

# **BENCHMARKING ASSESSMENT REPORT**

## **COMMUNITY BENCHMARKING**

### **Snaefellsnes Iceland**


**Report Date: 8 April 2008**  
**Benchmarked Certificate Expiry: 31 March 2009**

Benchmarking Data Collection Period: 1 January 2007 – 31 December 2007



## OVERVIEW

This annual assessment of **Snaefellsnes** was undertaken against Earthcheck benchmarking indicators and checklists developed for Green Globe and listed below.<sup>1</sup> They have been carefully selected to track performance in key areas of environmental and social performance impact. The lead agency responsible for collection, collation and authorisation of the information required by the indicators was the **Snaefellsnes Council**.

	 earthcheck	Indicator Measure (Benchmark)
1	Sustainability Policy	Policy is produced and in place <sup>2</sup>
2	Energy Consumption	Energy used (GJ / Person Year) <sup>3</sup>
		Renewable energy used (%) <sup>4</sup>
3	Water Consumption	Water used (kL / Person Year) <sup>3</sup>
		% of total water used is that is recycled/captured (%) <sup>4</sup>
4	Waste Sent to Landfill	Waste landfilled (t / Person Year) <sup>3</sup>
		% of total waste that is recycled/reused (%) <sup>4</sup>
5	Greenhouse Gas (CO <sub>2</sub> ) Production	Carbon dioxide produced (t / Person Year) <sup>3</sup>
6	Air Quality	Nitrous oxides produced (kg / Person Year / Area) <sup>5</sup>
7	Air Quality	Sulphur dioxide produced (kg / Person Year / Area) <sup>5</sup>
8	Air Quality	Particulate matter produced (kg / Person Year / Area) <sup>5</sup>
9	Waterways Quality	Tested waterways samples passing quality guidelines pa / Total number of waterways samples tested pa
10	Habitat Conservation (Biodiversity)	Area set aside for conservation of native species (ha) / Total community area (ha)
11	Green Space	Green space area of Community (ha) / Total community area (ha)
12	Travel & Tourism Accreditation	Environmentally accredited operators / Total number of operators in the community


<sup>1</sup> Please refer to the relevant Green Globe Sector Benchmarking Indicator (SBI) document for more details. For frequently asked questions (FAQs) about benchmarking or specific help, please log on to 'My EC3 Home' and visit your Earthcheck Benchmarking software.

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

<sup>3</sup> Person year is equivalent to 365 person days. Green Globe 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.

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

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

 <b>earthcheck</b>		<b>Indicator Measure (Benchmark)</b>
Lead Agency Performance		
<b>13</b>	Water Saving	Water saving (Checklist rating) <sup>6</sup>
<b>14</b>	Waste Recycling	Waste recycling (Checklist rating) <sup>6</sup>
<b>15</b>	Paper Products	Paper product types used (Checklist Rating) <sup>6</sup>
<b>16</b>	Cleaning Products	Cleaning product types used (Checklist rating) <sup>6</sup>
<b>17</b>	Pesticide Products	Pesticide product types used (Checklist Rating) <sup>6</sup>

In addition to the indicator measures, a range of optional indicators are also provided. These present the opportunity to benchmark areas that reflect specific commitments to the local environment by the Community.

Optional benchmarks are encouraged and recognised by Green Globe, but are not used in the Benchmarking evaluation that assesses whether the Community has reached the standards necessary to use the Green Globe Benchmarked logo.<sup>7</sup>



The data for the listed Earthcheck indicators and their benchmarks have been stated as compiled by **Snaefellsnes** in the prescribed manner, authorized by a senior officer of the Community's lead agency, the **Snaefellsnes Council**, and submitted to Green Globe for an annual assessment.

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

<sup>7</sup> To meet the requirements that allow the right to use the Green Globe Benchmarked logo, the benchmarks for all the submitted Earthcheck indicators should be at, or better than, the Baseline level. Baseline and Best Practice performance levels are set with reference to the type of activity and appropriate national and international data which take into account social, geographical and climatic impacts.

