

UN CPC 013
FRUITS AND NUTS

2012:07
VERSION 1.0



GENERAL INTRODUCTION

The International EPD[®] System is based on a hierarchic approach following the international standards:

- ISO 9001, Quality management systems
- ISO 14001, Environmental management systems
- ISO 14040, LCA - Principles and procedures
- ISO 14044, LCA - Requirements and guidelines
- ISO 14025, Type III environmental declarations
- ISO 21930, Environmental declaration of building products

The General programme Instructions are based on these standards, as well as instructions for developing Product Category Rules (PCR).

The documentation to The International EPD[®] System includes three separate parts (www.environdec.com):

- Introduction, intended uses and key programme elements
- General Programme Instructions Supporting annexes
- Supporting annexes

This PCR document specifies further and adds additional minimum requirements on EPDs of the product group defined below complementary to the above mentioned general requirement documents. Principle programme elements concerning the Product Category Rules (PCR) included in The International EPD[®] System are presented below.

PURPOSE	ELEMENT IDENTIFICATION AND PRINCIPAL APPROACH
Complying with principles set in ISO 14025 on modularity and comparability	1. "Book-keeping LCA approach" 2. A Polluter-Pays (PP), allocation method
Simplifying work to develop Product Category Rules (PCR)	3. PCR Module Initiative (PMI) in order to structure PCR in modules according to international classification 4. PCR moderator for leadership and support of the PCR work
Secure international participation in PCR work	5. Global PCR Forum for open and transparent EPD stakeholder consultation
Facilitating, identification and collection of LCA-based information	6. Selective data quality approach for specific and generic data

Product Category Rules (PCR) are specified for specified information modules "gate-to-gate", so called core modules. The structure and aggregation level of the core modules are defined by the United Nation Statistics Division - Classification Registry CPC codes (<http://unstats.un.org>). The PCR also provides rules for which methodology and data to use in the full LCA, i.e. life cycle parts up-streams and down-streams the core module.


The PCR also has requirements on the information given in the EPD, e.g. additional environmental information. A general requirement on the information in the EPD is that all information given in the EPD, mandatory and voluntary, shall be verifiable.

In the EPD, the environmental performance associated with each of the three life-cycle stages mentioned above are reported separately.

TABLE OF CONTENT

General Introduction	2
1 General information	4
2 Definition of the product group	5
2.1 Specification of manufacturing company	5
2.2 Specification of the product	6
3 Declared unit	6
4 Content of materials and chemical substances	6
5 Units and quantities	6
6 General system boundaries	7
6.1 Upstream processes	7
6.2 Core processes	7
6.3 Downstream processes	8
7 Core module	8
7.1 System boundaries	8
7.2 Cut off rules	9
7.3 Allocation rules	9
7.4 Data quality rules	10
8 Upstream module	11
8.1 System boundaries	11
8.2 Data quality rules	11
8.3 Rules for generic data	11
8.4 Other calculation rules specific for fruits and nuts	11
9 Downstream module	12
9.1 Use phase scenario	13
9.2 Recycling declaration and waste treatment	13
10 Environmental performance related information	13
10.1 Use of resources	13
10.2 Potential environmental impact	14
10.3 Other indicators	14
10.4 Other environmental information	14
11 Content of the EPD	15
11.1 Programme related information	15
11.2 Product related information	15
11.3 Environmental performance related information	15
11.4 Differences versus previous versions of the EPD	16
11.5 Verification	16
11.6 References	16
12 Validity of the EPD	17
13 Changes in this document	17

