

## 2009 Consolidated Nestlé Environmental Performance Indicators

Indicator	Units	2000 Reference Year	2005	2006	2007	2008	2009	% Change 2008-2009	% Change 2005-2009	% Change 2000-2009	GRI reference
Production tonnage	10 <sup>6</sup> tonnes product per year	25.31	36.36	38.24	41.07	41.06	41.17	0.3%	13.2%	62.7%	*
<b>Inputs</b>											
Raw materials	10 <sup>6</sup> tonnes	N/A	19.83	20.28	20.48	21.43	21.18	-1.2%	6.8%	-	EN1
Total water withdrawal	10 <sup>6</sup> m <sup>3</sup> per year	213	159	155	157	147	143	-3.2%	-10.2%	-33.0%	EN8
	m <sup>3</sup> per tonne product	8.42	4.37	4.05	3.82	3.59	3.47	-3.5%	-20.7%	-58.8%	*
Total on-site energy consumption	10 <sup>15</sup> Joules (PJ) per year	91.1	88.0	84.4	85.3	86.9	85.2	-2.0%	-3.2%	-6.5%	*
	10 <sup>9</sup> Joules (GJ) per tonne product	3.60	2.42	2.21	2.08	2.12	2.07	-2.3%	-14.5%	-42.5%	*
Direct energy consumption	10 <sup>15</sup> Joules (PJ) per year	N/A	N/A	N/A	N/A	N/A	61.00	-	-	-	*
Non-renewable direct energy consumption	10 <sup>15</sup> Joules (PJ) per year	N/A	N/A	N/A	N/A	N/A	54.50	-	-	-	EN3
Renewable direct energy consumption	10 <sup>15</sup> Joules (PJ) per year	N/A	N/A	N/A	N/A	N/A	6.50	-	-	-	EN3
Intermediate energy consumption	10 <sup>15</sup> Joules (PJ) per year	N/A	N/A	N/A	N/A	N/A	24.20	-	-	-	EN4
Indirect primary energy consumption	10 <sup>15</sup> Joules (PJ) per year	N/A	N/A	N/A	63.70	65.29	65.09	-0.3%	-	-	EN4
<b>Outputs</b>											
Total water discharge	10 <sup>6</sup> m <sup>3</sup> per year	158	123	118	101	96	91	-5.0%	-25.6%	-42.2%	EN21
	m <sup>3</sup> per tonne product	6.24	3.38	3.09	2.46	2.34	2.22	-5.3%	-34.3%	-64.5%	*
Water discharge quality	10 <sup>3</sup> tonnes COD per year	N/A	N/A	N/A	N/A	9.17	8.29	-9.6%	-	-	EN21
	Average mg COD / l	N/A	N/A	N/A	N/A	95	90.78	-4.4%	-	-	*
	% of COD removed	N/A	N/A	N/A	N/A	96%	97%	1.0%	-	-	*
Greenhouse gases emission (direct), scope 1	10 <sup>6</sup> tonnes CO <sub>2</sub> per year	4.72	4.31	4.05	4.13	4.10	3.98	-3.1%	-7.6%	-15.8%	EN16
	kg CO <sub>2</sub> per tonne product	186	118	106	101	100	97	-3.4%	-18.4%	-48.2%	*
Greenhouse gases emission (indirect), scope 2	10 <sup>6</sup> tonnes CO <sub>2</sub> per year	N/A	N/A	N/A	3.1	3.0	3.0	-0.1%	-	-	EN16
	kg CO <sub>2</sub> per tonne product	N/A	N/A	N/A	75	73	73	-0.4%	-	-	*
Air acidification potential	10 <sup>3</sup> tonnes SO <sub>2</sub> equivalents per year	28.2	18.4	19.0	21.4	18.11	16.64	-8.1%	-9.7%	-41.0%	EN20
	kg SO <sub>2</sub> equiv. per tonne product	1.11	0.51	0.50	0.52	0.44	0.40	-8.4%	-20.3%	-63.7%	*
Emissions of ozone-depleting substances	tonnes R-11 equivalents per year	29.69	10.19	8.93	8.82	5.02	4.85	-3.2%	-52.4%	-83.7%	EN19
	g R-11 equiv. per tonne product	1.17	0.28	0.23	0.21	0.12	0.12	-3.5%	-58.0%	-90.0%	*
By-products (for recovery)	10 <sup>6</sup> tonnes per year	1.28	1.48	1.20	1.07	1.11	1.35	22.0%	-8.7%	5.5%	EN22
	kg per tonne product	50.57	40.7	31.4	26.0	26.95	32.79	21.7%	-19.4%	-35.2%	*
Waste (for disposal)	10 <sup>6</sup> tonnes per year	0.48	0.44	0.40	0.37	0.41	0.36	-12.4%	-17.8%	-25.2%	EN22
	kg per tonne product	18.96	12.0	10.5	9.1	9.98	8.72	-12.7%	-27.4%	-54.0%	*

\* Nestlé specific indicators that are not required by GRI.

