

# Definitions and Comments on 2013 Consolidated Nestlé Environmental Performance Indicators

## General Comments

Environmental performance indicators cover all Nestlé factories excepted some of the factories acquired after 2011 and non-consumer Nestlé Waters Business factories. It includes data from factories closed or sold during 2013. Data is presented for the years 2013, 2012 and 2009 as well as for 2003.

*References in brackets refer to the Global Reporting Initiative Sustainability Reporting Guidelines Version 3.1 including the Food Processing Sector Supplement.*

## Total Production Volume

The total of all products produced at a factory, based on net weight (i.e. without packaging). Since 2003, the production volume has increased by more than 56% from 33.4 million tonnes to 52.1 million tonnes.

Non consumer Nestlé Waters Business factories produced an additional volume of 6.8 million tonnes in 2013.

## Aspect: MATERIALS

### Raw materials used (EN1)

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

Raw materials used increased slower than production volume. Influencing factors are an increased manufacturing efficiency and changes in product mix.

### Materials for packaging purposes (EN1)

The total of all packaging materials used for the production and in the distribution of products. The indicator includes all packaging with recycled content, bottles, cans, big bags, cartons, etc., and includes reusable packaging.

### Packaging source optimization

The data is extracted from a dedicated packaging tracking tool developed by our packaging department.

## Renewable packaging materials (EN1)

The data is extracted from a dedicated packaging tracking tool developed by our packaging department.

## Total percentage of recycled material in our packaging (EN2)

The data is extracted from a dedicated packaging tracking tool developed by our packaging department.

