

Natura Brazil, a Life Cycle Management experience in the cosmetic industry

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Abstract Since it was established in 1969, Natura Cosméticos –a leading cosmetic company in Latin America – has had a strong commitment to Sustainability, to the creation of value in the entire supply chain, and to the balance of economic, social, and environmental impacts. In line with these commitments, the company has launched initiatives to minimize its environmental impacts, such as the iconic example of refill packs, which have been available since the early 1980s. Concurrently, since 2001 several environmental indicators and associated management systems have been implemented in three waves. The first model was a simplified Life Cycle Assessment for packaging; the calculated aggregated value, in “millipoints” per kilo of content, characterized the relative environmental impact of packaging of each product, and helped initiate Ecodesign practices in the Development process. In addition, this indicator allowed for the calculation of an average value for all packaging of Natura’s products, considering the mass of sold products each month and year. The second model launched in 2007, referred to as the Environmental Table, is included on the labels of all products and is specified on the company’s website. It is comprised of 6 indicators that describe the product content (specifying the source of the raw materials) and the packaging (% of recycled material, % of recyclable material and number of recommended refills). Its objective was to raise consumer awareness in relation to the environment. In addition, it increased the number of Indicators available for Sustainability Management purposes, by calculating the average value of these 6 parameters for all sold products. The third model, which is related to Greenhouse Gas (GHG) Emissions, was initially created in 2007 as the basis for the Carbon Neutral Program. Natura’s externally verified Scope 3 Inventory counts the GHG Emissions of the entire supply chain, starting from the extraction of raw materials up to the disposal of products. This model was recently updated to include two additional levels: classification of the inventory per macro process and the carbon footprint of all products sold by the company. This system of indicators provides an even more effective support to the Carbon Reduction Program, which includes an ambitious 33% corporate reduction target (calculated in carbon intensity). Other relevant environmental and social indicators are still being studied, to try and bring more LCA knowledge into business applications, with the ultimate objective of making Natura’s products and activities even more sustainable.

1 Introduction

Since it was established in 1969, Natura - the biggest Brazilian manufacturer of cosmetics, fragrances and personal care products - has been guided by values and beliefs in which sustainability and relationship quality play a major role. This is why we seek to maintain a business attitude focused on the creation of sustainable value, to balance economic, social and environmental impacts. These values and beliefs permeate the entire value chain of our operations, from the extraction of raw materials to the final disposal of products and packaging.

In line with this commitment, we have consistently adopted management initiatives and principles throughout all these years. These initiatives and principles are divided into three main categories. Their objective is to reduce our environmental impacts, in synergy with the sustainable use of biodiversity as the source of the leading innovations of our products.

This article describes the environmental evaluation models developed by the company and their application for the purpose of Sustainability Management at Natura.

2 Life Cycle Assessment of Packaging: a visionary model

In addition to industrial eco-efficiency in relation to energy, water, and waste disposal at our main facility located in Cajamar, the on-going progress of which has been reported in our Annual Report, Natura has pioneered environmental awareness in relation to its products by introducing package refills, a practice which it implemented in 1983.

Packaging eco-design practices have gained momentum since 2001, through the creation of a simplified Life Cycle Assessment of the packages (using a Swiss data base and the Eco-indicator 99 model): the aggregated score (in “millipoints” or mPts per kilo of content) was established as the internal indicator of the environmental footprint, and guides the choices of all Product Development projects [1].

As of 2004, this indicator has been Natura’s first environmental performance indicator. The indicator is measured by calculating the weighted average, considering the mass of all the products sold each month. Such follow-up is still in effect, attesting to the corporate progress, as attested to by the reduction of the average impact reflected by the aggregated score (in mPts per kilo of product sold). The index, which was first used in the Internal Management indicators

(Balance Score Card), was included in the managers' bonus target and was reported in Natura's Annual Report.

Soon thereafter, this principle was replicated and expanded, through the introduction of new indicators, as described in the paragraphs below.

This simplified LCA model was updated in 2010, on the basis of more recent data, to represent inputs as according to the Ecoinvent 2.0. We also adopted ReCiPe Impact Assessment method, available from PRÉ Consultant in 2010 [2].

3 The Environmental Table, a pioneering self-declaration

In 2007, Natura launched the Environmental Table, an information chart printed on product packages and accessible on the Internet. The Table lists six quantitative indicators that specify environmental characteristics of the composition and the source of the raw materials and packaging materials, as follows: % of raw materials from renewable plant sources, % of natural plants and % with certificate of origin; % of recycled material, % of recyclable material and recommended number of refills.

This Type II Self-Declaration model attests to our commitment to transparency and seeks to raise the awareness of our target audiences - such as Sales Consultants and Consumers - on the environmental friendliness of the products and on the importance of consumers' shopping decisions. The other objective of this model is to specify the gains resulting from Natura's technological environment-friendly initiatives.

