Italian Environmental Footprint Program

A strategy for Low Carbon economy.

Roberta Ianna

Ministry for the Environment, Land and Sea
Department for Sustainable Development, Climate and Energy

Zagabria, March 21st, 2014
Italian Environmental Footprint Program

**Voluntary agreements with private companies:** The Ministry started an intensive program with the Italian productive sector in order to test and promote different methodologies on the environmental impact assessment of production, distribution and consumption patterns, since 2009.

**Open competitions:** To increase the investments for sustainability in the SME sector, the Ministry co-funded 22 companies through an open competition, in 2012. A new call has been launched in 2013 and other 95 companies joined the program.

**International cooperation:** The Ministry drives projects involving Italian companies working in developing countries and promotes sustainable initiatives in cooperation with developing countries.
The aims

The program is a driver:

✓ For increasing **competitiveness** of Italian companies, considering the role of “green” requisites of products in the market

✓ For rethinking the designing and **management** of industrial production and distribution of products

✓ For creating a **new awareness** for consumers, to encourage increasingly responsible choices and good practices.
Framework of International Standards

UNI EN ISO 14040:2006
Environmental Management - Life Cycle Assessment - Principles And Framework

UNI EN ISO 14044:2006
Environmental Management - Life Cycle Assessment - Requirements and guideline

UNI ISO/TS 14067
Carbon footprint of products - Requirements and guidelines for quantification and communication

ISO/CD 14046
Life cycle assessment - Water footprint - Requirements and guidelines

ISO 14064-2:2006
Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements

ISO 14025:2010
Environmental labels and declarations - Type III environmental declarations - Principles and procedures

GHG Protocol

PAS 2050
Methodology and sustainability indicators

**Life Cycle Assessment**  
(UNI EN ISO 14040, UNI EN ISO 14044)

**Carbon Footprint**  
(UNI ISO/DIS 14067)

**Water Footprint**  
(ISO/CD 14046)

**Social Footprint**
Carbon footprint

What is: The carbon footprint is the total set of GHG emissions caused directly and indirectly by an individual, organization, event or product (UK Carbon Trust 2008). The unit of carbon footprint is CO$_2$ equivalent.

What’s for: Carbon footprint practice started in the 1980’s, when consumers have begun to request information about the environmental consequences of their consumption.

Carbon management: Carbon management is the process of tracking and reducing of GHG footprint, through a set of policies, procedures and systems dedicated to the management of the main GHG emissions.
Water footprint

**What is:** WF is the amount of water used by the individual process, product, producer or consumer.

**What’s for:** The main goal for performing Water Footprint assessment is to analyze how human activity, through process or product analysis, influence on water scarcity and pollution, and as an outcome to improve sustainability from a water perspective.

**The components:** The water footprint is an indicator of freshwater use that assess the water consumption by dividing the used water in direct and indirect and in three components: Green water, Blue Water, Grey water.
Social footprint

**Definition:** The Social Footprint is the first social certification created to engage and communicate to consumers the social aspects of the supply chain of a product, company or organization.

**Aim:** Social Footprint communicates the social history of the product, the origin of the materials, the people involved, the craftsmanship of the product, etc, in order to create transparency and give the right value to materials, products and activities.

**Test:** The Ministry introduced this indicator in the framework of international cooperation programs and subsequently applied it in the context of the voluntary agreement with the Italian manufacturing sector.
# Environmental footprint steps

**ANALYSIS**

Analysis of *goods/services/organizations* during their life cycle.

**MITIGATION**

Identification of possible measures apt to reduce the emissions through the life cycle of the selected consumer goods.

**COMPENSATION**

Identification of possible measures for the neutralization of the residual carbon footprint.

**COMMUNICATION**

Strategies to communicate the carbon footprint analysis results.
Towards carbon neutrality: voluntary market trend

In spite of the global financial crisis the voluntary market grows rapidly. The positive trend is confirmed by the projections of 2013.

The market foreseen an average grow of 17% in 2012-2020.

The total amount of the expected transactions is of **$2.3 billion in 2020**.

Italian figures

Partners:
more than 200 companies
5 universities
6 municipalities

Results of Analysis:
Carbon footprint of more than 250 products
27 companies concluded and certified the analysis by third parties
6 companies applied offset of emissions
Environmental footprint label
Environmental footprint label in the Italian market

4 cheese products

- 1,249 kgCO₂e
- 1,355 kgCO₂e
- 2,678 kgCO₂e
- 1,353 kgCO₂e

250g tagliatelle
- 1,019 KgCO₂e

4 sizes of water bottles
- 1,353 kgCO₂e
- 132 gCO₂e
- 82 gCO₂e
- 186 gCO₂e
- 191.8 gCO₂e
San Benedetto: “easy” bottle

Carbon Footprint of the new one liter bottle - 2011 production: 132 g CO₂e

The carbon footprint has been offset by purchasing VCU.
Italian sustainable wine

Companies: Tasca d’Almerita, Planeta, Antinori, Mastroberardino, Montevibiano Vecchio, Masi, Gancia, Chiarlo, Venica&Venica

The 4 indicators:

**Territory:** The subject of evaluation are biodiversity, landscape, local communities, and the economic impact on the territory and on the local communities.