## Aspect: ENERGY

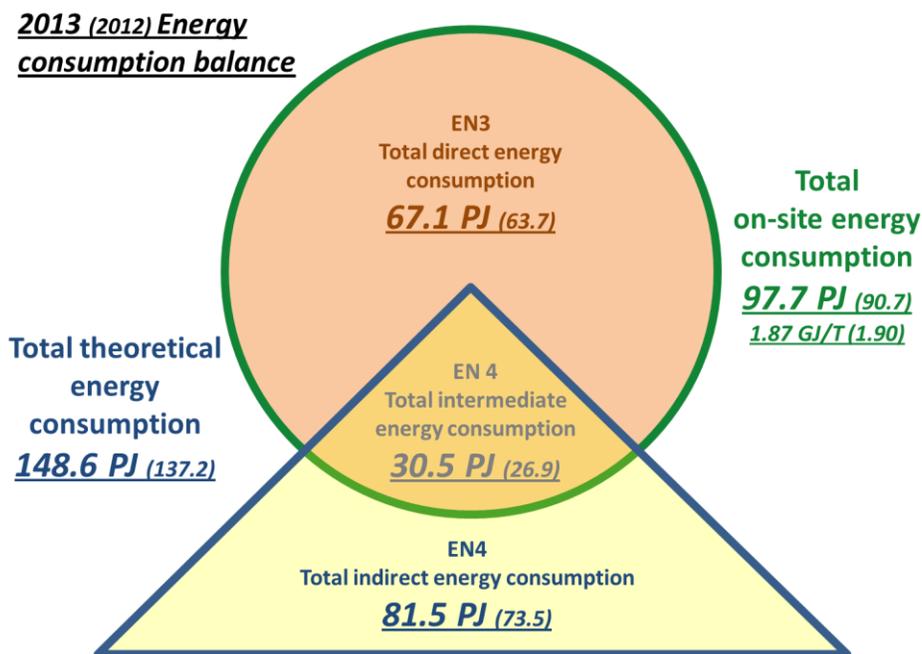


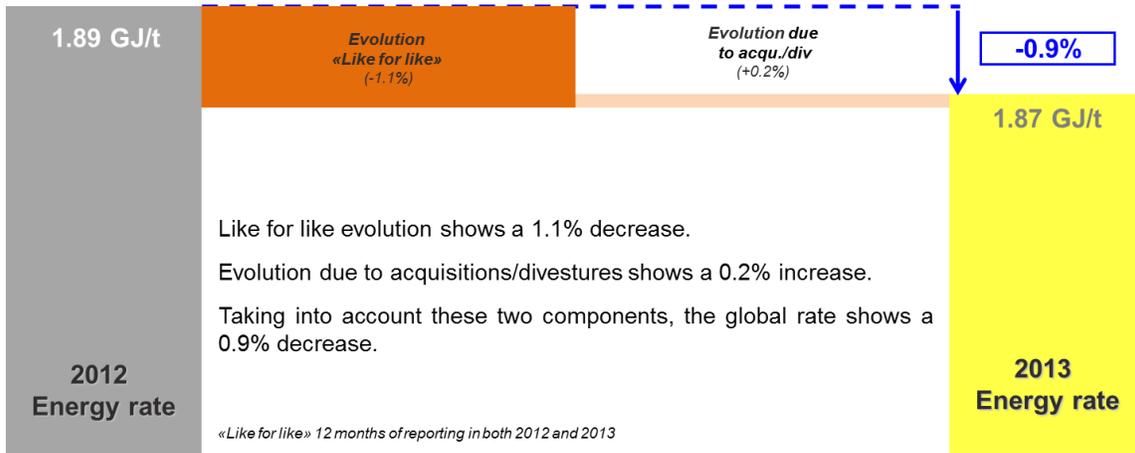
Chart 1: 2013 Energy consumption balance

## Total on-site energy consumption

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

Since 2003 total on-site energy consumption has increased by 3.5% whilst the total production volume increased by more than 56% over the same period of time, which resulted in a decrease of almost 35% of the total energy consumption rate per tonne of product. This is the result of efforts by Nestlé engineers and environmental sustainability managers working together to reduce and recover energy. The energy consumption rate has been also slightly influenced by acquisitions and divestitures.

## 1.1% improvement of Nestlé Group Energy Consumption rate compared to 2012 like for like



Renewable energy accounts for 13.3% of the total energy consumption of Nestlé factories. Spent coffee ground represents 27% of it, wood contributes for an additional 28%, and the remaining 45% correspond to the purchase of electrical energy generated from renewable sources. We purchase an estimated 21% of our electricity from renewable sources (based on national average or more detailed supplier data).

### Total direct energy consumption (EN3)

The sum of all energy generated and consumed by Nestlé factories. It is composed of direct non-renewable energy consumption where the energy is produced from fossil fuels (coal, natural gas and oil) and direct renewable energy consumption where the energy is produced from biomass (e.g. spent coffee grounds, wood). Direct renewable energy represents 10.8% of the total direct energy consumption. This information is used to calculate direct greenhouse gas emissions.

### Total intermediate energy consumption

The sum of all energy consumed by Nestlé factories and purchased from a third party. This includes mainly electricity purchased, from renewable sources (18.8%) and non-renewable sources (71.1%) (based on national averages or more detailed supplier data), steam (9.7%) and minor amounts of heating (0.4%).

### Total indirect energy consumption (EN4)

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 boundaries. Data from the energy supplier or country default values are used to calculate this indicator.

## Aspect: WATER

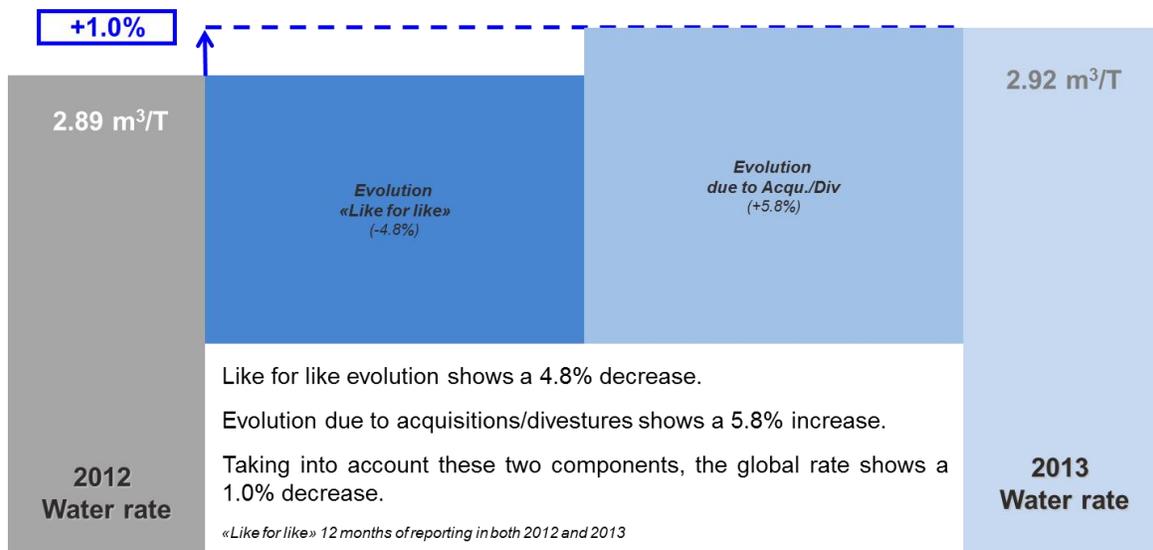
### Total water withdrawal by source (EN8)

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).