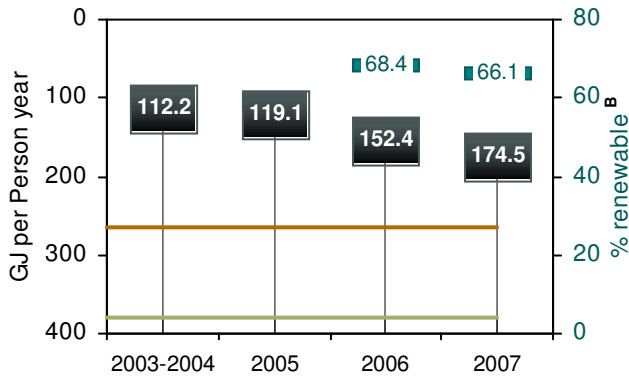
If an operation fails to meet the minimum requirements for up to two submitted Earthcheck indicators (Baseline performance or better), but achieves Baseline performance or better in all the other Earthcheck indicators, then the operation is allowed to use the Green Globe Benchmarked logo. It is, however, given a maximum of 12 months to improve performance in at least one of the indicators to Baseline performance or better. If on the next submission this is not achieved without substantiated evidence that the situation was beyond the control of that operation (e.g., occurrence of a natural disaster), then the right to use the Green Globe Benchmarked logo will be withdrawn.

As a standard policy, all Earthcheck indicators are continuously reviewed, along with the performance levels which operators have to achieve in order to use the Green Globe Benchmarked logo. This review takes into account "business-as-usual" changes in practices and equipment, and is used to update where appropriate Baseline and Best Practice levels. Advanced warning will be given of changes in any benchmarking related requirements and data.

**1 Sustainability Policy ★**

**2 Energy Consumption**

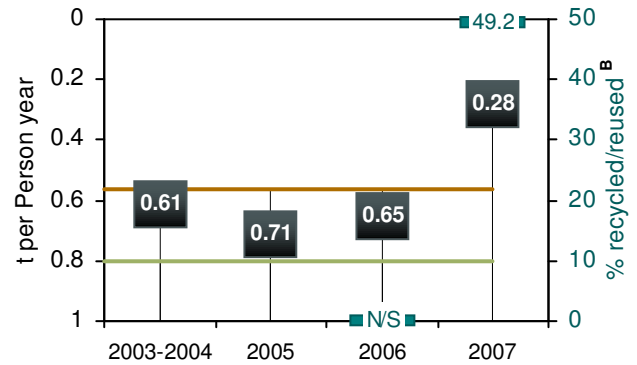
Energy consumed / Person year ★



**Snaefellsnes** consumed 174.5 GJ per Person Year for the year 2007 (1/01/07 - 31/12/07), which was 34% better than the Best Practice level.

**4 Waste Sent to Landfill**

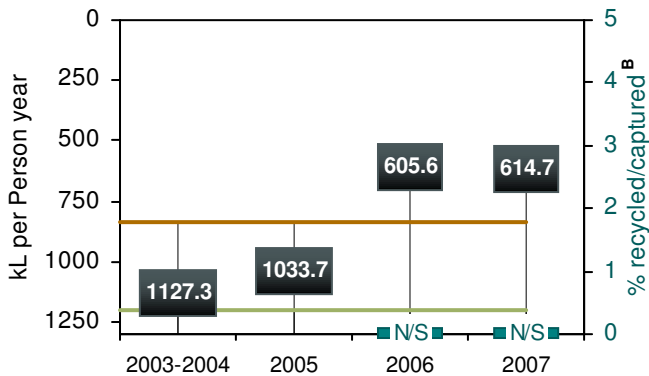
Waste landfilled / Person year ★



**Snaefellsnes** produced 0.28 t per Person Year for the year 2007 (1/01/07 - 31/12/07), which was 51% better than the Best Practice level.

