INTERNATIONAL CONFERENCE
FOOD CONTACT COMPLIANCE

Promosso da
ISTITUTO ITALIANO IMBALLAGGIO
The ITALIAN INSTITUTE of PACKAGING
The packaging community

SUSTAINABLE PACKAGING DESIGN AND EPD® PROCESS IN FOOD CONTACT MATERIALS

Daniele Simonazzi

ISAP PACKAGING S.p.A.

September 24th 2019

ISAP PACKAGING

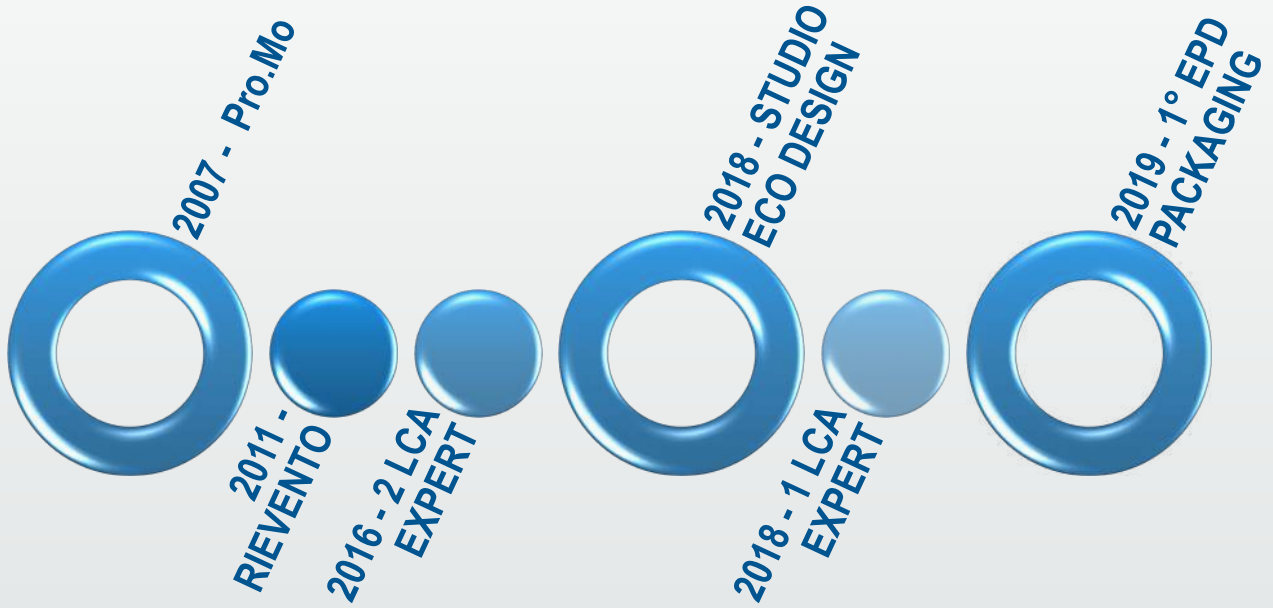
ISAP Packaging is a solid company located in Verona with more than 50 years of experience in industrial food packaging and disposable tableware.

- Revenue: €88 million
- Employees: 253
- Customers: 1700
- Suppliers: 600
- Investments: + €16 million in 5 years

THE PATH TO SUSTAINABILITY

ISAP is part of **Pro.Mo, association of Italian manufacturers of plastic disposable tableware** (Federazione Gomma Plastica - Confindustria).

This group promotes **research, information and communication activities**



ISAP Packaging has been investing for years:

- In **reduction of process/product environmental impact**
- In the study of truly effective and sustainable **raw materials alternative to plastics**
- In **informing** about proper use of products
- In supporting **pilot initiatives on recycling and reusing** (circular economy)

THE PATH TO SUSTAINABILITY

THE SUSTAINABILITY REPORT

A tool for sharing with the stakeholders the path taken by ISAP to a Sustainable Development, the main achieved results and the future goals

www.globalreporting.org

2015 The **zeroth number,** the start of ISAP's path to sustainability

2016 Edition written in accordance to **GRI-*Global Reporting Initiative (Core)*** standards, verified and certified by SGS Italia.

2017 Edition written in accordance to **GRI-*Global Reporting Initiative (Core)*** standards, verified and certified by SGS Italia.

2018 Edition written in accordance to **GRI-*Global Reporting Initiative (Core)*** standards, verified and certified by SGS Italia.

SUSTAINABLE PACKAGING DESIGN AND EPD® PROCESS IN FOOD CONTACT MATERIALS

PRODUCT ENVIRONMENTAL LABEL

TYPE I LABEL
UNI EN ISO 14024:2018

Voluntary ecological labels based on a multi-criteria system, that considers the entire life cycle of the product.
They are subjected to an external **certification by an independent body**.
E.g., the european ecological quality mark ECOLABEL

TYPE II LABEL
UNI EN ISO 14021:2016

Ecological labels referring to environmental **self-declarations** made by manufacturers, importers or distributors of products, without the intervention of an independent certification body.
E.g., the generic descriptions ”Recyclable”, “Compostable”, etc.)

TYPE III LABEL
ISO 14025:2006

Ecological labels referring to declarations based on fixed parameters and that contain a quantification of the environmental impact associated to the whole life cycle of the product, calculated with an LCA system.
They are subjected to a control by a third party independent body and are presented in a clear and comparable form.
E.g., the “Environmental Product Declaration”.

EPD®

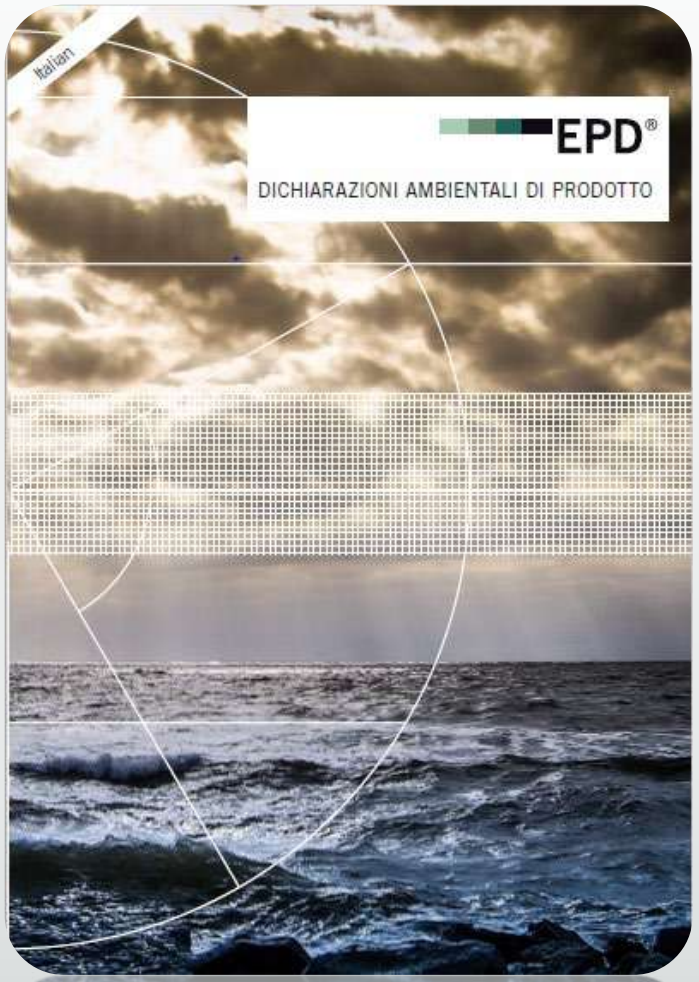
www.isprambiente.gov.it

EPD CERTIFICATION

Environmental Product Declaration, EPD

An **EPD®** is a **Certified Environmental Product Declaration**, which reports **environmental data** over the **life cycle** of products in accordance with the international standard **ISO 14025**.

The **International EPD® System** is a programme to **develop and register EPDs** for any type of goods and services.
The system is **international and third party verified**.



