



COMMUNITY STANDARD

# BENCHMARKED ASSESSMENT REPORT

COMMUNITY BENCHMARKING

**Snaefellsnes  
Iceland**

**Report Date: 18 September 2007**  
**Benchmarked Certificate Expiry: 31 March 2008**

BENCHMARKING DATA COLLECTION PERIOD: 1 January 2006 – 31 December 2006


Assessment Conducted by Earthcheck

# Green Globe Benchmarking Results

## Snaefellsnes

### OVERVIEW

This annual assessment of **Snaefellsnes** was undertaken against **earthcheck™** benchmarking indicators developed for Green Globe.<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**.

		Indicator Measure (Benchmark)
1	Sustainability Policy <sup>A</sup>	Policy is produced and in place
2	Energy Consumption	Energy used (GJ / Person Year) <sup>B</sup>
		Renewable energy used (%) <sup>C</sup>
3	Water Consumption	Water used (kL / Person Year) <sup>B</sup>
		% of total water used is that is recycled/captured (%) <sup>C</sup>
4	Waste Sent to Landfill	Waste landfilled (t / Person Year) <sup>B</sup>
		% of total waste that is recycled/reused (%) <sup>C</sup>
5	Greenhouse Gas (CO <sub>2</sub> ) Production	Carbon Dioxide produced (t / Person Year) <sup>B</sup>
6	Air Quality	Nitrogen Oxides produced (kg / Hectare) <sup>D</sup>
7	Air Quality	Sulphur Dioxide produced (kg / Hectare) <sup>D</sup>
8	Air Quality	Particulate Matter produced (kg / Hectare) <sup>D</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>A</sup> Produced by the lead agency after consultation with the community and consensus.

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

<sup>D</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 (for further details, please refer to the Community Benchmarking Document).

<sup>1</sup> Please refer to the relevant Green Globe Sector Performance Guides for more details. For frequently asked questions (FAQs) about benchmarking or specific help, please also refer to [www.earthcheck.org](http://www.earthcheck.org)

## Green Globe Benchmarking Results Snaefellsnes



### Indicator Measure (Benchmark)

#### Lead Agency Performance

<b>13</b>	Water Saving	Water saving (Checklist Rating) <sup>E</sup>
<b>14</b>	Waste Recycling	Waste recycling (Checklist Rating) <sup>E</sup>
<b>15</b>	Paper Products	Paper product types used (Checklist Rating) <sup>E</sup>
<b>16</b>	Cleaning Products	Cleaning product types used (Checklist Rating) <sup>E</sup>
<b>17</b>	Pesticide Products	Pesticide product types used (Checklist Rating) <sup>E</sup>

<sup>E</sup> assessed for the lead agency only.

In addition to the list on the previous page, 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 recognized 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>2</sup>



The data for the listed **earthcheck**<sup>TM</sup> 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 independent assessment conducted by Earthcheck.

<sup>2</sup> To meet the requirements that allow the right to use the Green Globe Benchmarked logo, the benchmarks for all the **earthcheck**<sup>TM</sup> indicators should be at, or better than, the Baseline level. Baseline performance and Best Practice are set for Green Globe by Earthcheck with reference to appropriate national, regional and international data which take into account social, geographical and climatic impacts.

If a Community fails to meet the minimum requirements for up to two **earthcheck**<sup>TM</sup> indicators (Baseline or better performance), but achieves Baseline or better performance in all the other **earthcheck**<sup>TM</sup> Indicators, then the Community is allowed to use the Green Globe Benchmarked logo. It is, however, given a maximum of 12 months to improve performance. After 12 months, if the Community still does not achieve Baseline or better performance without substantiated evidence that the situation was beyond the control of the Community (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**<sup>TM</sup> indicators are continuously reviewed, along with the performance levels which Communities 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 the Baseline and Best Practice levels, which provide useful feedback to the Community. Advanced warning will be given of changes in any required benchmarking related requirements and data.

