



READING GUIDE

FOR THE REPOSITORY ON TOILET PAPER

BP X30-323-8

Contents

Introduction	2
<ul style="list-style-type: none"> • Background • Environmental labelling principles • Objective of the reading guide 	 2 2 2
Presentation of the product covered by the repository	3
<ul style="list-style-type: none"> • Introduction • Functional unit • Toilet paper life cycle and study scope 	 3 3 3
Explanation of methodological choices	5
<ul style="list-style-type: none"> • Environmental issues and impacts • Data on which impacts are based • Other methodological choices 	 5 5 6
Unit glossary	7

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Introduction

> Background

> General background on environmental labelling

Article 54 of law No. 2009-967 passed on 3 August 2009 states that consumers shall be given objective environmental information on product characteristics (environmental impacts of the product/packaging pair).

Environmental labelling applies to all consumer products targeted at the end-consumer. Since spring 2008, AFNOR has been conducting work headed by ADEME to develop the methodologies assessing environmental impacts with the involvement of all stakeholders: professionals, but also based on input from civil society. **The AFNOR repository of best practices BP X30-323 is the framework document that sets out the general principles** so that companies who wish to initiate environmental labelling can do so on the basis of a common methodology. The repository has established that the indicators should allow products belonging to the same category to be compared. It is therefore necessary for the indicators to be calculated in the same manner. For this reason, and as an extension of this repository, work groups have met to specify calculation methods.

Sector-specific work groups bring together professionals and other stakeholders concerned by a product family to discuss and propose calculation methodologies specific to a given product.

> Specific background of the reading guide: work on toilet paper

This repository covers toilet paper only.

> Environmental labelling principles

In order to provide consumers with information that is representative of the main environmental impacts of products, the environmental labelling system is based on a key method for all work in the area: **life-cycle analysis (LCA)**. This assessment makes it possible to identify and evaluate all the potential environmental impacts of a product at each stage of its life cycle: raw materials production or extraction, product manufacture, distribution, product use and the impacts associated with its end-of-life processing or disposal.

ISO 14040 and ISO 14044¹ provide an international framework for this type of assessment. The standards have, however, left various methodological options open. The purpose of the cross-sector methodology annex and the sector-specific methodology annexes is to further specify these methodologies in order to ensure that all calculations follow the same method and that the results included in the environmental labelling system are therefore comparable.

> Objective of the reading guide

The aim of this reading guide is to explain some of the concepts and requirements included in the repository on toilet paper and make them accessible to a wider audience so that everyone can understand the choices made in the repository.

There is also a reading guide for the cross-sector methodology annex that is applicable to all products.

¹ www.iso.org



Presentation of the product covered by the repository

> Introduction

The working group on toilet paper, jointly led by Group'hygiène and ADEME, started meeting in February 2009. For toilet paper, a pilot project brought together sector professionals, with technical support from PwC.

> Functional unit

> Determining the functional unit and the reference flow

▪ Functional unit

The functional unit is the unit of measurement used to evaluate the service provided by the product. For toilet paper, the chosen functional unit is the following:

"the amount of toilet paper used per person per day"