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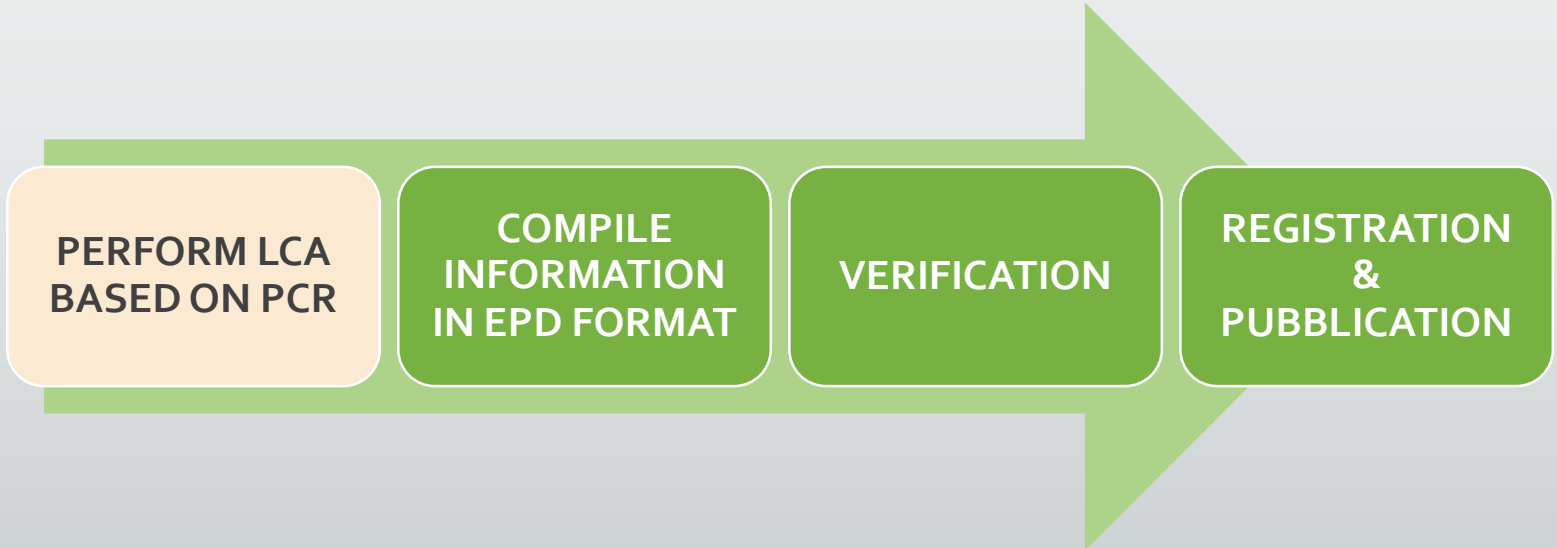
To create an EPD, a LCA study is carried out in accordance with the calculation rules in the product category rules (PCR).

The results from the study and other information, as required by the PCR, are then compiled into the EPD reporting format.

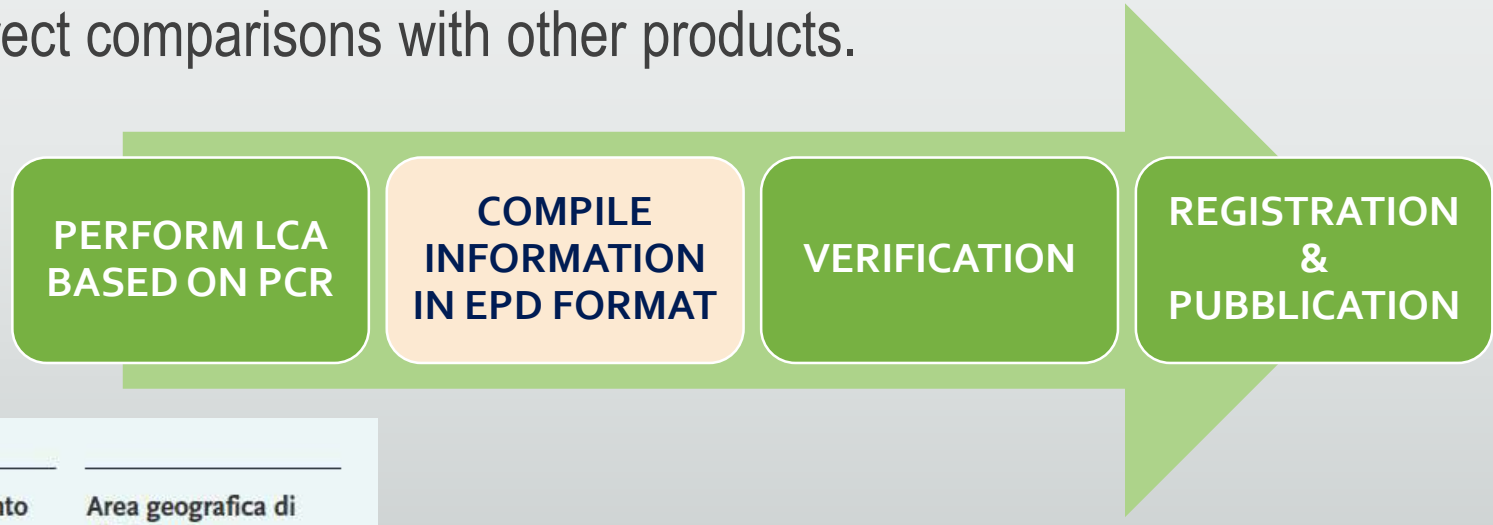
The EPD is then verified by an approved independent party.

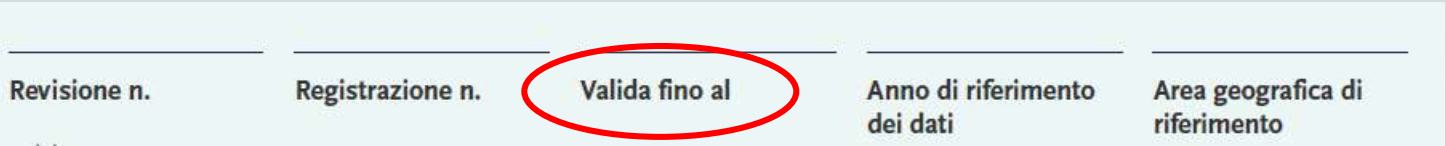
Registration and publication of the EPD is done by contacting the Secretariat at info@environdec.com, who also work as a helpdesk throughout the process.



The results of the LCA study and other information mandated by the reference PCR and General Programme Instructions shall be compiled in the EPD reporting format.
The International EPD® System includes the requirements for the EPD reporting format in terms of contents, while some flexibility is allowed in the formatting and layout provided that the EPD still includes the prescribed information.
As a general rule, the EPD content:

- shall be in line with the requirements and guidelines in ISO 14020 (Environmental labels and declarations - General principles),
- shall be verifiable, accurate, relevant, and not misleading,
- shall not include rating, judgements, or direct comparisons with other products.





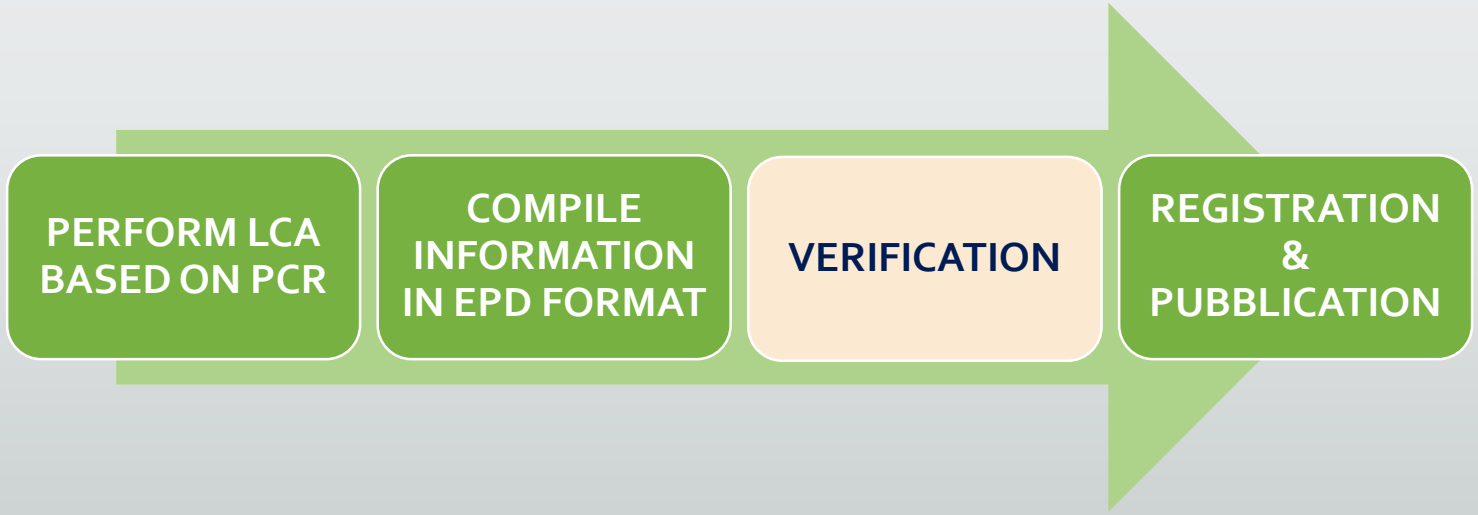
There are two types of verification procedures in the International EPD® :

- **EPD verification: verification of LCA-based data,** additional environmental information, and other information presented in an EPD based on the General Programme Instructions and a **valid reference PCR**.