# Green Globe Benchmarking Results

## Snaefellsnes

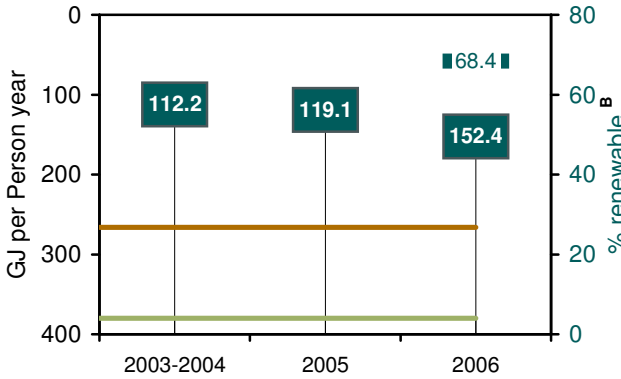


### COMMUNITY PERFORMANCE BENCHMARKS <sup>A</sup>

#### 1 Sustainability Policy ★

#### 2 Energy Consumption

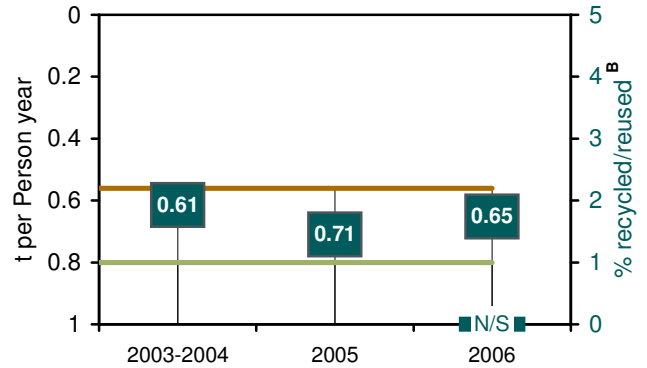
Energy consumed / Person year ★



Snaefellsnes consumed 152.4 GJ per Person Year for the year 2006 (01/01/2006 - 31/12/06), which was 42.7% better than the Best Practice level.

#### 4 Waste Sent to Landfill

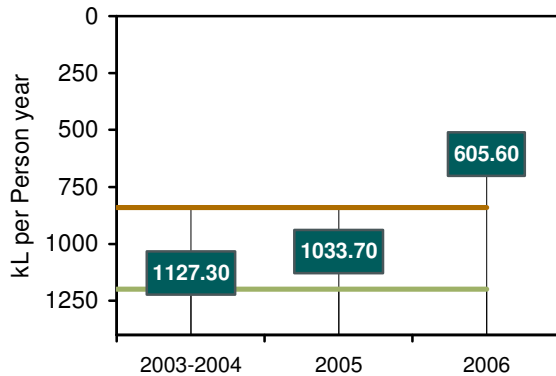
Waste landfilled / Person Year ✓



Snaefellsnes produced 0.65 t per Person Year for the year 2006 (01/01/2006 - 31/12/06), which was 18.6% better than the Baseline level.

#### 3 Water Consumption

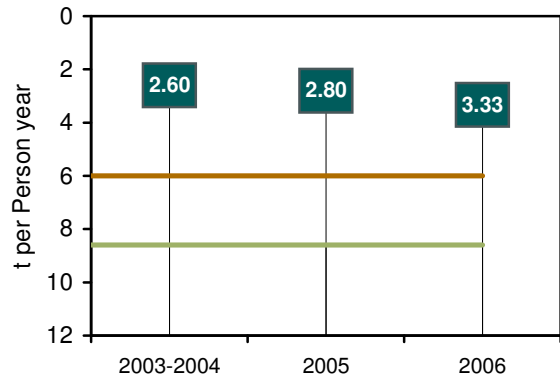
Water consumed / Person year ★



Snaefellsnes consumed 605.6 kL per Person Year for the year 2006 (01/01/2006 - 31/12/06), which was 27.9% better than the Best Practice level.

#### 5 Greenhouse Gas Production

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



Snaefellsnes produced 3.3 t per Person Year for the year 2006 (01/01/2006 - 31/12/06), which was 44.6% 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>A</sup> Each benchmark has been assessed on a per annum (12 months) basis

<sup>B</sup> These indicators are for guidance only and do not affect the overall benchmarking evaluation; N/S – Data not submitted

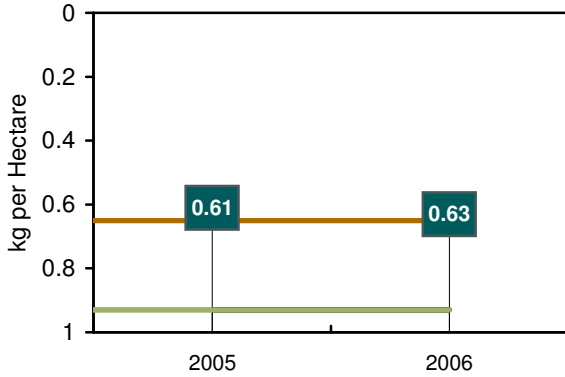
# Green Globe Benchmarking Results Snaefellsnes



