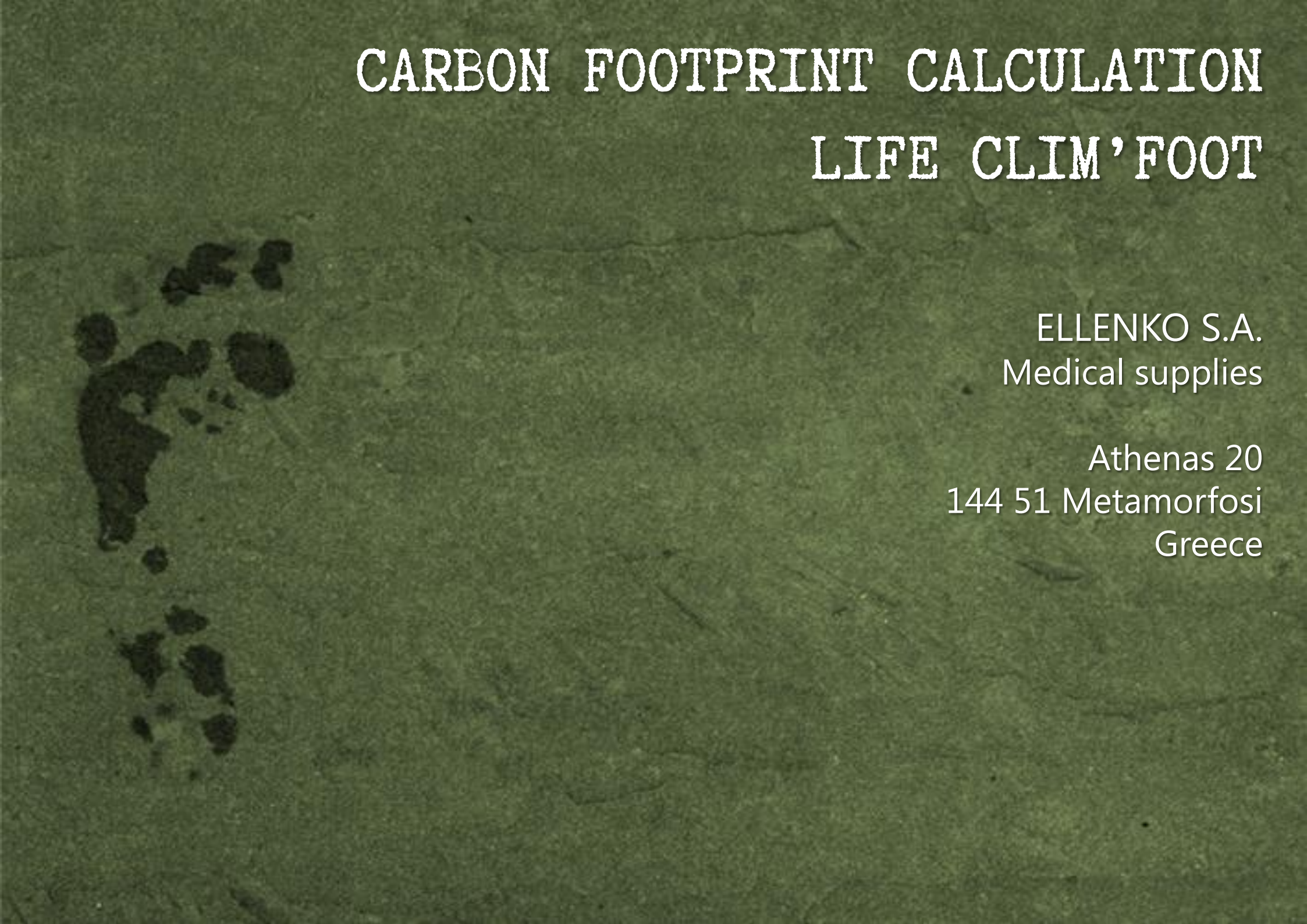
CARBON FOOTPRINT CALCULATION
LIFE CLIM'FOOT



ELLENKO S.A.
Medical supplies

Athenas 20
144 51 Metamorfosi
Greece

Contents

1. The company

ELLENKO S.A. is a commercial company, which specializes in the supply of Medical and Hospital consumables in the public and private health sector

Specifically, it trades certified commodities of foreign producers in the field of medical consumables, such as:

- *CATHETERS*
- *URINE BAGS*
- *NEEDLES*
- *GLOVES*
- *SCALPELS & SCALPEL BLADES*
- *SYRINGES*
- *DEVICES*
- *ANAESTHESIA CONSUMABLES*
- *MASKS*
- *COUPLING AGENTS*
- *SURGICAL SUPPLIES*
- *TUBES*
- *CLOTHING*
- *LAB CONSUMABLES*

2. Participation in LIFE Clim'Foot

Main reasons for the decision to participate in the project :

- Personal and organizational interest mainly in energy efficiency and climate change

Main benefits expected from the project :

- Understanding of the interactions between emissions and their main drivers

Main expectations from the project :

- Briefing and understanding of the tool and main principles of carbon footprint calculation

2. Participation in LIFE Clim'Foot

- The project was validated by the company prior to the participation
- A signed confidentiality agreement was provided for the use of the Bilan Carbone® Clim'Foot
- Participation of 2 people from ELLENKO S.A. on the training sessions organized by CRES for private organisations: 5th and 6th December 2016

Experience achieved through the training :

- General aspects of the significance of carbon footprint and the environmental and economical effects
- Detailed presentation of the tool Bilan Carbone® and a great familiarisation through exercises and examples
- Contact with different kinds of Greek companies with an extremely different job object
- Access to a series of a training material on Dropbox

3. Defining the perimeter

The target :

For ELLENKO S.A., the carbon footprint calculation constitutes a tool for internal inspection in order to take into account and understand risks and opportunities relating to energy consumption and climate change for the company

- Cartography of the activities of the organization
- Preparation of a presentation of the company and its activities
- Preparation of a data input template in accordance with Bilan Carbone® required inputs

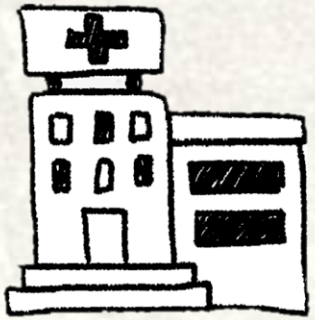
INPUT
Medical and hospital consumables

UPSTREAM
Transportation

Ellenko S.A.

Buildings – Energy

DOWNSTREAM
Transportation



CONSUMERS
Public and private health sector

Other input
Future packaging
Consumables

Transportation of people
Home-office travels – Business travels

Waste
End-of-life

ΕΛΛΕΝΚΟ Α.Ε.

ΚΑΠΕ
CRES

3. Defining the perimeter

Selected approach : **Operational control**

Base year: 2015

I. Direct emissions *(Scope 1)*

- ENERGY CONSUMPTION IN COMPANY FACILITIES *(1 BUILDING)*
- COMPANY VEHICLES : 9 *(2 LIGHT DUTY TRUCKS & 7 PASSENGER CARS)*

Direct consumption of fuels *(gasoline and diesel)*

II. Indirect emissions *(Scope 2)*

- ELECTRICITY CONSUMPTION IN COMPANY FACILITIES

3. Defining the perimeter

III. Indirect emissions – Upstream *(Scope 3)*

- INPUTS *(MEDICAL CONSUMABLES)*, OTHER INPUTS *(SERVICES - LOW AND HIGH LEVEL OF EQUIPMENT)*
- FUTURE PACKAGING
- CAPITAL GOODS
- TRANSPORTATION FROM SUPPLIERS
- EMPLOYEE COMMUTING
- BUSINESS TRAVELS
- WASTE GENERATED ON OPERATIONS

III. Indirect emissions – Downstream *(Scope 3)*

- END-OF-LIFE TREATMENT
- TRANSPORTATION TO CONSUMERS

4. Data collection

Data collection is conducted through the organisation of data in tables according to Bilan Carbone® requirements and in cooperation with the company's head and responsible departments *(ie. accounting, transportation, engineers etc.)* in order to have a clear idea of the data requirements

Some of the problems faced with the data collection that caused a small delay of the process:

- Due to the reason that ELLENKO S.A. is a commercial company, all the product data are organized according to financial characteristics and not technical as we need.
- There is a complicated net of upstream transportations as the suppliers are located all over EU and outside EU.
- The products are distributed to hospitals all over Greece, which also creates a complicated system of downstream transportations as well

Once the first attempt for data collection was completed, detailed discussions and troubleshooting about data collection took place during the on site visit by CRES on the 12th September 2017 and further communication.

