



**STUDY ON EXTERNAL
ENVIRONMENTAL EFFECTS
RELATED TO THE LIFE
CYCLE OF PRODUCTS AND
SERVICES**

FINAL REPORT

APPENDIX 1

FEBRUARY 2003

EUROPEAN COMMISSION
DIRECTORATE GENERAL ENVIRONMENT
Directorate A- Sustainable Development and Policy support

Contact BIO Intelligence Service

Eric LABOUZE / Véronique MONIER / Yannick LE GUERN

☎ 33 (0)1 56 20 28 98

✉ elabouze@biois.com; vmonier@biois.com

CONTENT

FACT SHEET	VEGETABLES.....	3
FACT SHEET	FOOD FROM ANIMALS	7
FACT SHEET	ALCOHOLIC BEVERAGES.....	11
FACT SHEET	FOOTWEARS	14
FACT SHEET	TEXTILES	19
FACT SHEET	BUILDING STRUCTURE	25
FACT SHEET	CIVIL WORK.....	30
FACT SHEET	BUILDING OCCUPANCY	34
FACT SHEET	ELECTRIC AND ELECTRONIC PRODUCTS.....	38
FACT SHEET	FURNITURES.....	48
FACT SHEET	CLEANING AGENTS	54
FACT SHEET	GARDENING	59
FACT SHEET	WATER SUPPLY.....	62
FACT SHEET	MUNICIPAL WASTE MANAGEMENT	67
FACT SHEET	BABY PRODUCTS	71
FACT SHEET	PACKAGING	73
FACT SHEET	PAPER PRODUCTS	79
FACT SHEET	TRANSPORTS	82
FACT SHEET	LUBRICANTS OIL.....	86

FACT SHEET

VEGETABLES

A. Content of the Category

Product category	Vegetable food products
Constituting elements	Vegetables 41%, of which potatoes (39%) and tomatoes (16%); Cereals 24%, of which 81% wheat; Fruits 24% of which 26% oranges; Sugar 8%.
Analysed elements	Wheat (19%) and potatoes (16%)

B. Functional Unit

One year of use of vegetables products per capita in Europe.

C. Main Sources of Information

Production figures:

[1] FAOSTAT 2000 (www.fao.org)

[2] VAVI 2001 Samen met kwaliteit naar de top (Together with quality to the top, Dutch Potato Processing Industry)

Environmental impacts:

[3] IVAM 2000 : IVAM LCA Data 3.0

[4] Zeijts, H. van and J.A.W.A.Reus (1996): Toepassing van LCA's in landbouwproducten (Application of LCA in agricultural products), CML, LEI-DLO and CLM

[5] Blonk, H., M. Lafleur and H. van Zeijts (1997) Towards an environmental information infrastructure for the Dutch food industry – Exploring the environmental information conversion of 5 food commodities, IVAM and CLM

[6] Jungbluth 2000 Umweltfolgen des Nahrungsmittelkonsums: beurteilung von produktmerkmalen auf Grundlage einer modularen Okobilanz- (Environmental impact of Food products- Assessment of Products on basis of LCA, ETH)

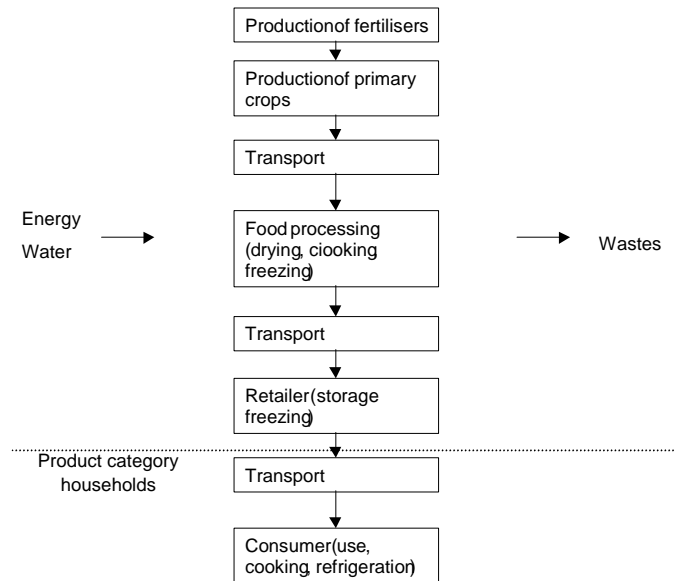
STUDIED SYSTEM

Life cycle steps	Main assumptions for calculation	Not included (no data available)
Production	<ul style="list-style-type: none"> ▪ Only vegetable food products for human consumption are considered; ▪ Vegetable crops produced for animal food will be included in the product category of animal food products; ▪ Alcoholic beverages (beer and wines) are part of another product category (alcoholic beverages) and not taken into consideration; 	
Use	<ul style="list-style-type: none"> ▪ The chain has been analysed up to the retailer, the hometransport and cooking are part of the product category households and will not be integrated in the analysis. However, this phase is expected to represent the highest environmental impact for the potatoes chain (over 50% according to the Dutch Potato Processing Association <i>Teelt, Tafel en Traject, 2001</i>). ▪ All wheat for human consumption is consumed as bread. ▪ Allocation of the manure used as fertiliser is done on basis of value, about 25% is allocated to vegetable products, the remaining part to the animal products. 	

Life cycle steps	Main assumptions for calculation	Not included (no data available)
End of life	<ul style="list-style-type: none"> Disposal of waste streams from primary production and recycling is considered. 	
Packaging		Not taken into account

Population considered in Europe for calculations : 1998 - 375 millions inhabitants.

SYSTEM STUDIED FOR ONE YEAR OF CONSUMPTION OF VEGETABLE PRODUCTS IN EUROPE



D. Main Data and Hypotheses

D.1. Main Data and Hypotheses for the use step

Production of fertilisers	<ul style="list-style-type: none"> ▪ Potatoes for direct consumption: Production/use of fertiliser based on specific needs for clay soil (Dutch situation). Fertiliser types: CAN (17% N), TSP (20% P) and K₂O. Taking 240 kg N, 135 kg P₂O₅ and 230 kg K₂O per ha crops. ▪ Potatoes for chips: Production/use of fertiliser based on specific needs for clay soil. Fertiliser types: CAN (17% N), TSP (20% P) and K₂O Taking 190 kg N, 135 kg P₂O₅, 230 kg K₂O per ha crops. ▪ Wheat: Taking 183 kg N/ha. P, K stated as applied to the previous crop
Production of primary crops	<p>Potatoes:</p> <ul style="list-style-type: none"> ▪ Crops for direct cons.: yield 45 t/ha, seed 2,2 t/ha ▪ Crops for chips: yield 55 t/ha, seed 2,2 t/ha ▪ Pesticides (type unknown): 20,2 kg pesticides/ha for direct consumption; 12,75 kg pesticides/ha for chips ▪ Energy needs (both cases): 4,0 kg diesel for harvest machines incl. manure appl. 1,6 kg diesel for irrigation (46 mm/ha/y on average) ▪ CO₂-sequestration. C-fraction: 0,423 of dry matter; fraction dry matter 0,3-0,6 (av. 0,45) for potatoes => 19% C => 0,70 kg CO₂/kg potato. ▪ Electricity use: 0,16 MJ for 0,95 ton potatoes (model UCPTTE) <p>Wheat:</p> <ul style="list-style-type: none"> ▪ Crops: category 'Winter Wheat NL' refers to 39% straw winter wheat and 61% winter wheat ▪ Straw winter wheat=0,62 ton/y; yield = 4,9 t/ha ▪ Winter wheat NL=0,981/y; yield = 8.1 t/ha ▪ Pesticides (type unknown): 3,6 kg/ha ▪ Energy needs:15,2 kg diesel (tractor) + 0,85 MJth gas ▪ CO₂-sequestration. C-fraction: 0,4853 of dry matter; fraction dry matter 0,78-0,88 (av. 0,83) => 40% C => 1,48 kg CO₂/kg wheat.
Transport	<ul style="list-style-type: none"> ▪ Potatoes (consumption&chips): 16t trucks. No fuel consumption available. Assumption IVAM of 6,7 t.km. ▪ Allocations: 0,228 t slurry 20%, 0,021 solid manure 100% ▪ Distance: 100 km ▪ Wheat: assumption IVAM of 420 kg.km (no fuel consumption available) ▪ No discrimination possible between transport field-factory and factory-retailer
Food processing	<ul style="list-style-type: none"> ▪ Chips: production of potatoes for chips related to Dutch situation (expect for energy use: UCPTTE model¹). Production of soy oil is average of European processing with UCPTTE model for the energy use. – potatoes for chips: 1,2 kg per kg chips – soy bean oil refined: 0,14 kg per kg chips <p>Electricity model UCPTTE: 2,82 MJ/kg chips, including:</p> <ul style="list-style-type: none"> – 3 MJ primary energy/kg prepared potato chips. Conversion factor 0,46. – 9 MJ primary energy/kg fried potatoes. Conversion factor 0,43. <ul style="list-style-type: none"> ▪ Bread: production of drinking water and sugar (beet) with respect to Dutch situation. – water: 0,344 liter/kg bread – wheat: 0,683 kg/kg bread – sugar: 0,0072 kg/kg bread – NaCl: 0,0063 kg/kg bread <p>Electricity model UCPTTE: 1,75 MJ/kg bread Heat (industrial): 10,7 MJ; 0.036 kg yeast, assumption 297 MJ/kg yeastbrick. Heat (yeast excluded): 1,62 MJ; taking energy content of 44 g margarine into account (0,044x14=0,62 MJth + 1 MJ for industrial processing)</p>
Transport to retailer	<ul style="list-style-type: none"> ▪ No transport to the retailer has been taken into account

¹ UCPTTE model for electricity: Electricity model based on 55.3% thermic energy, 32.3% nuclear power and 12.4% hydro power contribution in 1988. Conventional energy subdivided in 37.5% coal, 9.7% light fuel oil and 8.1% gas.

- Retailer
- Energy use for retailing: energy contain of PE packaging taken as 0,5 kg PE per tonne potatoes direct consump./for chips (field storage starch potatoes. Source Intramap, 1995). Energy contain of PE is taken from the APME Ecoprofiles Report 3: Polyethylene and polypropylene, PWMI, May 1993 and report 10, May 1997. Aggregated data.
- Data quality
- Potatoes and bread are the major constituents of this category. Together they amount up to 35% of the total category. This limits the conclusions that can be drawn based upon these figures. However adding more products to the analysis will cost a lot of time, resulting in only a very small increase in scope as the next largest product (sugar) is only half the size of the considered ones and also is an open air bulk product.
 - The analysed products are open air products, therefore the growing is considered to be CO2 negative, as CO2 sequestration is taken into account.
 - For the environmental data IVAM LCA Database 3.0 has the best available data. For potatoes the data are from 1996. As the Netherlands are ahead in environmental management in agriculture (VAVI 2002), this data is considered to be representative for the EU around 2000. For bread the data are from 1999.
 - Not all data is consistent and complete. There is often more water used than emitted (in product, air or waste water) and some information available for agricultural production (eg. Potatoes or wheat) is not available at the production of food products (chips or bread). We have corrected for this if possible.

FACT SHEET

FOOD FROM ANIMALS

A. Content of the Category

Product category	Food from animal origin.
Constituting elements	Meat, eggs, fish, poultry, milk.
Analysed elements	Meat from cow, and milk.

B. Functional Unit

One year of consumption of milk and meat per capita in Europe.

C. Main Sources of Information

[1] International conference on LCA in Foods. Gothenburg, Sweden 26-27 April, 2001. "System expansion and allocation in Life Cycle Assessment of meat and milk production." C. Cederberg, department of Applied Environmental Science, Göteborg University, M. Stadig, SIK The Swedish Institute for food and Biotechnology, Göteborg.

[2] The International Journal of Life Cycle Assessment, Vol.7 N°2 2002. LCA case studies, Life Cycle Assessment of Industrial milk production. M Hogaas Eide, TINE Norwegian Dairies, Centre for Research and Development.

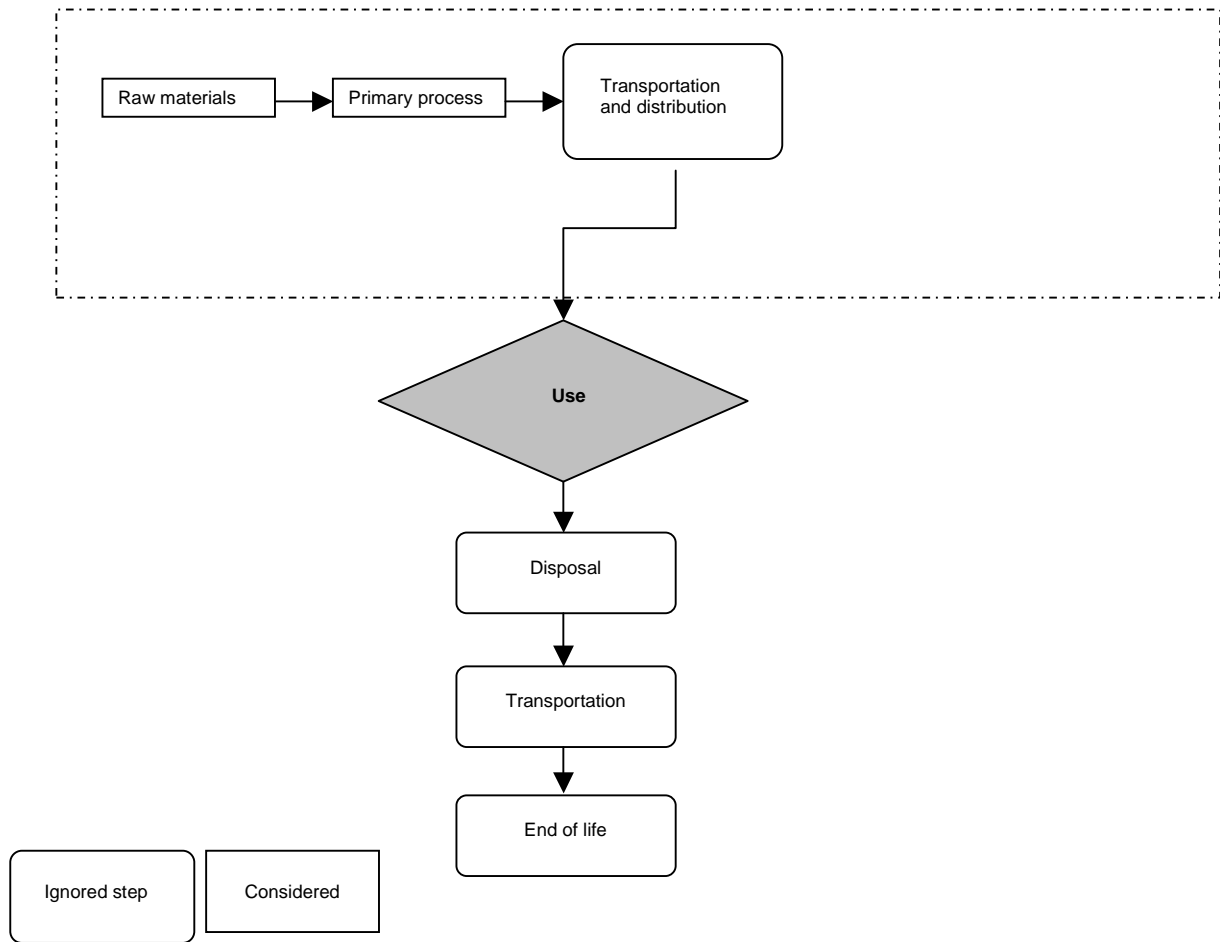
[3] Final report on the assessment risk of geographical BSE risk (GBR) of Latvia 2002, study for European commission June 2002

[4] Agriculture, Statistical yearbook 2000 – Data 1990-1999. European commission, Agriculture and Fisheries.

D. Studied System

Life cycle steps	Main assumptions for calculation	Not included
Production	<ul style="list-style-type: none"> ▪ Only meat from beef and milk are considered because of the lack of data. ▪ For meat, data are taken from life assessments for food products for the production step. Waste from slaughter houses are based on another study for European commission. 	
Use		
End of life		
		<ul style="list-style-type: none"> ▪ Transport and packaging

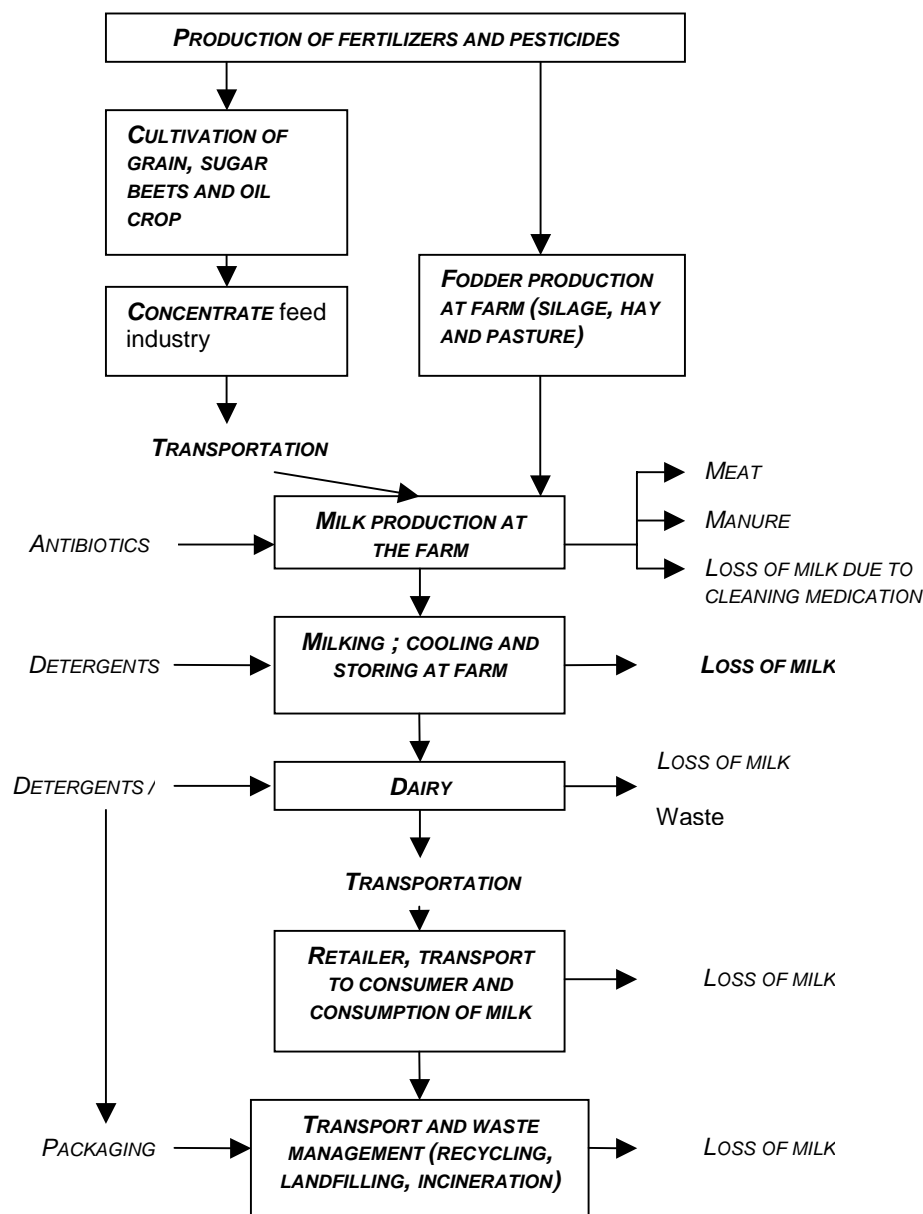
Population considered in Europe for calculations: 1998 - 375 millions inhabitants.

SYSTEM STUDIED FOR ONE YEAR OF FOOD FROM ANIMALS CONSUMPTION IN EUROPE

E. Main Data and Hypotheses

E.1. Main Data and Hypotheses for the Production Step

FLOWCHART FOR INDUSTRIAL MILK PRODUCTION [2]



[TAB 1] LIFE CYCLE ASSESSMENT FOR MILK PRODUCTION

Values for one litre of industrial milk		Source
Total primary energy (MJ)	6,3	[2]
Acidification (mol H+)	190	[2]
Ozone depletion potential (g CFC eq.)	0,56	[2]
GWP 100 (g CO2 eq.)	620	[2]
Photo oxidants formation (g ethene eq.)	27	[2]

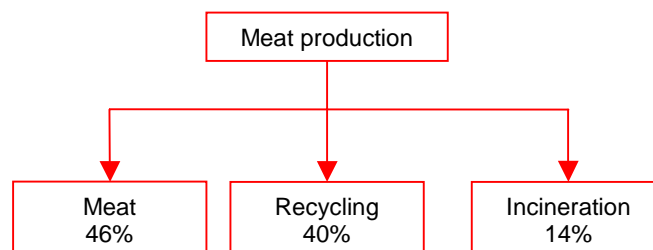
The study [2] defines three scenarios for milk production: a large dairy, a middle size dairy and small dairy; it's been assumed to take the values for the small dairy, because it represents the worst case. Gases from enteric fermentation are not considered.

[TAB 2] LIFE CYCLE ASSESSMENT FOR ONE KG OF BONE FREE MEAT

Total primary energy - MJ	25,9
GWP 100 - kg CO ₂ eq. ²	22,3
Acidification g H ⁺ eq.	14

Source [1]

Assumption for waste from slaughterhouse:



Source [3].

For one kg of bone free meat produced, the amount of waste represents 0.3 kg of generated for one kg of bone free meat (14%), this wastes are incinerated.

E.2. Animal food consumption in Europe

- Milk for consumption (1997): 28 988 kt for EU-15 [4], which represents **77.3 kg/cap/year** ;
- Meat consumption :

	Kg/cap/year [4]
Meat	95,9
Beef	19,5
Pork	43,2
Sheep	3,7
Poultry	21,4
Other	2,6

The life cycle assessment of beef meat can not be extrapolated to the total meat consumption. It's notably due to gas releases from enteric fermentation which are important for ruminants.

The meat consumption taken into consideration is **19.5 kg/cap/year**.

² Gases from enteric fermentation are considered.

FACT SHEET

ALCOHOLIC BEVERAGES

A. Content of the Category

- Product category** Alcoholic beverage.
- Constituting elements** Agricultural and industrial phases for the production of alcoholic beverages.
- Analysed elements** Wine only.

B. Functional Unit

One year of consumption of wine per capita in Europe.

C. Main Sources of Information

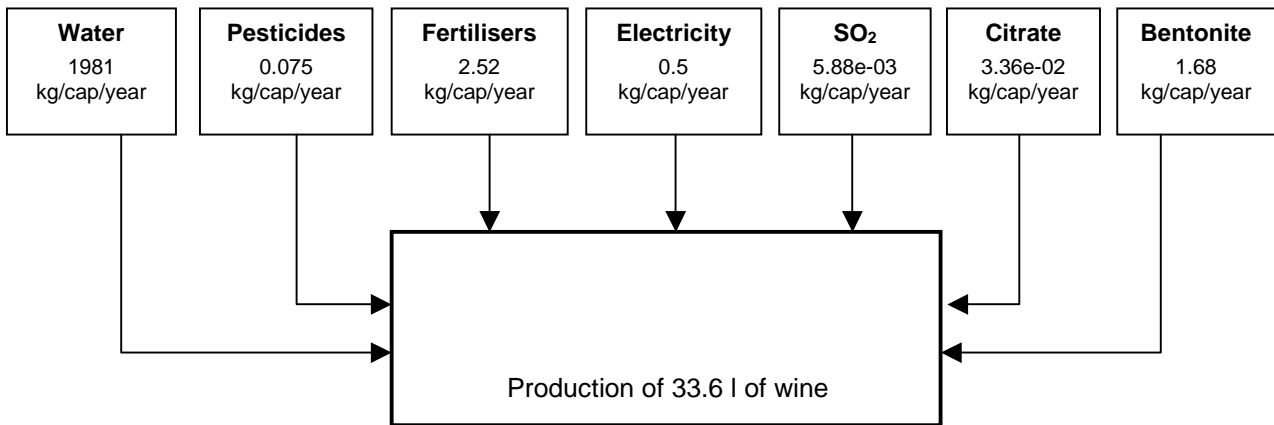
- [1] International conference on LCA in foods. Gothenburg, Sweden, 26-27 April, 2001. Comparison of conventional and organic wine. G.M. Nicoletti, B. Notarnicola, G Tassielli
- [2] Agriculture, Statistical yearbook 2000 – Data 1990-1999. European commission, Agriculture and Fisheries.

D. Studied System

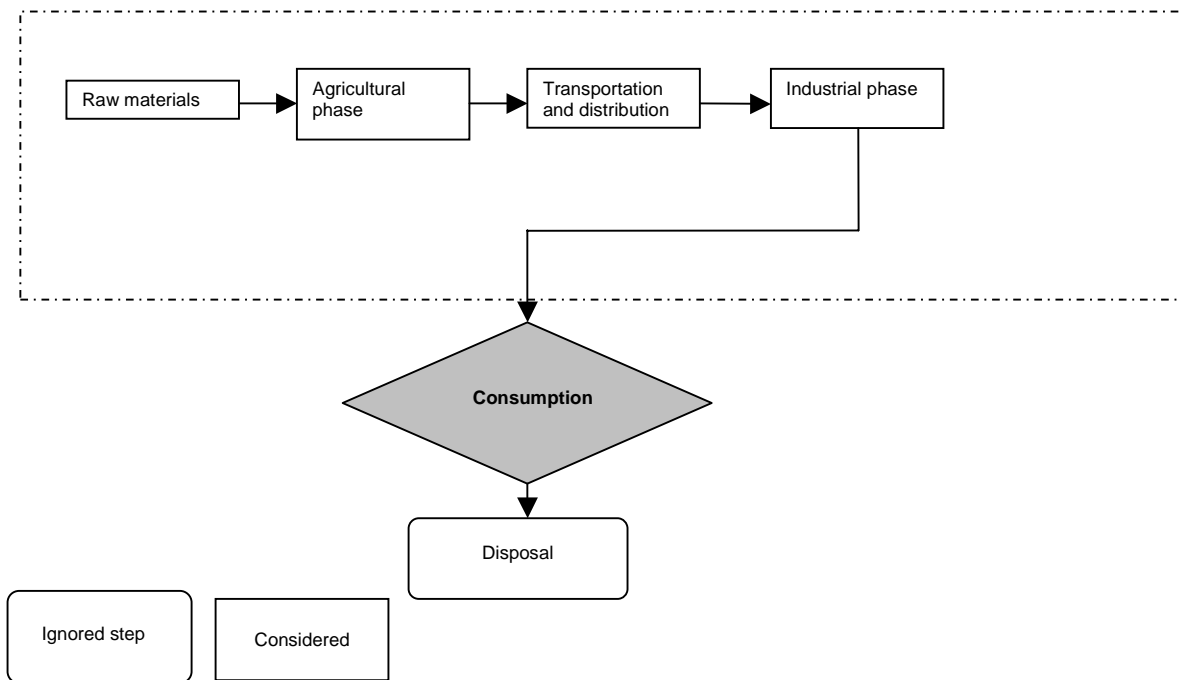
Life cycle steps	Main assumptions for calculation	Not included
Production	<ul style="list-style-type: none"> The production is considered from grapes cultivation to the production of one litre. Energy, materials and chemicals are considered for the agricultural and industrial phase. 	<ul style="list-style-type: none"> Bottles are not considered
Use		
End of life		
Transport and packaging		<ul style="list-style-type: none"> Transports have not been included

Population considered in Europe for calculations: 1998 - 375 millions inhabitants.

FLOWCHART



SYSTEM STUDIED FOR ONE YEAR OF WINE CONSUMPTION IN EUROPE



E. Main Data and Hypotheses

E.1. Main Data and Hypotheses for the Production Step

[TAB 1] MAIN INPUTS FOR ONE LITRE OF WINE

	Conventional wine (kg)	Source
Agricultural phase		
Water	57	[1]
Diesel	0.010	[1]
Lube oil	0.00023	[1]
Fertilisers	0.075	[1]
<i>Ammonium sulphate</i>	0.028	[1]
<i>Super phosphate</i>	0.012	[1]
<i>Potassium chloride</i>	0.035	[1]
Pesticides	0.00224	[1]
<i>Insecticides</i>	0.00094	[1]
<i>Fungicides</i>	0.0013	[1]
Industrial phase		
Electric energy (kWh)	0.015	[1]
Water	0.9	[1]
SO ₂ (mg)	175	[1]
Citric acid (g)	1	[1]
Bentonite (g)	50	[1]
Potassium bicarbonate (g)	130	[1]

Consumption of wine in Europe (l/cap/year): **33.6** (source [2])

For diesel, the module diesel combustion has been taken with the consideration that this module is done with a primary energy of 2.8 MJ/km which represents the consumption of 0.07 litres.

[TAB 2] MODULES USED FOR LCI AND VALUES FOR ONE YEAR OF WINE CONSUMPTION

Inputs	Consumption kg/cap/year	Module used in SIMAPRO for LCI
Fertilisers	2.52	Fertiliser production 1 kg
Pesticides	0.075	Pesticide production 1 kg
Lube oil	0.008	Huile de base 1 kg LCI from [2]
Diesel	0.03	Diesel combustion 1km
Electric energy (kWh)	0.504	Electricity UCPTTE 1 kWh
SO ₂	5.88E-03	SO2 production 1kg Boustead
Bentonite	1.68	Bentonite production Boustead

No available LCI for citric acid and potassium bicarbonate.

FACT SHEET

FOOTWEARS

A. Content of the Category

Product category Leather women shoes, synthetic shoes and slippers.

Constituting elements Leather, plastics, rubber, metals and textiles.

Analysed elements Production and end of life steps.

B. Functional Unit

One year of shoes consumption per capita in Europe.

C. Main Sources of Information

[1] Journal of life cycle assessment vol.3 n°4 1998, LCA case studies: application of life cycle assessment to footwear. L. Milà, X. Domènech, Joan Rieradevall, P. Fullana, R. Puig.

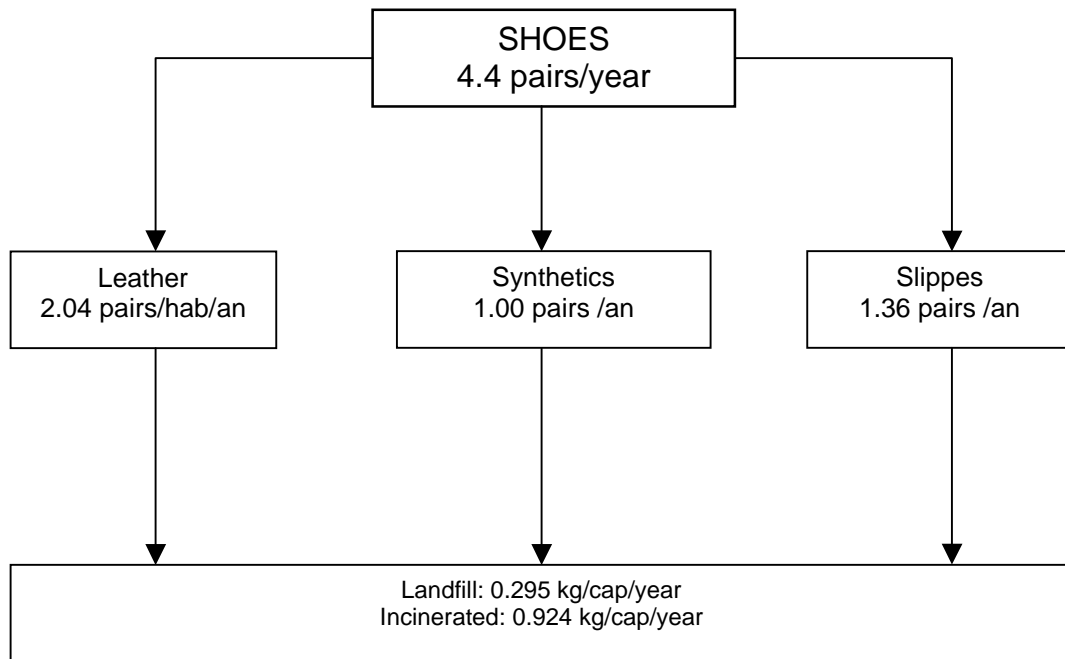
[2] Consumers in Europe. Facts and figures. Data 1996-2000. 2001 Edition.

D. Studied System

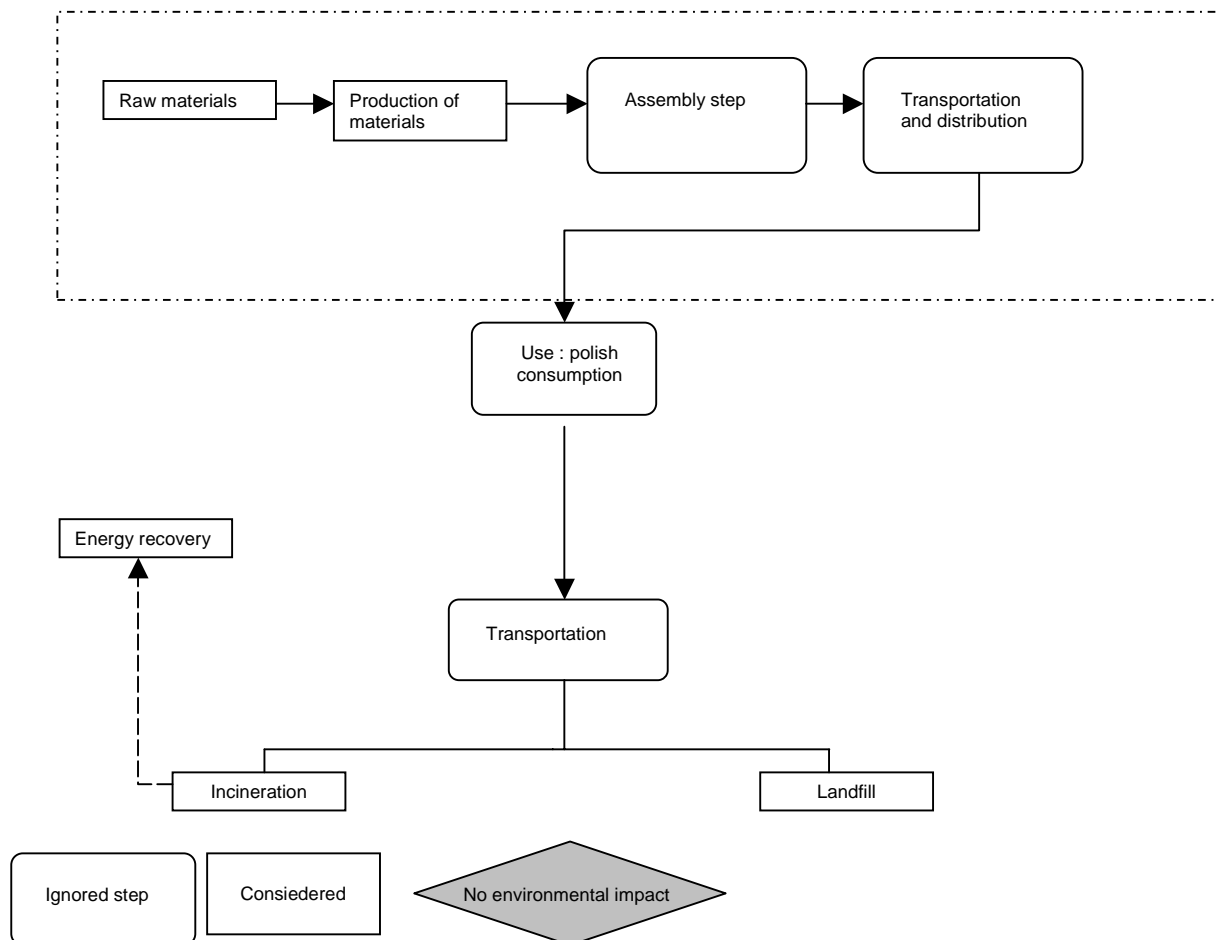
Life cycle steps	Main assumptions for calculation	Not included (no data available)
Production	<p>Leather shoes :</p> <ul style="list-style-type: none"> ▪ Functional unit : 1000 hours of protection of the feet, defined as one year of standard use. (3,7 pairs/year; 14h/day; 5 days /week; 45 weeks/year) calculated for 4 pairs/year. ▪ A typical value of 7.69 %, as the relative economic value of hides, is used for allocation of leather. <p>Synthetics and slippers :</p> <ul style="list-style-type: none"> ▪ Masses and materials are estimated. 	Other materials
Consumption	<ul style="list-style-type: none"> ▪ Based on the share of the market. 	
End of life	<ul style="list-style-type: none"> ▪ The same than textiles. 	
Transport and packaging		Not taken into account

Population considered in Europe for calculations: 1998 - 375 millions inhabitants.

FLOWCHART



SYSTEM STUDIED FOR ONE YEAR OF CONSUMPTION OF SHOES IN EUROPE



E. Main Data and Hypotheses

E.1. Main Data and Hypotheses for the production step

[TAB 1] FOOTWEAR MARKET IN FRANCE AND EU-15

Shares in % by market segment France		Consumption	Source	pairs cap/year
Leather	46.4 %	112 466 000 pairs	[2]	1.9
Synthetics	22.7 %	54 873 000 pairs	[2]	0.9
Slippes	30.9%	74 712 000 pairs	[2]	1.2
France		242 051 000 pairs		4.2
Apparent consumption in EU		1 656 006 000 pairs	[2]	4.4
Leather	46.4 %	768 386 784 pairs	extrapolation	2.04
Synthetics	22.7 %	375 913 362 pairs	extrapolation	1.00
Slippes	30.9%	511 705 854 pairs	extrapolation	1.36

Population in France considered : 60 millions inhabitants.
The French rates of market are extrapolated for Europe (heavy characters)

[TAB 2] MATERIALS CONSIDERED AND MODULES USED FOR LCI

Synthetic		Materials considered	Source	Modules used
	Kg/pairs			
Weight	0.4		Assumption	
Textiles	0.24	Polyamide	Assumption	PA 66 production -Boustead
Sole	0.16	Rubber	Assumption	EPDM Rubber production 1kg
Slippers				
	Kg/pairs			
Weight	0.4		Assumption	
Textiles	0.28	Polyamide	Assumption	PA 66 production -Boustead
Semelle	0.12	Rubber	Assumption	Rubber production 1kg

Leather shoes

- Functional unit: 1000 hours of protection of the feet, defined as one year of standard use. (3,7 pairs/year; 14h/day; 5 days /week; 45 weeks/year).
- A typical value of 7.69 %, as the relative economic value of hides, is used for allocation of leather.
- Productions of plastics, rubbers, chemical products used during the life cycle have not been inventoried.
- Main phases: animal care, slaughter houses, tannery, footwear confection, domestic use and waste management.

[TAB 3] ASSUMPTIONS IN LCA STUDY [1]

Process steps	Main assumptions	Lake of data
Cattle raising	The inventory profile is the same in dairy cattle and in beef cattle.	No data for goat raising
Slaughterhouse	Cattle hides are salted, goat hides are dried.	
Tannery	All nitrogen emitted is considered like N-NH3. NaCl is used as salt.	
Footwear manufacture	Emissions at the work place have not been included	
Waste management	All wastes are considered like urban solid wastes during the life cycle (95 % to landfill and 5 % to incinerator).	
Energy	Spanish model for electricity has been taken in LCA.	
Transports	Only between factories (not including importations and exportations.	

LCI CONSIDERED FOR ONE PAIR OF LEATHER SHOES

Substance	Unit	Total
Known input from technosphere		
Materials		
NaCl	g	5,44E+01
Ca(OH) ₂	g	1,43E+01
Cr ₂ (SO ₄) ₃	g	3,37E+00
oils and tannins	g	2,31E+01
Syntans	g	1,11E+01
Waste wood	g	2,57E+01
Energy		
Electricity	MJ	4,09E+00
Fossil fuel	MJ	2,16E+00
Known input from nature		
Water	g	1,03E+04
Outputs to technosphere (wastes and products)		
NaCl (solid)	g	9,71E+01
Tanned trimmings	g	6,36E+00
Entrails	g	3,29E+01
Fleshings	g	5,90E+01
Salted split	g	2,21E+01
Tanned split	g	2,03E-01
Hair	g	1,12E+01
Shavings	g	1,26E+01
Buffing dust	g	5,86E-01
Packaging	g	6,59E+01
Shoes	g	8,33E+01
Known Emissions to nature		
Air		
Nox	g	1,05E+00
Sox	g	2,37E+00
CO ₂	g	9,04E+02
CH ₄	g	2,20E+01
N ₂ O	g	2,54E+00
NH ₃ (gas)	g	1,97E+00
Hydrocarbons	g	2,32E-01
Water		
NaCl	g	8,77E+01
Chrome III	g	2,88E-01
Suspended solids	g	1,32E+01
COD	g	2,53E+01
N-NH ₃ aq	g	1,52E+00
Soil		
Nuclear wastes	g	1,60E+00

E.2. Main Data and Hypotheses for the end of life step

It's been assumed to take the municipal waste treatment, but leather is considered like null for energy recovery.

FACT SHEET

TEXTILES

A. Content of the Category

Product category	Textiles for apparel, home furnishing and industrial uses
Constituting elements	Cotton, wool, polyester, polyamide, acrylic, polypropylene, cellulose, imports and others.
Analysed elements	Production of textiles for each category, washing of apparels and industrial textiles and end of life.

B. Functional Unit

One year of utilisation of consumption and use of textiles products per capita in Europe.

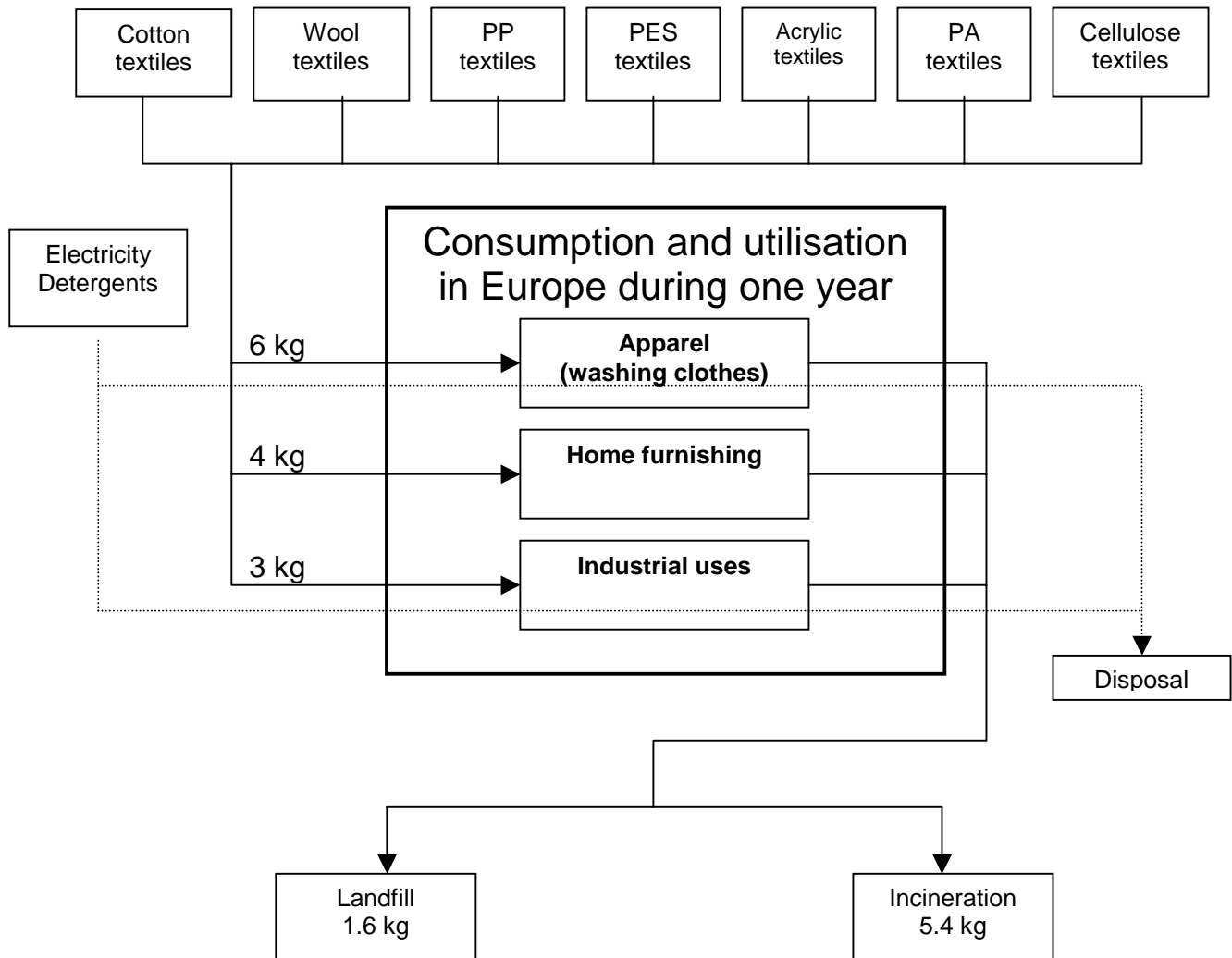
C. Main Sources of Information

- [1] Soren Ellebak Laursen, Jhon Hansen DTI Closing and textiles; Jhon Bagh et al Environmental impact assessment; Environmental impact assessment of textiles (1997) Ministry of Environment and Energy Denmark.
- [2] The environmental index model for textiles and textile services, Eija Kallia, D Sc. Tampere University of Technology
- [3] ETSA environmental principles
- [4] European Ecolabel, textiles, background report
- [5] Best Available Techniques for textiles
- [6] ETSA documentation
- [7] Chainet domestic washing of clothes 2nd draft of the “domestic washing of clothes” case report. For the seville workshop, 24-26 march, 1999
- [8] E Saouter an Gvan Hoof; (2002) A database for the life cycle assessment of Procter & Gamble laundry detergents The International Journal of Life Cycle Assessment, LCA case studies.: Vol.7 – N°2 – 2002 (page 103)
- [9] Livre blanc sur la prévention des déchets. France Nature environnement

D. System studied

Life cycle steps	Main assumptions for calculation	Not included (no data available)
Production	<ul style="list-style-type: none"> ▪ Imports and “other” category are not considered. ▪ Packaging and transports are not taken into consideration. ▪ Production: no available data for dyeing process, wool and cotton whitening. The module “textiles processing” in SIMAPRO has been taken (LCA for the washing, painting and/or printing of textiles). 	<ul style="list-style-type: none"> ▪ Equipment assembly step ▪ Transports ▪ packaging
Use	<ul style="list-style-type: none"> ▪ Uses: only wash for apparel and industrial category. 	<ul style="list-style-type: none"> ▪ Life time ▪ Electricity consumption during the use of a vacuum cleaner ▪ Stock of lamps ▪ Transports ▪ Packaging
End of life	<ul style="list-style-type: none"> ▪ Recycling: 5%. ▪ Municipal waste: 95 %. 	

Population considered in Europe for calculations: 1998 - 375 millions inhabitants.

FLOWCHART

E. Main Data and Hypotheses

E.1. Main Data and Hypotheses for the Production Step

COTTON PRODUCTION

- Modules used in SIMAPRO : "Cotton fabric"
- Bio cultivation is taken into account (0.03% world production).

POLYESTER PRODUCTION

- Modules used in SIMAPRO : "Polyester fabric"

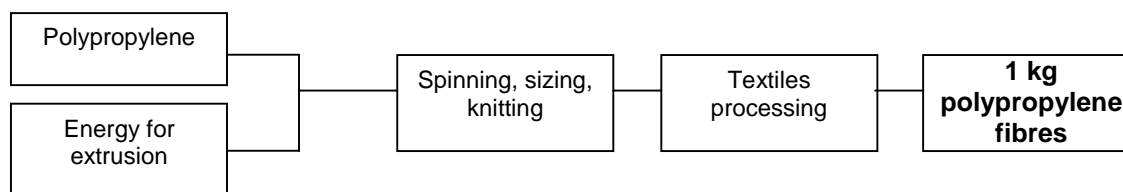
CELLULOSE PRODUCTION

- Yarn production :

[TAB 1] LCI FOR CELLULOSE FIBRES PRODUCTION

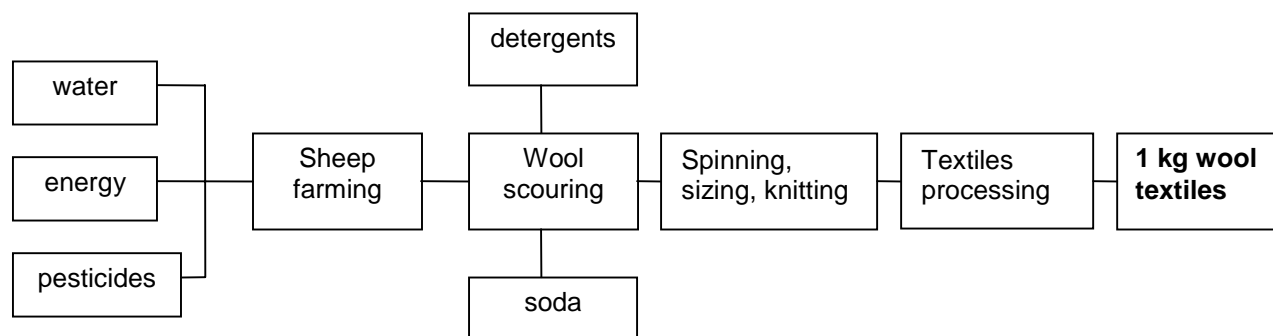
Resources		Unit	Source
Water	640	kg	[1]
Energy	35,3	MJ	[1]
Feedstock	36	MJ	[1]
Wood	3	kg	[1]
C2s	310	g	[1]
Wood pulp	1	kg	[1]
Spinning, sizing and knitting	68,5	MJ/kg	[1]
Emissions			
Cs2	25	g	[1]
Cod	276	g	[1]
BOD	10,6	g	[1]
Sulphur	2,8	g	[1]
NOx	4,7	g	[1]
Zn	2	g	[1]
Suspended solids	1,5	g	[1]

POLYPROPYLENE PRODUCTION



Spinning, sizing and knitting; 68.5 MJ/kg [1]

- Modules used in SIMAPRO : PP granulate average + Extrusion for PP + Textiles processing

WOOL PRODUCTION**[TAB 2] LCI FOR WOOL FIBRES PRODUCTION**

Resources		Unit	Source	
Water	125	kg	[1]	only for sheep farming
Energy consumption	8	MJ	[1]	only for sheep farming
Consumption of sheep pesticides	2	ml	[1]	considered as 2 mg; module "Pesticides" in SIMAPRO raw materials.
Emission of sheep manure	56	kg	[1]	not taken in consideration
Water	17	kg	[1]	wool scouring
NaOH	13,5	g	[1]	wool scouring
Detergents	10,75	g	[1]	wool scouring, module use : "Detergents production" from Boustead database.
Spinning, sizing and knitting	68,5	MJ/kg	[1]	(rough estimate based on cotton polyester data)
Emissions to water				
BOD	460	g	[1]	
grease	450	g	[1]	SIMAPRO: solid emissions - oil
Total solids	390	g	[1]	SIMAPRO: solid - waste

- Modules used in SIMAPRO : Textiles processing

E.2. Main Data and Hypotheses for the Use Step

[TAB 3] EUROPEAN MARKET FOR TEXTILES

	Consumption in Europe 1000 ton	Consumption (kg/cap/year)
Cotton	1144	2,96
Wool	360	0,93
Polyester	1414	3,65
Polypropylene	693	1,79
Polyamide	620	1,60
Acrylic	361	0,93
Other	367	0,95
Cellulose	471	1,22

[TAB 4] CONSUMPTION BY FIBRES

	Cotton	wool	polyester	polyamide	acrylic	polypropylene	cellulose
Apparel	56%	75%	45%	41%	76%	2%	48%
Home furnishing	31%	24%	28%	43%	22%	52%	10%
Industrial uses	14%	1%	26%	16%	2%	46%	42%

[TAB 5] CONSUMPTION OF EUROPEAN MANUFACTURED TEXTILES FIBRES

	Apparel (kg/cap/year)	Home furnishing (kg/cap/year)	Industrial uses (kg/cap/year)
Cotton	1.65	0.22	0.14
Wool	0.12	0.05	0.00
Polyester	0.28	0.25	0.32
Polyamide	0.11	0.17	0.09
Acrylic	0.12	0.05	0.01
Polypropylene	0.01	0.23	0.28
Cellulosic	0.10	0.03	0.17
TOTAL	6	4	3

Use phase is taken in LCA for apparel only, it has been considered that home furnishing have no impact during this phase, because they are not washed.

The washing process is based on detergents, water and energy consumption. The apparels and textiles for industrial uses are washed twice a week.

Consumption of detergents, water and electricity for one wash cycle, based on a full load of the washing machine (5kg), for the stock of textiles estimated, it's been assumed to take 25% of the consumption of new textiles to evaluate the stock (24kg for apparel and 12 kg for industrial uses).

- 115 g of detergents per wash cycle [8]
- 0.37 kWh / kg dry clothes per wash cycle [7]
- 10 l of water / kg dry clothes per wash cycle [7]

Disposal values for waste water are taken from Belgium conditions [8].

[TAB 6] LCI OF A TRADITIONAL GRANULAR LAUNDRY DETERGENT USED IN BELGIUM, BASED ON 1000 WASH LOADS.

Source: [8]

Energy and emissions	Unit	
Primary energy	GJ	0.26
Solid waste	Kg	20.00
Air emissions		
CO ₂	Kg	16.20
CO	g	2.08
SO _x	g	48.10
NO _x	g	20.40
CH ₄	g	107.00
C _x H _y	g	5.96
Particles / dust	g	10.80
Metals	g	0.48
Waterborne emissions		
BOD	g	8580.00
COD	g	20700.00
Total P	g	0.06
Total N	g	0.12
Oil/grease	g	0.91
Ammonia	g	0.07
Metals	Kg	14.20

E.3. Main Data and Hypotheses for the End of life Step

Module used in SIMAPRO for the municipal waste way: "Municipal waste 2000 NL B250", which considers 23 % to landfill and 77 % to incineration.

	Incineration (kg/cap/year)	Landfill (kg/cap/year)	Total	Source
Apparel	2.7	0.8	3.5	[9]
Home furnishing	1.35	0.4	1.75	Assumption
Industrial uses	1.35	0.4	1.75	Assumption
TOTAL	5.4	1.6	7	

For industrial uses and home furnishing, it's been assumed to take the same quantity of waste than textiles for apparel.

FACT SHEET

BUILDING STRUCTURE

A. Content of the Category

Product category	Minerals, non minerals and manufactured materials for construction.
Constituting elements	Concrete, bricks, steel, aluminium, copper, plastics (PVC, EPS, PU), wood, mineral wool, flat glass and paints.
Analysed elements	Materials production. End of life of demolition and construction waste.

B. Functional Unit

One year of consumption of materials for building construction per capita in Europe.

C. Main Sources of Information

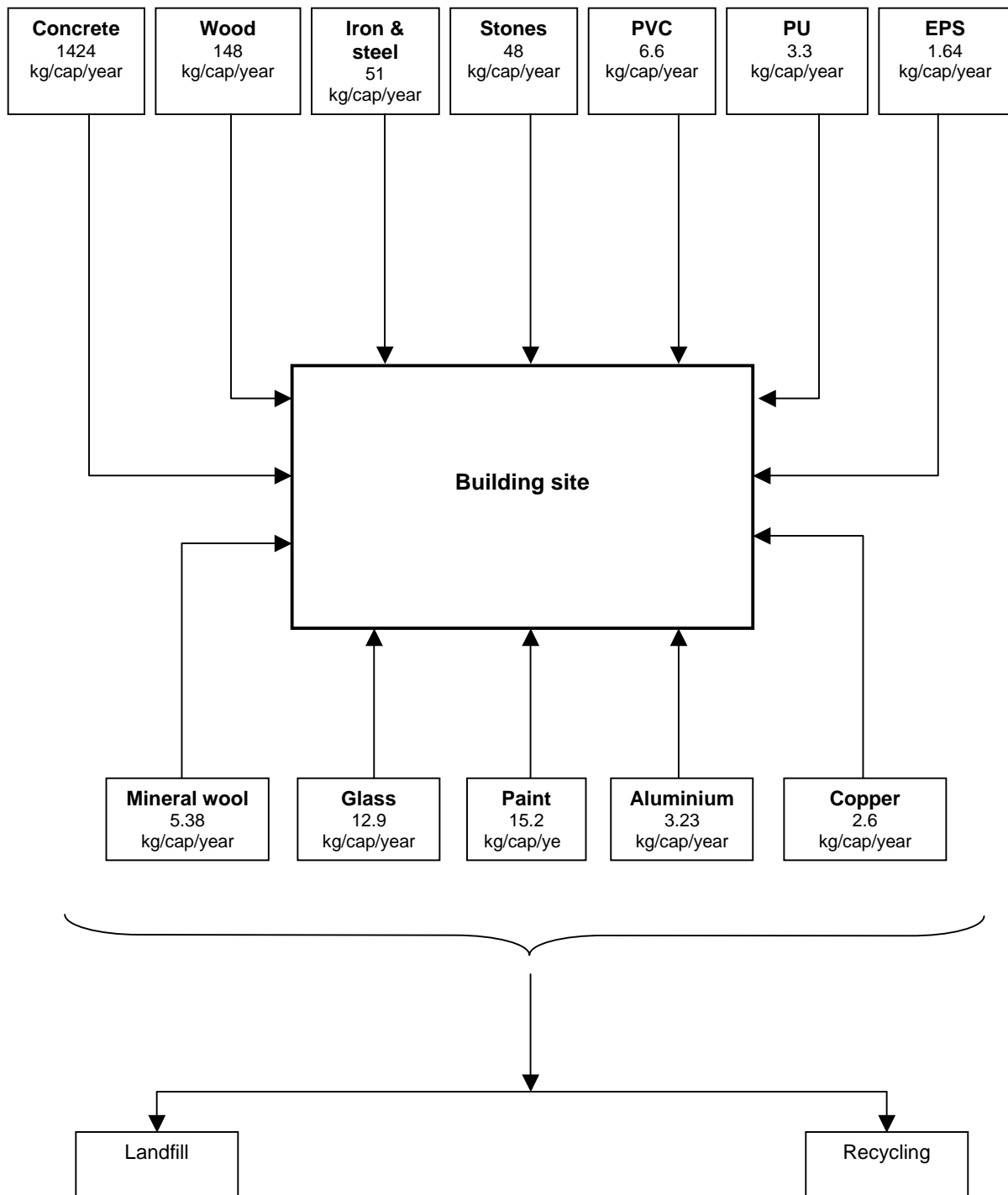
- [1] Plastics: A materials of choice in building and construction. Plastics consumption and recovery in western Europe 1995. APME
 [2] Management of construction and demolition waste. European commission DG ENV.E.3 4 April 2000.
 [3] Eurometaux, annual report 2000
 [4] Conseil Européen des Peintures, des Encres d'imprimerie et des couleurs d'arts - Publication 2000.

D. Studied System

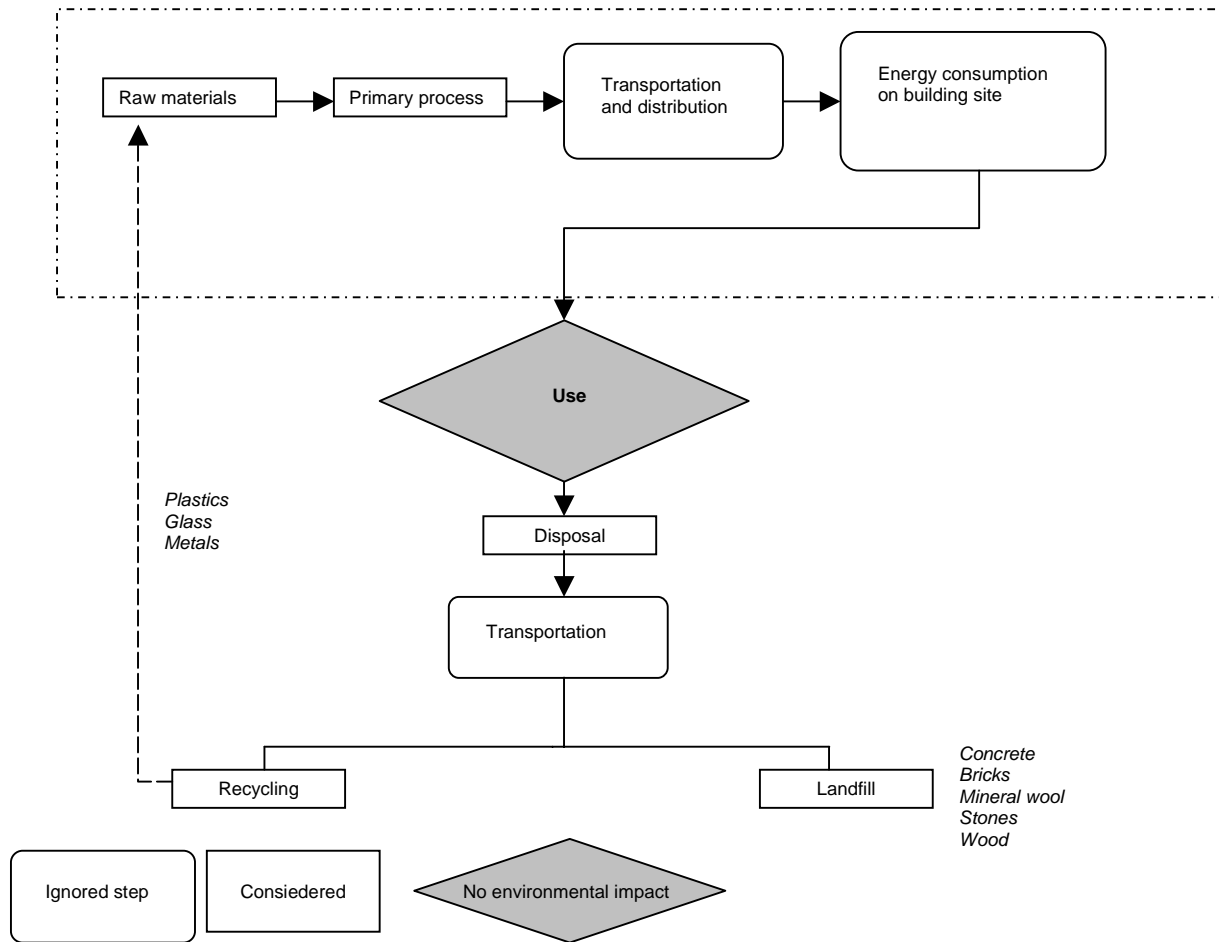
Life cycle steps	Main assumptions for calculation	Not included
Production	<ul style="list-style-type: none"> It's been assumed to taken into account only the production of the different materials intervening in the construction sector. The values are based on the materials consumption in Europe. 	
Use		No available data for energy consumption on a building site.
End of life	<ul style="list-style-type: none"> Composition of demolition and construction wastes is the same than the consumed products. Rate based on study for European commission -Recycling : 25%. -Landfill : 75% 	No data for demolition and construction wastes composition.
Transport and packaging	<ul style="list-style-type: none"> Not taken into account. 	Included in transport chapter.