## COMMUNITY PERFORMANCE BENCHMARKS <sup>A</sup>

### 6 Air Quality

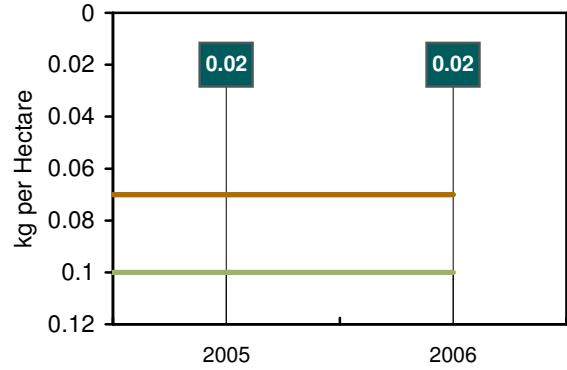
Nitrous oxides (NOx) produced / Hectare ✓ <sup>B</sup>



**Snaefellsnes** produced 0.6 kg per Hectare for the year 2006 (01/01/2006 - 31/12/06), which was 32.3% better than the Baseline level.

### 8 Air Quality

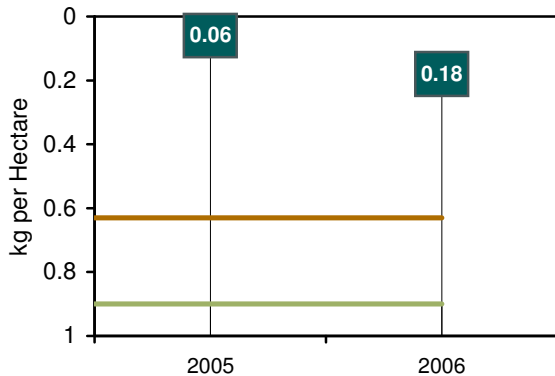
Particulate matter (PM10) produced / Hectare ★ <sup>B</sup>



The **Snaefellsnes** produced 0.02 kg per Hectare for the year 2006 (01/01/2006 - 31/12/06), which was 71.4% better than the Best Practice level.

### 7 Air Quality

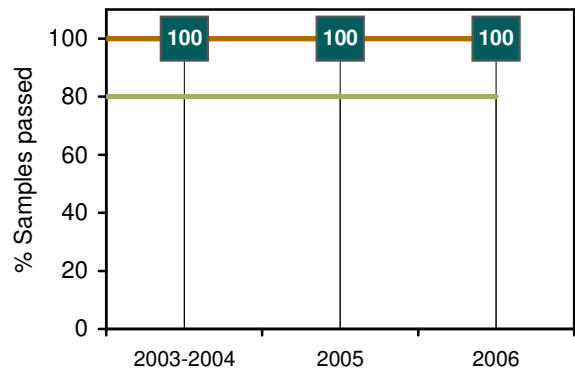
Sulphur dioxide (SO<sub>2</sub>) produced / Hectare ★ <sup>B, C</sup>



**Snaefellsnes** produced 0.18 kg per Hectare for the year 2006 (01/01/2006 - 31/12/06), which was 71.4% greater than the Best Practice level.

### 9 Waterways Quality

Water test passes / Water samples taken ★



Waterways Quality for the year 2006 (01/01/2006 - 31/12/06) was at the Best Practice level.

**Performance level:**

Baseline —

Best Practice —

**Current result:**

Below Baseline ✘

At or above Baseline ✓

At or above Best Practice ★

<sup>A</sup> Each benchmark has been assessed on a per annum (12 months) basis

<sup>B</sup> Community Air Quality figures are normalised by allowing for differences in population densities between the nation (upon which Baseline and Best Practice figures are based) and the Community.

<sup>C</sup> The rise in SO<sub>2</sub> reflects what appears to be a relative rise in the amount of diesel used and also an increase in fuel oil consumption.