EPD verification shall be conducted by an approved individual verifier or an accredited certification body.

- **EPD process certification:** verification of an internal organisational process aimed to develop EPDs based on the General Programme Instructions and valid reference PCRs covered under the scope of certification.

EPD process certification shall be conducted by an accredited certification body.



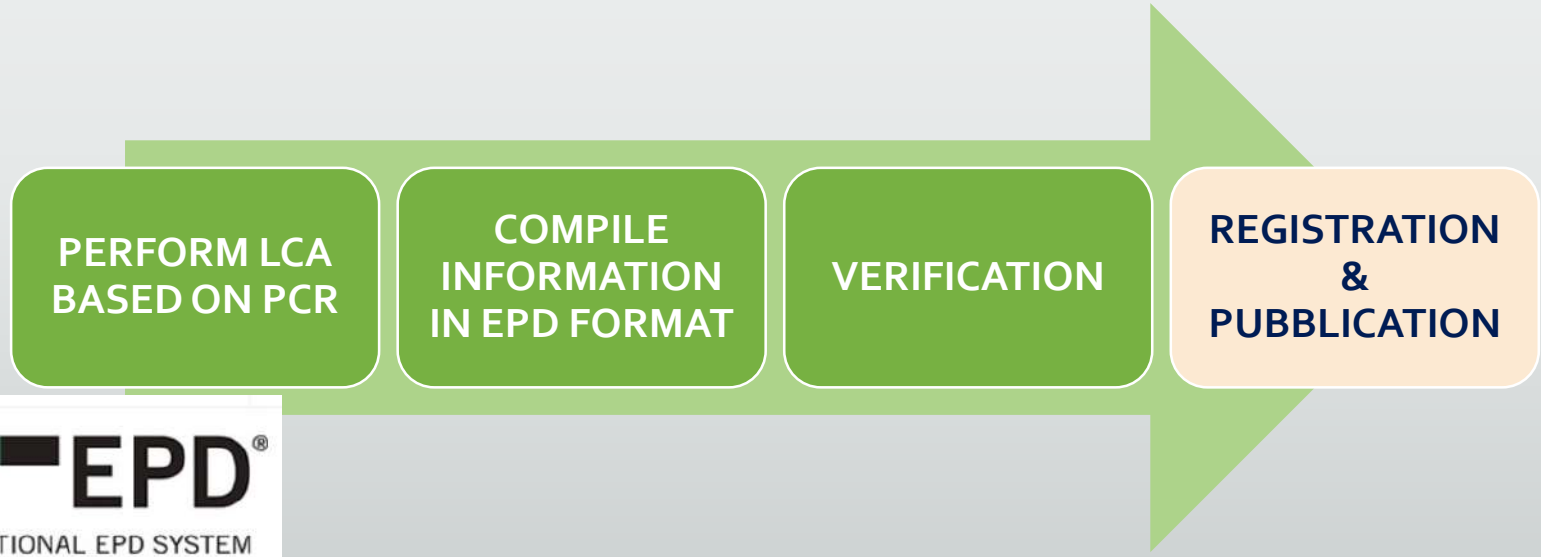
After completed verification, the organisation developing the EPD shall **submit the EPD to the Secretariat** (registration@environdec.com) together with other mandatory documentation.

The publication/issue date in the EPD should be set to the date when the documentation is submitted.

The verified EPD may be provided in one or multiple languages, and in multiple versions .

If the EPD is not available in **English**, it shall contain an executive summary in English that includes the main content of the EPD.

In some countries, EPD registration is handled via a regional partner. These countries are currently: Australia, Brazil, Chile, India, Mexico, New Zealand, Russia and Turkey.



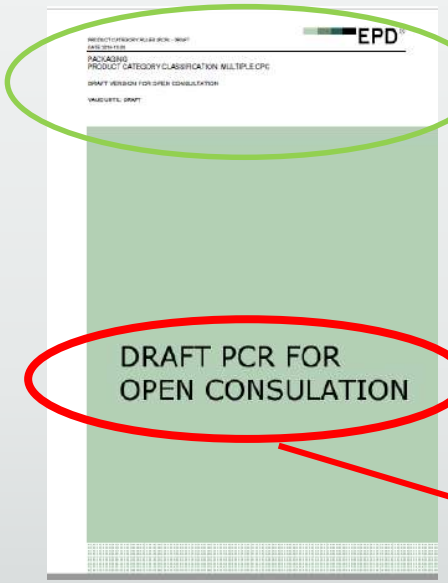
Programme Operator

When developing an EPD, the environmental performance of the product shall be described **from a life cycle perspective**. One of the main steps is to carry out a life cycle assessment (**LCA**) of the product.
The LCA study may be performed **by the organisation** itself (in-house) or with the help of a **consultant with expertise in LCA and environmental declarations.**

www.environdec.com

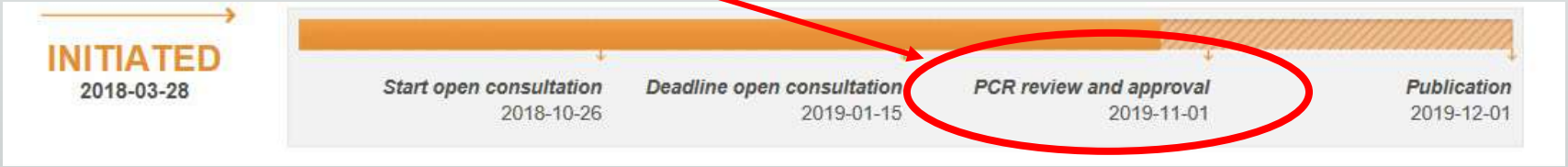
PERFORM LCA BASED ON PCR → COMPILE INFORMATION IN EPD FORMAT → VERIFICATION → REGISTRATION & PUBBLICATION

GENERAL PROGRAMME INSTRUCTIONS VERSION 3.0 PUBLISHED



PACKAGING – PRODUCT CATEGORY CLASSIFICATION: MULTIPLE CPC

www.environdec.com



THE CONTRIBUTION OF LIFE CYCLE ASSESSMENT (LCA)

The **LCA** procedure is based on the **compilation, quantification and evaluation**, with defined procedures, of all the **inputs** and **outputs** of **materials and energy and of the related environmental impact**, attributed to a **product** during its **life cycle**.