▪ Reference flow

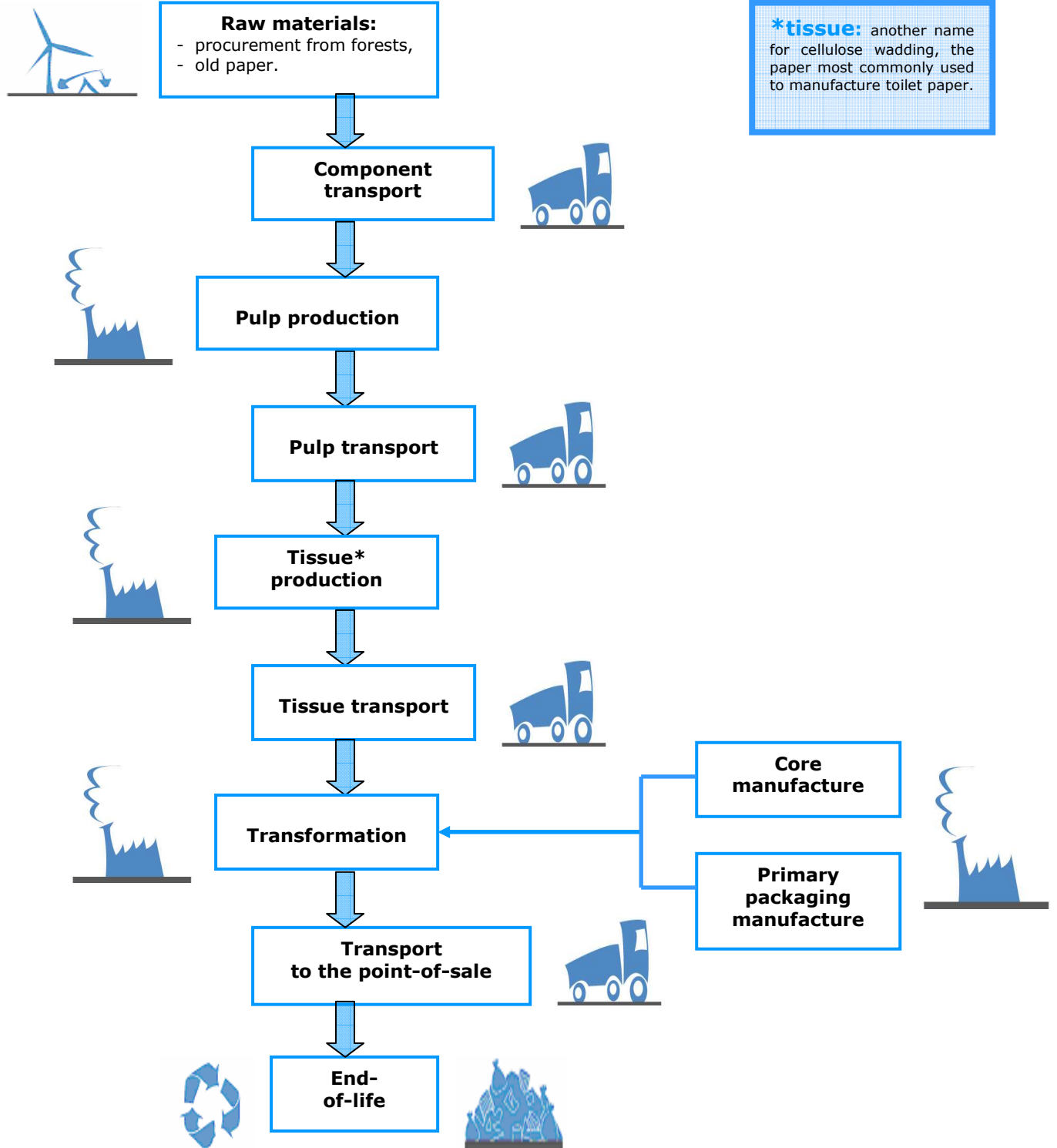
The reference flow designates the quantity of product necessary to satisfy the needs defined by the functional unit. For toilet paper, the reference flow is **16 grams of toilet paper per day per person**.

This reference flow is derived from statistical studies of use in France and may be further specified for a subsequent revision of the repository.

> Toilet paper life cycle and study scope

All the stages of the life cycle are taken into account. The only stages that are not counted are those:

- with **negligible impact on the environmental balance** of toilet paper:
 - o shaping and collection of packaging materials and of the core;
 - o manufacture, transport and end-of-life phase of secondary and tertiary packaging;
 - o packaging of paper materials;
 - o chemicals used to produce toilet paper (process additives, other additives and dyes in some cases);
 - o use of utilities services and waste production at logistics platforms and points-of-sale;
 - o collection of packaging and core waste.
- that are **excluded by the** methodological repository **BP X30-323** (consumer transport is offset).



Toilet paper life cycle



Explanation of methodological choices

► Environmental issues and impacts

► Environmental assessment impact

Some criteria have been identified as decisive for the overall environmental balance of toilet paper:

- **Greenhouse effect**

The manufacturing, storage and transport activities that occur throughout the life cycle of toilet paper result in greenhouse gas emissions that drive climate change.