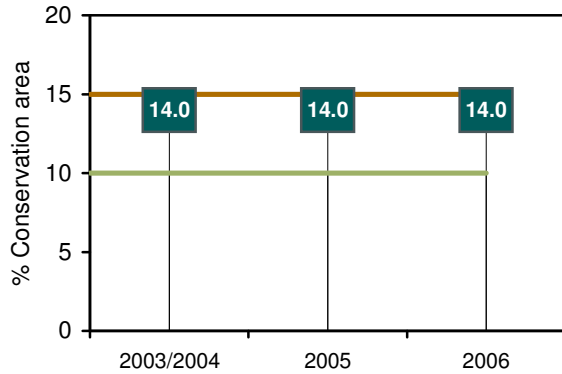
# Green Globe Benchmarking Results Snaefellsnes



## COMMUNITY PERFORMANCE BENCHMARKS <sup>A</sup>

### 10 Habitat Conservation (Biodiversity)

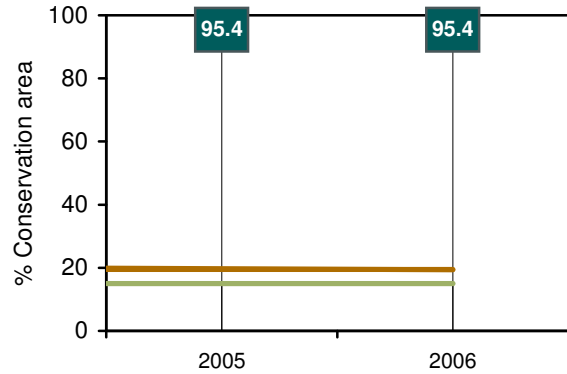
Habitat conservation area (ha) /  
Total Community area (ha) ✓



Habitat Conservation for the year 2006 (01/01/2006 - 31/12/06) was 4% better than the Baseline level.

### 11 Green Space

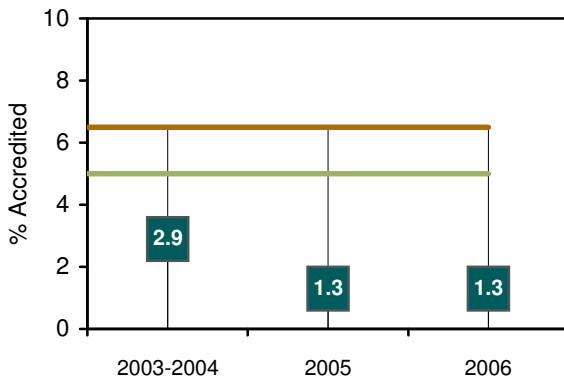
Green space area (ha) /  
Total Community area (ha) <sup>B</sup> ★



Green Space for the year 2006 (01/01/2006 - 31/12/06) was 75.9% better than the Best Practice level.

### 12 Travel & Tourism

Environmental performance accredited operations / Total travel & tourism operations



Travel & Tourism Accreditation for the year 2006 (01/01/2006 - 31/12/06) was 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 ★

<sup>A</sup> Each benchmark has been assessed on a per annum (12 months) basis

<sup>B</sup> In 2005 no data was submitted for Green Space, however, following the submission of data in 2006, the value for Green Space in 2005 has been altered to reflect the data submitted in 2006.

# Green Globe Benchmarking Results Snaefellsnes

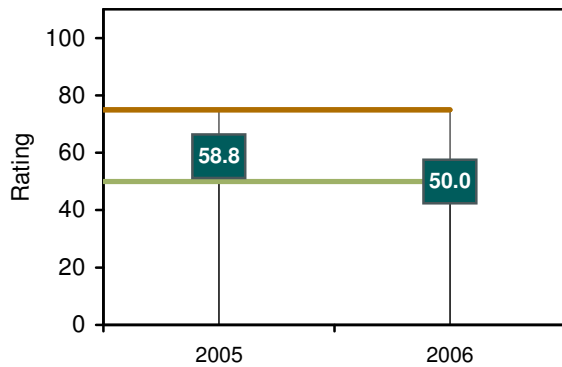


## COMMUNITY PERFORMANCE BENCHMARKS <sup>A</sup>

### Lead Agency Performance

#### 13 Water Saving

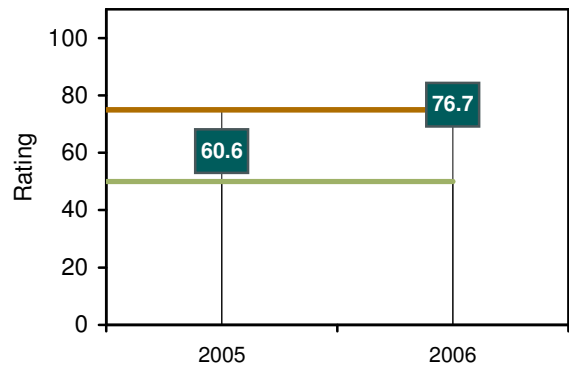
Checklist rating ✓ <sup>B</sup>



The Water Saving checklist rating for the year 2006 (01/01/2006 - 31/12/06) was at the Baseline level.