1 GENERAL INFORMATION

Date:	2012-08-23
Registration no:	PCR 2012:07
This PCR was prepared by:	George Michalopoulos & Lito Christodouloupoulou of RodaxAgro (www.rodaxagro.com) with the support of: Dr. M. Vasilakakis, Professor of Horticulture, Aristotle University of Thessaloniki, Thessaloniki 540 06 Greece, e-mail: vasilaka@agro.auth.gr Dr. K. Kalburtji, Professor of Agricultural Ecology, Aristotle University of Thessaloniki, Thessaloniki 541 24 Greece, e-mail: kalbourt@agro.auth.gr Dr. A.P. Mamolos Assistant Professor of Plant Ecology, Aristotle University of Thessaloniki, Thessaloniki 541 24 Greece, e-mail: mamolos@agro.auth.gr Dr. K. Abeliotis, Assistant Prof., Department of Home Economics and Ecology, Harokopio University, Athens, Greece, e-mail: kabeli@hua.gr
Appointed PCR moderator:	George Michalopoulos, parabem@hol.gr
Open consultation period:	2012-03-19 until 2012-04-20
Valid within the following geographical representativeness:	Global
Valid until:	2017-08-23
More information on this PCR's website:	http://www.environdec.com/en/Product-Category-Rules/Detail/?Pcr=8235 

This PCR document is valid irrespective of geographic production location until end of 2015. Any comments to this PCR document may be given on the Global PCR Forum or directly to the PCR moderator during the period of validity.

Effort was taken in the development of this PCR to align to the maximum possible extent with the following documents:

- PCR 2011:02 VERSION 1.0 UN CPC 01342 KIWI FRUIT
- PCR CPC GROUP 012: VEGETABLES
- PAS 2050:2011 Specification for the assessment of the life cycle greenhouse gas emissions of goods and services.
- PAS 2050-1:2012 (pending publication) Assessment of life cycle greenhouse gas emissions from horticultural products – Supplementary requirements for the cradle to gate stages of GHG assessments of horticultural products undertaken in accordance with PAS 2050
- Green House Gas Protocol 2011 Product Life Cycle Accounting and Reporting Standard.

UN CPC 013
FRUITS AND NUTS

The PCR document is a living document. If relevant changes in the LCA methodology or in the technology for the product category occur, the document will be revised and any changes will be published on the international website: www.environdec.com.

The EPD shall refer to a specific PCR version number. The production of new PCR versions does not affect the EPD certification period.

2 DEFINITION OF THE PRODUCT GROUP

The product category referred to the present PCR is: Fruits & Nuts. In particular the ISIC–CPC (http://unstats.un.org/unsd/cr/registry/docs/CPCv2_structure.pdf) version 2) classification is:

Section 0: Agriculture, forestry and fishery products

Division 01: Products of agriculture, horticulture and market gardening

Group 013: Fruits and nuts, which includes the following classes

- Class 0131: Tropical and subtropical fruits
- Class 0132: Citrus fruits
- Class 0133: Grapes
- Class 0134: Berries and the fruits of the genus vaccinium
- Class 0135: Pome fruits and stone fruits
- Class 0136: Fruit seeds
- Class 0137: Nuts (excluding wild edible nuts and groundnuts), in shell
- Class 0139: Other fruits, n.e.c.

In more detail the group includes the fruits and nuts referred to in the current version of product list published by GLOBALG.A.P on its website <http://www.globalgap.org>.

Note: Melons and watermelons are classified as vegetables (see PCR CPC GROUP 012: VEGETABLES). Also kiwi fruit is exempted as it is covered by PCR 2011:02.

2.1 SPECIFICATION OF MANUFACTURING COMPANY

The following mandatory and voluntary information of the producer shall be described:

MANDATORY INFORMATION	EXAMPLES ON VOLUNTARY INFORMATION
Name of the production company	Legal entity of the producer or producer group. Management system certificates (Quality / Environmental), Product certificates (e.g. GLOBALG.A.P.)
Primary production sites (geographic location of parcels of land, total area and number of plants, trees etc)	Environmental policy, Specific aspects regarding the production. Participating farmers in a producer group.
Auxiliary sites for post harvest handling of the products before or after packaging.	Environmental policy, Specific aspects regarding the production
Location of packaging and storage	Environmental policy, Specific aspects regarding the production.

facilities owned or subcontracted.	BRC, IFS Certificates
Issuer and Contacts	
Information on environmental management system of the production company.	