LCA PROCEDURE

According to **ISO 14040**, the **LCA** procedure is structured into four separate and consecutive phases:

1. **Definition** of **goals and scope** of the study
2. **Inventory analysis** (*Life Cycle Inventory*)
3. **Evaluation of environmental impact** (*Life Cycle Impact Assessment*)
4. **Interpretation of data** (*Life Cycle Improvement*)

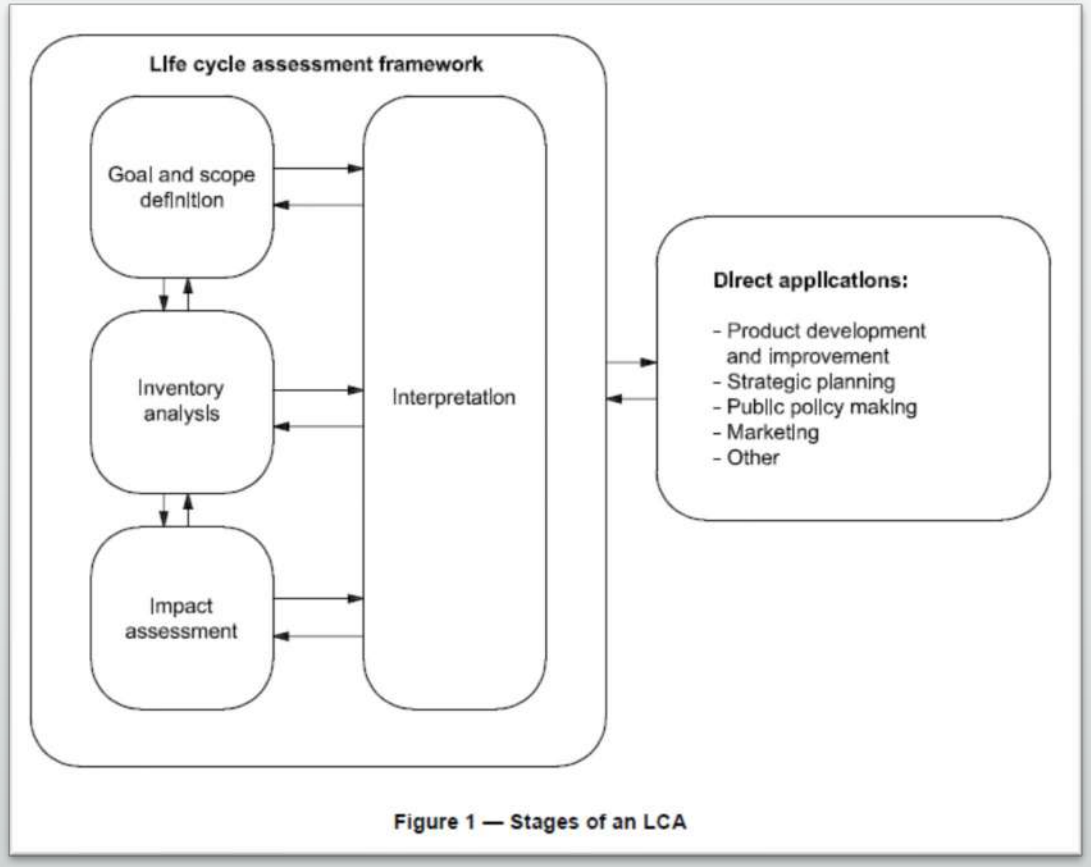
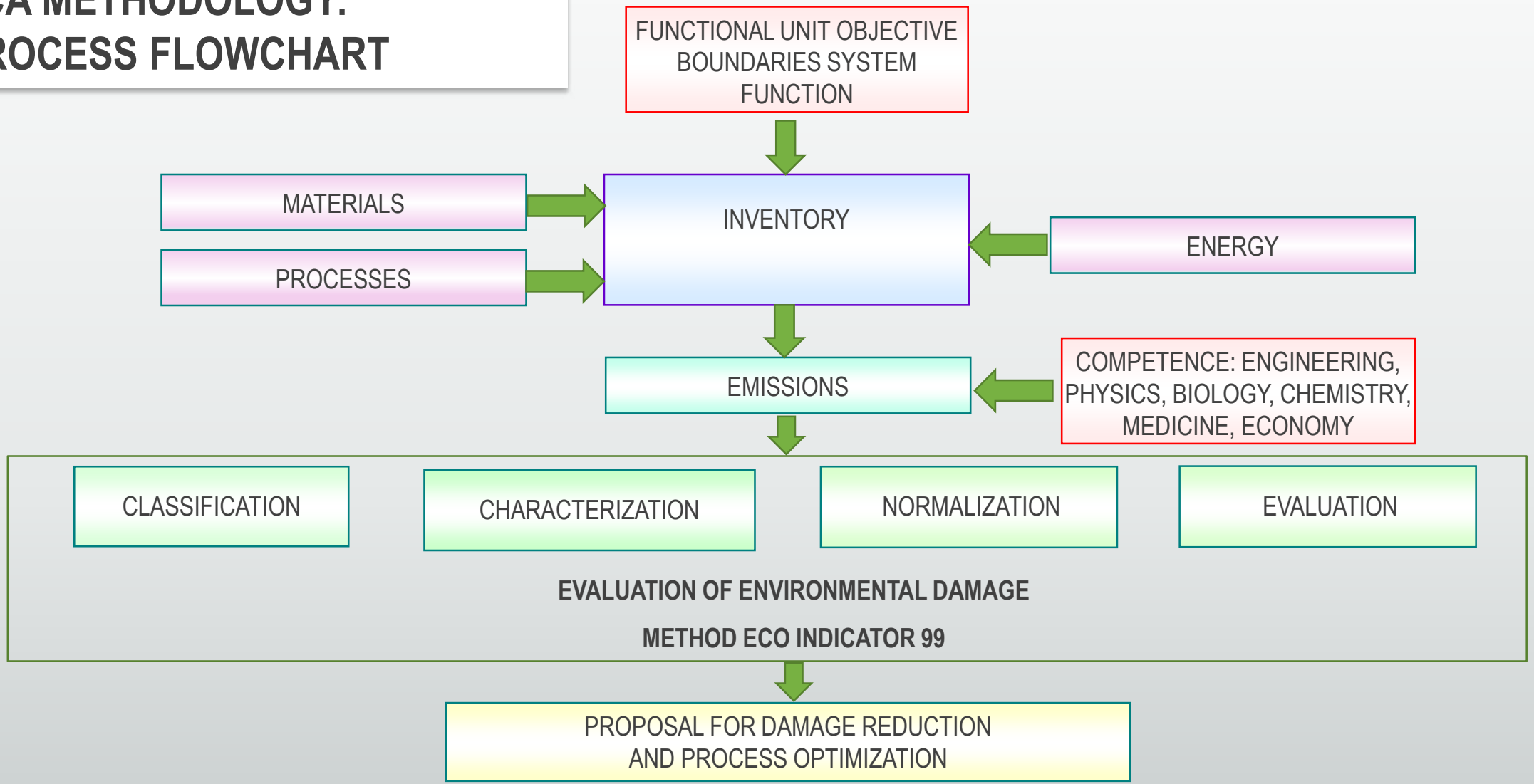


Figure 1 — Stages of an LCA

These phases are normalized by "**SETAC" (Society of Environmental Toxicology and Chemistry)** www.setac.org and "**ISO**" www.iso.org (International Standards Organization) with the standard UNI EN ISO 14040.

LCA METHODOLOGY: PROCESS FLOWCHART



Why a F.C.M. manufacturer should take this path?

- To answer the need to communicate environmental data in a transparent and honest way
- To communicate environmental data related to a product throughout the supply chain
- To aim the improvement of the product environmental performance
- To facilitate Eco-Design, improving already existing or new products/process
- To provide guarantees to all the interested parties

Why a F.C.M. manufacturer should take this path?

To answer the need to communicate environmental data in a transparent and honest way

Environmental communication is regulated internationally by specific standards. Those who communicate false or incomplete information about the environmental performance of their products risk being sanctioned. Be careful, no Greenwashing!

The results of an LCA study are verifiable and based on sound scientific data

Why a F.C.M. manufacturer should take this path?

To communicate environmental data related to a product throughout the supply chain

B2B – to the food industry who wants to use primary data for its EPD and being able to control them

B2C – to the end user, because he has the right to know the real impact on the plastic container he is using.

Why a F.C.M. manufacturer should take this path?

To aim the improvement of the product/service environmental performance

The analysis of the impact throughout the supply chain makes it possible to identify the most critical phases, allowing the adoption of specific solutions such as product/process eco-design, improving performance over time.

Why a F.C.M. manufacturer should take this path?

To facilitate the process of improving the ranges of products with Eco-Design

In addition to supporting the modification of production processes, the results of an LCA study can influence the choices made during the design or re-design of the products themselves.

The core of the Eco-Design activity aims to ensure an optimal management of environmental features of the product already during its design, maintaining the desired chemical and physical properties.

Why a F.C.M. manufacturer should take this path?

- To provide guarantees to all the interested parties
  - Because we need to provide scientific data to the stakeholders, allowing them to make the right choices.
  - Because is incorrect to just say ‘Plastic Free’ without analysing the environmental impact scientifically
  - Because we cannot ban a product on the basis of the bad habits of a part of the consumers.
  - Because the interested parties need certified scientific studies and data to support what has been declared.