**3 Water Consumption<sup>8</sup>**

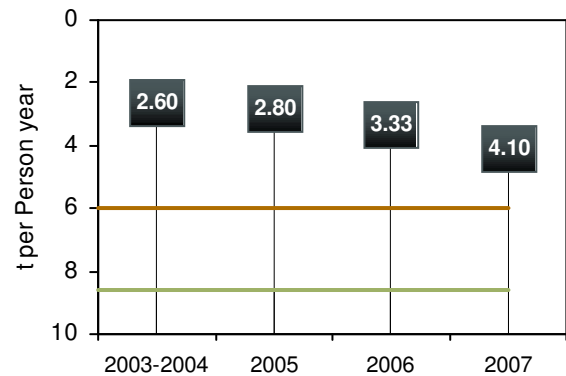
Water consumed / Person year ★



**Snaefellsnes** consumed 614.7 kL per Person Year for the year 2007 (1/01/07 - 31/12/07), which was 27% better than the Best Practice level.

**5 Greenhouse Gas (CO<sub>2</sub>) Production**

Carbon dioxide (CO<sub>2</sub>) produced / Person year ★



**Snaefellsnes** produced 4.1 t per Person Year for the year 2007 (1/01/07 - 31/12/07), which was 32% better than the Best Practice level.

**Performance level:**

Baseline

Best Practice

**Current result:**

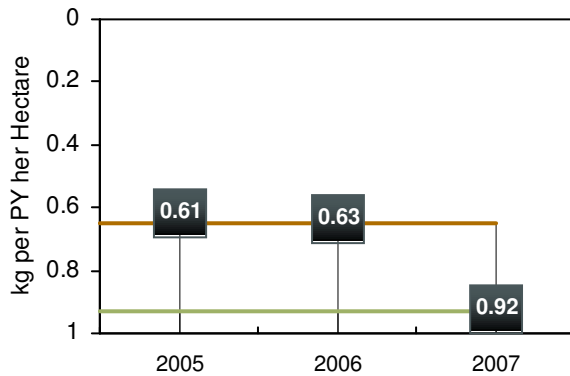
Below Baseline ✖

At or above Baseline ✔

At or above Best Practice ★

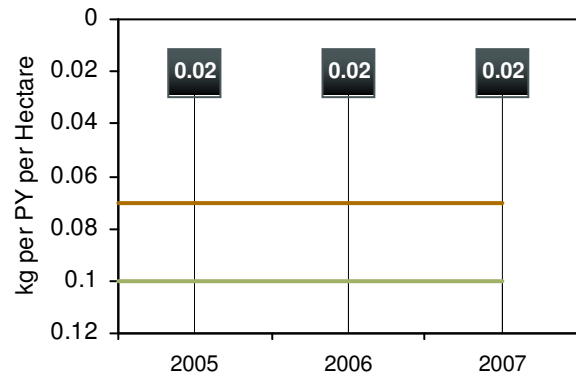
<sup>8</sup> Baseline, Best Practice, and Community consumption figures are based on that supplied by water utilities for primarily domestic and commercial/industrial use. Agricultural consumption (including forestry and fisheries) accounts in many countries for around 50-80% of a country's overall consumption of fresh water, but most of this is usually obtained by direct extraction from bore holes and waterways.

**6 Air Quality<sup>9</sup>**  
Nitrous oxides (NOx) produced /  
Person year / Area ✓



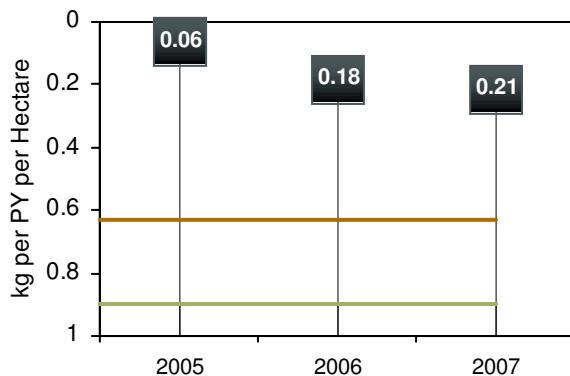
**Snaefellsnes** produced 0.92 kg per Person Year per Hectare for the year 2007 (1/01/07 - 31/12/07), which was 1% better than the Baseline level.