Asphalt and bitumen are mentioned here but they are taken into account in "Civil work" chapter.

Population considered in Europe for calculations: 1998 - 375 millions inhabitants.

FLOWCHART

SYSTEM STUDIED FOR ONE YEAR OF BUILDING MATERIALS CONSUMPTION IN EUROPE



E. Main Data and Hypotheses

E.1. Main Data and Hypotheses for the Production Step

[TAB 1] MATERIALS

Materials	Consumption in Europe (Mt)	Date	Source
Concrete	280	1995	[1]
Precast concrete	250	1995	[1]
Bricks, tiles	75	1995	[1]
Wood	55	1995	[1]
Iron & steel	19	1995	[1]
Stones	18	1995	[1]
Asphalt and bitumen	18	1995	[1]
Poly Vinyl Chlorides	4.89	1995	[1]
Poly Urethane		1995	[1]
Expanded Polystyrene		1995	[1]
Flat glass	4.8	1995	[1]
Mineral wool	2	1995	[1]
Aluminium	1.2	1995	[1]
Copper	0.998	1995	[1]
Paints for architectural	5.7	2000	[4]

- Precast concrete is taken like concrete : total consumption of concrete 530 Mt.
- Plastics : PVC represents about 50 % of the consumption of plastics for construction [APME], PU and EPS are the more employed after PVC, it's been assumed to take 25% of the consumption for both.

[TAB 2] CONSUMPTION PER CAPITA

Raw materials	Consumption kg/cap/year	Module used for LCI
Concrete	1424	Concrete production ETH
Bricks, tiles	202	Brick production ETH
Wood	148	Wood massive production ETH
Iron & steel	51	Steel 100% recycled ETH
Stones	48	Gravel production ETH
Poly Vinyl Chlorides	7.2	PVC production B250
Poly Urethane	2.9	PUR rigid foam B250
Expanded Polystyrene	2.9	EPS production B250
Flat glass	12.9	Float glass uncoated production ETH
Mineral wool	5.38	Mineral wool production ETH
Aluminium	3.23	Aluminium production ETH
Copper	2.6	Copper production ETH
Paints for architectural	15.2	Paint production ETH

E.2. Excluded Data for the Use Step :

Energy consumption on the building site (no available data).

E.3. Main Data and Hypotheses for the End of life Step

Total amount of construction and demolition waste in Europe : **179 Mt/year** [2]

Assumption for waste composition : the same than the consumed product, with data from Tab 2.

[TAB 3] DEMOLITION WASTE IN EUROPE

	Waste composition [2]	Waste kg/cap/year	End of life	Source
Concrete	72.7 %	357	Landfill 100%	Own
Bricks, tiles	10.3 %	51	Landfill 100%	Own
Wood	7.5 %	37	Landfill 100%	Own
Iron & steel	2.6 %	13	25% recycling / 75% landfill	[2]
Stones	2.5 %	12	Landfill 100%	Own
Asphalt and bitumen	2.5 %	12	Landfill 100%	Own
PVC *	0.67 %	2	25% recycling / 75% landfill	[2]
Flat glass	0.66 %	3	25% recycling / 75% landfill	[2]
Mineral wool	0.27 %	1	Landfill 100%	Own
Aluminium	0.16 %	1	25% recycling / 75% landfill	[2]
Copper	0.14 %	1	25% recycling / 75% landfill	[2]
TOTAL		479		

* PU and EPS –100% landfill : PU is a thermoset plastic and can not be recycled, and we've considered that recycling processes for EPS are not well established for the moment.

It's been assumed to take recycling way for metals and plastics only.

Recycling process : data for the consumption of energy and the avoided products, the materials taken into account are given in table 4.

[TAB 4] AVOIDED PRODUCTS CONSIDERED IN THE RECYCLING PROCESSES

Avoided production of		
Plastics	0,9kg	PE granulate average B250
PVC	0,9kg	PVC B250
Glass	0,95kg	Glass 100% recycled
Steel	0,9kg	Steel ECCS
Aluminium	1 kg	Alu Ingots B250
Ferro metals	0,95kg	Iron

Landfill : life cycle inventories available for : plastics, PVC, PS, glass, ferro metals, steel, aluminium and wood (taken like compostable).

FACT SHEET

CIVIL WORK

A. Content of the Category

Product category Roads and pavement.

Constituting elements

Analysed elements Materials production.
End of life of civil work waste.

B. Functional Unit

One year of consumption of materials for civil work per capita in Europe.

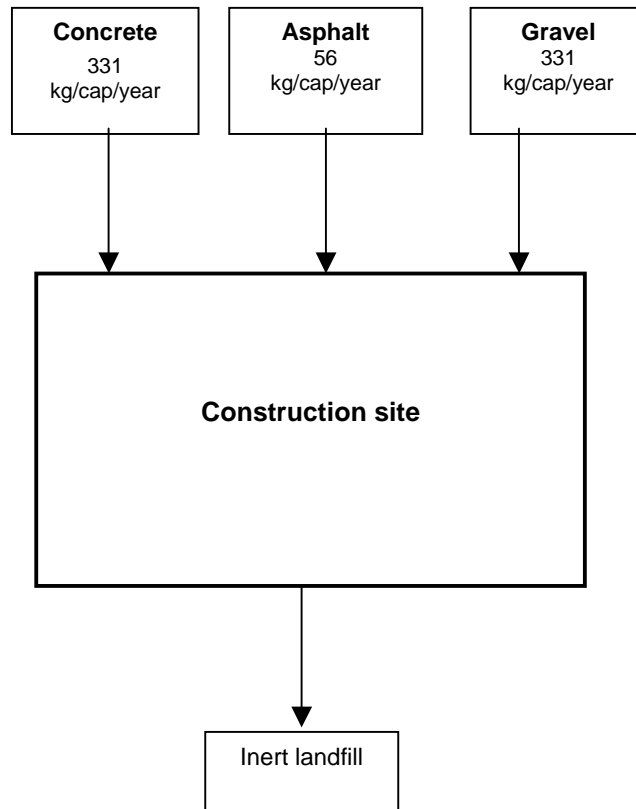
C. Main Sources of Information

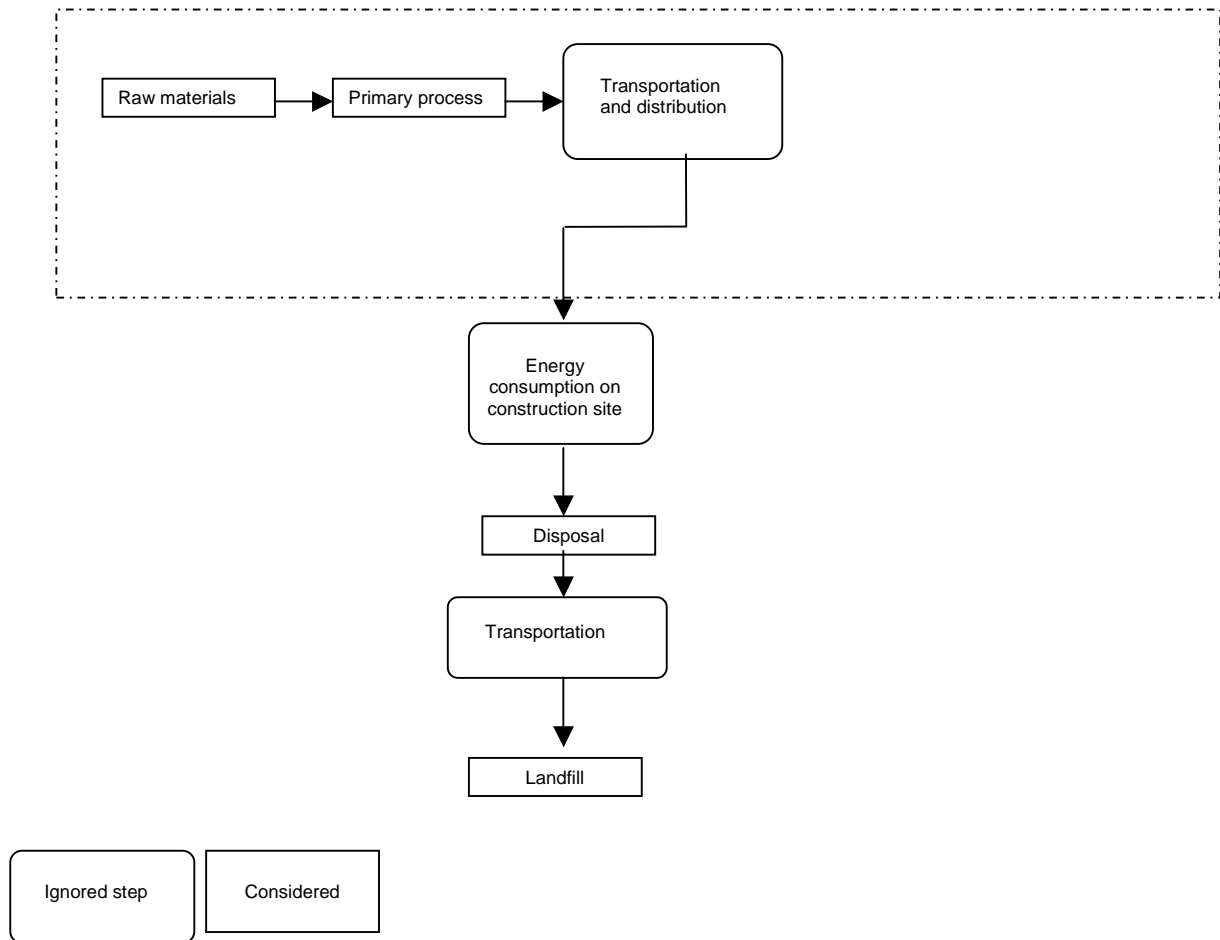
- [1] Etude des filières de recyclage et de valorisation des huiles usages. ADEME – Ecobilan. - 1999
[2] Management of construction and demolition waste. European commission DG ENV.E.3 4 April 2000.

D. Studied System

Life cycle steps	Main assumptions for calculation	Not included
Production	<ul style="list-style-type: none"> Gravel, concrete and asphalt consumption are extrapolated from France situation 	
Use		No available data for energy consumption on the construction site
End of life	<ul style="list-style-type: none"> 100 % landfill (inert) 	

Population considered in Europe for calculations: 1998 - 375 millions inhabitants.

FLOWCHART

SYSTEM STUDIED FOR ONE YEAR OF ROAD CONSTRUCTION IN EUROPE

E. Main Data and Hypotheses

E.1. Main Data and Hypotheses for the Production Step

[TAB 1] ASSESSMENT FOR ROAD CONSTRUCTION

Materials	Gravel	Concrete	Asphalt
Thickness (cm)	20	10	2
Density (kg/m ²)	1000	2000	1700
Quantity (kg/m ²)	200	200	34
Consumption Fr - 2000 (kg)			3,38E+09
Estimated consumption Fr (kt)	19 884	19 884	3 380
Estimated consumption in EU (kt)	124 272	124 272	21 126
Estimated consumption in EU (kg/cap)	331,39	331,39	56,34

Population considered in France for calculations: 60 millions inhabitants

[TAB 2] MODULES USED FOR LCI

Raw materials	Module used for LCI
Gravel	Gravel production ETH
Concrete	Concret production ETH
Asphalt	Bitume production from [1]

E.2. Excluded Data for the Use Step :

Energy consumption on the construction site (no available data).

E.3. Main Data and Hypotheses for the End of life Step

Assumption for waste composition: the waste amount is equal to the materials consumption; they are dumping to landfill (inert).

Total amount of waste: **719 kg/cap/year**

FACT SHEET

BUILDING OCCUPANCY

A. Content of the Category

- Product category** Energy consumption in residential and commercial sectors.
- Constituting elements** Consumption of : natural gas, petrol products, electricity and biomass
- Analysed elements** Space heating, water heating, cooking, domestic appliances, and lighting.

B. Functional Unit

One year of energy consumption for building occupancy per capita in Europe.

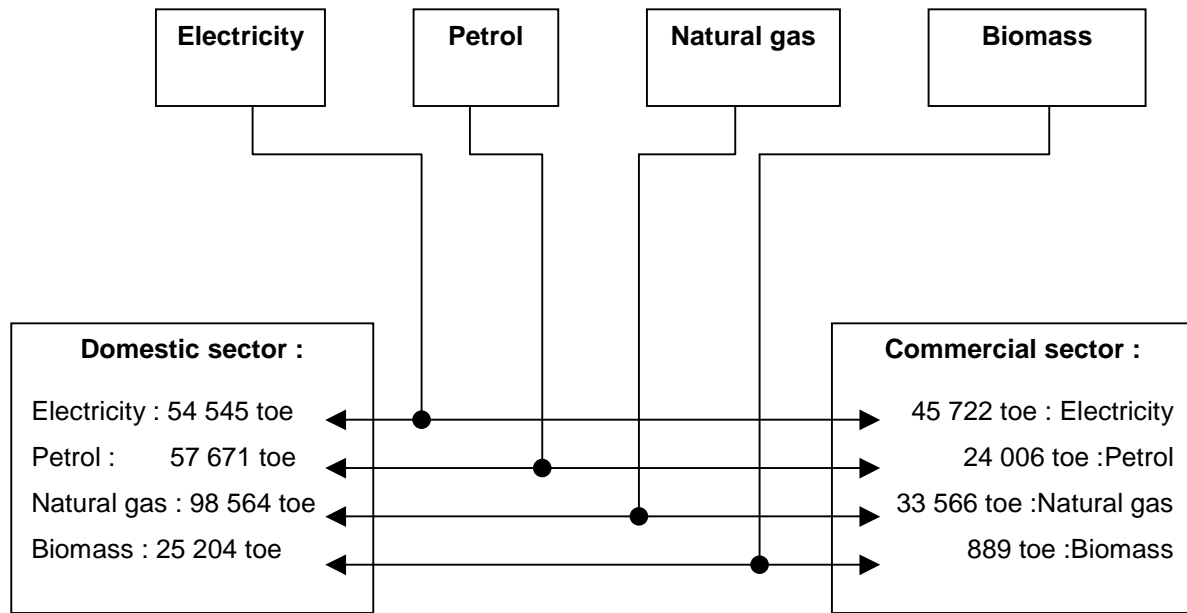
C. Main Sources of Information

[1] Eurostat, Survey on energy Consumption in consumers in Europe - data 1996-2000, Eurostat

D. Studied System

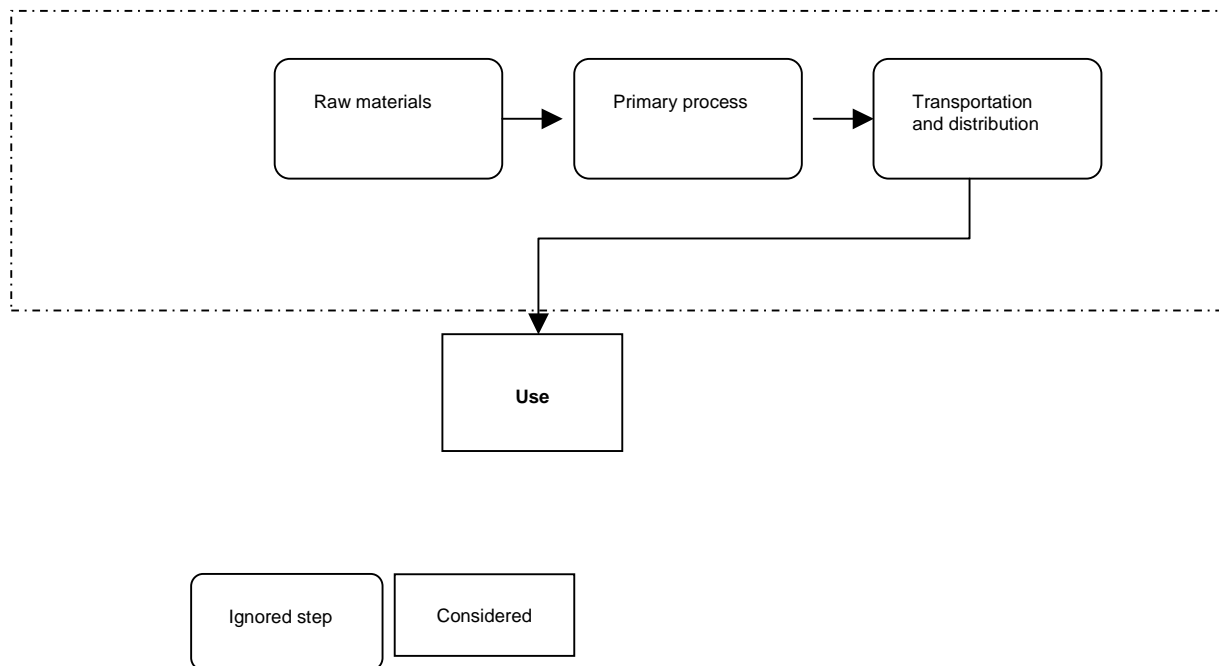
Life cycle steps	Main assumptions for calculation	Not included (no data available)
Production	<ul style="list-style-type: none"> ▪ For biomass: only heat from wood is considered. ▪ Petrol consumption is taken for LPG, motor spirit, kerosene, naphta, gas/diesel oil, residual fuel oil and other petrol products. 	<ul style="list-style-type: none"> ▪ Coke oven gas ▪ Renewable energies: solar heat, geothermal energy, energy from wind and hydro energy.
Use	<ul style="list-style-type: none"> ▪ Some data were available for the use of energy (electricity), the rest have been estimated. 	
End of life		

FLOWCHART



toe: tonne oil equivalent

SYSTEM STUDIED FOR ONE YEAR OF ENERGY CONSUMPTION FOR BUILDING OCCUPANCY IN EUROPE



E. Main Data and Hypotheses

E.1. Main Data and Hypotheses for the Production Step

[TAB 1] ENERGY CONSUMPTION IN DOMESTIC AND COMMERCIAL SECTORS

Domestic sector	1000 toe	Source
Total all products	251 885	[1]
Total petrol products (considered)	57 671	[1]
Natural gas (considered)	98 564	[1]
Total renew. Energy (considered)	25 204	[1]
Electrical energy (considered)	54 457	[1]
Not considered	15 524	

Commercial sector	1000 toe	Source
Total all products	112 310	[1]
Total petrol products	24 006	[1]
Natural gas	33 566	[1]
Total renew. Energy	889	[1]
Electrical energy	45 722	[1]
Not considered	7 874	

E.2. Main Data and Hypotheses for the Use Step

[TAB 2] USE OF ENERGY IN THE DOMESTIC SECTOR

Domestic sector	% Consumption in volume	Electricity	Petrol	Gas	Biomass
Space heating	68,50%	8%	26%	56%	10%
Water heating	15,10%	16%	44%	14%	26%
Cooking	5,30%	77%	0%	23%	0%
Electrical appliances and lighting	11,10%	100%	0%	0%	0%
Consumption in MJ/cap/year					
Space heating	18 077	1 446	4 700	10 123	1 808
Water heating	3 985	638	1 753	558	1 016
Cooking	1 399	1 077	-	322	-
Electrical appliances and lighting	2 929	2 929	-	-	-

[TAB 3] USE OF ENERGY IN THE COMMERCIAL SECTOR

Commercial sector	% Consumption in volume	Electricity	Petrol	Gas	Biomass
Space heating	52,00%	10,00%	37,00%	50,50%	1,50%
Water heating	9,00%	45,00%	31,00%	24,00%	0,00%
Cooking	5,00%	5,00%	0,00%	95,00%	0,00%
Electrical appliances and lighting	34,00%	100,00%	0,00%	0,00%	0,00%

Consumption in MJ/cap

Space heating	6 063	606	2 243	3 062	91
Water heating	1 049	472	325	252	-
Cooking	583	29	-	554	-
Electrical appliances and lighting	3 964	3 964	-	-	-

Heavy characters are from [1], others values are estimated.

Conversion factor : 1toe = 41 868 MJ

[TAB 4] MODULES USED FOR LCI

Petrol products	Heat petrol B250 1 MJ
Natural gas	Heat gas B250 1 MJ
Total renew. Energy	Heat wood B250 1 MJ
Electrical energy	Electricity UCPTTE 1 MJ

[TAB 5] MIX OF ENERGY IN THE ELECTRICITY MODEL – 1 KWH

Electricity from coal B250	kWh	17,4%
Electricity from gas B250	kWh	7,4%
Electricity from hydropower B250	kWh	16,4%
Electricity from lignite B250	kWh	7,8%
Electricity from uranium B250	kWh	40,3%
Electricity from oil B250	kWh	10,7%

FACT SHEET**ELECTRIC AND ELECTRONIC PRODUCTS****A. Content of the Category**

Product category	Electric and Electronic Equipment (EEE)
Constituting elements	IT equipment (office and computing machines), televisions, telecommunication equipment, electric lamps and lighting, other domestic appliances.
Analysed elements	IT equipment: personal computer Television Telecommunication equipment: telephone Electric lamps and lighting: incandescence lamp Other domestic appliance: washing machine, dishwasher, vacuum cleaner, refrigerator

B. Functional Unit

One year of consumption and utilisation of electric and electronic equipment per capita in Europe.

C. Main Sources of Information

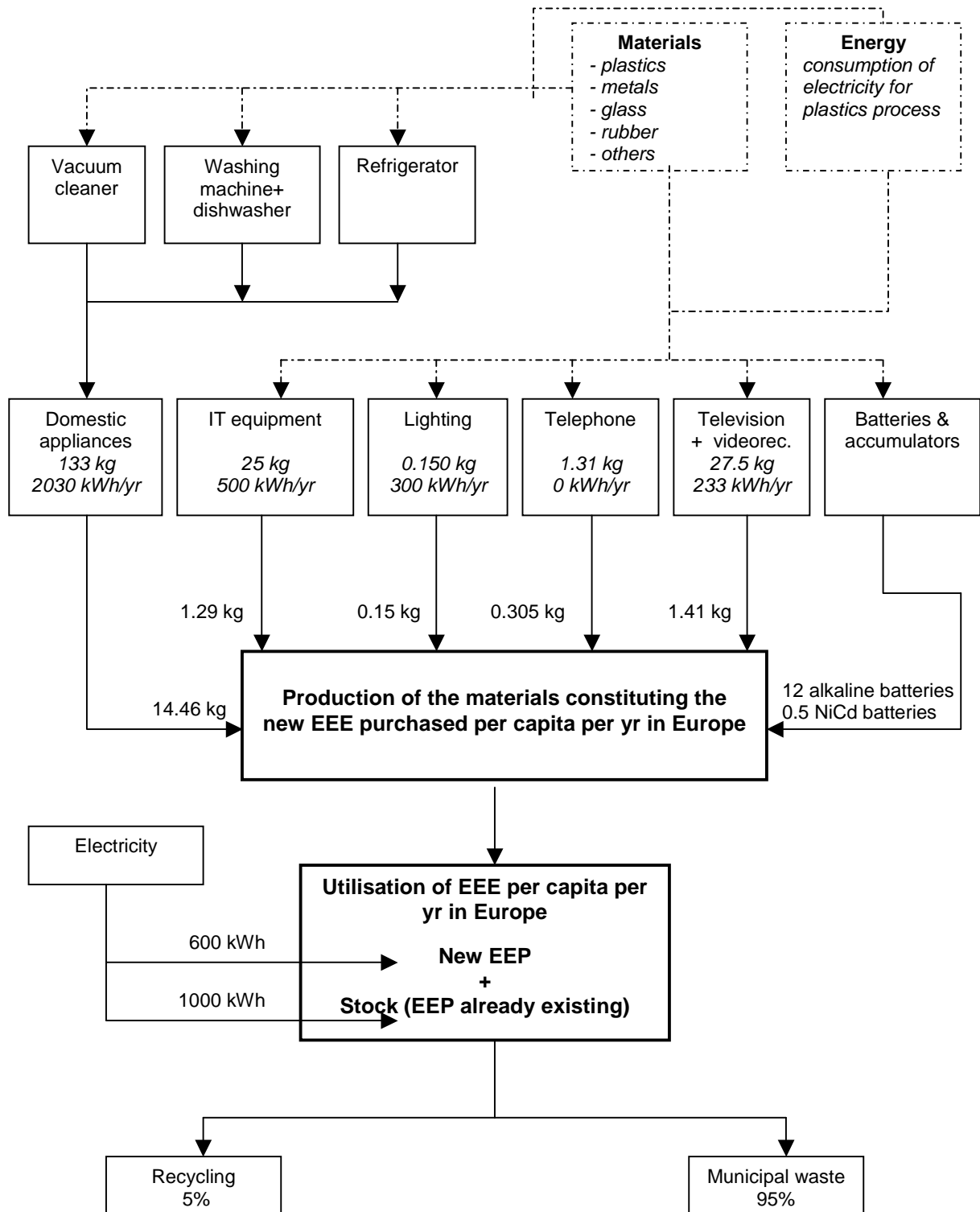
- [1] Life cycle assessment and life cycle analysis of the proposal for a directive on waste from electrical & electronic equipment. Ecobalance UK -DMG Consulting Ltd August 1999.
 [2] CHAINET, Electronic Consumer Goods case report, 2nd draft - March 1999.
 [3] site web www.energystar.gov.
 [4] Plastics. A material of innovation for the electric and electronic industry. Insight into consumption and recovery in Western Europe 2000. APME 2001.
 [5] European Ecolabel, textiles, background report.
 [6] Consumers in Europe. Facts and figures. Data 1996-2000. 2001 Edition.
 [7] Livre blanc sur la prévention des déchets. France Nature Environnement.

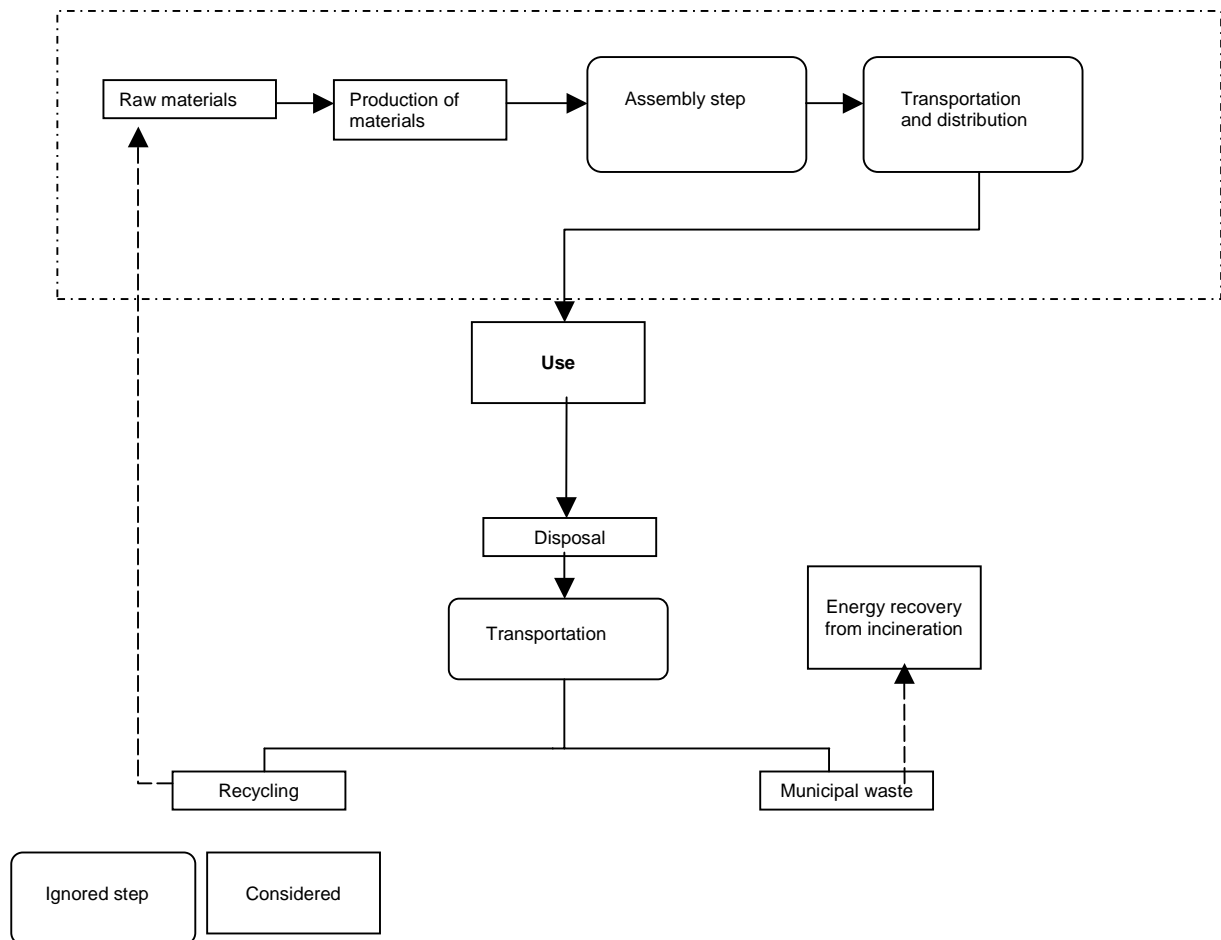
D. Studied System

Life cycle steps	Main assumptions for calculation	Not included (no data available)
Production	<ul style="list-style-type: none"> ▪ LCA data for materials only ▪ Process for plastics: injection moulding ▪ Materials for dishwashers: 10 % of those for washing machines (except concrete used as a ballast for spin drying process) ▪ European consumption of EEA equipment: <ul style="list-style-type: none"> - Lighting: only ceiling lamps considered - Video recorders: equal to TVs consumption - Batteries and accumulators: extrapolated from French situation 	<ul style="list-style-type: none"> ▪ Equipment assembly step
Use	<ul style="list-style-type: none"> ▪ Data from E.P.A. (Energystar) 	<ul style="list-style-type: none"> ▪ Life time ▪ Electricity consumption during the use of a vacuum cleaner ▪ Stock of lamps
End of life	<ul style="list-style-type: none"> ▪ Recycling : 5%. ▪ Municipal waste : 95 %. 	
Transport		<ul style="list-style-type: none"> ▪ Not taken into account
Packaging		<ul style="list-style-type: none"> ▪ Not taken into account

Population considered in Europe for calculations : 1998 - 375 millions inhabitants.

FLOWCHART



SYSTEM STUDIED FOR ONE YEAR OF UTILISATION OF ELECTRIC AND ELECTRONIC EQUIPMENT IN EUROPE

E. Main Data and Hypotheses

E.1. Main Data and Hypotheses for the Production Step

[TAB 1] MATERIAL COMPOSITION OF THE EEE

Materials (kg / unit)	Personal computer	Telephone	Television	Video recorder ³	Light	Module used in SIMAPRO
Steel	8,1	0,14	3,1	0.31	0.105	Steel 23% recycled
Aluminium	1,1					Aluminium 0% recycled ETH T
Copper	1,8	0,03	0,7	0.07	0.105	Copper ETH T
ABS	4,8	0,77				ABS I
PVC	0,7	0,07	0,2	0,02		PVC B 250
Other plastic		0,07	1,7	0.17		PS HIPS B250 1998
Flame retardant			0,4	0.04		
Printed board	1,5	0,11	0,1	0,01		Printed board I
Rubber		0,03				EPDM rubber ETHT
Concrete						Concrete I
Glass	7,2	0,03	19,1	1.91	0.1245	Glass white B250
Foam						PUR flex moulded CCMA
Tungsten					0.045	Tungsten I
Miscellaneous		0,06	0	0		Not taken into account
TOTAL WEIGHT	25,2	1,31	25,3	2.53	0.150	
Main source ⁴	[1]	[1]	[1]	BIO IS	[2] and BIO IS ⁵	

³ Video recorder is taken as 10% of the weight of a television (same technology) (no specific data available for this equipment)

⁴ For 'other plastics', [4] HIPS has been considered because of its large utilisation in the electrical and electronic industry

⁵ mass: 150 g

MATERIAL COMPOSITION OF THE EEE (CONT.)

Materials kg	Washing machine	Dishwasher ⁶	Vacuum cleaner	Refrigerator	Total domestic appliances (washing machine, dishwasher, vacuum cleaner, refrigerator, video recorder)	Module used in SIMAPRO
Steel	22	22	0,05	14,41	36,46	Steel 23% recycled
Aluminium	3,1	3.1		1,12	4,22	Aluminium 0% recycled ETH T
Copper	1,8	1.8		1,02	2,82	Copper ETH T
ABS	1,8	1.8			1,8	ABS I
PP	6,6	6.6			6,6	PP A
PVC						PVC B 250
Other plastic			3,25	7,39	10,64	PS HIPS B250 1998
Flame retardant						
Printed board						Printed board I
Rubber						EPDM rubber ETHT
Concrete	21,7				21,7	Concrete I
Glass	2,4	2.4		0,81	3,21	Glass white B250
Foam				2,29	2,29	PUR flex moulded CCMA
Refrigerant CFC/HFC134a				0,06	0,06	CFC I
Tungsten						Tungsten I
Miscellaneous	1,4	0.14	1,7	0,85	3,95	Not taken into account
TOTAL WEIGHT	60,8	39.1	5	27,95	93,75	
Main source	[1]	BIO IS	[1]	[1]	[1]	

⁶ For dishwasher, it is assumed that the materials are the same as for a washing machine, without concrete (used to ballast the washing machine during the spin-drying)

[TAB 2] ENERGY CONSUMPTION DURING PRODUCTION

Assumption: all plastics are injected (injection moulding)

Plastic resin	Source of data
ABS	SIMAPRO - "injection moulding" module
PVC	SIMAPRO - "injection moulding PVC1" module
PP	SIMAPRO - "injection moulding I" module
HIPS	SIMAPRO - "injection moulding" module

[TAB 3] STOCK OF EXISTING EEE

Population		Source
Number of households in 1995	146.2 millions	[6]
Number of households in 1998	150.7 millions	7
Population in 1998	375 millions	[6]

Penetration rate		Source
Television	45.4% of 145.9 millions of households in 1998 were equipped with a second television	[6]
PCs	34.9% of the households in 2000	[6]
Refrigerator	79.1% of the households in 1995	[6]
Washing machine	88.4% of the households in 1995	[6]
Dishwasher	30.1% of the households in 1995	[6]
Video recorder	104.8 millions of households in 1998	[6]

[TAB 4] STOCK OF EEE

	Calculations [Tab 2] & [Tab 3]	Assumptions	Stock of EEE (unit/capita)
Television	$(145\,956\,000 \times 1.454) / \text{pop } 1998$		0.56
PCs	$(\text{penetration rate in } 2000 \times \text{nb households } 1998) / \text{pop } 1998$	<ul style="list-style-type: none"> Number of households in 2000 is the same as in 1998 1 PC per household 	0.14
Refrigerator	$(\text{penetration rate in } 1995 \times \text{nb households } 1998) / \text{pop } 1998$	<ul style="list-style-type: none"> 1 refrigerator per household 	0.32
Washing machine	$(\text{penetration rate in } 1995 \times \text{nb households } 1998) / \text{pop } 1998$	<ul style="list-style-type: none"> 1 washing machine per household 	0.35
Dishwasher	$(\text{penetration rate in } 1995 \times \text{nb households } 1998) / \text{pop } 1998$	<ul style="list-style-type: none"> 1 dishwasher per household 	0.12
Video recorder	$104\,789\,000 / \text{pop } 1998$	<ul style="list-style-type: none"> 1 video recorder per household 	0.28

⁷ Calculation for the number of households in 1998 : [6] (p13-tab 1.3), with 3.3 millions for Portugal (assumption)

E.2. Main Data and Hypotheses for the Use Step

[TAB 5] NEW EEE - ELECTRICITY CONSUMED DURING USE

	Consumption in EU (Million units)	Kg/unit	kWh/yr/unit	Kg/year/cap	kWh/year/cap
	a	b	c	$e = a \times b / pop^8$	$f = a \times c / pop$
IT equipment	21	24	500	1.35	26.9
TV	22	25	190	1.42	10.7
Video recorder	22	2.5	43	0.142	2.4
Telecom.	91,6	1.3	0	0.305	0
Lighting	323	0.15	300	0.124	248.5
Domestic appliances	60	133	2030	14.46	312
Total					~ 600
Sources	[6]	[tab 1]	[3]	calculation	calculation

[TAB 6] STOCK OF EXISTING EEE - ELECTRICITY CONSUMED DURING USE

	Stock (unit/cap)	kWh/year/unit	kWh/year/cap
IT equipment	0.14	500	70
TV	0.56	184	103
Video recorder	0.28	43	12
Refrigerator	0.32	450	144
Washing machine	0.35	880	308
Dishwasher	0.12	700	84
Lighting			~300⁹
Total			1000 kWh
Source	[Tab 4]	[3]	

The SIMAPRO data are used for electricity (module Electricity UCPT B250).

[TAB 7] MIX OF ENERGY IN THE ELECTRICITY MODEL – 1 KWH

Electricity from coal B250	kWh	17,4%
Electricity from gas B250	kWh	7,4%
Electricity from hydropower B250	kWh	16,4%
Electricity from lignite B250	kWh	7,8%
Electricity from uranium B250	kWh	40,3%
Electricity from oil B250	kWh	10,7%

[TAB 8] ASSUMPTIONS FROM THE ENERGYSTAR WEB SITE

Lighting:

- Average energy use per ceiling lamp : 60 W
- Number of days in use per year : 365
- Hours used per year (private areas) : 2445
- Hours used per day (public areas) : 5887

TVs:

- Average hourly energy in "off" mode, per Input Area. Consumer Electronics Manufacturers Association reports a value of 5.9 W
- Average hourly energy in "on" mode (W) : 75 Based on Lawrence Berkeley National Laboratory and Florida Solar Energy Center research;
- Average number of hours the TV unit is in "standby" mode or "off" per year : 6843
- Average number of hours the TV unit is in "on" mode per year : 1916

⁸ Population in EU – 1999 (pop) : 390 Millions [5]

⁹ Assumption for lighting: in order to take into account the consumption of the stock of lamps, the value of a year of utilisation for new products is considered

PCs:

- Total average annual energy use per unit (kWh): 199 (Calculated in LBNL research for EPA program)
- Total average annual energy use per unit (kWh): 307.66 (Calculated in LBNL research for EPA program)

Washing machines:

- Energy factor, NAECA standards: EF 1.18
- Cycles per year : 392 Per the "Energy Data Sourcebook for the U.S. Residential Sector" LBNL – 40297

Refrigerators:

- top freezer configuration, average on WHIRLPOOL models

Dishwashers:

- Energy factor, NAECA standards: EF 0.46
- Cycle per year : 322 Per the "Energy Data Sourcebook for the U.S. Residential Sector" LBNL - 40297

MAIN ASSUMPTIONS FOR BATTERIES AND ACCUMULATORS, EXTRAPOLATED FROM FRANCE SITUATION

Source: ADEME

Consumption of batteries in France (population: 60 millions)

- 720 millions of batteries (66% alkaline, 34 % saline)
- 30 millions accumulators (majority NiCd)

[TAB 9] BATTERIES CONSUMPTION PER CAPITA

	Consumption/cap/year
Alkaline batteries	8
Saline batteries	4
NiCd accumulators	0.5

No available life cycle inventory for saline batteries. LCI of alkaline batteries considered instead.

E.3. Main Data and Hypotheses for the End of Life Step

The amount of waste from E.E.E. (W.E.E.E.) per capita are extrapolated from France situation [7].

[TAB 10] W.E.E.E. PER CAPITA.

	EEE waste kg/year	Kg/cap/year
It equipments	415 000 000	7
Domestic appliance +light	300 000 000	5

Population in France : 59 780 000 [7]

The composition of WEEE is based on the composition of consumed products.

[TAB 11] COMPOSITION OF W.E.E.E.

	IT equipments		Domestic appliance	
	% - [Tab 1]	kg/an/hab	% - [Tab 1]	kg/an/hab
Steel	21,44%	1,08	43,96%	3,05
Aluminium	2,02%	0,10	5,49%	0,38
Copper	4,78%	0,24	3,55%	0,25
ABS	10,25%	0,51	2,70%	0,19
PP	0,00%	0,00	9,91%	0,69
PVC	1,82%	0,09	0,00%	0,00
PS (HIPS)	3,57%	0,18	7,99%	0,55
Flame retardant	0,81%	0,04	0,00%	0,00
Printed board	3,17%	0,16	0,00%	0,00
Rubber	0,06%	0,00	0,00%	0,00
Concrete	0,00%	0,00	16,29%	1,13
Glass	51,97%	2,61	4,30%	0,30
Foam	0,00%	0,00	1,72%	0,12
Refrigerant CFC/HFC134a	0,00%	0,00	0,05%	0,00
Tungstene	0,00%	0,00	0,03%	0,00
Misc	0,11%	0,01	4,02%	0,28
TOTAL WEIGHT (kg)	100,00%	5,02	100,00%	6,94

End for life for CFC : emitted in atmosphere.

End for life fro batteries: not taken into account (no life cycle inventories available for recycling and landfilling).

END OF LIFE SCENARIO

It were assumed that 5% of electric and electronic wastes are recycled, the rest being treated as municipal waste.

- Module used in SIMAPRO for the recycling: "Recycling only B 250 avoided".
- Module used in SIMAPRO for the municipal waste way: "Municipal waste 2000 NL B250", which considers 23 % to landfilling and 77 % to incineration.

[TAB 12] SCENARIOS FOR END OF LIFE

		IT equipments kg/cap/year	Domestic appliance kg/cap/year
Recycling	10%	0.5	0.7
Landfilling (95%x23%)	20%	1.0	1.4
Incineration (95%x77%)	70%	3.5	4.9

MAIN HYPOTHESES ABOUT RECYCLING

SIMAPRO recycling module gives data for the consumption of energy and the avoided products. The materials taken into account are given in table 9.

[TAB 13] AVOIDED PRODUCTS FOR RECYCLING PROCESS

	Avoided production of	
Plastics	0,9kg	PE granulate average B250
PP	0,9kg	PP granulate
PS	0,9kg	PS GPPS B250 1998
PVC	0,9kg	PVC B250
Glass	0,95kg	Glass 100% recycled
Steel	0,9kg	Steel ECCS
Aluminium	1kg	Aluminium ingots B250
Ferro metals	0,95kg	Iron

MAIN HYPOTHESES ABOUT INCINERATION

SIMAPRO incineration module gives data for energy consumption, the avoided production of electricity for incineration of plastics, and the flows related to the incineration of glass, aluminium and steel.

[TAB 14] ENERGY RECOVERY FOR PLASTICS INCINERATION

	MJ/kg UCPTE B250
PVC	2,51
PP	4,14
PS	5,09
Plastic	6,46

MAIN HYPOTHESES ABOUT LANDFILLING

SIMAPRO landfill module gives life cycle inventories for: plastics, PVC, PP, PS, glass, ferrous metals, steel and aluminium (emissions in air, soil and water), for the rest, only the mass dumping in landfill is considered.

FACT SHEET

FURNITURES

A. Content of the Category

- Product category** Furniture for households, offices and gardens
- Constituting elements** Furniture for : dining room, bed room, kitchen, chairs, upholstered, mattress and office.
- Analysed elements** Wood board, particulates board, melamine, metals, foam, cover materials, latex and glass.

B. Functional Unit

One year of consumption of furniture per capita in Europe.

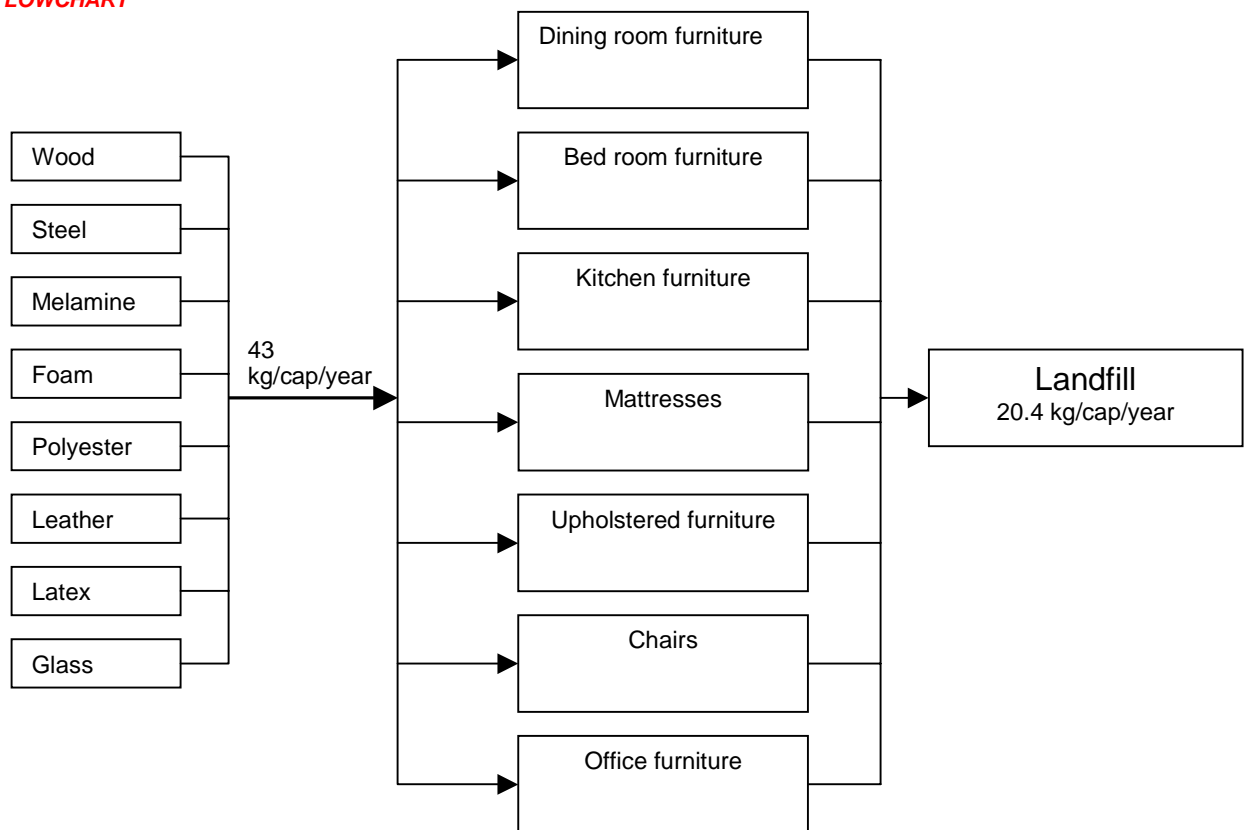
C. Main Sources of Information

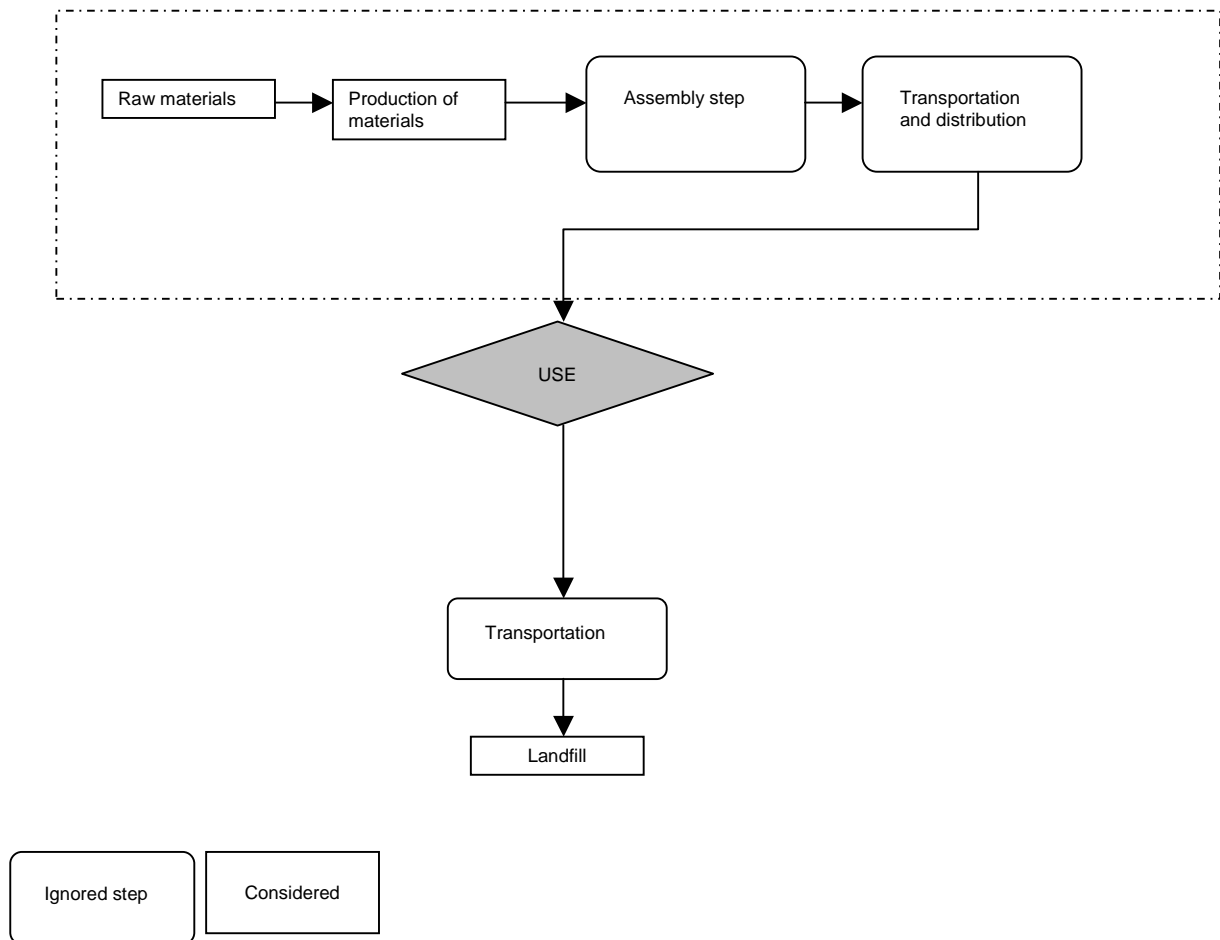
- [1] Site web : euanet.com
- [2] Site web : spmp.sgbd.com (syndicat des producteurs de matières plastiques)
- [3] A. Frühwald, University of Hamburg/Germany. J. Hasch, Kronopol Zary/Poland. Life Cycle Assessment of Particleboards and Fibreboards.

D. Studied System

Life cycle steps	Main assumptions for calculation	Not included (no data available)
Production	<ul style="list-style-type: none"> ▪ Steel is taken for springs (mattresses) and hardware. ▪ Melamine production is extrapolated from France situation. 	
Use		
End of life	<ul style="list-style-type: none"> ▪ It's been considered that all materials are dumping in landfills because of their high volumes. 	

Population considered in Europe for calculations: 1998 - 375 millions inhabitants.

FLOWCHART

SYSTEM STUDIED FOR ONE YEAR OF FURNITURE CONSUMPTION IN EUROPE

E. Main Data and Hypotheses

E.1. Main Data and Hypotheses for the Production Step

[TAB 1] MARKET UPDATE FOR FURNITURE

Dining room furniture	Production in 1000 kg	Kg/cap/year	Source	Assumption for materials
Tables	390 000	1.04	[1]	100% massive wood
Cabinets	2 460 000	6.56	[1]	100% massive wood

Bed room furniture	Production in 1000 kg	Kg/cap/year	Source	Assumption for materials
Wooden wardrobes	2 520 000	6.72	[1]	100% massive wood
Chest of drawers	540 000	1.44	[1]	100% massive wood
Wooden beds	280 000	0.75	[1]	100% massive wood
Metal beds	15 000	0.04	[1]	100% steel
Bedside tables	60 000	0.16	[1]	100% massive wood

Kitchen furniture	Production in 1000 kg	Kg/cap/year	Source	Assumption for materials
Fitted kitchens	2 200 000	5.87	[1]	100% massive wood

Chairs	Production in 1000 kg	Kg/cap/year	Source	Assumption for materials
Chairs	262 500	0.7	[1]	100% massive wood

Upholstered furniture	Production in 1000 kg	Kg/cap/year	Source	Assumption for materials
Sofas	960 000	2.56	[1]	Wood structures 57%, PU foams 15%, cardboard 10%, metals 5%, cover materials 13% (of which 37% leather and 67% textiles) – data from [1]
Armchairs	1 000 000	2.67	[1]	

Mattresses	Production in 1000 kg	Kg/cap/year	Source	Assumption for materials
Spring m~	410 000	1.09	[1]	32% PU foams, 14% latex, 26% metals, 28% textiles
Foam m~	176 000	0.47	[1]	
Latex m~	88 750	0.24	[1]	

Office	Production in 1000 kg	Kg/cap/year	Source	Assumption for materials
Seats	195 000	0.52	[1]	100% particulates board
Cabinets	1 270 000	3.39	[1]	100% particulates board
Desks	420 000	1.12	[1]	100% particulates board
Partition	125 000	0.33	[1]	100% particulates board

For glass, the total consumption for furniture industry is 400 000 tons, it represents 1.07 kg per capita per year.

Melamine	tons	Kg/cap/year	Source	Assumption for materials
Consumption 2001 (France situation)	380 000	6.33	[2]	Melamine (aminoplast)
Population in France: 60 millions Population in Europe 375 millions Pop Eu/ Pop France = 6.25 380 000 x 6.25 = 2 375 000 tons of melamine consumed by year in Europe.				
Consumption 2001 extrapolated to Europe.	2 375 000	6.33	[2]	Melamine (aminoplast)

[TAB 2] MODULES USED IN SIMAPRO FOR LCI :

Materials	Modules
Wood massive	Wood board production
Melamine	Melamine production
Steel	Steel production
PUR	PUR flexible foam production
Cardboard	Cardboard grey production
Textiles	Polyester production
Leather	Leather production
Latex	SBR production
Particulates board	Particulate board Data from [1]
Glass	Flat glass uncoated production

An "other" category is not taken into account for materials by Euanet, it represents 32% of the sales volume, so we have overestimated by 32% all materials to take it into consideration.

[TAB 3] LCI FOR PARTICULATES BOARD PRODUCTION 1 KG

Inputs		
Water Used (total)	litre	3,48E-01
Wood	kg	9,64E-01
Emissions to air		
Carbon Dioxide (CO ₂ , fossil)	g	3,97E+02
Dust	g	1,52E+02
Sulphur Oxides (SO _x as SO ₂)	g	2,86E+00
Emissions to water		
Phosphorus (P)	g	4,96E+01
Waste		
Recovered Matter: Iron Scrap	kg	1,45E-03
Waste (unspecified)	kg	2,90E-03
Energies		
E Fuel Energy	MJ	3,17E-01
E Total Primary Energy	MJ	5,71E+00
Electricity	MJ elec	2,25E+00

E.2. Main data and hypothes for the use step

[TAB 4] BREAKDOWN OF PRODUCTION :

Garden	3,1%
Office	11,7%
Domestic	85,2%
<i>Parts</i>	17,1%
<i>Others</i>	6,5%
<i>Uphlostery</i>	14,5%
<i>Kitchen</i>	13,0%
<i>Bedroom</i>	11,5%
<i>Dining room</i>	10,3%
<i>Matteresses</i>	4,5%
<i>Chairs</i>	4,0%
<i>Shop</i>	3,8%

All environmental impacts are dispatched with this repartition (garden, office, domestic).

E.3. Main Data and Hypotheses for the End of Life Step

EUANET gives data for furniture waste by materials.

Furniture waste	Total 1000 kg	Kg/cap/year	Modules
wood	4 585 000	12,23	Landfill compostable
metals	910 000	2,43	Landfill steel
plastics	452 000	1,21	Landfill plastics
hardware	412 000	1,10	Landfill steel
PU foams	305 000	0,81	Landfill plastics
Cover materials	260 000	0,69	Landfill textiles
Glass	150 000	0,40	Landfill glass
Rubber	56 000	0,15	Landfill plastics
Others	511 000	1,36	Landfill non inert
	7 641 000	20.38	

FACT SHEET

CLEANING AGENTS

A. Content of the Category

- Product category** Household and industrial detergents.
- Constituting elements** Cleaning agents for : textiles, dishwasher, personal care, households and industrial uses.
- Analysed elements** Laundry detergents powders, liquids, and specific products, fabric softeners, toilet cleaning agents, hand and machine dishwashing cleaning agents, personal care products and industrial detergents.

B. Functional Unit

One year of use of cleaning agents and detergents in Europe.