#### 15 Paper Products

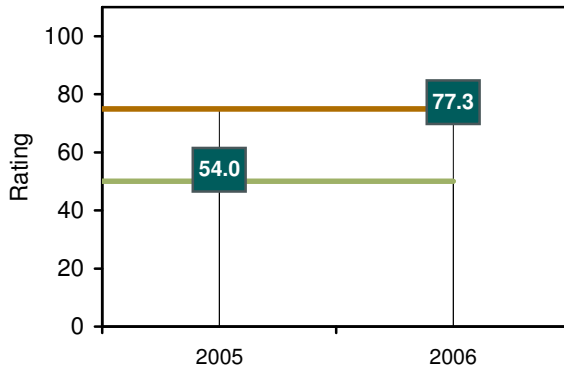
Checklist rating ★ <sup>B</sup>



The Paper Products checklist rating for the year 2006 (01/01/2006 - 31/12/06) was 1.7 points better than the Best Practice level.

#### 14 Waste Recycling

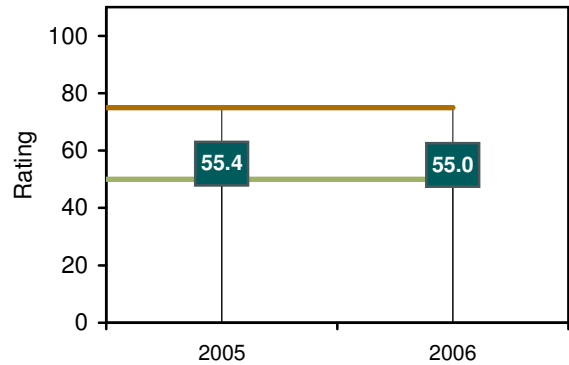
Checklist rating ★ <sup>B</sup>



The Waste Recycling checklist rating for the year 2006 (01/01/2006 - 31/12/06) was 2.3 points better than the Best Practice level.

#### 16 Cleaning Products

Checklist rating ✓ <sup>B</sup>



The Cleaning Products checklist rating for the year 2006 (01/01/2006 - 31/12/06) was 5 points better than the Baseline level.

**Performance level:**

Baseline —

Best Practice —

**Current result:**

Below Baseline ✘

At or above Baseline ✓

At or above Best Practice ★

<sup>A</sup> Each benchmark has been assessed on a per annum (12 months) basis

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

# Green Globe Benchmarking Results Snaefellsnes

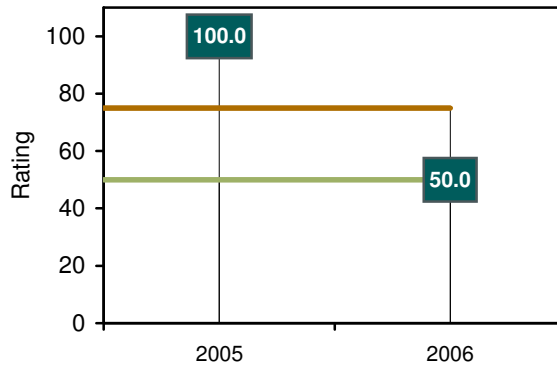


## COMMUNITY PERFORMANCE BENCHMARKS <sup>A</sup>

### Lead Agency Performance (continued)

#### 17 Pesticide Products

Checklist rating ✓ <sup>B, C</sup>



The Pesticide Products checklist rating for the year 2006 (01/01/2006 - 31/12/06) was at the Baseline level.

**Performance level:**

Baseline —

Best Practice —

**Current result:**

Below Baseline ✘

At or above Baseline ✓

At or above Best Practice ★

<sup>A</sup> Each benchmark has been assessed on a per annum (12 months) basis

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

<sup>C</sup> In 2005 there was no reported use of pesticide products in Snaefellsnes and therefore they were given a checklist rating of 100 for this indicator, on the basis that no use represents a Best Practice achievement.



