



READING GUIDE

FOR THE REPOSITORY ON BACKPACKS FOR SPORTS BP X30-323-3

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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.

> 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 backpacks for sports in order to 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 "**Sports equipment, camping gear and mobility equipment**", jointly led by the Fédération Professionnelle des entreprises du Sport (FPS – sports businesses professional federation) and ADEME started meeting in January 2009. The work conducted in 2009 and 2010 culminated in a repository for the "Backpacks for sports" product category. It was presented and adopted by the general platform in January 2011.

> Functional unit

▪ Functional unit

The functional unit is the unit of measurement used to evaluate the service provided by the product. For backpacks for sports, the functional unit selected is: "**use of a backpack for sports for 2 years**".

▪ Reference flow

The reference flow designates the quantity of product necessary to satisfy the needs defined by the functional unit. For this study, the **reference flow** is therefore **the number of backpacks necessary to wear a backpack for sports for 2 years**.

The concept of product durability is linked to the supplier's guarantee, which is determined through company-specific internal tests.

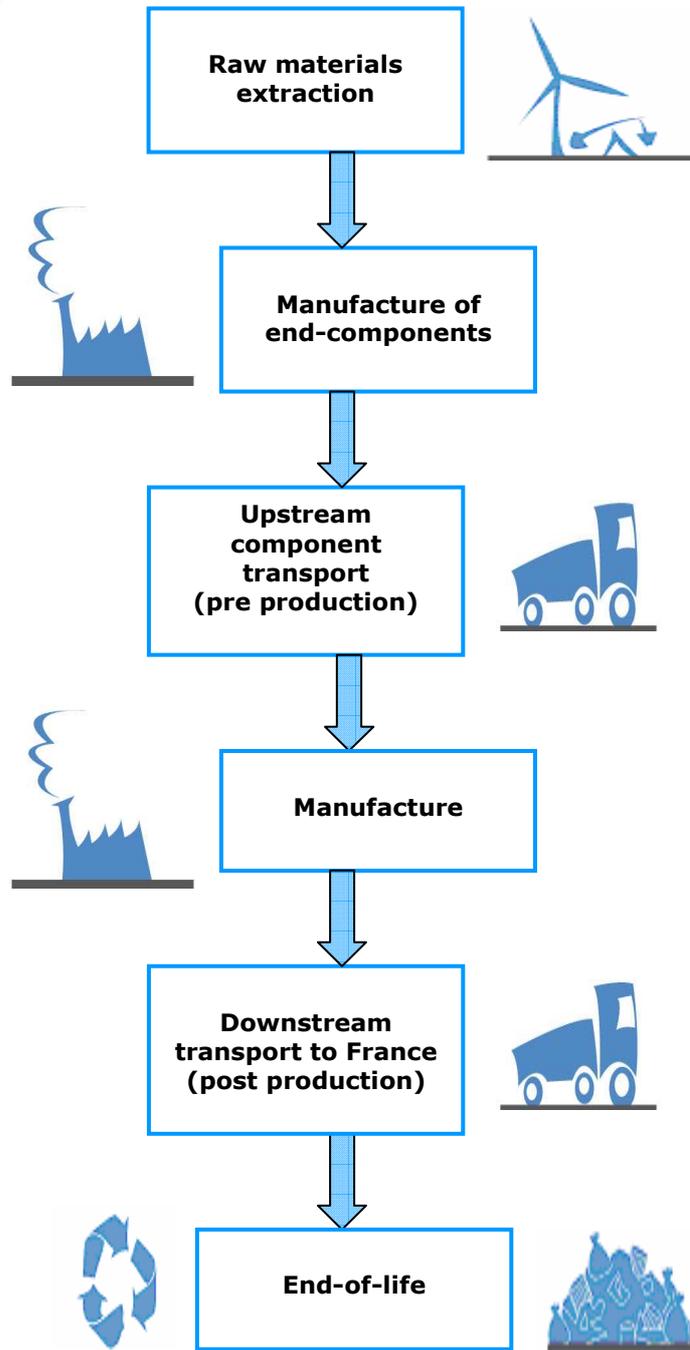
Example: Backpack that is guaranteed for 4 years

The functional unit refers to using a backpack for 2 years. For a backpack that is guaranteed for 4 years, the quantity of product necessary to satisfy the functional unit requirements (reference flow) is therefore divided by 2.

> Life cycle of a backpack for sports and scope of the study

All the stages of the life cycle of a backpack for sports are taken into account. The only stages that are not taken into account are those with negligible influence on the environmental balance of the backpack:

- **use phase**, because washing is not recommended as part of product care,
- **tertiary packaging**.



Life cycle of a backpack for sports



Explanation of methodological choices

> Environmental issues and impacts

> Environmental impact assessment:

Some criteria have been identified as **decisive** for the overall environmental balance of a backpack for sports:

- **Non-renewable resource depletion:**

Manufacturing the various components of a backpack requires the use of non-renewable materials and resources. These resources are mobilised by the product during its lifespan and are not entirely recycled or recovered in the end-of-life phase (household waste channel).

- **Greenhouse effect:**

The manufacturing, storage and transport activities that occur throughout the life cycle of a backpack for sports result in greenhouse gas emissions that drive climate change.

Indicators retained for backpacks:

- **the greenhouse effect**, expressed in kg CO₂ eq.
- **natural resource depletion**, expressed as person-reserves

(see the Unit glossary)

> Data underlying impacts and articulation of primary and secondary data

The main data identified as relevant for backpacks are mass and composition of the end-components.

Example: For a hiking backpack comprised mainly of synthetic materials, the end-components are:

- Polyester
- Polyamide

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.

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



This choice 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 **primary data** primarily covers backpack components, because the manufacturing phase causes most of the environmental impacts. **Data collection efforts** shall therefore be carried out for this step.

The following table summarizes the choices made for backpack modelization:

Phase	Primary data	Semi-specific data	Secondary data
Raw materials	<ul style="list-style-type: none"> - Product composition - Packaging composition (including primary and secondary) - Recycled material incorporation rate for the materials 		Materials impacts
Manufacture	<ul style="list-style-type: none"> - Energy use - Manufacture site for components and backpack 	Default life cycle inventories for manufacturing processes	<ul style="list-style-type: none"> - Energy impacts, depending on the energy mix - Manufacture
Transport	Distance travelled by plane	Default values for transport scenarios for materials and the backpack within France	Tonne-kilometre impacts depending on the mode of transport
Performance tests	Guarantee length		
Distribution		Default life cycle impacts for marketing	
End-of-life			Household waste and household cardboard packaging scenarios in France



> Other methodological choices

> Data validity period and frequency of updates

If there is any modification to the composition of the product, to the manufacturing process or to other stages of the life cycle that causes the environmental impact of the functional unit as a whole to be altered by more than 20% for one of the

three indicators used, 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 e eq.	1 tonne CO ₂ eq. represents a Paris - New York round trip by plane
Non-renewable resource depletion	person-reserve	1 person-reserve represents a fraction of the resources still available per person