C. Main Sources of Information

[1] Site web www.mst.dk

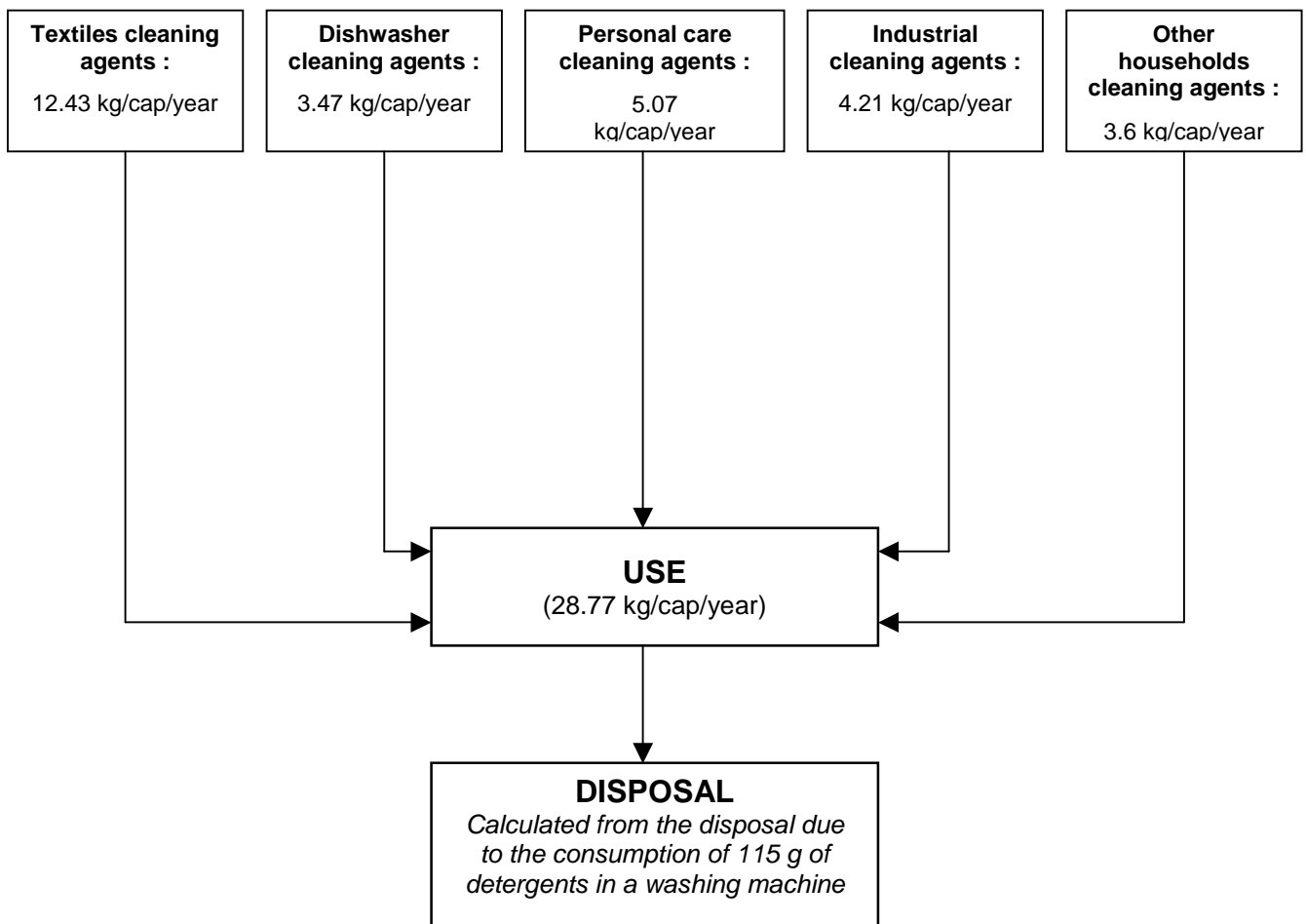
[2] Chainet domestic washing of clothes

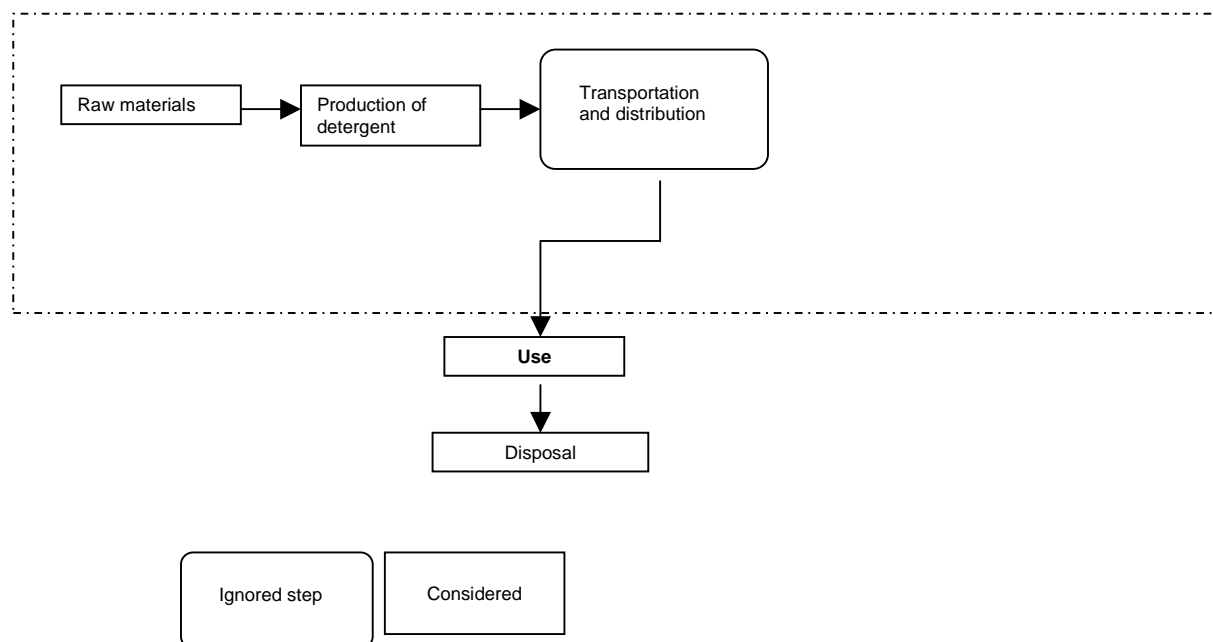
[3] E. Saouter, G. Van Hoof; A database for the life cycle assessment of Procter & Gamble laundry detergents; (page 103). The International Journal of Life Cycle Assessment Vol.7 - N°2 - 2002, LCA case studies.

D. Studied System

Life cycle steps	Main assumptions for calculation	Not included (no data available)
Production	<ul style="list-style-type: none"> LCI from Boustead database : "Detergent production" used for each kind of cleaning agent. 	
Use	<ul style="list-style-type: none"> Environmental burdens are extrapolated from disposals due to the use of a washing machine (0.115 g/wash cycle). Model for disposal is taken from Belgium situation. 	<ul style="list-style-type: none"> Energy consumption during the washing process
End of life		

Population considered in Europe for calculations : 1998 - 375 millions inhabitants.

FLOWCHART

SYSTEM STUDIED FOR ONE YEAR OF WASH IN EUROPE.

E. Main Data and Hypotheses

E.1. Main Data and Hypotheses for the production step

[TAB 1] HOUSEHOLDS DETERGENTS CONSUMPTION.

	Consumption EU 1999 (kt)	Kg/cap/year	Categories considered
Laundry detergents powders	3 100	8.27	Textiles cleaning agents
Laundry detergents liquids	560	1.49	Textiles cleaning agents
Fabric softeners	1 000	2.67	Textiles cleaning agents
All purpose cleaning agents	950	2.53	Other households cleaning agents
Toilet cleaning agents	400	1.07	Other households cleaning agents
Hand dishwashing cleaning agents	800	2.13	Dishwasher cleaning agents
Machine dishwashing cleaning agents	500	1.33	Dishwasher cleaning agents
Personal care products	1 900	5.07	Personal care cleaning agents
	9 210		
Surfactants	1 448	(ratio surfactants/detergents : ^(a) 15.72%)	

[TAB 2] HOUSEHOLDS DETERGENTS CONSUMPTION BY CATEGORIES.

	Consumption EU 1999 (kt)	Kg/cap/year
Textiles cleaning agents	4660	12.43
Dishwasher cleaning agents	1300	3.47
Personal care cleaning agents	1900	5.07
Other households cleaning agents	1350	3.6
	9 210	24.57

For industrial detergents, the consumption is based on the quantity of surfactants consumed with the same ratio than for households detergents (15.72% - [tab 1]).

[TAB 3] INDUSTRIAL DETERGENTS CONSUMPTION.

	Consumption EU 1999 (kt)	Kg/cap/year
Industrial surfactants	^(b) 248	-
Estimated consumption of detergents	^(b/a) 1577	4.21

Module used for LCI : “detergent production 1kg” from Boustead database.

E.2. Main Data and Hypotheses for the use step

Number of wash cycle equivalent based on the consumption of 115g of detergents per wash cycle [2].

[TAB 4] ESTIMATION OF THE WASH CYCLE EQUIVALENT.

	Consumption Kg/cap/year	Nb wash cycle equivalent/cap/year
Textiles cleaning agents	12.43	108,08
Dishwasher cleaning agents	3.47	30,17
Personal care cleaning agents	5.07	44,08
Other households cleaning agents	3.60	31,30
Industrial detergents	4.21	36,61

E.3. Main Data and Hypotheses for the end of life step

[TAB 5] LCI OF A TRADITIONAL GRANULAR LAUNDRY DETERGENT USED IN BELGIUM, BASED ON 1000 WASH LOADS.

Source : [3]

Energy and emissions	Unit	
Primary energy	GJ	0.26
Solid waste	Kg	20.00
Air emissions		
CO ₂	Kg	16.20
CO	g	2.08
SO _x	g	48.10
NO _x	g	20.40
CH ₄	g	107.00
C _x H _y	g	5.96
Particles / dust	g	10.80
Metals	g	0.48
Waterborne emissions		
BOD	g	8580.00
COD	g	20700.00
Total P	g	0.06
Total N	g	0.12
Oil/grease	g	0.91
Ammonia	g	0.07
Metals	Kg	14.20

FACT SHEET

GARDENING

A. Content of the Category

Product category	Garden products
Constituting elements	Tools, furniture, pesticides and fertilisers.
Analysed elements	Production and use of pesticides and fertilisers.

B. Functional Unit

One year of consumption of pesticides and fertilisers for gardening per capita in Europe.

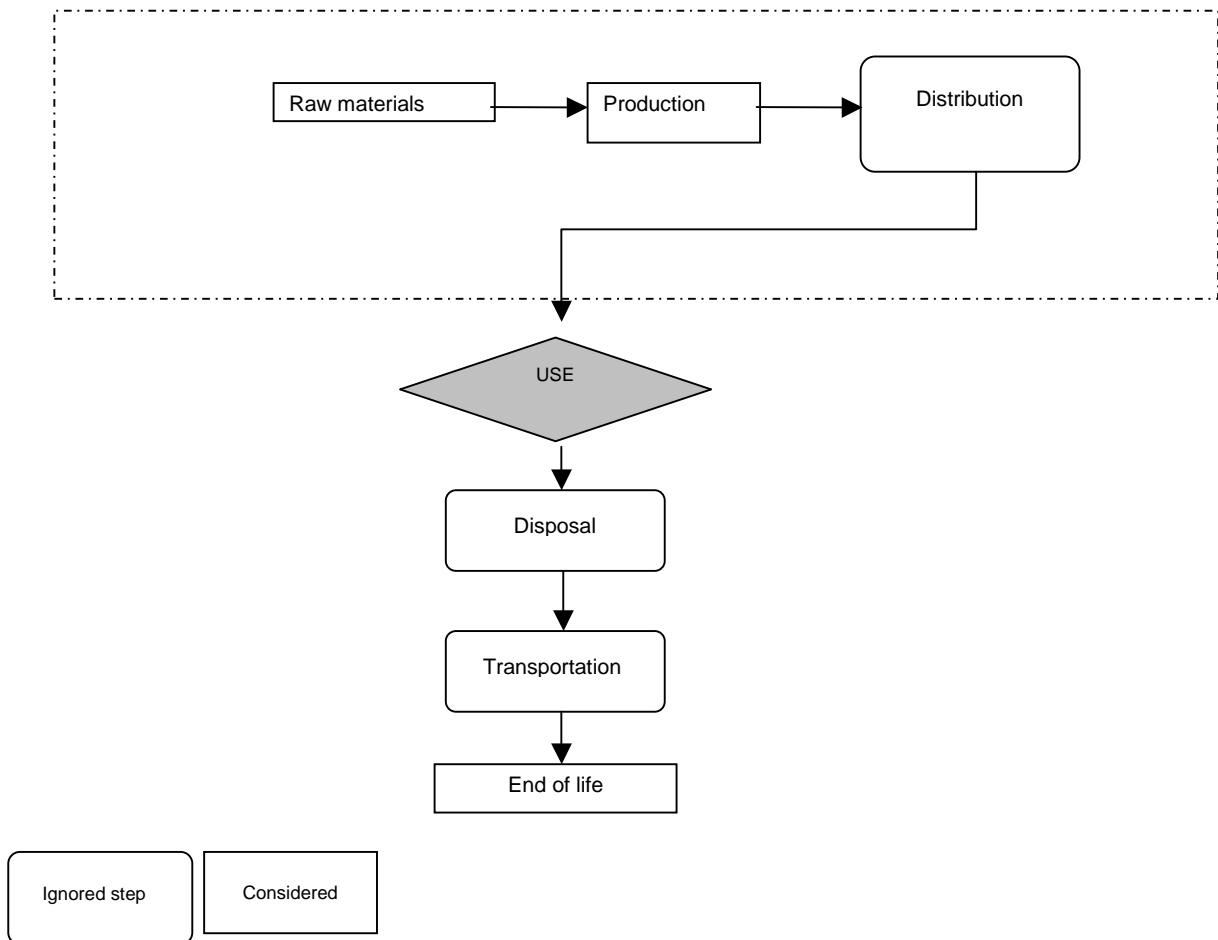
C. Main Sources of Information

- [1] Site web: fao.org
 [2] Agriculture, Statistical yearbook 2000 – data 1990-1999. European commission – Eurostat agriculture and fisheries.
 [3] Centre of environmental science (CML), Leiden university.
 [4] The Fertilizer Industry in Western Europe. IFA Enlarged Council Meeting. Rome 2 December 1999.
 [5] site web ADEME.fr
 [8] Comité de la prevention et de la precaution : risques sanitaires lies à l'utilisation des produits phytosanitaires.

D. Studied System

Life cycle steps	Main assumptions for calculation	Not included (no data available)
Production	<ul style="list-style-type: none"> It's been assumed to consider that all pesticides have an equivalent life cycle inventory for the production step. Idem for fertilisers. 	<ul style="list-style-type: none"> Tools
Use		<ul style="list-style-type: none"> Energy and gases for pulverization are not considered.
End of life	<ul style="list-style-type: none"> toxicity of pesticides is based on carbendazim pesticide. 	
		<ul style="list-style-type: none"> Transports and packaging

Population considered in Europe for calculations: 1998 - 375 millions inhabitants.

SYSTEM STUDIED FOR ONE YEAR OF FURNITURE CONSUMPTION IN EUROPE

E. Main Data and Hypotheses

E.1. Main Data and Hypotheses for the Production Step

[TAB 1] UTILISATION OF PESTICIDES IN EUROPE

Extrapolation from France situation

- Pesticides consumption in France :9.5 kt/cap/year [8]
- Population considered in France : 60 millions : **0.11 kg/cap/year**. This value is extrapolated to Europe with the same ratio for gardening used in fertilisers^a (7%).
- Module used for LCI in SIMAPRO: "Pesticides cotton" production.

[TAB 2] CONSUMPTION OF FERTILIZERS IN EUROPE

	Kg/ha	Source	Module used in SIMAPRO
Western Europe 1999	17.7 Mt	[4]	Pesticides (cotton)
Use for gardening	7% ^a	[4]	
Consumption kg/cap/year	3.3		

E.2. Main data and hypotheses for the use step

[TAB 3] TOXICITY AND ECO TOXICITY OF PESTICIDES:

The values are based on carbendazim compound [CML]

	kg 1,4 Dichlorobenzene eq.
Human toxicity	1,40E+02
Aquatic ecotoxicity	2,00E+03
Terrestrial ecotoxicity	4,90E+01
Sediment ecotoxicity	2,00E+03

[TAB 4 ASSUMPTIONS FOR FERTILIZERS

Nutrients	Bio disponibility	Rest considered in water	Source
N	40%	60 %	[8]
P	70%	30 %	[8]
K	100%	0 %	[8]

For 1 kg of fertilizer used in agriculture: N in water = 28 g; P in water = 0.42 g; K in water = 0 g.

FACT SHEET

WATER SUPPLY

A. Content of the Category

Product category	Consumption and use of drinking water.
Constituting elements	Production of drinking water, waste water treatment and disposal of sewage sludge.
Analysed elements	Energy and chemicals consumption due to the production of drinking water, production of plastics pipes for the delivery of water. Energy consumption and recovery due to the treatment of waste water; agricultural use and landfill of sewage sludge.

B. Functional Unit

One year of consumption and use of drinking water per capita in Europe.

C. Main Sources of Information

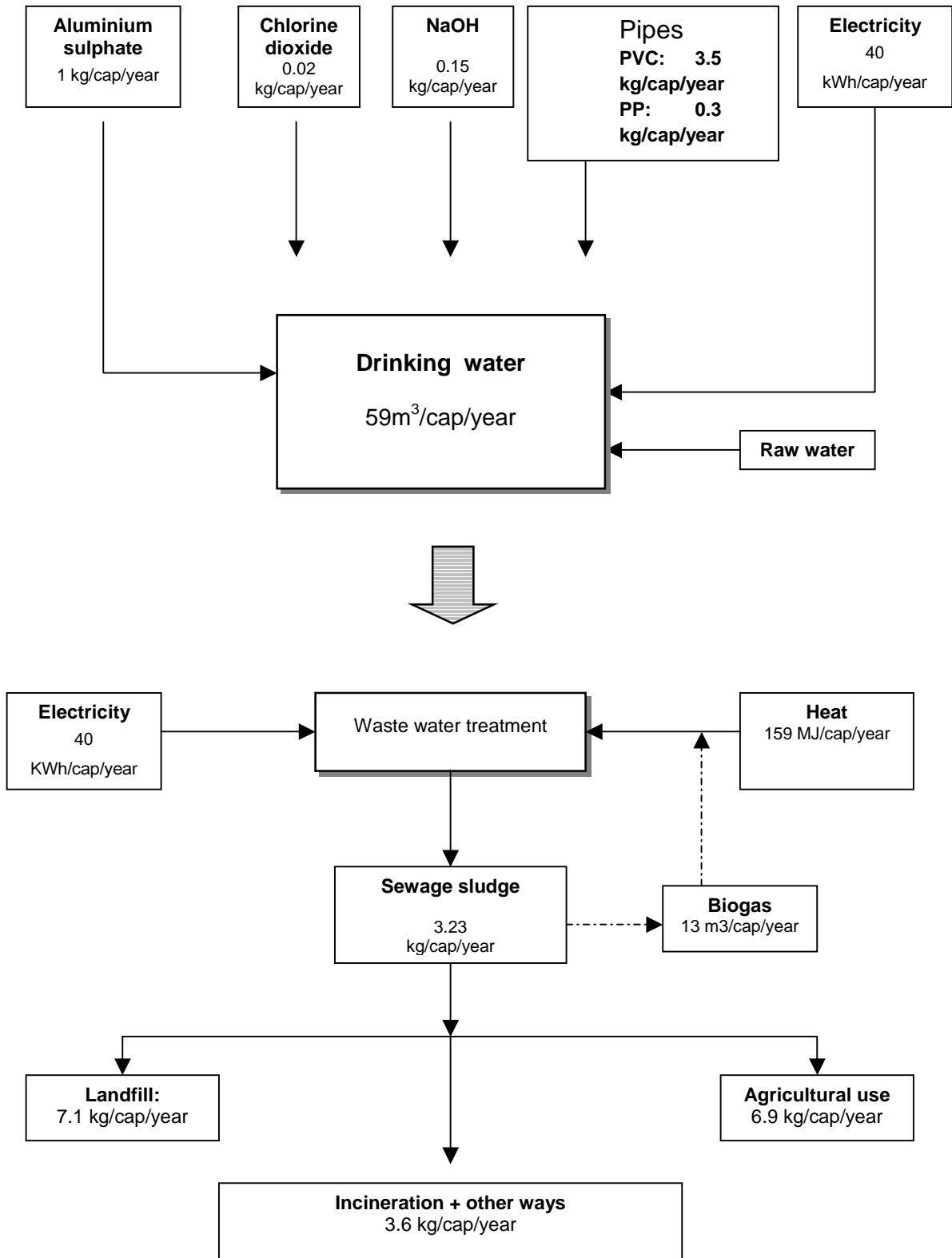
- [1] Introduction of domestic water saving systems in the municipal water cycle: an LCA based comparison. M. Tarantini, F. Ferri. 6th Case Studies Symposium SETAC-Europe, 1998
- [2] Disposal and recycling routes for sewage sludge, Scientific and technical sub-component report. Arthur Andersen, CEDE, for European commission, DG Environment B/2.
- [3] Plastics: A materials of choice in building and construction. Plastics consumption and recovery in Western Europe 1995. APME.
- [4] Consumers in Europe. Facts and figures. Data 1996-2000. 2001 Edition.
- [5] site web sfc.fr (Société Française de Chimie).
- [6] Informations concernant la protection des eaux N°18. L'énergie dans les stations d'épuration ; résumé du manuel et des analyses détaillées. Office fédéral de l'environnement, des forêts et du paysage (OFEFP) Berne 1995.
- [7] site web www.biogaz.atee.info
- [8] site web ADEME.fr

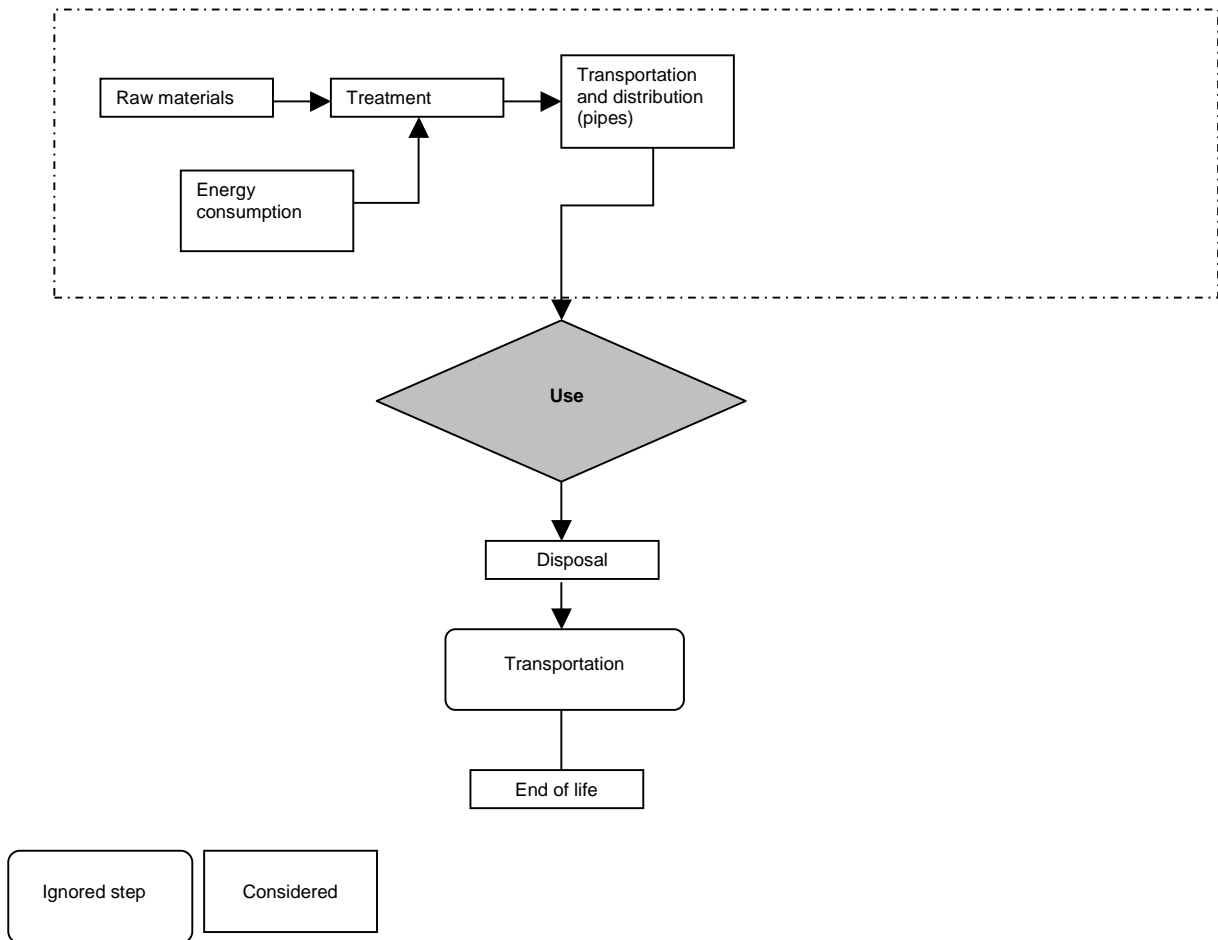
D. Studied System

Life cycle steps	Main assumptions for calculation	Not included
Production	<ul style="list-style-type: none"> Chemicals considered for water treatment: Aluminium sulphate, chlorine dioxide, soda. For pipes: only plastics are considered. 	Other chemicals
Use		
End of life	<ul style="list-style-type: none"> Agricultural use and landfill are considered. 	Incineration and other issues
Transport		Not taken into account

Population considered in Europe for calculations: 1998 - 375 millions inhabitants.

FLOWCHART



SYSTEM STUDIED FOR ONE YEAR OF BUILDING MATERIALS CONSUMPTION IN EUROPE

E. Main Data and Hypotheses

E.1. Main Data and Hypotheses for the Production of drinking water

[TAB 1] CHEMICALS AND ENERGY FOR DRINKING WATER PROCESS

Inputs	Per m ³	Date	Source
Electricity	0.67 kWh	1998	[1]
Chemicals ^(a)	19.8 g	1998	[1]
Sludge	39.9 g	1998	[1]

[TAB 2] ASSUMPTION FOR CHEMICALS

Chemicals	Per m ³	Date	Source
Al ₂ (SO ₄) ^(b)	17 g	1998	[5]
ClO ₂ ^(c)	0.3 g	1998	[5]
NaOH	2.52	Calculation (a-b-c) and [5]	

Water consumption in the domestic sector: **59 m³/cap/year**

[TAB 3] RESULTS PER CAPITA AND MODULES USED IN SIMAPRO FOR LCI

Inputs	Per capita	Modules used for LCI
Electricity	0.67 kWh	Electricity UCPTTE 1 kWh
Al ₂ (SO ₄)	1.01 kg	Aluminium sulphate production (Boustead database)
ClO ₂	0.02 kg	Chlorine dioxide production (Boustead database)
NaOH	0.15 kg	NaOH average EU Simapro
Sludge	2.36 kg	Landfill non inert

[TAB 4] MATERIALS AND MODULES CONSIDERED IN SIMAPRO FOR PIPES

Plastics	Market for pipes kt/year	Kg/cap/year	Source	Modules used in SIMAPRO for LCI
PVC	1329	3.54	[3]	PVC B 250 + extrusion
PP	121	0.32	[3]	PP A + extrusion
HDPE	341	0.91	[3]	PE granulate + extrusion
LDPE	88	0.23	[3]	PE granulate + extrusion
ABS	13	0.03	[3]	ABS I +extrusion

E.2. Excluded Data for the Use Step :

Energy consumption for the delivery of water.

E.3. Main Data and Hypotheses for waste water treatment

The production of sewage sludge in Europe is about 7 million tons of dry matter; it represents **18.7 kg/cap/year**.

[TAB 5] ENERGY CONSUMPTION FOR WASTE WATER TREATMENT PLANT (20 000 INHABITANT EQUIVALENT)

Electricity	kWh/day	KWh/cap/year	Source
Lifting	250	4.6	[6]
Mechanical purification	100	1.8	[6]
Biological purification	1200	21.9	[6]
Sludge treatment	550	10.0	[6]
Other	100	1.8	[6]
TOTAL	2200	40	
Heat	MJ/day	MJ/cap/year	Source
Biological purification	100	1.8	[6]
Sludge treatment	8000	146.0	[6]
Other	600	10.9	[6]
TOTAL	8700	159	

ASSUMPTIONS FOR SEWAGE SLUDGE TREATMENT

- Lime treatment: 30 % of dry matter [2]
- Production of biogas: 0.7 m³/kg dry matter [6]
- Composition of biogas: 45 % CH₄, CO₂ 35 %, N₂ 19%. [7]
- PCI CH₄ : 36 MJ/m³ - PCI for biogas : 45% x 36 = **16.2 MJ/ m³**

[TAB 6] ENERGY RECOVERY FROM BIOGAS

Biogas	
m ³ /cap/year	13.07
CO ₂ from biogas kg/cap/year	8.2
Energy recovery MJ/cap/year	212

Module used in SIMAPRO: Heat gas 1 MJ

[TAB 7] DISPOSAL ROUTES FOR SEWAGE SLUDGE

Agricultural use	38%	7,09 kg/cap/year dry matter	[2]
Landfill	37%	6,91 kg/cap/year dry matter	[2]
Incineration	9%	1,68 kg/cap/year dry matter	[2]
Others	16%	2,99 kg/cap/year dry matter	[2]

[TAB 8] ASSUMPTIONS FOR AGRICULTURAL USE

Nutrients	% DM	Bio disponibility	Rest considered in water	Source
N	7%	40%	60 %	[8]
P	6%	70%	30 %	[8]
K	1%	100%	0 %	[8]

For 1 kg of dry matter used in agriculture: N in water = 28 g; P in water = 0.42 g; K in water = 0 g.

FACT SHEET

MUNICIPAL WASTE MANAGEMENT

A. Content of the Category

Product category	Municipal waste management in Europe.
Constituting elements	Landfilling, incineration, composting, sorting and recycling, other treatment.
Analysed elements	Landfilling, incineration, composting, sorting and recycling for plastics, paper, glass, metals, food and garden waste.

B. Functional Unit

One year of municipal waste generation and treatment per capita in Europe .

C. Main Sources of Information

[1] Site web: waste.eionet.eu.int

[2] Site web: eea.org

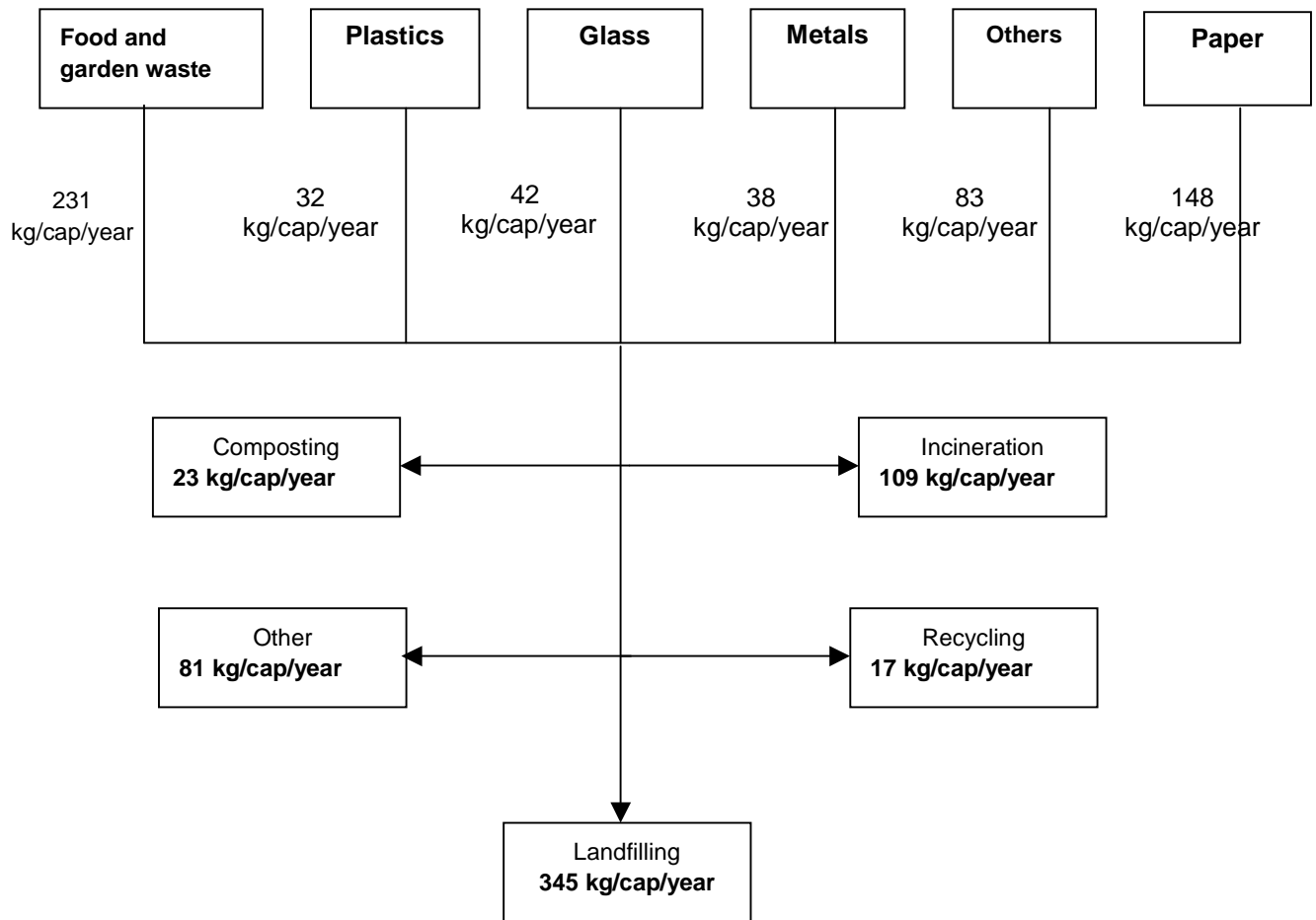
D. System studied

Life cycle steps	Main assumptions for calculation	Not included (no data available)
Production	<ul style="list-style-type: none"> The Wisard¹⁰ software has been used. The construction, maintenance, energy consumption infrastructures, end of life of waste treatment plants are considered. 	
Use	<ul style="list-style-type: none"> Energy consumption for waste treatment plants. 	
End of life	<ul style="list-style-type: none"> Model for electricity: French Recycling, landfilling, composting, and incineration are considered 	<ul style="list-style-type: none"> Transports

Population considered in Europe for calculations: 1998 - 375 millions inhabitants.

¹⁰ Price Water House Coopers

FLOWCHART



E. Main Data and Hypotheses

E.1. Main Data and Hypotheses for the composition and treatment of municipal waste

The amount of waste considered is based on products categories considered in this study.

The following scenarios have been considered for the routes of treatment:

- Recycling: the refused compounds, after sorting, are dumping in municipal landfill;
- Incineration: the components with no calorific value are considered only for the fuel consumption, transports and valorisation of ashes, building of incinerator, no direct energy recovery is considered for this materials;
- Composting: the non organic components are only considered for the construction and the consumptions of the composting site, no direct environmental burden is considered for this components;
- Landfilling: inert waste, like glass, are considered for their contribution in the construction and the consumptions of the landfill site, no direct environmental burden is considered for this components;
- Other treatments are not considered.

[TAB 1] MUNICIPAL WASTE GENERATION IN EU COUNTRIES

	Waste generation kg/cap/year	Source
Denmark	540	[1]
Netherland	562	[1]
Italy	455	[1]
Spain	390	[1]
Sweden (94)	364	[1]
Portugal (95)	353	[1]
United Kingdom	476	[1]
France (95)	597	[1]
Greece	344	[1]
Austria	654	[1]
Germany	536	[1]
Norway	630	[1]
Luxembourg	461	[1]
Iceland	558	[1]
Finland (94)	413	[1]
Belgium	536	[1]

[TAB 2] MUNICIPAL WASTE COMPOSITION

		Source	Kg/cap/year
Paper	31%	This study	148
Plastics	4%	This study	32
Glass	8%	This study	42
Metals	4%	This study	38
Food and garden waste	47%	[2]	231
Others	6%	This study	83

575

The municipal waste treatment has been evaluated with the WISARD software, with the following characteristics:

Incinerator (UIOM 24/02/97 – ½ hum cogener moy (32% rdt)

The installation is conformed to the 24/02/97 French circular:

[TAB 3] INCINERATOR AIRBORNE EMISSIONS

Dust	10 mg/Nm ³
HCl	10 mg/Nm ³
HF	1 mg/Nm ³
SOx	50 mg/Nm ³
CO	20 mg/Nm ³
VOC	10 mg/Nm ³
Hg	0.05 mg/Nm ³
Cd	0.05 mg/Nm ³
Dioxins	0.1 ng I TEQ/Nm ³

- Moist treatment of smoke,
- Activated charcoal is injected for dioxins and furans treatment;
- Cogeneration recovery (electricity and heat). Efficiency: 32% of the calorific value.

Composting site (Compostage C1)

Composting process for crude municipal waste.

Landfilling site (CET couvert captage biogaz 50%)

The site is covered and 50% of the biogas is collected and burned.

[TAB 4] ROUTES FOR MUNICIPAL WASTE TREATMENTS (WISARD SCENARIOS)

	Paper	Plastics	Glass	Metals	Food /garden waste	Others	Total
Quantity total kg/capita	148	32	42	38	231	83	575
Landfill	88,7	19,4	25,4	23,0	138,6	49,9	345,0
Incineration	28,1	6,2	8,0	7,3	43,9	15,8	109,3
Composting	5,9	1,3	1,7	1,5	9,2	3,3	23,0
Sorting	4,4	1,0	1,3	1,2	6,9	2,5	17,3
Other	20,7	4,5	5,9	5,4	32,3	11,6	80,5

FACT SHEET

BABY PRODUCTS

A. Content of the Category

Product category	Baby products
Constituting elements	Diapers, talc, cream and others
Analysed elements	Disposal and reusable diapers.

B. Functional Unit

One year of consumption of diapers per capita in Europe.

C. Main Sources of Information

[1] Beverly J. Sauer et al Franklin Associates. Life Cycle Assessment: Resource and environmental profile analysis of children's diaper systems SETAC, Environmental toxicology and chemistry, Volume 13, Number 6 June 1994.

D. Studied System

Life cycle steps	Main assumptions in the study	Not included (no data available)
Production	<ul style="list-style-type: none"> This study is based on data provided by a set of material suppliers across the industry 	
Use	<ul style="list-style-type: none"> Usage: data are based on an average daily usage of 9.7 cloth diapers and 5.4 single-use diapers per day. Cloth diapers are used at a higher rate than single use diapers for more frequent changes and the practice of using double or triple cloth diapers for more absorbency. All cloth diapers are assumed to be machine dry. 	
End of life	<ul style="list-style-type: none"> 5% of single use diapers containing faecal matter are flushed before disposing of the diaper; 50% of wastewater sewage sludge is landfilled, 25% is applied, and 21% is incinerated. The remaining 4% is distributed proportionately among these disposal methods 	

Population considered in Europe for calculations: 1998 - 375 millions inhabitants.

E. Main Data and Hypotheses

The number of birth in Europe, in 2002 is 4 millions [Eurostat], with a population of 375 millions of inhabitants, it represents 0.01 births per capita per year. It's been assumed that the length of diapering is 3 years, so the two years old and the one year old baby must be considered. **The number of baby diapered per capita per year represents 0.03 babies per capita per year.** The number of diapers used each year is equivalent to 71 diapers/cap/year.

It was assumed to take 75% for the single use diapers and 25% for the laundered cloth diapers.

[TAB 1] ENERGY AND ENVIRONMENTAL DATA FOR CHILDREN'S DIAPER SYSTEMS (BASED ON SIX-MONTHS PERIOD)

		Single use diapers 5,4/baby/day	Commercial laundrying 9,7/baby/day
Water Used (total)	litre	8.42	21.88
Airborne emissions			
Aldehyde	g	5.40	2.10
Ammonia (NH ₃)	g	0.10	2.30
Carbon Monoxide (CO)	g	390.00	300.00
Chlorine (Cl ₂)	g	24.00	8.70
Hydrocarbons (unspecified)	g	790.00	1230.00
Lead (Pb)	g	0.36	0.02
Nitrogen Oxides (NO _x as NO ₂)	g	810.00	870.00
Particulates (unspecified)	g	600.00	500.00
Sulphur Oxides (SO _x as SO ₂)	g	1060.00	900.00
Emissions to water			
Acids (H ⁺)	g	120.00	100.00
Ammonia (NH ₄ ⁺ , NH ₃ , as N)	g	1.30	0.06
BOD ₅ (Biochemical Oxygen Demand)	g	150.00	400.00
COD (Chemical Oxygen Demand)	g	23.00	1730.00
Dissolved Matter (unspecified)	g	130.00	1080.00
Metals (unspecified)	g	11.00	13.00
Oils (unspecified)	g	1.20	3.30
Phenol (C ₆ H ₅ OH)	g	0.00	0.02
Sulphide (S ⁻)	g	0.00	0.00
Suspended Matter (unspecified)	g	220.00	1120.00
Total solid waste	m ³	0.21	0.11
E Total Primary Energy	MJ	3490.00	4150.00

F. Main conclusions of the study

- The laundered cloth diaper uses 13% more total energy than the single use diaper;
- Single use diapers produce about 100% more total solid waste by volume than either the laundered cloth diaper
- None of the diaper systems produces more or less air or water borne emissions in every category
- Waterborne emissions for both cloth diaper systems are primarily process related and consist of baby wastes contained in the solid diaper and chemicals used in the laundering operation.

FACT SHEET

PACKAGING

A. Content of the Category

Product category	Packaging
Constituting elements	Bags (paper, plastic), film plastic, palettes (wood), Aluminium and steel cans, carton.
Analysed elements	Liquid packaging carton, packaging carton Glass container PET HDPE bottles, PP film, PS, PVC and EPS Aluminium cans Palettes

B. Functional Unit

One year of consumption of packaging per capita in Europe.

C. Main Sources of Information

[1] European commission DG-XI-E3, European packaging waste management systems. Final report, February 2001.

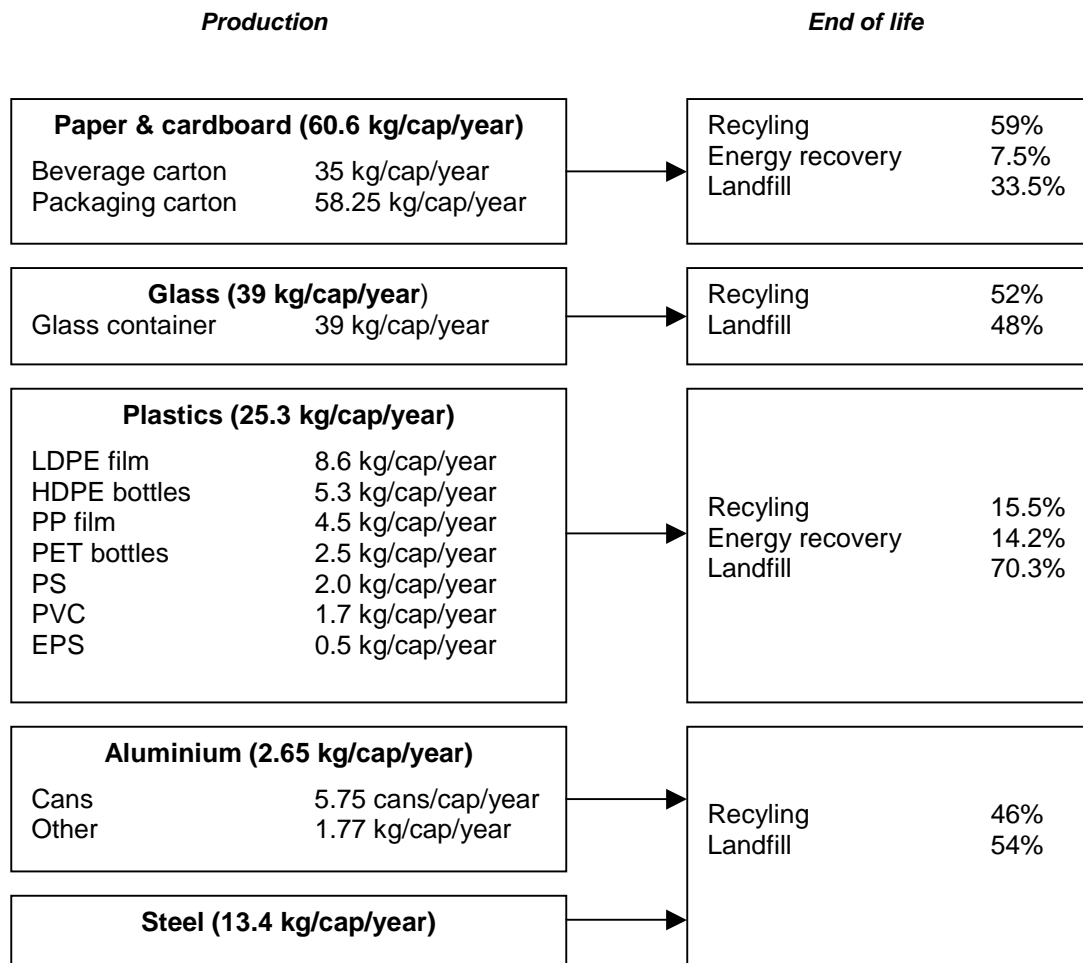
[2] Site web APME.org

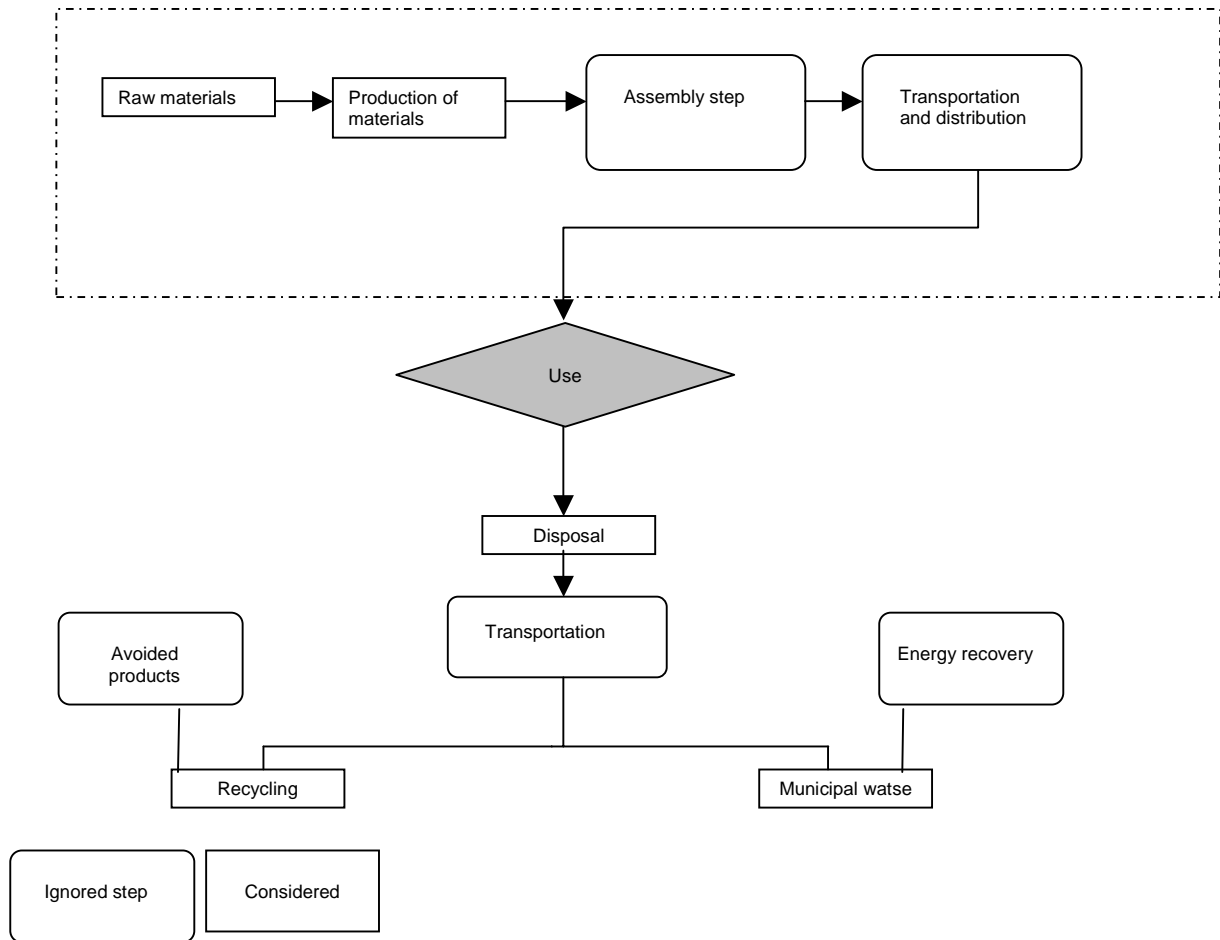
[3] Site web APEAL.org

[4] Site web EAA.org

D. Studied System

Life cycle steps	Main assumptions for calculation	Not included (no data available)
Production	<ul style="list-style-type: none"> ▪ Paper & cardboard : liquid packaging and packaging for carton only. ▪ Plastics : consumption by polymer: <ul style="list-style-type: none"> ▪ LDPE used for film ▪ HDPE used for bottles ▪ PP used for film ▪ PET used for bottles ▪ PS, PVC, EPS : no information for utilization, we assumed to take account only the production of the granulate and their extrusion. ▪ Aluminium : only cans usage is available for year 2001, the rest of the production of Al packaging is considered like hot rolling aluminium 	
Use		
End of life	<ul style="list-style-type: none"> ▪ Aluminium packaging have the same end of life than steel packaging. ▪ Wood : 50% Landfilling, 50% recycling. 	
Transport		<ul style="list-style-type: none"> ▪ Transports are not taken in consideration.

FLOWCHART

SYSTEM STUDIED FOR ONE YEAR OF PACKAGING CONSUMPTION IN EUROPE

E. Main Data and Hypotheses

E.1. Main Data and Hypotheses for the Production Step

[TAB 1] MATERIAL COMPOSITION OF THE PACKAGING

PAPER AND CARDBOARD	Market	Kg/cap/year	Source	Module used for LCI
Paper and cardboard for packaging	22.6 Mt	60.6		
Beverage carton	874 kt	2.35	[1]	Liquid packaging carton
Rest	21.7Mt	58.3	[1]	Packaging carton

GLASS	Market	Kg/cap/year	Source	Module used for LCI
Glass for packaging	14.499 Mt	39	[1]	Glass container from virgin materials

PLASTICS	Market	Kg/cap/year	Source	Module used for LCI
Plastics for packaging	9.5 Mt	25.3	[2]	
LDPE	34%	8.6	[2]	LDPE oriented film
HDPE	21%	5.3	[2]	HDPE bottles production
PP	18%	4.5	[2]	PP oriented film
PET	10%	2.5	[2]	PET bottles production
PS	8%	2.0	[2]	PS granulate production + Extrusion
PVC	7%	1.8	[2]	PVC granulate production + Extrusion
EPS	2%	0.5	[2]	EPS production 1kg

STEEL	Market	Kg/cap/year	Source	Module used for LCI
Steel for packaging	5 Mt	13.4	[3]	Steel ECCS production

ALUMINIUM	Market	Kg/cap/year	Source	Module used for LCI
Aluminium for packaging	1 Mt	2.65	[4]	
Aluminium cans (about 15 g/ can)	2.14e7 units	57.5 units	[4]	Aluminium cans 330 ml production
Rest		1.77	[4]	Aluminium production+ Hot rolling aluminium

WOOD	Market	Kg/cap/year	Source	Module used for LCI
Wood for packaging	6.375 Mt	17.1	[1]	Palette production

E.2. Main Data and Hypotheses for the Use Step

[TAB 2] UTILISATION OF PACKAGING

	Beverage	Food	Detergents, cosmetics, pharmaceuticals	Aerosol	Others households	Others industrials
Glass	75,0%	20,0%	3,0%			2%
Plastics	0,0%	54,3%	12,7%		6,0%	27%
Metals	17,0%	56,0%		7,0%		20%
Aluminium	16,5%	49,5%	16,5%	16,5%	0,0%	0%
Wood						100%
paper board	4%					50%

E.3. Main Data and Hypotheses for the End of Life Step

[TAB 3] SCENARIOS FOR END OF LIFE

	Recycling	Energy recovery	Landfilling	Source
Paper and cardboard	59%	7.5%	33.5%	[1]
Glass	52%		48%	[2]
Plastics	15.5%	14.2%	70.3%	[3]
Steel	46%		54%	[4]
Aluminium	46%		54%	[5]
Wood	50%	50%		[6]

MAIN HYPOTHESES ABOUT RECYCLING

The avoided products are not considered for packaging. Only the recycling process is considered.

MAIN HYPOTHESES ABOUT INCINERATION

The avoided production of electricity for incineration of plastics is not taken into account. Only the incineration step is considered.

[TAB 4] MIX OF ENERGY IN THE ELECTRICITY MODEL – 1 KWH

Electricity from coal B250	kWh	17,4%
Electricity from gas B250	kWh	7,4%
Electricity from hydropower B250	kWh	16,4%
Electricity from lignite B250	kWh	7,8%
Electricity from uranium B250	kWh	40,3%
Electricity from oil B250	kWh	10,7%

MAIN HYPOTHESES ABOUT LANDFILLING

SIMAPRO landfill module gives life cycle inventories for: plastics, PVC, PP, PS, glass, ferrous metals, steel and aluminium. Others are considered for their mass only (landfill non inert).

FACT SHEET**PAPER PRODUCTS****A. Content of the Category**

Product category Books, news paper

Constituting elements

Analysed elements graphic and sanitary paper: newsprint ,other graphic, woody uncoated, woody coated, uncoated woodfree, coated woodfree, case materials, folding boxboards, wrapping.

B. Functional Unit

One year of use of Paper products per capita in Europe.

C. Main Sources of Information

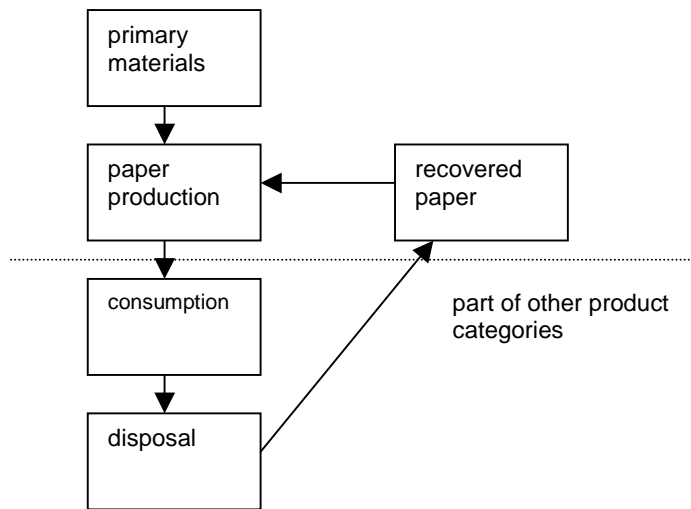
- [1] CEPI-website
- [2] FAO-website
- [3] EIONET Website

STUDIED SYSTEM

Life cycle steps	Main assumptions for calculation	Not included (no data available)
Production	<ul style="list-style-type: none"> ▪ The chain has been considered up to the consumer. ▪ The production of paper in the analysed countries (Switzerland and Sweden) is assumed to be representative for the EU. 	
Use	<ul style="list-style-type: none"> ▪ Disposal of waste paper from households and companies are part of another product category and therefore not taken into account 	
End of life	<ul style="list-style-type: none"> ▪ Disposal of waste streams from primary production and recycling is considered. 	
Transports		Not taken into account

Population considered in Europe for calculations : 1998 - 375 millions inhabitants.

SYSTEM STUDIED FOR ONE YEAR OF CONSUMPTION OF PAPER PRODUCTS IN EUROPE



Not analysed
elements:

household + sanitary	5.090	7%
others	2.752	4%
Total	75.231	100%

D. Main Data and Hypotheses

D.1. Main Data and Hypotheses for the use step

[TAB 1] PAPER PRODUCTS MARKET

Graphic and sanitary paper:	Ktonnes/year	Percentage
Newsprint	9.801	13%
Woody uncoated	4.057	5%
Woody coated	6.151	8%
Uncoated woodfree	8.906	12%
Coated woodfree	8.682	12%
Case materials	18.169	24%
Folding boxboards	8.703	12%
Wrapping	2.920	4%

The production of primary materials (like fillers and wood) and recovered (or waste) paper has been taken into account. Simapro does not distinguish any process steps in the paper making process, it is all integrated into paper production

The data used for determining the external effects are:

Graphic paper:

- Newsprint, woody coated and woody uncoated: Thermomechanical production in Switzerland around 1993, based on Buwal 250
- Woodfree coated and uncoated: Sulphite and sulphate process in Switzerland around 1993, Buwal 250

Boards (wrappings, case materials, folding boxboards)

- Kraftliner for wrapping and folding boxes: Kraft (sulphate) production process in Switzerland and Sweden around 1993. Buwal 250
- Heavy corrugated board (case materials) from Buwal 132 (1990)
- Other corrugated board (folding boxes): production in Switzerland, around 100% recovered paper.

FACT SHEET

TRANSPORTS

A. Content of the Category

Product category	Goods and passengers transports in Europe
Constituting elements	Rail, road, sea, inland waterway and air transport.
Analysed elements	Use step.

B. Functional Unit

One year of transports for goods consumption and passengers travelling in Europe, calculated per capita.

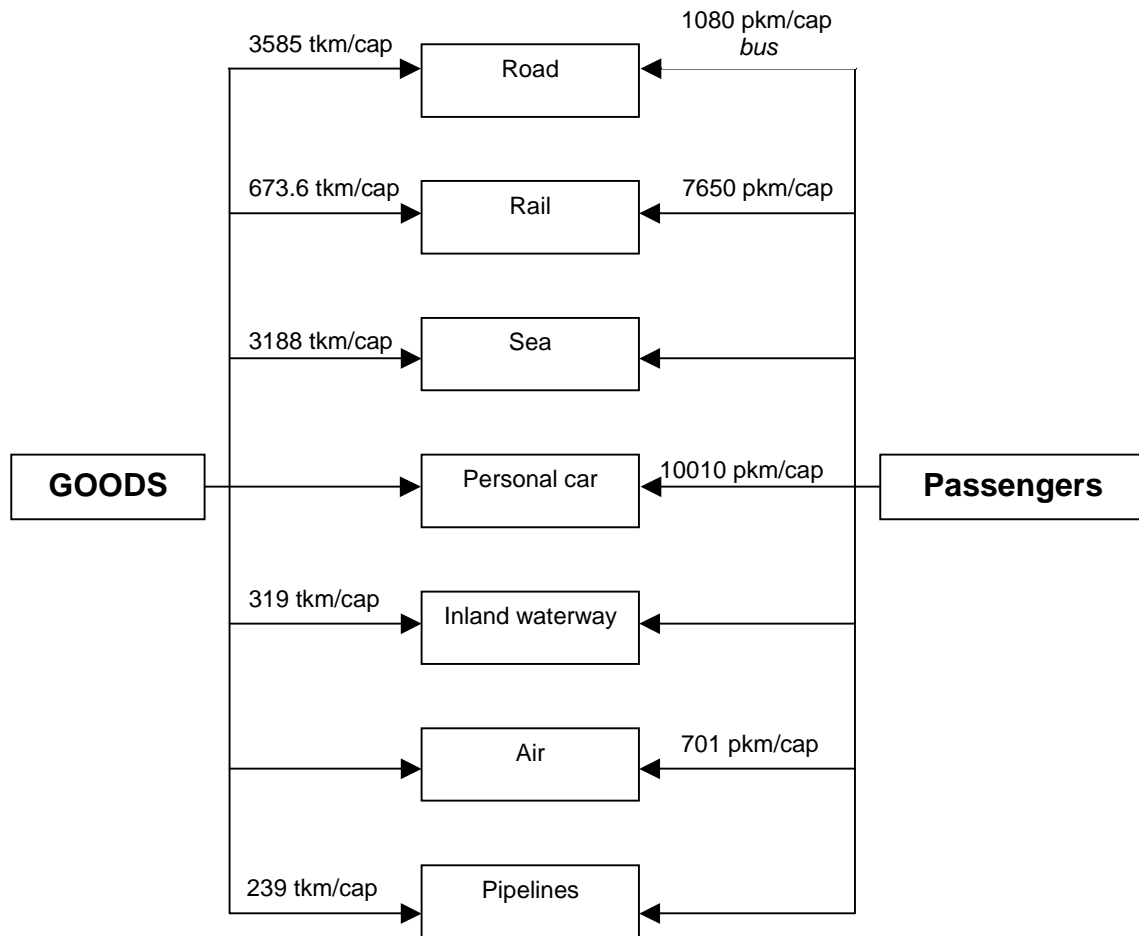
C. Main Sources of Information

- [1] Site web Europa.eu.int Statistical overview EU transport from Eurostat.
 [2] Consumers in Europe, facts and figures. Data 1996-2000

D. Studied System

Life cycle steps	Main assumptions for calculation	Not included (no data available)
Production		<ul style="list-style-type: none"> Production of energy and petrol products is not taken into account.
Use	<ul style="list-style-type: none"> Combustion only is taken for petrol and diesel personal car. 	
End of life		<ul style="list-style-type: none"> End of life of vehicles is not considered.

Population considered in Europe for calculations : 1998 - 375 millions inhabitants.

FLOWCHART

E. Main Data and Hypotheses

E.1. Main Data and Hypotheses for transports

[TAB 1] GOODS TRANSPORTS

	quantity	unit	Source	Module used for LCI
Transport demand total in EU	2,97E+12	tkm	[1]	-
Transport demand per capita	7970	tkm/cap	[1]	-
Road 45%	3586.5	tkm/cap	[1]	truck 28 t ETHT (tkm)
Sea 40%	3188	tkm/cap	[1]	freighter oceanic (tkm)
Rail 8%	637.6	tkm/cap	[1]	rail transport (tkm)
Inland waterway 4%	318.8	tkm/cap	[1]	rail transport (tkm)
Pipelines 3%	239.1	tkm/cap	[1]	pipeline onshore (tkm)

[TAB 2] PASSENGERS TRANSPORTS

	quantity	unit	Source	Module used for LCI
Intra-EU and domestic transport demand	4,79E+12	pkm	[1]	-
Intra-EU and domestic transport demand per capita	1,28E+04	pkm/cap	[1]	-
Personal car 79%	1,01E+04	pkm/cap	[1]	- petrol car 81% [2] - diesel car 19% (combustion only 1km) [2]
Bus 8.5%	1,08E+03	pkm/cap	[1]	bus transport (pkm)
Railway 6%	7,65E+02	pkm/cap	[1]	rail transport (tkm)
Air 5.5%	7,01E+02	pkm/cap	[1]	air transport A320 (tkm)
Metro 1%	1,28E+02	pkm/cap	[1]	rail transport (tkm)

DATA FOR PASSENGER CARS :

Analysed elements: Production, recycling and disposal of the materials used in passenger cars.