The table of environmental indicators was extended to internal management and to external reports through the Annual Report, reflecting not only the information and the impacts related to Natura packaging, but also the average compositions of all Natura products.

For example, one of our objectives is to give priority to raw materials from plant sources. To this end, we follow the table and the Natura average for each new product launch. The Natura average for all dry matter used by Natura has recently been increased to more than 80%.

4 Carbon footprint models

In 2007, aware of the threat posed by global warming and the consequences, Natura adopted another model and took on another commitment, referred to as the

Carbon Neutral Program. The objective of this program is to measure and neutralize all Greenhouse Gas Emissions (GHG) of the entire business chain.

Natura has created its own GHG inventory, based on the standards of the Greenhouse Gas Protocol Initiative and on the ISO 14064-1 Standard [3]. The company chose a broad scope in this respect, based on a study of the Life Cycle Assessment of the products' supply chain. This scope takes into consideration the emissions generated by all the related activities, ranging from the extraction of raw materials to the final disposal of products and packaging, and including all the steps related to processing and transportation.

The main focus of the program as a whole is to reduce the emissions of all the processes in the company's entire supply chain. The established target was to reduce our carbon footprint by 33% in a five years period, with a life cycle perspective (in kilos of CO₂ eq. per kilo of product sold by the company).

The Carbon Neutral Program also contemplates a third scope of activity to offset all emissions that cannot be avoided. To this end, the company organizes volunteer projects selected on the basis of a tender for such projects. Reforestation and renewable energy projects are contracted to offset the emission-related volumes of the previous year. This initiative includes external verification and the related results are periodically communicated, including through a specific web site [4].

In the last two years, with the objective of achieving even more effective reduction of emissions, Natura has developed a new system to manage GHG emissions; this system is comprised of three complementary levels: the consolidated level is the annual corporate inventory, which is comprised of a quarterly follow-up and a pluriannual plan based on a projection of future emissions. Like the other environmental indicators referred to above, the main carbon indicator takes into consideration the average intensity of GHG emissions per mass of products sold by the company.

The second level is comprised of the classification of Natura's emissions into six main categories of internal macro-processes (ex: Product Management at the Business Units, Commercial Management, Product Ordering Cycle, Product Availability, People Management...), with the objective of incorporating this indicator and the emission reduction target into each macro-process conducted by the company, complementing the other performance indicators, particularly the financial performance indicator.

Considering that almost 75% of Natura's GHG emissions are linked to the final products (supply chain processes and disposal scenarios for formulas and packaging material), it became necessary to develop a third management level, which entails calculating the emissions for each product in Natura's portfolio. Natura's product portfolio includes more than 1000 references, with an "annual

renovation rate" higher than 30%, i.e., every year more than 30% of the products are being replaced by new references.

Natura's product carbon footprint model was created in a two years R&D project, supported by several Brazilian LCA experts and consultants, and was inspired by the British PAS 2050 Carbon Footprint Standard. It included the mapping of the life cycle supply chain processes to estimate the GHG emissions of the main raw materials used in Natura's product portfolio, tracking primary data in priority. The methodology was improved through a critical review process conducted by PRÉ Consultant experts.

This model, established in 2010, allows taking into consideration the carbon footprint during the development of any new product, with the objective of achieving the responsible management of one of the main environmental impact categories associated with the products, aligned with Natura's sustainability commitment.

5 The future: expand social-environmental indicators

Natura intends to continue improving the sustainable management of its products and activities. This requires the strengthening and updating of current indicators (such as the most recent standards of the Scope 3 GHG Protocol that are being developed), and the expansion of its list of social-economic indicators, to take into consideration the progress of research projects related to the Life Cycle Assessment.

In this sense, Natura is already working on the development of models for the water footprint of its products, within the scope of their life cycle, participating in the Water Footprint Network. One of the limiting factors in this respect is the need for a data base of Brazilian materials for water consumption and, in more general terms, for Life Cycle Inventories.

The company is also interested in the possible transfer of Life Cycle Assessment to social issues, in accordance with the new projects under the Life Cycle Initiative, coordinated by United Nations Environmental Programme and by the Society of Environmental Toxicology and Chemistry [5]. These projects open up new perspectives for the assessment of the impact of the company's activities on social life issues. This promising approach may result in tangible solutions for the assessment of social-economic impacts associated with the products' chains, facilitating the monitoring of these chains. In addition, this approach will help Natura maintain the long-standing commitments the company has taken on for many years in regard to social life issues. At the moment, Natura is fine-tuning the

methodology and its application to real cases, thus reinforcing its contribution to the building up of knowledge on Life Cycle methodologies and the use of this knowledge in the field of business activities.

6 References

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