2.2 SPECIFICATION OF THE PRODUCT

The common name of the species and the plant variety shall be declared. If necessary, the scientific name of the species shall also be necessary to avoid ambiguity.

The production system shall be specified i.e. conventional, low input, integrated or organic farming and whether the cultivation takes place in open field or greenhouse.

The state that the product is presented in the market e.g. intact, cut or chopped, removed shell, fresh, dried or dehydrated, chilled, frozen or preserved in any other way and the type of packaging shall also be specified. Only primary product is considered. Processed product e.g. mixing with other products or additives is not included in the present specifications.

Also, Information on product durability (e.g. shelf life) can be provided.

All international, regional and national legal requirements on environment and food safety have to be respected.

3 DECLARED UNIT

The declared unit is 1 kg of packaged fruits or nuts including the non-edible parts. The weight of the package is not taken account of.

The declared unit shall be declared in the EPD. The environmental impact shall be given per declared unit.

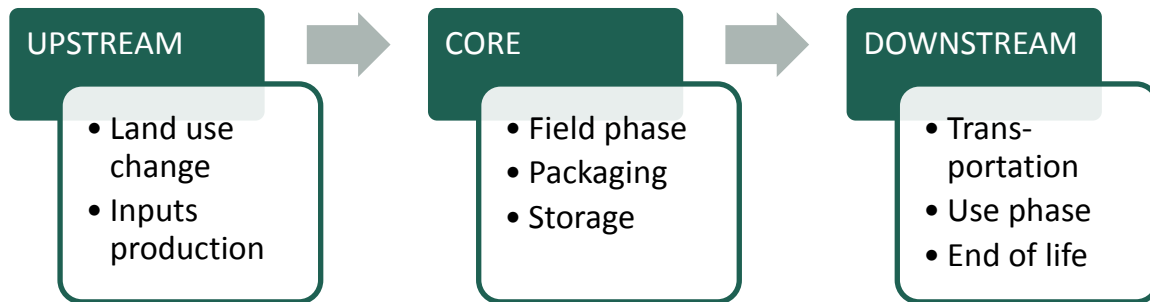
4 CONTENT OF MATERIALS AND CHEMICAL SUBSTANCES

In principle there should be nothing included in the declared unit except for the product itself. If else, the gross weight of any contained material shall be declared in the EPD at a minimum of 99% of one declared unit. Moisture content shall be declared if relevant.

5 UNITS AND QUANTITIES

SI units shall be used. A maximum of two significant figures shall be used when reporting LCA results.

6 GENERAL SYSTEM BOUNDARIES



6.1 UPSTREAM PROCESSES

The upstream processes include the following inflow of raw materials and energy wares needed for the production of fruit and nut products:

- Operations for the transformation of land use, if the crop life time is expected to be less than 25 years.
- Operations for the initial establishment of the crop including the irrigation system, if its life time is expected to be less than 25 years.
- The production of the following inflows and their external transportation to the production site(s) shall be considered: Substrates, cuttings, seedlings, seeds, agrochemicals (Plant Protection Products and fertilizers) ancillary material (detergents for cleaning) material for trellis etc.
- Extraction and use of water.
- The production processes for the generation of energy wares (fuel and electricity) used in agriculture at the farm and in the packaging and other facilities including cool storage.
- The production of semi products used in the core process, if applicable.
- Management of waste created in the upstream phase.

6.2 CORE PROCESSES

- Production of primary and secondary packaging material.
- External transportation to the core process and internal transportation.
- Agricultural production including all the processes such as pruning, plant protection, irrigation etc. It includes emissions to air, soil and water during and emissions from energy wares used in the agriculture as well as emissions of nitrous gases. The cradle for the agriculture is soil preparation and cultivation for each production cycle.
- Maintenance of machinery (e.g. tractors) and equipment (e.g. in the packing house).
- Preparation of the final product, including post harvest and post packaging treatment if applicable.
- On site storage including cool storage, before dispatch.
- Management of any by-products and of final waste.