Sources :

- EFR website; <http://www.efr2.org>
- EIONET website; <http://waste.eionet.eu.int>
- D. Nagelhout et al
- Informatiedocument autowrakken en shredderafval
- RIVM, Bilthoven, 1991
- F. de Haan, J.T.W. Vroonhof
- Milieuscan verwijdering autowrakken
- CE, Delft, juni 2000
- ARN Milieujaarverslag 2000
- ARN, Amsterdam, 2000
- A.M.M. Ansems, L. Feenstra, H.J.B. Averink
- Massabalansen van twee shredderproeven en analyse van geproduceerde fracties shredderafval
- TNO-MEP, Apeldoorn, 2000
- Pre 1999 (SimaPro 4)

Scope and assumptions

- The use phase of cars is the major environmental theme considering the complete life cycle. In this project this is neglected because this is part of the product category "passenger transport"
- The primary production of all the main materials (aluminium, steel, , plastics) has been taken into consideration.
- Primary production of Several minor car components, such as copper, zinc, lead, composites and liquids had to be neglected because no environmental profile is available in Simapro 4.

- Only recycling of steel and aluminium has been considered. All recycled material is considered to be reused for the production of new passenger cars. Losses due to incomplete recovery at shredding plants and inclusion of metal in slags from remelting operations have been taken into account. The recycling yields include shredder and recycling losses. (see the annex.) Losses are assumed to be landfilled.
- Recycling of other materials is assumed to be negligible. Components with positive market value remain in circulation.
- Leaching and other emissions of landfill is not considered in this product category.

Process steps	Main assumptions for calculations (per average car of 905 kg)
Production materials	<p>The primary production of the following materials have been considered¹¹:</p> <ul style="list-style-type: none"> ▪ 133,4 kg primary steel ▪ 554,4 kg secondary steel ▪ 14,2 kg aluminium ▪ 22,0 kg secondary aluminium ▪ 27,2 kg glass ▪ 27,0 kg ABS ▪ 6,7 kg HDPE ▪ 14,2 kg PP ▪ 10,9 kg PVC ▪ 15,0 kg PUR ▪ 27,0 kg SBR ▪ other materials such as copper, zinc, lead, composites and liquids <p>Production process: Steel, aluminium, glass, ABS and SBR: average Dutch production around 1992 (IDEMAT 1996, in SimaPro 4.0, 1999) HDPE, PP, PVC, PUR: European data from 1990-1994 (BUWAL 250, 1996, in SimaPro 4.0)</p>
Car production	<p>The following processes have been included</p> <ul style="list-style-type: none"> ▪ Aluminium extrusion ▪ Steel rolling ▪ Steel cast work ▪ Injection moulding of plastics ▪ PUR pentane blowing <p>Processes with the amounts of primary and secondary materials, average Dutch production around 1992 (IDEMAT 1996).</p>
Shredding and Recycling	<p>The materials that are recycled are (nett yield after shredding and recycling) :</p> <ul style="list-style-type: none"> ▪ 22,0 kg aluminium ▪ 554,4 kg steel <p>Recycling process: Secondary Aluminium: Dutch average around 1989 (LCA IDEMAT 1996), Dutch average SPIN Secondary Steel 1993</p> <p>Shredding: 20 kWh/ ton; yields TNO data (see Annex)</p>
Disposal	<ul style="list-style-type: none"> ▪ 5% of the cars are disposed of irregularly (dumped) ▪ 95% of the cars are shredded (the environmental burden of this has been allocated to recycling) ▪ Everything that is not recycled is landfilled. ▪ Emissions from landfills are not taken into account.

Data quality The production and processing data are based on the Dutch average in 1992 or European data from 1990-1994. Therefore the figures do not represent the current environmental profile.

¹¹ In combination with the amount of recycled materials this adds up to approximately 850 kg/car. Several components, such as copper, zinc, lead, composites and liquids had to be neglected because no environmental profile is available in Simapro 4

FACT SHEET

LUBRICANTS OIL

A. Content of the Category

Product category	Oil
Constituting elements	Engine oil, gear oils and transmission, processing oils, metal working oils, highly refined oils, grease and other
Analysed elements	Production and end of life of oil

B. Functional Unit

One year of consumption of oils

C. Main Sources of Information

[1] EUROPALUB statistics 1999

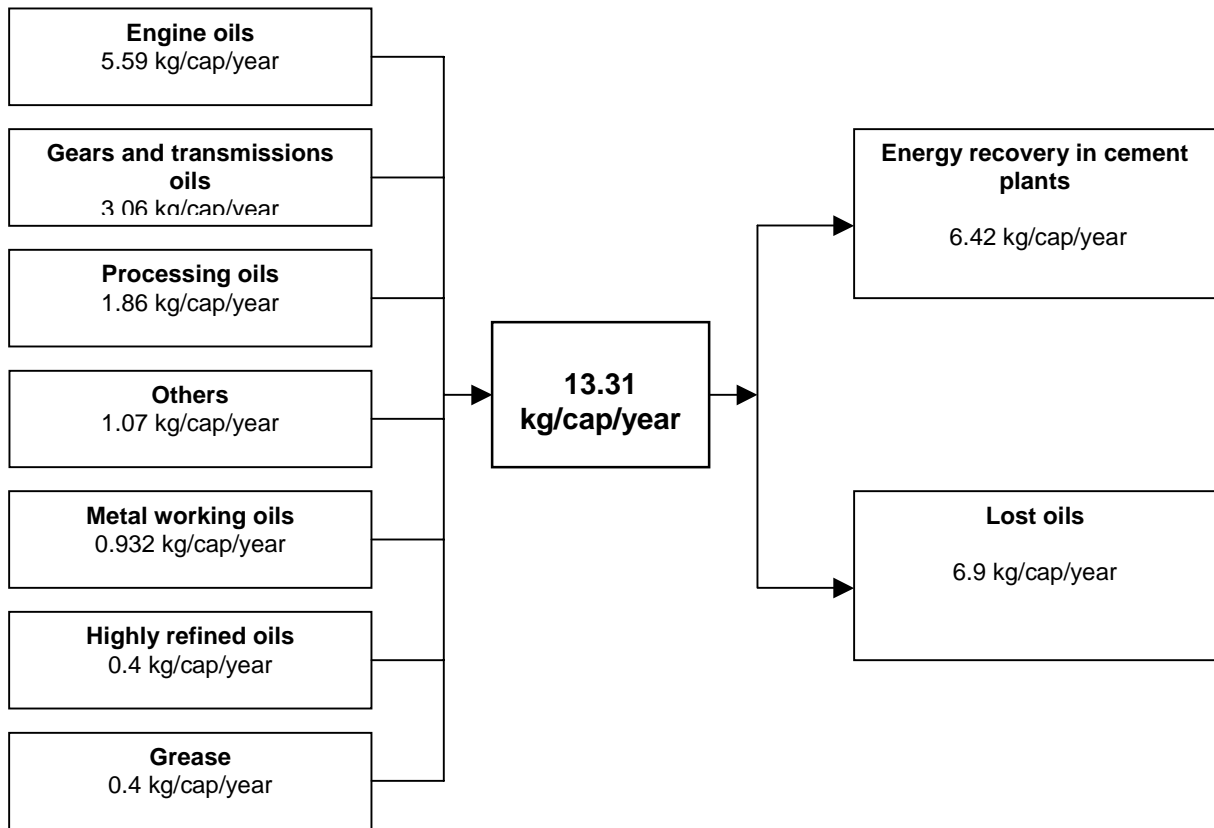
[2] Etude des filières de recyclage et de valorisation des huiles usages. ADEME – Ecobilan. - 1999

D. Studied System

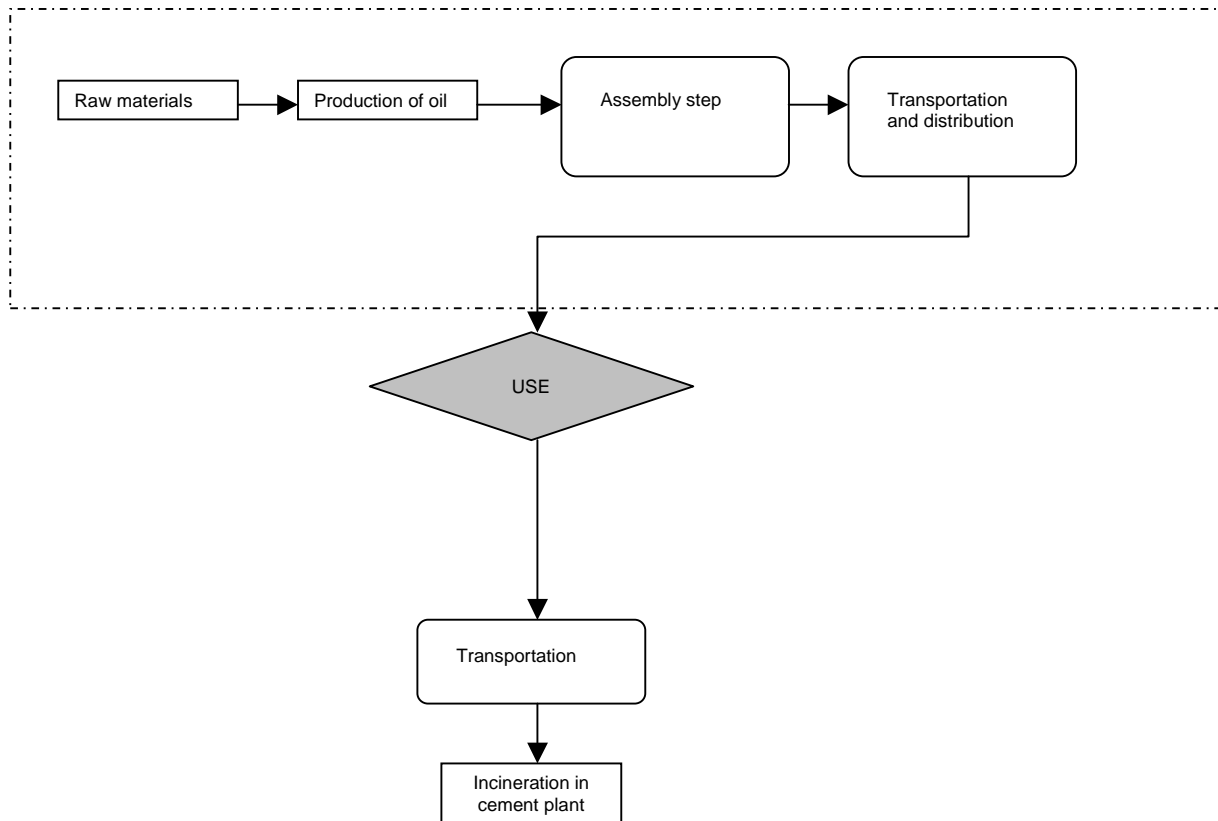
Life cycle steps	Main assumptions for calculation	Not included (no data available)
Production	<ul style="list-style-type: none"> Oil base production is considered for each kind of oil 	Production of synthetic oils.
Use	<ul style="list-style-type: none"> All oils are considered like mineral. 	Consumption of synthetic oil
End of life	<ul style="list-style-type: none"> Energy recovery in cement plant and lost oils are considered. 	Recycling and other energy recovery processes.

Population considered in Europe for calculations : 1998 - 375 millions inhabitants.

FLOWCHART



SYSTEM STUDIED FOR ONE YEAR OF OIL CONSUMPTION IN EUROPE



E. Main Data and Hypotheses

E.1. Main Data and Hypotheses for the Production and Use Step

[TAB 1] MARKET UPDATE FOR OILS

Consumption 1999	Consumption EU 1999 (%)	Consumption kt	Kg/cap/year	Source	Assumption for materials
Engine oils	42%	2097,9	5,59	[1]	Base oil
Gear and transmission oils	23%	1148,85	3,06	[1]	Base oil
Processing oil	14%	699,3	1,86	[1]	Base oil
Other	8%	399,6	1,07	[1]	Base oil
Metal working oils	7%	349,65	0,93	[1]	Base oil
Highly refined oils	3%	149,85	0,40	[1]	Base oil
Grease	3%	149,85	0,40	[1]	Base oil
		4995	13,32		

[TAB 2] MODULES USED FOR LCI :

Materials	Modules
For all kind of oils	Huile de base production 1kg, from [2]

E.2. Main Data and Hypotheses for the End of Life Step

[TAB 3] WASTE OILS :

Waste oils 1999	%	kt	Kg/cap/year	Source
Black engine oils	65%	1565,85	4,18	[1]
Light engine oils	25%	602,25	1,61	[1]
Black industrial oils	10%	240,9	0,64	[1]
		2409	6,42	

We have considered that waste oils are incinerated in cement plant, the rest is lost in soils (6.9 kg/cap/year).

[TAB 4] MODULES USED FOR LCI :

Process	Modules
Energy recovery in cement plant	LCI from [2]
Lost oils	Considered in soil

Vegetables

Functional unit: Consumption per
Capita per Year in Europe

Total

A/ Environmental Impacts

		Values
Linked to resources consumption		
Depletion of non renewable resources	kg antimony eq.	0.0E+00
Linked to air emissions		
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.	-2.9E+04
Stratospheric Ozone Depletion	g CFC-11 eq.	1.4E-01
Air acidification	g SO ₂ eq.	1.5E+03
Photochemical oxidation	g ethylene eq.	0.0E+00
Linked to water effluents		
Eutrophication	g PO4 eq.	5.1E+03
Linked to human health		
Human Toxicity	g eq. 1-4-dichlorobenzene	0.0E+00
Years of Life Lost	year	0.0E+00
Linked to ecotoxicological risk		
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene	0.0E+00
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene	0.0E+00
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene	0.0E+00

B/ Other Environmental Indicators

		Values
Primary energy	MJ	7.2E+03
Fossil energy	MJ	7.2E+03
Consumption of raw materials	kg	4.5E+02
Dusts	g	0.0E+00
Dioxins	g	1.5E-08
Metals into air	g	0.0E+00
Metals into water	g	2.2E+02
Metals into soil	g	0.0E+00
Municipal and industrial waste	kg	1.2E+02
Hazardous waste	kg	1.6E+00
Inert waste	kg	0.0E+00

C/ External Cost

		Values		% total external cost	
		min	max	min	max
Linked to air emissions					
Greenhouse effect (direct, 100 yrs)	Euros	-5.6E-01	-1.4E+00	-7.5%	-16.6%
Stratospheric Ozone Depletion	Euros	9.4E-05	9.4E-05	0.0%	0.0%
Air acidification	Euros	2.1E-01	2.1E+00	2.9%	25.1%
Photochemical oxidation	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Linked to water effluents					
Eutrophication	Euros	7.8E+00	7.8E+00	104.6%	91.4%
Linked to solid waste					
Disaminty caused by incineration	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Disaminty caused by landfilling	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Linked to human health					
Carcinogenic potential of heavy metals	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Human health effects caused by dusts	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Human health effects caused by dioxins	Euros	2.0E-04	4.3E-04	0.0%	0.0%
Total External Cost	Euros	7	9	100%	100%

D/ Internalisation of the external Cost

		Values		% total external cost	
		min	max	min	max
Taxes paid (total)					
Denmark	Euros	0.0E+00	0.0E+00	0.0%	0.0%
France	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Sweden	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Poland	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Part of the external cost internalised		0	0	0%	0%

Taxes paid - Linked to air emissions

		Values		% total taxes paid	
		min	max	min	max
Denmark	Euros	0.0E+00	0.0E+00	0.0%	0.0%
France	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Sweden	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Poland	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Part of the external cost internalised		0	0	0%	0%

Taxes paid - Linked to water effluents

		Values		% total taxes paid	
		min	max	min	max
Denmark	Euros	0.0E+00	0.0E+00	0.0%	0.0%
France	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Sweden	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Poland	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Part of the external cost internalised		0	0	0%	0%

Taxes paid - Linked to solid waste

		Values		% total taxes paid	
		min	max	min	max
Denmark	Euros	0.0E+00	0.0E+00	0.0%	0.0%
France	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Sweden	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Poland	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Part of the external cost internalised		0	0	0%	0%

Taxes paid - Linked to material consumption

		Values		% total taxes paid	
		min	max	min	max
Denmark	Euros	0.0E+00	0.0E+00	0.0%	0.0%
France	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Sweden	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Poland	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Part of the external cost internalised		0	0	0%	0%

Taxes paid - Linked to energy consumption

		Values		% total taxes paid	
		min	max	min	max
Denmark	Euros	0.0E+00	0.0E+00	0.0%	0.0%
France	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Sweden	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Poland	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Part of the external cost internalised		0	0	0%	0%

E/ Life Cycle Price

Euros

244

% of external cost internalised	min	max
	0%	0%
% of price corresponding to internalised external cost	min	max
	0%	0%

Alcoholic beverage

Functional unit: Consumption of per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values
Linked to resources consumption
Depletion of non renewable resources kg antimony eq. 4.1E-02
Linked to air emissions
Greenhouse effect (direct, 100 yrs) g CO ₂ eq. 3.2E+03
Stratospheric Ozone Depletion g CFC-11 eq. 3.7E-04
Air acidification g SO ₂ eq. 1.8E+01
Photochemical oxidation g ethylene eq. 1.7E+00
Linked to water effluents
Eutrophication g PO ₄ eq. 4.4E+01
Linked to human health
Human Toxicity g eq. 1-4-dichlorobenzene 1.4E+04
Years of Life Lost year 8.3E-07
Linked to ecotoxicological risk
Aquatic Ecotoxicity g eq. 1-4-dichlorobenzene 2.8E+03
Sediment Ecotoxicity g eq. 1-4-dichlorobenzene 9.0E+03
Terrestrial Ecotoxicity g eq. 1-4-dichlorobenzene 3.0E+01

Values
4.1E-02
3.2E+03
3.7E-04
1.8E+01
1.7E+00
4.4E+01
1.4E+04
8.3E-07
2.8E+03
9.0E+03
3.0E+01

Values	%	Values	%	Values	%
4.1E-02	100%	0.0E+00	0%	0.0E+00	0%
3.2E+03	100%	0.0E+00	0%	0.0E+00	0%
3.7E-04	100%	0.0E+00	0%	0.0E+00	0%
1.8E+01	100%	0.0E+00	0%	0.0E+00	0%
1.7E+00	100%	0.0E+00	0%	0.0E+00	0%
4.4E+01	100%	0.0E+00	0%	0.0E+00	0%
1.4E+04	100%	0.0E+00	0%	0.0E+00	0%
8.3E-07	100%	0.0E+00	0%	0.0E+00	0%
2.8E+03	100%	0.0E+00	0%	0.0E+00	0%
9.0E+03	100%	0.0E+00	0%	0.0E+00	0%
3.0E+01	100%	0.0E+00	0%	0.0E+00	0%

B/ Other Flows Not Taken Into Account in the Environmental Impacts Above

Values
Primary energy MJ 1.8E+02
Fossil energy MJ 0.0E+00
Consumption of raw materials kg 1.1E+01
Dusts g 1.1E+00
Dioxins g 8.4E-12
Metals into air g 9.9E-02
Metals into water g 4.3E-01
Metals into soil g 8.0E-03
Municipal and industrial waste kg 1.8E-02
Hazardous waste kg 1.8E-04
Inert waste kg 6.4E-04

Values
1.8E+02
0.0E+00
1.1E+01
1.1E+00
8.4E-12
9.9E-02
4.3E-01
8.0E-03
1.8E-02
1.8E-04
6.4E-04

Values	%	Values	%	Values	%
1.8E+02	100%	0.0E+00	0%	0.0E+00	0%
0.0E+00	#DIV/0!	0.0E+00	#DIV/0!	0.0E+00	#DIV/0!
1.1E+01	100%	0.0E+00	0%	0.0E+00	0%
1.1E+00	100%	0.0E+00	0%	0.0E+00	0%
8.4E-12	100%	0.0E+00	0%	0.0E+00	0%
9.9E-02	100%	0.0E+00	0%	0.0E+00	0%
4.3E-01	100%	0.0E+00	0%	0.0E+00	0%
8.0E-03	100%	0.0E+00	0%	0.0E+00	0%
1.8E-02	100%	0.0E+00	0%	0.0E+00	0%
1.8E-04	100%	0.0E+00	0%	0.0E+00	0%
6.4E-04	100%	0.0E+00	0%	0.0E+00	0%

C/ External Cost

Values
Linked to air emissions
Greenhouse effect (direct, 100 yrs) Euros 6.0E-02
Stratospheric Ozone Depletion Euros 2.5E-07
Air acidification Euros 2.7E-03
Photochemical oxidation Euros 1.2E-03
Linked to water effluents
Eutrophication Euros 6.7E-02
Linked to solid waste
Disassembly caused by incineration Euros 0.0E+00
Disassembly caused by landfilling Euros 1.1E-04
Linked to human health
Carcinogenic potential of heavy metals Euros 2.3E-05
Human health effects caused by dusts Euros 1.6E-03
Human health effects caused by dioxins Euros 1.1E-07

Values		% total external cost	
min	max	min	max
6.0E-02	1.5E-01	45.1%	48.1%
2.5E-07	2.5E-07	0.0%	0.0%
2.7E-03	2.7E-02	2.0%	8.4%
1.2E-03	1.6E-03	0.9%	0.5%
6.7E-02	6.7E-02	50.7%	21.4%
0.0E+00	0.0E+00	0.0%	0.0%
1.1E-04	3.6E-04	0.1%	0.1%
2.3E-05	2.3E-05	0.0%	0.0%
1.6E-03	6.7E-02	1.2%	21.4%
1.1E-07	2.3E-07	0.0%	0.0%
0	0	100%	100%

min	max	min	max	min	max
6.0E-02	1.5E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2.5E-07	2.5E-07	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2.7E-03	2.7E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1.2E-03	1.6E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00
6.7E-02	6.7E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1.1E-04	3.6E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2.3E-05	2.3E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1.6E-03	6.7E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1.1E-07	2.3E-07	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0
100%	100%	0%	0%	0%	0%

D/ Internalisation of the external Cost

Taxes paid (total)	Euros
Denmark	1.1E+00
France	8.8E+00
Poland	2.1E-01

Values		% total external cost	
min	max	min	max
1.1E+00	4.4E+00	808.4%	1401.9%
8.8E+00	1.2E+01	6617.1%	3941.5%
2.1E-01	2.5E+00	154.5%	802.1%
0	12	155%	3942%

min	max	min	max	min	max
1.1E+00	4.4E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
8.8E+00	1.2E+01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2.1E-01	2.5E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	12	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to air emissions	Euros
Denmark	3.1E-02
France	7.4E-04
Poland	1.1E-03

Values		% total taxes paid	
min	max	min	max
3.1E-02	4.3E-02	2.9%	1.0%
7.4E-04	7.9E-04	0.0%	0.0%
1.1E-03	1.1E-03	0.5%	0.0%
0	0	0%	1%

min	max	min	max	min	max
3.1E-02	4.3E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00
7.4E-04	7.9E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1.1E-03	1.1E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to water effluents	Euros
Denmark	6.5E-01
France	8.7E+00
Poland	9.2E-04

Values		% total external cost	
min	max	min	max
6.5E-01	6.5E-01	60.0%	14.6%
8.7E+00	8.7E+00	98.3%	69.8%
9.2E-04	9.3E-04	0.4%	0.0%
0	9	0%	70%

min	max	min	max	min	max
6.5E-01	6.5E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
8.7E+00	8.7E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
9.2E-04	9.3E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	9	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to solid waste	Euros
Denmark	1.3E-03
France	2.8E-04
Poland	0.0E+00

Values		% total external cost	
min	max	min	max
1.3E-03	1.6E-03	0.1%	0.0%
2.8E-04	3.9E-04	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0	0	0%	0%

min	max	min	max	min	max
1.3E-03	1.6E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2.8E-04	3.9E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to material consumption	Euros
Denmark	5.4E-03
France	4.3E-04
Poland	8.1E-05

Values		% total external cost	
min	max	min	max
5.4E-03	5.4E-03	0.5%	0.1%
4.3E-04	2.5E-03	0.0%	0.0%
8.1E-05	8.9E-04	0.0%	0.0%
0	0	0%	0%

min	max	min	max	min	max
5.4E-03	5.4E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00
4.3E-04	2.5E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00
8.1E-05	8.9E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to energy consumption	Euros
Denmark	2.5E-01
France	1.2E-01
Poland	2.0E-01

Values		% total external cost	
min	max	min	max
2.5E-01	3.6E+00	23.6%	80.5%
1.2E-01	3.7E+00	1.3%	29.8%
2.0E-01	2.5E+00	99.0%	99.9%
0	4	1%	100%

min	max	min	max	min	max
2.5E-01	3.6E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1.2E-01	3.7E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2.0E-01	2.5E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	4	0	0	0	0

Part of the external cost internalised

E/ Life Cycle Price

Euros

71

% of external cost internalised	min	max
	155%	3942%
% of price corresponding to internalised external cost	min	max
	0%	18%

Footwears

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values	
Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g styrene eq.
Linked to water effluents	
Eutrophication	g PO ₄ eq.
Linked to human health	
Human Toxicity	g eq. 1-4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene

Values
5.9E-02
1.2E+04
-1.9E-05
6.3E+01
8.7E+00
6.5E+00
8.4E+02
3.0E-06
7.5E+01
5.9E+01
4.4E+01

Values	%	Values	%	Values	%
6.0E-02	101%	0.0E+00	0%	-8.2E-04	-1%
1.1E+04	97%	0.0E+00	0%	3.1E+02	3%
0.0E+00	0%	0.0E+00	0%	-1.9E-05	100%
6.0E+01	96%	0.0E+00	0%	2.5E+00	4%
8.6E+00	99%	0.0E+00	0%	1.2E-01	1%
6.3E+00	97%	0.0E+00	0%	2.0E-01	3%
1.8E+03	218%	0.0E+00	0%	-9.9E+02	-118%
2.7E-06	92%	0.0E+00	0%	2.4E-07	8%
2.7E+02	356%	0.0E+00	0%	-1.9E+02	-256%
6.8E+02	1145%	0.0E+00	0%	-6.2E+02	-1045%
4.4E+01	100%	0.0E+00	0%	1.1E-01	0%

B/ Other Environmental Indicators

Values	
Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
1.7E+02
0.0E+00
2.1E+04
7.6E+00
1.7E-10
2.6E-02
1.6E+00
0.0E+00
4.7E+00
4.4E-02
1.3E-01

Values	%	Values	%	Values	%
1.7E+02	101%	0.0E+00	0%	-2.5E+00	-1%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
2.1E+04	100%	0.0E+00	0%	-5.1E+00	0%
7.7E+00	102%	0.0E+00	0%	-1.7E-01	-2%
0.0E+00	0%	0.0E+00	0%	1.7E-10	100%
2.8E-02	107%	0.0E+00	0%	-1.9E-03	-7%
1.7E+00	104%	0.0E+00	0%	-6.7E-02	-4%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
3.4E+00	73%	0.0E+00	0%	1.3E+00	27%
3.5E-02	79%	0.0E+00	0%	9.1E-03	21%
1.3E-01	100%	0.0E+00	0%	0.0E+00	0%

C/ External Cost

Values	
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros
Linked to water effluents	
Eutrophication	Euros
Linked to solid waste	
Disaminy caused by incineration	Euros
Disaminy caused by landfilling	Euros
Linked to human health	
Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Values		% total external cost	
min	max	min	max
2.2E-01	5.6E-01	77.3%	46.2%
-1.3E-08	-1.3E-08	0.0%	0.0%
9.1E-03	9.1E-02	3.2%	7.6%
6.4E-03	8.1E-03	2.2%	0.7%
1.0E-02	1.0E-02	3.5%	0.8%
8.6E-04	3.0E-03	0.3%	0.3%
2.8E-02	8.7E-02	9.7%	7.2%
2.0E-05	2.0E-05	0.0%	0.0%
1.1E-02	4.5E-01	3.7%	37.2%
2.1E-06	4.6E-06	0.0%	0.0%
0	1	100%	100%

min	max	min	max	min	max
2.1E-01	5.4E-01	0.0E+00	0.0E+00	5.8E-03	1.5E-02
0.0E+00	0.0E+00	0.0E+00	0.0E+00	-1.3E-08	-1.3E-08
8.8E-03	8.8E-02	0.0E+00	0.0E+00	3.6E-04	3.6E-03
6.3E-03	8.0E-03	0.0E+00	0.0E+00	8.6E-05	1.1E-04
9.7E-03	9.7E-03	0.0E+00	0.0E+00	3.1E-04	3.1E-04
0.0E+00	0.0E+00	0.0E+00	0.0E+00	8.6E-04	3.0E-03
2.1E-02	6.8E-02	0.0E+00	0.0E+00	6.1E-03	1.9E-02
0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.0E-05	2.0E-05
1.1E-02	4.6E-01	0.0E+00	0.0E+00	-2.4E-04	-1.0E-02
0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.1E-06	4.6E-06
0	1	0	0	0	0
95%	97%	0%	0%	5%	3%

Total External Cost Euros

D/ Internalisation of the external Cost

Taxes paid (total)	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
2.5E+01	2.8E+01	8765.2%	2340.4%
6.3E+00	1.9E+01	2221.4%	1553.5%
5.7E-01	6.4E+00	198.6%	529.1%
1	28	199%	2340%

min	max	min	max	min	max
2.5E+01	2.8E+01	0.0E+00	0.0E+00	6.3E-03	-3.5E-02
6.3E+00	1.9E+01	0.0E+00	0.0E+00	5.0E-02	5.4E-04
5.7E-01	6.4E+00	0.0E+00	0.0E+00	-1.8E-03	-3.4E-02
1	28	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to air emissions	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
9.9E-02	1.5E-01	0.4%	0.5%
2.6E-03	2.9E-03	0.0%	0.0%
4.2E-03	4.2E-03	0.7%	0.1%
0	0	0%	1%

min	max	min	max	min	max
9.7E-02	1.5E-01	0.0E+00	0.0E+00	1.7E-03	3.8E-03
2.4E-03	2.6E-03	0.0E+00	0.0E+00	2.1E-04	2.5E-04
3.6E-03	3.6E-03	0.0E+00	0.0E+00	5.8E-04	5.8E-04
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to water effluents	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
9.4E-02	9.4E-02	0.4%	0.3%
4.2E+00	4.2E+00	66.2%	22.4%
1.6E-02	1.1E-01	2.9%	1.8%
0	4	0%	22%

min	max	min	max	min	max
9.1E-02	9.1E-02	0.0E+00	0.0E+00	3.0E-03	3.0E-03
4.1E+00	4.1E+00	0.0E+00	0.0E+00	5.0E-02	5.0E-02
1.6E-02	1.1E-01	0.0E+00	0.0E+00	4.6E-04	4.6E-04
0	4	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to solid waste	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
2.6E-01	3.1E-01	1.0%	1.1%
5.4E-02	7.6E-02	0.9%	0.4%
0.0E+00	0.0E+00	0.0%	0.0%
0	0	0%	1%

min	max	min	max	min	max
2.5E-01	3.0E-01	0.0E+00	0.0E+00	1.1E-02	1.2E-02
5.2E-02	7.3E-02	0.0E+00	0.0E+00	1.8E-03	2.6E-03
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to material consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
2.4E+01	2.4E+01	95.6%	84.6%
1.9E+00	1.1E+01	29.8%	58.1%
3.6E-01	3.9E+00	62.9%	61.4%
0	24	30%	85%

min	max	min	max	min	max
2.4E+01	2.4E+01	0.0E+00	0.0E+00	-5.8E-03	-5.8E-03
1.9E+00	1.1E+01	0.0E+00	0.0E+00	-4.6E-04	-2.6E-03
3.6E-01	3.9E+00	0.0E+00	0.0E+00	-8.6E-05	-9.5E-04
0	24	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to energy consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
2.4E-01	3.3E+00	0.9%	11.7%
1.1E-01	3.4E+00	1.7%	18.4%
1.9E-01	2.3E+00	33.5%	36.8%
0	3	1%	37%

min	max	min	max	min	max
2.4E-01	3.4E+00	0.0E+00	0.0E+00	-3.4E-03	-4.8E-02
1.1E-01	3.5E+00	0.0E+00	0.0E+00	-1.6E-03	-5.0E-02
1.9E-01	2.4E+00	0.0E+00	0.0E+00	-2.7E-03	-3.4E-02
0	3	0	0	0	0

Part of the external cost internalised

E/ Life Cycle Price

Euros

115

% of external cost internalised	min	max
	199%	2340%
% of price corresponding to internalised external cost	min	max
	0%	25%

Textiles - total

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values
Linked to resources consumption
Depletion of non renewable resources kg antimony eq. 2.8E+00
Linked to air emissions
Greenhouse effect (direct, 100 yrs) g CO ₂ eq. 4.1E+05
Stratospheric Ozone Depletion g CFC-11 eq. 1.1E-01
Air acidification g SO ₂ eq. 4.0E+03
Photochemical oxidation g ethylene eq. 1.4E+03
Linked to water effluents
Eutrophication g PO4 eq. 0.0E+00
Linked to human health
Human Toxicity g eq. 1-4-dichlorobenzene 4.8E+06
Years of Life Lost year 1.9E-04
Linked to ecotoxicological risk
Aquatic Ecotoxicity g eq. 1-4-dichlorobenzene 9.7E+05
Sediment Ecotoxicity g eq. 1-4-dichlorobenzene 3.1E+06
Terrestrial Ecotoxicity g eq. 1-4-dichlorobenzene 1.3E+04

Values
2.8E+00
4.1E+05
1.1E-01
4.0E+03
1.4E+03
0.0E+00
4.8E+06
1.9E-04
9.7E+05
3.1E+06
1.3E+04

Values	%	Values	%	Values	%
1.1E+00	39%	1.7E+00	61%	-4.4E-03	0%
1.9E+05	46%	2.2E+05	53%	1.7E+03	0%
3.9E-02	35%	7.1E-02	65%	-1.0E-04	0%
2.0E+03	50%	2.0E+03	50%	1.3E+01	0%
7.7E+02	56%	6.1E+02	44%	6.4E-01	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
1.7E+06	35%	3.1E+06	65%	-5.4E+03	0%
1.0E-04	55%	8.6E-05	45%	1.3E-06	1%
3.5E+05	36%	6.2E+05	64%	-1.0E+03	0%
1.1E+06	36%	2.0E+06	64%	-3.4E+03	0%
2.6E+03	20%	1.0E+04	80%	5.9E-01	0%

B/ Other Environmental Indicators

Values
Primary energy MJ 6.9E+03
Fossil energy MJ 0.0E+00
Consumption of raw materials kg 3.3E+04
Dusts g 6.3E+02
Dioxins g 1.5E-09
Metals into air g 4.6E+01
Metals into water g 2.2E+02
Metals into soil g 0.0E+00
Municipal and industrial waste kg 9.3E+00
Hazardous waste kg 8.1E-01
Inert waste kg 3.1E+00

Values
6.9E+03
0.0E+00
3.3E+04
6.3E+02
1.5E-09
4.6E+01
2.2E+02
0.0E+00
9.3E+00
8.1E-01
3.1E+00

Values	%	Values	%	Values	%
2.9E+03	43%	4.0E+03	58%	-1.3E+01	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
3.2E+04	96%	1.3E+03	4%	-2.8E+01	0%
3.9E+02	60%	2.8E+02	40%	-9.2E-01	0%
3.6E-10	25%	2.1E-10	14%	8.9E-10	61%
7.8E+00	17%	3.9E+01	83%	-1.0E-02	0%
9.0E+01	42%	1.3E+02	59%	-3.9E-01	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
2.3E+00	25%	4.0E-02	0%	7.0E+00	75%
3.4E-01	42%	4.2E-01	51%	4.9E-02	6%
1.4E+00	43%	1.8E+00	57%	0.0E+00	0%

C/ External Cost

Values	% total external cost		
min	max	min	max
7.7E+00	2.0E+01	66.6%	29.2%
7.5E-05	7.5E-05	0.0%	0.0%
5.8E-01	5.8E+00	5.0%	8.7%
1.0E+00	1.3E+00	8.6%	1.9%
1.3E+00	1.3E+00	11.3%	2.0%
5.1E-03	1.8E-02	0.0%	0.0%
6.7E-02	2.1E-01	0.6%	0.3%
2.1E-03	2.1E-03	0.0%	0.0%
9.1E-01	3.9E+01	7.8%	57.8%
1.9E-05	4.1E-05	0.0%	0.0%

Values	% total external cost		
min	max	min	max
7.7E+00	2.0E+01	66.6%	29.2%
7.5E-05	7.5E-05	0.0%	0.0%
5.8E-01	5.8E+00	5.0%	8.7%
1.0E+00	1.3E+00	8.6%	1.9%
1.3E+00	1.3E+00	11.3%	2.0%
5.1E-03	1.8E-02	0.0%	0.0%
6.7E-02	2.1E-01	0.6%	0.3%
2.1E-03	2.1E-03	0.0%	0.0%
9.1E-01	3.9E+01	7.8%	57.8%
1.9E-05	4.1E-05	0.0%	0.0%
12	67	100%	100%

min	max	min	max	min	max
3.6E+00	9.1E+00	4.1E+00	1.0E+01	3.2E-02	8.0E-02
2.6E-05	2.6E-05	4.8E-05	4.8E-05	-9.9E-08	-6.9E-08
2.9E-01	2.9E+00	2.9E-01	2.9E+00	2.0E-03	2.0E-02
5.6E-01	7.2E-01	4.4E-01	5.6E-01	4.7E-04	5.9E-04
1.2E+00	1.2E+00	9.9E-02	9.9E-02	1.5E-03	1.5E-03
2.8E-05	9.7E-05	7.5E-06	2.6E-05	5.0E-03	1.8E-02
2.4E-02	7.6E-02	1.3E-02	4.3E-02	2.9E-02	9.3E-02
7.8E-04	7.6E-04	1.2E-03	1.2E-03	1.1E-04	1.1E-04
5.5E-01	2.3E+01	3.6E-01	1.5E+01	-1.3E-03	-5.5E-02
4.7E-06	1.0E-05	2.7E-06	5.8E-06	1.2E-05	2.5E-05
6	37	5	29	0	0
54%	56%	46%	44%	1%	0%

Total External Cost Euros

D/ Internalisation of the external Cost

Taxes paid (total)	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values	% total external cost		
min	max	min	max
6.8E+02	8.1E+02	5832.0%	1206.1%
7.5E+02	9.0E+02	6433.7%	1342.5%
9.6E+00	1.1E+02	82.6%	166.1%
10	898	83%	1343%

min	max	min	max	min	max
6.7E+02	7.2E+02	1.1E+01	8.4E+01	2.7E-02	-1.9E-01
6.2E+02	6.9E+02	1.3E+02	2.1E+02	2.4E-01	-3.0E-02
4.3E+00	4.9E+01	5.3E+00	6.2E+01	-9.9E-03	-1.8E-01
4	723	5	207	0	0

Part of the external cost internalised

Taxes paid - Linked to air emissions	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values	% total taxes paid		
min	max	min	max
6.2E+00	8.8E+00	0.9%	1.1%
2.5E-01	2.8E-01	0.0%	0.0%
3.1E-01	3.1E-01	3.3%	0.3%
0	9	0%	1%

min	max	min	max	min	max
2.9E+00	4.1E+00	3.3E+00	4.6E+00	8.9E-03	2.0E-02
1.4E-01	1.4E-01	1.1E-01	1.2E-01	1.1E-03	1.4E-03
1.5E-01	1.5E-01	1.6E-01	1.6E-01	3.1E-03	3.1E-03
0	4	0	5	0	0

Part of the external cost internalised

Taxes paid - Linked to water effluents	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values	% total external cost		
min	max	min	max
6.1E+02	6.1E+02	90.6%	76.1%
7.4E+02	7.4E+02	98.7%	82.1%
1.0E+00	9.4E+00	10.8%	8.5%
1	738	11%	82%

min	max	min	max	min	max
6.1E+02	6.1E+02	6.7E-02	6.7E-02	1.4E-02	1.4E-02
6.1E+02	6.1E+02	1.3E+02	1.3E+02	2.4E-01	2.4E-01
3.7E-01	2.6E+00	6.7E-01	6.8E+00	2.2E-03	2.2E-03
0	614	0	125	0	0

Part of the external cost internalised

Taxes paid - Linked to solid waste	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values	% total external cost		
min	max	min	max
4.7E-01	5.1E-01	0.1%	0.1%
5.1E-02	7.6E-02	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0	1	0%	0%

min	max	min	max	min	max
2.8E-01	3.1E-01	1.4E-01	1.4E-01	5.4E-02	6.0E-02
3.8E-02	5.5E-02	4.4E-03	8.4E-03	8.5E-03	1.2E-02
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to material consumption	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values	% total external cost		
min	max	min	max
3.7E+01	3.7E+01	5.5%	4.6%
3.0E+00	1.7E+01	0.4%	1.9%
5.6E-01	6.1E+00	5.8%	5.5%
1	37	0%	6%

min	max	min	max	min	max
3.6E+01	3.6E+01	1.4E+00	1.4E+00	-3.1E-02	-3.1E-02
2.8E+00	1.6E+01	1.1E-01	6.2E-01	-2.5E-03	-1.4E-02
5.4E-01	5.9E+00	2.0E-02	2.2E-01	-4.6E-04	-5.1E-03
1	36	0	1	0	0

Part of the external cost internalised

Taxes paid - Linked to energy consumption	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values	% total external cost		
min	max	min	max
9.6E+00	1.3E+02	1.4%	16.6%
4.4E+00	1.4E+02	0.6%	15.6%
7.7E+00	9.5E+01	80.1%	85.7%
4	140	1%	86%

min	max	min	max	min	max
4.1E+00	5.7E+01	5.5E+00	7.7E+01	-1.9E-02	-2.6E-01
1.9E+00	6.0E+01	2.5E+00	8.1E+01	-8.4E-03	-2.7E-01
3.3E+00	4.1E+01	4.4E+00	5.5E+01	-1.5E-02	-1.8E-01
2	60	3	81	0	0

Part of the external cost internalised

E/ Life Cycle Price

Euros

534

% of external cost internalised	min	max
	83%	1343%
% of price corresponding to internalised external cost	min	max
	2%	168%

Textile - apparel

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values	
Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g ethylene eq.
Linked to water effluents	
Eutrophication	g PO ₄ eq.
Linked to human health	
Human Toxicity	g eq. 1-4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene

Values
2.0E+00
2.8E+05
8.3E-02
2.8E+03
9.7E+02
0.0E+00
3.6E+06
1.3E-04
7.1E+05
2.3E+06
9.7E+03

Values	%	Values	%	Values	%
6.5E-01	33%	1.3E+00	67%	-2.2E-03	0%
1.1E+05	38%	1.7E+05	61%	8.3E+02	0%
2.6E-02	31%	5.7E-02	69%	-5.1E-05	0%
1.2E+03	42%	1.6E+03	58%	6.7E+00	0%
4.8E+02	50%	4.8E+02	50%	3.2E-01	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
1.1E+06	30%	2.5E+06	70%	-2.7E+03	0%
6.1E-05	47%	6.9E-05	53%	6.5E-07	0%
2.2E+05	31%	5.0E+05	69%	-5.2E+02	0%
7.0E+05	30%	1.6E+06	70%	-1.7E+03	0%
1.3E+03	13%	8.4E+03	87%	2.9E-01	0%

B/ Other Environmental Indicators

Values	
Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
4.8E+03
0.0E+00
1.9E+04
4.3E+02
8.3E-10
3.4E+01
1.4E+02
0.0E+00
5.0E+00
6.0E-01
2.4E+00

Values	%	Values	%	Values	%
1.6E+03	33%	3.2E+03	67%	-6.6E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
1.8E+04	94%	1.0E+03	6%	-1.4E+01	0%
2.3E+02	52%	2.1E+02	48%	-4.6E-01	0%
2.1E-10	23%	1.7E-10	20%	4.5E-10	54%
3.0E+00	9%	3.1E+01	91%	-5.1E-03	0%
4.3E+01	30%	1.0E+02	70%	-2.0E-01	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
1.5E+00	30%	3.2E-02	1%	3.5E+00	70%
2.5E-01	41%	3.3E-01	55%	2.5E-02	4%
9.8E-01	41%	1.4E+00	59%	0.0E+00	0%

C/ External Cost

Values	
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros
Linked to water effluents	
Eutrophication	Euros
Linked to solid waste	
Disaminty caused by incineration	Euros
Disaminty caused by landfilling	Euros
Linked to human health	
Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Values		% total external cost	
min	max	min	max
5.4E+00	1.4E+01	67.6%	30.0%
5.6E-05	5.6E-05	0.0%	0.0%
4.1E-01	4.1E+00	5.1%	8.9%
7.1E-01	9.0E-01	8.8%	2.0%
8.2E-01	8.2E-01	10.4%	1.8%
2.5E-03	8.9E-03	0.0%	0.0%
4.2E-02	1.3E-01	0.5%	0.3%
1.5E-03	1.5E-03	0.0%	0.0%
6.0E-01	2.6E+01	7.6%	56.9%
1.1E-05	2.3E-05	0.0%	0.0%
8	45	100%	100%

min	max	min	max	min	max
2.1E+00	5.2E+00	3.3E+00	8.4E+00	1.6E-02	4.0E-02
1.9E-05	1.8E-05	3.9E-05	3.9E-05	-3.4E-08	-3.4E-08
1.7E-01	1.7E+00	2.3E-01	2.3E+00	9.8E-04	9.8E-03
3.5E-01	4.5E-01	3.5E-01	4.5E-01	2.3E-04	3.0E-04
7.4E-01	7.4E-01	7.9E-02	7.9E-02	7.4E-04	7.4E-04
1.5E-05	5.1E-05	6.0E-06	2.1E-05	2.5E-03	8.8E-03
1.6E-02	5.1E-02	1.1E-02	3.4E-02	1.5E-02	4.7E-02
4.8E-04	4.8E-04	9.5E-04	9.5E-04	5.4E-05	5.4E-05
3.2E-01	1.3E+01	2.9E-01	1.2E+01	-8.4E-04	-2.7E-02
2.7E-06	5.8E-06	2.2E-06	4.7E-06	5.8E-06	1.2E-05
4	22	4	24	0	0
46%	48%	54%	52%	0%	0%

D/ Internalisation of the external Cost

Taxes paid (total)	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
3.8E+02	4.7E+02	4772.6%	1036.1%
4.5E+02	5.6E+02	5685.1%	1225.7%
6.6E+00	7.7E+01	82.8%	169.1%
7	555	83%	1226%

min	max	min	max	min	max
3.7E+02	4.0E+02	8.5E+00	6.7E+01	1.3E-02	-9.7E-02
3.5E+02	3.9E+02	1.0E+02	1.7E+02	1.2E-01	-1.5E-02
2.4E+00	2.7E+01	4.0E+00	5.0E+01	-5.0E-03	-9.2E-02
2	402	4	165	0	0

Part of the external cost internalised

Taxes paid - Linked to air emissions	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
4.3E+00	6.1E+00	1.1%	1.3%
1.7E-01	1.8E-01	0.0%	0.0%
2.1E-01	2.1E-01	3.2%	0.3%
0	6	0%	1%

min	max	min	max	min	max
1.7E+00	2.4E+00	2.6E+00	3.7E+00	4.5E-03	1.0E-02
8.2E-02	8.6E-02	9.0E-02	9.3E-02	5.6E-04	6.8E-04
8.8E-02	8.8E-02	1.2E-01	1.2E-01	1.6E-03	1.8E-03
0	2	0	4	0	0

Part of the external cost internalised

Taxes paid - Linked to water effluents	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
3.4E+02	3.4E+02	90.0%	72.9%
4.5E+02	4.5E+02	98.7%	80.5%
7.5E-01	7.0E+00	11.3%	9.1%
1	447	11%	80%

min	max	min	max	min	max
3.4E+02	3.4E+02	5.4E-02	5.4E-02	7.1E-03	7.1E-03
3.5E+02	3.5E+02	1.0E+02	1.0E+02	1.2E-01	1.2E-01
2.1E-01	1.5E+00	5.4E-01	5.5E+00	1.1E-03	1.1E-03
0	347	0	100	0	0

Part of the external cost internalised

Taxes paid - Linked to solid waste	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
3.3E-01	3.5E-01	0.1%	0.1%
3.3E-02	4.9E-02	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0	0	0%	0%

min	max	min	max	min	max
1.9E-01	2.1E-01	1.1E-01	1.1E-01	2.7E-02	3.0E-02
2.5E-02	3.6E-02	3.5E-03	6.7E-03	4.2E-03	6.1E-03
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Taxes paid - Linked to material consumption

Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
2.1E+01	2.1E+01	5.6%	4.5%
1.7E+00	9.7E+00	0.4%	1.7%
3.2E-01	3.5E+00	4.8%	4.5%
0	21	0%	5%

min	max	min	max	min	max
2.0E+01	2.0E+01	1.1E+00	1.1E+00	-1.6E-02	-1.6E-02
1.6E+00	9.2E+00	8.5E-02	4.9E-01	-1.2E-03	-7.1E-03
3.0E-01	3.3E+00	1.6E-02	1.8E-01	-2.3E-04	-2.6E-03
0	20	0	1	0	0

Taxes paid - Linked to energy consumption

Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
6.6E+00	9.3E+01	1.7%	19.8%
3.0E+00	9.7E+01	0.7%	17.4%
5.3E+00	6.6E+01	80.6%	86.1%
3	97	1%	86%

min	max	min	max	min	max
2.2E+00	3.1E+01	4.4E+00	6.2E+01	-9.3E-03	-1.3E-01
1.0E+00	3.2E+01	2.0E+00	6.5E+01	-4.2E-03	-1.3E-01
1.8E+00	2.2E+01	3.5E+00	4.4E+01	-7.4E-03	-9.2E-02
1	32	2	65	0	0

E/ Life Cycle Price

Euros

474

% of external cost internalised	min	max
	83%	1226%
% of price corresponding to internalised external cost	min	max
	1%	117%

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Linked to resources consumption		Values
Depletion of non renewable resources	kg antimony eq.	3.0E-01
Linked to air emissions		Values
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.	5.2E+04
Stratospheric Ozone Depletion	g CFC-11 eq.	1.0E-02
Air acidification	g SO ₂ eq.	5.4E+02
Photochemical oxidation	g ethylene eq.	2.1E+02
Linked to water effluents		Values
Eutrophication	g PO ₄ eq.	0.0E+00
Linked to human health		Values
Human Toxicity	g eq. 1,4-dichlorobenzene	4.7E+05
Years of Life Lost	year	2.9E-05
Linked to ecotoxicological risk		Values
Aquatic Ecotoxicity	g eq. 1,4-dichlorobenzene	9.5E+04
Sediment Ecotoxicity	g eq. 1,4-dichlorobenzene	3.0E+05
Terrestrial Ecotoxicity	g eq. 1,4-dichlorobenzene	7.7E+02

Values	%	Values	%	Values	%
3.1E-01	100%	0.0E+00	0%	-1.1E-03	0%
5.2E+04	99%	0.0E+00	0%	4.2E+02	1%
1.0E-02	100%	0.0E+00	0%	-2.5E-05	0%
5.4E+02	99%	0.0E+00	0%	3.3E+00	1%
2.1E+02	100%	0.0E+00	0%	1.6E-01	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
4.7E+05	100%	0.0E+00	0%	-1.3E+03	0%
2.9E-05	99%	0.0E+00	0%	3.2E-07	1%
9.5E+04	100%	0.0E+00	0%	-2.8E+02	0%
3.0E+05	100%	0.0E+00	0%	-8.4E+02	0%
7.7E+02	100%	0.0E+00	0%	1.5E-01	0%

B/ Other Environmental Indicators

		Values
Primary energy	MJ	8.2E+02
Fossil energy	MJ	0.0E+00
Consumption of raw materials	kg	9.5E+03
Dusts	g	1.1E+02
Dioxins	g	3.3E-10
Metals into air	g	2.4E+00
Metals into water	g	2.7E+01
Metals into soil	g	0.0E+00
Municipal and industrial waste	kg	2.3E+00
Hazardous waste	kg	9.7E-02
Inert waste	kg	3.4E-01

Values	%	Values	%	Values	%
8.2E+02	100%	0.0E+00	0%	-3.3E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
9.5E+03	100%	0.0E+00	0%	-6.9E+00	0%
1.1E+02	100%	0.0E+00	0%	-2.3E-01	0%
1.0E-10	31%	0.0E+00	0%	2.2E-10	69%
2.4E+00	100%	0.0E+00	0%	-2.9E-03	0%
2.7E+01	100%	0.0E+00	0%	-9.8E-02	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
5.9E-01	25%	0.0E+00	0%	1.8E+00	75%
8.4E-02	87%	0.0E+00	0%	1.2E-02	13%
3.4E-01	100%	0.0E+00	0%	0.0E+00	0%

C/ External Cost

Linked to air emissions		Euros
Greenhouse effect (direct, 100 yrs)	Euros	9.9E-01
Stratospheric Ozone Depletion	Euros	7.0E-06
Air acidification	Euros	7.9E-02
Photochemical oxidation	Euros	1.9E-01
Linked to water effluents		Euros
Eutrophication	Euros	3.4E-01
Linked to solid waste		Euros
Disaminty caused by incineration	Euros	1.3E-03
Disaminty caused by landfilling	Euros	1.3E-02
Linked to human health		Euros
Carcinogenic potential of heavy metals	Euros	2.3E-04
Human health effects caused by dusts	Euros	1.6E-01
Human health effects caused by dioxins	Euros	4.2E-06

Values		% total external cost	
min	max	min	max
9.9E-01	2.5E+00	57.2%	23.8%
7.0E-06	7.0E-06	0.0%	0.0%
7.9E-02	7.9E-01	4.5%	7.5%
1.9E-01	2.0E-01	8.8%	1.9%
3.4E-01	3.4E-01	19.6%	3.2%
1.3E-03	4.4E-03	0.1%	0.0%
1.3E-02	4.3E-02	0.8%	0.4%
2.3E-04	2.3E-04	0.0%	0.0%
1.6E-01	6.6E+00	9.0%	63.1%
4.2E-06	9.0E-06	0.0%	0.0%

min	max	min	max	min	max
9.8E-01	2.5E+00	0.0E+00	0.0E+00	7.9E-03	2.0E-02
7.0E-06	7.0E-06	0.0E+00	0.0E+00	-1.7E-08	-1.7E-08
7.8E-02	7.8E-01	0.0E+00	0.0E+00	4.9E-04	4.9E-03
1.9E-01	2.0E-01	0.0E+00	0.0E+00	1.2E-04	1.5E-04
3.4E-01	3.4E-01	0.0E+00	0.0E+00	3.7E-04	3.7E-04
8.8E-06	3.1E-05	0.0E+00	0.0E+00	1.3E-03	4.4E-03
6.1E-03	1.9E-02	0.0E+00	0.0E+00	7.4E-03	2.3E-02
2.0E-04	2.0E-04	0.0E+00	0.0E+00	2.7E-05	2.7E-05
1.6E-01	6.6E+00	0.0E+00	0.0E+00	-3.2E-04	-1.4E-02
1.3E-06	2.8E-06	0.0E+00	0.0E+00	2.9E-06	6.2E-06

Total External Cost Euros

2	11	100%	100%
----------	-----------	-------------	-------------

2	10	0	0	0	0
99%	100%	0%	0%	1%	0%

D/ Internalisation of the external Cost

Taxes paid (total)		Euros
Denmark	Euros	2.0E+02
France	Euros	1.9E+02
Poland	Euros	1.2E+00

Values		% total external cost	
min	max	min	max
2.0E+02	2.2E+02	11783.9%	2093.5%
1.9E+02	2.0E+02	10642.9%	1950.3%
1.2E+00	1.4E+01	69.7%	130.9%

min	max	min	max	min	max
2.0E+02	2.2E+02	0.0E+00	0.0E+00	6.7E-03	-4.9E-02
1.9E+02	2.0E+02	0.0E+00	0.0E+00	6.0E-02	-7.5E-03
1.2E+00	1.4E+01	0.0E+00	0.0E+00	-2.5E-03	-4.6E-02

Part of the external cost internalised

1	220	70%	2093%
----------	------------	------------	--------------

1	220	0	0	0	0
----------	------------	----------	----------	----------	----------

Taxes paid - Linked to air emissions

Denmark		Euros
Denmark	Euros	7.9E-01
France	Euros	3.7E-02
Poland	Euros	4.3E-02

Values		% total taxes paid	
min	max	min	max
7.9E-01	1.1E+00	0.4%	0.5%
3.7E-02	3.9E-02	0.0%	0.0%
4.3E-02	4.3E-02	3.6%	0.3%

min	max	min	max	min	max
7.8E-01	1.1E+00	0.0E+00	0.0E+00	2.2E-03	5.1E-03
3.7E-02	3.9E-02	0.0E+00	0.0E+00	2.8E-04	3.4E-04
4.2E-02	4.2E-02	0.0E+00	0.0E+00	7.9E-04	7.9E-04

Part of the external cost internalised

0	1	0%	1%
----------	----------	-----------	-----------

0	1	0	0	0	0
----------	----------	----------	----------	----------	----------

Taxes paid - Linked to water effluents

Denmark		Euros
Denmark	Euros	1.9E+02
France	Euros	1.8E+02
Poland	Euros	9.1E-02

Values		% total taxes paid	
min	max	min	max
1.9E+02	1.9E+02	92.3%	85.7%
1.8E+02	1.8E+02	98.9%	89.0%
9.1E-02	6.2E-01	7.5%	4.5%

min	max	min	max	min	max
1.9E+02	1.9E+02	0.0E+00	0.0E+00	3.5E-03	3.5E-03
1.8E+02	1.8E+02	0.0E+00	0.0E+00	6.0E-02	6.0E-02
9.0E-02	6.2E-01	0.0E+00	0.0E+00	5.5E-04	5.5E-04

Part of the external cost internalised

0	188	8%	89%
----------	------------	-----------	------------

0	188	0	0	0	0
----------	------------	----------	----------	----------	----------

Taxes paid - Linked to solid waste

Denmark		Euros
Denmark	Euros	8.3E-02
France	Euros	1.2E-02
Poland	Euros	0.0E+00

Values		% total taxes paid	
min	max	min	max
8.3E-02	9.2E-02	0.0%	0.0%
1.2E-02	1.7E-02	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%

min	max	min	max	min	max
6.8E-02	7.7E-02	0.0E+00	0.0E+00	1.3E-02	1.5E-02
9.7E-03	1.4E-02	0.0E+00	0.0E+00	2.1E-03	3.0E-03
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Part of the external cost internalised

0	0	0%	0%
----------	----------	-----------	-----------

0	0	0	0	0	0
----------	----------	----------	----------	----------	----------

Taxes paid - Linked to material consumption

Denmark		Euros
Denmark	Euros	1.1E+01
France	Euros	8.5E-01
Poland	Euros	1.6E-01

Values		% total taxes paid	
min	max	min	max
1.1E+01	1.1E+01	5.3%	4.9%
8.5E-01	4.9E+00	0.5%	2.4%
1.6E-01	1.8E+00	13.3%	12.9%

min	max	min	max	min	max
1.1E+01	1.1E+01	0.0E+00	0.0E+00	-7.8E-03	-7.8E-03
8.5E-01	4.9E+00	0.0E+00	0.0E+00	-6.2E-04	-3.6E-03
1.6E-01	1.8E+00	0.0E+00	0.0E+00	-1.2E-04	-1.3E-03

Part of the external cost internalised

0	11	0%	13%
----------	-----------	-----------	------------

0	11	0	0	0	0
----------	-----------	----------	----------	----------	----------

Taxes paid - Linked to energy consumption

Denmark		Euros
Denmark	Euros	1.1E+00
France	Euros	5.2E-01
Poland	Euros	9.1E-01

Values		% total taxes paid	
min	max	min	max
1.1E+00	1.6E+01	0.6%	7.3%
5.2E-01	1.7E+01	0.3%	8.1%
9.1E-01	1.1E+01	75.6%	82.3%

min	max	min	max	min	max
1.1E+00	1.6E+01	0.0E+00	0.0E+00	-4.6E-03	-6.5E-02
5.2E-01	1.7E+01	0.0E+00	0.0E+00	-2.1E-03	-6.7E-02
9.2E-01	1.1E+01	0.0E+00	0.0E+00	-3.7E-03	-4.6E-02

Part of the external cost internalised

1	17	0%	82%
----------	-----------	-----------	------------

1	
----------	---------

Textile - Industrial

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values	
Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g ethylene eq.
Linked to water effluents	
Eutrophication	g PO ₄ eq.
Linked to human health	
Human Toxicity	g eq. 1-4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene

Values
4.6E-01
7.2E+04
1.7E-02
6.7E+02
2.0E+02
0.0E+00
7.8E+05
3.3E-05
1.6E+05
5.0E+05
2.6E+03

Values	%	Values	%	Values	%
1.3E-01	28%	3.3E-01	72%	-1.1E-03	0%
2.9E+04	40%	4.3E+04	60%	4.2E+02	1%
2.6E-03	16%	1.4E-02	85%	-2.5E-05	0%
2.7E+02	41%	4.0E+02	59%	3.3E+00	0%
8.0E+01	40%	1.2E+02	60%	1.6E-01	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
1.6E+05	20%	6.2E+05	80%	-1.3E+03	0%
1.5E-05	47%	1.7E-05	52%	3.2E-07	1%
3.3E+04	21%	1.2E+05	79%	-2.6E+02	0%
1.0E+05	21%	4.0E+05	80%	-8.4E+02	0%
5.6E+02	21%	2.1E+03	79%	1.5E-01	0%

B/ Other Environmental Indicators

Values	
Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
1.3E+03
0.0E+00
4.8E+03
1.1E+02
3.2E-10
1.0E+01
4.5E+01
0.0E+00
2.0E+00
1.1E-01
3.9E-01

