WATER FOOTPRINT OF PAPER ON BIO PAPPEL SCRIBE NUEVO LEÓN INDUSTRIAL PLANT

El Agua Nos Une – SuizAgua América Latina

Company
BIO PAPPEL

Sector:
Pulp and Paper

Location:
Monterrey, Nuevo León, Mexico.

Date: July 28th 2020

ABOUT BIO PAPPEL

With a history of more than 35 years, Bio Pappel® began with an ambitious dream: To build a world-class paper company to promote integral sustainability by recovering post consumed paper and cardboard, the efficient use of water and energy and the sustainable use of our forests, guided by one purpose: To serve Mexico with the best of our entrepreneurship, supported by a strong culture of learning and innovation, inspired by the best business practices of the international paper industry.

Since then, the company has built a successful history in the paper industry, expanding not only vertically but geographically to become an international company and the largest manufacturer of paper and paper products in Mexico, with operations in the United States and Latin America.

Faced with this problem, Bio Pappel® has decided to be part of the solution and has started important tasks such as the efficient use of water in all its processes, zero water discharges system and wastewater treatment. In addition, Bio Pappel® is constantly looking to increase competencies. They have recently initiated a staff training project in the use of tools that allow them to improve their water management, with an internationally valid methodology and recognition over stakeholders, that will enable them to quantify their potential impacts of their activities on water resources.

This is how Bio Pappel® has provided the tools and facilities for its staff to know and develop projects for Water Footprint quantification according to the ISO 14046 standard and following the recommendations for regional coherence developed by the community of practice in Latin America.

It is important to mention that, when talking about Water Footprint, not only the volume is considered, that is, the amount of water consumed throughout the life cycle; but also its availability, varying from one region to another, as well as the water quality and the impacts such as contamination of aquatic ecosystems and the water source.

MAIN PRODUCTS

Scribe®
Is the largest integrated white paper company in Mexico and Latin America.
Products: Large bond paper rolls for books, continuous forms and commercial printing, cut bond paper and notebooks.

Titan® Empaques
Is the largest paper manufacturer and leader in the production of corrugated and high graphics packaging in Mexico and Latin America.
It maintains the leadership in its field thanks to the structured strategy of vertical integration, geographical presence, a wide national network and advanced technology to stay ahead.

Products: Large paper rolls for packaging and containing, white and brown liner paper for packaging. Corrugated and high graphic boxes, newsprint and paper bags.

McKinley®
Is the largest Mexican company in paper, corrugated packaging and containing manufacturing in the United States. It has an extensive production and distribution network, from its industrial plants in the states of Washington, New Mexico, California, Texas, Georgia, Colorado, Arizona and Indiana, as well as Baja California in Mexico.
Products: Paper for packaging and containing, corrugated boxes.

CONTEXT

Bio Pappel TITÁN Nuevo León Industrial Plant is located in Calle Miguel Barragán, Monterrey, N.L.

GOAL

To obtain the water footprint on the production of 1 ton of Kraft Liner Paper in Bio Pappel Nuevo León Industrial Plant.

SCOPE

The LCA of the production of 1 ton of Kraft Liner Paper in Bio Pappel Titán Nuevo León Industrial Plant in 2018, includes the life cycle inventory analysis and potential impact assessment to water from cradle to gate.

WATER FOOTPRINT OF PAPER ON BIO PAPPEL SCRIBE NUEVO LEÓN INDUSTRIAL PLANT

El Agua Nos Une – SuizAgua América Latina

Company
BIO PAPPEL

Sector:
Pulp and Paper

Location:
Monterrey, Nuevo León, Mexico.

Date: July 28th 2020

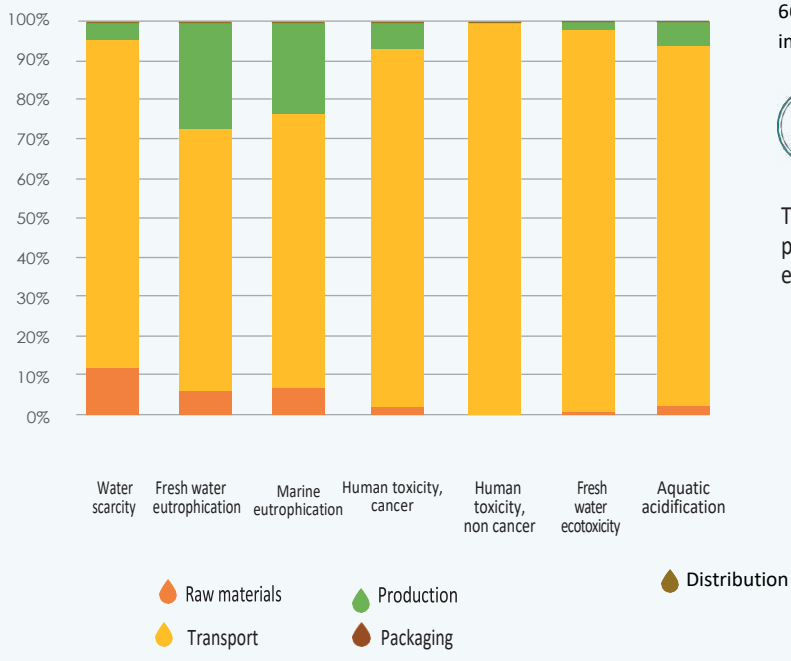
SYSTEM BOUNDARY

The Water Footprint evaluation based on LCA of kraft liner paper is considered on one ton of paper without making a distinction to the type of weight and specification in general.

FUNCTIONAL UNIT

To produce 1 ton of Kraft paper in the Nuevo León Industrial Plant in 2018.

RESULT OF THE EVALUATION OF THE POTENTIAL IMPACT TO WATER IN THE LIFE CYCLE OF 1 TON OF KRAFT PAPER IN BIOPAPPEL TITÁN NUEVO LEÓN INDUSTRIAL PLANT.



. Figure1. LCIA results of the water footprint of 1 Ton of Kraft paper.

On Figure 1, the raw materials transport stage is the one that presents the highest impact contributions on all the analyzed categories, following the production stage with a significant proportion of impacts generated.

the stages that contribute the most on each impact category are:

Human toxicity non cancer - The raw materials transport stage contributes 99% of the impacts on this category.

Freshwater ecotoxicity - The raw materials transport stage contributes 93% of the impacts on this category.

Aquatic acidification - The raw materials transport stage contributes 91.6% of the impacts on this category.

Water scarcity - The raw materials transport stage contributes 83.4% of the impacts on this category, and the raw materials supply stage with 12.1%.

Marine eutrophication - The raw materials transport stage contributes an important 69.5% of impacts on this category, and the production stage contributes with 23.2% of impacts.

Freshwater eutrophication - the raw materials transport stage contributes with 66.7% impacts on this category, and the production stage contributes with 27% of impacts.

IMPROVEMENTS FOR WATER MANAGEMENT

To consider the alternative of using wind energy for electricity required in the process, since the impacts are considerably reduced, except for freshwater ecotoxicity, as in this case the impact increases.