# Definitions and Comments on 2009 Consolidated Nestlé Environmental Performance Indicators

## General Comments

This report covers 452 manufacturing sites. It includes data from factories closed or sold during 2009 while they still belonged to Nestlé. It excludes Alcon factories.

Data is presented for the current reporting year and 4 previous years, as well as for 2000 so as to provide both 5 and 10 year periods in order to highlight trends.

In 2009, we include for the first time the following KPIs:

- Raw materials
- Direct energy consumption
- Non-renewable direct energy consumption
- Renewable direct energy consumption
- Intermediate energy consumption

*References in brackets refer to the Global Reporting Initiative Sustainability Reporting Guidelines Version 3.0.*

## Raw materials (EN1)

The total of all input resources (i.e. natural resources used for conversion to products or services such as milk, plants, crops, etc.) used to manufacture a product, including manufacturing losses, but excluding packaging material and water consumption, which are separate indicators.

## Total water withdrawal (EN8)

The sum of water used by Nestlé factories from all sources, including purchases from suppliers as well as surface, ground and rain water sources. This includes water that may be treated through industrial services (such as softening and demineralising), non-contact cooling water, water used for cleaning and water used by itself as a raw material (e.g. for bottled waters) but does not include water contained in raw materials (e.g. from milk).

Over the last ten years, both absolute total water withdrawal and water withdrawal rate per tonne of product decreased.

This decrease is the result of extensive efforts by Nestlé engineers and environmental professionals to improve water efficiency in our operations. It is also influenced by changes in the relative tonnage of each product category (volume change) and acquisitions and divestitures. The following chart shows the contribution of these three components.

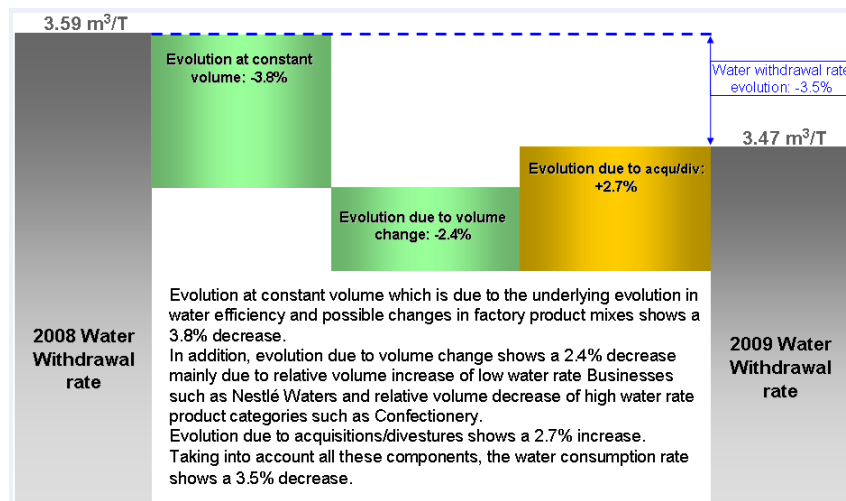


Chart 1: Components of Nestlé water withdrawal rate evolution

## Total on-site energy consumption

The sum of all energy consumed on Nestlé factory sites, whether purchased or produced – less any energy that, in some cases, is sold. This includes direct energy consumption (EN3) and intermediate energy consumption (part of EN4).

12.2% of total on-site energy is derived from renewable sources. This is composed of 10.6% renewable sources used in our factories (see EN3) and 16.1% which mainly represent the proportion of renewable sources supplied by our electricity providers.

Over the last ten years, both absolute total energy consumption and energy consumption rate per tonne of product decreased.

Since 2009, we also track the on-site energy consumption of our GLOBE Data Centers, which amounted to 0.38 PJ, equivalent to two average manufacturing sites.