How a company that produces FCM should do an environmental product declaration?

EPD

Environmental Product Declaration containing all the information mandated by the *General Programme Instructions for EPD*

The following environmental impacts are reported:

Greenhouse gas emissions, use of resources, energy consumption, emissions of pollutants, other significant environmental impacts, etc.

PROCESS EPD CERTIFICATION

Process certification by third party with internal EPD validation.

Allows for the organizations to develop and publish several EPDs, sampled during third party verification.

EPD PRE-CERTIFICATION

The International EPD® System includes the possibility for pre-certification of EPDs as an initial step to publishing environmental information of a product during the development of a PCR for a new product category.

Environmental performances of F.C.M. rigid packaging

Project Profood

From the Position Paper of Rigid Packaging for Fresh Food Group, Project UNIONPLAST

RACCOMANDAZIONE DELLA COMMISSIONE

del 9 aprile 2013

relativa a relativa all'uso di metodologie comuni per misurare e comunicare le prestazioni ambientali nel corso del ciclo di vita dei prodotti e delle organizzazioni

(Testo rilevante ai fini del SEE)

(2013/179/UE)

…..OMISSIS…….

La **tutela del consumatore** è da sempre un tema chiave della legislazione europea. In questo ambito la Commissione Europea ha recentemente varato un **serie di misure innovative intese a proteggere il consumatore da** attività di **greenwashing e di manipolazione** sul tema **della sostenibilità ambientale dei prodotti**. Queste misure sono state introdotte con la **RACCOMANDAZIONE DELLA COMMISSIONE del 9 aprile 2013** relativa all'uso di **metodologie comuni per misurare e comunicare le prestazioni ambientali nel corso del ciclo di vita dei prodotti**. La Commissione Europea, nelle proprie comunicazioni al Consiglio e al Parlamento Europeo, **ha ribadito la necessità** di sviluppare una "Politica integrata dei prodotti" basata sul concetto **di ciclo di vita ambientale** e che consenta agli Stati membri e al **settore privato di valutare, comunicare e confrontare le prestazioni ambientali dei prodotti** sulla base di una valutazione approfondita degli impatti ambientali nel corso del ciclo di vita ("impronta ambientale"). **…..OMISSIS…….**

Environmental performances of F.C.M. rigid packaging

Project Profood

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(Testo rilevante ai fini del SEE)

(2013/179/UE)

…..OMISSIS…….

Il Gruppo Imballaggi Rigidi Per Alimenti Freschi di UNIONPLAST **supporta** le politiche della Commissione Europea che **individuano nell'impronta ambientale e nel metodo L.C.A. (life cycle assessement) gli strumenti più adeguati per una corretta comunicazione al consumatore** sul tema della sostenibilità ambientale dei prodotti. **…..OMISSIS…….**

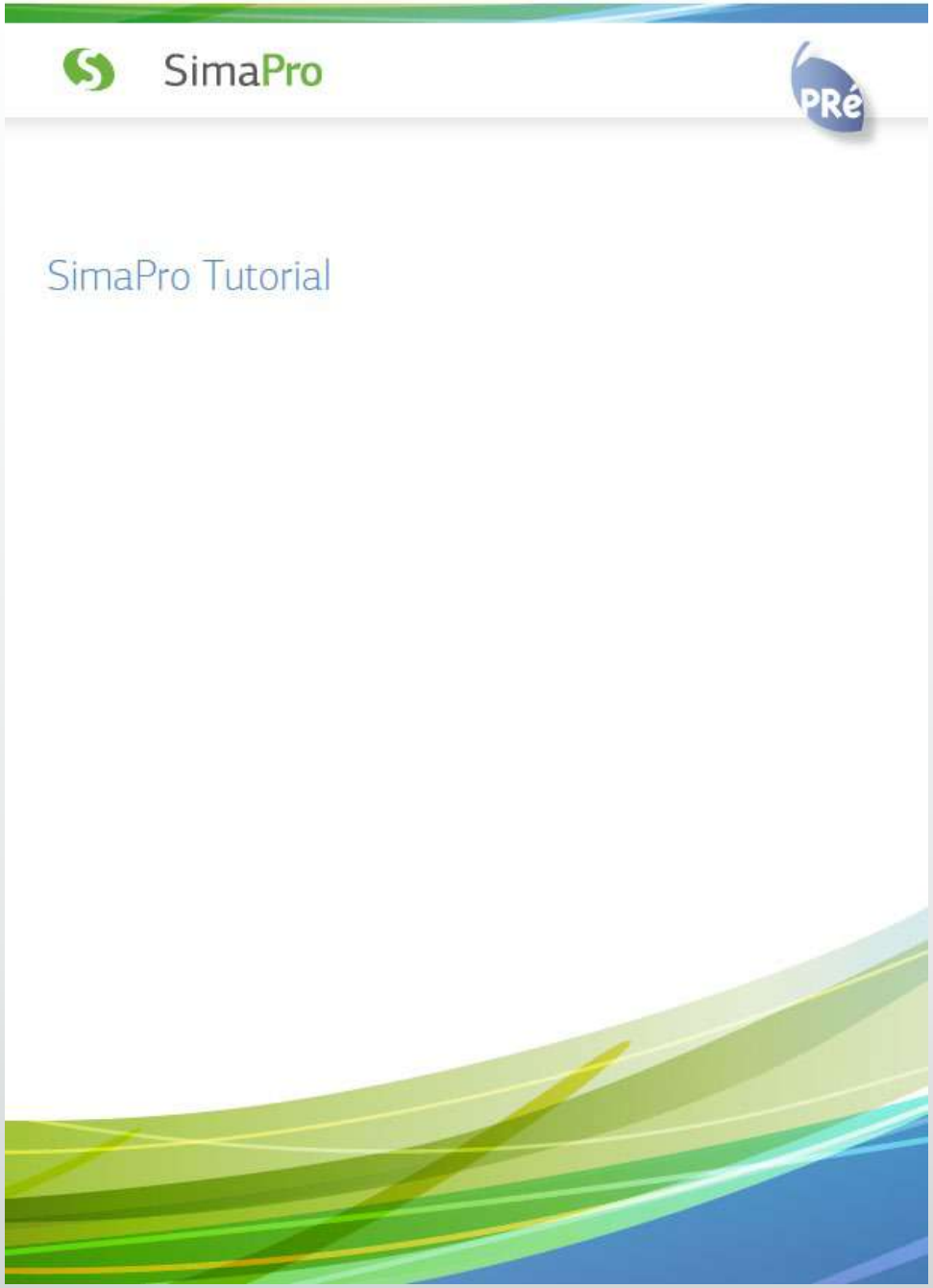
Our choice for EPD® PROCESS

	PRODUCT EPD	PROCESS EPD CERTIFICATION	
WHAT IS NEEDED		MANUAL FOR EPD PROCESS	
		MANUAL FOR DATA COLLECTION	
		INTERNAL VERIFICATION FORM	
		LCA / EPD	
		PROCESS EPD VERIFICATION FORM	
	LCA PROJECT	AT LEAST 1:	LCA PROJECT
	PRIMARY DATA DOCUMENTATION		PRIMARY DATA DOCUMENTATION
	REPORT LCA		REPORT LCA
	REPORT EPD		REPORT EPD

Our choice for EPD® PROCESS

Training of staff: 3 LCA Expert in our Company
Purchase of SimaPro Software

SimaPro



Our choice for EPD® PROCESS

Study of reference standards
Study of GPI and PCR

NORMA EUROPEA

Etichette e dichiarazioni ambientali
Dichiarazioni ambientali di Tipo III
Principi e procedure

UNI EN ISO 14025

NOVEMBRE 2010

Environmental labels and declarations
Type III environmental declarations
Principles and procedures

NORMA EUROPEA

Gestione ambientale
Valutazione del ciclo di vita
Principi e quadro di riferimento

UNI EN ISO 14040

OTTOBRE 2006

Environmental management
Life cycle assessment
Principles and framework

Versione bilingue del dicembre 2007

EPD®
PACKAGING
PRODUCT CATEGORY CLASSIFICATION: MULTIPLE CPC
DRAFT VERSION FOR OPEN CONSULTATION

DRAFT PCR FOR OPEN CONSULATION

- Product Category Rules
  - (EN 15804 / ISO 21930)
- General Programme Instructions
  - ISO 14025
- ISO 14040/14044
- ISO 9001/ISO 14001