6.3 DOWNSTREAM PROCESSES

The downstream processes include

- Transportation from final production / storage site to an average customer or consumer if relevant.
- The customer or consumer use of the product.
- Waste management after use of the product.
- Recycling or handling of packaging waste/materials after use.

In the EPD, the environmental performance associated with each of the three life-cycle stages above are reported separately.

7 CORE MODULE

7.1 SYSTEM BOUNDARIES

7.1.1 TECHNICAL SYSTEM

The processes listed below for the production of the final product, including primary and secondary packaging, shall be included. Production processes not listed here may be included. However, the production of the raw materials used for production of all product parts shall be included if applicable.

Production processes which are mandatory to include:

- Pruning
- Frost control
- Soil cultivation
- Mowing or other mechanical or manual weed control measures
- Trimming and mulching
- Fertiliser applications
- Chemical weed control and plant protection applications
- Irrigation
- Harvesting
- Post harvest and any post packing treatments
- Packing and Repacking
- Storage and cool storage
- Transportation of raw materials, intermediates, energy, products and goods
- By-products generation and management

A minimum of 99% of the total weight of the declared product including packaging shall be included.

By-products and products not compliant to the quality requirements shall be included. If they are destined to other chains (such as animal feed or organic waste treatment) this must be reported. Environmental impacts related to their transportation to the other chains shall be included, but their treatment should not be included in the system boundaries.

Waste that is deposited in landfill shall be declared as kg of waste (and kg of hazardous waste).

Waste management shall be included in the system boundaries. Where waste is used as animal feed this shall be quantified and transport requirements included.

Waste water treatment shall be included in the system boundaries.

The manufacturing of production equipment, machinery and infrastructure (e.g. sheds, buildings etc) and other capital goods shall not be included.

Business travel of personnel may be included. Travel to and from work by personnel should not be included.

Research and development activities may be included if relevant. This should be regulated on more detailed CPC levels.

Recycling of secondary packaging may be included in a quantified way. However, in that case it shall be reported separately and only the transportation to the recycling unit shall be included, while recycling will not be included in the total sum of the environmental impact of the core module.

7.1.2 GEOGRAPHICAL BOUNDARIES

The data for the core module shall be representative for the actual production processes and representative for the site/region where the respective process is taking place. Where data derive from many orchards, farmers or perhaps regions then inflows and emissions shall be representative of the average. Specific data should be collected from the site/region under study and retain the data quality rules described in Section 7.4.

7.1.3 TIME BOUNDARIES

Data on the product should reflect the entire lifetime of the product from establishment of the crop through to its end of life. Specific data shall be collected to represent the year(s) for which the production cycle was studied and the year/time frame for which the EPD is valid. EPD validity may be extended to 3 years provided that underlying data remains representative of the product as first declared, i.e. varying less than 10% in the second and third year. Specific data to be used for the study period will comply with data quality rules described in Section 7.4.

7.1.4 BOUNDARIES TO NATURE

Boundaries to nature are defined as flows of material water and energy resources from nature into the production system. Emissions to air, water and soil cross the system boundary when they are emitted from or leaving the product system.

7.1.5 BOUNDARIES TO OTHER PRODUCTS LIFE CYCLES

If there is an inflow of recycled material to the production system in the production phase, the recycling process and the transportation from the recycling process to where the material is used shall be included. If there is an outflow of material to recycling, the transportation of the material to the recycling process shall be included. The material going to recycling is then an outflow from the production system.

7.2 CUT OFF RULES

Life Cycle Inventory data for a minimum of 99 % of total inflows to the core module shall be included. The maximum of all exclusions shall not exceed 5% of the total inflows, and the final emissions should be pro-rated to 100% if omissions have occurred. Inflows not included in the LCA shall be documented in the EPD.