Values	%	Values	%	Values	%
5.2E+02	40%	7.9E+02	60%	-3.3E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
4.5E+03	95%	2.6E+02	5%	-6.9E+00	0%
5.5E+01	92%	5.2E+01	49%	-2.3E-01	0%
5.0E-11	10%	4.2E-11	13%	2.2E-10	71%
2.3E+00	23%	7.7E+00	77%	-2.5E-03	0%
2.0E+01	45%	2.5E+01	55%	-9.8E-02	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
2.2E-01	11%	7.9E-03	0%	1.8E+00	88%
1.3E-02	12%	8.3E-02	77%	1.2E-02	11%
4.0E-02	10%	3.5E-01	90%	0.0E+00	0%

C/ External Cost

Values	
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros
Linked to water effluents	
Eutrophication	Euros
Linked to solid waste	
Disaminy caused by incineration	Euros
Disaminy caused by landfilling	Euros
Linked to human health	
Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Values		% total external cost	
min	max	min	max
1.4E+00	3.5E+00	77.3%	31.1%
1.1E-05	1.1E-05	0.0%	0.0%
9.8E-02	9.8E-01	5.1%	8.8%
1.5E-01	1.9E-01	7.6%	1.7%
1.5E-01	1.5E-01	7.6%	1.3%
1.3E-03	4.4E-03	0.1%	0.0%
1.2E-02	3.7E-02	0.6%	0.3%
3.4E-04	3.4E-04	0.0%	0.0%
1.5E-01	6.3E+00	7.7%	56.6%
4.1E-06	8.8E-06	0.0%	0.0%
2	11	100%	100%

min	max	min	max	min	max
5.5E-01	1.4E+00	8.2E-01	2.1E+00	7.9E-03	2.0E-02
1.9E-06	1.8E-06	9.6E-06	9.6E-06	-1.7E-08	-1.7E-08
4.0E-02	4.0E-01	5.8E-02	5.8E-01	4.9E-04	4.9E-03
5.9E-02	7.5E-02	8.8E-02	1.1E-01	1.2E-04	1.5E-04
1.3E-01	1.3E-01	2.0E-02	2.0E-02	3.7E-04	3.7E-04
4.3E-06	1.5E-05	1.5E-06	5.2E-06	1.3E-03	4.4E-03
1.6E-03	5.2E-03	2.7E-03	8.5E-03	7.4E-03	2.3E-02
7.9E-05	7.6E-05	2.4E-04	2.4E-04	2.7E-05	2.7E-05
7.6E-02	3.3E+00	7.2E-02	3.1E+00	-3.2E-04	-1.4E-02
6.5E-07	1.4E-06	5.4E-07	1.2E-06	2.9E-06	6.2E-06
1	5	1	6	0	0
44%	47%	55%	53%	1%	0%

D/ Internalisation of the external Cost

Taxes paid (total)	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
9.3E+01	1.2E+02	4860.3%	1060.3%
1.1E+02	1.4E+02	5743.9%	1244.2%
1.8E+00	2.1E+01	93.3%	187.3%
2	138	93%	1244%

min	max	min	max	min	max
9.1E+01	1.0E+02	2.1E+00	1.7E+01	6.7E-03	-4.9E-02
8.5E+01	9.7E+01	2.5E+01	4.1E+01	6.0E-02	-7.5E-03
7.5E-01	8.5E+00	1.0E+00	1.2E+01	-2.5E-03	-4.6E-02
1	101	1	41	0	0

Part of the external cost internalised

Taxes paid - Linked to air emissions	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
1.0E+00	1.5E+00	1.1%	1.3%
3.9E-02	4.2E-02	0.0%	0.0%
5.6E-02	5.6E-02	3.1%	0.3%
0	2	0%	1%

min	max	min	max	min	max
4.0E-01	5.9E-01	6.5E-01	9.2E-01	2.2E-03	5.1E-03
1.7E-02	1.8E-02	2.2E-02	2.3E-02	2.8E-04	3.4E-04
2.4E-02	2.4E-02	3.1E-02	3.1E-02	7.9E-04	7.9E-04
0	1	0	1	0	0

Part of the external cost internalised

Taxes paid - Linked to water effluents	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
8.3E+01	8.3E+01	89.2%	70.8%
1.1E+02	1.1E+02	98.5%	78.6%
2.0E-01	1.8E+00	11.3%	8.8%
0	109	11%	79%

min	max	min	max	min	max
8.3E+01	8.3E+01	1.3E-02	1.3E-02	3.5E-03	3.5E-03
8.4E+01	8.4E+01	2.5E+01	2.5E+01	6.0E-02	6.0E-02
6.9E-02	4.8E-01	1.3E-01	1.4E+00	5.5E-04	5.5E-04
0	84	0	25	0	0

Part of the external cost internalised

Taxes paid - Linked to solid waste	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
6.1E-02	6.6E-02	0.1%	0.1%
6.4E-03	9.6E-03	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0	0	0%	0%

min	max	min	max	min	max
2.0E-02	2.3E-02	2.8E-02	2.8E-02	1.3E-02	1.5E-02
3.5E-03	4.9E-03	8.7E-04	1.7E-03	2.1E-03	3.0E-03
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to material consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
5.4E+00	5.4E+00	5.8%	4.6%
4.2E-01	2.5E+00	0.4%	1.8%
8.0E-02	8.8E-01	4.5%	4.2%
0	5	0%	5%

min	max	min	max	min	max
5.1E+00	5.1E+00	2.7E-01	2.7E-01	-7.8E-03	-7.8E-03
4.0E-01	2.3E+00	2.1E-02	1.2E-01	-6.2E-04	-3.6E-03
7.6E-02	8.4E-01	4.0E-03	4.4E-02	-1.2E-04	-1.3E-03
0	5	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to energy consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
1.8E+00	2.5E+01	1.9%	21.6%
8.3E-01	2.6E+01	0.7%	19.2%
1.5E+00	1.8E+01	81.1%	86.7%
1	26	1%	87%

min	max	min	max	min	max
7.3E-01	1.0E+01	1.1E+00	1.5E+01	-4.6E-03	-6.5E-02
3.3E-01	1.1E+01	5.0E-01	1.6E+01	-2.1E-03	-6.7E-02
5.8E-01	7.2E+00	8.8E-01	1.1E+01	-3.7E-03	-4.6E-02
0	11	0	16	0	0

E/ Life Cycle Price

% of external cost internalised	min	max
	93%	1244%
% of price corresponding to internalised external cost	min	max

Building structure

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

	Values
Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq. 1.9E+00
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq. 2.8E+05
Stratospheric Ozone Depletion	g CFC-11 eq. 1.1E-01
Air acidification	g SO ₂ eq. 2.6E+03
Photochemical oxidation	g ethylene eq. 1.1E+03
Linked to water effluents	
Eutrophication	g PO ₄ eq. 1.1E+02
Linked to human health	
Human Toxicity	g eq. 1-4-dichlorobenzene 4.2E+08
Years of Life Lost	year 1.2E-04
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene 6.1E+06
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene 2.0E+07
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene 2.5E+03

Values	%	Values	%	Values	%
1.9E+00	103%	0.0E+00	0%	-5.1E-02	-3%
2.9E+05	103%	0.0E+00	0%	-7.2E+03	-3%
1.1E-01	101%	0.0E+00	0%	-1.3E-03	-1%
2.7E+03	101%	0.0E+00	0%	-3.5E+01	-1%
1.1E+03	101%	0.0E+00	0%	-6.9E+00	-1%
1.0E+01	9%	0.0E+00	0%	1.0E+02	91%
4.2E+08	100%	0.0E+00	0%	-1.3E+06	0%
1.3E-04	101%	0.0E+00	0%	-1.6E-06	-1%
6.3E+06	104%	0.0E+00	0%	-2.6E+05	-4%
2.0E+07	104%	0.0E+00	0%	-8.4E+05	-4%
2.5E+03	100%	0.0E+00	0%	2.6E+00	0%

B/ Other Environmental Indicators

	Values
Primary energy	MJ 7.9E+03
Fossil energy	MJ 0.0E+00
Consumption of raw materials	kg 2.5E+05
Dusts	g 3.4E+02
Dioxins	g 4.3E-08
Metals into air	g 7.6E+00
Metals into water	g 1.4E+02
Metals into soil	g 3.5E+00
Municipal and industrial waste	kg 5.5E+01
Hazardous waste	kg 4.7E-01
Inert waste	kg 5.2E+02

Values	%	Values	%	Values	%
7.9E+03	99%	0.0E+00	0%	5.4E+01	1%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
2.5E+05	100%	0.0E+00	0%	-1.5E+01	0%
3.4E+02	102%	0.0E+00	0%	-5.9E+00	-2%
4.3E-08	100%	0.0E+00	0%	1.8E-11	0%
7.6E+00	99%	0.0E+00	0%	5.3E-02	1%
1.4E+02	102%	0.0E+00	0%	-3.3E+00	-2%
3.5E+00	100%	0.0E+00	0%	1.6E-05	0%
9.5E-01	2%	0.0E+00	0%	5.4E+01	98%
4.7E-01	100%	0.0E+00	0%	0.0E+00	0%
1.5E+02	28%	0.0E+00	0%	3.7E+02	72%

C/ External Cost

	Values	% total external cost			
	min	max	min	max	
Linked to air emissions					
Greenhouse effect (direct, 100 yrs)	Euros 5.4E+00	1.4E+01	49.1%	27.0%	
Stratospheric Ozone Depletion	Euros 7.5E-05	7.5E-05	0.0%	0.0%	
Air acidification	Euros 3.8E-01	3.8E+00	3.5%	7.6%	
Photochemical oxidation	Euros 7.7E-01	9.8E-01	7.0%	1.9%	
Linked to water effluents					
Eutrophication	Euros 1.7E-01	1.7E-01	1.6%	0.3%	
Linked to solid waste					
Disarmity caused by incineration	Euros 8.2E-05	2.9E-04	0.0%	0.0%	
Disarmity caused by landfilling	Euros 3.7E+00	1.2E+01	34.0%	23.4%	
Linked to human health					
Carcinogenic potential of heavy metals	Euros 5.1E-02	5.1E-02	0.5%	0.1%	
Human health effects caused by dusts	Euros 4.7E-01	2.0E+01	4.3%	39.6%	
Human health effects caused by dioxins	Euros 5.6E-04	1.2E-03	0.0%	0.0%	
Total External Cost	Euros	11	50	100%	100%

min	max	min	max	min	max
5.5E+00	1.4E+01	0.0E+00	0.0E+00	-1.4E-01	-3.5E-01
7.6E-05	7.6E-05	0.0E+00	0.0E+00	-8.9E-07	-8.9E-07
3.9E-01	3.9E+00	0.0E+00	0.0E+00	-5.0E-03	-5.0E-02
7.7E-01	9.9E-01	0.0E+00	0.0E+00	-5.0E-03	-6.4E-03
1.5E-02	1.5E-02	0.0E+00	0.0E+00	1.6E-01	1.6E-01
8.2E-05	2.9E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00
8.9E-01	2.8E+00	0.0E+00	0.0E+00	2.8E+00	9.0E+00
5.1E-02	5.1E-02	0.0E+00	0.0E+00	4.4E-06	4.4E-06
4.8E-01	2.0E+01	0.0E+00	0.0E+00	-8.1E-03	-3.5E-01
5.6E-04	1.2E-03	0.0E+00	0.0E+00	2.3E-07	4.9E-07
8	42	0	0	3	8
74%	83%	0%	0%	26%	17%

D/ Internalisation of the external Cost

Taxes paid (total)		Values	% total external cost		
	Euros	min	max	min	max
Denmark	Euros	3.2E+02	4.7E+02	2929.15%	929.06%
France	Euros	5.9E+01	3.2E+02	541.01%	635.34%
Poland	Euros	1.3E+01	1.5E+02	120.83%	305.91%
Part of the external cost internalised		13	469	121%	929%

min	max	min	max	min	max
3.2E+02	4.7E+02	0.0E+00	0.0E+00	1.9E+00	3.0E+00
3.8E+01	3.0E+02	0.0E+00	0.0E+00	2.2E+01	2.3E+01
1.3E+01	1.5E+02	0.0E+00	0.0E+00	8.9E-02	7.8E-01
13	466	0	0	0	23

Taxes paid - Linked to air emissions

	Euros	Values	% total taxes paid		
	Euros	min	max	min	max
Denmark	Euros	2.9E+00	3.5E+00	0.9%	0.8%
France	Euros	1.1E-01	1.2E-01	0.2%	0.0%
Poland	Euros	1.9E-01	1.9E-01	1.4%	0.1%
Part of the external cost internalised		0	4	0%	1%

min	max	min	max	min	max
3.0E+00	3.6E+00	0.0E+00	0.0E+00	-7.7E-02	-1.2E-01
1.1E-01	1.2E-01	0.0E+00	0.0E+00	-1.4E-03	-1.5E-03
1.9E-01	1.9E-01	0.0E+00	0.0E+00	-3.4E-03	-3.4E-03
0	4	0	0	0	0

Taxes paid - Linked to water effluents

	Euros	Values	% total taxes paid		
	Euros	min	max	min	max
Denmark	Euros	1.7E+00	1.7E+00	0.5%	0.4%
France	Euros	2.6E+01	2.6E+01	44.4%	8.2%
Poland	Euros	1.7E-01	2.2E-01	1.3%	0.1%
Part of the external cost internalised		0	26	1%	8%

min	max	min	max	min	max
1.4E-01	1.4E-01	0.0E+00	0.0E+00	1.5E+00	1.5E+00
4.7E+00	4.7E+00	0.0E+00	0.0E+00	2.2E+01	2.2E+01
1.4E-01	1.8E-01	0.0E+00	0.0E+00	3.2E-02	3.1E-02
0	5	0	0	0	22

Taxes paid - Linked to solid waste

	Euros	Values	% total taxes paid		
	Euros	min	max	min	max
Denmark	Euros	6.3E-01	7.9E-01	0.2%	0.2%
France	Euros	1.8E-01	2.5E-01	0.3%	0.1%
Poland	Euros	0.0E+00	0.0E+00	0.0%	0.0%
Part of the external cost internalised		0	1	0%	0%

min	max	min	max	min	max
2.2E-01	2.4E-01	0.0E+00	0.0E+00	4.1E-01	5.5E-01
1.8E-02	2.8E-02	0.0E+00	0.0E+00	1.6E-01	2.2E-01
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	1

Taxes paid - Linked to material consumption

	Euros	Values	% total taxes paid		
	Euros	min	max	min	max
Denmark	Euros	2.8E+02	2.8E+02	86.7%	59.4%
France	Euros	2.2E+01	1.3E+02	37.1%	39.5%
Poland	Euros	4.1E+00	4.5E+01	31.2%	29.4%
Part of the external cost internalised		4	279	31%	59%

min	max	min	max	min	max
2.8E+02	2.8E+02	0.0E+00	0.0E+00	-8.2E-03	-8.2E-03
2.2E+01	1.3E+02	0.0E+00	0.0E+00	-6.4E-04	-3.7E-03
4.1E+00	4.5E+01	0.0E+00	0.0E+00	-1.2E-04	-1.3E-03
4	279	0	0	0	0

Taxes paid - Linked to energy consumption

	Euros	Values	% total taxes paid		
	Euros	min	max	min	max
Denmark	Euros	1.1E+01	1.5E+02	3.4%	32.6%
France	Euros	5.0E+00	1.6E+02	8.4%	49.7%
Poland	Euros	8.8E+00	1.1E+02	66.1%	70.3%
Part of the external cost internalised		5	159	3%	70%

min	max	min	max	min	max
1.1E+01	1.5E+02	0.0E+00	0.0E+00	7.6E-02	1.1E+00
4.9E+00	1.6E+02	0.0E+00	0.0E+00	3.4E-02	1.1E+00
8.7E+00	1.1E+02	0.0E+00	0.0E+00	6.1E-02	7.5E-01
5	158	0	0	0	1

E/ Life Cycle Price

Euros	2 037
-------	-------

% of external cost internalised	min	max
	121%	929%
% of price corresponding to internalised external cost	min	max
	1%	23%

Civil work

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values	
Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g styrene eq.
Linked to water effluents	
Eutrophication	g PO ₄ eq.
Linked to human health	
Human Toxicity	g eq. 1,4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1,4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1,4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1,4-dichlorobenzene

Values
1.5E+00
7.7E+04
1.4E-02
6.3E+02
1.0E+02
1.1E+00
4.5E+05
2.9E-05
9.1E+04
2.9E+05
8.9E+01

Values	%	Values	%	Values	%
1.5E+00	100%	0.0E+00	0%	0.0E+00	0%
7.7E+04	100%	0.0E+00	0%	0.0E+00	0%
1.4E-02	100%	0.0E+00	0%	0.0E+00	0%
6.3E+02	100%	0.0E+00	0%	0.0E+00	0%
1.0E+02	100%	0.0E+00	0%	0.0E+00	0%
1.1E+00	100%	0.0E+00	0%	0.0E+00	0%
4.5E+05	100%	0.0E+00	0%	0.0E+00	0%
2.9E-05	100%	0.0E+00	0%	0.0E+00	0%
9.1E+04	100%	0.0E+00	0%	0.0E+00	0%
2.9E+05	100%	0.0E+00	0%	0.0E+00	0%
8.9E+01	100%	0.0E+00	0%	0.0E+00	0%

B/ Other Environmental Indicators

Values	
Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
3.0E+03
0.0E+00
8.6E+03
2.4E+01
7.2E-09
3.4E-01
1.8E+01
4.2E-01
4.6E-02
3.5E-02
7.2E+02

Values	%	Values	%	Values	%
3.0E+03	100%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
8.6E+03	100%	0.0E+00	0%	0.0E+00	0%
2.4E+01	100%	0.0E+00	0%	0.0E+00	0%
7.2E-09	100%	0.0E+00	0%	0.0E+00	0%
3.4E-01	100%	0.0E+00	0%	0.0E+00	0%
1.8E+01	100%	0.0E+00	0%	0.0E+00	0%
4.2E-01	100%	0.0E+00	0%	0.0E+00	0%
4.6E-02	100%	0.0E+00	0%	0.0E+00	0%
3.5E-02	100%	0.0E+00	0%	0.0E+00	0%
8.1E-02	0%	0.0E+00	0%	7.2E+02	100%

C/ External Cost

Values	
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros
Linked to water effluents	
Eutrophication	Euros
Linked to solid waste	
Disaminy caused by incineration	Euros
Disaminy caused by landfilling	Euros
Linked to human health	
Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Values		% total external cost	
min	max	min	max
1.5E+00	3.7E+00	24.5%	78.7%
9.8E-06	9.8E-06	0.0%	0.0%
9.2E-02	9.2E-01	1.5%	4.7%
7.5E-02	9.6E-02	1.3%	0.5%
1.7E-03	1.7E-03	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
4.3E+00	1.4E+01	72.1%	68.9%
9.5E-04	9.5E-04	0.0%	0.0%
3.4E-02	1.4E+00	0.6%	7.3%
9.4E-05	2.0E-04	0.0%	0.0%
6	20	100%	100%

min	max	min	max	min	max
1.5E+00	3.7E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
9.8E-06	9.8E-06	0.0E+00	0.0E+00	0.0E+00	0.0E+00
9.2E-02	9.2E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
7.5E-02	9.6E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1.7E-03	1.7E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
7.6E-04	2.4E-03	0.0E+00	0.0E+00	4.3E+00	1.4E+01
9.5E-04	9.5E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00
3.4E-02	1.4E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
9.4E-05	2.0E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2	6	0	0	4	14
28%	31%	0%	0%	72%	69%

D/ Internalisation of the external Cost

Taxes paid (total)	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
1.4E+01	6.9E+01	233.6%	346.8%
3.4E+00	6.6E+01	57.1%	330.3%
3.5E+00	4.3E+01	58.9%	216.3%

min	max	min	max	min	max
1.4E+01	6.9E+01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
3.4E+00	6.6E+01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
3.5E+00	4.3E+01	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Part of the external cost internalised

3	69	57%	347%
---	----	-----	------

3	69	0	0	0	0
---	----	---	---	---	---

Taxes paid - Linked to air emissions

Values		% total taxes paid			
Denmark	Euros	1.0E+00	1.5E+00	7.2%	2.2%
France	Euros	3.0E-02	3.3E-02	0.9%	0.1%
Poland	Euros	4.5E-02	4.5E-02	1.3%	0.1%

Values	% total taxes paid		
0	2	1%	2%

Values	% total taxes paid				
0	2	0	0	0	0

Part of the external cost internalised

0	2	1%	2%
---	---	----	----

0	2	0	0	0	0
---	---	---	---	---	---

Taxes paid - Linked to water effluents

Values		% total taxes paid			
Denmark	Euros	1.4E-02	1.4E-02	0.1%	0.0%
France	Euros	8.0E-01	8.0E-01	23.3%	1.2%
Poland	Euros	1.2E-02	2.8E-02	0.3%	0.1%

Values	% total taxes paid		
0	1	0%	1%

Values	% total taxes paid				
0	1	0	0	0	0

Part of the external cost internalised

0	1	0%	1%
---	---	----	----

0	1	0	0	0	0
---	---	---	---	---	---

Taxes paid - Linked to solid waste

Values		% total taxes paid			
Denmark	Euros	1.5E-02	1.6E-02	0.1%	0.0%
France	Euros	1.0E-03	1.6E-03	0.0%	0.0%
Poland	Euros	0.0E+00	0.0E+00	0.0%	0.0%

Values	% total taxes paid		
0	0	0%	0%

Values	% total taxes paid				
0	0	0	0	0	0

Part of the external cost internalised

0	0	0%	0%
---	---	----	----

0	0	0	0	0	0
---	---	---	---	---	---

Taxes paid - Linked to material consumption

Values		% total taxes paid			
Denmark	Euros	8.8E+00	8.8E+00	62.6%	12.7%
France	Euros	6.9E-01	3.7E+00	20.2%	5.7%
Poland	Euros	1.2E-01	1.3E+00	3.4%	3.1%

Values	% total taxes paid		
0	9	3%	13%

Values	% total taxes paid				
0	9	0	0	0	0

Part of the external cost internalised

0	9	3%	13%
---	---	----	-----

0	9	0	0	0	0
---	---	---	---	---	---

Taxes paid - Linked to energy consumption

Values		% total taxes paid			
Denmark	Euros	4.2E+00	5.9E+01	29.9%	85.0%
France	Euros	1.9E+00	6.1E+01	55.6%	93.0%
Poland	Euros	3.4E+00	4.2E+01	95.0%	96.7%

Values	% total taxes paid		
2	61	30%	97%

Values	% total taxes paid				
2	61	0	0	0	0

Part of the external cost internalised

2	61	30%	97%
---	----	-----	-----

2	61	0	0	0	0
---	----	---	---	---	---

E/ Life Cycle Price

% of external cost internalised	
min	max
57%	347%

% of price corresponding to internalised external cost	
min	max

Building occupancy - total

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values
Linked to resources consumption
Depletion of non renewable resources kg antimony eq. 2.1E+01
Linked to air emissions
Greenhouse effect (direct, 100 yrs) g CO ₂ eq. 3.1E+06
Stratospheric Ozone Depletion g CFC-11 eq. 9.6E-01
Air acidification g SO ₂ eq. 1.3E+04
Photochemical oxidation g styrene eq. 1.8E+03
Linked to water effluents
Eutrophication g PO ₄ eq. 9.1E+01
Linked to human health
Human Toxicity g eq. 1-4-dichlorobenzene 5.5E+07
Years of Life Lost year 5.8E-04
Linked to ecotoxicological risk
Aquatic Ecotoxicity g eq. 1-4-dichlorobenzene 1.1E+07
Sediment Ecotoxicity g eq. 1-4-dichlorobenzene 3.5E+07
Terrestrial Ecotoxicity g eq. 1-4-dichlorobenzene 1.3E+05

Values	%	Values	%	Values	%
0.0E+00	0%	2.1E+01	100%	0.0E+00	0%
0.0E+00	0%	3.1E+06	100%	0.0E+00	0%
0.0E+00	0%	9.6E-01	100%	0.0E+00	0%
0.0E+00	0%	1.3E+04	100%	0.0E+00	0%
0.0E+00	0%	1.8E+03	100%	0.0E+00	0%
0.0E+00	0%	9.1E+01	100%	0.0E+00	0%
0.0E+00	0%	5.5E+07	100%	0.0E+00	0%
0.0E+00	0%	5.8E-04	100%	0.0E+00	0%
0.0E+00	0%	1.1E+07	100%	0.0E+00	0%
0.0E+00	0%	3.5E+07	100%	0.0E+00	0%
0.0E+00	0%	1.3E+05	100%	0.0E+00	0%

B/ Other Environmental Indicators

Values
Primary energy MJ 6.4E+04
Fossil energy MJ 0.0E+00
Consumption of raw materials kg 1.6E+03
Dusts g 2.1E+03
Dioxins g 0.0E+00
Metals into air g 4.9E+02
Metals into water g 1.5E+03
Metals into soil g 0.0E+00
Municipal and industrial waste kg 0.0E+00
Hazardous waste kg 0.0E+00
Inert waste kg 0.0E+00

Values	%	Values	%	Values	%
0.0E+00	0%	6.4E+04	100%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	1.6E+03	100%	0.0E+00	0%
0.0E+00	0%	2.1E+03	100%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	4.9E+02	100%	0.0E+00	0%
0.0E+00	0%	1.5E+03	100%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%

C/ External Cost

Values	% total external cost				
min	max	min	max		
Linked to air emissions					
Greenhouse effect (direct, 100 yrs) Euros 6.0E+01	1.5E+02	90.5%	50.5%		
Stratospheric Ozone Depletion Euros 6.5E-04	6.5E-04	0.0%	0.0%		
Air acidification Euros 1.9E+00	1.9E+01	2.8%	6.2%		
Photochemical oxidation Euros 1.3E+00	1.6E+00	2.0%	0.6%		
Linked to water effluents					
Eutrophication Euros 1.4E-01	1.4E-01	0.2%	0.0%		
Linked to solid waste					
Disaminy caused by incineration Euros 0.0E+00	0.0E+00	0.0%	0.0%		
Disaminy caused by landfilling Euros 0.0E+00	0.0E+00	0.0%	0.0%		
Linked to human health					
Carcinogenic potential of heavy metals Euros 8.6E-03	8.6E-03	0.0%	0.0%		
Human health effects caused by dusts Euros 3.0E+00	1.3E+02	4.5%	42.6%		
Human health effects caused by dioxins Euros 0.0E+00	0.0E+00	0.0%	0.0%		
Total External Cost	Euros	66	298	100%	100%

min	max	min	max	min	max
0.0E+00	0.0E+00	6.0E+01	1.5E+02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	6.5E-04	6.5E-04	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.9E+00	1.9E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.3E+00	1.6E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.4E-01	1.4E-01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	8.6E-03	8.6E-03	0.0E+00	0.0E+00
0.0E+00	0.0E+00	3.0E+00	1.3E+02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	66	298	0	0
0%	0%	100%	100%	0%	0%

D/ Internalisation of the external Cost

Taxes paid (total)	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values	% total external cost		
min	max	min	max
1.2E+02	1.3E+03	164.0%	433.2%
6.8E+01	1.3E+03	103.9%	442.5%
7.4E+01	8.8E+02	111.6%	295.8%

min	max	min	max	min	max
0.0E+00	0.0E+00	1.2E+02	1.3E+03	0.0E+00	0.0E+00
0.0E+00	0.0E+00	6.8E+01	1.3E+03	0.0E+00	0.0E+00
0.0E+00	0.0E+00	7.4E+01	8.8E+02	0.0E+00	0.0E+00

Part of the external cost internalised

68	1 319	104%	443%
-----------	--------------	-------------	-------------

0	0	68	1 319	0	0
----------	----------	-----------	--------------	----------	----------

Taxes paid - Linked to air emissions

Values	% total taxes paid		
Denmark Euros 3.2E+01	5.2E+01	26.1%	4.0%
France Euros 4.5E-01	4.8E-01	0.7%	0.0%
Poland Euros 1.8E+00	1.8E+00	2.4%	0.2%

0	52	1%	4%
----------	-----------	-----------	-----------

0.0E+00	0.0E+00	3.2E+01	5.2E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	4.5E-01	4.8E-01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.8E+00	1.8E+00	0.0E+00	0.0E+00

Part of the external cost internalised

0	28	1%	2%
----------	-----------	-----------	-----------

0	0	1	28	0	0
----------	----------	----------	-----------	----------	----------

Taxes paid - Linked to water effluents

Values	% total taxes paid		
Denmark Euros 9.3E-01	9.3E-01	0.8%	0.1%
France Euros 2.8E+01	2.8E+01	40.5%	2.1%
Poland Euros 8.1E-01	8.7E-01	1.1%	0.1%

1	28	1%	2%
----------	-----------	-----------	-----------

0.0E+00	0.0E+00	9.3E-01	9.3E-01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.8E+01	2.8E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	8.1E-01	8.7E-01	0.0E+00	0.0E+00

Part of the external cost internalised

0	0	0%	0%
----------	----------	-----------	-----------

0	0	0	0	0	0
----------	----------	----------	----------	----------	----------

Taxes paid - Linked to solid waste

Values	% total taxes paid		
Denmark Euros 0.0E+00	0.0E+00	0.0%	0.0%
France Euros 0.0E+00	0.0E+00	0.0%	0.0%
Poland Euros 0.0E+00	0.0E+00	0.0%	0.0%

0	0	0%	0%
----------	----------	-----------	-----------

0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Part of the external cost internalised

0	0	0%	0%
----------	----------	-----------	-----------

0	0	0	0	0	0
----------	----------	----------	----------	----------	----------

Taxes paid - Linked to material consumption

Values	% total taxes paid		
Denmark Euros 0.0E+00	0.0E+00	0.0%	0.0%
France Euros 0.0E+00	0.0E+00	0.0%	0.0%
Poland Euros 0.0E+00	0.0E+00	0.0%	0.0%

0	0	0%	0%
----------	----------	-----------	-----------

0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Part of the external cost internalised

0	0	0%	0%
----------	----------	-----------	-----------

0	0	0	0	0	0
----------	----------	----------	----------	----------	----------

Taxes paid - Linked to energy consumption

Values	% total taxes paid		
Denmark Euros 8.9E+01	1.2E+03	73.1%	95.9%
France Euros 4.0E+01	1.3E+03	58.8%	97.9%
Poland Euros 7.1E+01	8.8E+02	96.5%	99.7%

40	1 291	59%	100%
-----------	--------------	------------	-------------

0.0E+00	0.0E+00	8.9E+01	1.2E+03	0.0E+00	0.0E+00
0.0E+00	0.0E+00	4.0E+01	1.3E+03	0.0E+00	0.0E+00
0.0E+00	0.0E+00	7.1E+01	8.8E+02	0.0E+00	0.0E+00

Part of the external cost internalised

0	0	40	1 291	0	0
----------	----------	-----------	--------------	----------	----------

0	0	40	1 291	0	0
----------	----------	-----------	--------------	----------	----------

E/ Life Cycle Price

Euros	
-------	--

% of external cost internalised	min	max
	104%	443%
% of price corresponding to internalised external cost	min	max

Building occupancy (domestic)

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
-------------------------	------------------	--------------------------

A/ Environmental Impacts

Values	
Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g styrene eq.
Linked to water effluents	
Eutrophication	g PO ₄ eq.
Linked to human health	
Human Toxicity	g eq. 1-4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene

Values
1.4E+01
2.0E+06
6.4E-01
7.5E+03
1.1E+03
6.4E+01
3.7E+07
3.5E-04
7.3E+06
2.3E+07
7.1E+04

Values	%	Values	%	Values	%
0.0E+00	0%	1.4E+01	100%	0.0E+00	0%
0.0E+00	0%	2.0E+06	100%	0.0E+00	0%
0.0E+00	0%	6.4E-01	100%	0.0E+00	0%
0.0E+00	0%	7.5E+03	100%	0.0E+00	0%
0.0E+00	0%	1.1E+03	100%	0.0E+00	0%
1.5E+01	23%	6.4E+01	100%	0.0E+00	0%
0.0E+00	0%	3.7E+07	100%	0.0E+00	0%
0.0E+00	0%	3.5E-04	100%	0.0E+00	0%
0.0E+00	0%	7.3E+06	100%	0.0E+00	0%
0.0E+00	0%	2.3E+07	100%	0.0E+00	0%
0.0E+00	0%	7.1E+04	100%	0.0E+00	0%

B/ Other Environmental Indicators

Values	
Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
4.1E+04
0.0E+00
1.1E+03
1.4E+03
0.0E+00
2.7E+02
8.7E+02
0.0E+00
0.0E+00
0.0E+00
0.0E+00
0.0E+00

Values	%	Values	%	Values	%
0.0E+00	0%	4.1E+04	100%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	1.1E+03	100%	0.0E+00	0%
0.0E+00	0%	1.4E+03	100%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	2.7E+02	100%	0.0E+00	0%
0.0E+00	0%	8.7E+02	100%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%

C/ External Cost

Values	
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros
Linked to water effluents	
Eutrophication	Euros
Linked to solid waste	
Disaminy caused by incineration	Euros
Disaminy caused by landfilling	Euros
Linked to human health	
Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Values		% total external cost	
min	max	min	max
3.9E+01	9.7E+01	93.6%	51.2%
4.3E-04	4.3E-04	0.0%	0.0%
1.1E+00	1.1E+01	2.7%	5.8%
8.4E-01	1.1E+00	2.0%	0.6%
9.9E-02	9.9E-02	0.2%	0.1%
0.0E+00	0.0E+00	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
1.6E-03	5.1E-03	0.0%	0.0%
6.0E-01	8.1E+01	1.4%	42.4%
0.0E+00	0.0E+00	0.0%	0.0%
41	190	100%	19029%

min	max	min	max	min	max
0.0E+00	0.0E+00	3.9E+01	9.7E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	4.3E-04	4.3E-04	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.1E+00	1.1E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	8.4E-01	1.1E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	9.9E-02	9.9E-02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	5.1E-03	5.1E-03	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.9E+00	8.1E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	42	190	0	0
0%	0%	103%	100%	0%	#DIV/0!

D/ Internalisation of the external Cost

Taxes paid (total)	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
9.7E+01	8.3E+02	236.5%	434.3%
4.3E-04	8.4E+02	0.0%	443.7%
1.1E+00	5.6E+02	2.6%	296.7%

min	max	min	max	min	max
0.0E+00	0.0E+00	7.7E+01	8.3E+02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	4.3E+01	8.4E+02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	4.7E+01	5.6E+02	0.0E+00	0.0E+00

Part of the external cost internalised

0	844	0%	84422%
---	-----	----	--------

0	0	43	844	0	0
---	---	----	-----	---	---

Taxes paid - Linked to air emissions

Values		% total taxes paid			
Denmark	Euros	0.0E+00	3.3E+01	0.0%	0.0%
France	Euros	5.1E-03	2.9E-01	1177.4%	0.0%
Poland	Euros	0.0E+00	1.1E+00	0.0%	0.2%

Values	% total taxes paid		
0	33	0%	3255%

min	max	min	max	min	max
0.0E+00	0.0E+00	2.0E+01	3.3E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.7E-01	2.9E-01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.1E+00	1.1E+00	0.0E+00	0.0E+00

Part of the external cost internalised

0	17	0%	1739%
---	----	----	-------

0	0	0	33	0	0
---	---	---	----	---	---

Taxes paid - Linked to water effluents

Values		% total taxes paid			
Denmark	Euros	0.0E+00	6.1E-01	0.0%	0.1%
France	Euros	0.0E+00	1.7E+01	0.0%	2.1%
Poland	Euros	4.3E+01	5.2E-01	4080.7%	0.1%

Values	% total taxes paid		
0	17	0%	1739%

min	max	min	max	min	max
0.0E+00	0.0E+00	6.1E-01	6.1E-01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.7E+01	1.7E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	4.8E-01	5.2E-01	0.0E+00	0.0E+00

Part of the external cost internalised

0	0	0	0	0	0
---	---	---	---	---	---

0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Taxes paid - Linked to solid waste

Values		% total taxes paid			
Denmark	Euros	8.3E+02	0.0E+00	848.7%	0.0%
France	Euros	8.4E+02	0.0E+00	#####	0.0%
Poland	Euros	5.6E+02	0.0E+00	53033.6%	0.0%

Values	% total taxes paid		
565	0	849%	0%

min	max	min	max	min	max
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Part of the external cost internalised

0	0	0	0	0	0
---	---	---	---	---	---

0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Taxes paid - Linked to material consumption

Values		% total taxes paid			
Denmark	Euros	5.0E+01	0.0E+00	51.8%	0.0%
France	Euros	1.1E+00	0.0E+00	262728.8%	0.0%
Poland	Euros	0.0E+00	0.0E+00	0.0%	0.0%

Values	% total taxes paid		
0	0	0%	0%

min	max	min	max	min	max
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Part of the external cost internalised

0	0	0%	0%
---	---	----	----

0	0	0	0	0	0
---	---	---	---	---	---

Taxes paid - Linked to energy consumption

Values		% total taxes paid			
Denmark	Euros	0.0E+00	7.9E+02	0.0%	96.0%
France	Euros	0.0E+00	8.3E+02	0.0%	97.9%
Poland	Euros	1.7E+01	5.6E+02	1634.0%	99.7%

Values	% total taxes paid		
0	827	0%	82653%

min	max	min	max	min	max
0.0E+00	0.0E+00	5.7E+01	7.9E+02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.6E+01	8.3E+02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	4.5E+01	5.6E+02	0.0E+00	0.0E+00

Part of the external cost internalised

0	26	827	0	0
---	----	-----	---	---

0	0	26	827	0	0
---	---	----	-----	---	---

E/ Life Cycle Price

Euros	383
-------	-----

% of external cost internalised	
min	max
0%	444%

% of price corresponding to internalised external cost	
min	max
0%	220%

Building occupancy (commercial)

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Linked to resources consumption

Depletion of non renewable resources	kg antimony eq.
--------------------------------------	-----------------

Values
7.6E+00

Values	%	Values	%	Values	%
0.0E+00	0%	7.6E+00	100%	0.0E+00	0%

Linked to air emissions

Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g ethylene eq.

1.1E+06
3.2E-01
5.2E+03
6.2E+02

0.0E+00	0%	1.1E+06	100%	0.0E+00	0%
0.0E+00	0%	3.2E-01	100%	0.0E+00	0%
0.0E+00	0%	5.2E+03	100%	0.0E+00	0%
0.0E+00	0%	6.2E+02	100%	0.0E+00	0%

Linked to water effluents

Eutrophication	g PO ₄ eq.
----------------	-----------------------

2.6E+01

1.5E+01	56%	2.6E+01	100%	0.0E+00	0%
---------	-----	---------	------	---------	----

Linked to human health

Human Toxicity	g eq. 1,4-dichlorobenzene
Years of Life Lost	year

1.8E+07
2.3E-04

0.0E+00	0%	1.8E+07	100%	0.0E+00	0%
0.0E+00	0%	2.3E-04	100%	0.0E+00	0%

Linked to ecotoxicological risk

Aquatic Ecotoxicity	g eq. 1,4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1,4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1,4-dichlorobenzene

3.6E+06
1.2E+07
5.5E+04

0.0E+00	0%	3.6E+06	100%	0.0E+00	0%
0.0E+00	0%	1.2E+07	100%	0.0E+00	0%
0.0E+00	0%	5.5E+04	100%	0.0E+00	0%

B/ Other Environmental Indicators

Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
2.3E+04
0.0E+00
5.6E+02
7.8E+02
0.0E+00
2.2E+02
6.8E+02
0.0E+00
0.0E+00
0.0E+00
0.0E+00
0.0E+00

0.0E+00	0%	2.3E+04	100%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	5.6E+02	100%	0.0E+00	0%
0.0E+00	0%	7.8E+02	100%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	2.2E+02	100%	0.0E+00	0%
0.0E+00	0%	6.8E+02	100%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%

C/ External Cost

Linked to air emissions

Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros

Values		% total external cost	
min	max	min	max
2.1E+01	5.3E+01	90.0%	49.4%
2.2E-04	2.2E-04	0.0%	0.0%
7.6E-01	7.6E+00	3.2%	7.0%
4.6E-01	5.8E-01	1.9%	0.5%

min	max	min	max	min	max
0.0E+00	0.0E+00	2.1E+01	5.3E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.2E-04	2.2E-04	0.0E+00	0.0E+00
0.0E+00	0.0E+00	7.6E-01	7.6E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	4.6E-01	5.8E-01	0.0E+00	0.0E+00

Linked to water effluents

Eutrophication	Euros
----------------	-------

4.0E-02	4.0E-02	0.2%	0.0%
---------	---------	------	------

0.0E+00	0.0E+00	4.0E-02	4.0E-02	0.0E+00	0.0E+00
---------	---------	---------	---------	---------	---------

Linked to solid waste

Disimilarity caused by incineration	Euros
Disimilarity caused by landfilling	Euros

0.0E+00	0.0E+00	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%

0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Linked to human health

Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

3.4E-03	3.4E-03	0.0%	0.0%
1.1E+00	4.6E+01	4.6%	43.0%
0.0E+00	0.0E+00	0.0%	0.0%

0.0E+00	0.0E+00	3.4E-03	3.4E-03	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.1E+00	4.6E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Total External Cost

Euros

23	108	100%	100%
----	-----	------	------

0	0	23	108	0	0
0%	0%	100%	100%	0%	0%

D/ Internalisation of the external Cost

Taxes paid (total)

Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
4.4E+01	4.6E+02	188.5%	431.3%
2.5E+01	4.7E+02	106.8%	440.6%
2.6E+01	3.2E+02	113.1%	294.2%

min	max	min	max	min	max
0.0E+00	0.0E+00	4.4E+01	4.6E+02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.5E+01	4.7E+02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.6E+01	3.2E+02	0.0E+00	0.0E+00

Part of the external cost internalised

25	475	107%	441%
----	-----	------	------

0	0	25	475	0	0
---	---	----	-----	---	---

Taxes paid - Linked to air emissions

Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
1.2E+01	1.9E+01	27.0%	4.1%
1.8E-01	1.9E-01	0.7%	0.0%
6.3E-01	6.3E-01	2.4%	0.2%

0.0E+00	0.0E+00	1.2E+01	1.9E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.8E-01	1.9E-01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	6.3E-01	6.3E-01	0.0E+00	0.0E+00

Part of the external cost internalised

0	19	1%	4%
---	----	----	----

0	0	0	19	0	0
---	---	---	----	---	---

Taxes paid - Linked to water effluents

Denmark	Euros
France	Euros
Poland	Euros

3.2E-01	3.2E-01	0.7%	0.1%
1.0E+01	1.0E+01	41.4%	2.2%
3.3E-01	3.5E-01	1.2%	0.1%

0.0E+00	0.0E+00	3.2E-01	3.2E-01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.0E+01	1.0E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	3.3E-01	3.5E-01	0.0E+00	0.0E+00

Part of the external cost internalised

0	10	1%	2%
---	----	----	----

0	0	0	10	0	0
---	---	---	----	---	---

Taxes paid - Linked to solid waste

Denmark	Euros
France	Euros
Poland	Euros

0.0E+00	0.0E+00	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%

0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Part of the external cost internalised

0	0	0%	0%
---	---	----	----

0	0	0	0	0	0
---	---	---	---	---	---

Taxes paid - Linked to material consumption

Denmark	Euros
France	Euros
Poland	Euros

0.0E+00	0.0E+00	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%

0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Part of the external cost internalised

0	0	0%	0%
---	---	----	----

0	0	0	0	0	0
---	---	---	---	---	---

Taxes paid - Linked to energy consumption

Denmark	Euros
France	Euros
Poland	Euros

3.2E+01	4.5E+02	72.2%	95.9%
1.4E+01	4.6E+02	57.9%	97.8%
2.6E+01	3.2E+02	96.4%	99.7%

0.0E+00	0.0E+00	3.2E+01	4.5E+02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.4E+01	4.6E+02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.6E+01	3.2E+02	0.0E+00	0.0E+00

Part of the external cost internalised

14	464	58%	100%
----	-----	-----	------

0	0	14	464	0	0
---	---	----	-----	---	---

E/ Life Cycle Price

Euros

% of external cost internalised	min	max
	107%	441%
% of price corresponding to internalised external cost	min	max

EEE - total

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values	
Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g ethylene eq.
Linked to water effluents	
Eutrophication	g PO ₄ eq.
Linked to human health	
Human Toxicity	g eq. 1-4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene

Values
5.6E+00
8.0E+05
1.7E-01
6.1E+03
7.7E+02
2.8E+01
2.3E+08
2.7E-04
1.8E+07
5.8E+07
6.1E+04

Values	%	Values	%	Values	%
5.0E-01	9%	5.2E+00	91%	-1.6E-02	0%
6.0E+04	8%	7.4E+05	92%	3.5E+03	0%
2.5E-02	14%	1.5E-01	86%	-2.0E-04	0%
9.8E+02	16%	5.2E+03	84%	-1.1E+01	0%
3.2E+02	42%	4.5E+02	58%	-1.3E+00	0%
6.3E+00	23%	2.2E+01	77%	6.9E-02	0%
2.2E+08	96%	8.0E+06	4%	2.8E+05	0%
4.8E-05	18%	2.3E-04	82%	-2.9E-07	0%
1.6E+07	91%	1.6E+06	9%	-1.4E+04	0%
5.3E+07	91%	5.0E+06	9%	-6.0E+04	0%
6.3E+02	1%	6.0E+04	99%	1.8E+02	0%

B/ Other Environmental Indicators

Values	
Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
2.0E+04
0.0E+00
1.6E+03
1.2E+03
9.3E-08
2.6E+02
7.8E+02
4.8E-01
1.6E+01
2.6E-01
2.6E+01

Values	%	Values	%	Values	%
1.7E+03	9%	1.8E+04	91%	-2.7E+01	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
1.2E+03	73%	4.5E+02	27%	-9.3E+00	-1%
3.3E+02	28%	8.3E+02	72%	-1.9E+00	0%
8.9E-09	11%	0.0E+00	0%	7.4E-08	89%
1.5E+00	1%	2.5E+02	98%	2.8E+00	1%
1.8E+01	2%	7.5E+02	96%	1.6E+01	2%
4.8E-01	100%	0.0E+00	0%	7.9E-06	0%
4.0E+00	25%	0.0E+00	0%	1.2E+01	75%
1.3E-01	51%	0.0E+00	0%	1.3E-01	49%
2.6E+01	97%	0.0E+00	0%	7.8E-01	3%

C/ External Cost

Values	
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros
Linked to water effluents	
Eutrophication	Euros
Linked to solid waste	
Disaminy caused by incineration	Euros
Disaminy caused by landfilling	Euros
Linked to human health	
Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Values		% total external cost	
min	max	min	max
1.5E+01	3.9E+01	87.7%	32.7%
1.2E-04	1.2E-04	0.0%	0.0%
9.0E-01	9.0E+00	4.8%	7.6%
5.6E-01	7.2E-01	3.0%	0.6%
4.3E-02	4.3E-02	0.2%	0.0%
3.4E-02	1.2E-01	0.2%	0.1%
1.9E-01	6.1E-01	1.0%	0.5%
7.1E-02	7.1E-02	0.4%	0.1%
1.6E+00	6.9E+01	8.7%	58.4%
1.1E-03	2.3E-03	0.0%	0.0%
19	118	100%	100%

min	max	min	max	min	max
1.1E+00	2.9E+00	1.4E+01	3.5E+01	6.6E-02	1.7E-01
1.7E-05	1.7E-05	1.0E-04	1.0E-04	-1.3E-07	-1.3E-07
1.4E-01	1.4E+00	7.5E-01	7.5E+00	-1.6E-03	-1.6E-02
2.4E-01	3.0E-01	3.3E-01	4.2E-01	-9.5E-04	-1.2E-03
9.7E-03	9.7E-03	3.3E-02	3.3E-02	1.1E-04	1.1E-04
1.9E-04	6.5E-04	0.0E+00	0.0E+00	3.3E-02	1.2E-01
1.8E-01	5.7E-01	0.0E+00	0.0E+00	1.4E-02	4.5E-02
2.2E-03	2.2E-03	3.2E-03	3.2E-03	6.5E-02	6.5E-02
4.6E-01	2.0E+01	1.2E+00	4.9E+01	-2.6E-03	-1.1E-01
1.1E-04	2.5E-04	0.0E+00	0.0E+00	9.6E-04	2.1E-03
2	25	16	93	0	0
12%	21%	87%	79%	1%	0%

D/ Internalisation of the external Cost

Taxes paid (total)	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
6.1E+01	4.3E+02	18.1%	364.5%
3.1E+01	4.2E+02	166.4%	360.2%
2.3E+01	2.8E+02	124.3%	234.4%
23	430	124%	364%

min	max	min	max	min	max
2.6E+01	6.1E+01	3.5E+01	3.7E+02	2.7E-02	-4.3E-01
9.2E+00	4.5E+01	2.2E+01	3.8E+02	-2.3E-02	-5.5E-01
2.0E+00	2.4E+01	2.1E+01	2.5E+02	7.9E-02	-2.6E-01
2	61	21	380	0	0

Part of the external cost internalised

Taxes paid - Linked to air emissions	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
1.1E+01	1.6E+01	18.1%	3.7%
2.1E-01	2.2E-01	0.7%	0.1%
6.2E-01	6.2E-01	2.7%	0.2%
0	16	1%	4%

min	max	min	max	min	max
1.4E+00	1.8E+00	9.6E+00	1.4E+01	1.0E-02	3.4E-02
3.1E-02	3.2E-02	1.8E-01	1.9E-01	-2.3E-04	-2.1E-04
2.7E-02	2.7E-02	4.8E-01	4.8E-01	1.1E-01	1.1E-01
0	2	0	14	0	0

Part of the external cost internalised

Taxes paid - Linked to water effluents	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
6.2E-01	6.2E-01	1.0%	0.1%
1.4E+01	1.4E+01	44.3%	3.2%
3.4E-01	4.3E-01	1.5%	0.2%
0	14	1%	3%

min	max	min	max	min	max
3.2E-01	3.2E-01	3.0E-01	3.0E-01	1.1E-04	1.1E-04
3.6E+00	3.6E+00	1.0E+01	1.0E+01	-1.1E-02	-1.1E-02
3.2E-02	1.2E-01	3.1E-01	3.1E-01	3.9E-04	2.9E-04
0	4	0	10	0	0

Part of the external cost internalised

Taxes paid - Linked to solid waste	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
5.0E-01	5.7E-01	0.8%	0.1%
9.1E-02	1.3E-01	0.3%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0	1	0%	0%

min	max	min	max	min	max
3.3E-01	3.8E-01	0.0E+00	0.0E+00	1.7E-01	1.9E-01
6.2E-02	8.7E-02	0.0E+00	0.0E+00	2.9E-02	4.1E-02
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to material consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
1.3E+00	1.3E+00	2.1%	0.3%
1.0E-01	5.9E-01	0.3%	0.1%
1.9E-02	2.1E-01	0.1%	0.1%
0	1	0%	0%

min	max	min	max	min	max
1.3E+00	1.3E+00	0.0E+00	0.0E+00	-8.5E-03	-8.5E-03
1.0E-01	5.9E-01	0.0E+00	0.0E+00	-6.7E-04	-3.9E-03
1.9E-02	2.1E-01	0.0E+00	0.0E+00	-1.3E-04	-1.4E-03
0	1	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to energy consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
2.8E+01	3.9E+02	45.5%	90.2%
1.3E+01	4.0E+02	40.6%	95.1%
2.2E+01	2.8E+02	95.8%	99.5%
13	404	41%	100%

min	max	min	max	min	max
2.4E+00	3.4E+01	2.5E+01	3.5E+02	-3.7E-02	-5.2E-01
1.1E+00	3.5E+01	1.2E+01	3.7E+02	-1.7E-02	-5.4E-01
1.9E+00	2.4E+01	2.0E+01	2.5E+02	-3.0E-02	-3.7E-01
1	35	12	370	0	0

E/ Life Cycle Price

Euros

245

% of external cost internalised	min	max
	124%	364%
% of price corresponding to internalised external cost	min	max
	9%	176%

EEE - domestic appliances

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values	
Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g styrene eq.
Linked to water effluents	
Eutrophication	g PO ₄ eq.
Linked to human health	
Human Toxicity	g eq. 1-4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene

Values
4.8E+00
6.7E+05
1.5E-01
4.9E+03
6.3E+02
2.0E+01
2.0E+08
2.3E-04
1.8E+07
5.7E+07
5.2E+04

Values	%	Values	%	Values	%
3.4E-01	7%	4.4E+00	93%	-1.2E-02	0%
3.8E+04	6%	6.3E+05	94%	2.2E+03	0%
2.3E-02	15%	1.3E-01	85%	-2.6E-04	0%
4.2E+02	9%	4.4E+03	91%	-8.1E+00	0%
2.5E+02	39%	3.9E+02	61%	-9.8E-01	0%
1.4E+00	7%	1.8E+01	93%	5.1E-02	0%
2.0E+08	96%	6.9E+06	3%	3.2E+05	0%
3.2E-05	14%	1.9E-04	86%	-3.0E-07	0%
1.6E+07	92%	1.3E+06	8%	-1.1E+04	0%
5.2E+07	92%	4.3E+06	8%	-4.6E+04	0%
5.1E+02	1%	5.2E+04	99%	2.1E+02	0%

B/ Other Environmental Indicators

Values	
Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
1.7E+04
0.0E+00
1.3E+03
1.0E+03
4.9E-08
2.2E+02
6.7E+02
4.1E-01
1.1E+01
5.7E-02
6.8E-01

Values	%	Values	%	Values	%
1.2E+03	7%	1.6E+04	93%	-1.8E+01	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
9.0E+02	70%	3.8E+02	30%	-7.7E+00	-1%
3.0E+02	30%	7.2E+02	70%	-1.6E+00	0%
8.5E-09	17%	0.0E+00	0%	4.1E-08	83%
1.0E+00	0%	2.2E+02	98%	2.9E+00	1%
1.1E+01	2%	6.4E+02	97%	1.2E+01	2%
4.1E-01	100%	0.0E+00	0%	6.0E-06	0%
3.7E+00	35%	0.0E+00	0%	6.9E+00	65%
9.9E-02	174%	0.0E+00	0%	-4.2E-02	-74%
4.2E-01	61%	0.0E+00	0%	2.7E-01	39%

C/ External Cost

Values	
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros
Linked to water effluents	
Eutrophication	Euros
Linked to solid waste	
Disaminy caused by incineration	Euros
Disaminy caused by landfilling	Euros
Linked to human health	
Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Values		% total external cost	
min	max	min	max
1.3E+01	3.2E+01	82.4%	32.2%
1.0E-04	1.0E-04	0.0%	0.0%
7.1E-01	7.1E+00	4.6%	7.0%
4.6E-01	5.9E-01	3.0%	0.6%
3.1E-02	3.1E-02	0.2%	0.0%
1.9E-02	6.8E-02	0.1%	0.1%
3.4E-02	1.1E-01	0.2%	0.1%
6.9E-02	6.9E-02	0.4%	0.1%
1.4E+00	6.0E+01	9.1%	60.0%
6.4E-04	1.4E-03	0.0%	0.0%

min	max	min	max	min	max
7.1E-01	1.8E+00	1.2E+01	3.0E+01	4.3E-02	1.1E-01
1.6E-05	1.6E-05	8.6E-05	8.6E-05	-1.7E-07	-1.7E-07
6.2E-02	6.2E-01	6.5E-01	6.5E+00	-1.2E-03	-1.2E-02
1.8E-01	2.3E-01	2.8E-01	3.6E-01	-7.1E-04	-9.1E-04
2.1E-03	2.1E-03	2.8E-02	2.8E-02	7.9E-05	7.9E-05
5.9E-05	2.1E-04	0.0E+00	0.0E+00	1.9E-02	6.8E-02
2.5E-02	8.0E-02	0.0E+00	0.0E+00	8.3E-03	2.6E-02
5.9E-04	5.9E-04	2.7E-03	2.7E-03	6.5E-02	6.5E-02
2.2E-01	1.8E+01	1.0E+00	4.2E+01	-2.3E-03	-9.7E-02
1.1E-04	2.4E-04	0.0E+00	0.0E+00	5.3E-04	1.1E-03
1	21	14	80	0	0
9%	21%	90%	79%	1%	0%

Total External Cost Euros

16	101	100%	100%
----	-----	------	------

D/ Internalisation of the external Cost

Taxes paid (total)	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
5.1E+01	3.6E+02	17.4%	360.0%
2.4E+01	3.6E+02	155.5%	354.1%
2.0E+01	3.6E+02	125.9%	231.7%

min	max	min	max	min	max
2.1E+01	4.5E+01	3.0E+01	3.2E+02	2.4E-02	-2.7E-01
5.4E+00	3.0E+01	1.9E+01	3.3E+02	-5.7E-03	-3.6E-01
1.4E+00	1.6E+01	1.8E+01	2.2E+02	8.8E-02	-1.4E-01

Part of the external cost internalised

20	363	126%	360%
----	-----	------	------

1	45	18	327	0	0
---	----	----	-----	---	---

Taxes paid - Linked to air emissions

Values		% total taxes paid			
Denmark	Euros	8.9E+00	1.3E+01	17.4%	3.6%
France	Euros	1.7E-01	1.8E-01	0.7%	0.1%
Poland	Euros	5.4E-01	5.4E-01	2.8%	0.2%

0	13	1%	4%
---	----	----	----

6.4E-01	8.7E-01	8.3E+00	1.2E+01	6.2E-03	2.1E-02
1.6E-02	1.7E-02	1.5E-01	1.6E-01	-2.4E-04	-2.4E-04
1.9E-02	1.9E-02	4.1E-01	4.1E-01	1.1E-01	1.1E-01

Part of the external cost internalised

0	1	0	12	0	0
---	---	---	----	---	---

0	1	0	9	0	0
---	---	---	---	---	---

Taxes paid - Linked to water effluents

Values		% total taxes paid			
Denmark	Euros	2.7E-01	2.7E-01	0.5%	0.1%
France	Euros	9.5E+00	9.5E+00	39.3%	2.7%
Poland	Euros	2.8E-01	3.0E-01	1.4%	0.1%

0	10	1%	3%
---	----	----	----

1.5E-02	1.5E-02	2.6E-01	2.6E-01	1.1E-04	1.1E-04
7.9E-01	7.9E-01	8.7E+00	8.7E+00	-7.1E-03	-7.1E-03
1.7E-02	3.4E-02	2.7E-01	2.7E-01	-4.5E-04	-5.2E-04

Part of the external cost internalised

0	0	0%	0%
---	---	----	----

0	0	0	0	0	0
---	---	---	---	---	---

Taxes paid - Linked to solid waste

Values		% total taxes paid			
Denmark	Euros	3.6E-01	4.2E-01	0.7%	0.1%
France	Euros	7.3E-02	1.0E-01	0.3%	0.0%
Poland	Euros	0.0E+00	0.0E+00	0.0%	0.0%

0	0	0%	0%
---	---	----	----

2.9E-01	3.4E-01	0.0E+00	0.0E+00	6.1E-02	7.5E-02
5.7E-02	8.1E-02	0.0E+00	0.0E+00	1.6E-02	2.2E-02
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Part of the external cost internalised

0	1	0%	0%
---	---	----	----

0	1	0	0	0	0
---	---	---	---	---	---

Taxes paid - Linked to material consumption

Values		% total taxes paid			
Denmark	Euros	9.5E-01	9.5E-01	1.9%	0.3%
France	Euros	7.5E-02	4.3E-01	0.3%	0.1%
Poland	Euros	1.4E-02	1.6E-01	0.1%	0.1%

0	1	0%	0%
---	---	----	----

9.6E-01	9.6E-01	0.0E+00	0.0E+00	-7.3E-03	-7.3E-03
7.6E-02	4.4E-01	0.0E+00	0.0E+00	-5.7E-04	-3.3E-03
1.4E-02	1.6E-01	0.0E+00	0.0E+00	-1.1E-04	-1.2E-03

Part of the external cost internalised

0	1	0%	0%
---	---	----	----

0	1	0	0	0	0
---	---	---	---	---	---

Taxes paid - Linked to energy consumption

Values		% total taxes paid			
Denmark	Euros	2.3E+01	3.3E+02	45.9%	90.3%
France	Euros	1.1E+01	3.4E+02	44.0%	95.7%
Poland	Euros	1.9E+01	2.3E+02	95.7%	99.6%

11	341	44%	100%
----	-----	-----	------

1.6E+00	2.3E+01	2.2E+01	3.0E+02	-2.5E-02	-3.5E-01
7.4E-01	2.4E+01	9.9E+00	3.2E+02	-1.1E-02	-3.7E-01
1.3E+00	1.6E+01	1.7E+01	2.2E+02	-2.0E-02	-2.5E-01

Part of the external cost internalised

1	24	10	318	0	0
---	----	----	-----	---	---

1	24	10	318	0	0
---	----	----	-----	---	---

E/ Life Cycle Price

Euros

92

% of external cost internalised	min	max
	126%	360%

% of price corresponding to internalised external cost	min	max
	21%	392%

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values	
Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g ethylene eq.
Linked to water effluents	
Eutrophication	g PO ₄ eq.
Linked to human health	
Human Toxicity	g eq. 1-4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene

Values
8.8E-01
1.3E+05
2.2E-02
1.3E+03
1.4E+02
8.0E+00
2.3E+07
4.8E-05
2.5E+05
7.9E+05
8.6E+03