# Green Globe Benchmarking Results

## Snaefellsnes

### OPTIONAL BENCHMARKING INDICATORS

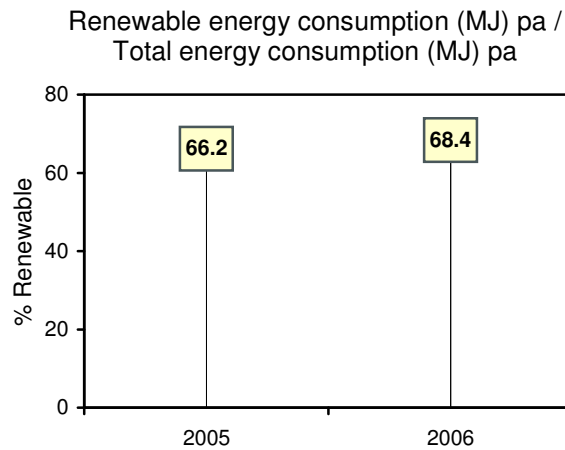
**Snaefellsnes** has also nominated optional Community Selected and Specified Indicators that they consider relevant to their specific locality. These indicators reflect a very positive and strong commitment that **Snaefellsnes** has to protecting the community's environment.

---

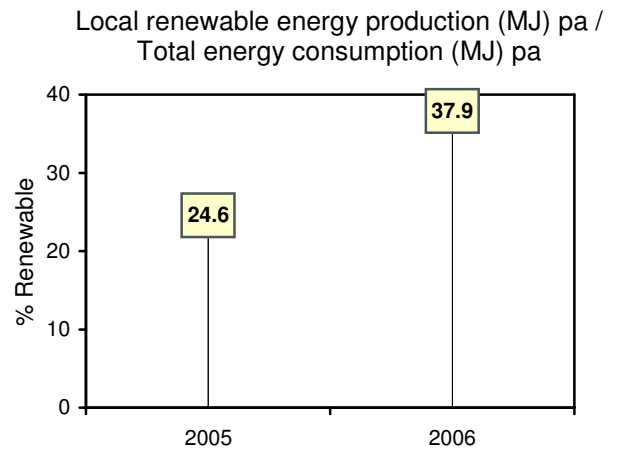
### COMMUNITY SELECTED INDICATORS <sup>A</sup>

---

#### 1 Renewable Energy Consumption <sup>B</sup>



#### 2 Renewable Energy Production



---

<sup>A</sup> Each benchmark has been assessed on a per annum (12 months) basis

<sup>B</sup> Selected by the Community from a supplied list of **earthcheck™** indicators

# Green Globe Benchmarking Results

## Snaefellsnes

### CONCLUSION AND RECOMMENDATIONS

Congratulations, **Snaefellsnes** has passed the requirements to continue being recognised as a Green Globe Benchmarked Community and retains the right to display the Green Globe Benchmarked logo until the certificate expiry date.



In addition to having a Sustainability Policy in place, all fifteen of the assessed **earthcheck**<sup>™</sup> indicators are above the Baseline level. From the benchmarking data provided, nine indicators, *Energy Consumption*, *Water Consumption*, *Greenhouse Gas Production*, *Air Quality (SO<sub>x</sub>)*, *Air Quality (PM10)*, *Waterways Quality*, *Paper Products*, *Waste Recycling* and *Green Space* are above the Best Practice level, which is an achievement to be very highly commended.

Additionally, the use of optional Operation Selected and Operation Specified Indicators further demonstrates a very positive commitment to protecting the environment whilst also contributing to the local economy.

Improvements in all the **earthcheck**<sup>™</sup> 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 particular over the next 12 months, Snaefellsnes is encouraged to strive towards *Travel & Tourism* being at Baseline performance or better. In line with Green Globe Policy this would enable Benchmarked status to be retained.

# Green Globe Benchmarking Results Snaefellsnes



**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 Asia Pacific (GGAP) is majority owned by the not-for-profit Sustainable Tourism Cooperative Research Centre (STCRC), which is the largest sustainable tourism research organisation in the world. The CRC is an Icelandic Government Initiative.