**Air:** The indicator evaluates the total greenhouse gas emissions, directly and indirectly related to the life cycle of a wine bottle (0.75 litre).

**Vineyard:** This indicator takes into account the agronomic management practices in the vineyards.

**Water:** The water footprint is an explicit indicator of the fresh water consumption in the vineyard and in the cellar related to the wine production.
Benetton: beyond national boundaries

Evaluation of the carbon footprint of two “kids” products (t-shirt and polo shirt) concluded.

**Mitigation action:** Realization of a solar plant in Monastir (Tunisia), in cooperation with “Prosol”, a program in support of the solar heating market in Tunisia. The plant will be ready in June 2014.

The solar plant will cover the 8% of the energetic need and will avoid the emissions of **177 tCO$_2$e/a**.
Pirelli: beyond national boundaries

Carbon footprint analysis of the Cinturato P7 has been completed. The agreement undersigned in January 2013 starts the second step for reducing the impact on climate.

**Mitigation action:** Realisation of the biggest Solar Thermal Energy plants with Direct Steam Generation in Campinas (Brazil).
Analysis: mobility emerged as critical point for the GHG emissions.

Result: A CO₂ calculator (online app for calculating CO₂ emissions) and Guidelines on Carbon Footprint methodology for Universities have been developed.

Domino effect: Master in Sustainability and Carbon Footprint Management. The University statute contains the commitments for sustainability.

1000 students asked to have “sustainability skills” (1 credit) in their plan of study.
Carlsberg: an Italian innovation

Carlsberg Italia produces and sells over 1 million HL of beer.

CF Analysis: PET kegs, steel kegs, glass bottles, cans.

Brands involved: Carlsberg, Poretti, Tuborg

Mitigation action: reduction of the carbon footprint through innovative solutions as the recyclable PET Kegs.
Italian-Brazilian project

TRACES

& WATER TRACES
Traces: CF of 6 Osklen products

- Pirarucu leather bag
- Recycled cotton and PET shoes
- Recycled cotton and PET backpack
- Organic cotton T-shirt
- Organic silk tennis shoes
- Eco-juta bag
Tracing the Pirarucu bag

Pirarucu leather bag

Pirarucu is a fish used basically for feeding purposes.

Its skin usually represents a waste from the food industry and causes emissions of GHG when disposed to landfill.

The material which would normally become residue, is turned into a fashion accessory, generating jobs and incomes.
The results

**Il label:** The label traces the whole production chain, from the raw material to the end of life of the product, together with the social aspects of the production.

**Repeatable methodology:** The methodology and environmental footprint assessment of the production chain can be extended to other firms in the sector.

**Mexiana project:** The intervention for the reduction of CO₂ emissions will be realized by Enel Green Power and will provide solar energy instead of diesel fuel.

**Water Traces:** After Traces, another innovative project has been developed on water footprint assessment and social.
Water traces: water & social footprint of 4 Osklen items

Natural Straw Bag

T-Shirt

Arpoador Shoes

Jeans
The results of Water traces and the new label have been presented at the Sao Paulo fashion week.

Water footprint of the T-Shirt
The results of Water traces and the new label have been presented at the Sao Paulo fashion week.

Social footprint:

Social and Environmental initiative related to the production of the T-Shirt
Social initiatives and analysis

Social indicators obtained through the main International legal references, cooperation projects and regulatory standards.

**Social information:**
For each product, are reported social initiatives of suppliers involved in the production chain:
- Number of project started;
- Number of person who gain benefit from social project;
- Gender, mean age and educational level of employees;
- Process activity;
- Region covered by product supply chain.
Outcomes and Vision

Joint program with Expo 2015: The Ministry for the Environment in partnership with Expo 2015 and Olympic Committee Rio2016 promotes a joint program in order to develop a methodology for the carbon footprint analysis of “mega events“.

The partners: The Ministry cooperates with private sectors, research centers, public institutions in order to disseminate know how, awareness and best practices on emissions reductions.

The strategy: The national program, identifying and testing procedures of carbon management, through the development and use of low-carbon technologies and the implementation of best practices in the production processes as well as in the life cycle of goods and services, promotes “green economy” in Italy.
Contacts

Department of Sustainable Development, Climate and Energy

Italian Ministry for the Environment Land and Sea
44, Via Cristoforo Colombo
00147 – Rome
Italy
Phone: (+39) 0657221

ianna.roberta@minambiente.it

carbonfootprint@pec.minambiente.it