Values	%	Values	%	Values	%
1.6E-01	18%	7.3E-01	83%	-4.5E-03	-1%
2.3E+04	18%	1.0E+05	81%	1.2E+03	1%
1.6E-03	7%	2.1E-02	93%	5.8E-05	0%
5.6E+02	43%	7.3E+02	57%	-2.6E+00	0%
7.6E+01	55%	6.3E+01	45%	-3.3E-01	0%
4.9E+00	62%	3.0E+00	38%	1.7E-02	0%
2.2E+07	95%	1.1E+06	5%	-4.0E+04	0%
1.6E-05	34%	3.2E-05	66%	1.3E-08	0%
3.1E+04	12%	2.2E+05	89%	-3.0E+03	-1%
9.8E+04	12%	7.1E+05	89%	-1.3E+04	-2%
1.2E+02	1%	8.5E+03	99%	-2.6E+01	0%

B/ Other Environmental Indicators

Values	
Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
3.1E+03
0.0E+00
3.7E+02
1.4E+02
3.4E-08
3.6E+01
1.2E+02
6.4E-02
5.3E+00
2.0E-01
2.6E+01

Values	%	Values	%	Values	%
5.5E+02	18%	2.6E+03	83%	-8.8E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
3.1E+02	83%	6.3E+01	17%	-1.6E+00	0%
2.7E+01	19%	1.2E-02	81%	-2.4E-01	0%
2.9E-10	1%	0.0E+00	0%	3.3E-08	99%
4.2E-01	1%	3.5E+01	99%	-1.1E-01	0%
7.7E+00	7%	1.1E+02	90%	3.8E+00	3%
6.4E-02	100%	0.0E+00	0%	1.9E-06	0%
3.1E-01	6%	0.0E+00	0%	5.0E+00	94%
3.1E-02	16%	0.0E+00	0%	1.7E-01	84%
2.5E+01	98%	0.0E+00	0%	5.1E-01	2%

C/ External Cost

Values	
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros
Linked to water effluents	
Eutrophication	Euros
Linked to solid waste	
Disaminty caused by incineration	Euros
Disaminty caused by landfilling	Euros
Linked to human health	
Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Values		% total external cost	
min	max	min	max
2.4E+00	6.1E+00	78.2%	35.5%
1.5E-05	1.5E-05	0.0%	0.0%
1.9E-01	1.9E+00	6.0%	10.8%
1.0E-01	1.3E-01	3.3%	0.8%
1.2E-02	1.2E-02	0.4%	0.1%
1.4E-02	5.0E-02	0.5%	0.3%
1.6E-01	5.0E-01	5.1%	2.9%
2.1E-03	2.1E-03	0.1%	0.0%
2.0E-01	8.8E+00	6.5%	49.6%
4.4E-04	9.4E-04	0.0%	0.0%

min	max	min	max	min	max
4.3E-01	1.1E+00	2.0E+00	5.0E+00	2.4E-02	6.0E-02
1.1E-06	1.1E-06	1.4E-05	1.4E-05	3.9E-08	3.9E-08
8.1E-02	8.1E-01	1.1E-01	1.1E+00	-3.9E-04	-3.9E-03
5.6E-02	7.1E-02	4.6E-02	5.9E-02	-2.4E-04	-3.1E-04
7.6E-03	7.6E-03	4.7E-03	4.7E-03	2.6E-05	2.6E-05
1.3E-04	4.5E-04	0.0E+00	0.0E+00	1.4E-02	4.9E-02
1.5E-01	4.9E-01	0.0E+00	0.0E+00	6.0E-03	1.9E-02
1.6E-03	1.6E-03	4.4E-04	4.4E-04	4.9E-05	4.9E-05
3.8E-02	1.6E+00	1.6E-01	7.0E+00	-3.3E-04	-1.4E-02
3.8E-06	8.1E-06	0.0E+00	0.0E+00	4.3E-04	9.3E-04

Total External Cost	Euros
----------------------------	-------

3	17	100%	100%
----------	-----------	-------------	-------------

1	4	2	13	0	0
25%	24%	74%	76%	1%	1%

D/ Internalisation of the external Cost

Taxes paid (total)	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
9.9E+00	6.7E+01	21.3%	390.3%
6.9E+00	6.8E+01	221.1%	395.6%
3.6E+00	4.3E+01	116.0%	250.2%

min	max	min	max	min	max
4.9E+00	1.6E+01	5.0E+00	5.2E+01	2.6E-03	-1.6E-01
3.8E+00	1.5E+01	3.1E+00	5.4E+01	-1.8E-02	-1.9E-01
6.4E-01	7.8E+00	3.0E+00	3.6E+01	-8.7E-03	-1.2E-01

Part of the external cost internalised

4	68	116%	396%
----------	-----------	-------------	-------------

1	16	3	54	0	0
----------	-----------	----------	-----------	----------	----------

Taxes paid - Linked to air emissions

Values	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
2.1E+00	2.9E+00	21.3%	4.3%
4.0E-02	4.2E-02	0.6%	0.1%
7.6E-02	7.6E-02	2.1%	0.2%

min	max	min	max	min	max
7.5E-01	9.0E-01	1.4E+00	2.0E+00	3.9E-03	1.2E-02
1.5E-02	1.5E-02	2.5E-02	2.7E-02	7.6E-06	3.0E-05
7.6E-03	7.6E-03	6.8E-02	6.8E-02	3.3E-04	3.3E-04

Part of the external cost internalised

0	3	1%	4%
----------	----------	-----------	-----------

0	1	0	2	0	0
----------	----------	----------	----------	----------	----------

Taxes paid - Linked to water effluents

Values	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
3.5E-01	3.5E-01	3.5%	0.5%
4.3E+00	4.3E+00	61.8%	6.2%
5.9E-02	1.3E-01	1.6%	0.3%

min	max	min	max	min	max
3.1E-01	3.1E-01	4.3E-02	4.3E-02	-1.1E-06	-1.1E-06
2.8E+00	2.8E+00	1.4E+00	1.4E+00	-3.9E-03	-3.9E-03
1.5E-02	8.6E-02	4.4E-02	4.4E-02	8.4E-04	7.5E-04

Part of the external cost internalised

0	4	2%	6%
----------	----------	-----------	-----------

0	3	0	1	0	0
----------	----------	----------	----------	----------	----------

Taxes paid - Linked to solid waste

Values	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
1.4E-01	1.5E-01	1.4%	0.2%
1.7E-02	2.5E-02	0.3%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%

min	max	min	max	min	max
3.2E-02	3.6E-02	0.0E+00	0.0E+00	1.1E-01	1.2E-01
4.5E-03	6.5E-03	0.0E+00	0.0E+00	1.3E-02	1.9E-02
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Part of the external cost internalised

0	0	0%	0%
----------	----------	-----------	-----------

0	0	0	0	0	0
----------	----------	----------	----------	----------	----------

Taxes paid - Linked to material consumption

Values	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
3.3E-01	3.3E-01	3.4%	0.5%
2.6E-02	1.5E-01	0.4%	0.2%
5.0E-03	5.5E-02	0.1%	0.1%

min	max	min	max	min	max
3.4E-01	3.4E-01	0.0E+00	0.0E+00	-1.3E-03	-1.3E-03
2.6E-02	1.5E-01	0.0E+00	0.0E+00	-1.0E-04	-5.9E-04
5.0E-03	5.5E-02	0.0E+00	0.0E+00	-1.9E-05	-2.1E-04

Part of the external cost internalised

0	0	0%	0%
----------	----------	-----------	-----------

0	0	0	0	0	0
----------	----------	----------	----------	----------	----------

Taxes paid - Linked to energy consumption

Values	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
4.3E+00	6.1E+01	43.8%	89.8%
2.0E+00	6.3E+01	28.6%	92.3%
3.5E+00	4.3E+01	96.1%	99.4%

min	max	min	max	min	max
7.7E-01	1.1E+01	3.6E+00	5.0E+01	-1.2E-02	-1.7E-01
3.5E-01	1.1E+01	1.6E+00	5.2E+01	-5.6E-03	-1.8E-01
6.2E-01	7.6E+00	2.9E+00	3.5E+01	-9.8E-03	-1.2E-01

Part of the external cost internalised

2	63	29%	99%
----------	-----------	------------	------------

0	11	2	52	0	0
----------	-----------	----------	-----------	----------	----------

E/ Life Cycle Price

Furniture -total

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values	
Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g styrene eq.
Linked to water effluents	
Eutrophication	g PO ₄ eq.
Linked to human health	
Human Toxicity	g eq. 1-4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene

Values
4.4E-01
1.5E+05
2.7E-02
4.8E+02
1.1E+02
4.1E+01
3.3E+07
2.7E-05
6.7E+06
2.1E+07
4.6E+02

Values	%	Values	%	Values	%
4.4E-01	100%	0.0E+00	0%	3.5E-04	0%
1.5E+05	100%	0.0E+00	0%	5.5E+01	0%
2.7E-02	100%	0.0E+00	0%	4.7E-05	0%
4.8E+02	100%	0.0E+00	0%	4.8E-01	0%
1.1E+02	100%	0.0E+00	0%	4.9E-02	0%
6.2E+00	15%	0.0E+00	0%	3.5E+01	85%
3.3E+07	100%	0.0E+00	0%	3.2E+03	0%
2.7E-05	100%	0.0E+00	0%	3.9E-08	0%
6.7E+06	100%	0.0E+00	0%	2.1E+03	0%
2.1E+07	100%	0.0E+00	0%	5.6E+03	0%
4.6E+02	100%	0.0E+00	0%	6.7E-01	0%

B/ Other Environmental Indicators

Values	
Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
2.4E+03
0.0E+00
8.7E+04
9.2E+01
2.5E-08
8.1E-01
1.7E+01
4.3E-01
2.1E+01
4.6E-01
8.3E-01

Values	%	Values	%	Values	%
2.4E+03	100%	0.0E+00	0%	7.6E-01	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
8.7E+04	100%	0.0E+00	0%	1.7E-02	0%
9.2E+01	100%	0.0E+00	0%	4.6E-02	0%
2.5E-08	100%	0.0E+00	0%	0.0E+00	0%
8.1E-01	100%	0.0E+00	0%	8.6E-04	0%
1.6E+01	93%	0.0E+00	0%	1.2E+00	7%
4.3E-01	100%	0.0E+00	0%	0.0E+00	0%
5.7E-01	3%	0.0E+00	0%	2.0E+01	97%
4.6E-01	100%	0.0E+00	0%	0.0E+00	0%
4.3E-01	52%	0.0E+00	0%	4.0E-01	48%

C/ External Cost

Values	
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros
Linked to water effluents	
Eutrophication	Euros
Linked to solid waste	
Disaminy caused by incineration	Euros
Disaminy caused by landfilling	Euros
Linked to human health	
Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Values		% total external cost	
min	max	min	max
2.9E+00	7.3E+00	85.8%	51.8%
1.8E-05	1.8E-05	0.0%	0.0%
7.0E-02	7.0E-01	2.1%	5.0%
7.8E-02	9.9E-02	2.3%	0.7%
6.3E-02	6.3E-02	1.9%	0.5%
1.3E-04	4.4E-04	0.0%	0.0%
1.3E-01	4.1E-01	3.9%	3.0%
6.3E-03	6.3E-03	0.2%	0.0%
1.3E-01	5.5E+00	3.8%	39.1%
3.3E-04	7.0E-04	0.0%	0.0%
3	14	100%	100%

min	max	min	max	min	max
2.9E+00	7.3E+00	0.0E+00	0.0E+00	1.0E-03	2.6E-03
1.8E-05	1.8E-05	0.0E+00	0.0E+00	3.2E-08	3.2E-08
7.0E-02	7.0E-01	0.0E+00	0.0E+00	7.0E-05	7.0E-04
7.8E-02	9.9E-02	0.0E+00	0.0E+00	3.6E-05	4.6E-05
9.5E-03	9.5E-03	0.0E+00	0.0E+00	5.4E-02	5.4E-02
1.3E-04	4.4E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00
8.5E-03	2.7E-02	0.0E+00	0.0E+00	6.6E-02	2.1E-01
6.3E-03	6.3E-03	0.0E+00	0.0E+00	9.1E-08	9.1E-08
1.3E-01	5.5E+00	0.0E+00	0.0E+00	6.3E-05	2.7E-03
3.3E-04	7.0E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00
3	14	0	0	0	0
95%	97%	0%	0%	4%	2%

D/ Internalisation of the external Cost

Taxes paid (total)	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
1.1E+02	1.5E+02	3153.9%	1067.9%
2.0E+01	1.0E+02	589.0%	746.1%
4.3E+00	5.0E+01	127.7%	354.3%

min	max	min	max	min	max
1.0E+02	1.5E+02	0.0E+00	0.0E+00	1.3E+00	1.4E+00
1.2E+01	9.7E+01	0.0E+00	0.0E+00	7.4E+00	7.5E+00
4.3E+00	5.0E+01	0.0E+00	0.0E+00	1.3E-02	2.2E-02

Part of the external cost internalised

4	150	128%	1068%
---	-----	------	-------

4	148	0	0	0	8
---	-----	---	---	---	---

Taxes paid - Linked to air emissions

Values		% total taxes paid	
min	max	min	max
9.0E-02	-1.8E-01	0.1%	-0.1%
2.5E-02	2.7E-02	0.1%	0.0%
4.1E-02	4.1E-02	1.0%	0.1%

Values		% total taxes paid	
min	max	min	max
9.0E-02	-1.8E-01	0.1%	-0.1%
2.5E-02	2.7E-02	0.1%	0.0%
4.1E-02	4.1E-02	1.0%	0.1%

min	max	min	max	min	max
8.9E-02	-1.8E-01	0.0E+00	0.0E+00	4.6E-04	8.2E-04
2.5E-02	2.7E-02	0.0E+00	0.0E+00	3.3E-05	3.9E-05
4.1E-02	4.1E-02	0.0E+00	0.0E+00	8.8E-05	8.8E-05

Part of the external cost internalised

0	0	0%	0%
---	---	----	----

0	0	0	0	0	0
---	---	---	---	---	---

Taxes paid - Linked to water effluents

Values		% total taxes paid	
min	max	min	max
5.9E-01	5.9E-01	0.6%	0.4%
9.7E+00	9.7E+00	49.2%	9.3%
7.6E-02	1.2E-01	1.8%	0.2%

Values		% total taxes paid	
min	max	min	max
5.9E-01	5.9E-01	0.6%	0.4%
9.7E+00	9.7E+00	49.2%	9.3%
7.6E-02	1.2E-01	1.8%	0.2%

min	max	min	max	min	max
8.3E-02	8.3E-02	0.0E+00	0.0E+00	5.1E-01	5.1E-01
2.4E+00	2.4E+00	0.0E+00	0.0E+00	7.3E+00	7.3E+00
6.4E-02	1.1E-01	0.0E+00	0.0E+00	1.2E-02	1.2E-02

Part of the external cost internalised

0	10	1%	9%
---	----	----	----

0	2	0	0	0	7
---	---	---	---	---	---

Taxes paid - Linked to solid waste

Values		% total taxes paid	
min	max	min	max
9.4E-01	1.1E+00	0.9%	0.7%
1.7E-01	2.5E-01	0.9%	0.2%
0.0E+00	0.0E+00	0.0%	0.0%

Values		% total taxes paid	
min	max	min	max
9.4E-01	1.1E+00	0.9%	0.7%
1.7E-01	2.5E-01	0.9%	0.2%
0.0E+00	0.0E+00	0.0%	0.0%

min	max	min	max	min	max
1.9E-01	2.0E-01	0.0E+00	0.0E+00	7.5E-01	8.9E-01
1.2E-02	2.0E-02	0.0E+00	0.0E+00	1.6E-01	2.3E-01
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Part of the external cost internalised

0	1	0%	1%
---	---	----	----

0	0	0	0	0	1
---	---	---	---	---	---

Taxes paid - Linked to material consumption

Values		% total taxes paid	
min	max	min	max
9.8E+01	9.8E+01	93.0%	65.6%
7.8E+00	4.5E+01	39.3%	42.8%
1.5E+00	1.6E+01	34.2%	32.4%

Values		% total taxes paid	
min	max	min	max
9.8E+01	9.8E+01	93.0%	65.6%
7.8E+00	4.5E+01	39.3%	42.8%
1.5E+00	1.6E+01	34.2%	32.4%

min	max	min	max	min	max
9.8E+01	9.8E+01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
7.8E+00	4.5E+01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1.5E+00	1.6E+01	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Part of the external cost internalised

1	98	34%	66%
---	----	-----	-----

1	98	0	0	0	0
---	----	---	---	---	---

Taxes paid - Linked to energy consumption

Values		% total taxes paid	
min	max	min	max
3.4E+00	4.7E+01	3.2%	31.4%
1.5E+00	4.9E+01	7.7%	46.9%
2.7E+00	3.3E+01	63.0%	67.2%

Values		% total taxes paid	
min	max	min	max
3.4E+00	4.7E+01	3.2%	31.4%
1.5E+00	4.9E+01	7.7%	46.9%
2.7E+00	3.3E+01	63.0%	67.2%

min	max	min	max	min	max
3.4E+00	4.7E+01	0.0E+00	0.0E+00	1.1E-03	1.5E-02
1.5E+00	4.9E+01	0.0E+00	0.0E+00	4.8E-04	1.5E-02
2.7E+00	3.3E+01	0.0E+00	0.0E+00	8.5E-04	1.0E-02

Part of the external cost internalised

2	49	3%	67%
---	----	----	-----

2	49	0	0	0	0
---	----	---	---	---	---

E/ Life Cycle Price

Euros

306

% of external cost internalised	min	max
	128%	1068%

% of price corresponding to internalised external cost	min	max
	1%	49%

Furniture - domestic

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values	
Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g ethylene eq.
Linked to water effluents	
Eutrophication	g PO ₄ eq.
Linked to human health	
Human Toxicity	g eq. 1-4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene

Values
7.0E-02
7.7E+04
1.3E-02
-1.3E+02
-1.2E+02
3.5E+01
2.8E+07
-6.6E-06
5.6E+06
1.8E+07
-3.8E+02

Values	%	Values	%	Values	%
3.7E-01	531%	0.0E+00	0%	2.9E-04	0%
1.3E+05	168%	0.0E+00	0%	4.7E+01	0%
2.3E-02	182%	0.0E+00	0%	4.0E-05	0%
4.1E+02	-305%	0.0E+00	0%	4.1E-01	0%
9.1E+01	-77%	0.0E+00	0%	4.2E-02	0%
5.3E+00	15%	0.0E+00	0%	3.0E+01	85%
2.8E+07	102%	0.0E+00	0%	2.7E+03	0%
2.3E-05	-345%	0.0E+00	0%	3.4E-08	-1%
5.7E+06	102%	0.0E+00	0%	1.8E+03	0%
1.8E+07	102%	0.0E+00	0%	4.8E+03	0%
3.9E+02	-104%	0.0E+00	0%	5.8E-01	0%

B/ Other Environmental Indicators

Values	
Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
1.2E+03
0.0E+00
6.5E+04
-3.3E+01
2.1E-08
-1.8E+00
-1.2E+01
3.6E-01
1.6E+01
2.9E-01
3.6E-01

Values	%	Values	%	Values	%
2.1E+03	166%	0.0E+00	0%	6.5E-01	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
7.4E+04	115%	0.0E+00	0%	1.5E-02	0%
7.9E+01	-237%	0.0E+00	0%	3.9E-02	0%
2.5E-08	102%	0.0E+00	0%	0.0E+00	0%
6.9E-01	-39%	0.0E+00	0%	7.3E-04	0%
1.4E+01	-117%	0.0E+00	0%	1.0E+00	-9%
3.6E-01	100%	0.0E+00	0%	0.0E+00	0%
4.9E-01	3%	0.0E+00	0%	1.7E+01	112%
3.9E-01	133%	0.0E+00	0%	0.0E+00	0%
3.7E-01	101%	0.0E+00	0%	3.4E-01	94%

C/ External Cost

Values	
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros
Linked to water effluents	
Eutrophication	Euros
Linked to solid waste	
Disaminy caused by incineration	Euros
Disaminy caused by landfilling	Euros
Linked to human health	
Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Values		% total external cost	
min	max	min	max
1.5E+00	3.7E+00	129.9%	256.2%
8.5E-06	8.5E-06	0.0%	0.0%
-1.9E-02	-1.9E-01	-1.7%	-13.5%
-8.7E-02	-1.1E-01	-7.7%	-7.7%
-2.9E-01	-2.9E-01	-25.4%	-19.9%
-1.2E-03	-4.1E-03	-0.1%	-0.3%
9.8E-02	3.1E-01	8.7%	21.6%
5.1E-03	5.1E-03	0.5%	0.4%
-4.6E-02	-2.0E+00	-4.1%	-136.8%
2.8E-04	5.9E-04	0.0%	0.0%

min	max	min	max	min	max
2.4E+00	6.2E+00	0.0E+00	0.0E+00	8.9E-04	2.2E-03
1.6E-05	1.6E-05	0.0E+00	0.0E+00	2.7E-08	2.7E-08
5.9E-02	5.9E-01	0.0E+00	0.0E+00	6.0E-05	6.0E-04
6.6E-02	8.5E-02	0.0E+00	0.0E+00	3.1E-05	3.9E-05
8.1E-03	8.1E-03	0.0E+00	0.0E+00	4.6E-02	4.6E-02
1.1E-04	3.8E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00
7.2E-03	2.3E-02	0.0E+00	0.0E+00	5.7E-02	1.8E-01
5.4E-03	5.4E-03	0.0E+00	0.0E+00	7.7E-08	7.7E-08
1.1E-01	4.7E+00	0.0E+00	0.0E+00	5.4E-05	2.3E-03
2.8E-04	6.0E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00
3	12	0	0	0	0
241%	805%	0%	0%	9%	16%

Total External Cost Euros

1	1	100%	100%
---	---	------	------

D/ Internalisation of the external Cost

Taxes paid (total)	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
-1.1E+02	-9.2E+01	-10179.5%	-6430.0%
-1.7E+02	-1.2E+02	-14944.4%	-8058.2%
2.4E+00	2.9E+01	217.1%	1987.7%

min	max	min	max	min	max
8.9E+01	1.3E+02	0.0E+00	0.0E+00	1.1E+00	1.2E+00
1.0E+01	8.3E+01	0.0E+00	0.0E+00	6.3E+00	6.4E+00
3.6E+00	4.2E+01	0.0E+00	0.0E+00	1.1E-02	1.9E-02

Part of the external cost internalised

-168	29	-14944%	1988%
------	----	---------	-------

4	126	0	0	0	6
---	-----	---	---	---	---

Taxes paid - Linked to air emissions

Values		% total taxes paid	
Denmark	Euros	0.6%	1.4%
France	Euros	0.0%	0.0%
Poland	Euros	0.0%	0.0%

min	max	min	max
-7.1E-01	-1.3E+00	0.6%	1.4%
-1.6E-02	-1.6E-02	0.0%	0.0%
-8.0E-03	-8.0E-03	0.0%	0.0%

min	max	min	max	min	max
7.6E-02	-1.6E-01	0.0E+00	0.0E+00	4.0E-04	7.0E-04
2.1E-02	2.3E-02	0.0E+00	0.0E+00	2.8E-05	3.3E-05
3.5E-02	3.5E-02	0.0E+00	0.0E+00	7.5E-05	7.5E-05

Part of the external cost internalised

-1	0	0%	1%
----	---	----	----

0	0	0	0	0	0
---	---	---	---	---	---

Taxes paid - Linked to water effluents

Values		% total taxes paid	
Denmark	Euros	164.6%	203.4%
France	Euros	103.9%	150.4%
Poland	Euros	-1.1%	-1.8%

min	max	min	max
-1.9E+02	-1.9E+02	164.6%	203.4%
-1.7E+02	-1.7E+02	103.9%	150.4%
-2.6E-02	-5.2E-01	-1.1%	-1.8%

min	max	min	max	min	max
7.1E-02	7.1E-02	0.0E+00	0.0E+00	4.3E-01	4.3E-01
2.1E+00	2.1E+00	0.0E+00	0.0E+00	6.2E+00	6.2E+00
5.5E-02	9.5E-02	0.0E+00	0.0E+00	1.0E-02	1.0E-02

Part of the external cost internalised

-188	-1	-1%	203%
------	----	-----	------

0	2	0	0	0	6
---	---	---	---	---	---

Taxes paid - Linked to solid waste

Values		% total taxes paid	
Denmark	Euros	-0.7%	-0.9%
France	Euros	-0.1%	-0.2%
Poland	Euros	0.0%	0.0%

min	max	min	max
8.0E-01	8.3E-01	-0.7%	-0.9%
1.5E-01	1.9E-01	-0.1%	-0.2%
0.0E+00	0.0E+00	0.0%	0.0%

min	max	min	max	min	max
1.6E-01	1.7E-01	0.0E+00	0.0E+00	6.4E-01	7.6E-01
1.0E-02	1.7E-02	0.0E+00	0.0E+00	1.4E-01	1.9E-01
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Part of the external cost internalised

0	1	-1%	0%
---	---	-----	----

0	0	0	0	0	1
---	---	---	---	---	---

Taxes paid - Linked to material consumption

Values		% total taxes paid	
Denmark	Euros	-73.3%	-78.9%
France	Euros	-3.9%	-28.7%
Poland	Euros	51.2%	41.9%

min	max	min	max
8.4E+01	7.3E+01	-73.3%	-78.9%
6.6E+00	3.3E+01	-3.9%	-28.7%
1.2E+00	1.2E+01	51.2%	41.9%

min	max	min	max	min	max
8.4E+01	8.4E+01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
6.6E+00	3.8E+01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1.2E+00	1.4E+01	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Part of the external cost internalised

1	73	-73%	42%
---	----	------	-----

1	84	0	0	0	0
---	----	---	---	---	---

Taxes paid - Linked to energy consumption

Values		% total taxes paid	
Denmark	Euros	-2.5%	-26.1%
France	Euros	-0.8%	-21.7%
Poland	Euros	94.3%	60.0%

min	max	min	max
2.9E+00	2.4E+01	-2.5%	-26.1%
1.3E+00	2.5E+01	-0.8%	-21.7%
2.3E+00	1.7E+01	94.3%	60.0%

min	max	min	max	min	max
2.9E+00	4.0E+01	0.0E+00	0.0E+00	9.0E-04	1.3E-02
1.3E+00	4.2E+01	0.0E+00	0.0E+00	4.1E-04	1.3E-02
2.3E+00	2.8E+01	0.0E+00	0.0E+00	7.2E-04	8.9E-03

Part of the external cost internalised

1	25	-3%	60%
---	----	-----	-----

1	42	0	0	0	0
---	----	---	---	---	---

E/ Life Cycle Price

Euros

257

Furniture garden

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values
Linked to resources consumption
Depletion of non renewable resources kg antimony eq. 1.4E-02
Linked to air emissions
Greenhouse effect (direct, 100 yrs) g CO ₂ eq. 4.7E+03
Stratospheric Ozone Depletion g CFC-11 eq. 8.3E-04
Air acidification g SO ₂ eq. 1.5E+01
Photochemical oxidation g styrene eq. 3.3E+00
Linked to water effluents
Eutrophication g PO4 eq. 1.3E+00
Linked to human health
Human Toxicity g eq. 1-4-dichlorobenzene 1.0E+06
Years of Life Lost year 8.2E-07
Linked to ecotoxicological risk
Aquatic Ecotoxicity g eq. 1-4-dichlorobenzene 2.1E+05
Sediment Ecotoxicity g eq. 1-4-dichlorobenzene 6.7E+05
Terrestrial Ecotoxicity g eq. 1-4-dichlorobenzene 1.4E+01

Values
1.4E-02
4.7E+03
8.3E-04
1.5E+01
3.3E+00
1.3E+00
1.0E+06
8.2E-07
2.1E+05
6.7E+05
1.4E+01

Values	%	Values	%	Values	%
1.4E-02	100%	0.0E+00	0%	1.1E-05	0%
4.7E+03	100%	0.0E+00	0%	1.7E+00	0%
8.3E-04	100%	0.0E+00	0%	1.5E-06	0%
1.5E+01	100%	0.0E+00	0%	1.5E-02	0%
3.3E+00	100%	0.0E+00	0%	1.5E-03	0%
1.9E-01	15%	0.0E+00	0%	1.1E+00	85%
1.0E+06	100%	0.0E+00	0%	9.9E+01	0%
8.2E-07	100%	0.0E+00	0%	1.2E-09	0%
2.1E+05	100%	0.0E+00	0%	6.5E+01	0%
6.7E+05	100%	0.0E+00	0%	1.7E+02	0%
1.4E+01	100%	0.0E+00	0%	2.1E-02	0%

B/ Other Environmental Indicators

Values
Primary energy MJ 7.5E+01
Fossil energy MJ 0.0E+00
Consumption of raw materials kg 2.7E+03
Dusts g 2.9E+00
Dioxins g 7.9E-10
Metals into air g 2.5E-02
Metals into water g 5.4E-01
Metals into soil g 1.3E-02
Municipal and industrial waste kg 6.5E-01
Hazardous waste kg 1.4E-02
Inert waste kg 2.6E-02

Values
7.5E+01
0.0E+00
2.7E+03
2.9E+00
7.9E-10
2.5E-02
5.4E-01
1.3E-02
6.5E-01
1.4E-02
2.6E-02

Values	%	Values	%	Values	%
7.5E+01	100%	0.0E+00	0%	2.4E-02	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
2.7E+03	100%	0.0E+00	0%	5.4E-04	0%
2.9E+00	100%	0.0E+00	0%	1.4E-03	0%
7.9E-10	100%	0.0E+00	0%	0.0E+00	0%
2.5E-02	100%	0.0E+00	0%	2.7E-05	0%
5.0E-01	93%	0.0E+00	0%	3.7E-02	7%
1.3E-02	100%	0.0E+00	0%	0.0E+00	0%
1.8E-02	3%	0.0E+00	0%	6.3E-01	97%
1.4E-02	100%	0.0E+00	0%	0.0E+00	0%
1.3E-02	52%	0.0E+00	0%	1.2E-02	48%

C/ External Cost

Values
Linked to air emissions
Greenhouse effect (direct, 100 yrs) Euros 8.9E-02
Stratospheric Ozone Depletion Euros 5.7E-07
Air acidification Euros 2.2E-03
Photochemical oxidation Euros 2.4E-03
Linked to water effluents
Eutrophication Euros 2.0E-03
Linked to solid waste
Disaminy caused by incineration Euros 3.9E-06
Disaminy caused by landfilling Euros 4.1E-03
Linked to human health
Carcinogenic potential of heavy metals Euros 1.9E-04
Human health effects caused by dusts Euros 4.0E-03
Human health effects caused by dioxins Euros 1.0E-05

Values		% total external cost	
min	max	min	max
8.9E-02	2.2E-01	85.8%	51.8%
5.7E-07	5.7E-07	0.0%	0.0%
2.2E-03	2.2E-02	2.1%	5.0%
2.4E-03	3.1E-03	2.3%	0.7%
2.0E-03	2.0E-03	1.9%	0.5%
3.9E-06	1.4E-05	0.0%	0.0%
4.1E-03	1.3E-02	3.9%	3.0%
1.9E-04	1.9E-04	0.2%	0.0%
4.0E-03	1.7E-01	3.8%	39.1%
1.0E-05	2.2E-05	0.0%	0.0%
0	0	100%	100%

min	max	min	max	min	max
8.9E-02	2.2E-01	0.0E+00	0.0E+00	3.2E-05	8.2E-05
5.6E-07	5.6E-07	0.0E+00	0.0E+00	9.9E-10	9.9E-10
2.2E-03	2.2E-02	0.0E+00	0.0E+00	2.2E-06	2.2E-05
2.4E-03	3.1E-03	0.0E+00	0.0E+00	1.1E-06	1.4E-06
3.0E-04	3.0E-04	0.0E+00	0.0E+00	1.7E-03	1.7E-03
3.9E-06	1.4E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2.6E-04	8.3E-04	0.0E+00	0.0E+00	2.1E-03	6.5E-03
1.9E-04	1.9E-04	0.0E+00	0.0E+00	2.8E-09	2.8E-09
4.0E-03	1.7E-01	0.0E+00	0.0E+00	2.0E-06	8.4E-05
1.0E-05	2.2E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0
95%	97%	0%	0%	4%	2%

D/ Internalisation of the external Cost

Taxes paid (total)	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
3.3E+00	4.6E+00	3153.9%	1067.9%
6.1E-01	3.2E+00	589.0%	746.1%
1.3E-01	1.5E+00	127.7%	354.3%
0	5	128%	1068%

min	max	min	max	min	max
3.2E+00	4.6E+00	0.0E+00	0.0E+00	3.9E-02	4.4E-02
3.8E-01	3.0E+00	0.0E+00	0.0E+00	2.3E-01	2.3E-01
1.3E-01	1.5E+00	0.0E+00	0.0E+00	4.0E-04	6.9E-04
0	5	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to air emissions	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
2.8E-03	-5.7E-03	0.1%	-0.1%
7.8E-04	8.5E-04	0.1%	0.0%
1.3E-03	1.3E-03	1.0%	0.1%
0	0	0%	0%

min	max	min	max	min	max
2.8E-03	-5.7E-03	0.0E+00	0.0E+00	1.4E-05	2.5E-05
7.8E-04	8.5E-04	0.0E+00	0.0E+00	1.0E-06	1.2E-06
1.3E-03	1.3E-03	0.0E+00	0.0E+00	2.7E-06	2.7E-06
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to water effluents	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
1.8E-02	1.8E-02	0.6%	0.4%
3.0E-01	3.0E-01	49.2%	9.3%
2.4E-03	3.5E-03	1.8%	0.2%
0	0	1%	9%

min	max	min	max	min	max
2.6E-03	2.6E-03	0.0E+00	0.0E+00	1.6E-02	1.6E-02
7.6E-02	7.6E-02	0.0E+00	0.0E+00	2.3E-01	2.3E-01
2.0E-03	3.5E-03	0.0E+00	0.0E+00	3.7E-04	3.7E-04
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to solid waste	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
2.9E-02	3.4E-02	0.9%	0.7%
5.4E-03	7.7E-03	0.9%	0.2%
0.0E+00	0.0E+00	0.0%	0.0%
0	0	0%	1%

min	max	min	max	min	max
6.0E-03	6.2E-03	0.0E+00	0.0E+00	2.3E-02	2.7E-02
3.8E-04	6.1E-04	0.0E+00	0.0E+00	5.0E-03	7.1E-03
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to material consumption	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
3.0E+00	3.0E+00	93.0%	65.6%
2.4E-01	1.4E+00	39.3%	42.8%
4.5E-02	5.0E-01	34.2%	32.4%
0	3	34%	66%

min	max	min	max	min	max
3.0E+00	3.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2.4E-01	1.4E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
4.5E-02	5.0E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	3	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to energy consumption	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
1.0E-01	1.5E+00	3.2%	31.4%
4.7E-02	1.5E+00	7.7%	46.9%
8.3E-02	1.0E+00	63.0%	67.2%
0	2	3%	67%

min	max	min	max	min	max
1.0E-01	1.5E+00	0.0E+00	0.0E+00	3.3E-05	4.6E-04
4.7E-02	1.5E+00	0.0E+00	0.0E+00	1.5E-05	4.8E-04
8.3E-02	1.0E+00	0.0E+00	0.0E+00	2.6E-05	3.2E-04
0	2	0	0	0	0

E/ Life Cycle Price

Euros

49

% of external cost internalised	min	max
	128%	1068%
% of price corresponding to internalised external cost	min	max
	0%	9%

Furniture office

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values	
Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g styrene eq.
Linked to water effluents	
Eutrophication	g PO ₄ eq.
Linked to human health	
Human Toxicity	g eq. 1-4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene

Values
5.1E-02
1.8E+04
3.1E-03
5.6E+01
1.3E+01
4.8E+00
3.9E+06
3.1E-06
7.8E+05
2.5E+06
5.4E+01

Values	%	Values	%	Values	%
5.1E-02	100%	0.0E+00	0%	4.0E-05	0%
1.8E+04	100%	0.0E+00	0%	6.4E+00	0%
3.1E-03	100%	0.0E+00	0%	5.5E-06	0%
5.6E+01	100%	0.0E+00	0%	5.6E-02	0%
1.3E+01	100%	0.0E+00	0%	5.7E-03	0%
7.3E-01	15%	0.0E+00	0%	4.1E+00	85%
3.9E+06	100%	0.0E+00	0%	3.7E+02	0%
3.1E-06	100%	0.0E+00	0%	4.6E-09	0%
7.8E+05	100%	0.0E+00	0%	2.5E+02	0%
2.5E+06	100%	0.0E+00	0%	6.5E+02	0%
5.4E+01	100%	0.0E+00	0%	7.9E-02	0%

B/ Other Environmental Indicators

Values	
Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
2.8E+02
0.0E+00
1.0E+04
1.1E+01
3.0E-09
9.5E-02
2.0E+00
5.0E-02
2.5E+00
5.3E-02
9.7E-02

Values	%	Values	%	Values	%
2.8E+02	100%	0.0E+00	0%	8.9E-02	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
1.0E+04	100%	0.0E+00	0%	2.0E-03	0%
1.1E+01	100%	0.0E+00	0%	5.3E-03	0%
3.0E-09	100%	0.0E+00	0%	0.0E+00	0%
9.5E-02	100%	0.0E+00	0%	1.0E-04	0%
1.9E+00	93%	0.0E+00	0%	1.4E-01	7%
5.0E-02	100%	0.0E+00	0%	0.0E+00	0%
6.7E-02	3%	0.0E+00	0%	2.4E+00	97%
5.3E-02	100%	0.0E+00	0%	0.0E+00	0%
5.0E-02	52%	0.0E+00	0%	4.7E-02	48%

C/ External Cost

Values	
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros
Linked to water effluents	
Eutrophication	Euros
Linked to solid waste	
Disaminy caused by incineration	Euros
Disaminy caused by landfilling	Euros
Linked to human health	
Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Values		% total external cost	
min	max	min	max
3.4E-01	8.5E-01	85.8%	51.8%
2.1E-06	2.1E-06	0.0%	0.0%
8.1E-03	8.1E-02	2.1%	5.0%
9.1E-03	1.2E-02	2.3%	0.7%
7.4E-03	7.4E-03	1.9%	0.5%
1.5E-05	5.2E-05	0.0%	0.0%
1.5E-02	4.8E-02	3.9%	3.0%
7.4E-04	7.4E-04	0.2%	0.0%
1.5E-02	6.4E-01	3.8%	39.1%
3.8E-05	8.2E-05	0.0%	0.0%
0	2	100%	100%

min	max	min	max	min	max
3.4E-01	8.5E-01	0.0E+00	0.0E+00	1.2E-04	3.1E-04
2.1E-06	2.1E-06	0.0E+00	0.0E+00	3.7E-09	3.7E-09
8.1E-03	8.1E-02	0.0E+00	0.0E+00	8.2E-06	8.2E-05
9.1E-03	1.2E-02	0.0E+00	0.0E+00	4.2E-06	5.3E-06
1.1E-03	1.1E-03	0.0E+00	0.0E+00	6.3E-03	6.3E-03
1.5E-05	5.2E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00
9.9E-04	3.1E-03	0.0E+00	0.0E+00	7.8E-03	2.5E-02
7.4E-04	7.4E-04	0.0E+00	0.0E+00	1.1E-08	1.1E-08
1.5E-02	6.4E-01	0.0E+00	0.0E+00	7.4E-06	3.2E-04
3.8E-05	8.2E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	2	0	0	0	0
95%	97%	0%	0%	4%	2%

Total External Cost Euros

D/ Internalisation of the external Cost

Taxes paid (total)	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
1.2E+01	1.8E+01	3153.9%	1067.9%
2.3E+00	1.2E+01	589.0%	746.1%
5.0E-01	5.8E+00	127.7%	354.3%

min	max	min	max	min	max
1.2E+01	1.7E+01	0.0E+00	0.0E+00	1.5E-01	1.7E-01
1.4E+00	1.1E+01	0.0E+00	0.0E+00	8.7E-01	8.8E-01
5.0E-01	5.8E+00	0.0E+00	0.0E+00	1.5E-03	2.6E-03

Part of the external cost internalised

1	18	128%	1068%
---	----	------	-------

0	17	0	0	0	1
---	----	---	---	---	---

Taxes paid - Linked to air emissions

Values		% total taxes paid	
min	max	min	max
1.1E-02	-2.1E-02	0.1%	-0.1%
3.0E-03	3.2E-03	0.1%	0.0%
4.8E-03	4.8E-03	1.0%	0.1%

Values		% total taxes paid	
min	max	min	max
1.1E-02	-2.1E-02	0.1%	-0.1%
3.0E-03	3.2E-03	0.1%	0.0%
4.8E-03	4.8E-03	1.0%	0.1%

min	max	min	max	min	max
1.0E-02	-2.2E-02	0.0E+00	0.0E+00	5.4E-05	9.6E-05
2.9E-03	3.2E-03	0.0E+00	0.0E+00	3.8E-06	4.5E-06
4.8E-03	4.8E-03	0.0E+00	0.0E+00	1.0E-05	1.0E-05

Part of the external cost internalised

0	0	0%	0%
---	---	----	----

0	0	0	0	0	0
---	---	---	---	---	---

Taxes paid - Linked to water effluents

Values		% total taxes paid	
min	max	min	max
6.9E-02	6.9E-02	0.6%	0.4%
1.1E+00	1.1E+00	49.2%	9.3%
8.9E-03	1.4E-02	1.8%	0.2%

Values		% total taxes paid	
min	max	min	max
6.9E-02	6.9E-02	0.6%	0.4%
1.1E+00	1.1E+00	49.2%	9.3%
8.9E-03	1.4E-02	1.8%	0.2%

min	max	min	max	min	max
9.7E-03	9.7E-03	0.0E+00	0.0E+00	6.0E-02	6.0E-02
2.9E-01	2.9E-01	0.0E+00	0.0E+00	8.5E-01	8.5E-01
7.5E-03	1.3E-02	0.0E+00	0.0E+00	1.4E-03	1.4E-03

Part of the external cost internalised

0	1	1%	9%
---	---	----	----

0	0	0	0	0	1
---	---	---	---	---	---

Taxes paid - Linked to solid waste

Values		% total taxes paid	
min	max	min	max
1.1E-01	1.3E-01	0.9%	0.7%
2.0E-02	2.9E-02	0.9%	0.2%
0.0E+00	0.0E+00	0.0%	0.0%

Values		% total taxes paid	
min	max	min	max
1.1E-01	1.3E-01	0.9%	0.7%
2.0E-02	2.9E-02	0.9%	0.2%
0.0E+00	0.0E+00	0.0%	0.0%

min	max	min	max	min	max
2.3E-02	2.3E-02	0.0E+00	0.0E+00	8.7E-02	1.0E-01
1.4E-03	2.3E-03	0.0E+00	0.0E+00	1.9E-02	2.7E-02
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Part of the external cost internalised

0	0	0%	1%
---	---	----	----

0	0	0	0	0	0
---	---	---	---	---	---

Taxes paid - Linked to material consumption

Values		% total taxes paid	
min	max	min	max
1.1E+01	1.1E+01	93.0%	65.6%
9.1E-01	5.2E+00	39.3%	42.8%
1.7E-01	1.9E+00	34.2%	32.4%

Values		% total taxes paid	
min	max	min	max
1.1E+01	1.1E+01	93.0%	65.6%
9.1E-01	5.2E+00	39.3%	42.8%
1.7E-01	1.9E+00	34.2%	32.4%

min	max	min	max	min	max
1.1E+01	1.1E+01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
9.1E-01	5.2E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1.7E-01	1.9E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Part of the external cost internalised

0	11	34%	66%
---	----	-----	-----

0	11	0	0	0	0
---	----	---	---	---	---

Taxes paid - Linked to energy consumption

Values		% total taxes paid	
min	max	min	max
3.9E-01	5.5E+00	3.2%	31.4%
1.8E-01	5.7E+00	7.7%	46.9%
3.2E-01	3.9E+00	63.0%	67.2%

Values		% total taxes paid	
min	max	min	max
3.9E-01	5.5E+00	3.2%	31.4%
1.8E-01	5.7E+00	7.7%	46.9%
3.2E-01	3.9E+00	63.0%	67.2%

min	max	min	max	min	max
3.9E-01	5.5E+00	0.0E+00	0.0E+00	1.2E-04	1.7E-03
1.8E-01	5.7E+00	0.0E+00	0.0E+00	5.6E-05	1.8E-03
3.1E-01	3.9E+00	0.0E+00	0.0E+00	9.9E-05	1.2E-03

Part of the external cost internalised

0	6	3%	67%
---	---	----	-----

0	6	0	0	0	0
---	---	---	---	---	---

E/ Life Cycle Price

% of external cost internalised	
min	max
128%	1068%

% of price corresponding to internalised external cost	
min	max

Cleaning agents - total

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values
Linked to resources consumption
Depletion of non renewable resources kg antimony eq. 1.7E+00
Linked to air emissions
Greenhouse effect (direct, 100 yrs) g CO ₂ eq. 2.0E+05
Stratospheric Ozone Depletion g CFC-11 eq. 9.4E-02
Air acidification g SO ₂ eq. 2.3E+03
Photochemical oxidation g ethylene eq. 1.0E+03
Linked to water effluents
Eutrophication g PO ₄ eq. 0.0E+00
Linked to human health
Human Toxicity g eq. 1-4-dichlorobenzene 3.7E+06
Years of Life Lost year 9.9E-05
Linked to ecotoxicological risk
Aquatic Ecotoxicity g eq. 1-4-dichlorobenzene 7.3E+05
Sediment Ecotoxicity g eq. 1-4-dichlorobenzene 2.4E+06
Terrestrial Ecotoxicity g eq. 1-4-dichlorobenzene 2.8E+03

Values
1.7E+00
2.0E+05
9.4E-02
2.3E+03
1.0E+03
0.0E+00
3.7E+06
9.9E-05
7.3E+05
2.4E+06
2.8E+03

Values	%	Values	%	Values	%
1.7E+00	100%	0.0E+00	0%	0.0E+00	0%
2.0E+05	98%	4.7E+03	2%	0.0E+00	0%
9.4E-02	100%	0.0E+00	0%	0.0E+00	0%
2.3E+03	99%	1.7E+01	1%	0.0E+00	0%
1.0E+03	100%	2.3E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
3.7E+06	100%	7.3E+02	0%	0.0E+00	0%
9.9E-05	99%	7.5E-07	1%	0.0E+00	0%
7.3E+05	100%	5.9E+00	0%	0.0E+00	0%
2.4E+06	100%	1.5E+01	0%	0.0E+00	0%
2.8E+03	93%	1.9E+02	7%	0.0E+00	0%

B/ Other Environmental Indicators

Values
Primary energy MJ 2.4E+03
Fossil energy MJ 0.0E+00
Consumption of raw materials kg 2.4E+03
Dusts g 2.6E+02
Dioxins g 4.0E-10
Metals into air g 2.3E+00
Metals into water g 2.8E+01
Metals into soil g 0.0E+00
Municipal and industrial waste kg 7.6E-02
Hazardous waste kg 7.9E-01
Inert waste kg 3.4E+00

Values
2.4E+03
0.0E+00
2.4E+03
2.6E+02
4.0E-10
2.3E+00
2.8E+01
0.0E+00
7.6E-02
7.9E-01
3.4E+00

Values	%	Values	%	Values	%
2.3E+03	97%	6.5E+01	3%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
2.4E+03	100%	0.0E+00	0%	0.0E+00	0%
2.5E+02	99%	2.7E+00	1%	0.0E+00	0%
4.0E-10	100%	0.0E+00	0%	0.0E+00	0%
2.1E+00	95%	1.2E-01	5%	0.0E+00	0%
2.8E+01	100%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
7.6E-02	100%	0.0E+00	0%	0.0E+00	0%
7.9E-01	100%	0.0E+00	0%	0.0E+00	0%
3.4E+00	100%	0.0E+00	0%	0.0E+00	0%

C/ External Cost

Values
Linked to air emissions
Greenhouse effect (direct, 100 yrs) Euros 3.9E+00
Stratospheric Ozone Depletion Euros 6.4E-05
Air acidification Euros 3.4E-01
Photochemical oxidation Euros 7.5E-01
Linked to water effluents
Eutrophication Euros 1.8E-01
Linked to solid waste
Disaminty caused by incineration Euros 1.4E-05
Disaminty caused by landfilling Euros 2.6E-02
Linked to human health
Carcinogenic potential of heavy metals Euros 1.4E-03
Human health effects caused by dusts Euros 3.6E-01
Human health effects caused by dioxins Euros 5.2E-06

Values		% total external cost			
min	max	min	max		
3.9E+00	9.8E+00	70.1%	33.0%		
6.4E-05	6.4E-05	0.0%	0.0%		
3.4E-01	3.4E+00	6.2%	11.5%		
7.5E-01	9.5E-01	13.5%	3.2%		
1.8E-01	1.8E-01	3.2%	0.6%		
1.4E-05	5.0E-05	0.0%	0.0%		
2.6E-02	8.1E-02	0.5%	0.3%		
1.4E-03	1.4E-03	0.0%	0.0%		
3.6E-01	1.5E+01	6.5%	51.4%		
5.2E-06	1.1E-05	0.0%	0.0%		
Total External Cost	Euros	6	30	100%	100%

min	max	min	max	min	max
3.8E+00	9.5E+00	8.9E-02	2.2E-01	0.0E+00	0.0E+00
6.4E-05	6.4E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00
3.4E-01	3.4E+00	2.5E-03	2.5E-02	0.0E+00	0.0E+00
7.4E-01	9.5E-01	1.7E-03	2.1E-03	0.0E+00	0.0E+00
3.8E-03	3.8E-03	1.8E-01	1.8E-01	0.0E+00	0.0E+00
1.4E-05	5.0E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2.6E-02	8.1E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1.4E-03	1.4E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00
3.5E-01	1.5E+01	3.8E-03	1.6E-01	0.0E+00	0.0E+00
5.2E-06	1.1E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00
5	29	0	1	0	0
95%	98%	5%	2%	0%	0%

D/ Internalisation of the external Cost

Taxes paid (total)	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
1.0E+01	5.5E+01	183.6%	184.3%
2.4E+02	2.8E+02	4298.0%	962.7%
4.0E+00	4.6E+01	73.2%	156.5%

min	max	min	max	min	max
1.0E+01	5.3E+01	1.3E-01	1.3E+00	0.0E+00	0.0E+00
3.1E+00	5.0E+01	2.3E+02	2.4E+02	0.0E+00	0.0E+00
2.8E+00	3.3E+01	1.2E+00	1.4E+01	0.0E+00	0.0E+00

Part of the external cost internalised

4	285	73%	963%
----------	------------	------------	-------------

3	53	0	235	0	0
----------	-----------	----------	------------	----------	----------

Taxes paid - Linked to air emissions

Values	% total taxes paid
Denmark Euros 3.5E+00	4.8E+00 34.3%
France Euros 1.6E-01	1.7E-01 0.1%
Poland Euros 1.6E-01	1.6E-01 3.9%

Values	% total taxes paid
3.5E+00	4.8E+00 34.3%
1.6E-01	1.7E-01 0.1%
1.6E-01	1.6E-01 3.9%

Values	% total taxes paid
3.4E+00	4.7E+00 4.3E-02 7.0E-02 0.0E+00 0.0E+00
1.6E-01	1.7E-01 5.8E-04 6.2E-04 0.0E+00 0.0E+00
1.6E-01	1.6E-01 7.6E-04 7.6E-04 0.0E+00 0.0E+00

Part of the external cost internalised

0	5	0%	9%
----------	----------	-----------	-----------

0	5	0	0	0	0
----------	----------	----------	----------	----------	----------

Taxes paid - Linked to water effluents

Values	% total taxes paid
Denmark Euros 4.2E-02	4.2E-02 0.4%
France Euros 2.4E+02	2.4E+02 99.2%
Poland Euros 1.2E+00	1.3E+01 29.3%

Values	% total taxes paid
4.2E-02	4.2E-02 0.4%
2.4E+02	2.4E+02 99.2%
1.2E+00	1.3E+01 29.3%

Values	% total taxes paid
4.2E-02	4.2E-02 3.5E-04 3.5E-04 0.0E+00 0.0E+00
1.2E+00	1.2E+00 2.3E+02 2.3E+02 0.0E+00 0.0E+00
3.8E-02	6.4E-02 1.1E+00 1.3E+01 0.0E+00 0.0E+00

Part of the external cost internalised

0	235	0%	83%
----------	------------	-----------	------------

0	1	0	234	0	0
----------	----------	----------	------------	----------	----------

Taxes paid - Linked to solid waste

Values	% total taxes paid
Denmark Euros 2.7E-01	2.7E-01 2.7%
France Euros 8.3E-03	1.6E-02 0.0%
Poland Euros 0.0E+00	0.0E+00 0.0%

Values	% total taxes paid
2.7E-01	2.7E-01 2.7%
8.3E-03	1.6E-02 0.0%
0.0E+00	0.0E+00 0.0%

Values	% total taxes paid
2.7E-01	2.7E-01 0.0E+00 0.0E+00 0.0E+00 0.0E+00
8.3E-03	1.6E-02 0.0E+00 0.0E+00 0.0E+00 0.0E+00
0.0E+00	0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00

Part of the external cost internalised

0	0	0%	0%
----------	----------	-----------	-----------

0	0	0	0	0	0
----------	----------	----------	----------	----------	----------

Taxes paid - Linked to material consumption

Values	% total taxes paid
Denmark Euros 2.6E+00	2.6E+00 25.4%
France Euros 2.0E-01	1.2E+00 0.1%
Poland Euros 3.8E-02	4.2E-01 0.9%

Values	% total taxes paid
2.6E+00	2.6E+00 25.4%
2.0E-01	1.2E+00 0.1%
3.8E-02	4.2E-01 0.9%

Values	% total taxes paid
2.6E+00	2.6E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00
2.0E-01	1.2E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00
3.8E-02	4.2E-01 0.0E+00 0.0E+00 0.0E+00 0.0E+00

Part of the external cost internalised

0	3	0%	5%
----------	----------	-----------	-----------

0	3	0	0	0	0
----------	----------	----------	----------	----------	----------

Taxes paid - Linked to energy consumption

Values	% total taxes paid
Denmark Euros 3.3E+00	4.6E+01 32.7%
France Euros 1.5E+00	4.8E+01 0.6%
Poland Euros 2.7E+00	3.3E+01 65.8%

Values	% total taxes paid
3.3E+00	4.6E+01 32.7%
1.5E+00	4.8E+01 0.6%
2.7E+00	3.3E+01 65.8%

Values	% total taxes paid
3.2E+00	4.5E+01 9.1E-02 1.3E+00 0.0E+00 0.0E+00
1.5E+00	4.7E+01 4.1E-02 1.3E+00 0.0E+00 0.0E+00
2.6E+00	3.2E+01 7.3E-02 9.0E-01 0.0E+00 0.0E+00

Part of the external cost internalised

2	48	1%	85%
----------	-----------	-----------	------------

1	47	0	1	0	0
----------	-----------	----------	----------	----------	----------

E/ Life Cycle Price

Euros	
-------	--

% of external cost internalised	min	max
	73%	963%
% of price corresponding to internalised external cost	min	max

Cleaning agents - personal care

Functional unit: Consumption of per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Linked to resources consumption

Depletion of non renewable resources	kg antimony eq.	3.0E-01
--------------------------------------	-----------------	---------

Linked to air emissions

Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.	3.6E+04
Stratospheric Ozone Depletion	g CFC-11 eq.	1.7E-02
Air acidification	g SO ₂ eq.	4.1E+02
Photochemical oxidation	g ethylene eq.	1.8E+02

Linked to water effluents

Eutrophication	g PO ₄ eq.	0.0E+00
----------------	-----------------------	---------

Linked to human health

Human Toxicity	g eq. 1-4-dichlorobenzene	6.5E+05
Years of Life Lost	year	1.7E-05

Linked to ecotoxicological risk

Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene	1.3E+05
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene	4.2E+05
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene	4.9E+02

Values

Values	%	Values	%	Values	%
--------	---	--------	---	--------	---

3.0E-01	100%	0.0E+00	0%	0.0E+00	0%
3.6E+04	98%	8.2E+02	2%	0.0E+00	0%
1.7E-02	100%	0.0E+00	0%	0.0E+00	0%
4.1E+02	99%	3.0E+00	1%	0.0E+00	0%
1.8E+02	100%	4.0E-01	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
6.5E+05	100%	1.3E+02	0%	0.0E+00	0%
1.7E-05	99%	1.3E-07	1%	0.0E+00	0%
1.3E+05	100%	1.0E+00	0%	0.0E+00	0%
4.2E+05	100%	2.7E+00	0%	0.0E+00	0%
4.9E+02	93%	3.4E+01	7%	0.0E+00	0%

B/ Other Environmental Indicators

Primary energy	MJ	4.2E+02
Fossil energy	MJ	0.0E+00
Consumption of raw materials	kg	4.2E+02
Dusts	g	4.5E+01
Dioxins	g	7.0E-11
Metals into air	g	4.0E-01
Metals into water	g	4.9E+00
Metals into soil	g	0.0E+00
Municipal and industrial waste	kg	1.3E-02
Hazardous waste	kg	1.4E-01
Inert waste	kg	6.0E-01

Values

4.1E+02	97%	1.1E+01	3%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
4.2E+02	100%	0.0E+00	0%	0.0E+00	0%
4.5E+01	99%	4.8E-01	1%	0.0E+00	0%
7.0E-11	100%	0.0E+00	0%	0.0E+00	0%
3.8E-01	95%	2.1E-02	5%	0.0E+00	0%
4.9E+00	100%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
1.3E-02	100%	0.0E+00	0%	0.0E+00	0%
1.4E-01	100%	0.0E+00	0%	0.0E+00	0%
6.0E-01	100%	0.0E+00	0%	0.0E+00	0%

C/ External Cost

Linked to air emissions

Greenhouse effect (direct, 100 yrs)	Euros	6.8E-01
Stratospheric Ozone Depletion	Euros	1.1E-05
Air acidification	Euros	6.0E-02
Photochemical oxidation	Euros	1.3E-01

Linked to water effluents

Eutrophication	Euros	3.2E-02
----------------	-------	---------

Linked to solid waste

Disamenity caused by incineration	Euros	2.5E-06
Disamenity caused by landfilling	Euros	4.5E-03

Linked to human health

Carcinogenic potential of heavy metals	Euros	2.4E-04
Human health effects caused by dusts	Euros	6.3E-02
Human health effects caused by dioxins	Euros	9.1E-07

Values		% total external cost	
min	max	min	max

6.8E-01	1.7E+00	70.1%	33.0%
1.1E-05	1.1E-05	0.0%	0.0%
6.0E-02	6.0E-01	6.2%	11.5%
1.3E-01	1.7E-01	13.5%	3.2%
3.2E-02	3.2E-02	3.2%	0.6%
2.5E-06	8.8E-06	0.0%	0.0%
4.5E-03	1.4E-02	0.5%	0.3%
2.4E-04	2.4E-04	0.0%	0.0%
6.3E-02	2.7E+00	6.5%	51.4%
9.1E-07	2.0E-06	0.0%	0.0%
1	5	100%	100%

min	max	min	max	min	max
6.7E-01	1.7E+00	1.6E-02	3.9E-02	0.0E+00	0.0E+00
1.1E-05	1.1E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00
5.9E-02	5.9E-01	4.4E-04	4.4E-03	0.0E+00	0.0E+00
1.3E-01	1.7E-01	2.9E-04	3.7E-04	0.0E+00	0.0E+00
6.7E-04	6.7E-04	3.1E-02	3.1E-02	0.0E+00	0.0E+00
2.5E-06	8.8E-06	0.0E+00	0.0E+00	0.0E+00	0.0E+00
4.5E-03	1.4E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2.4E-04	2.4E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00
6.2E-02	2.6E+00	6.6E-04	2.8E-02	0.0E+00	0.0E+00
9.1E-07	2.0E-06	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1	5	0	0	0	0
95%	98%	5%	2%	0%	0%

D/ Internalisation of the external Cost

Taxes paid (total)

Denmark	Euros	1.8E+00
France	Euros	4.2E+01
Poland	Euros	7.1E-01

Values		% total external cost	
min	max	min	max

1.8E+00	9.6E+00	183.6%	184.3%
4.2E+01	3.0E+01	4298.0%	962.7%
7.1E-01	8.2E+00	73.2%	156.8%
1	50	73%	963%

min	max	min	max	min	max
1.8E+00	9.4E+00	2.4E-02	2.4E-01	0.0E+00	0.0E+00
5.5E-01	8.7E+00	4.1E-01	4.1E+01	0.0E+00	0.0E+00
5.0E-01	5.7E+00	2.1E-01	2.4E+00	0.0E+00	0.0E+00
0	9	0	41	0	0

Part of the external cost internalised

Taxes paid - Linked to air emissions

Denmark	Euros	6.1E-01
France	Euros	2.9E-02
Poland	Euros	2.8E-02

Values		% total taxes paid	
min	max	min	max

6.1E-01	8.4E-01	34.3%	8.7%
2.9E-02	3.0E-02	0.1%	0.1%
2.8E-02	2.8E-02	3.9%	0.3%
0	1	0%	9%

6.0E-01	8.3E-01	7.6E-03	1.2E-02	0.0E+00	0.0E+00
2.8E-02	2.9E-02	1.0E-04	1.1E-04	0.0E+00	0.0E+00
2.8E-02	2.8E-02	1.3E-04	1.3E-04	0.0E+00	0.0E+00
0	1	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to water effluents

