

CONSUMPTION

How does it affect climate?



What are we talking about?

Since the United Nations Framework Convention on Climate Change (adopted in 1992), the economic and industrial sectors have changed dramatically: between 1992 and 2011, the world production of manufactured goods has nearly doubled and the export volume of agricultural goods has been multiplied by two¹. **Due to this considerable increase in international trade, the estimations of the greenhouse gas emissions of a country can vary a lot depending on the method used in measuring the emissions.**

Greenhouse gas emissions (a higher atmospheric concentration of greenhouse gas means a higher average global temperature) are generally measured using a territorial-based approach, that is to say based on the emissions generated within the territorial limits of each State. The **“Consumption-based emissions” method of measuring allows for better understanding of a country’s global emissions and footprint relating to climate change. In order to calculate a country’s consumption-based emissions, the following calculation needs to be done:**

WHY THIS PHENOMENON?

A country is more or less an exporter or an importer of greenhouse gas emissions depending on:

- The carbon intensity of its energy system, which is the type of energy it uses. The more it uses fossil fuels (coal, oil, gas) in the production of its energy, the higher its carbon intensity is.
- The energy intensity of its Gross Domestic Product (GDP), that is the amount of energy used to produce one GDP unit.
- Its economic specialization in products with higher or lower CO₂ concentration, for example: steel, cement, the car industry, as opposed to services.
- Its balance of trade: a country whose balance of trade is negative will be more likely to be an importer of greenhouse gas emissions.

WHERE DOES FRANCE STAND (CONCERNING CO₂)?

In 2012, “consumption-based” CO₂ emissions had slightly increased compared to 1990², while territorial emissions had decreased by 15%.

The drop in French territorial emissions has therefore been counterbalanced by imported emissions in order to answer consumer demand. These emissions mainly come from our imports for food consumption, the car industry and chemicals.

Territorial emissions



Embedded emissions generated by the production of goods imported to answer domestic demands



Emissions generated by the international transportation of these imported goods



Embedded emissions generated by the domestic production of goods exported to answer foreign demands

= Consumption-based emissions

PUT AN END TO PRECONCEIVED IDEAS!

The source of imported emissions

MOST OF FRANCE'S IMPORTED EMISSIONS COME FROM CHINA

FALSE

Germany is France's main trade partner. In terms of value and emissions, most of our consumption goods come from Germany³. Germany has initiated an energy transition process and has set ambitious goals for climate change. Germany's energy production is partly based on coal. In order to meet its climate target the government is aiming at decreasing this form of energy and increasing that of renewable energies.

As a whole, European production is regulated by environmental policies aiming at cutting greenhouse gases emissions by 20% by 2020 and by 40% before 2030. Relocating the production of goods manufactured in Germany, or in the European Union in general, to France would then have limited impact regarding climate change only.

MOST IMPORTED EMISSIONS COME FROM ASIAN ELECTRONIC GOODS

FALSE

In 2007, the "Electrical and electronic equipment" category represented only **5%** of imported emissions, just the same as the «Clothing» category.

That same year however, **16%** of French imported emissions came from the farming and food industries, mainly because of meat consumption. **8%** came from the car industry, **8%** from building materials and **7%** from the chemical and plastic industries⁴.

How to reduce imported emissions

RELOCATING INDUSTRIAL PRODUCTION TO FRANCE

IT'S NOT THAT SIMPLE

In theory, relocating industrial production to France would enable us to reduce our country's imported emissions. However it would also have other consequences. First of all, it would probably raise production costs of goods and their price for the consumer.

Moreover industrial relocation would result in a rise in France's territorial emissions. Although this would allow for better emission management and creation of employment (by implementing energy efficient technologies), **the essential solution lies in better consumption.**

SETTING UP CARBON PRICING AT THE BORDERS

IT'S NOT THAT SIMPLE

The aim of such a measure is to avoid greenhouse gas emissions to move out of a country (through company delocalisation) with a policy to cut its emissions. It also has to ensure French companies' competitiveness against foreign ones, unregulated by constraining environmental policies. The implementation of a tax or carbon pricing (or "adjustment") at the borders proves to be very complex because it requires to be able to track the embedded emissions of all imported products. At best it could only be applied to a few key products⁵.