- **Air acidification**

Some gases (e.g. sulphur dioxide and nitrogen dioxide) that the toilet paper industry releases into the air become acids when they come in contact with humidity. These acids then fall back to the ground during rainfall events and modify the pH of rivers, lakes and soil.

- **Eutrophication**

Eutrophication is the modification and deterioration of an aquatic environment, which has negative effects on biodiversity, water quality and health.

The selection of the environmental impacts to use in environmental labelling **communication** was carried out on the basis of several criteria:

- ease of implementation for the database used by the company;
- differentiability of the impact for a majority of products on the market;
- impact coverage over the life cycle as a whole.

Among the five possible indicators, **three were selected to be included in environmental labelling communication**:

Indicators retained for toilet paper:

- **the greenhouse effect**, expressed in kg CO₂ eq.;
- **air acidification**, expressed in g SO₂ eq.;
- **eutrophication**, expressed in g P eq. (release of phosphate-containing substances).

(see the Unit glossary)

► Additional information

For products made of virgin fibres, operators who wish to do so can provide consumers with additional information on biodiversity.

► Data on which impacts are based

► Type of data used for labelling

Data used to calculate impacts:

- **Primary data**: data measured or calculated by the company (also called specific data);
- **Secondary data**: averaged data used by all companies (i.e. materials impacts);
- **Semi-specific data**: secondary data that is proposed by default and that the company can replace with primary data.



A work group shall specify which parts of the quantified data shall necessarily be primary data and which can or shall be secondary data.

The data qualification depends on:

- the relative importance of this data for the overall balance,
- the availability of the data,
- the cost involved in obtaining the data.

The following table summarizes the choices made for toilet paper modelization:

Life cycle phase	Primary data	Semi-specific data	Secondary data
<i>Raw materials</i>	<ul style="list-style-type: none"> - Quantity of tissue product ingredients (mass) - Product fibre type: pulp composition, % of recycled material, % of virgin material <p>Non-integrated manufacturers have the option of using a simplification rule: 80% of the annual supply is characterized using primary data and the 20% remaining with secondary data.</p>		Upstream forestry
<i>Manufacturing site</i>	Description of the primary packaging and the core: <ul style="list-style-type: none"> - Number of rolls per CSU - Core mass Mass and type of CSU protective film	<p><u>Pulp production</u></p> Quantity of fibrous raw material used	Production of: <ul style="list-style-type: none"> - Pulp (chemical pulp, unbleached pulp, etc.) - Primary packaging and core materials - Fuels
	<p><u>Pulp production</u></p> <ul style="list-style-type: none"> - Pulp type - Energy use and energy source - Plant location - Release of pollutants in the water / air - Energy sold (quantity and type) - Waste production 		
<i>Transport</i>		Default values for the scenario on transport of materials to the manufacturing site, and then from the packaging site to the point-of-sale	Secondary data on procurement (truck fill factor and empty backhaul rate)
<i>End-of-life</i>			<ul style="list-style-type: none"> - End-of-life of household packaging - Ultimate fate of toilet paper in water treatment facilities



> Other methodological choices

> Co-product allocation

If data on resource use and discharges of the toilet paper production line is available, it shall be used. Otherwise, the total energy use and discharges produced by the site shall be split between the various co-products: this is allocation.

In the case of waste produced by **toilet paper transformation**, the method recommended is that developed by the **European Ecolabel** which takes into account impacts equivalent to those of tissue production. The European Ecolabel certification bodies have initiated work on how these waste impacts are calculated. The results of this work could be taken into account in the future if the work group deems they are relevant.

> Data validity period and frequency of updates

If one of the 3 indicators used is modified by more than 20%, calculations shall be updated. In all cases, all data shall be recalculated after **5 years for an initial labelling, then every 10 years.**

> How data is validated

The company shall keep the **information** used in the calculations **available for any subsequent inspection.**

Unit glossary

Indicator	Unit	Illustration
Greenhouse effect	kg CO ₂ eq.	1 tonne CO ₂ eq. represents a Paris - New York round trip by plane.
Air acidification	g SO ₂ eq.	Mean discharges per European per year amount to 73.6 kg SO ₂ eq.
Eutrophication	g P eq. (release of phosphate-containing substances).	2 g P eq. represents a dishwasher wash cycle