Denmark	Euros	7.4E-03
France	Euros	4.1E+01
Poland	Euros	2.1E-01

7.4E-03	7.4E-03	0.4%	0.1%
4.1E+01	4.1E+01	99.2%	82.5%
2.1E-01	2.3E+00	29.3%	27.8%
0	41	0%	83%

7.3E-03	7.3E-03	6.1E-05	6.1E-05	0.0E+00	0.0E+00
2.1E-01	2.1E-01	4.1E+01	4.1E+01	0.0E+00	0.0E+00
6.8E-03	1.1E-02	2.0E-01	2.3E+00	0.0E+00	0.0E+00
0	0	0	41	0	0

Part of the external cost internalised

Taxes paid - Linked to solid waste

Denmark	Euros	4.8E-02
France	Euros	1.5E-03
Poland	Euros	0.0E+00

4.8E-02	4.8E-02	2.7%	0.5%
1.5E-03	2.8E-03	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0	0	0%	0%

4.8E-02	4.8E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1.5E-03	2.8E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to material consumption

Denmark	Euros	4.5E-01
France	Euros	3.6E-02
Poland	Euros	6.7E-03

4.5E-01	4.5E-01	25.4%	4.7%
3.6E-02	2.1E-01	0.1%	0.4%
6.7E-03	7.4E-02	0.9%	0.9%
0	0	0%	5%

4.5E-01	4.5E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
3.6E-02	2.1E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
6.7E-03	7.4E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to energy consumption

Denmark	Euros	5.8E-01
France	Euros	2.7E-01
Poland	Euros	4.7E-01

5.8E-01	8.2E+00	32.7%	85.0%
2.7E-01	8.5E+00	0.6%	16.9%
4.7E-01	5.8E+00	65.8%	71.0%
0	8	1%	85%

5.7E-01	7.9E+00	1.6E-02	2.2E-01	0.0E+00	0.0E+00
2.6E-01	8.3E+00	7.2E-03	2.3E-01	0.0E+00	0.0E+00
4.5E-01	5.6E+00	1.3E-02	1.6E-01	0.0E+00	0.0E+00
0	8	0	0	0	0

E/ Life Cycle Price

Euros

91

% of external cost internalised	min	max
	3%	16%

% of price corresponding to internalised external cost	min	max
	0%	1%

Cleaning agents - textile

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Linked to resources consumption	Values
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g ethylene eq.
Linked to water effluents	
Eutrophication	g PO ₄ eq.
Linked to human health	
Human Toxicity	g eq. 1-4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene

Values
7.4E-01
8.8E+04
4.1E-02
1.0E+03
4.4E+02
3.2E+05
0.0E+00
1.6E+06
4.3E-05
3.2E+05
1.0E+06
1.2E+03

Values	%	Values	%	Values	%
7.4E-01	100%	0.0E+00	0%	0.0E+00	0%
8.8E+04	98%	2.0E+03	2%	0.0E+00	0%
4.1E-02	100%	0.0E+00	0%	0.0E+00	0%
1.0E+03	99%	7.3E+00	1%	0.0E+00	0%
4.4E+02	100%	9.8E-01	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
1.6E+06	100%	3.2E+02	0%	0.0E+00	0%
4.2E-05	99%	3.2E-07	1%	0.0E+00	0%
3.2E+05	100%	2.6E+00	0%	0.0E+00	0%
1.0E+06	100%	6.6E+00	0%	0.0E+00	0%
1.1E+03	93%	8.3E+01	7%	0.0E+00	0%

B/ Other Environmental Indicators

Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
1.0E+03
0.0E+00
1.0E+03
1.1E+02
1.7E-10
9.8E-01
1.2E+01
0.0E+00
3.3E-02
3.4E-01
1.5E+00

Values	%	Values	%	Values	%
1.0E+03	97%	2.8E+01	3%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
1.0E+03	100%	0.0E+00	0%	0.0E+00	0%
1.1E+02	99%	1.2E+00	1%	0.0E+00	0%
1.7E-10	100%	0.0E+00	0%	0.0E+00	0%
9.2E-01	95%	5.2E-02	5%	0.0E+00	0%
1.2E+01	100%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
3.3E-02	100%	0.0E+00	0%	0.0E+00	0%
3.4E-01	100%	0.0E+00	0%	0.0E+00	0%
1.5E+00	100%	0.0E+00	0%	0.0E+00	0%

C/ External Cost

Linked to air emissions	Euros
Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros
Linked to water effluents	
Eutrophication	Euros
Linked to solid waste	
Disaminy caused by incineration	Euros
Disaminy caused by landfilling	Euros
Linked to human health	
Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Values		% total external cost	
min	max	min	max
1.7E+00	4.2E+00	70.1%	33.0%
2.8E-05	2.8E-05	0.0%	0.0%
1.5E-01	1.5E+00	6.2%	11.5%
3.2E-01	4.1E-01	13.5%	3.2%
7.7E-02	7.7E-02	3.2%	0.6%
6.2E-06	2.2E-05	0.0%	0.0%
1.1E-02	3.5E-02	0.5%	0.3%
5.9E-04	5.9E-04	0.0%	0.0%
1.5E-01	6.6E+00	6.5%	51.4%
2.2E-06	4.8E-06	0.0%	0.0%
2	13	100%	100%

min	max	min	max	min	max
1.6E+00	4.1E+00	3.8E-02	9.7E-02	0.0E+00	0.0E+00
2.8E-05	2.8E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1.5E-01	1.5E+00	1.1E-03	1.1E-02	0.0E+00	0.0E+00
3.2E-01	4.1E-01	7.2E-04	9.1E-04	0.0E+00	0.0E+00
1.7E-03	1.7E-03	7.6E-02	7.6E-02	0.0E+00	0.0E+00
6.2E-06	2.2E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1.1E-02	3.5E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00
5.9E-04	5.9E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1.5E-01	6.6E+00	1.6E-03	6.9E-02	0.0E+00	0.0E+00
2.2E-06	4.8E-06	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2	13	0	0	0	0
95%	98%	5%	2%	0%	0%

D/ Internalisation of the external Cost

Taxes paid (total)	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
4.4E+00	2.4E+01	183.6%	184.3%
1.0E+02	1.2E+02	4298.0%	962.7%
1.7E+00	2.0E+01	73.2%	156.5%
2	123	73%	963%

min	max	min	max	min	max
4.3E+00	2.3E+01	5.8E-02	5.8E-01	0.0E+00	0.0E+00
1.4E+00	2.1E+01	1.0E+02	1.0E+02	0.0E+00	0.0E+00
1.2E+00	1.4E+01	5.3E-01	5.9E+00	0.0E+00	0.0E+00
1	23	0	102	0	0

Part of the external cost internalised

Taxes paid - Linked to air emissions	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
1.5E+00	2.1E+00	34.3%	8.7%
7.0E-02	7.2E-02	0.1%	0.1%
6.9E-02	6.9E-02	3.9%	0.3%
0	2	0%	9%

min	max	min	max	min	max
1.5E+00	2.0E+00	1.9E-02	3.0E-02	0.0E+00	0.0E+00
7.0E-02	7.2E-02	2.5E-04	2.7E-04	0.0E+00	0.0E+00
6.8E-02	6.8E-02	3.3E-04	3.3E-04	0.0E+00	0.0E+00
0	2	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to water effluents	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
1.8E-02	1.8E-02	0.4%	0.1%
1.0E+02	1.0E+02	99.2%	82.5%
5.1E-01	5.6E+00	29.3%	27.8%
0	102	0%	83%

min	max	min	max	min	max
1.8E-02	1.8E-02	1.5E-04	1.5E-04	0.0E+00	0.0E+00
5.2E-01	5.2E-01	1.0E+02	1.0E+02	0.0E+00	0.0E+00
1.7E-02	2.8E-02	4.9E-01	5.5E+00	0.0E+00	0.0E+00
0	1	0	101	0	0

Part of the external cost internalised

Taxes paid - Linked to solid waste	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
1.2E-01	1.2E-01	2.7%	0.5%
3.6E-03	6.9E-03	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0	0	0%	0%

min	max	min	max	min	max
1.2E-01	1.2E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
3.6E-03	6.9E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to material consumption	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
1.1E+00	1.1E+00	25.4%	4.7%
8.8E-02	5.1E-01	0.1%	0.4%
1.7E-02	1.8E-01	0.9%	0.9%
0	1	0%	5%

min	max	min	max	min	max
1.1E+00	1.1E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
8.8E-02	5.1E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1.7E-02	1.8E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	1	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to energy consumption	Euros
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
1.4E+00	2.0E+01	32.7%	85.0%
6.5E-01	2.1E+01	0.6%	16.9%
1.1E+00	1.4E+01	65.8%	71.0%
1	21	1%	85%

min	max	min	max	min	max
1.4E+00	1.9E+01	3.9E-02	5.5E-01	0.0E+00	0.0E+00
6.3E-01	2.0E+01	1.8E-02	5.7E-01	0.0E+00	0.0E+00
1.1E+00	1.4E+01	3.1E-02	3.9E-01	0.0E+00	0.0E+00
1	20	0	1	0	0

E/ Life Cycle Price

Euros	
-------	--

% of external cost internalised	min	max
	3%	16%
% of price corresponding to internalised external cost		

Cleaning agents - other househo

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Linked to resources consumption		
Depletion of non renewable resources	kg antimony eq.	4.2E-01
Linked to air emissions		
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.	5.0E+04
Stratospheric Ozone Depletion	g CFC-11 eq.	2.3E-02
Air acidification	g SO ₂ eq.	5.7E+02
Photochemical oxidation	g ethylene eq.	2.5E+02
Linked to water effluents		
Eutrophication	g PO4 eq.	0.0E+00
Linked to human health		
Human Toxicity	g eq. 1-4-dichlorobenzene	9.0E+05
Years of Life Lost	year	2.4E-05
Linked to ecotoxicological risk		
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene	1.8E+05
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene	5.8E+05
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene	6.9E+02

Values
4.2E-01
5.0E+04
2.3E-02
5.7E+02
2.5E+02
0.0E+00
9.0E+05
2.4E-05
1.8E+05
5.8E+05
6.9E+02

Values	%	Values	%	Values	%
4.2E-01	100%	0.0E+00	0%	0.0E+00	0%
4.9E+04	98%	1.1E+03	2%	0.0E+00	0%
2.3E-02	100%	0.0E+00	0%	0.0E+00	0%
5.7E+02	99%	4.2E+00	1%	0.0E+00	0%
2.5E+02	100%	5.6E-01	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
9.0E+05	100%	1.8E+02	0%	0.0E+00	0%
2.4E-05	99%	1.8E-07	1%	0.0E+00	0%
1.8E+05	100%	1.5E+00	0%	0.0E+00	0%
5.8E+05	100%	3.7E+00	0%	0.0E+00	0%
6.4E+02	93%	4.7E+01	7%	0.0E+00	0%

B/ Other Environmental Indicators

Primary energy	MJ	5.8E+02
Fossil energy	MJ	0.0E+00
Consumption of raw materials	kg	5.8E+02
Dusts	g	6.3E+01
Dioxins	g	9.8E-11
Metals into air	g	5.6E-01
Metals into water	g	6.8E+00
Metals into soil	g	0.0E+00
Municipal and industrial waste	kg	1.9E-02
Hazardous waste	kg	1.9E-01
Inert waste	kg	8.3E-01

Values
5.8E+02
0.0E+00
5.8E+02
6.3E+01
9.8E-11
5.6E-01
6.8E+00
0.0E+00
1.9E-02
1.9E-01
8.3E-01

5.7E+02	97%	1.6E+01	3%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
5.8E+02	100%	0.0E+00	0%	0.0E+00	0%
6.2E+01	99%	6.6E-01	1%	0.0E+00	0%
9.8E-11	100%	0.0E+00	0%	0.0E+00	0%
5.3E-01	95%	2.9E-02	5%	0.0E+00	0%
6.8E+00	100%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
1.9E-02	100%	0.0E+00	0%	0.0E+00	0%
1.9E-01	100%	0.0E+00	0%	0.0E+00	0%
8.3E-01	100%	0.0E+00	0%	0.0E+00	0%

C/ External Cost

Linked to air emissions		
Greenhouse effect (direct, 100 yrs)	Euros	9.5E-01
Stratospheric Ozone Depletion	Euros	1.6E-05
Air acidification	Euros	8.3E-02
Photochemical oxidation	Euros	1.8E-01
Linked to water effluents		
Eutrophication	Euros	4.4E-02
Linked to solid waste		
Disaminy caused by incineration	Euros	3.5E-06
Disaminy caused by landfilling	Euros	6.3E-03
Linked to human health		
Carcinogenic potential of heavy metals	Euros	3.4E-04
Human health effects caused by dusts	Euros	8.8E-02
Human health effects caused by dioxins	Euros	1.3E-06

Values		% total external cost	
min	max	min	max
9.5E-01	2.4E+00	70.1%	33.0%
1.6E-05	1.6E-05	0.0%	0.0%
8.3E-02	8.3E-01	6.2%	11.5%
1.8E-01	2.3E-01	13.5%	3.2%
4.4E-02	4.4E-02	3.2%	0.6%
3.5E-06	1.2E-05	0.0%	0.0%
6.3E-03	2.0E-02	0.5%	0.3%
3.4E-04	3.4E-04	0.0%	0.0%
8.8E-02	3.7E+00	6.5%	51.4%
1.3E-06	2.7E-06	0.0%	0.0%
1	7	100%	100%

min	max	min	max	min	max
9.5E-01	2.3E+00	2.2E-02	5.5E-02	0.0E+00	0.0E+00
1.6E-05	1.6E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00
8.3E-02	8.3E-01	6.1E-04	6.1E-03	0.0E+00	0.0E+00
1.8E-01	2.3E-01	4.1E-04	5.2E-04	0.0E+00	0.0E+00
9.4E-04	9.4E-04	4.3E-02	4.3E-02	0.0E+00	0.0E+00
3.5E-06	1.2E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00
6.3E-03	2.0E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00
3.4E-04	3.4E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00
8.7E-02	3.7E+00	9.2E-04	3.9E-02	0.0E+00	0.0E+00
1.3E-06	2.7E-06	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1	7	0	0	0	0
95%	98%	5%	2%	0%	0%

D/ Internalisation of the external Cost

Taxes paid (total)		
Denmark	Euros	2.5E+00
France	Euros	5.8E+01
Poland	Euros	9.9E-01

Values		% total external cost	
min	max	min	max
2.5E+00	1.3E+01	34.3%	184.3%
5.8E+01	7.0E+01	4298.0%	962.7%
9.9E-01	1.1E+01	73.2%	156.5%
1	70	73%	963%

min	max	min	max	min	max
2.5E+00	1.3E+01	3.3E-02	3.3E-01	0.0E+00	0.0E+00
7.7E-01	1.2E+01	5.7E+01	5.8E+01	0.0E+00	0.0E+00
6.9E-01	8.0E+00	3.0E-01	3.4E+00	0.0E+00	0.0E+00
1	13	0	58	0	0

Part of the external cost internalised

Taxes paid - Linked to air emissions		
Denmark	Euros	8.5E-01
France	Euros	4.0E-02
Poland	Euros	3.9E-02

Values		% total taxes paid	
min	max	min	max
8.5E-01	1.2E+00	34.3%	8.7%
4.0E-02	4.1E-02	0.1%	0.1%
3.9E-02	3.9E-02	3.9%	0.3%
0	1	0%	9%

8.4E-01	1.2E+00	1.1E-02	1.7E-02	0.0E+00	0.0E+00
4.0E-02	4.1E-02	1.4E-04	1.5E-04	0.0E+00	0.0E+00
3.9E-02	3.9E-02	1.9E-04	1.9E-04	0.0E+00	0.0E+00
0	1	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to water effluents		
Denmark	Euros	1.0E-02
France	Euros	5.8E+01
Poland	Euros	2.9E-01

Values		% total taxes paid	
min	max	min	max
1.0E-02	1.0E-02	0.4%	0.1%
5.8E+01	5.8E+01	99.2%	82.5%
2.9E-01	3.2E+00	29.3%	27.8%
0	58	0%	83%

1.0E-02	1.0E-02	8.5E-05	8.5E-05	0.0E+00	0.0E+00
3.0E-01	3.0E-01	5.7E+01	5.7E+01	0.0E+00	0.0E+00
9.4E-03	1.6E-02	2.8E-01	3.1E+00	0.0E+00	0.0E+00
0	0	0	57	0	0

Part of the external cost internalised

Taxes paid - Linked to solid waste		
Denmark	Euros	6.6E-02
France	Euros	2.0E-03
Poland	Euros	0.0E+00

Values		% total taxes paid	
min	max	min	max
6.6E-02	6.7E-02	2.7%	0.5%
2.0E-03	3.9E-03	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0	0	0%	0%

6.6E-02	6.7E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2.0E-03	3.9E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to material consumption		
Denmark	Euros	6.3E-01
France	Euros	5.0E-02
Poland	Euros	9.4E-03

Values		% total taxes paid	
min	max	min	max
6.3E-01	6.3E-01	25.4%	4.7%
5.0E-02	2.9E-01	0.1%	0.4%
9.4E-03	1.0E-01	0.9%	0.9%
0	1	0%	5%

6.3E-01	6.3E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
5.0E-02	2.9E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
9.4E-03	1.0E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	1	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to energy consumption		
Denmark	Euros	8.1E-01
France	Euros	1.5E+00
Poland	Euros	2.7E+00

Values		% total taxes paid	
min	max	min	max
8.1E-01	1.1E+01	32.7%	85.0%
1.5E+00	1.2E+01	2.6%	16.9%
2.7E+00	8.1E+00	267.7%	71.0%
1	12	3%	85%

7.9E-01	1.1E+01	2.2E-02	3.1E-01	0.0E+00	0.0E+00
3.6E-01	1.2E+01	1.0E-02	3.2E-01	0.0E+00	0.0E+00
6.3E-01	7.9E+00	1.8E-02	2.2E-01	0.0E+00	0.0E+00
0	12	0	0	0	0

E/ Life Cycle Price

% of external cost internalised	min	max
	73%	963%
% of price corresponding to internalised external cost		

Industrial cleaning agents

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values
Linked to resources consumption
Depletion of non renewable resources kg antimony eq. 2.5E-01
Linked to air emissions
Greenhouse effect (direct, 100 yrs) g CO ₂ eq. 3.0E+04
Stratospheric Ozone Depletion g CFC-11 eq. 1.4E-02
Air acidification g SO ₂ eq. 3.4E+02
Photochemical oxidation g ethylene eq. 1.5E+02
Linked to water effluents
Eutrophication g PO ₄ eq. 0.0E+00
Linked to human health
Human Toxicity g eq. 1-4-dichlorobenzene 5.4E+05
Years of Life Lost year 1.4E-05
Linked to ecotoxicological risk
Aquatic Ecotoxicity g eq. 1-4-dichlorobenzene 1.1E+05
Sediment Ecotoxicity g eq. 1-4-dichlorobenzene 3.5E+05
Terrestrial Ecotoxicity g eq. 1-4-dichlorobenzene 4.1E+02

Values
2.5E-01
3.0E+04
1.4E-02
3.4E+02
1.5E+02
0.0E+00
5.4E+05
1.4E-05
1.1E+05
3.5E+05
4.1E+02

Values	%	Values	%	Values	%
2.5E-01	100%	0.0E+00	0%	0.0E+00	0%
2.9E+04	98%	6.8E+02	2%	0.0E+00	0%
1.4E-02	100%	0.0E+00	0%	0.0E+00	0%
3.4E+02	99%	2.5E+00	1%	0.0E+00	0%
1.5E+02	100%	3.3E-01	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
5.4E+05	100%	1.1E+02	0%	0.0E+00	0%
1.4E-05	99%	1.1E-07	1%	0.0E+00	0%
1.1E+05	100%	8.7E-01	0%	0.0E+00	0%
3.5E+05	100%	2.2E+00	0%	0.0E+00	0%
3.8E+02	93%	2.8E+01	7%	0.0E+00	0%

B/ Other Environmental Indicators

Values
Primary energy MJ 3.5E+02
Fossil energy MJ 0.0E+00
Consumption of raw materials kg 3.5E+02
Dusts g 3.7E+01
Dioxins g 5.8E-11
Metals into air g 3.3E-01
Metals into water g 4.1E+00
Metals into soil g 0.0E+00
Municipal and industrial waste kg 1.1E-02
Hazardous waste kg 1.2E-01
Inert waste kg 5.0E-01

Values
3.5E+02
0.0E+00
3.5E+02
3.7E+01
5.8E-11
3.3E-01
4.1E+00
0.0E+00
1.1E-02
1.2E-01
5.0E-01

Values	%	Values	%	Values	%
3.4E+02	97%	9.5E+00	3%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
3.5E+02	100%	0.0E+00	0%	0.0E+00	0%
3.7E+01	99%	4.0E-01	1%	0.0E+00	0%
5.8E-11	100%	0.0E+00	0%	0.0E+00	0%
3.1E-01	95%	1.8E-02	5%	0.0E+00	0%
4.1E+00	100%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
1.1E-02	100%	0.0E+00	0%	0.0E+00	0%
1.2E-01	100%	0.0E+00	0%	0.0E+00	0%
5.0E-01	100%	0.0E+00	0%	0.0E+00	0%

C/ External Cost

Values
Linked to air emissions
Greenhouse effect (direct, 100 yrs) Euros 5.7E-01
Stratospheric Ozone Depletion Euros 9.3E-06
Air acidification Euros 5.0E-02
Photochemical oxidation Euros 1.1E-01
Linked to water effluents
Eutrophication Euros 2.6E-02
Linked to solid waste
Disaminy caused by incineration Euros 2.1E-06
Disaminy caused by landfilling Euros 3.7E-03
Linked to human health
Carcinogenic potential of heavy metals Euros 2.0E-04
Human health effects caused by dusts Euros 5.2E-02
Human health effects caused by dioxins Euros 7.6E-07

Values		% total external cost	
min	max	min	max
5.7E-01	1.4E+00	70.1%	33.0%
9.3E-06	9.3E-06	0.0%	0.0%
5.0E-02	5.0E-01	6.2%	11.5%
1.1E-01	1.4E-01	13.5%	3.2%
2.6E-02	2.6E-02	3.2%	0.6%
2.1E-06	7.3E-06	0.0%	0.0%
3.7E-03	1.2E-02	0.5%	0.3%
2.0E-04	2.0E-04	0.0%	0.0%
5.2E-02	2.2E+00	6.5%	51.4%
7.6E-07	1.6E-06	0.0%	0.0%
1	4	100%	100%

min	max	min	max	min	max
5.5E-01	1.4E+00	1.3E-02	3.3E-02	0.0E+00	0.0E+00
9.3E-06	9.3E-06	0.0E+00	0.0E+00	0.0E+00	0.0E+00
4.9E-02	4.9E-01	3.6E-04	3.6E-03	0.0E+00	0.0E+00
1.1E-01	1.4E-01	2.4E-04	3.1E-04	0.0E+00	0.0E+00
5.6E-04	5.6E-04	2.6E-02	2.6E-02	0.0E+00	0.0E+00
2.1E-06	7.3E-06	0.0E+00	0.0E+00	0.0E+00	0.0E+00
3.7E-03	1.2E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2.0E-04	2.0E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00
5.2E-02	2.2E+00	5.5E-04	2.3E-02	0.0E+00	0.0E+00
7.6E-07	1.6E-06	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1	4	0	0	0	0
95%	98%	5%	2%	0%	0%

D/ Internalisation of the external Cost

Taxes paid (total)
Denmark Euros 1.5E+00
France Euros 3.5E+01
Poland Euros 5.9E-01

Values		% total external cost	
min	max	min	max
1.5E+00	8.0E+00	34.3%	184.3%
3.5E+01	4.2E+01	4298.0%	962.7%
5.9E-01	6.8E-01	73.2%	156.5%
1	42	73%	963%

min	max	min	max	min	max
1.5E+00	7.8E+00	2.0E-02	2.0E-01	0.0E+00	0.0E+00
4.6E-01	7.3E+00	3.4E+01	3.4E+01	0.0E+00	0.0E+00
4.1E-01	4.8E+00	1.8E-01	2.0E+00	0.0E+00	0.0E+00
0	8	0	34	0	0

Part of the external cost internalised

Taxes paid - Linked to air emissions
Denmark Euros 5.1E-01
France Euros 2.4E-02
Poland Euros 2.3E-02

Values		% total taxes paid	
min	max	min	max
5.1E-01	7.0E-01	34.3%	8.7%
2.4E-02	2.5E-02	0.1%	0.1%
2.3E-02	2.3E-02	3.9%	0.3%
0	1	0%	9%

min	max	min	max	min	max
5.0E-01	6.9E-01	6.3E-03	1.0E-02	0.0E+00	0.0E+00
2.4E-02	2.4E-02	8.5E-05	9.1E-05	0.0E+00	0.0E+00
2.3E-02	2.3E-02	1.1E-04	1.1E-04	0.0E+00	0.0E+00
0	1	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to water effluents
Denmark Euros 6.1E-03
France Euros 3.4E+01
Poland Euros 1.7E-01

Values		% total taxes paid	
min	max	min	max
6.1E-03	6.1E-03	0.4%	0.1%
3.4E+01	3.4E+01	99.2%	82.5%
1.7E-01	1.9E+00	29.3%	27.8%
0	34	0%	83%

min	max	min	max	min	max
6.1E-03	6.1E-03	5.1E-05	5.1E-05	0.0E+00	0.0E+00
1.8E-01	1.8E-01	3.4E+01	3.4E+01	0.0E+00	0.0E+00
5.6E-03	9.4E-03	1.7E-01	1.9E+00	0.0E+00	0.0E+00
0	0	0	34	0	0

Part of the external cost internalised

Taxes paid - Linked to solid waste
Denmark Euros 4.0E-02
France Euros 1.2E-03
Poland Euros 0.0E+00

Values		% total taxes paid	
min	max	min	max
4.0E-02	4.0E-02	2.7%	0.5%
1.2E-03	2.3E-03	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0	0	0%	0%

min	max	min	max	min	max
4.0E-02	4.0E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1.2E-03	2.3E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to material consumption
Denmark Euros 3.8E-01
France Euros 3.0E-02
Poland Euros 5.6E-03

Values		% total taxes paid	
min	max	min	max
3.8E-01	3.8E-01	25.4%	4.7%
3.0E-02	1.7E-01	0.1%	0.4%
5.6E-03	6.2E-02	0.9%	0.9%
0	0	0%	5%

min	max	min	max	min	max
3.8E-01	3.8E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
3.0E-02	1.7E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00
5.6E-03	6.2E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to energy consumption
Denmark Euros 4.8E-01
France Euros 2.2E-01
Poland Euros 3.9E-01

Values		% total taxes paid	
min	max	min	max
4.8E-01	6.8E+00	32.7%	85.0%
2.2E-01	7.1E-01	0.6%	16.9%
3.9E-01	4.8E+00	65.8%	71.0%
0	7	1%	85%

min	max	min	max	min	max
4.7E-01	6.6E+00	1.3E-02	1.9E-01	0.0E+00	0.0E+00
2.1E-01	6.9E+00	6.0E-03	1.9E-01	0.0E+00	0.0E+00
3.8E-01	4.7E+00	1.1E-02	1.3E-01	0.0E+00	0.0E+00
0	7	0	0	0	0

E/ Life Cycle Price

% of external cost internalised	min	max
	73%	963%
% of price corresponding to internalised external cost	min	max

Gardening

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

	Values	Production stage		Use stage		End of life stage	
		Values	%	Values	%	Values	%
Linked to resources consumption							
Depletion of non renewable resources	4.0E+02	4.0E+02	1.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Linked to air emissions							
Greenhouse effect (direct, 100 yrs)	3.4E+03	3.4E+03	1.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Stratospheric Ozone Depletion	1.3E-05	1.3E-05	1.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Air acidification	2.1E+01	2.1E+01	1.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Photochemical oxidation	1.4E+00	1.4E+00	1.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Linked to water effluents							
Eutrophication	2.5E+02	5.8E+01	2.3E-01	1.9E+02	7.7E-01	0.0E+00	0.0E+00
Linked to human health							
Human Toxicity	1.6E+04	7.9E+02	4.9E-02	1.5E+04	9.5E-01	0.0E+00	0.0E+00
Years of Life Lost	8.0E-07	8.0E-07	1.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Linked to ecotoxicological risk							
Aquatic Ecotoxicity	2.2E+04	2.2E+02	1.0E-02	2.2E+04	9.9E-01	0.0E+00	0.0E+00
Sediment Ecotoxicity	2.3E+04	6.6E+02	2.9E-02	2.2E+04	9.7E-01	0.0E+00	0.0E+00
Terrestrial Ecotoxicity	5.4E+03	9.3E+00	1.7E-03	5.4E+03	1.0E+00	0.0E+00	0.0E+00

B/ Other Environmental Indicators

	Values	Production stage		Use stage		End of life stage	
		Values	%	Values	%	Values	%
Primary energy	6.5E+01	6.5E+01	1.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Fossil energy	0.0E+00	0.0E+00	#DIV/0!	0.0E+00	#DIV/0!	0.0E+00	#DIV/0!
Consumption of raw materials	7.5E+00	7.5E+00	1.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Dusts	9.3E-01	9.3E-01	1.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Dioxins	4.4E-12	4.4E-12	1.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Metals into air	1.0E-02	1.0E-02	1.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Metals into water	2.4E-01	2.4E-01	1.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Metals into soil	0.0E+00	0.0E+00	#DIV/0!	0.0E+00	#DIV/0!	0.0E+00	#DIV/0!
Municipal and industrial waste	1.2E+02	2.4E-02	2.1E-04	0.0E+00	0.0E+00	1.2E+02	1.0E+00
Hazardous waste	1.8E-04	1.8E-04	1.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Inert waste	7.5E-04	7.5E-04	1.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

C/ External Cost

	Values	% total external cost		Production stage		Use stage		End of life stage			
		min	max	min	max	min	max	min	max		
Linked to air emissions											
Greenhouse effect (direct, 100 yrs)	6.4E-02	1.6E-01	8.7%	17.7%	6.4E-02	1.6E-01	0.0E+00	0.0E+00	0.0E+00		
Stratospheric Ozone Depletion	8.8E-09	8.8E-09	0.0%	0.0%	8.8E-09	8.8E-09	0.0E+00	0.0E+00	0.0E+00		
Air acidification	3.1E-03	3.1E-02	0.4%	3.4%	3.1E-03	3.1E-02	0.0E+00	0.0E+00	0.0E+00		
Photochemical oxidation	1.0E-03	1.3E-03	0.1%	0.1%	1.0E-03	1.3E-03	0.0E+00	0.0E+00	0.0E+00		
Linked to water effluents											
Eutrophication	6.7E-01	6.7E-01	90.5%	72.7%	8.8E-02	8.8E-02	5.8E-01	5.8E-01	0.0E+00	0.0E+00	
Linked to solid waste											
Disaminty caused by incineration	0.0E+00	0.0E+00	0.0%	0.0%	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00		
Disaminty caused by landfilling	1.5E-04	4.7E-04	0.0%	0.1%	1.5E-04	4.7E-04	0.0E+00	0.0E+00	0.0E+00		
Linked to human health											
Carcinogenic potential of heavy metals	3.9E-06	3.9E-06	0.0%	0.0%	3.9E-06	3.9E-06	0.0E+00	0.0E+00	0.0E+00		
Human health effects caused by dusts	1.3E-03	5.5E-02	0.2%	6.0%	1.3E-03	5.5E-02	0.0E+00	0.0E+00	0.0E+00		
Human health effects caused by dioxins	5.7E-08	1.2E-07	0.0%	0.0%	5.7E-08	1.2E-07	0.0E+00	0.0E+00	0.0E+00		
Total External Cost		1	1	100%	100%	0	0	1	1	0	0
						21%	37%	79%	63%	0%	0%

D/ Internalisation of the external Cost

	Values	% total external cost		Production stage		Use stage		End of life stage			
		min	max	min	max	min	max	min	max		
Taxes paid (total)											
Denmark	8.1E+00	9.4E+00	1104.63%	1020.58%	1.2E+00	2.4E+00	7.0E+00	7.0E+00	0.0E+00	0.0E+00	
France	1.2E+02	1.2E+02	16671.80%	13530.16%	1.1E+01	1.3E+01	1.1E+02	1.1E+02	0.0E+00	0.0E+00	
Poland	7.5E-02	9.0E-01	10.13%	98.49%	7.5E-02	9.0E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
Part of the external cost internalised		0	124	10%	13530%	0	13	0	111	0	0
Taxes paid - Linked to air emissions											
Denmark	2.8E-02	3.9E-02	0.3%	0.4%	2.8E-02	3.9E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
France	7.0E-04	7.6E-04	0.0%	0.0%	7.0E-04	7.6E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
Poland	8.6E-04	8.6E-04	1.2%	0.1%	8.6E-04	8.6E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
Part of the external cost internalised		0	0	0%	0%	0	0	0	0	0	0
Taxes paid - Linked to water effluents											
Denmark	7.8E+00	7.8E+00	96.1%	83.5%	8.5E-01	8.5E-01	7.0E+00	7.0E+00	0.0E+00	0.0E+00	
France	1.2E+02	1.2E+02	99.9%	98.9%	1.1E+01	1.1E+01	1.1E+02	1.1E+02	0.0E+00	0.0E+00	
Poland	1.0E-03	1.0E-03	1.3%	0.1%	1.0E-03	1.0E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
Part of the external cost internalised		0	123	1%	99%	0	11	0	111	0	0
Taxes paid - Linked to solid waste											
Denmark	1.7E-03	2.0E-03	0.0%	0.0%	1.7E-03	2.0E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
France	3.6E-04	5.1E-04	0.0%	0.0%	3.6E-04	5.1E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
Poland	0.0E+00	0.0E+00	0.0%	0.0%	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
Part of the external cost internalised		0	0	0%	0%	0	0	0	0	0	0
Taxes paid - Linked to material consumption											
Denmark	5.0E-03	5.0E-03	0.1%	0.1%	5.0E-03	5.0E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
France	3.9E-04	2.3E-03	0.0%	0.0%	3.9E-04	2.3E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
Poland	7.4E-05	8.2E-04	0.1%	0.1%	7.4E-05	8.2E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
Part of the external cost internalised		0	0	0%	0%	0	0	0	0	0	0
Taxes paid - Linked to energy consumption											
Denmark	9.1E-02	1.3E+00	1.1%	13.6%	9.1E-02	1.3E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
France	4.1E-02	1.3E+00	0.0%	1.1%	4.1E-02	1.3E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
Poland	7.3E-02	9.0E-01	97.4%	99.7%	7.3E-02	9.0E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
Part of the external cost internalised		0	1	0%	100%	0	1	0	0	0	0

E/ Life Cycle Price

	min	max
% of external cost internalised	10%	13530%
% of price corresponding to internalised external cost		

Water supply

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values
Linked to resources consumption
Depletion of non renewable resources kg antimony eq. 4.5E-01
Linked to air emissions
Greenhouse effect (direct, 100 yrs) g CO ₂ eq. 5.1E+04
Stratospheric Ozone Depletion g CFC-11 eq. 9.9E-03
Air acidification g SO ₂ eq. 6.1E+02
Photochemical oxidation g ethylene eq. 7.6E+01
Linked to water effluents
Eutrophication g PO ₄ eq. 9.4E+02
Linked to human health
Human Toxicity g eq. 1-4-dichlorobenzene 3.4E+09
Years of Life Lost year 5.7E-05
Linked to ecotoxicological risk
Aquatic Ecotoxicity g eq. 1-4-dichlorobenzene 6.8E+08
Sediment Ecotoxicity g eq. 1-4-dichlorobenzene 2.2E+09
Terrestrial Ecotoxicity g eq. 1-4-dichlorobenzene 3.3E+04

Values	%	Values	%	Values	%
3.7E-01	8.1E-01	0.0E+00	0.0E+00	8.5E-02	1.9E-01
3.6E+04	6.9E-01	0.0E+00	0.0E+00	1.6E+04	3.1E-01
6.3E-03	6.4E-01	0.0E+00	0.0E+00	3.6E-03	3.6E-01
5.1E+02	8.3E-01	0.0E+00	0.0E+00	1.0E+02	1.7E-01
6.8E+01	8.7E-01	0.0E+00	0.0E+00	9.8E+00	1.3E-01
1.0E+00	1.1E-03	0.0E+00	0.0E+00	9.4E+02	1.0E+00
3.6E+05	1.1E-04	0.0E+00	0.0E+00	3.4E+09	1.0E+00
2.1E-05	3.7E-01	0.0E+00	0.0E+00	3.6E-05	6.3E-01
7.0E+04	1.0E-04	0.0E+00	0.0E+00	6.8E+08	1.0E+00
2.3E+05	1.0E-04	0.0E+00	0.0E+00	2.2E+09	1.0E+00
1.5E+03	4.6E-02	0.0E+00	0.0E+00	3.2E+04	9.5E-01

B/ Other Environmental Indicators

Values
Primary energy MJ 1.4E+03
Fossil energy MJ 0.0E+00
Consumption of raw materials kg 1.2E+05
Dusts g 6.2E+02
Dioxins g 3.1E-11
Metals into air g 1.2E+01
Metals into water g 4.2E+01
Metals into soil g 4.5E+01
Municipal and industrial waste kg 1.0E+01
Hazardous waste kg 4.5E-02
Inert waste kg 2.2E+00

Values	%	Values	%	Values	%
1.0E+03	7.2E-01	0.0E+00	0.0E+00	4.0E+02	2.8E-01
0.0E+00	#DIV/0!	0.0E+00	#DIV/0!	0.0E+00	#DIV/0!
1.2E+05	1.0E+00	0.0E+00	0.0E+00	1.4E+01	1.2E-04
5.5E+01	8.8E-02	0.0E+00	0.0E+00	5.6E+02	9.1E-01
0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.1E-11	1.0E+00
6.2E+00	5.0E-01	0.0E+00	0.0E+00	6.2E+00	5.0E-01
2.4E+01	5.7E-01	0.0E+00	0.0E+00	1.8E+01	4.3E-01
0.0E+00	0.0E+00	0.0E+00	0.0E+00	4.5E+01	1.0E+00
2.6E+00	2.5E-01	0.0E+00	0.0E+00	7.6E+00	7.5E-01
4.1E-02	9.1E-01	0.0E+00	0.0E+00	3.9E-03	8.6E-02
2.2E+00	9.9E-01	0.0E+00	0.0E+00	2.7E-02	1.3E-02

C/ External Cost

Values	% total external cost		
min	max	min	max
9.8E-01	2.5E+00	28.2%	5.9%
6.7E-06	6.7E-06	0.0%	0.0%
8.9E-02	8.9E-01	2.6%	2.1%
5.5E-02	7.0E-02	1.6%	0.2%
1.4E+00	1.4E+00	41.8%	3.5%
1.3E-05	4.7E-05	0.0%	0.0%
3.3E-02	1.1E-01	1.0%	0.3%
1.7E-04	1.7E-04	0.0%	0.0%
8.6E-01	3.7E+01	24.9%	88.1%
4.0E-07	8.6E-07	0.0%	0.0%

min	max	min	max	min	max
6.8E-01	1.7E+00	0.0E+00	0.0E+00	3.0E-01	7.5E-01
4.3E-06	4.3E-06	0.0E+00	0.0E+00	2.4E-06	2.4E-06
7.4E-02	7.4E-01	0.0E+00	0.0E+00	1.5E-02	1.5E-01
4.8E-02	6.1E-02	0.0E+00	0.0E+00	7.1E-03	9.1E-03
1.6E-03	1.6E-03	0.0E+00	0.0E+00	1.4E+00	1.4E+00
1.3E-05	4.7E-05	0.0E+00	0.0E+00	1.6E-08	5.5E-08
2.9E-02	9.1E-02	0.0E+00	0.0E+00	4.6E-03	1.4E-02
9.0E-05	9.0E-05	0.0E+00	0.0E+00	8.4E-05	8.4E-05
7.6E-02	3.2E+00	0.0E+00	0.0E+00	7.8E-01	3.3E+01
0.0E+00	0.0E+00	0.0E+00	0.0E+00	4.0E-07	8.6E-07
1	6	0	0	3	36
26%	14%	0%	0%	74%	86%

D/ Internalisation of the external Cost

Taxes paid (total)	Euros
Denmark	Euros
France	Euros
Sweden	Euros
Poland	Euros

Values	% total external cost		
min	max	min	max
8.0E-01	1.1E+02	2298.76%	253.03%
1.3E+02	1.8E+02	3612.57%	427.86%
2.4E+00	3.4E+00	68.45%	8.13%
2.6E+00	3.1E+01	76.32%	73.54%

min	max	min	max	min	max
7.0E-01	8.9E+01	0.0E+00	0.0E+00	9.1E+00	1.6E+01
6.7E+00	5.2E+01	0.0E+00	0.0E+00	1.2E+02	1.3E+02
1.4E+00	2.1E+00	0.0E+00	0.0E+00	9.9E-01	1.3E+00
2.2E+00	2.5E+01	0.0E+00	0.0E+00	4.6E-01	5.5E+00

Part of the external cost internalised

3	178	76%	428%
---	-----	-----	------

2	89	0	0	0	126
---	----	---	---	---	-----

Taxes paid - Linked to air emissions

Values	% total taxes paid		
min	max	min	max
9.1E-01	1.2E+00	1.1%	1.2%
2.3E-02	2.5E-02	0.0%	0.0%
1.8E+00	2.9E+00	78.1%	84.7%
3.8E-02	3.8E-02	1.4%	0.1%

min	max	min	max	min	max
7.0E-01	9.2E-01	0.0E+00	0.0E+00	2.1E-01	3.3E-01
2.0E-02	2.1E-02	0.0E+00	0.0E+00	3.6E-03	3.8E-03
1.4E+00	2.1E+00	0.0E+00	0.0E+00	4.7E-01	8.2E-01
2.7E-02	2.7E-02	0.0E+00	0.0E+00	1.1E-02	1.1E-02

Part of the external cost internalised

0	1	0%	1%
---	---	----	----

0	1	0	0	0	0
---	---	---	---	---	---

Taxes paid - Linked to water effluents

Values	% total taxes paid		
min	max	min	max
8.4E+00	8.4E+00	10.6%	8.0%
1.2E+02	1.2E+02	94.9%	66.5%
5.2E-01	5.2E-01	21.9%	15.3%
2.1E-02	3.0E-02	0.8%	0.1%

min	max	min	max	min	max
1.7E-02	1.7E-02	0.0E+00	0.0E+00	8.4E+00	8.4E+00
5.7E-01	5.7E-01	0.0E+00	0.0E+00	1.2E+02	1.2E+02
1.4E-03	1.4E-03	0.0E+00	0.0E+00	5.2E-01	5.2E-01
1.4E-02	2.3E-02	0.0E+00	0.0E+00	6.4E-03	6.8E-03

Part of the external cost internalised

0	119	1%	67%
---	-----	----	-----

0	1	0	0	0	118
---	---	---	---	---	-----

Taxes paid - Linked to solid waste

Values	% total taxes paid		
min	max	min	max
2.5E-01	2.9E-01	0.3%	0.3%
5.1E-02	7.2E-02	0.0%	0.0%
9.2E-05	9.2E-05	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%

min	max	min	max	min	max
2.0E-01	2.3E-01	0.0E+00	0.0E+00	5.2E-02	6.2E-02
4.0E-02	5.6E-02	0.0E+00	0.0E+00	1.1E-02	1.6E-02
7.2E-05	7.2E-05	0.0E+00	0.0E+00	2.0E-05	2.0E-05
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Part of the external cost internalised

0	0	0%	0%
---	---	----	----

0	0	0	0	0	0
---	---	---	---	---	---

Taxes paid - Linked to material consumption

Values	% total taxes paid		
min	max	min	max
6.8E+01	6.8E+01	85.0%	64.1%
5.3E+00	3.1E+01	4.3%	17.3%
3.8E-12	3.8E-12	0.0%	0.0%
1.0E+00	1.1E+01	38.2%	36.2%

min	max	min	max	min	max
6.8E+01	6.8E+01	0.0E+00	0.0E+00	-3.7E-03	-3.7E-03
5.3E+00	3.1E+01	0.0E+00	0.0E+00	-2.9E-04	-1.7E-03
1.8E-12	1.8E-12	0.0E+00	0.0E+00	2.0E-12	2.0E-12
1.0E+00	1.1E+01	0.0E+00	0.0E+00	-5.5E-05	-6.1E-04

Part of the external cost internalised

1	68	4%	64%
---	----	----	-----

1	68	0	0	0	0
---	----	---	---	---	---

Taxes paid - Linked to energy consumption

Values	% total taxes paid		
min	max	min	max
2.0E+00	2.7E+01	2.5%	26.0%
8.9E-01	2.9E+01	0.7%	16.1%
0.0E+00	0.0E+00	0.0%	0.0%
1.6E+00	2.0E+01	59.6%	63.6%

min	max	min	max	min	max
1.4E+00	2.0E+01	0.0E+00	0.0E+00	5.6E-01	7.8E+00
6.4E-01	2.1E+01	0.0E+00	0.0E+00	2.5E-01	8.1E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
1.1E+00	1.4E+01	0.0E+00	0.0E+00	4.4E-01	5.5E+00

Part of the external cost internalised

1	29	1%	64%
---	----	----	-----

1	21	0	0	0	8
---	----	---	---	---	---

E/ Life Cycle Price

Euros	145
-------	-----

% of external cost internalised	min	max
	76%	428%

% of price corresponding to internalised external cost	min	max
	2%	123%

Municipal waste

Functional unit: Consumption of per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Linked to resources consumption

Depletion of non renewable resources	kg antimony eq.
--------------------------------------	-----------------

Values

-1.8E-01

Linked to air emissions

Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
-------------------------------------	-----------------------

4.6E+05

Stratospheric Ozone Depletion	g CFC-11 eq.
-------------------------------	--------------

-3.0E-03

Air acidification	g SO ₂ eq.
-------------------	-----------------------

-1.0E+02

Photochemical oxidation	g ethylene eq.
-------------------------	----------------

7.8E+02

Linked to water effluents

Eutrophication	g PO ₄ eq.
----------------	-----------------------

3.9E+01

Linked to human health

Human Toxicity	g eq. 1-4-dichlorobenzene
----------------	---------------------------

3.0E+06

Years of Life Lost

	year
--	------

1.7E-06

Linked to ecotoxicological risk

Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
---------------------	---------------------------

5.9E+05

Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
----------------------	---------------------------

1.9E+06

Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene
-------------------------	---------------------------

7.2E+02

Values % Values % Values %

0.0E+00	0%	0.0E+00	0%	-1.8E-01	100%
---------	----	---------	----	----------	------

0.0E+00	0%	0.0E+00	0%	4.6E+05	100%
---------	----	---------	----	---------	------

0.0E+00	0%	0.0E+00	0%	-3.0E-03	100%
---------	----	---------	----	----------	------

0.0E+00	0%	0.0E+00	0%	-1.0E+02	100%
---------	----	---------	----	----------	------

0.0E+00	0%	0.0E+00	0%	7.8E+02	100%
---------	----	---------	----	---------	------

0.0E+00	0%	0.0E+00	0%	3.9E+01	100%
---------	----	---------	----	---------	------

0.0E+00	0%	0.0E+00	0%	3.0E+06	100%
---------	----	---------	----	---------	------

0.0E+00	0%	0.0E+00	0%	1.7E-06	100%
---------	----	---------	----	---------	------

0.0E+00	0%	0.0E+00	0%	5.9E+05	100%
---------	----	---------	----	---------	------

0.0E+00	0%	0.0E+00	0%	1.9E+06	100%
---------	----	---------	----	---------	------

0.0E+00	0%	0.0E+00	0%	7.2E+02	100%
---------	----	---------	----	---------	------

B/ Other Flows Not Taken Into Account in the Environmental Impacts Above

Primary energy	MJ
----------------	----

-6.17E+02

Fossil energy	MJ
---------------	----

0.00E+00

Consumption of raw materials	kg
------------------------------	----

1.58E+02

Dusts	g
-------	---

6.59E+00

Dioxins	g
---------	---

1.79E-07

Metals into air	g
-----------------	---

-7.56E-01

Metals into water	g
-------------------	---

5.19E+00

Metals into soil	g
------------------	---

5.83E+01

Municipal and industrial waste	kg
--------------------------------	----

5.75E+02

Hazardous waste	kg
-----------------	----

4.78E+00

Inert waste	kg
-------------	----

3.76E+00

0.0E+00	0%	0.0E+00	0%	-6.2E+02	100%
---------	----	---------	----	----------	------

0.0E+00	#DIV/0!	0.0E+00	#DIV/0!	0.0E+00	#DIV/0!
---------	---------	---------	---------	---------	---------

0.0E+00	0%	0.0E+00	0%	1.6E+02	100%
---------	----	---------	----	---------	------

0.0E+00	0%	0.0E+00	0%	6.6E+00	100%
---------	----	---------	----	---------	------

0.0E+00	0%	0.0E+00	0%	1.8E-07	100%
---------	----	---------	----	---------	------

0.0E+00	0%	0.0E+00	0%	-7.6E-01	100%
---------	----	---------	----	----------	------

0.0E+00	0%	0.0E+00	0%	5.2E+00	100%
---------	----	---------	----	---------	------

0.0E+00	0%	0.0E+00	0%	5.8E+01	100%
---------	----	---------	----	---------	------

0.0E+00	0%	0.0E+00	0%	5.8E+02	100%
---------	----	---------	----	---------	------

0.0E+00	0%	0.0E+00	0%	4.8E+00	100%
---------	----	---------	----	---------	------

0.0E+00	0%	0.0E+00	0%	3.8E+00	100%
---------	----	---------	----	---------	------

C/ External Cost

Linked to air emissions

Greenhouse effect (direct, 100 yrs)	Euros
-------------------------------------	-------

Values % total external cost

min	max	min	max
-----	-----	-----	-----

8.7E+00	2.2E+01	93.3%	95.5%
---------	---------	-------	-------

Stratospheric Ozone Depletion	Euros
-------------------------------	-------

-2.0E-06	-2.0E-06	0.0%	0.0%
----------	----------	------	------

Air acidification	Euros
-------------------	-------

-1.5E-02	-1.5E-01	-0.2%	-0.6%
----------	----------	-------	-------

Photochemical oxidation	Euros
-------------------------	-------

5.7E-01	7.9E-01	6.1%	3.1%
---------	---------	------	------

Linked to water effluents

Eutrophication	Euros
----------------	-------

6.1E-02	6.1E-02	0.6%	0.3%
---------	---------	------	------

Linked to solid waste

Disaminy caused by incineration	Euros
---------------------------------	-------

0.0E+00	0.0E+00	0.0%	0.0%
---------	---------	------	------

Disaminy caused by landfilling	Euros
--------------------------------	-------

0.0E+00	0.0E+00	0.0%	0.0%
---------	---------	------	------

Linked to human health

Carcinogenic potential of heavy metals	Euros
--	-------

-3.3E-04	-3.3E-04	0.0%	0.0%
----------	----------	------	------

Human health effects caused by dusts	Euros
--------------------------------------	-------

9.2E-03	3.9E-01	0.1%	1.7%
---------	---------	------	------

Human health effects caused by dioxins	Euros
--	-------

2.3E-03	5.0E-03	0.0%	0.0%
---------	---------	------	------

Total External Cost Euros

9	23	100%	100%
---	----	------	------

min max min max min max

0.0E+00	0.0E+00	0.0E+00	0.0E+00	8.7E+00	2.2E+01
---------	---------	---------	---------	---------	---------

0.0E+00	0.0E+00	0.0E+00	0.0E+00	-2.0E-06	-2.0E-06
---------	---------	---------	---------	----------	----------

0.0E+00	0.0E+00	0.0E+00	0.0E+00	-1.5E-02	-1.5E-01
---------	---------	---------	---------	----------	----------

0.0E+00	0.0E+00	0.0E+00	0.0E+00	5.7E-01	7.9E-01
---------	---------	---------	---------	---------	---------

0.0E+00	0.0E+00	0.0E+00	0.0E+00	6.1E-02	6.1E-02
---------	---------	---------	---------	---------	---------

0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
---------	---------	---------	---------	---------	---------

0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
---------	---------	---------	---------	---------	---------

0.0E+00	0.0E+00	0.0E+00	0.0E+00	-3.3E-04	-3.3E-04
---------	---------	---------	---------	----------	----------

0.0E+00	0.0E+00	0.0E+00	0.0E+00	9.2E-03	3.9E-01
---------	---------	---------	---------	---------	---------

0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.3E-03	5.0E-03
---------	---------	---------	---------	---------	---------

0	0	0	0	9	23
---	---	---	---	---	----

0%	0%	0%	0%	100%	100%
----	----	----	----	------	------

D/ Internalisation of the external Cost

Taxes paid (total)

Denmark	Euros
---------	-------

Values % total external cost

min	max	min	max
-----	-----	-----	-----

1.1E+01	1.6E+00	117.2%	7.1%
---------	---------	--------	------

France	Euros
--------	-------

2.7E+00	-8.5E+00	28.8%	-36.8%
---------	----------	-------	--------

Poland	Euros
--------	-------

-7.0E-01	-8.7E+00	-7.4%	-37.6%
----------	----------	-------	--------

Part of the external cost internalised

-1	2	-7%	7%
----	---	-----	----

min max min max min max

0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.1E+01	1.6E+00
---------	---------	---------	---------	---------	---------

0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.7E+00	-8.5E+00
---------	---------	---------	---------	---------	----------

0.0E+00	0.0E+00	0.0E+00	0.0E+00	-7.0E-01	-8.7E+00
---------	---------	---------	---------	----------	----------

0	0	0	0	-1	2
---	---	---	---	----	---

Taxes paid - Linked to air emissions

Denmark	Euros
---------	-------

Values % total taxes paid

min	max	min	max
-----	-----	-----	-----

-2.8E-01	-3.7E-01	-2.6%	22.5%
----------	----------	-------	-------

France	Euros
--------	-------

9.8E-04	1.9E-03	0.0%	0.0%
---------	---------	------	------

Poland	Euros
--------	-------

7.0E-03	7.0E-03	-1.0%	-0.1%
---------	---------	-------	-------

Part of the external cost internalised

0	0	-3%	0%
---	---	-----	----

0.0E+00	0.0E+00	0.0E+00	0.0E+00	-2.8E-01	-3.7E-01
---------	---------	---------	---------	----------	----------

0.0E+00	0.0E+00	0.0E+00	0.0E+00	9.8E-04	1.9E-03
---------	---------	---------	---------	---------	---------

0.0E+00	0.0E+00	0.0E+00	0.0E+00	7.0E-03	7.0E-03
---------	---------	---------	---------	---------	---------

0	0	0	0	0	0
---	---	---	---	---	---

Taxes paid - Linked to water effluents

Denmark	Euros
---------	-------

Values % total taxes paid

min	max	min	max
-----	-----	-----	-----

9.6E-02	9.6E-02	0.9%	5.8%
---------	---------	------	------

France	Euros
--------	-------

Baby products

Functional unit: Consumption of per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g ethylene eq.
Linked to water effluents	
Eutrophication	g PO ₄ eq.
Linked to human health	
Human Toxicity	g eq. 1-4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene

Values
0.0E+00
0.0E+00
0.0E+00
1.0E+02
2.7E+01
3.2E+00
1.2E+03
6.5E-06
1.5E+02
3.9E+02
2.7E-01

Values	%	Values	%	Values	%
0.0E+00	#DIV/0!	0.0E+00	#DIV/0!	0.0E+00	#DIV/0!
0.0E+00	#DIV/0!	0.0E+00	#DIV/0!	0.0E+00	#DIV/0!
0.0E+00	0%	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0%	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0%	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0%	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0%	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0%	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0%	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0%	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0%	0.0E+00	0.0E+00	0.0E+00	0.0E+00

B/ Other Flows Not Taken into Account in the Environmental Impacts Above

Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
2.3E+02
0.0E+00
7.5E-01
3.7E+01
0.0E+00
1.8E-02
7.4E-01
0.0E+00
0.0E+00
0.0E+00
0.0E+00
0.0E+00

0.0E+00	0%	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	#DIV/0!	0.0E+00	#DIV/0!	0.0E+00	#DIV/0!
0.0E+00	0%	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0%	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	#DIV/0!	0.0E+00	#DIV/0!	0.0E+00	#DIV/0!
0.0E+00	0%	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	#DIV/0!	0.0E+00	#DIV/0!	0.0E+00	#DIV/0!
0.0E+00	0%	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	#DIV/0!	0.0E+00	#DIV/0!	0.0E+00	#DIV/0!
0.0E+00	0%	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	#DIV/0!	0.0E+00	#DIV/0!	0.0E+00	#DIV/0!