ANNA BORTOLUZZI
SUSANNA CAPROTTI
PAOLO SIMON OSTAN

COPIA

EASY GUIDE

TO SUSTAINABLE PRODUCTS COMMUNICATION
AN ALTERNATIVE TO GREENWASHING

GUIDA ALLA COMUNICAZIONE DEI PRODOTTI SOSTENIBILI
UN'ALTERNATIVA AL GREENWASHING

INTRODUZIONE / INTRODUCTION
BRUNO SPOZIO

CON IL CONTRIBUTO PER LA COMUNICAZIONE AMBIENTALE / CONTRIBUTION ON ENVIRONMENTAL COMMUNICATION:
GLORIA MILAN

EDIZIONE SPECIALE PER ISAP PACKAGING

Our choice for EPD® PROCESS

Writing a Feasibility Report

ISAP PACKAGING	**Report di fattibilità**	D-EPD.03 Ed.1 Rev. 0 Pag. 1 di 5

Tipologia di intervento

☒ Nuova EPD

☐ Aggiornamento EPD in scadenza

☐ Aggiornamento EPD per variazione impatti ±10%

☐ Aggiornamento volontario EPD (prima della scadenza, es. per modifiche/integrazioni/correzioni)

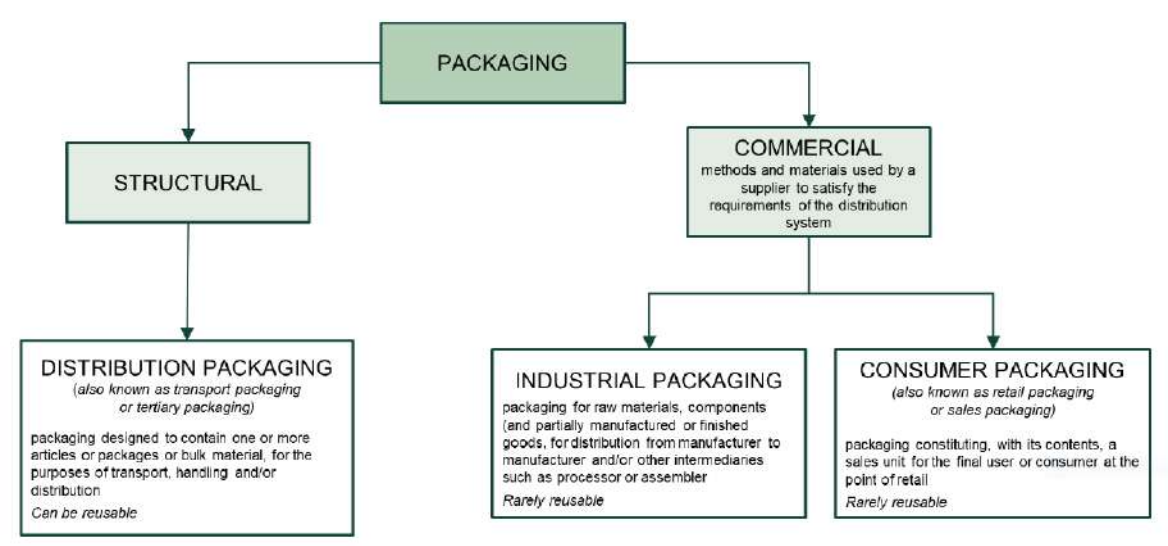
1. Informazioni generali in entrata *(da compilare a cura del team di pianificazione strategica)*

1.1 Sviluppo nuova EPD *(da compilare solo nel caso di nuova EPD)*

Tipologia di EPD da sviluppare

Our choice for EPD® PROCESS

Preparation of master flowcharts



Life cycle stage	Life cycle module	Life cycle module group	EPD type	
			Declared unit: Cradle-Gate, Cradle-Gate with options	Functional unit: Cradle-Grave
Upstream	A1) Raw material supply	A1-A3) Product stage	Mandatory	Mandatory
Core	A2) Transport			
	A3) Manufacturing			
Downstream	A4) Transport to forming or filling	A4-A5) Forming stage	Optional, or Mandatory if final forming is outside of company boundaries	Mandatory
	A5) Forming (*) (if final forming is outside of company boundaries)			
	B1) Filling operation	B1-B4) Use stage	Optional	Mandatory
	B2) Distribution of filled packaging			
	B3) Transport to reconditioning			
	B4) Reconditioning (**)			
	B5) Transport to re-filling point			
	C1) Disassembling / sorting	C1-C4) End of life stage	Optional	Mandatory
	C2) Transport to final waste processing			
	C3) Final waste processing/disposal			

(*) Both phase A3 and phase A5 (if present) are to be considered packaging production phases. In fact, packaging production is considered completed only upon conclusion of all the phases that will allow the product to accomplish its final function for the intended use.

(**) Reconditioning[6]: operations necessary to restore a reusable packaging to a functional state for further reuse.

Table 2

Core exclusions

Manufacturing of production equipment, buildings and other goods.
Staff business trips.
Staff commuting.

Downstream exclusions

Phase of product use (domestic use)

Our choice for EPD® PROCESS

Training and involving Data Owners

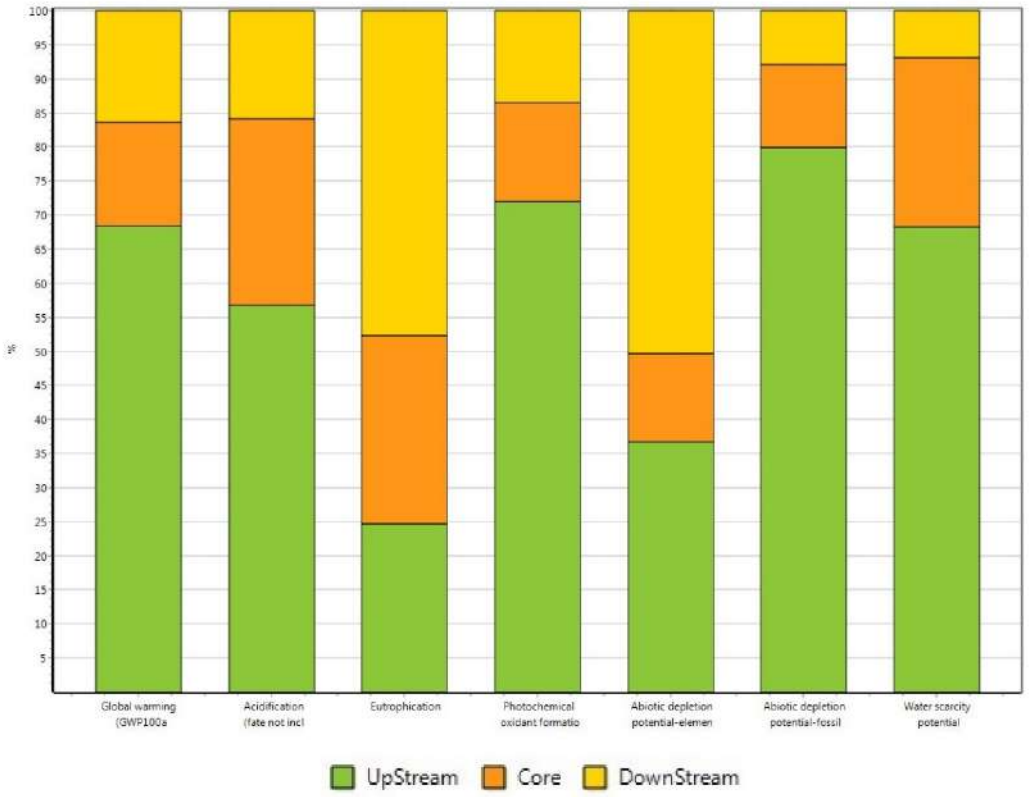
They are the persons in charge of the process.
They propose improvements supported by short studies