**8 Air Quality<sup>9</sup>**  
Particulate matter (PM10) produced /  
Person year / Area ★



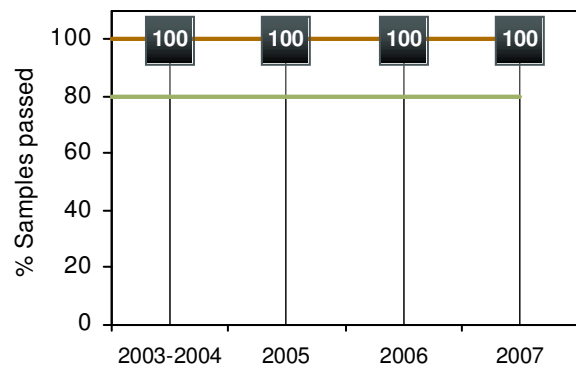
**Snaefellsnes** produced 0.02 kg per Person Year per Hectare for the year 2007 (1/01/07 - 31/12/07), which was 66% better than the Best Practice level.

**7 Air Quality<sup>9</sup>**  
Sulphur dioxide (SO<sub>2</sub>) produced /  
Person year / Area ★



**Snaefellsnes** produced 0.21 kg per Person Year per Hectare for the year 2007 (1/01/07 - 31/12/07), which was 67% better than the Best Practice level.

**9 Waterways Quality**  
Water test passes / Water samples taken ★



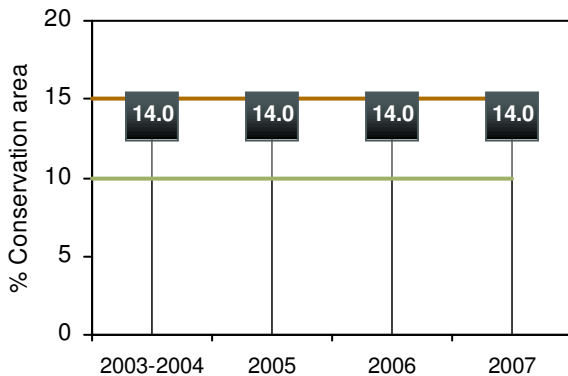
Waterways Quality for the year 2007 (1/01/07 - 31/12/07) was at the Best Practice level.

Performance level:	Baseline	Best Practice
<b>Current result:</b>	Below Baseline ✖	At or above Baseline ✓ At or above Best Practice ★

<sup>9</sup> Baseline, Best Practice, and Community consumption figures are based on that supplied by water utilities for primarily domestic and commercial/industrial use. Agricultural consumption (including forestry and fisheries) accounts in many countries for around 50-80% of a country's overall consumption of fresh water, but most of this is usually obtained by direct extraction from bore holes and waterways.

**10 Habitat Conservation (Biodiversity)**

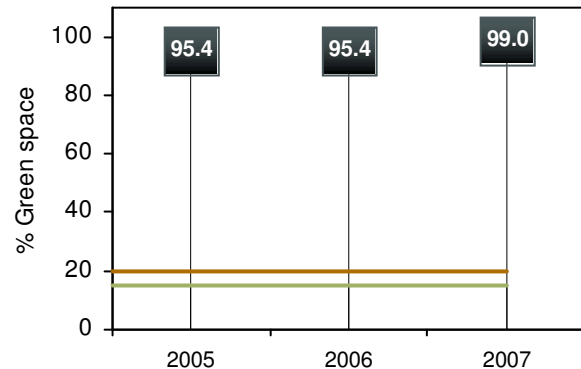
Habitat conservation area (ha) /  
Total community area (ha) ✓



Habitat Conservation (Biodiversity) for the year 2007 (1/01/07 - 31/12/07) was 4% better than the Baseline level.