Since 2003, both absolute total water withdrawal and water withdrawal rate per tonne of product decreased significantly by 21% and 50% respectively.

This is the result of extensive efforts by Nestlé engineers and environmental sustainability managers to improve water efficiency in our operations. Acquisitions and divestitures have influenced significantly this rate as shown in the chart below:

### 4.8% improvement of Nestlé Group Water Withdrawal rate compared to 2012 like for like



Reporting the total volume of water withdrawn by source contributes to an understanding of the overall scale of potential impacts and risks associated with the reporting organization's water use. The total water withdrawal comes from various sources:

- Surface water: is described as water present on the earth's surface: streams, lakes, and ponds. Includes water from shallow bores that are fed from streams, lakes, and ponds.
- Ground water: is described as water within the earth that supplies wells and springs; water in the zone of saturation where all openings in rocks and soil are filled, the upper surface of which forms the water table. It is normally recovered using deep bore pumps.
- Municipal water: is described as treated potable water normally provided by third parties such as municipalities, councils, water authorities, etc.
- Rain water: can be untreated and used for irrigation, road cleaning etc., or can be treated and used in production. It represents a minor amount (<0.05%).

## Once through cooling water from surface sources

Cooling water usage is the water used solely for once-through cooling purposes. The water source (e.g. rivers, lakes, etc.) passes through the cooling process (spray condensers, shell and tube heat exchangers, etc.) and then returns to the environment (lakes and rivers) without any significant quality alteration. It represents 5.3% of our total water withdrawal.

## Water recycled and reused

The volume of recycled/reused water is mainly based on the water discharged to irrigation (including on site). This quantity represents 4.4% of the total water withdrawal.

## Aspect: BIODIVERSITY

### Total size of manufacturing sites located in protected areas (EN11)

A detailed assessment of all of Nestlé's production sites performed in collaboration with UNEP-WCMC allowed us to identify 10 factories located in protected areas.

## Aspect: EMISSIONS, EFFLUENTS and WASTE

### Direct greenhouse gas emission (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 losses. These greenhouse gas emissions can result from burning of fuels in boilers, roasters, dryers, from 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.

Since 2003, direct greenhouse gas emission decreased by 16%. The direct greenhouse gas emission rate per tonne of product also decreased by 46%. 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 and renewable fuels such as wood from sustainably managed forests.

Despite a significant increase in our use of renewable fuels (+22% from 2012 to 2013), direct greenhouse gas emissions increased by 7.5% from 2012, whereas the direct greenhouse gas emission rate per tonne of product decreased by 1.6%. This is mainly due to our growth in China where coal is commonly used.

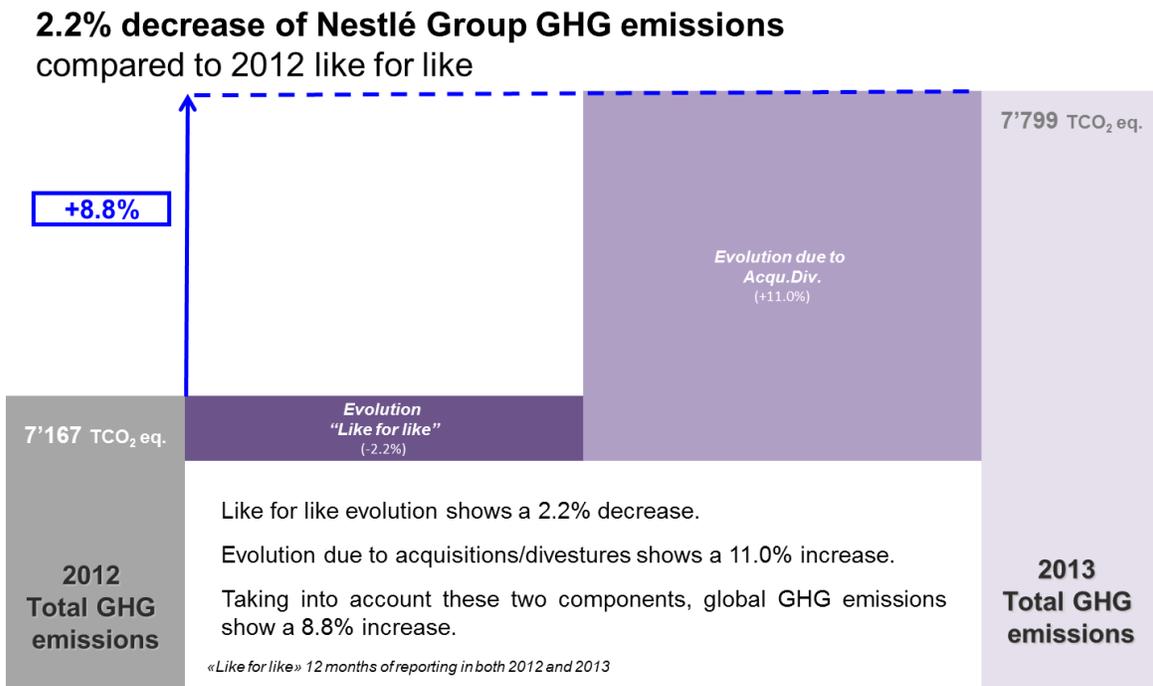
### Indirect greenhouse gas emission (EN16)