7.3 ALLOCATION RULES

7.3.1 ALLOCATION BETWEEN DIFFERENT GRADES OF PRODUCT

Where fruits and nuts are destined for human consumption, even though they may be of potentially different grades, they are considered equivalent in terms of the service they deliver, therefore no allocation is appropriate.

Where substandard or waste fruits or nuts is used as animal feed this will be regarded as «near to waste treatment» and it is not considered as a displacement of other feedstock.

7.3.2 ALLOCATION TO BY-PRODUCTS

Should the production plant generate more than one product, the inputs and outputs of the system should be partitioned between these different products or functions.

Partitioning should reflect the underlying physical relationships between them; i.e. they should reflect the manner in which the inputs and outputs are modified by quantitative changes in the products delivered by the system (allocation by mass).

For impacts regarding agricultural operations in a farm, allocation among different products should be avoided by considering the impacts of every single operation. For instance with regard to the fuel consumption it shall be estimated the consumption of every single operation onto a certain surface and then divided by the mass of product.

Any deviation from these rules must be declared in the LCA and in the EPD.

7.4 DATA QUALITY RULES

Assessment of emissions should use data that will reduce bias and uncertainty as far as practicable, by using the best quality data achievable. Specific data (often called site specific data) shall be used for the Core Process. Specific data are gathered from the sites where specific processes are carried out by the producer.

The requirement for specific data also includes actual product weights, amounts of inflows and materials used e.g. fertilizers, plant protection products etc, water, packaging, amounts of waste etc, as well as the outflows i.e. the yield of the products produced.

Where specific data in the analysed production system are variable as a result of deriving from many orchards or perhaps regions, then the following options are available for data collection on inflows and outflows, in relation to the period of validity of the EPD:

Inflows shall be typical of the production system implemented e.g. conventional, organic, low input etc. Specific data per farm must cover at least 90% of the production, except if it can be shown that by suitable sampling/stratified data the 'between-farm', 'between-region' and the 'temporal' variability are adequately covered. In order that sample size is adjusted to cope with inherent uncertainties it shall be derived from proper statistical analysis based on the actual size of the farms population and the standard deviation found through historical data. It should be shown that the standard error of the sample does not exceed by more than 10% the true mean value of the population.

Outflow (yield of the product per hectare) is in most cases much more variable than inflows, since -in a disciplined production system- the latter are controlled by the farmer.

So, sampling is quite unlikely to render representative yield in kg of product / hectare or the yield factor of m² of cropland required to produce 1 kg of product. Yield factor is much more critical than inflows for the final results as it is the only divisor of impacts per hectare. The options in such a case are:

- a) A typical yield factor (m²/kg) is agreed between the interested parties in the area / region under question, based on agronomic parameters and historical data for the area. This can be supported by a production protocol that defines the practices and inflows linked to the typical yield factor. This approach can lead to the maximum period of EPD validity.
- b) In absence of the above, a second option for a group of farms is to consider the worse-case scenario with regard to inflows and yield factor. In this case also, the maximum period of validity can apply.
- c) Last option is to consider every production period (cycle) as a unique batch in EPD terms, in which case the period of validity of the EPD will cover only a single production period.

Data integrity shall be supported by quality procedures, such as documentation, document control and internal audits. Suitable certification (e.g. GLOBALGAP, LEAF, BRC, IFS) should also be considered. Data records on inputs and outputs shall be available for verification and shall be traceable to the product lot numbers corresponding to the EPD.

Specific data for the generation of electricity bought shall be used if possible. If specific data are not available or if the electricity bought is not specified for parts of the Core Module, the electricity mix used in those parts shall be approximated as the official electricity mix in the country of manufacture. The mix of energy shall be documented including renewable sources. Where electricity has been generated locally and where good quality specific data exists on the fuel composition used to generate that electricity then this data should be used to estimate emissions from the electricity rather than the official electricity mix of the country. Electricity data should be verifiable by invoice or similar.