**11 Green Space**

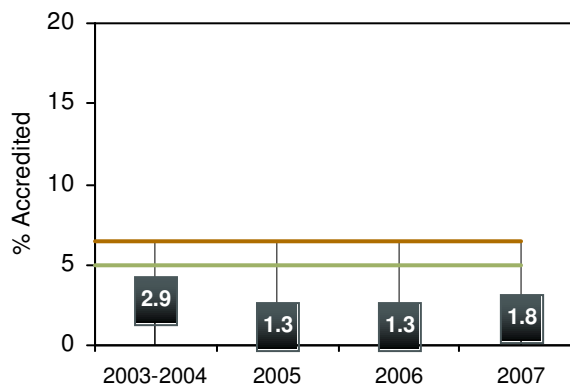
Green space area (ha) /  
Total community area (ha) ★



Green Space for the year 2007 (1/01/07 - 31/12/07) was 79.5% better than the Best Practice level.

**12 Travel & Tourism Accreditation**

Environmental performance accredited operations / Total travel & tourism operations



Travel & Tourism Accreditation for the year 2007 (1/01/07 - 31/12/07) was 3.2% below the Baseline level.

It is recognised that in most regions around the world, travel and tourism has not, until very recently, had access to environmental accreditation programs, such as Green Globe, that are suitable for their business.

As a consequence this indicator's role is not to pass/fail a Community, but to encourage local travel and tourism operators, who are generally the main point of contact for visitors to the Community, to start taking part in, and promoting, environmentally aware programs.

This will not only help support the Community's goals for a better environment, but also promote their own businesses.

**Performance level:**

Baseline —

Best Practice —

**Current result:**

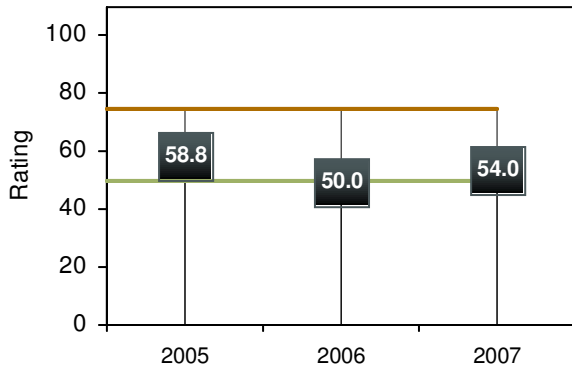
Below Baseline ✖

At or above Baseline ✓

At or above Best Practice ★

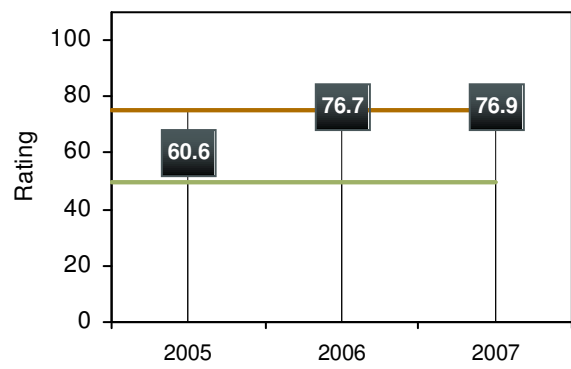
**Lead Agency Performance**

**13 Water Saving**<sup>10</sup>  
Checklist rating ✓



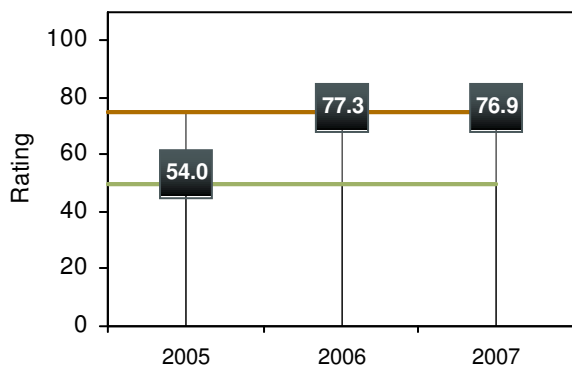
The Water Saving checklist rating for the year 2007 (1/01/07 - 31/12/07) was 4 points better than the Baseline level.