**An Australian Government Initiative**

# Green Globe Benchmarking Results

## Snaefellsnes

### Summary of Snaefellsnes Supplied Benchmarking Data

Activity Measure(s)		
Person Years	4,271	PY
Total Community Area	146,700	ha
Energy Consumption		
	Indicator	
Supplied	0	GJ
Calculated	0.0	GJ per PY
<i>Baseline</i>	380	<i>GJ per PY</i>
<i>Best Practice</i>	266	<i>GJ per PY</i>
<i>% difference</i>	100.00	better than BP
Renewable	68.38	%
Water Consumption		
	Indicator	
Supplied	2,585,893	kL
For Assessment	2,586,493	kL
Calculated	605.6	kL per PY
<i>Baseline</i>	1200	<i>kL per PY</i>
<i>Best Practice</i>	840	<i>kL per PY</i>
<i>% difference</i>	27.91	better than BP
Recycled/captured	N/S	%
Waste Sent to Landfill		
	Indicator	
Supplied	2,780.60	tonnes
Calculated	0.651	t per PY
<i>Baseline</i>	0.8	<i>t per PY</i>
<i>Best Practice</i>	0.56	<i>t per PY</i>
<i>% difference</i>	18.62	better than BL
Recycled/reused	N/S	%
Carbon Dioxide (CO <sub>2</sub> ) Production		
	Indicator	
Total CO <sub>2</sub>	0	t
	0.00	t per PY
<i>Baseline</i>	8.6	
<i>Best Practice</i>	6	
<i>% difference</i>	100.00	better than BP
Air Quality - Nitrous Oxides (NO <sub>x</sub> ) Produced		
	Indicator	
Supplied	see vehicle data	kg
	0.63	kg per ha
<i>Baseline</i>	0.93	<i>kg per ha</i>

Waterways Quality		
	Indicator	
Supplied	100	%
<i>Baseline</i>	80	%
<i>Best Practice</i>	100	%
<i>% difference</i>	0	at BP

Habitat Conservation (Biodiversity)		
	Indicator	
Supplied	14	%
<i>Baseline</i>	10	%
<i>Best Practice</i>	15	%
<i>% difference</i>	4	better than BL

Green Space		
	Indicator	
Supplied	95.4	%
<i>Baseline</i>	15	%
<i>Best Practice</i>	19.5	%
<i>% difference</i>	75.9	better than BP

Travel & Tourism Accreditation		
	Indicator	
Supplied	1.3	%
<i>Baseline</i>	5	%
<i>Best Practice</i>	6.5	%
<i>% difference</i>	3.7	below BL

### Lead Agency Performance:

Water Saving		
	Checklist	
Supplied Rating	50	
<i>Baseline</i>	50	
<i>Best Practice</i>	75	
<i>points difference</i>	0	at BL

Waste Recycling		
	Checklist	
Supplied Rating	77.3	
<i>Baseline</i>	50	
<i>Best Practice</i>	75	
<i>points difference</i>	2.3	better than BP

Paper Products		
	Checklist	
Supplied Rating	76.73	
<i>Baseline</i>	50	

## Green Globe Benchmarking Results

### Snaefellsnes

<i>Best Practice</i>	0.65	kg per ha
<i>% difference</i>	32.26	better than BL

<i>Best Practice</i>	75	
<i>points difference</i>	1.7	better than BP

#### Air Quality - Sulphur Dioxide (SOx) Produced

	Indicator	
Supplied	see vehicle data	kg
	0.18	kg per ha
<i>Baseline</i>	0.9	kg per ha
<i>Best Practice</i>	0.63	kg per ha
<i>% difference</i>	71.43	better than BP

#### Cleaning Products

	Checklist	
Supplied Rating	54.96	
<i>Baseline</i>	50	
<i>Best Practice</i>	75	
<i>points difference</i>	5.0	better than BL

#### Air Quality - Particulate Matter (PM10) Produced

	Indicator	
Supplied	see vehicle data	kg
	0.02	kg per ha
<i>Baseline</i>	0.1	kg per ha
<i>Best Practice</i>	0.07	kg per ha
<i>% difference</i>	71.43	better than BP

#### Pesticide Products

	Checklist	
Supplied Rating	50	
<i>Baseline</i>	50	
<i>Best Practice</i>	75	
<i>points difference</i>	0	at BL

N/S = not submitted.

# Green Globe Benchmarking Results

## Snaefellsnes

### 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**<sup>™</sup> 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**<sup>™</sup> 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).