8 UPSTREAM MODULE

8.1 SYSTEM BOUNDARIES

All elementary flows at resource extraction shall be included, except for the flows that fall under the general 1% cut-off rule.

8.2 DATA QUALITY RULES

Specific data shall be used for operations at the farm(s), e.g. consumption of energy wares, waste generation etc.

Selected generic data shall be used for other parts of the LCI, i.e. data from commonly available data sources such as commercial databases and free databases describing specific raw materials or processes usually referring to the system under study or to other systems equivalent from a technical point of view.

For allowing the use of selected generic data, a number of pre-set characteristics must be fulfilled and demonstrated:

- Representativeness of the geographical area should adhere to “Data deriving from areas with the same legislative framework and the same energetic mix”,
- Technological equivalence adhere to “Data deriving from the same chemical and physical processes or at least the same technology coverage (nature of the technology mix, e.g. weighted average of the actual process mix, best available technology or worst operating unit)”,
- Boundaries towards nature adhere to “Data shall report all the quantitative information (resources, solid, liquid, gaseous emissions; etc.) necessary for the EPD”, and
- Boundaries towards technical systems adhere to “The boundaries of the considered life cycle stage shall be equivalent”.

Selected generic data can be used for upstream and downstream stages if no specific data is available. Some indicative data sources for generic data are Ecoinvent, ILCD and LCA food database.

8.3 RULES FOR GENERIC DATA

If these data sources do not supply the necessary data, other generic data may be used and documented. The environmental impact of the processes where the other generic data are used must not exceed 10% of the overall environmental impact from the product system.

Data calculated with system expansion should not be used, but if no other data is available, any negative flows should be changed to zero, see General Programme Instructions.

8.4 OTHER CALCULATION RULES SPECIFIC FOR FRUITS AND NUTS

8.4.1 SOURCES OF EMISSIONS

The assessment shall include emissions arising from all processes, inputs and outputs of a crop production system, including but not limited to:

- CO₂ emissions arising from biogenic carbon sources (e.g. soil biomass decay, if 8.4.2 below applies) other than for food and feed products for which CO₂ emissions may be excluded;
- CO₂ emissions arising from fossil carbon sources;
- Emissions due to burning of plant material, such as annual pruning or at end of life.
- CH₄ (methane) emissions arising from manure used as fertiliser and other agricultural processes;
- Emissions of nitrous compounds to air such as N₂O (nitrous oxide) and NH₃ (ammonia) arising from soils and agricultural processes and emissions of nitrates (NO₃⁻) to soil.

Delayed emissions: Where carbon containing materials are added to the production process and are likely to give rise to emissions during the use or end of life stages and within the 100 year assessment period, the potential emissions from those sources shall be assessed as if released at the beginning of the assessment period. A record of that assessment shall be made and retained separately from the overall assessment.

8.4.2 CO₂ REMOVAL AND STORAGE

In the event that crop establishment has not taken place through land use change within the last 20 years (in which case 8.4.3 applies) the following calculations can be included:

- CO₂ storage in soil may be included, if available data show a systematic increment of soil organic matter (SOC) towards a steady state at a higher SOC level which –through proper cultivation practices- would be expected to be maintained for more than 100 years.
- CO₂ removals by crop and weed photosynthesis may be included, with the exception of the amounts stored in the harvested products which shall not be included.

8.4.3 CALCULATION OF AVERAGE GHG EMISSIONS FROM LAND USE CHANGE

The carbon stock changes due to land use change within the last 20 years for the crop to be established shall be assessed in accordance with the calculations of the relevant chapters of Volume 4 (AFOLU) of the IPCC Guidelines for National Greenhouse Gas Inventories. Default IPCC values shall be used, unless specific data are available for refinement of the calculations.