4. Data collection

Sample of the data input template, created by ELLENKO S.A. according to the needs of Bilan Carbon®:

ΕΛΛΕΝΚΟ Α.Ε. ΚΑΠΕ CRES BC BILAN CARBONE®

4.9 κεφαλαιουχικά

4.9.2 οχήματα

όχημα 1* :		ton	όμοια τεμ :		σύνολο :	0,0 ton	ηλικία :	έτη
όχημα 2* :		ton	όμοια τεμ :		σύνολο :	0,0 ton	ηλικία :	έτη
όχημα 3* :		ton	όμοια τεμ :		σύνολο :	0,0 ton	ηλικία :	έτη
όχημα 4* :		ton	όμοια τεμ :		σύνολο :	0,0 ton	ηλικία :	έτη
όχημα 5* :		ton	όμοια τεμ :		σύνολο :	0,0 ton	ηλικία :	έτη

ΠΑΡΑΤΗΡΗΣΕΙΣ :

ο χρόνος απόσβεσης των οχημάτων υπολογίζεται στα 10 έτη

ΠΗΓΗ : *από το γραφείο κίνησης*

ΕΛΛΕΝΚΟ Α.Ε. ΚΑΠΕ CRES BC BILAN CARBONE®

4.2 ενεργειακές καταναλώσεις

ΗΛΕΚΤΡΙΣΜΟΣ σε kWh

Ιαν-15	Φεβ-15	Μαρ-15	Απρ-15	Μαϊ-15	Ιουν-15	Ιουλ-15	Αυγ-15	Σεπ-15	Οκτ-15	Νοε-15	Δεκ-15	ΣΥΝΟΛΟ ΕΤΟΥΣ
2.828,0	3.527,0	2.871,0	2.881,0	1.536,0	1.542,0	1.674,0	3.696,0	4.206,0	1.715,0	1.691,0	2.655,0	30.822,0

ΠΕΤΡΕΛΑΙΟ ΘΕΡΜΑΝΣΗΣ σε lt

Ιαν-15	Φεβ-15	Μαρ-15	Απρ-15	Μαϊ-15	Ιουν-15	Ιουλ-15	Αυγ-15	Σεπ-15	Οκτ-15	Νοε-15	Δεκ-15	ΣΥΝΟΛΟ ΕΤΟΥΣ
												0,0

ΦΥΣΙΚΟ ΑΕΡΙΟ σε kWh ***

Ιαν-15	Φεβ-15	Μαρ-15	Απρ-15	Μαϊ-15	Ιουν-15	Ιουλ-15	Αυγ-15	Σεπ-15	Οκτ-15	Νοε-15	Δεκ-15	ΣΥΝΟΛΟ ΕΤΟΥΣ
												0,0

ΠΑΡΑΤΗΡΗΣΕΙΣ :

υπολογίζονται αθροιστικά οι ενεργειακές καταναλώσεις *(ηλεκτρισμός από πάροχο ΔΕΗ και πετρέλαιο θέρμανσης από συνεργαζόμενο πρατήριο υγρών καυσίμων)* του κτιρίου που λειτουργει η εταιρία

χαρακτηρισμός πηγής : **non operated**

ΠΗΓΗ : *από τιμολόγια και λογαριασμούς*

01_ΔΕΔΟΜΕΝΑ_ΕΛΛΕΝΚΟ ΑΕ ΕΝΕΡΓΕΙΑΚΕΣ σελ.1 από σελ.1

ΕΛΛΕΝΚΟ Α.Ε. ΚΑΠΕ CRES

4. Data collection

I. Direct emissions *(Scope 1)*

- ENERGY CONSUMPTION IN COMPANY FACILITIES *(1 BUILDING)*

In 2015 there was no diesel consumption due to general economical and energy crisis in Greece.

- COMPANY VEHICLES : 9 *(2 LIGHT DUTY TRUCKS & 7 PASSENGER CARS)*

Consumption of gasoline and diesel

Data collection completed

II. Indirect emissions *(Scope 2)*

- ELECTRICITY CONSUMPTION IN COMPANY FACILITIES

Data collection completed

4. Data collection

III. Indirect emissions – Upstream (Scope 3)

CAPITAL GOODS :

- **BUILDINGS :**
  - OFFICES
  - STORAGE *(DEPRECIATED)*
  - PARKING *(DEPRECIATED)*
- **VEHICLES:**
  - 2 VEHICLES AQUIRED IN 2015 AND 2 VEHICLES ARE DEPRECIATED

Data collection completed

III. Indirect emissions – Upstream *(Scope 3)*

FUTURE PACKAGING :

