



Company
BIO PAPPEL

Sector:
Pulp and paper

Location:
Durango, 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.



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 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 Durango Industrial Plant is located in Carretera México KM. 26 Cuesta el Registrillo, CP 34348, Durango, Durango.



GOAL

To quantify the potential impact to water from the production of 1 ton of Kraft Liner Paper produced in Bio Pappel Titán Durango Industrial Plant in 2018.



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.



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SCOPE

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

The production stage contributes 71% on the category of water scarcity, followed by raw materials supply with 17%.

The production and distribution stages contribute 73.5% and 14.7% respectively to freshwater eutrophication.

For the marine eutrophication category, the raw materials supply and production stages contribute 54.4% and 39.1% respectively.

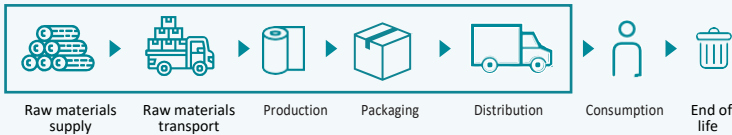
The production and distribution stages contribute 51.3% and 22.5% respectively to human toxicity, cancer.

The distribution stage contributes with 70.4% and raw materials supply with 15.2% to the category of human toxicity non cancer.

For the freshwater ecotoxicity category, the stages of raw materials supply and production contribute 84% and 10% respectively.

The distribution stage contributes 47% to the aquatic acidification category, followed by production with 20%.

SYSTEM BOUNDARY



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 Durango 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 BIOPAPPÉL TITÁN DURANGO INDUSTRIAL PLANT.



IMPROVEMENTS FOR WATER MANAGEMENT

To carry out specific analysis of each of the significant issues to determine the possibility of working on mitigation.

To follow up this type of study and not remain it as an isolated analysis. Incorporate it to the Integrated Management System.

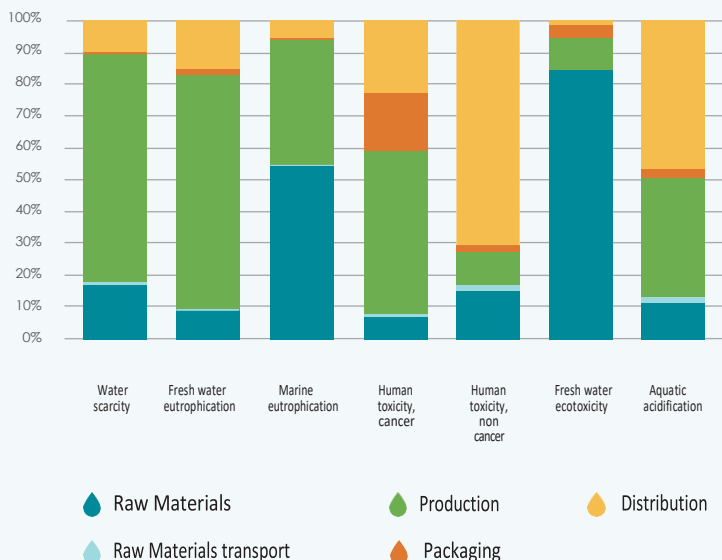


Figure 1. LCIA results of the water footprint of 1 Ton of Kraft paper.