9 DOWNSTREAM MODULE

Distribution scenario shall be defined at a more detailed level. Specific distribution assumptions (e.g. a weighted average distribution mode and route, or a worst case) shall be declared, as follows:

- Transportation: Distances of product distribution should be calculated by an average of the covered distances by each mode and route. Distribution data to the point of retail shall be subdivided by mode:
 - Sea transport
 - Air freight
 - Transport by rail
 - Transport by truck/lorry

Also, an average retailer shall be included as applicable.

- Wholesale / Retail storage / Cool storage
- Waste management

Transport from the retailer to the household should be excluded from the assessment.

9.1 USE PHASE SCENARIO

If the product needs a freezing phase or cold storage for preserving its shelf life, the environmental impacts related to this process shall be estimated.

Since the impacts could be quite variable, the following hypotheses shall be adopted in order to calculate the values in a “comparable” way. These hypotheses come from

www.lcafood.dk.

Electric energy due to the cold storage shall be evaluated by the following formula:

$$E_p = E_s \times 100\% / u \times V_p \times t$$

Where:

- E_s is the specific energy consumption of the cooling room (kWh per m^3 per day). If specific data are not available, calculations can be based on consumption of 0,59 kWh per m^3 per day of storage in a cold place (5°C) and 0,63 kWh per m^3 per day spent in freezer.
- u is the degree of utilisation of the storage room (%). If no specific information is available then 50% utilization shall be considered.
- V_p is the volume of the considered product (m^3). If unknown, it can be calculated on the basis of the specific weight of the packed product, in kg/m^3 .
- t is the time of the storage (days) assumed by the shelf life of the product.

A country-specific energy mix shall be used.

Different hypotheses could be used but they have to be presented in the EPD.

9.2 RECYCLING DECLARATION AND WASTE TREATMENT

Recommendation shall be given for packaging material to be treated according to the local recycling / waste treatment schemes, as well as recommendations for the treatment of the non-edible parts of the fruits and nuts.

The potential environmental impact and benefit of recycling and waste treatment shall be presented in the EPD. Calculations should take into account a typical scenario of the area in which the product is mainly distributed.

10 ENVIRONMENTAL PERFORMANCE RELATED INFORMATION

Values on the following indicators should be accompanied by information on uncertainty, qualitative or -in the case of product comparison- quantitative.

10.1 USE OF RESOURCES

The consumption of natural resources and resources per declared unit shall be reported in the EPD, divided into core, upstream and, if relevant, downstream module.

Input parameters, extracted resources:

- Non-renewable resources
 - Material resources
 - Energy resources (used for energy conversion purposes)
- Renewable resources
 - Material resources

- Energy resources (used for energy conversion purposes)
- Water use
- Electricity consumption during production phase

10.2 POTENTIAL ENVIRONMENTAL IMPACT

The environmental impact per declared unit for the following environmental impact categories shall be reported in the EPD, divided into core, upstream and, if relevant, downstream module:

- The emissions of greenhouse gases (expressed in global warming potential, GWP kg CO₂-equivalents, in 100 year perspective).
- Emission of ozone-depleting gases (expressed as the sum of ozone-depleting potential in CFC 11-equivalents, 20 years).
- Emission of acidification gases (expressed as the sum of acidification potential expressed in SO₂-equivalents).
- Emissions of gases that contribute to the creation of ground level ozone (expressed as the sum of ozone-creating potential, ethene-equivalents).
- Emission of substances to water contributing to oxygen depletion (expressed as PO₄³⁻- equivalents).