**15 Paper Products**<sup>10</sup>  
Checklist rating ★



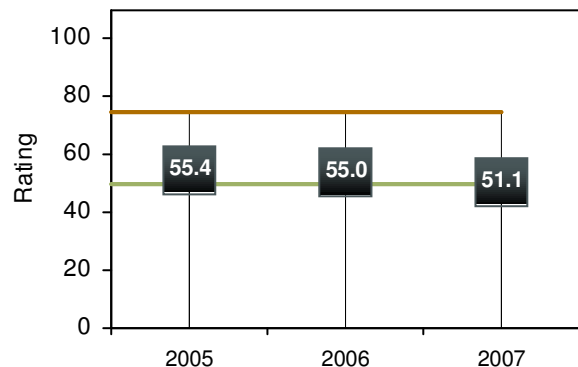
The Paper Products checklist rating for the year 2007 (1/01/07 - 31/12/07) was 1.9 points better than the Best Practice level.

**14 Waste Recycling**<sup>10</sup>  
Checklist rating ★



The Waste Recycling checklist rating for the year 2007 (1/01/07 - 31/12/07) was 1.9 points better than the Best Practice level.

**16 Cleaning Products**<sup>10</sup>  
Checklist rating ✓



The Cleaning Products checklist rating for the year 2007 (1/01/07 - 31/12/07) was 1.1 points better than the Baseline level.

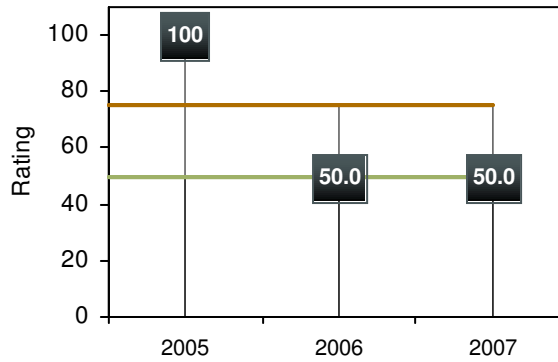
<b>Performance level:</b>	Baseline	Best Practice
<b>Current result:</b>	Below Baseline ✖	At or above Baseline ✓ At or above Best Practice ★

<sup>10</sup> Assessed for the Community's lead agency – the **Snaefellsnes Council**

**Lead Agency Performance**

**17 Pesticide Products <sup>11</sup>**

Checklist rating ✓



The Pesticide Products checklist rating for the year 2007 (1/01/07 - 31/12/07) was at the Baseline level.

**Performance level:**

*Baseline* —

*Best Practice* —

**Current result:**

*Below Baseline* ✖

*At or above Baseline* ✓

*At or above Best Practice* ★

<sup>11</sup> Assessed for the Community's lead agency – the **Snaefellsnes Council**



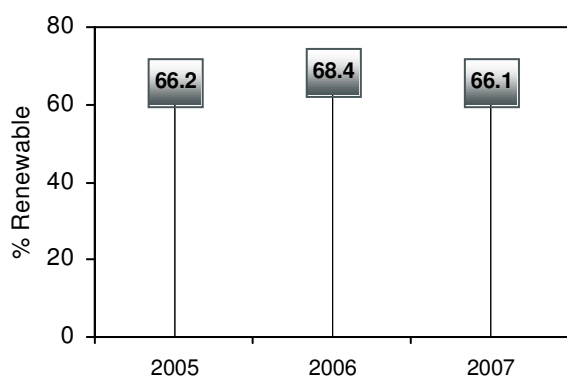
## OPTIONAL BENCHMARKING INDICATORS

**Snaefellsnes** has also nominated optional Community Selected and Specified Indicators that they consider relevant to their specific locality. These indicators do not form part of the formal annual benchmarking exercise, however, their use reflects a commendable and very positive commitment by the lead agency to monitoring key factors that can impact on the community's environment.