C/ External Cost

Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros
Linked to water effluents	
Eutrophication	Euros
Linked to solid waste	
Disaminty caused by incineration	Euros
Disaminty caused by landfilling	Euros
Linked to human health	
Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Values		% total external cost	
min	max	min	max
0.0E+00	0.0E+00	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
1.5E-02	1.5E-01	16.7%	6.5%
2.0E-02	2.5E-02	21.9%	1.1%
5.0E-03	5.0E-03	5.4%	0.2%
0.0E+00	0.0E+00	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
5.1E-02	2.2E+00	56.0%	92.3%
0.0E+00	0.0E+00	0.0%	0.0%
0	2	100%	100%

min	max	min	max	min	max
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0
0%	0%	0%	0%	0%	0%

Total External Cost Euros

D/ Internalisation of the external Cost

Taxes paid (total)	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
4.4E-01	4.7E+00	484.1%	197.8%
1.9E+00	6.5E+00	2050.5%	273.6%
2.8E-01	3.3E+00	301.0%	140.1%
0	6	301%	274%

0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to air emissions	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
8.7E-02	8.7E-02	19.8%	1.9%
6.0E-03	6.4E-03	0.3%	0.1%
7.4E-03	7.4E-03	2.7%	0.2%
0	0	0%	2%

0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to water effluents	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
2.8E-02	2.8E-02	6.3%	0.6%
1.7E+00	1.7E+00	91.8%	26.6%
6.7E-03	7.5E-02	2.4%	2.3%
0	2	2%	27%

0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to solid waste	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
0.0E+00	0.0E+00	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0	0	0%	0%

0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to material consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
8.6E-04	8.6E-04	0.2%	0.0%
6.8E-05	3.9E-04	0.0%	0.0%
1.3E-05	1.4E-04	0.0%	0.0%
0	0	0%	0%

0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to energy consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
3.3E-01	4.6E+00	73.7%	97.5%
1.5E-01	4.7E+00	7.9%	73.3%
2.8E-01	3.2E+00	94.9%	97.5%
0	5	8%	98%

Packaging - total

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values	
Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g ethylene eq.
Linked to water effluents	
Eutrophication	g PO4 eq.
Linked to human health	
Human Toxicity	g eq. 1-4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene

Values
1.5E+00
2.2E+05
1.2E-01
2.6E+03
3.5E+02
1.8E+02
7.7E+08
1.2E-04
1.5E+08
5.0E+08
3.9E+03

Values	%	Values	%	Values	%
1.4E+00	90%	0.0E+00	0%	1.6E-01	10%
1.8E+05	84%	0.0E+00	0%	3.4E+04	16%
1.2E-01	93%	0.0E+00	0%	8.6E-03	7%
2.3E+03	91%	0.0E+00	0%	2.3E+02	9%
3.2E+02	91%	0.0E+00	0%	3.1E+01	9%
2.0E+01	11%	0.0E+00	0%	1.6E+02	89%
2.4E+08	31%	0.0E+00	0%	5.3E+08	69%
1.1E-04	90%	0.0E+00	0%	1.2E-05	10%
4.8E+07	31%	0.0E+00	0%	1.1E+08	69%
1.5E+08	31%	0.0E+00	0%	3.4E+08	69%
2.7E+03	70%	0.0E+00	0%	1.2E+03	30%

B/ Other Environmental Indicators

Values	
Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
6.1E+03
0.0E+00
6.8E+03
3.6E+02
1.2E-07
3.6E+00
2.7E+02
1.6E+00
1.7E+02
7.3E+00
1.3E+01

Values	%	Values	%	Values	%
5.2E+03	85%	0.0E+00	0%	9.0E+02	15%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
6.7E+03	98%	0.0E+00	0%	1.2E+02	2%
3.2E+02	89%	0.0E+00	0%	3.9E+01	11%
2.7E-09	2%	0.0E+00	0%	1.2E-07	98%
2.7E+00	76%	0.0E+00	0%	8.8E-01	24%
7.9E+01	29%	0.0E+00	0%	1.9E+02	71%
1.6E+00	100%	0.0E+00	0%	2.1E-03	0%
1.7E+01	10%	0.0E+00	0%	1.6E+02	90%
6.0E+00	83%	0.0E+00	0%	1.3E+00	17%
1.3E+01	100%	0.0E+00	0%	2.2E-03	0%

C/ External Cost

Values	
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros
Linked to water effluents	
Eutrophication	Euros
Linked to solid waste	
Disaminy caused by incineration	Euros
Disaminy caused by landfilling	Euros
Linked to human health	
Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Values		% total external cost	
min	max	min	max
4.1E+00	1.0E+01	63.0%	26.3%
8.4E-05	8.4E-05	0.0%	0.0%
3.7E-01	3.7E+00	5.7%	9.5%
2.5E-01	3.2E-01	3.9%	0.8%
2.8E-01	2.8E-01	4.3%	0.7%
2.1E-01	7.4E-01	3.2%	1.9%
7.8E-01	2.5E+00	12.0%	6.3%
2.1E-03	2.1E-03	0.0%	0.0%
5.0E-01	2.1E+01	7.7%	54.5%
1.6E-03	3.4E-03	0.0%	0.0%
Total External Cost	Euros	7	39

min	max	min	max	min	max
3.5E+00	8.7E+00	0.0E+00	0.0E+00	6.4E-01	1.6E+00
7.9E-05	7.9E-05	0.0E+00	0.0E+00	5.8E-06	5.8E-06
3.4E-01	3.4E+00	0.0E+00	0.0E+00	3.3E-02	3.3E-01
2.3E-01	3.0E-01	0.0E+00	0.0E+00	2.2E-02	2.9E-02
3.1E-02	3.1E-02	0.0E+00	0.0E+00	2.5E-01	2.5E-01
3.8E-04	1.3E-03	0.0E+00	0.0E+00	2.1E-01	7.4E-01
2.2E-01	6.8E-01	0.0E+00	0.0E+00	5.7E-01	1.8E+00
1.6E-03	1.6E-03	0.0E+00	0.0E+00	5.2E-04	5.2E-04
4.5E-01	1.9E+01	0.0E+00	0.0E+00	3.4E-02	2.3E+00
3.5E-05	7.5E-05	0.0E+00	0.0E+00	1.6E-03	3.4E-03
5	32	0	0	2	7
73%	82%	0%	0%	27%	18%

D/ Internalisation of the external Cost

Taxes paid (total)	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
3.0E+01	1.4E+02	457.6%	362.8%
7.1E+01	1.9E+02	1096.9%	494.3%
7.3E+00	8.8E+01	113.0%	223.3%
7	194	113%	494%

min	max	min	max	min	max
1.9E+01	1.2E+02	0.0E+00	0.0E+00	1.0E+01	2.8E+01
3.5E+01	1.4E+02	0.0E+00	0.0E+00	3.6E+01	5.4E+01
6.2E+00	7.5E+01	0.0E+00	0.0E+00	1.1E+00	1.3E+01
6	140	0	0	1	54

Part of the external cost internalised

Taxes paid - Linked to air emissions	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
3.5E+00	4.8E+00	11.7%	3.3%
1.1E-01	1.2E-01	0.2%	0.1%
1.6E-01	1.8E-01	2.2%	0.2%
0	5	0%	3%

min	max	min	max	min	max
3.1E+00	4.2E+00	0.0E+00	0.0E+00	3.9E-01	6.0E-01
9.7E-02	1.1E-01	0.0E+00	0.0E+00	9.9E-03	1.1E-02
1.4E-01	1.4E-01	0.0E+00	0.0E+00	1.8E-02	1.8E-02
0	4	0	0	0	1

Part of the external cost internalised

Taxes paid - Linked to water effluents	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
4.0E+00	4.0E+00	13.3%	2.8%
6.6E+01	6.6E+01	92.0%	33.8%
2.7E-01	2.1E+00	3.7%	2.4%
0	66	4%	34%

min	max	min	max	min	max
6.1E-02	6.1E-02	0.0E+00	0.0E+00	3.9E+00	3.9E+00
3.1E+01	3.1E+01	0.0E+00	0.0E+00	3.5E+01	3.5E+01
1.7E-01	1.5E+00	0.0E+00	0.0E+00	1.0E-01	6.5E-01
0	31	0	0	0	35

Part of the external cost internalised

Taxes paid - Linked to solid waste	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
7.8E+00	8.9E+00	26.4%	6.2%
1.2E+00	1.8E+00	1.7%	0.9%
0.0E+00	0.0E+00	0.0%	0.0%
0	9	0%	6%

min	max	min	max	min	max
3.2E+00	3.5E+00	0.0E+00	0.0E+00	4.6E+00	5.4E+00
3.2E-01	4.8E-01	0.0E+00	0.0E+00	9.2E-01	1.3E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	3	0	0	0	5

Part of the external cost internalised

Taxes paid - Linked to material consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
5.9E+00	5.9E+00	19.8%	4.1%
4.6E-01	2.7E+00	0.7%	1.4%
8.8E-02	9.6E-01	1.2%	1.1%
0	6	1%	4%

min	max	min	max	min	max
5.8E+00	5.8E+00	0.0E+00	0.0E+00	1.0E-01	1.0E-01
4.6E-01	2.6E+00	0.0E+00	0.0E+00	8.2E-03	4.7E-02
8.6E-02	9.5E-01	0.0E+00	0.0E+00	1.5E-03	1.7E-02
0	6	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to energy consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
8.5E+00	1.2E+02	28.7%	83.5%
3.9E+00	1.2E+02	5.4%	63.9%
6.8E+00	8.5E+01	92.9%	96.3%
4	124	5%	96%

min	max	min	max	min	max
7.3E+00	1.0E+02	0.0E+00	0.0E+00	1.3E+00	1.8E+01
3.3E+00	1.1E+02	0.0E+00	0.0E+00	5.7E-01	1.8E+01
5.8E+00	7.2E+01	0.0E+00	0.0E+00	1.0E+00	1.2E+01
3	106	0	0	1	18

E/ Life Cycle Price

% of external cost internalised	
min	max
113%	494%
% of price corresponding to internalised external cost	
min	max

Packaging - household

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values	
Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g ethylene eq.
Linked to water effluents	
Eutrophication	g PO ₄ eq.
Linked to human health	
Human Toxicity	g eq. 1-4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene

Values
1.1E+00
1.7E+05
8.3E-02
1.8E+03
2.4E+02
8.0E+01
3.9E+08
9.0E-05
7.8E+07
2.5E+08
3.0E+03

Values	%	Values	%	Values	%
1.0E+00	91%	0.0E+00	0%	1.0E-01	9%
1.5E+05	87%	0.0E+00	0%	2.3E+04	13%
7.8E-02	94%	0.0E+00	0%	4.7E-03	6%
1.7E+03	93%	0.0E+00	0%	1.3E+02	7%
2.3E+02	93%	0.0E+00	0%	1.8E+01	7%
1.1E+01	14%	0.0E+00	0%	6.9E+01	86%
1.2E+08	31%	0.0E+00	0%	2.6E+08	69%
8.3E-05	92%	0.0E+00	0%	6.9E-06	8%
2.4E+07	31%	0.0E+00	0%	5.3E+07	69%
7.9E+07	31%	0.0E+00	0%	1.7E+08	69%
2.2E+03	73%	0.0E+00	0%	8.0E+02	27%

B/ Other Environmental Indicators

Values	
Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
4.3E+03
0.0E+00
4.3E+03
2.8E+02
1.6E-08
2.6E+00
2.0E+02
8.0E-01
1.0E+02
5.5E+00
1.1E+01

Values	%	Values	%	Values	%
3.7E+03	86%	0.0E+00	0%	6.0E+02	14%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
4.2E+03	98%	0.0E+00	0%	8.7E+01	2%
2.6E+02	92%	0.0E+00	0%	2.2E+01	8%
1.4E-09	8%	0.0E+00	0%	1.5E-08	92%
1.9E+00	74%	0.0E+00	0%	6.7E-01	26%
5.9E+01	30%	0.0E+00	0%	1.4E+02	70%
8.0E-01	100%	0.0E+00	0%	1.1E-03	0%
9.2E-01	1%	0.0E+00	0%	1.0E+02	99%
4.6E+00	83%	0.0E+00	0%	9.2E-01	17%
1.1E+01	100%	0.0E+00	0%	1.1E-03	0%

C/ External Cost

Values	
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros
Linked to water effluents	
Eutrophication	Euros
Linked to solid waste	
Disaminy caused by incineration	Euros
Disaminy caused by landfilling	Euros
Linked to human health	
Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Values		% total external cost	
min	max	min	max
3.3E+00	8.4E+00	67.8%	27.7%
5.6E-05	5.6E-05	0.0%	0.0%
2.7E-01	2.7E+00	5.5%	8.8%
1.8E-01	2.3E-01	3.6%	0.7%
1.2E-01	1.2E-01	2.5%	0.4%
9.2E-02	3.2E-01	1.9%	1.1%
5.1E-01	1.6E+00	10.5%	5.3%
1.4E-03	1.4E-03	0.0%	0.0%
4.0E-01	1.7E+01	8.1%	56.0%
2.1E-04	4.5E-04	0.0%	0.0%
5	30	100%	100%

min	max	min	max	min	max
2.9E+00	7.2E+00	0.0E+00	0.0E+00	4.4E-01	1.1E+00
5.3E-05	5.3E-05	0.0E+00	0.0E+00	3.2E-06	3.2E-06
2.5E-01	2.5E+00	0.0E+00	0.0E+00	2.0E-02	2.0E-01
1.6E-01	2.1E-01	0.0E+00	0.0E+00	1.3E-02	1.7E-02
1.7E-02	1.7E-02	0.0E+00	0.0E+00	1.1E-01	1.1E-01
3.8E-04	1.3E-03	0.0E+00	0.0E+00	9.2E-02	3.2E-01
9.8E-02	3.1E-01	0.0E+00	0.0E+00	4.1E-01	1.3E+00
9.8E-04	9.6E-04	0.0E+00	0.0E+00	3.9E-04	3.9E-04
3.6E-01	1.6E+01	0.0E+00	0.0E+00	3.1E-02	1.3E+00
1.8E-05	3.8E-05	0.0E+00	0.0E+00	1.9E-04	4.2E-04
4	26	0	0	1	4
77%	85%	0%	0%	23%	15%

Total External Cost Euros

D/ Internalisation of the external Cost

Taxes paid (total)	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
1.9E+01	9.7E+01	380.7%	322.3%
3.5E+01	1.2E+02	715.5%	398.7%
5.1E+00	6.1E+01	104.2%	201.2%
5	120	104%	399%

min	max	min	max	min	max
1.3E+01	8.0E+01	0.0E+00	0.0E+00	6.0E+00	1.8E+01
1.9E+01	9.2E+01	0.0E+00	0.0E+00	1.6E+01	2.8E+01
4.3E+00	5.2E+01	0.0E+00	0.0E+00	7.4E-01	8.7E+00
4	#NOM?	0	0	1	28

Part of the external cost internalised

Taxes paid - Linked to air emissions	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
2.6E+00	3.7E+00	14.1%	3.8%
7.7E-02	8.3E-02	0.2%	0.1%
1.2E-01	1.2E-01	2.3%	0.2%
0	4	0%	4%

min	max	min	max	min	max
2.4E+00	3.3E+00	0.0E+00	0.0E+00	2.5E-01	4.0E-01
7.1E-02	7.7E-02	0.0E+00	0.0E+00	5.8E-03	6.3E-03
1.1E-01	1.1E-01	0.0E+00	0.0E+00	1.1E-02	1.1E-02
0	#NOM?	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to water effluents	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
1.8E+00	1.8E+00	9.9%	1.9%
3.1E+01	3.1E+01	89.3%	25.9%
1.5E-01	1.1E+00	2.9%	1.8%
0	31	3%	26%

min	max	min	max	min	max
4.5E-02	4.5E-02	0.0E+00	0.0E+00	1.8E+00	1.8E+00
1.6E+01	1.6E+01	0.0E+00	0.0E+00	1.5E+01	1.5E+01
9.8E-02	7.7E-01	0.0E+00	0.0E+00	4.9E-02	3.2E-01
0	#NOM?	0	0	0	15

Part of the external cost internalised

Taxes paid - Linked to solid waste	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
4.7E+00	5.2E+00	25.1%	5.3%
6.6E-01	9.5E-01	1.9%	0.8%
0.0E+00	0.0E+00	0.0%	0.0%
0	5	0%	5%

min	max	min	max	min	max
1.6E+00	1.6E+00	0.0E+00	0.0E+00	3.1E+00	3.6E+00
5.4E-02	1.0E-01	0.0E+00	0.0E+00	6.0E-01	8.5E-01
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	#NOM?	0	0	0	4

Part of the external cost internalised

Taxes paid - Linked to material consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
3.5E+00	3.5E+00	18.6%	3.6%
2.7E-01	1.6E+00	0.8%	1.3%
5.2E-02	5.7E-01	1.0%	0.9%
0	3	1%	4%

min	max	min	max	min	max
3.4E+00	3.4E+00	0.0E+00	0.0E+00	7.5E-02	7.5E-02
2.7E-01	1.5E+00	0.0E+00	0.0E+00	5.9E-03	3.4E-02
5.0E-02	5.5E-01	0.0E+00	0.0E+00	1.1E-03	1.2E-02
0	#NOM?	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to energy consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
5.9E+00	8.3E+01	32.1%	85.4%
2.7E+00	8.7E+01	7.7%	72.0%
4.8E+00	5.9E+01	93.8%	97.1%
3	87	8%	97%

min	max	min	max	min	max
5.1E+00	7.1E+01	0.0E+00	0.0E+00	8.4E-01	1.2E+01
2.3E+00	7.4E+01	0.0E+00	0.0E+00	3.8E-01	1.2E+01
4.1E+00	5.1E+01	0.0E+00	0.0E+00	6.7E-01	8.4E+00
2	#NOM?	0	0	0	12

Part of the external cost internalised

E/ Life Cycle Price

% of external cost internalised	
min	max
104%	399%
% of price corresponding to internalised external cost	
min	max

Packaging - household products

Functional unit: Consumption per Capita per Year in Europe

	Total	Beverage	Food	Detergents, cosmetics	aerosol	other households
A/ Environmental Impacts						
Linked to resources consumption						
Depletion of non renewable resources	4.7E-02	2.6E-01	6.7E-01	1.2E-01	4.5E-02	4.7E-02
Linked to air emissions						
Greenhouse effect (direct, 100 yrs)	5.5E+03	4.6E+04	9.7E+04	1.7E+04	8.9E+03	5.5E+03
Stratospheric Ozone Depletion	6.3E-03	4.2E-03	5.6E-02	1.4E-02	1.9E-03	6.3E-03
Air acidification	7.6E+01	5.4E+02	9.3E+02	2.2E+02	6.2E+01	7.6E+01
Photochemical oxidation	1.2E+01	5.1E+01	1.4E+02	3.2E+01	7.9E+00	1.2E+01
Linked to water effluents						
Eutrophication	7.7E+00	6.8E+00	5.0E+01	1.5E+01	3.6E-01	7.7E+00
Linked to human health						
Human Toxicity	3.8E+07	3.1E+07	2.4E+08	7.6E+07	5.2E+05	3.8E+07
Years of Life Lost	3.7E-06	2.4E-05	4.7E-05	1.1E-05	3.8E-06	3.7E-06
Linked to ecotoxicological risk						
Aquatic Ecotoxicity	7.7E+06	6.3E+06	4.8E+07	1.5E+07	1.0E+05	7.7E+06
Sediment Ecotoxicity	2.5E+07	2.0E+07	1.6E+08	4.9E+07	3.3E+05	2.5E+07
Terrestrial Ecotoxicity	1.0E+02	5.6E+02	1.7E+03	3.6E+02	2.3E+02	1.0E+02

B/ Other Environmental Indicators

	Values	Values	Values	Values	Values	Values
Primary energy	2.1E+02	7.9E+02	2.6E+03	5.5E+02	1.7E+02	2.1E+02
Fossil energy	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Consumption of raw materials	3.0E+02	6.8E+02	2.9E+03	6.6E+02	5.0E+01	3.0E+02
Dusts	1.1E+01	3.1E+01	1.7E+02	4.5E+01	2.7E+01	1.1E+01
Dioxins	1.4E-09	3.2E-10	1.2E-08	2.9E-09	0.0E+00	1.4E-09
Metals into air	1.2E-01	4.1E-01	1.5E+00	3.3E-01	1.6E-01	1.2E-01
Metals into water	1.3E+01	1.1E+01	1.4E+02	2.8E+01	5.2E+00	1.3E+01
Metals into soil	8.0E-02	6.4E-02	5.0E-01	1.6E-01	0.0E+00	8.0E-02
Municipal and industrial waste	4.6E+00	3.5E+01	4.9E+01	1.1E+01	1.5E+00	4.6E+00
Hazardous waste	3.2E-02	1.0E+00	1.0E+00	3.8E-01	3.2E-02	3.2E-02
Inert waste	1.1E-01	6.1E+00	4.1E+00	9.4E-01	6.8E-01	1.1E-01

C/ External Cost

	Values				Values				Values				Values				Values			
	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max		
Linked to air emissions																				
Greenhouse effect (direct, 100 yrs)	1.0E-01	2.6E-01	59.7%	23.7%	8.7E-01	2.2E+00	1.8E+00	4.6E+00	3.3E-01	8.3E-01	1.7E-01	4.3E-01	1.0E-01	2.6E-01						
Stratospheric Ozone Depletion	4.3E-06	4.3E-06	0.0%	0.0%	2.9E-06	2.9E-06	3.9E-05	3.9E-05	9.8E-06	9.8E-06	1.3E-06	1.3E-06	4.3E-06	4.3E-06						
Air acidification	1.1E-02	1.1E-01	6.4%	9.7%	7.8E-02	7.8E-01	1.4E-01	1.4E+00	3.2E-02	3.2E-01	9.1E-03	9.1E-02	1.1E-02	1.1E-01						
Photochemical oxidation	9.0E-03	1.1E-02	5.2%	1.0%	3.7E-02	4.8E-02	1.0E-01	1.3E-01	2.4E-02	3.0E-02	5.8E-03	7.4E-03	9.0E-03	1.1E-02						
Linked to water effluents																				
Eutrophication	1.2E-02	1.2E-02	6.8%	1.0%	1.0E-02	1.0E-02	7.7E-02	7.7E-02	2.4E-02	2.4E-02	5.5E-04	5.5E-04	1.2E-02	1.2E-02						
Linked to solid waste																				
Disassembly caused by incineration	9.0E-03	3.1E-02	5.2%	2.8%	6.5E-03	2.3E-02	5.9E-02	2.0E-01	1.8E-02	6.3E-02	6.1E-05	2.1E-04	9.0E-03	3.1E-02						
Disassembly caused by landfilling	1.4E-02	4.3E-02	7.8%	3.8%	2.3E-01	7.2E-01	2.2E-01	8.9E-01	4.1E-02	1.3E-01	1.1E-02	3.8E-02	1.4E-02	4.3E-02						
Linked to human health																				
Carcinogenic potential of heavy metals	8.1E-05	8.1E-05	0.0%	0.0%	1.5E-04	1.5E-04	8.9E-04	8.9E-04	1.8E-04	1.8E-04	5.1E-05	5.1E-05	8.1E-05	8.1E-05						
Human health effects caused by dusts	1.6E-02	6.7E-01	9.0%	58.6%	4.4E-02	1.9E+00	2.4E-01	1.0E+01	6.3E-02	2.7E+00	3.7E-02	1.6E+00	1.6E-02	6.7E-01						
Human health effects caused by dioxins	1.8E-05	3.9E-05	0.0%	0.0%	4.1E-06	8.8E-06	1.5E-04	3.2E-04	3.8E-05	8.2E-05	0.0E+00	0.0E+00	1.8E-05	3.9E-05						
Total External Cost	0	1	100%	100%	1	6	3	17	1	4	0	2	0	1						

D/ Internalisation of the external Cost

	Values				Values				Values				Values				Values			
	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max		
Taxes paid (total)																				
Denmark	1.1E+00	4.9E+00	615.1%	430.4%	2.9E+00	1.7E+01	1.1E+01	5.9E+01	2.5E+00	1.3E+01	5.8E-01	3.8E+00	1.1E+00	4.9E+00						
France	3.2E+00	7.4E+00	1814.7%	647.3%	3.2E+00	1.9E+01	2.2E+01	7.3E+01	6.5E+00	1.7E+01	2.7E-01	3.7E+00	3.2E+00	7.4E+00						
Poland	2.5E-01	3.0E+00	144.9%	265.7%	9.3E-01	1.1E+01	3.0E+00	3.6E+01	6.6E-01	7.9E+00	2.0E-01	2.4E+00	2.5E-01	3.0E+00						
Part of the external cost internalised	0	7	145%	647%	1	19	3	73	1	17	0	4	0	7						

Taxes paid - Linked to air emissions

	Values	Values	Values	Values	Values	Values								
Denmark	9.7E-02	1.3E-01	9.1%	2.7%	7.2E-01	1.0E+00	1.4E+00	2.0E+00	3.0E-01	4.0E-01	1.1E-01	1.7E-01	9.7E-02	1.3E-01
France	3.5E-03	3.7E-03	0.1%	0.1%	2.1E-02	2.3E-02	4.0E-02	4.5E-02	1.0E-02	2.3E-02	2.5E-03	3.5E-03	3.5E-03	3.7E-03
Poland	4.9E-03	4.9E-03	2.0%	0.2%	3.2E-02	3.2E-02	6.4E-02	6.4E-02	1.4E-02	1.4E-02	4.3E-03	4.3E-03	4.9E-03	4.9E-03

Part of the external cost internalised

0	0	0%	3%	0	1	0	2	0	0	0	0	0	0	0
----------	----------	-----------	-----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

Taxes paid - Linked to water effluents

	Values	Values	Values	Values	Values	Values								
Denmark	1.8E-01	1.8E-01	16.7%	3.7%	1.5E-01	1.5E-01	1.1E+00	1.1E+00	3.6E-01	3.6E-01	4.3E-03	4.3E-03	1.8E-01	1.8E-01
France	3.0E+00	3.0E+00	93.6%	40.2%	2.6E+00	2.6E+00	1.9E+01	1.9E+01	6.0E+00	6.0E+00	1.4E-01	1.4E-01	3.0E+00	3.0E+00
Poland	1.2E-02	1.0E-01	4.7%	3.4%	1.4E-02	9.0E-02	9.3E-02	6.8E-01	2.5E-02	2.1E-01	3.0E-03	4.5E-03	1.2E-02	1.0E-01

Part of the external cost internalised

0	3	5%	40%	0	3	0	19	0	6	0	0	0	0	3
----------	----------	-----------	------------	----------	----------	----------	-----------	----------	----------	----------	----------	----------	----------	----------

Taxes paid - Linked to solid waste

	Values	Values	Values	Values	Values	Values								
Denmark	2.3E-01	2.7E-01	21.6%	5.5%	5.1E-01	5.4E-01	3.2E+00	3.6E+00	5.1E-01	5.9E-01	1.9E-01	2.0E-01	2.3E-01	2.7E-01
France	4.4E-02	6.2E-02	1.4%	0.8%	4.6E-02	7.0E-02	4.6E-01	6.6E-01	9.6E-02	1.4E-01	1.6E-02	2.5E-02	4.4E-02	6.2E-02
Poland	0.0E+00	0.0E+00	0.0%	0.0%	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Part of the external cost internalised

0	0	0%	5%	0	1	0	4	0	1	0	0	0	0	0
----------	----------	-----------	-----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

Taxes paid - Linked to material consumption

	Values	Values	Values	Values	Values	Values								
Denmark	2.7E-01	2.7E-01	25.4%	5.6%	4.2E-01	4.2E-01	2.2E+00	2.2E+00	5.7E-01	5.7E-01	3.8E-02	3.8E-02	2.7E-01	2.7E-01
France	2.1E-02	1.2E-01	0.7%	1.7%	3.3E-02	1.9E-01	1.7E-01	9.8E-01	4.5E-02	2.6E-01	3.0E-03	1.7E-02	2.1E-02	1.2E-01
Poland	4.0E-03	4.4E-02	1.0%	1.5%	6.2E-03	6.9E-02	3.2E-02	3.5E-01	8.5E-03	9.4E-02	5.7E-04	6.3E-03	4.0E-03	4.4E-02

Part of the external cost internalised

0	0	1%	6%	0	0	0	2	0	1	0	0	0	0	0
----------	----------	-----------	-----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

Taxes paid - Linked to energy consumption

	Values	Values	Values	Values	Values	Values								
Denmark	2.9E-01	4.0E+00	27.0%	82.6%	1.1E+00	1.5E+01	3.6E+00	5.0E+01	7.6E-01	1.1E+01	2.4E-01	3.3E+00	2.9E-01	4.0E+00
France	1.3E-01	4.2E+00	4.2%	57.2%	5.0E-01	1.6E+01	1.6E+00	5.2E+01	3.5E-01	1.1E+01	1.1E-01	3.5E+00	1.3E-01	4.2E+00
Poland	2.3E-01	2.9E+00	91.7%	94.9%	8.8E-01	1.1E+01	2.8E+00	3.5E+01	6.1E-01	7.6E+00	1.9E-01	2.4E+00	2.3E-01	2.9E+00

Part of the external cost internalised

0	4	4%	95%	0	16	2	52	0	11	0	3	0	4
----------	----------	-----------	------------	----------	-----------	----------	-----------	----------	-----------	----------	----------	----------	----------

E/ Life Cycle Price

Euros						
-------	--	--	--	--	--	--

% of external cost internalised	min	max
	145%	647%

% of price corresponding to internalised external cost	min	max

Paper products

Functional unit: Consumption per Capita per Year in Europe

A/ Environmental Impacts

Linked to resources consumption

Depletion of non renewable resources	kg antimony eq.
--------------------------------------	-----------------

Linked to air emissions

Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g ethylene eq.

Linked to water effluents

Eutrophication	g PO ₄ eq.
----------------	-----------------------

Linked to human health

Human Toxicity	g eq. 1-4-dichlorobenzene
Years of Life Lost	year

Linked to ecotoxicological risk

Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene

B/ Other Environmental Indicators

Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

C/ External Cost

Linked to air emissions

Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros

Linked to water effluents

Eutrophication	Euros
----------------	-------

Linked to solid waste

Disaminy caused by incineration	Euros
Disaminy caused by landfilling	Euros

Linked to human health

Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Total External Cost Euros

D/ Internalisation of the external Cost

Taxes paid (total)

Denmark	Euros
France	Euros
Sweden	Euros
Poland	Euros

Part of the external cost internalised

Taxes paid - Linked to air emissions

Denmark	Euros
France	Euros
Sweden	Euros
Poland	Euros

Part of the external cost internalised

Taxes paid - Linked to water effluents

Denmark	Euros
France	Euros
Sweden	Euros
Poland	Euros

Part of the external cost internalised

Taxes paid - Linked to solid waste

Denmark	Euros
France	Euros
Sweden	Euros
Poland	Euros

Part of the external cost internalised

Taxes paid - Linked to material consumption

Denmark	Euros
France	Euros
Sweden	Euros
Poland	Euros

Part of the external cost internalised

Taxes paid - Linked to energy consumption

Denmark	Euros
France	Euros
Sweden	Euros
Poland	Euros

Part of the external cost internalised

E/ Life Cycle Price

Euros

% of external cost internalised	min	max
	0%	586%
% of price corresponding to internalised external cost	min	max
	0%	5%

Total

Values

0.0E+00

6.9E+01

1.5E-05

5.4E-01

0.0E+00

8.4E-02

0.0E+00

0.0E+00

0.0E+00

0.0E+00

0.0E+00

Values

3.1E+00

7.5E+00

1.3E-01

0.0E+00

0.0E+00

0.0E+00

9.4E+01

0.0E+00

8.7E+01

2.6E-02

0.0E+00

Values % total external cost

min	max	min	max
1.3E-03	3.3E-03	0%	0%
1.0E-08	1.0E-08	0%	0%
7.9E-05	7.9E-04	0%	0%
4.6E-05	7.9E-03	0%	1%

1.3E-04 1.3E-04 0% 0%

6.6E-02 2.3E-01 17% 19%

3.1E-01 9.9E-01 82% 80%

0.0E+00 0.0E+00 0% 0%

0.0E+00 0.0E+00 0% 0%

0.0E+00 0.0E+00 0% 0%

Values % total external cost

min	max	min	max
6.1E+00	7.2E+00	1.6E+01	5.9E+00
1.3E+00	1.9E+00	3.5E+00	1.5E+00
2.4E-03	2.4E-03	6.3E-03	1.9E-03
0.0E+00	0.0E+00	0.0E+00	0.0E+00

0 7 0 6

Values % total taxes paid

0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	#DIV/0!	#DIV/0!

0 0 #DIV/0! #DIV/0!

0.0E+00 0.0E+00 0.0E+00 0.0E+00

0.0E+00 0.0E+00 0.0E+00 0.0E+00

0.0E+00 0.0E+00 #DIV/0! #DIV/0!

0 0 #DIV/0! #DIV/0!

6.1E+00 7.2E+00 1.0E+00 1.0E+00

1.3E+00 1.9E+00 1.0E+00 1.0E+00

2.4E-03 2.4E-03 1.0E+00 1.0E+00

0.0E+00 0.0E+00 #DIV/0! #DIV/0!

0 7 #DIV/0! #DIV/0!

0.0E+00 0.0E+00 0.0E+00 0.0E+00

0.0E+00 0.0E+00 0.0E+00 0.0E+00

0.0E+00 0.0E+00 0.0E+00 0.0E+00

0.0E+00 0.0E+00 #DIV/0! #DIV/0!

0.0E+00 0.0E+00 0.0E+00 0.0E+00

0.0E+00 0.0E+00 0.0E+00 0.0E+00

0.0E+00 0.0E+00 #DIV/0! #DIV/0!

0 0 #DIV/0! #DIV/0!

143

Packaging - Industrial

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values	
Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g styrene eq.
Linked to water effluents	
Eutrophication	g PO ₄ eq.
Linked to human health	
Human Toxicity	g eq. 1-4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene

Values
4.0E-01
4.2E+04
4.1E-02
7.3E+02
1.0E+02
1.0E+02
3.8E+08
3.3E-05
7.7E+07
2.5E+08
9.3E+02

Values	%	Values	%	Values	%
3.4E-01	86%	0.0E+00	0%	5.4E-02	14%
3.2E+04	75%	0.0E+00	0%	1.0E+04	25%
3.7E-02	91%	0.0E+00	0%	3.8E-03	9%
6.4E+02	87%	0.0E+00	0%	9.5E+01	13%
9.2E+01	88%	0.0E+00	0%	1.3E+01	12%
8.9E+00	9%	0.0E+00	0%	9.2E+01	91%
1.2E+08	31%	0.0E+00	0%	2.6E+08	69%
2.8E-05	85%	0.0E+00	0%	5.0E-06	15%
2.4E+07	31%	0.0E+00	0%	5.3E+07	69%
7.6E+07	31%	0.0E+00	0%	1.7E+08	69%
5.7E+02	61%	0.0E+00	0%	3.6E+02	39%

B/ Other Environmental Indicators

Values	
Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
1.8E+03
0.0E+00
2.5E+03
7.6E+01
1.1E-07
1.0E+00
7.3E+01
8.0E-01
7.4E+01
1.7E+00
1.6E+00

Values	%	Values	%	Values	%
1.6E+03	84%	0.0E+00	0%	3.0E+02	16%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
2.5E+03	99%	0.0E+00	0%	3.8E+01	1%
6.0E+01	79%	0.0E+00	0%	1.6E+01	21%
1.4E-09	1%	0.0E+00	0%	1.1E-07	99%
8.4E-01	80%	0.0E+00	0%	2.1E-01	20%
2.0E+01	28%	0.0E+00	0%	5.3E+01	72%
8.0E-01	100%	0.0E+00	0%	1.0E-03	0%
1.6E+01	22%	0.0E+00	0%	5.8E+01	78%
1.4E+00	81%	0.0E+00	0%	3.4E-01	19%
1.6E+00	100%	0.0E+00	0%	1.1E-03	0%

C/ External Cost

Values	
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros
Linked to water effluents	
Eutrophication	Euros
Linked to solid waste	
Disaminy caused by incineration	Euros
Disaminy caused by landfilling	Euros
Linked to human health	
Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Values		% total external cost	
min	max	min	max
7.9E-01	2.0E+00	48.7%	22.0%
2.8E-05	2.8E-05	0.0%	0.0%
1.1E-01	1.1E+00	6.5%	11.7%
7.7E-02	9.8E-02	4.7%	1.1%
1.6E-01	1.6E-01	9.5%	1.7%
1.2E-01	4.2E-01	7.3%	4.6%
2.7E-01	8.6E-01	16.6%	9.4%
7.9E-04	7.9E-04	0.0%	0.0%
1.1E-01	4.5E+00	6.5%	49.5%
1.4E-03	3.0E-03	0.1%	0.0%
2	9	100%	100%

min	max	min	max	min	max
6.0E-01	1.5E+00	0.0E+00	0.0E+00	1.9E-01	4.9E-01
2.5E-05	2.5E-05	0.0E+00	0.0E+00	2.6E-06	2.6E-06
9.3E-02	9.3E-01	0.0E+00	0.0E+00	1.4E-02	1.4E-01
6.7E-02	8.6E-02	0.0E+00	0.0E+00	9.3E-03	1.2E-02
1.4E-02	1.4E-02	0.0E+00	0.0E+00	1.4E-01	1.4E-01
4.1E-06	1.4E-05	0.0E+00	0.0E+00	1.2E-01	4.2E-01
1.2E-01	3.7E-01	0.0E+00	0.0E+00	1.5E-01	4.9E-01
6.6E-04	6.6E-04	0.0E+00	0.0E+00	1.3E-04	1.3E-04
8.3E-02	3.6E+00	0.0E+00	0.0E+00	2.3E-02	9.6E-01
1.8E-05	3.8E-05	0.0E+00	0.0E+00	1.4E-03	3.0E-03
1	6	0	0	1	3
60%	71%	0%	0%	40%	29%

D/ Internalisation of the external Cost

Taxes paid (total)	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
1.1E+01	4.5E+01	687.2%	497.0%
3.6E+01	7.4E+01	2235.8%	810.8%
2.3E+00	2.7E+01	139.1%	296.3%
2	74	139%	811%

min	max	min	max	min	max
6.9E+00	3.5E+01	0.0E+00	0.0E+00	4.3E+00	1.0E+01
1.6E+01	4.8E+01	0.0E+00	0.0E+00	2.0E+01	2.6E+01
1.9E+00	2.3E+01	0.0E+00	0.0E+00	3.9E-01	4.4E+00
2	48	0	0	0	26

Part of the external cost internalised

Taxes paid - Linked to air emissions	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
8.6E-01	1.1E+00	7.7%	2.4%
3.0E-02	3.3E-02	0.1%	0.0%
4.3E-02	4.3E-02	1.9%	0.2%
0	1	0%	2%

min	max	min	max	min	max
7.2E-01	8.8E-01	0.0E+00	0.0E+00	1.4E-01	2.0E-01
2.6E-02	2.8E-02	0.0E+00	0.0E+00	4.2E-03	4.6E-03
3.7E-02	3.7E-02	0.0E+00	0.0E+00	6.9E-03	6.9E-03
0	1	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to water effluents	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
2.1E+00	2.1E+00	19.1%	4.7%
3.4E+01	3.4E+01	94.6%	46.6%
1.3E-01	1.0E+00	5.6%	3.9%
0	34	6%	47%

min	max	min	max	min	max
1.5E-02	1.5E-02	0.0E+00	0.0E+00	2.1E+00	2.1E+00
1.5E+01	1.5E+01	0.0E+00	0.0E+00	2.0E+01	2.0E+01
7.4E-02	7.2E-01	0.0E+00	0.0E+00	5.3E-02	3.2E-01
0	15	0	0	0	20

Part of the external cost internalised

Taxes paid - Linked to solid waste	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
3.2E+00	3.7E+00	28.4%	8.1%
5.8E-01	8.2E-01	1.6%	1.1%
0.0E+00	0.0E+00	0.0%	0.0%
0	4	0%	8%

min	max	min	max	min	max
1.6E+00	1.8E+00	0.0E+00	0.0E+00	1.6E+00	1.8E+00
2.6E-01	3.8E-01	0.0E+00	0.0E+00	3.2E-01	4.5E-01
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	2	0	0	0	2

Part of the external cost internalised

Taxes paid - Linked to material consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
2.4E+00	2.4E+00	21.7%	5.4%
1.9E-01	1.1E+00	0.5%	1.5%
3.6E-02	4.0E-01	1.6%	1.5%
0	2	1%	5%

min	max	min	max	min	max
2.4E+00	2.4E+00	0.0E+00	0.0E+00	2.8E-02	2.8E-02
1.9E-01	1.1E+00	0.0E+00	0.0E+00	2.2E-03	1.3E-02
3.6E-02	3.9E-01	0.0E+00	0.0E+00	4.2E-04	4.6E-03
0	2	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to energy consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
2.6E+00	3.6E+01	23.0%	79.4%
1.2E+00	3.8E+01	3.2%	50.7%
2.1E+00	2.6E+01	90.9%	94.5%
1	38	3%	95%

min	max	min	max	min	max
2.2E+00	3.0E+01	0.0E+00	0.0E+00	4.1E-01	5.8E+00
9.8E-01	3.2E+01	0.0E+00	0.0E+00	1.9E-01	6.0E+00
1.7E+00	2.1E+01	0.0E+00	0.0E+00	3.3E-01	4.1E+00
1	32	0	0	0	6

E/ Life Cycle Price

% of external cost internalised	min	max
	139%	811%
% of price corresponding to internalised external cost	min	max

Transport - total

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values	
Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g styrene eq.
Linked to water effluents	
Eutrophication	g PO ₄ eq.
Linked to human health	
Human Toxicity	g eq. 1-4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene

Values
1.6E+01
2.6E+06
1.2E+00
1.3E+04
5.7E+03
5.6E+01
4.2E+07
9.9E-04
8.4E+06
2.7E+07
3.7E+03

Values	%	Values	%	Values	%
0.0E+00	0%	1.6E+01	100%	0.0E+00	0%
0.0E+00	0%	2.6E+06	100%	0.0E+00	0%
0.0E+00	0%	1.2E+00	100%	0.0E+00	0%
0.0E+00	0%	1.3E+04	100%	0.0E+00	0%
0.0E+00	0%	5.7E+03	100%	0.0E+00	0%
0.0E+00	0%	5.6E+01	100%	0.0E+00	0%
0.0E+00	0%	4.2E+07	100%	0.0E+00	0%
0.0E+00	0%	9.9E-04	100%	0.0E+00	0%
0.0E+00	0%	8.4E+06	100%	0.0E+00	0%
0.0E+00	0%	2.7E+07	100%	0.0E+00	0%
0.0E+00	0%	3.7E+03	100%	0.0E+00	0%

B/ Other Environmental Indicators

Values	
Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
3.9E+04
0.0E+00
1.3E+04
1.1E+03
6.7E-07
4.6E+01
1.9E+02
4.5E+01
2.7E+00
8.0E-01
0.0E+00

Values	%	Values	%	Values	%
0.0E+00	0%	3.9E+04	100%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	1.3E+04	100%	0.0E+00	0%
0.0E+00	0%	1.1E+03	100%	0.0E+00	0%
0.0E+00	0%	6.7E-07	100%	0.0E+00	0%
0.0E+00	0%	4.6E+01	100%	0.0E+00	0%
0.0E+00	0%	1.9E+02	100%	0.0E+00	0%
0.0E+00	0%	4.5E+01	100%	0.0E+00	0%
0.0E+00	0%	2.7E+00	100%	0.0E+00	0%
0.0E+00	0%	8.0E-01	100%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%

C/ External Cost

Values		% total external cost	
min	max	min	max
Linked to air emissions			
Greenhouse effect (direct, 100 yrs)	Euros	5.0E+01	1.3E+02
Stratospheric Ozone Depletion	Euros	8.3E-04	8.3E-04
Air acidification	Euros	2.0E+00	2.0E+01
Photochemical oxidation	Euros	4.2E+00	5.3E+00
Linked to water effluents			
Eutrophication	Euros	8.6E-02	8.6E-02
Linked to solid waste			
Disaminy caused by incineration	Euros	0.0E+00	0.0E+00
Disaminy caused by landfilling	Euros	0.0E+00	0.0E+00
Linked to human health			
Carcinogenic potential of heavy metals	Euros	5.2E-02	5.2E-02
Human health effects caused by dusts	Euros	1.6E+00	6.6E+01
Human health effects caused by dioxins	Euros	8.6E-03	1.9E-02

Values		% total external cost	
min	max	min	max
58	217	100%	100%

min	max	min	max	min	max
0	0	58	217	0	0
0%	0%	100%	100%	0%	0%

Total External Cost Euros

D/ Internalisation of the external Cost

Taxes paid (total)	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
47	885	81%	407%

min	max	min	max	min	max
0	0	47	885	0	0

Part of the external cost internalised

Taxes paid - Linked to air emissions	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
1	37	2%	4%

min	max	min	max	min	max
0	0	1	37	0	0

Part of the external cost internalised

Taxes paid - Linked to water effluents	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
0	15	0%	2%

min	max	min	max	min	max
0	0	0	15	0	0

Part of the external cost internalised

Taxes paid - Linked to solid waste	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
0	0	0%	0%

min	max	min	max	min	max
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to material consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
0	9	0%	1%

min	max	min	max	min	max
0	0	0	9	0	0

Part of the external cost internalised

Taxes paid - Linked to energy consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
24	785	35%	99%

min	max	min	max	min	max
0	0	24	785	0	0

Part of the external cost internalised

E/ Life Cycle Price

% of external cost internalised	
min	max
81%	407%

% of price corresponding to internalised external cost	
min	max

Transport - Goods

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values	
Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g styrene eq.
Linked to water effluents	
Eutrophication	g PO ₄ eq.
Linked to human health	
Human Toxicity	g eq. 1-4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene

Values
6.1E+00
8.8E+05
1.2E+00
7.0E+03
2.0E+03
3.0E+01
4.2E+07
4.8E-04
8.4E+06
2.7E+07
3.4E+03

Values	%	Values	%	Values	%
0.0E+00	0%	6.1E+00	100%	0.0E+00	0%
0.0E+00	0%	8.8E+05	100%	0.0E+00	0%
0.0E+00	0%	1.2E+00	100%	0.0E+00	0%
0.0E+00	0%	7.0E+03	100%	0.0E+00	0%
0.0E+00	0%	2.0E+03	100%	0.0E+00	0%
0.0E+00	0%	3.0E+01	100%	0.0E+00	0%
0.0E+00	0%	4.2E+07	100%	0.0E+00	0%
0.0E+00	0%	4.8E-04	100%	0.0E+00	0%
0.0E+00	0%	8.4E+06	100%	0.0E+00	0%
0.0E+00	0%	2.7E+07	100%	0.0E+00	0%
0.0E+00	0%	3.4E+03	100%	0.0E+00	0%

B/ Other Environmental Indicators

Values	
Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
1.6E+04
0.0E+00
1.1E+04
7.7E+02
1.0E-07
3.5E+01
1.8E+02
4.5E+01
0.0E+00
0.0E+00
0.0E+00

Values	%	Values	%	Values	%
0.0E+00	0%	1.6E+04	100%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	1.1E+04	100%	0.0E+00	0%
0.0E+00	0%	7.7E+02	100%	0.0E+00	0%
0.0E+00	0%	1.0E-07	100%	0.0E+00	0%
0.0E+00	0%	3.5E+01	100%	0.0E+00	0%
0.0E+00	0%	1.8E+02	100%	0.0E+00	0%
0.0E+00	0%	4.5E+01	100%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%

C/ External Cost

Values	
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros
Linked to water effluents	
Eutrophication	Euros
Linked to solid waste	
Disaminy caused by incineration	Euros
Disaminy caused by landfilling	Euros
Linked to human health	
Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Values		% total external cost	
min	max	min	max
1.7E+01	4.2E+01	82.3%	42.4%
8.1E-04	8.1E-04	0.0%	0.0%
1.0E+00	1.0E+01	5.0%	10.2%
1.4E+00	1.8E+00	7.0%	1.8%
4.7E-02	4.7E-02	0.2%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
5.0E-02	5.0E-02	0.2%	0.1%
1.1E+00	4.5E+01	5.2%	45.5%
1.3E-03	2.8E-03	0.0%	0.0%
20	100	100%	100%

min	max	min	max	min	max
0.0E+00	0.0E+00	1.7E+01	4.2E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	8.1E-04	8.1E-04	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.0E+00	1.0E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.4E+00	1.8E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	4.7E-02	4.7E-02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	5.0E-02	5.0E-02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.1E+00	4.5E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.3E-03	2.8E-03	0.0E+00	0.0E+00
0	0	20	100	0	0
0%	0%	100%	100%	0%	0%

Total External Cost Euros

D/ Internalisation of the external Cost

Taxes paid (total)	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
4.0E+01	3.4E+02	197.2%	336.3%
2.6E+01	3.4E+02	125.8%	344.5%
2.0E+01	2.2E+02	95.9%	224.9%
20	344	96%	345%

min	max	min	max	min	max
0.0E+00	0.0E+00	4.0E+01	3.4E+02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.6E+01	3.4E+02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.0E+01	2.2E+02	0.0E+00	0.0E+00
0	0	20	344	0	0

Part of the external cost internalised

Taxes paid - Linked to air emissions	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
8.9E+00	1.4E+01	22.2%	4.3%
4.9E-01	5.5E-01	1.9%	0.2%
1.0E+00	1.0E+00	5.1%	0.4%
0	14	2%	4%

min	max	min	max	min	max
0.0E+00	0.0E+00	8.9E+00	1.4E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	4.9E-01	5.5E-01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.0E+00	1.0E+00	0.0E+00	0.0E+00
0	0	0	14	0	0

Part of the external cost internalised

Taxes paid - Linked to water effluents	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
3.4E-01	3.4E-01	0.8%	0.1%
1.4E+01	1.4E+01	55.8%	4.2%
4.9E-01	5.8E-01	2.5%	0.3%
0	14	1%	4%

min	max	min	max	min	max
0.0E+00	0.0E+00	3.4E-01	3.4E-01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.4E+01	1.4E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	4.9E-01	5.8E-01	0.0E+00	0.0E+00
0	0	0	14	0	0

Part of the external cost internalised

Taxes paid - Linked to solid waste	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
0.0E+00	0.0E+00	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0	0	0%	0%

min	max	min	max	min	max
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to material consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
8.5E+00	8.5E+00	21.2%	2.5%
6.7E-01	3.6E+00	2.6%	1.0%
1.2E-01	1.3E+00	0.6%	0.6%
0	9	1%	3%

min	max	min	max	min	max
0.0E+00	0.0E+00	8.5E+00	8.5E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	6.7E-01	3.6E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.2E-01	1.3E+00	0.0E+00	0.0E+00
0	0	0	9	0	0

Part of the external cost internalised

Taxes paid - Linked to energy consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
2.2E+01	3.1E+02	55.7%	93.1%
1.0E+01	3.3E+02	39.7%	94.6%
1.8E+01	2.2E+02	91.7%	98.7%
10	326	40%	99%

min	max	min	max	min	max
0.0E+00	0.0E+00	2.2E+01	3.1E+02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.0E+01	3.3E+02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.8E+01	2.2E+02	0.0E+00	0.0E+00
0	0	10	326	0	0

Part of the external cost internalised

E/ Life Cycle Price

% of external cost internalised	min	max
	96%	345%
% of price corresponding to internalised external cost	min	max

Transport - Personal cars

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Values	
Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g ethylene eq.
Linked to water effluents	
Eutrophication	g PO ₄ eq.
Linked to human health	
Human Toxicity	g eq. 1-4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1-4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1-4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1-4-dichlorobenzene

Values
8.2E+00
1.5E+06
2.9E-02
4.7E+03
3.6E+03
2.5E+01
4.6E+04
4.0E-04
8.2E+02
1.9E+03
3.0E+02

Values	%	Values	%	Values	%
0.0E+00	0%	8.2E+00	100%	0.0E+00	0%
0.0E+00	0%	1.5E+06	100%	0.0E+00	0%
0.0E+00	0%	2.9E-02	100%	0.0E+00	0%
0.0E+00	0%	4.7E+03	100%	0.0E+00	0%
0.0E+00	0%	3.6E+03	100%	0.0E+00	0%
0.0E+00	0%	2.5E+01	100%	0.0E+00	0%
0.0E+00	0%	4.6E+04	100%	0.0E+00	0%
0.0E+00	0%	4.0E-04	100%	0.0E+00	0%
0.0E+00	0%	8.2E+02	100%	0.0E+00	0%
0.0E+00	0%	1.9E+03	100%	0.0E+00	0%
0.0E+00	0%	3.0E+02	100%	0.0E+00	0%

B/ Other Environmental Indicators

Values	
Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
1.9E+04
0.0E+00
9.2E+02
1.2E+02
5.7E-07
1.1E+01
1.0E+00
0.0E+00
0.0E+00
6.1E-02
0.0E+00

Values	%	Values	%	Values	%
0.0E+00	0%	1.9E+04	100%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	9.2E+02	100%	0.0E+00	0%
0.0E+00	0%	1.2E+02	100%	0.0E+00	0%
0.0E+00	0%	5.7E-07	100%	0.0E+00	0%
0.0E+00	0%	1.1E+01	100%	0.0E+00	0%
0.0E+00	0%	1.0E+00	100%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	6.1E-02	100%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%

C/ External Cost

Values	
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros
Linked to water effluents	
Eutrophication	Euros
Linked to solid waste	
Disaminy caused by incineration	Euros
Disaminy caused by landfilling	Euros
Linked to human health	
Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Values		% total external cost	
min	max	min	max
2.9E+01	7.2E+01	89.1%	80.8%
2.0E-05	2.0E-05	0.0%	0.0%
6.9E-01	6.9E+00	2.1%	7.7%
2.6E+00	3.3E+00	8.1%	3.7%
3.9E-02	3.9E-02	0.1%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
1.8E-03	1.8E-03	0.0%	0.0%
1.6E-01	7.0E+00	0.5%	7.8%
7.3E-03	1.6E-02	0.0%	0.0%
32	90	100%	100%

min	max	min	max	min	max
0.0E+00	0.0E+00	2.9E+01	7.2E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.0E-05	2.0E-05	0.0E+00	0.0E+00
0.0E+00	0.0E+00	6.9E-01	6.9E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.6E+00	3.3E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	3.9E-02	3.9E-02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.8E-03	1.8E-03	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.6E-01	7.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	7.3E-03	1.6E-02	0.0E+00	0.0E+00
0	0	32	90	0	0
0%	0%	100%	100%	0%	0%

Total External Cost Euros

D/ Internalisation of the external Cost

Taxes paid (total)	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
1.1E+02	4.7E+02	334.6%	528.8%
2.9E+01	4.1E+02	89.9%	456.7%
2.3E+01	2.7E+02	72.0%	295.6%
23	474	72%	529%

min	max	min	max	min	max
0.0E+00	0.0E+00	1.1E+02	4.7E+02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.9E+01	4.1E+02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.3E+01	2.7E+02	0.0E+00	0.0E+00
0	0	23	474	0	0

Part of the external cost internalised

Taxes paid - Linked to air emissions	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
9.5E+00	1.9E+01	8.8%	4.0%
5.5E-01	6.1E-01	1.9%	0.1%
1.9E+00	1.9E+00	8.3%	0.7%
1	19	2%	4%

min	max	min	max	min	max
0.0E+00	0.0E+00	9.5E+00	1.9E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	5.5E-01	6.1E-01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.9E+00	1.9E+00	0.0E+00	0.0E+00
0	0	1	19	0	0

Part of the external cost internalised

Taxes paid - Linked to water effluents	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
8.2E-03	8.2E-03	0.0%	0.0%
8.6E-01	8.6E-01	3.0%	0.2%
6.9E-03	3.2E-02	0.0%	0.0%
0	1	0%	0%

min	max	min	max	min	max
0.0E+00	0.0E+00	8.2E-03	8.2E-03	0.0E+00	0.0E+00
0.0E+00	0.0E+00	8.6E-01	8.6E-01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	6.9E-03	3.2E-02	0.0E+00	0.0E+00
0	0	0	1	0	0

Part of the external cost internalised

Taxes paid - Linked to solid waste	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
2.1E-02	2.1E-02	0.0%	0.0%
5.6E-04	1.1E-03	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0	0	0%	0%

min	max	min	max	min	max
0.0E+00	0.0E+00	2.1E-02	2.1E-02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	5.6E-04	1.1E-03	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to material consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
5.8E-01	5.8E-01	0.5%	0.1%
4.6E-02	2.7E-01	0.2%	0.1%
8.7E-03	9.6E-02	0.0%	0.0%
0	1	0%	0%

min	max	min	max	min	max
0.0E+00	0.0E+00	5.8E-01	5.8E-01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	4.6E-02	2.7E-01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	8.7E-03	9.6E-02	0.0E+00	0.0E+00
0	0	0	1	0	0

Part of the external cost internalised

Taxes paid - Linked to energy consumption	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
2.7E+01	3.7E+02	24.6%	78.2%
1.2E+01	3.9E+02	41.7%	94.3%
2.1E+01	2.6E+02	91.7%	99.2%
12	386	25%	99%

min	max	min	max	min	max
0.0E+00	0.0E+00	2.7E+01	3.7E+02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.2E+01	3.9E+02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.1E+01	2.6E+02	0.0E+00	0.0E+00
0	0	12	386	0	0

E/ Life Cycle Price

Euros

955

% of external cost internalised	min	max
	72%	529%
% of price corresponding to internalised external cost	min	max
	2%	50%

Transport Passenger services

Functional unit: Consumption per Capita per Year in Europe

Total

Production stage	Use stage	End of life stage
------------------	-----------	-------------------

A/ Environmental Impacts

Linked to resources consumption	
Depletion of non renewable resources	kg antimony eq.
Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	g CO ₂ eq.
Stratospheric Ozone Depletion	g CFC-11 eq.
Air acidification	g SO ₂ eq.
Photochemical oxidation	g ethylene eq.
Linked to water effluents	
Eutrophication	g PO ₄ eq.
Linked to human health	
Human Toxicity	g eq. 1,4-dichlorobenzene
Years of Life Lost	year
Linked to ecotoxicological risk	
Aquatic Ecotoxicity	g eq. 1,4-dichlorobenzene
Sediment Ecotoxicity	g eq. 1,4-dichlorobenzene
Terrestrial Ecotoxicity	g eq. 1,4-dichlorobenzene

Values
1.4E+00
2.3E+05
3.2E-03
1.7E+03
2.0E+02
2.1E+04
1.9E-01
1.0E+05
1.1E-04
2.1E+04
6.5E+04
1.4E+01

Values	%	Values	%	Values	%
0.0E+00	0%	1.4E+00	100%	0.0E+00	0%
0.0E+00	0%	2.3E+05	100%	0.0E+00	0%
0.0E+00	0%	3.2E-03	100%	0.0E+00	0%
0.0E+00	0%	1.7E+03	100%	0.0E+00	0%
0.0E+00	0%	2.0E+02	100%	0.0E+00	0%
0.0E+00	0%	2.1E+04	100%	0.0E+00	0%
0.0E+00	0%	1.9E-01	100%	0.0E+00	0%
0.0E+00	0%	1.0E+05	100%	0.0E+00	0%
0.0E+00	0%	1.1E-04	100%	0.0E+00	0%
0.0E+00	0%	2.1E+04	100%	0.0E+00	0%
0.0E+00	0%	6.5E+04	100%	0.0E+00	0%
0.0E+00	0%	1.4E+01	100%	0.0E+00	0%

B/ Other Environmental Indicators

Primary energy	MJ
Fossil energy	MJ
Consumption of raw materials	kg
Dusts	g
Dioxins	g
Metals into air	g
Metals into water	g
Metals into soil	g
Municipal and industrial waste	kg
Hazardous waste	kg
Inert waste	kg

Values
3.6E+03
0.0E+00
4.3E+02
2.3E+02
6.6E-10
1.7E-01
2.7E+00
1.2E-01
2.7E+00
7.4E-01
0.0E+00

0.0E+00	0%	3.6E+03	100%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%
0.0E+00	0%	4.3E+02	100%	0.0E+00	0%
0.0E+00	0%	2.3E+02	100%	0.0E+00	0%
0.0E+00	0%	6.6E-10	100%	0.0E+00	0%
0.0E+00	0%	1.7E-01	100%	0.0E+00	0%
0.0E+00	0%	2.7E+00	100%	0.0E+00	0%
0.0E+00	0%	1.2E-01	100%	0.0E+00	0%
0.0E+00	0%	2.7E+00	100%	0.0E+00	0%
0.0E+00	0%	7.4E-01	100%	0.0E+00	0%
0.0E+00	0%	0.0E+00	0%	0.0E+00	0%

C/ External Cost

Linked to air emissions	
Greenhouse effect (direct, 100 yrs)	Euros
Stratospheric Ozone Depletion	Euros
Air acidification	Euros
Photochemical oxidation	Euros
Linked to water effluents	
Eutrophication	Euros
Linked to solid waste	
Disaminy caused by incineration	Euros
Disaminy caused by landfilling	Euros
Linked to human health	
Carcinogenic potential of heavy metals	Euros
Human health effects caused by dusts	Euros
Human health effects caused by dioxins	Euros

Values		% total external cost	
min	max	min	max
4.4E+00	1.1E+01	85.9%	40.3%
2.2E-06	2.2E-06	0.0%	0.0%
2.5E-01	2.5E+00	4.9%	9.1%
1.5E-01	1.9E-01	2.9%	0.7%
3.0E-04	3.0E-04	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
0.0E+00	0.0E+00	0.0%	0.0%
1.0E-04	1.0E-04	0.0%	0.0%
3.2E-01	1.4E+01	6.3%	49.9%
8.5E-06	1.8E-05	0.0%	0.0%
5	28	100%	100%

min	max	min	max	min	max
0.0E+00	0.0E+00	4.4E+00	1.1E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.2E-06	2.2E-06	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.5E-01	2.5E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.5E-01	1.9E-01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	3.0E-04	3.0E-04	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.0E-04	1.0E-04	0.0E+00	0.0E+00
0.0E+00	0.0E+00	3.2E-01	1.4E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	8.5E-06	1.8E-05	0.0E+00	0.0E+00
0	0	5	28	0	0
0%	0%	100%	100%	0%	0%

D/ Internalisation of the external Cost

Taxes paid (total)	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total external cost	
min	max	min	max
8.2E+00	7.4E+01	160.2%	270.0%
2.7E+00	7.3E+01	51.9%	265.4%
4.2E+00	5.0E+01	82.1%	180.3%
3	74	52%	270%

min	max	min	max	min	max
0.0E+00	0.0E+00	8.2E+00	7.4E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.7E+00	7.3E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	4.2E+00	5.0E+01	0.0E+00	0.0E+00
0	0	3	74	0	0

Part of the external cost internalised

Taxes paid - Linked to air emissions	
Denmark	Euros
France	Euros
Poland	Euros

Values		% total taxes paid	
min	max	min	max
2.5E+00	4.0E+00	30.7%	5.4%
9.2E-02	1.0E-01	3.5%	0.1%
1.9E-01	1.9E-01	4.6%	0.4%
0	4	3%	5%

0.0E+00	0.0E+00	2.5E+00	4.0E+00	0.0E+00	0.0E+00
0.0E+00	0.0E+00	9.2E-02	1.0E-01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.9E-01	1.9E-01	0.0E+00	0.0E+00
0	0	0	4	0	0

Part of the external cost internalised

Taxes paid - Linked to water effluents	
Denmark	Euros
France	Euros
Poland	Euros

1.5E-03	1.5E-03	0.0%	0.0%
2.3E-01	2.3E-01	8.8%	0.3%
1.5E-02	2.5E-02	0.3%	0.1%
0	0	0%	0%

0.0E+00	0.0E+00	1.5E-03	1.5E-03	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.3E-01	2.3E-01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	1.5E-02	2.5E-02	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to solid waste	
Denmark	Euros
France	Euros
Poland	Euros

4.4E-01	4.8E-01	5.4%	0.6%
4.8E-02	7.2E-02	1.6%	0.1%
0.0E+00	0.0E+00	0.0%	0.0%
0	0	0%	1%

0.0E+00	0.0E+00	4.4E-01	4.8E-01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	4.8E-02	7.2E-02	0.0E+00	0.0E+00
0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to material consumption	
Denmark	Euros
France	Euros
Poland	Euros

2.6E-01	2.6E-01	3.1%	0.3%
2.0E-02	1.2E-01	0.8%	0.2%
3.8E-03	4.1E-02	0.1%	0.1%
0	0	0%	0%

0.0E+00	0.0E+00	2.6E-01	2.6E-01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.0E-02	1.2E-01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	3.8E-03	4.1E-02	0.0E+00	0.0E+00
0	0	0	0	0	0

Part of the external cost internalised

Taxes paid - Linked to energy consumption	
Denmark	Euros
France	Euros
Poland	Euros

5.0E+00	7.0E+01	60.8%	93.6%
2.3E+00	7.3E+01	85.2%	99.3%
4.0E+00	4.9E+01	95.0%	99.5%
2	73	61%	99%

0.0E+00	0.0E+00	5.0E+00	7.0E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	2.3E+00	7.3E+01	0.0E+00	0.0E+00
0.0E+00	0.0E+00	4.0E+00	4.9E+01	0.0E+00	0.0E+00
0	0	2	73	0	0

Part of the external cost internalised

E/ Life Cycle Price

Euros

101

% of external cost internalised	min	max
	52%	270%
% of price corresponding to internalised external cost	min	max
	3%	73%