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February 03-05, 2016, Chennai, INDIA

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"Footwear Carbon
Footprint calculation"



Patricia Piñeiro Director of European Affairs & Internal Market Spanish Footwear Industries Federation (FICE)





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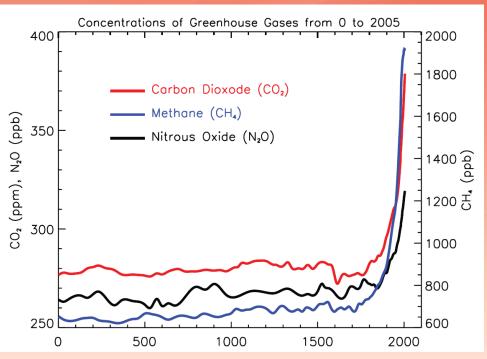
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### Global warming & climate change





Source: IPCC 2013





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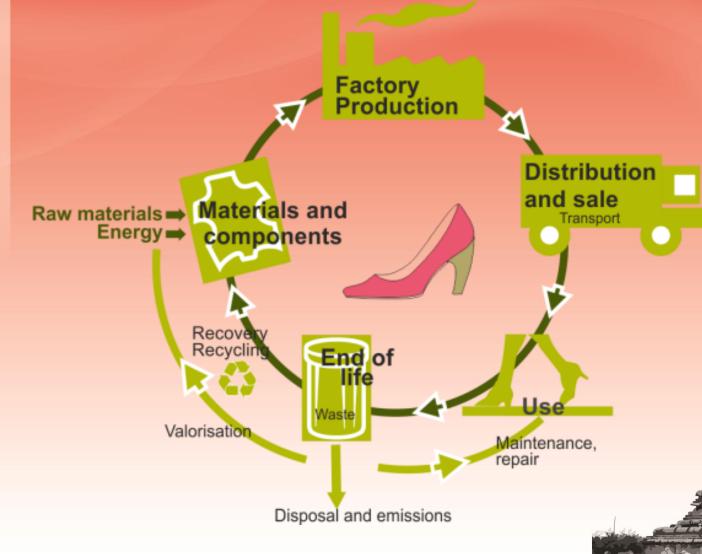
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Life Cycle Assessment







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### Organisation carbon footprint

 Study of GHG emissions caused by the development of a business activity.

### **Product carbon footprint**

 Study of GHG emissions caused by a good or service and based on its Life Cycle.







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### Footwear carbon footprint calculation

- There is a wide range of methodologies for calculating the carbon footprint (over 40)
- There was not a specific methodology for footwear
- Difficulties in the application of the existing methodologies in specific sectors
- Difficulty to compare results: Different methodologies, scopes, materials, etc.
- Consumer confusion





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# Footwear carbon footprint LIFE 12 ENV/ES/000315 - CO2Shoe

Duration: 01/10/2013 - 30/09/2017

### Main objective:

To develop a carbon footprint calculation tool specific for footwear to quantify the green house gas emissions of a pair of shoes to improve the environmental situation of the footwear companies

Coordinator

**Partners** 















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### Objective & scope

- Objective: Quantification of the GHG emissions produced by each pair of shoes
- Functional unit: A pair of shoes inside its box
- System boundaries: Cradle to grave

RAW
MATERIALS
EXTRACTION

PRODUCTION
OF INPUT
MATERIALS

FOOTWEAR COMPONENTS MANUFACTURE

FOOTWEAR ASSEMBLY AND FINISHING

PACKAGING MANUFACTURE

DISTRIBUTIO TO BUSINESS CUSTOMER

USE PHASE





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### Footwear carbon footprint methodology

- ISO standards & Technical Specifications
  - LCA (ISO 14040 14044)
  - Carbon footprint (ISO 14067)
- ISO 14067 is specific for "product"
- Product Category Rule: UN CPC 2933 –
   Leather Footwear







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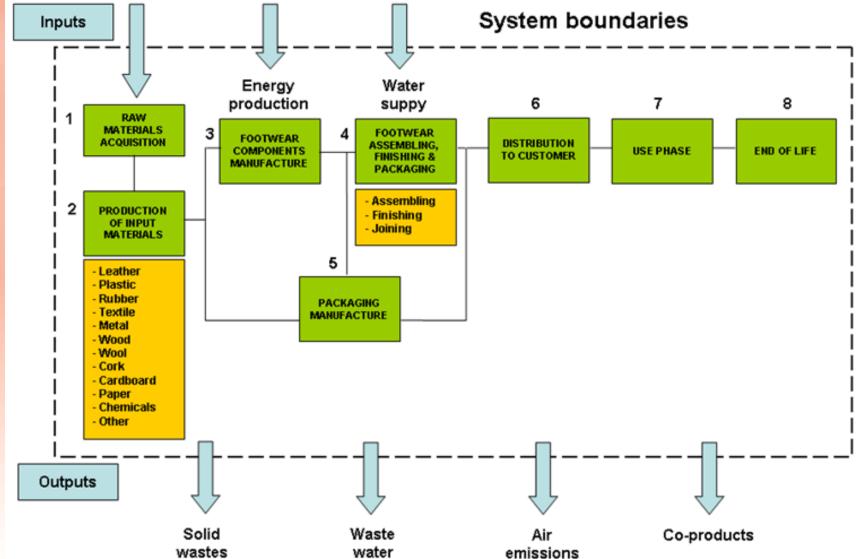
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### Footwear carbon footprint stages

- Breaking down the model into components and materials
- Weight
- Origin
- Energy, water, etc.
- Filling in the questionnaire
- Entering data into the tool







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2	Tool to calculate the carbon footprint of footwear V									V.1
3	Project:	Footwear ca	rbon footprint			-06				
4	Reference: LIFE 12 ENV/ES/000315 - CO2Sho			O2Shoe		00				
5	Methodology: ISO/TS 14067						14		ESC	
6	Colours code:					The state of the s	<u> </u>			
7	Data to be insert					1223		FOOTV	VEAR TECHNO	DLOGICAL
8	Fixes data					ACCRESS NO.	-	INSTITU	JIE	
9	Results			Shoe						
10	Negligible value									
11	Initial dates									
12	Entreprise name									
13	Location		Country	Region						
14			Name							
15	Contact person		Mail							
16			Phone			Other				
17										
18	General category									
19	Footwear model name							Size		
20	Functional Unit-weight (g)		0.000	Shoe weight (g) 0.00		0.000	Packaging weight (g) 0.000			
21	Total production (pair of shoes)				Evaluated period		Start month	year		
22	Production of model (pair of shoes)						Final month	/year		





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### Shoe models pilot test results

Country	Results (kg CO <sub>2</sub> e)
Spain	1.3 - 16.7
Portugal	7.8 - 25.3
Poland	4.0 - 13.5
Italy	7.6 - 12.3
Average	10.3

Flight 250 passengers Madrid-Chennai ≈ 230.000 kg CO2e Equates to ≈ 22.300 pairs of shoes with their packaging



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### Summary

- Carbon footprint: An indicator used to asses the environmental behaviour of products or organisations (continuous improvement)
- Today, there is a calculation tool that allows the specific calculation of the carbon footprint of footwear
- The tool has been verified
- Allows the reduction of the carbon footprint
- Reinforces the product, trademark or company image



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### www.co2shoe.eu





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