10.3 OTHER INDICATORS

The following indicators shall be reported in the EPD also expressed as per declared unit and divided into the two or three modules:

- Material subject for recycling or other use
- Hazardous and environmentally active waste, kg (as defined by regional directives)
- Other waste, kg
- Renewable energy, if applicable
- Toxic emissions: if applicable
- Land area occupied, ha
- Land use change, ha from/to land use type since 20 years

10.4 OTHER ENVIRONMENTAL INFORMATION

A detailed description of an organisation's overall environmental work (than indicated above under Chapter 3.2 Product related information), such as:

- the existence of a quality or environmental management system or any other type of organised environmental activity,
- any activity related to supply chain management, social responsibility (SR) etc., and
- information on where interested parties may find more details about the organisation's environmental work.
- Ecological footprint (www.footprintnetwork.org)
- Water footprint www.waterfootprint.org

Information about biogenic CO₂ emissions is not mandatory. If reported, the biogenic CO₂ emissions shall be separated from the other greenhouse gases (expressed in global warming potential, GWP, in 100 year perspective).

11 CONTENT OF THE EPD

11.1 PROGRAMME RELATED INFORMATION

The programme related part of the EPD shall include:

- Name of the programme and the programme operator
- The reference PCR document
- Registration number
- Date of publication and validity taking account of 7.4
- Geographical scope of application of EPD
- Information about the year or reference period of the underlying data to the EPD
- Reference to the homepage – www.environdec.com – for more information

11.2 PRODUCT RELATED INFORMATION

11.2.1 SPECIFICATION OF THE PRODUCTION COMPANY.

See 2.1.

11.2.2 SPECIFICATION OF THE PRODUCT

See 2.2

Total volume of fruits and nuts produced that corresponds to the EPD.

11.2.3 DECLARED UNIT

See 3

11.2.4 CONTENT OF MATERIALS AND CHEMICAL SUBSTANCES

See 4

11.2.5 COMPARISONS OF EPDS WITHIN THIS PRODUCT CATEGORY

To be able to compare EPDs within this product category, they have to be based on this particular PCR. The user of the EPD information should be made aware of this by the inclusion of this statement in the EPD:

“EPDs from different programmes may not be comparable”

11.2.6 VALIDITY OF THE EPD

The temporal validity of the EPD shall be reported in the EPD taking account of 7.4.

11.3 ENVIRONMENTAL PERFORMANCE RELATED INFORMATION

11.3.1 ENVIRONMENTAL PERFORMANCE DECLARATION

Minimum set of parameters from the LCA study, reported per functional unit.

UN CPC 013
FRUITS AND NUTS

Upstream module, Core module and Downstream module shall be reported separately for the resource use, potential environmental impact and other indicators such as waste.

11.3.2 USE OF RESOURCES

In this category the consumption of natural resources and resources per declared unit shall be reported
See 10.1

11.3.3 POTENTIAL ENVIRONMENTAL IMPACT

In this category the potential environmental impacts shall be reported (See 10.2).

11.3.4 OTHER INDICATORS

In this category relevant indicators shall be reported per declared unit.
See 10.3

11.3.5 ADDITIONAL ENVIRONMENTAL INFORMATION

See 10.4

11.4 DIFFERENCES VERSUS PREVIOUS VERSIONS OF THE EPD

The main causes for changes in environmental performance in comparison with previous EPD versions shall be described shortly.

11.5 VERIFICATION

The EPD shall give the following information about the verification process:

PCR review, was conducted by:	Technical Committee of the International EPD [®] System
Independent verification of the declaration and data, according to ISO 14025:	EPD process certificate or EPD verification, name of the third party verifier
Accredited or approved by (if relevant):	Name of the organisation

11.6 REFERENCES

The EPD shall -if relevant- refer to:

- The underlying LCA
- The PCR used
- Other documents that verify and complement the EPD
- Instruction for recycling
- Programme instructions
- Sources of additional information

12 VALIDITY OF THE EPD

See 7.4.

If changes in any of the environmental impacts are larger than +- 5% the EPD shall be adjusted. Regardless, the EPD shall be reviewed every three years.

13 CHANGES IN THIS DOCUMENT

VERSION 1.0, 2012-08-23

Original version.