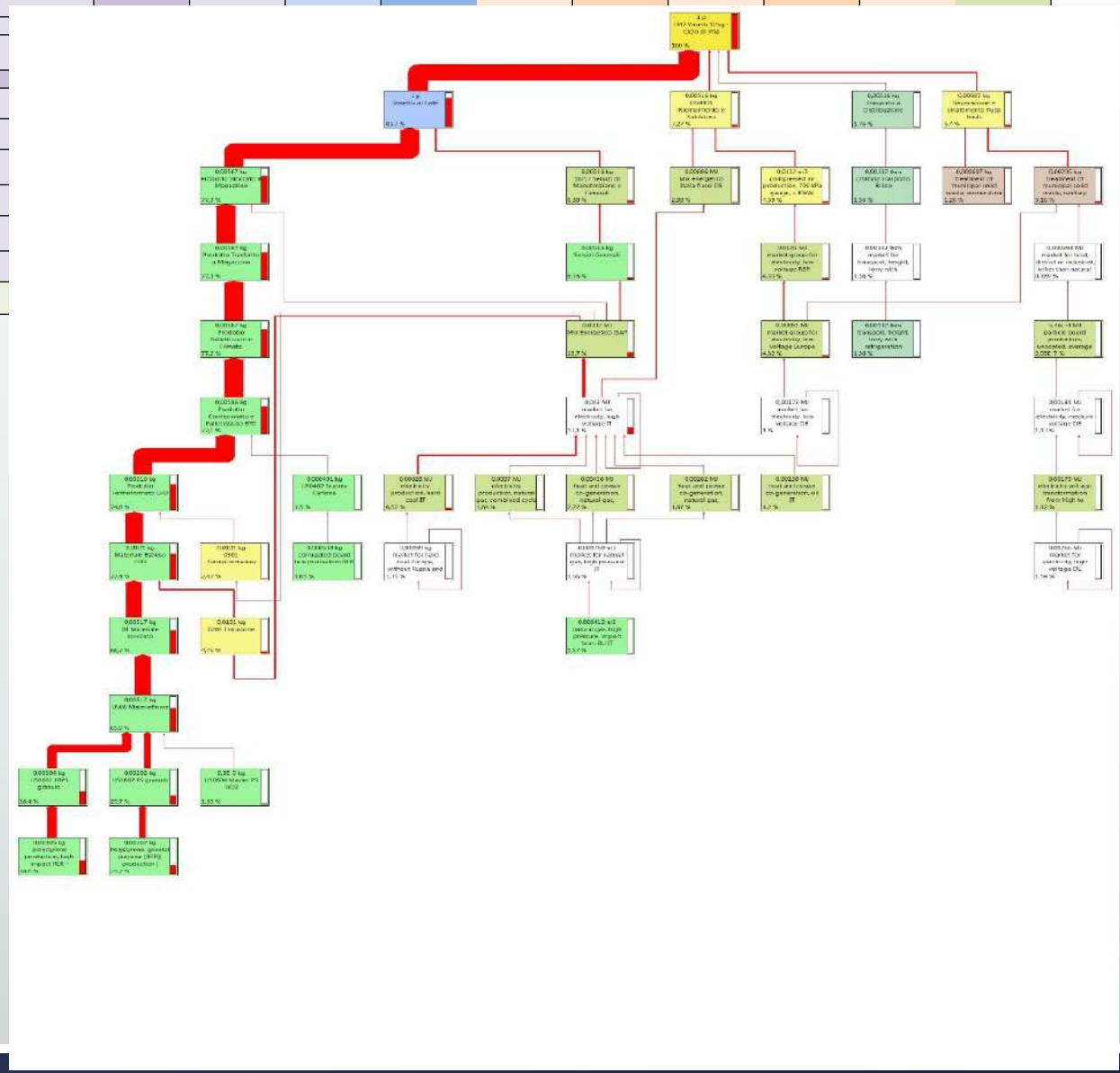
Purchases	Environmental Controls	Maintenance	Programming	Logistics	General Services	Raw material Managing	Administration
• Raw material & transport • Auxiliaries & transport • Packaging & transport	• Wastes • MUD	• Maintenance • Spare parts • Auxiliaries	• Bill of materials • Detail on produced pieces	• Internal transport • Transport to customers	• Energy consumption • Water consumption	• Preparation and consumption of raw materials	• Invoices

Our choice for EPD® PROCESS

DESIGNING THE LCA MODEL
DATA PROCESSING IN SimaPro

			CONSUMER									TOTALE AL GRAVE
			UPSTREAM			CORE		DOWNSTREAM				
		UNIT	MATERIE PRIME	PACKAGING	MATERIALI AUSILIARI	TRASPORTI	PROCESSO	TRASPORTO A RIEMPIMENTO	RIEMPIMENTO	DISTRIBUZIONE	TRASPORTO A FINE VITA	FINE VITA	
Global Worming Potential (GWP)	Fossil	kg CO_2 eq.											
	Biogenic	kg CO_2 eq.											
	Land Use and land trasformation	kg CO_2 eq.											
	Total	kg CO_2 eq.											
Acidification Potential (AP)		kg SO_2 eq.											
Eutrophication Potential (EP)		kg PO_4^{3-} eq.											
Formation Potential of tropospheric Ozone (POCP)		kg C_2H_4 eq.											
Abiotic depletion potential - Elements		kg Sb eq.											
Abiotic depletion potential - Fossil fuels		MJ, net calorific value											
Water scarcity potential		m^3 eq.											



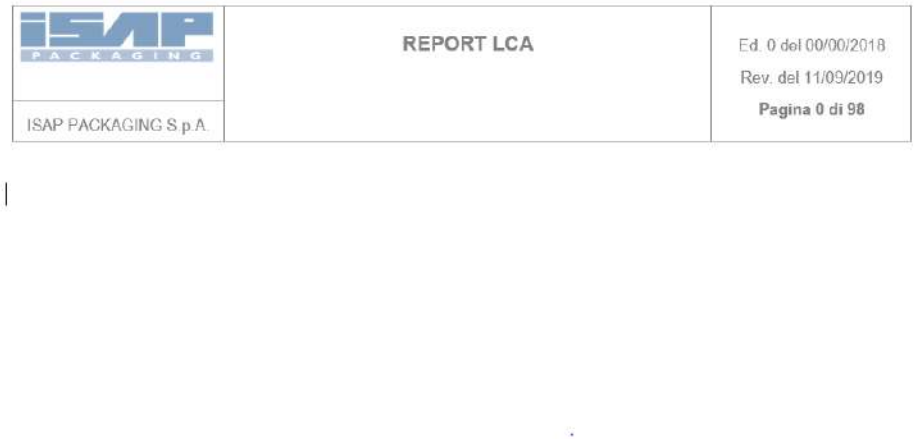


Our choice for EPD® PROCESS

Writing the LCA Report

The LCA Report is mandatory and must be written in compliance with the reference standards.

It is written step by step as the LCA model is designed on software to detail all the assumptions made.



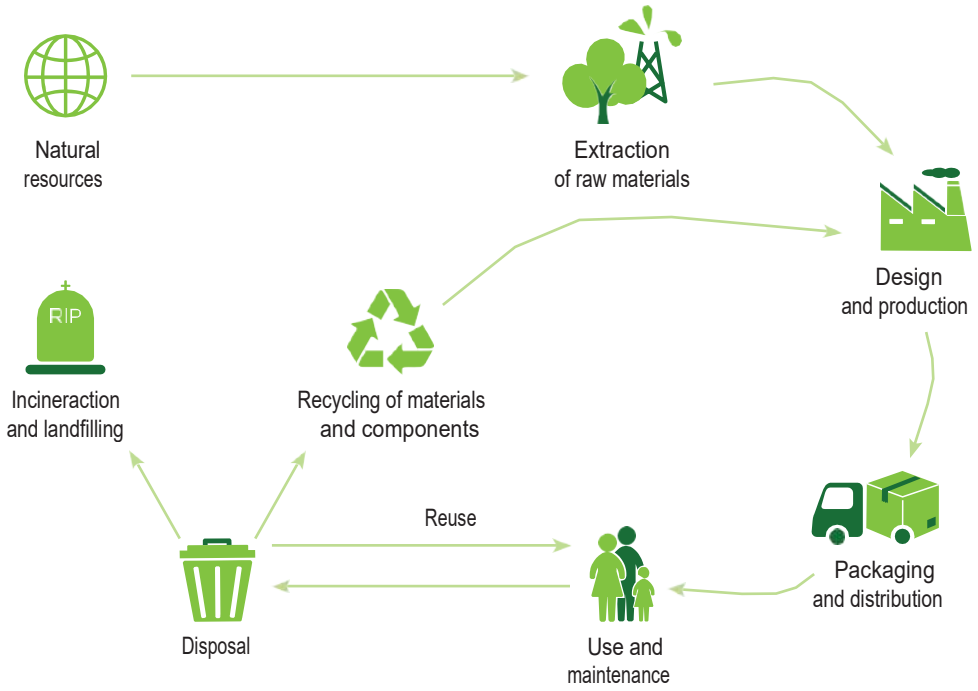
ISAP PACKAGING	REPORT LCA	Ed. 0 del 00/00/2018 Rev. del 11/09/2019 Pagina 0 di 98
ISAP PACKAGING S.p.A.		