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

Despite a significant increase in our use of renewable electricity (+11% from 2012 to 2013) indirect greenhouse gas emissions increased by 12.5% from 2012, whereas the indirect greenhouse gas emission rate per tonne of product increased by 3%. This is mainly due to our growth in China where coal is commonly used to produce electricity..

## Direct and indirect greenhouse gas emission (EN16)

The sum of scope 1 and scope 2 greenhouse gas emissions increased by 8.8% from 2012. As explained earlier, this increase is mainly due to our growth in China. At comparable scope (“like for like”), Nestlé reduced its greenhouse gas emissions by 2.2% from 2012:



## 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 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 significantly decreased since 2003, by 89% and 93% respectively.

## Air acidifying substances (EN20)

Air acidification resulting from NOx gas emissions account for 27% of the total air acidification potential whereas the remaining 73% are related to SOx gas emissions.

In 2013 the absolute air acidifying substances emission increased by 52% whereas the rate per tonne of product increased by 39%. This is mainly due to our growth in China where coal, a fuel with high sulphur content, is commonly used in the industry. Nestlé is committed to continuously improve its environmental performance; in that context, improving energy efficiency, increasing the share of cleaner fuel and renewable energy in our mix will in turn reduce air acidifying substances emissions.

## 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 and are discharged to subsurface waters, surface waters, sewers that lead to rivers, oceans, lakes, wetlands, treatment facilities and ground water.

Since 2003 absolute total water discharge decreased by 38% as well as the total water discharge per tonne of product, which decreased over this time period by 60%.

## Average quality of water discharge (EN21)

The water quality is expressed by the quantity of Chemical Oxygen Demand (COD) per volume of water, commonly used to measure the amount of organic compounds in water. A decrease in COD represents improvement of water quality. Compared to the previous period the quality of water discharged improved by 19%.

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

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

In 2013, the quantity of by-products increased by 6.4% due to improvements in the recycling and recovery processes as well as an increased production volume. The amount of by-products per tonne of product decreased by 2.6%.

## Waste for disposal (EN22)

Any materials arising during the manufacture or distribution stage of a product at a factory that are destined for final disposal to offsite 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.

Since 2003 absolute waste for disposal quantity decreased by 28 %. The waste rate per tonne of product also decreased over this time period by almost 55%. Compared to 2012 the amount of waste for disposal decreased by 18%. Hazardous waste represents only 1.2% of waste for disposal. In 2013, 61 of our factories generated zero waste for disposal.

## Significant spills (EN23)

Significant spills are defined as any spills that are included in our financial statement. Nestlé did not have any significant spills in 2013.

## **Aspect: COMPLIANCE**

### **Total monetary value of fines (EN28)**

The total amount of environmental fines or penalties for breaches of environmental legislation and/or operating permits. It excludes all legal costs.

In 2013 the total amount of environmental fines summed up to 110 kCHF, corresponding to the regularization of outstanding environmental contribution payments.

## **Aspect: ENVIRONMENTAL SUSTAINABILITY GOVERNANCE**

### **ISO 14001 certified sites**

By the end of 2013 a total of sites achieved ISO 14.001:2004 certification, including 446 factories, 130 distribution centers and 25 R&D locations. The number of factories mainly represents sites that are part of the Nestlé Group for more than three years. Factories that are not certified are mainly recent acquisitions which are currently working towards certification.