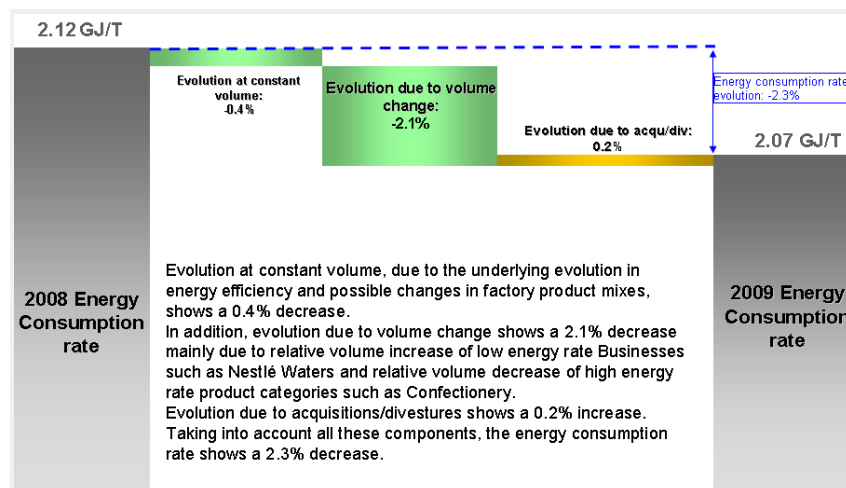


Chart 2: Components of Nestlé energy consumption rate evolution

### Direct energy consumption (EN3)

The sum of all energy generated and consumed by Nestlé factories. It is composed of **Non-renewable energy consumption** where the energy is produced from fossil fuels (oil, natural gas, etc) and **Renewable energy consumption** where the energy is produced from biomass (e.g. coffee grounds, wood, etc). Renewable energy represents 10.6% of direct energy consumption. This information also enables calculations of direct greenhouse gas emissions.

### Intermediate energy consumption (EN4)

The sum of all energy consumed by Nestlé factories purchased from a third party. This includes mainly electricity and minor amounts of steam and hot water.

### Indirect primary energy consumption (EN4)

This indicator represents the energy required to produce and deliver purchased electricity and any other intermediate energy products (such as district heat) that involve significant energy consumption upstream from our reporting boundary. This information also enables calculations of indirect greenhouse gas emissions. Typically a default factor is used based on data from the energy supplier or country default values.

### Total water discharge (EN21)

The sum of all water effluents discharged from Nestlé factories. Water effluents are generated in manufacturing from processing, cleaning and some cooling processes.

Over the last ten years absolute total water discharge decreased by 42.2% as well as the total water discharge per tonne of product, which decreased over this time period by 64.5%.

### Water discharge quality (EN21)

The water quality is expressed by the Chemical Oxygen Demand (COD), commonly used to measure the amount of organic compounds in water. **A decrease in COD represents improvement of water quality.**

### Greenhouse gas emission (direct) (EN16)

The sum of all on-site greenhouse gas emissions at Nestlé factories which arise from combustion processes used to manufacture products as well as the CO<sub>2</sub> equivalents from refrigerants. These greenhouse gas emissions can result from burning of fuels in boilers, roasters, dryers, electric generators and from refrigerants losses (CO<sub>2</sub> eq). Not included are greenhouse gases arising from transportation and business travel. This indicator corresponds to Scope 1 of the WRI/WBCSD GHG Protocol.

Over the last ten years absolute greenhouse gas emission (direct) decreased by 15.8%.The greenhouse gas emission (direct) rate per tonne of product also decreased by 48.2%.These reductions have been achieved through energy savings and fuel-switching projects where fuels such as coal and heavy fuel oil were replaced by cleaner-burning fuels such as natural gas.

### Greenhouse gas emission (indirect) (EN16)

These are greenhouse gas emissions arising from the generation of electricity, hot water and steam which is purchased by Nestlé or otherwise brought into our organizational boundary. The emissions physically occur at the facility where the electricity is generated. Typically publicly available country-specific default factors are used to calculate this from the purchased energy qualities. This indicator corresponds to Scope 2 of the WRI/WBCSD GHG Protocol.

## **Air acidification potential (EN20)**

The sum of all SO<sub>x</sub> and NO<sub>x</sub> gas emissions at Nestlé factories resulting from the total on site energy consumption, converted into SO<sub>x</sub> equivalents.

Over the last ten years absolute air acidification potential decreased as well as the air acidification potential rate per tonne of product, also decreased over this time period. These reductions have been achieved through energy savings and fuel-switching projects where fuels such as coal and heavy fuel oil were replaced by cleaner-burning fuels such as natural gas.

## **Emissions of ozone-depleting substances (EN19)**

The sum of substances emitted from Nestlé factories which have been shown to contribute to the depletion of the ozone layer, that is, having an ozone depletion potential. The common unit of measurement is R-11 equivalents. R-11 is one type of refrigerant, which has been assigned an ozone depleting potential of one, with all other ozone depleting substances being assigned relative values. The ozone depletion potential of each substance is determined using conversion factors commonly agreed by relevant authorities. These substances are primarily refrigerants in equipment used to cool or freeze products.

Both absolute ozone depletion potential and ozone depletion potential rate per tonne of product decreased over the last ten years.

## **By-product (for recovery ) (EN22)**

Any materials that are generated during the manufacture of a product that leave the factory and is destined for reuse or recovery, including recycling, composting and incineration with heat recovery. They are not limited just to the product manufactured; they include all materials used to support the manufacture.

In 2009, the by-products figure increased due partly to the newly acquired Nestlé Nutrition factory which generated approximately 5% of the total Nestlé by-products.

## **Waste (for disposal) (EN22)**

Waste is any material, which arises during the manufacture or distribution stage of a product at a factory site that is destined for final disposal to off site landfill or to incineration without heat recovery. Not included are extraordinary wastes generated on a non-routine basis, such as construction and demolition waste, contaminated soils, etc.

Over the last ten years absolute waste quantity decreased by 25.2%.The waste rate per tonne of product also decreased over this time period by 54%.