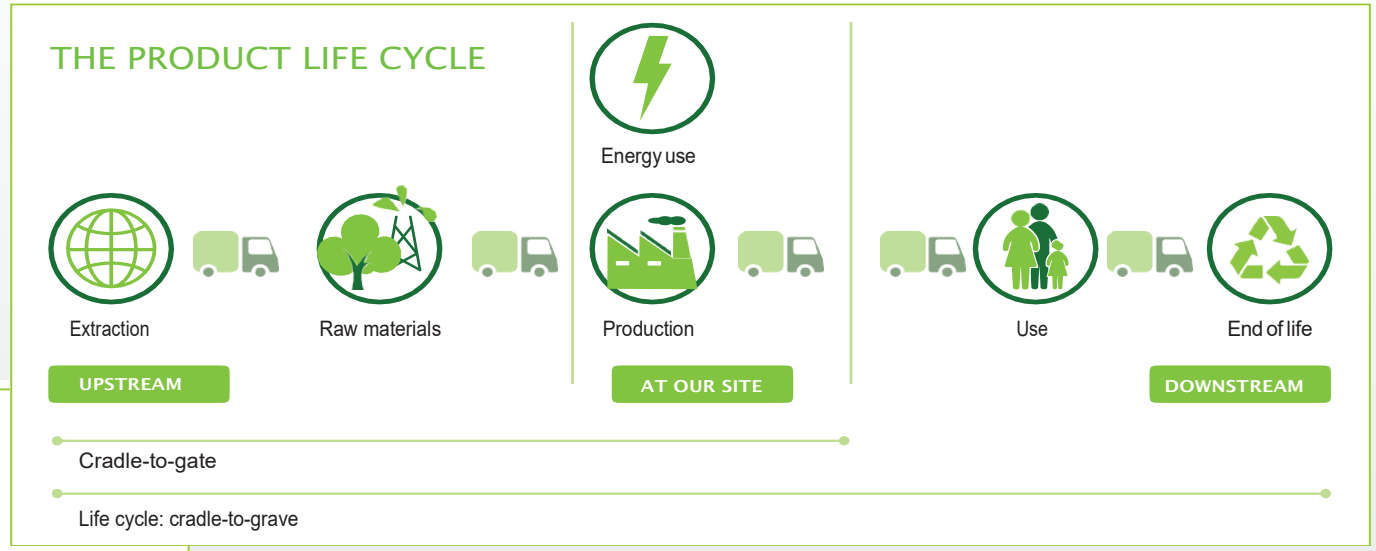
Report LCA

Sommario

Our choice for EPD® PROCESS

EPD PREPARATION





INFOGRAPHICS PUBBLISHED ON EASY GUIDE

Our choice for EPD® PROCESS

EPD PREPARATION

- EPD template - Construction products (EN 15804)
- EPD template - All other product categories

This template is intended as a voluntary best practice template. The template does not override the mandatory requirements as set by the PCR.

www.environdec.com

Environmental Product Declaration

EPD®

In accordance with ISO 14025 for:

[*Product name*]

from

[*Company name*]

[Company logotype]

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	S-P-0XXXX
Publication date:	2018-XX-YY
Valid until:	202X-XX-YY

[Product image]

Our choice for EPD® PROCESS

We have trained LCA Practitioner able to manage the processes of our Company

The International EPD® System is the most widely used programme for environmental declaration based on UNI EN ISO 14025.
It is possible to develop and certify the PROCESS EPD.

In this case the object of the certification is not the single Environmental Product Declaration, but the process of preparing Environmental Declarations within the Organization.

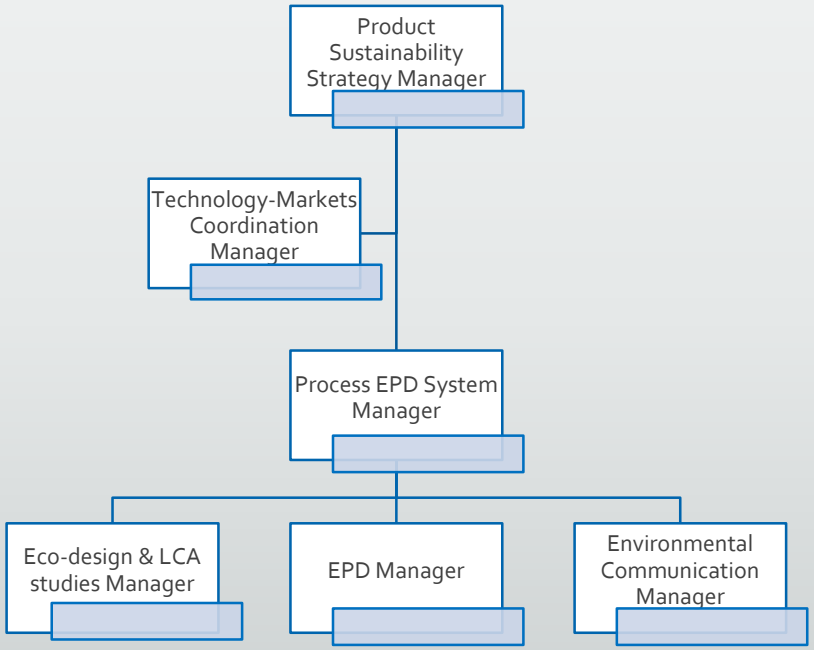
To do this, a **Documented Management System** must be developed

PROCESS EPD CERTIFICATION	
MANUAL FOR EPD PROCESS	
MANUAL FOR DATA COLLECTION	
INTERNAL VERIFICATION FORM	
LCA / EPD	
PROCESS EPD VERIFICATION FORM	
AT LEAST 1:	LCA PROJECT
	PRIMARY DATA DOCUMENTATION
	REPORT LCA
	REPORT EPD

EPD® PROCESS AND COMMUNICATION

ISAP PACKAGING S.p.A. ENVIRONMENTAL COMMUNICATION: PROJECT FOR RENOVATION

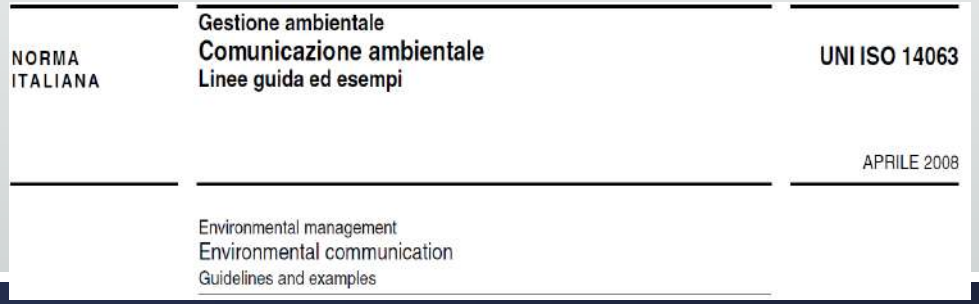
ISAP SUSTAINABILITY DEPARTMENT



Environmental communication in ISAP will refer to the UNI ISO 14063 standard

This standard defines the communication activities in this sector, based on the following 5 fundamental principles:

- ❑ Transparency
- ❑ Appropriateness
- ❑ Credibility
- ❑ Responsiveness
- ❑ Clarity



NORMA ITALIANA

Gestione ambientale
Comunicazione ambientale
Linee guida ed esempi

UNI ISO 14063

APRILE 2008

Environmental management
Environmental communication
Guidelines and examples

Daniele Simonazzi

ISAP Packaging S.p.A.
Lungadige Attiraglio, 67 – 37124 Parona Verona Italy
www.isap-packaging.com
daniele.simonazzi@flo.eu