### Selected Indicators <sup>12</sup>

#### 1 Renewable Energy Consumption

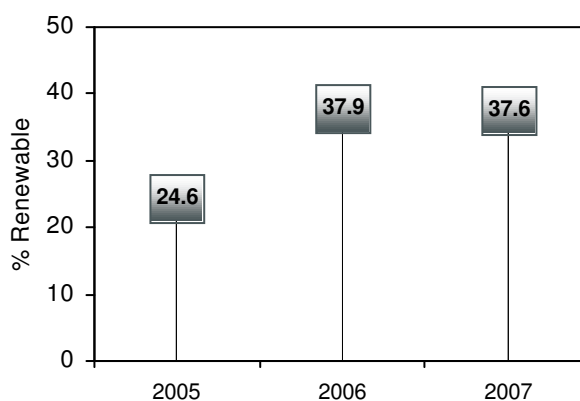
Renewable energy consumption (MJ) pa /  
Total energy consumption (MJ) pa



### Specified Indicators <sup>13</sup>

#### 2 Renewable Energy Production

Local renewable energy production (MJ) pa / Total  
energy consumption (MJ) pa



<sup>12</sup> Selected from a supplied list of Earthcheck indicators

<sup>13</sup> Indicators devised by the Community for local performance assessment

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

## CONCLUSION AND RECOMMENDATIONS

Congratulations, **Snaefellsnes** has passed the requirements to continue to be recognised as a Green Globe Benchmarked Community and retains the right to display the Green Globe Benchmarked logo.



In addition to having a Sustainability Policy in place, all fifteen assessed Earthcheck indicators are at or above the Baseline level. From the Benchmarking data provided, ten indicators, *Energy Consumption, Water Consumption, Waste Sent to Landfill, Greenhouse Gas (CO<sub>2</sub>) Production, Air Quality (SO<sub>2</sub>), Air Quality (PM10), Waterways Quality, Green Space, Waste Recycling, and Paper Products*, are at or above the Best Practice level, which is an achievement to be very highly commended.

In addition, the use of optional Community Selected and Community Specified Indicators further demonstrates a very positive commitment to protecting the community's environment.

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 **Snaefellsnes** has demonstrated to the environment, the assessors are confident that they can maintain or improve performance, where appropriate and practical, in all indicators. In line with Green Globe Policy this would enable Benchmarked status to be retained.

## APPENDIX

### WATERWAYS QUALITY

An initial value of '0' was submitted for *Waterways Quality*. This value was clarified by the benchmarking assessors, and a ratio of '1' (or 100%) was resubmitted using the online benchmarking software.

Therefore, the reported value for *Waterways Quality* is 100%.

### TRAVEL & TOURISM ACCREDITATION

An initial value of '0' was submitted for *Travel & Tourism Accreditation*. This value was clarified by the benchmarking assessors, and a ratio of '0.018' (or 1.8%) was resubmitted using the online benchmarking software.

Therefore, the reported value for *Travel & Tourism Accreditation* is 1.8%.

### WASTE SENT TO LANDFILL

The submitted value of 3 849.23 m<sup>3</sup> of waste has been converted into a weight by using the standard conversion of 300 kg/m<sup>3</sup> for uncompacted waste. (i.e., 3 849.23 m<sup>3</sup> x 300 kg/m<sup>3</sup> = 1 154 769 kg or 1 154.8 tonnes). (If the waste is compacted, then the standard conversion is 650 kg/m<sup>3</sup>).

This equates to 0.28 tonnes per Person Year.



**Benchmarks assessed by Earthcheck**



**Report endorsed by Green Globe**



This Report is recognised under the **PATA and Green Globe Co-operative Agreement** that provides PATA with a real impetus to advance the sustainability and goals of the Association.



Under an agreement with Green Globe Asia Pacific (GGAP), the Caribbean Alliance for Sustainable Tourism (CAST) supports the delivery and promotion of the Green Globe program in the Caribbean.

