is 0%. The scope for our certification is the city area, and within the city area there is 0% habitat conservation areas. However, as soon as you step outside the city area, then you are in protected wilderness area. On a side note and a rough estimate, if we changed the scope to the entire municipality, I guess somewhere close to 99% would be habitat conservation areas. But we are limited to the city area.”

Therefore the Benchmarking Assessors maintained the initial data submission.

POTABLE WATER CONSUMPTION

The Benchmarking Assessors sought clarification with regards to a lower than expected figure for *Potable Water Consumption*.

The **Nuuk** provided the following response for clarification:

“Potable water consumption data are correct. We have little water intensive industry in Nuuk.”

Therefore the Benchmarking Assessors maintained the initial data submission.



EARTHCHECK

Benchmarks Assessed by EarthCheck

SUMMARY OF SUPPLIED BENCHMARKING DATA

Activity Measures

Person Years	18508
Total Destination Area	3610

Supplied Benchmarking Data

Energy

Energy Consumption (GJ / Person Year)

Supplied	2898749.02 GJ
Calculated	156.62 GJ / Person Year
Baseline	176.507.64 GJ / Person Year
Best Practice	123.56 GJ / Person Year
Difference	11.3% better than the Baseline level

Green Power (Purchased Electricity) (%)

Supplied	100%
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Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO₂-e / Person Year)

Supplied	165437.5 t CO ₂ -e
Calculated	8.9 t CO ₂ -e / Person Year
Baseline	4.09 t CO ₂ -e / Person Year
Best Practice	2.86 t CO ₂ -e / Person Year
Difference	118.7% below the Baseline level

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

Supplied	165437.5 t CO ₂ -e
Calculated	8.9 t CO ₂ -e / Person Year

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

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

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

Supplied	4445182.3 kg CO ₂ -e
Calculated	240.2 kg CO ₂ -e / Person Year

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

Supplied	4445182.3 kg CO ₂ -e
Calculated	240.2 kg CO ₂ -e / Person Year

Water

Potable Water Consumption (kL / Person Year)

Supplied	1354221.0 kL
Calculated	73.2 kL / Person Year
Baseline	814.64 kL / Person Year
Best Practice	570.25 kL / Person Year
Difference	87.2% better than the Best Practice level

Recycled / Captured Water (%)

Supplied	100%
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Water Savings Rating (Points)

Calculated	52.9 Points
Baseline	50 Points
Best Practice	80 Points
Difference	2.9 Points better than the Baseline level

Waste

Waste Sent to Landfill (m³ / Person Year)

Supplied	10966.7 m ³
Calculated	0.6 m ³ / Person Year
Baseline	1.60 m ³ / Person Year
Best Practice	1.12 m ³ / Person Year
Difference	47.0% better than the Best Practice level

Recycled / Reused / Composted Waste (%)

Supplied	0%
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Waste Recycling Rating (Points)

Calculated	62.5 Points
Baseline	50 Points
Best Practice	80 Points
Difference	12.5 Points better than the Baseline level

Waste Sent for Incineration (m³ / Person Year)

Supplied 42666.7 m³
Calculated 2.3 m³ / Person Year

90.9% better than the Best Practice Level

Paper

Paper Products Rating (Points)

Calculated 88.9 Points
Baseline 50 Points
Best Practice 80 Points
Difference 8.9 Points better than the Best Practice level

Destination Safety – Homicide Rate (%)

Calculated 0.0%
Baseline 0.009%
Best Practice 0.0061%
Difference 96.3% better than the Best Practice Level

Destination Safety – Theft Rate (%)

Calculated 0.884%
Baseline 1.27%
Best Practice 0.89%
Difference 00006% better than the Best Practice

Cleaning

Cleaning Products Rating (Points)

Calculated 88.9 Points
Baseline 50 Points
Best Practice 80 Points
Difference 8.9 Points better than the Best Practice level

Destination Safety – Assault Rate (%)

Calculated 1.5%
Baseline 0.023%
Best Practice 0.016%
Difference 1.477% below the Baseline level

Pesticides

Pesticide Products Rating (Points)

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

Socio-Economic Benefit – Unemployment Rate (%)

Calculated 2.5%
Baseline 4.6%
Best Practice 6.6%
Difference 2.1% better than the Best Practice level

Sector Specific

Nitrous Oxides Produced (kg / Person Year / Hectare)

Calculated 0.024 kg / Person Year / Hectare
Baseline 0.93 kg / Person Year / Hectare
Best Practice 0.65 kg / Person Year / Hectare
Difference 96.3% better than the Best Practice Level

Green Space (%)

Supplied 64.0%
Baseline 15 %
Best Practice 20 %
Difference 44.0% better than the Best Practice level

Sulphur Dioxide Produced (kg / Person Year/ Hectare)

Calculated 0.00215 kg / Person Year / Hectare
Baseline 0.9 kg / Person Year / Hectare
Best Practice 0.63 kg / Person Year / Hectare
Difference 99.7% better than Best Practice

Accredited Operations (%)

Supplied 0%
Baseline 5 %
Best Practice 6.5 %
Difference 5.0% below the Baseline level

Particulate Matter Produced (kg / Person Year/ Hectare)

Calculated 0.0453 kg / Person Year / Hectare
Baseline 0.7 kg / Person Year / Hectare
Best Practice 0.5 kg / Person Year / Hectare
Difference

Habitat Conservation (%)

Supplied 0%

Renewable Energy (%)

Supplied 19.28%

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).