The amounts used for future packaging are very limited

III. Indirect emissions – Upstream *(Scope 3)*

EMPLOYEE COMMUTING :

Data collection completed

III. Indirect emissions – Upstream *(Scope 3)*

BUSINESS TRAVELS :

Data collection in progress

III. Indirect emissions – Upstream *(Scope 3)*

WASTE GENERATED ON OPERATIONS :

Data collection in progress

4. Data collection

Transportation

Suppliers outside Europe

Road transport
From the production plant to the closest port

Sea transport
From the port to Piraeus port

Road transport
From Piraeus to Metamorfosi

Suppliers in Europe

Road transport
From production factory to Metamorfosi

Sold products

Within Attica
Road transport
From Metamorfosi to consumers with the 2 company vehicles (*already available in Direct emissions*)

Outside Attica
Road transport
From Metamorfosi to consumers through a collaborating company

4. Data collection

TRANSPORTATION :

- The company has several suppliers : Outside Europe *(5 suppliers)*, within Europe *(10 suppliers)*
- Sold products : Outside Attica

Main issues :

- Data from suppliers were collected from the company's accounting department, which collects data by supplier, product type and number of products : No data on transported weights were available *(Now in the process of inquiring the potential availability of more detailed weight data from the accounting department)*
- Sold products : Data are only available in number of packages and cost by destination : No data on transported weights are available
- Data by distance and mean of transportation within Europe for suppliers and Outside Attica for sold products

4. Data collection

Indirect emissions *(Scope 3)*

INPUTS *(MEDICAL CONSUMABLES)* :

- The company has several suppliers : Outside Europe and within Europe
- Data from suppliers were collected from the company's accounting department, which collects data by supplier, product type and number of products

Main issues :

- Data are only available by number of products
- Great variety of traded products, both large number of products and great diversity, for instance 20 types of catheters, each type is available in several dimensions
- Weight data are unavailable for each product
- Material data are unavailable for each product
- Lack of data correlating weights of inputs and transportation of goods *(both in sold products and supplied products)*
- Missing emission factors for products

4. Data collection

Indirect emissions *(Scope 3)*

INPUTS *(MEDICAL CONSUMABLES)* AND TRANSPORTATION :

Discussion during on site meeting with CRES and potential solutions:

- Examine the potential availability and collection of weight data by the accounting department
- Data from suppliers can be replaced with data on sold products: examine the potential for a bottom-up approach, data collection for the products sold within a year *(the same data can also be used in the "end of life" treatment of the products and in the transportation part)*, and avoid using data for products that may be in the company's warehouse and sold in future years

4. Data collection

Indirect emissions *(Scope 3)*

INPUTS *(MEDICAL CONSUMABLES)* AND TRANSPORTATION :

In the meantime, the collected data by supplier, product type and number of products were sent to CRES for check :

- No availability of emission factors by product, two alternative approaches : easy solution is to use an emission factor relating to the amount spent or a more sophisticated approach where products are categorized and weighted according to their materials and potentially add supplementary emissions for the production of medical consumables based on sector studies

- A first breakdown was made regarding suppliers, percentages of type of products by supplier and research of the materials of the products for each supplier and product, according to this initial breakdown it appears that regardless of the different suppliers the materials seem to be similar by type of product

4. Data collection

Indirect emissions *(Scope 3)*

INPUTS *(MEDICAL CONSUMABLES)* AND TRANSPORTATION :

- Once sold products data are available, further investigation will take place on the grouping of products according to their materials and weight measures will be conducted for the most representative types of products, focusing on the heavier products, for the products where the exact material is not available an average value will be used
- This approach may also allow for a correlation between data of supplied and sold products and their destinations

5. Use of Bilan Carbone® LIFE Clim'Foot

The Bilan Carbone® tool through the presentation and the exercises *(as we haven't already use it with the inputs of our field)* **seems to be :**

- Easy to use, developed in a familiar programming environment to the user
- Flexible system with multiple potentials for the data processing
- It gives the opportunity to use different emission factors as input according to every country's standards on energy

6. Progress until now/Future expectations/Interaction with CRES

About the process of the carbon footprint calculation :

- ***Data collection is still in progress***

Next steps :

- Data processing
- Carbon footprint calculation through Bilan Carbon ®
- Conclusions according to the outputs
- Internal discussion on the risks and opportunities relating to energy consumption and climate change for the company
- All the steps will take place under the valuable help and advice of the members of CRES.

Our collaboration was excellent until now and training material we have been given is really helpful