Green Globe is managed by EC3 Global, a wholly owned subsidiary of the Sustainable Tourism Cooperative Research Centre (STCRC), which is the largest sustainable tourism research organisation in the world. The CRC is an Australian Government Initiative.



**An Australian Government Initiative**

## SUMMARY OF SUPPLIED BENCHMARKING DATA

<b>Activity Measure(s)</b>						
Person Years	4,196	PY		<b>Waterways Quality</b>		
Total Community Area	146,700	ha			Indicator	
				Supplied	100	%
<b>Energy Consumption</b>				Baseline	80	%
	Indicator			Best Practice	100	%
Supplied	732,171	GJ		% difference	0	at BP
Calculated	174.5	GJ per PY				
Baseline	380	GJ per PY		<b>Habitat Conservation (Biodiversity)</b>		
Best Practice	266	GJ per PY			Indicator	
% difference	34	better than BP		Supplied	14	%
				Baseline	10	%
Renewable	66.1	%		Best Practice	15	%
				% difference	4	better than BL
<b>Water Consumption</b>						
	Indicator			<b>Green Space</b>		
Supplied	2,579,163	kL			Indicator	
Calculated	614.7	kL per PY		Supplied	99.0	%
Baseline	1200	kL per PY		Baseline	15	
Best Practice	840	kL per PY		Best Practice	19.5	
% difference	27	better than BP		% difference	79.5	better than BP
Recycled/captured	N/S	%		<b>Travel &amp; Tourism Accreditation</b>		
					Indicator	
<b>Waste Sent to Landfill</b>				Supplied	1.8	%
	Indicator			Baseline	5	%
Supplied	3,849.23	m <sup>3</sup>		Best Practice	6.5	%
Converted	1,154.8	t (uncompacted)		% difference	3.2	below BL
Calculated	0.275	t per PY				
Baseline	0.8	t per PY		<b>Lead Agency Performance:</b>		
Best Practice	0.56	t per PY				
% difference	51	better than BP		<b>Water Saving</b>		
					Checklist	
Recycled/reused	49.2	%		Supplied Rating	54.0	
				Baseline	50	
<b>Carbon Dioxide (CO<sub>2</sub>) Production</b>				Best Practice	75	
	Indicator			points difference	4.0	better than BL
Total CO <sub>2</sub>	17,187	t				
	4.10	t per PY		<b>Waste Recycling</b>		
Baseline	8.6	t per PY			Checklist	
Best Practice	6	t per PY		Supplied Rating	76.9	
% difference	32	better than BP		Baseline	50	
				Best Practice	75	
				points difference	1.9	better than BP

Air Quality - Nitrous Oxides (NOx) Produced			Paper Products		
	Indicator			Checklist	
Calculated	126,377	kg	Supplied Rating	76.9	
	0.92	kg per PY per ha	Baseline	50	
Baseline	0.93	kg per PY per ha	Best Practice	75	
Best Practice	0.65	kg per PY per ha	points difference	1.9	better than BP
% difference	1	better than BL			
Air Quality - Sulphur Dioxide (SO <sub>2</sub> ) Produced			Cleaning Products		
	Indicator			Checklist	
Calculated	9,808	kg	Supplied Rating	51.1	
	0.21	kg per PY per ha	Baseline	50	
Baseline	0.9	kg per PY per ha	Best Practice	75	
Best Practice	0.63	kg per PY per ha	points difference	1.1	better than BL
% difference	67	better than BP			
Air Quality - Particulate Matter (PM10) Produced			Pesticide Products		
	Indicator			Checklist	
Calculated	482,109	kg	Supplied Rating	50.0	
	0.024	kg per PY per ha	Baseline	50	
Baseline	0.1	kg per PY per ha	Best Practice	75	
Best Practice	0.07	kg per PY per ha	points difference	0	at BL
% difference	66	better than BP			

N/S - Not submitted.

## 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 solid waste production (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., litres (L)). These are 300 kg/m<sup>3</sup> for uncompacted waste or 650 kg/m<sup>3</sup> for lightly compacted waste.

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).