Moreover, the reason for implementing such a measure has to be to answer the risk of emission displacement rather than to protect national companies from a loss of competitiveness. So far no country has set up a complete framework encompassing all products⁶.

HOW TO ACT AS A CITIZEN?

In 2014 and 2015, over a period of eight months, we consumed the equivalent in natural resources of our planet's yearly production without it compromising their replenishment (at a worldwide level). **Changing our consumption patterns towards better quality, sustainable, repairable or second-hand products would allow, through a global decrease in new products purchase, a drop in raw material consumption and consumption-based emissions.**

SIMPLE IDEAS

- **Giving priority to sensible consumption patterns**, focused on actual needs and the search for quality and durable products.
- **Thinking "service"** rather than «property»: renting, borrowing or sharing can be used to meet a need for service in a cheaper and environmentally friendlier way than buying new products.
- **Thinking about repairing**, buying second-hand goods or donating to extend your goods life span.
- **Giving "non-material" presents**: show tickets, cultural subscriptions, discovery tours, etc.
- **Choosing products with environmental logos**, for example the EU ecolabel, which ensures that the product's life cycle will have less impact on the environment. These logos appear on many products (food, hygiene, cleaning, paint, textile, etc.).


 **16%** of France's imported emissions came from the food industry (in 2007)

A French citizen's average consumption is estimated to be 3500 kilocalories/day while the average requirement is about 2700. Apart from the immediate effects on health, cutting food-related emissions would potentially lower greenhouse gas emissions by 30%. More than half the environmental impact from the food industry is due to livestock farming (meat, eggs, fish, dairy products, etc.). **Reducing our consumption of these products and more specifically beef is a way to reduce the impact of our food consumption**⁷.

In France, food wastage represents an annual volume of 20 to 30 kilograms per capita, 7 kilograms of which still in the packaging⁸. **We can reduce our wastage by adapting what we buy to our actual needs and by keeping an eye on use-by dates.**

 **8%** of imported emissions in France come from the car industry⁹ (in 2007).

In 2008, the size of the household car fleet was 25% bigger than in 1994. **When this is possible (particularly in cities), we have to favour low emissions means of transport (such as cycling, walking, carpooling, public transport, carsharing, etc.).**

 **7%** of imported greenhouse gas emissions in France come from the chemical industry (in 2007): plastics, paint, soap, perfumes, etc.

The Chemical industry is highly dependent upon fossil fuels and therefore is emitting high levels of greenhouse gas. 4.6 million tons of plastics were used in France in 2011, 40% of which came from products with a short life span (in the packaging for example), as well as 2.1 million ton of nitrogen fertilizer. We can **reduce our climate footprint by choosing products with less packaging, or by using shopping bags rather than plastic ones.**

REDUCING CONSUMPTION-BASED EMISSIONS: EVERYONE WINS



BY REPAIRING AND REUSING OUR GOODS WE SUPPORT LOCAL EMPLOYMENT

Choosing to repair is a way to promote local craftsmanship. In the same way, choosing second-hand products is a way to support organisations such as Emmaüs. According to ADEME (French Environment & Energy Management Agency), these fields of work represent the equivalent of 18400 full-time jobs (FTE) in France, not including volunteer work¹⁰.



RESTORING COMPANY COMPETITIVENESS

France could restore its companies' competitiveness by focusing on the energy efficiency of its national production (through better regulation, incitements, etc.). For this to be achieved, Research & Development will have to develop innovative solutions to reduce the carbon footprint of products and industrial processes.



EMPOWER PEOPLE SO THEY BECOME CONSUM'ACTORS

People are influenced by advertising in their consumption choices. Adverts take care not to show the environmental effects of products. It is very important that environmental labelling for products (already used by some retailers) act as a drive for action, in order to promote low-emission products and to give people transparent information so they can make deliberate consumer choices while being aware of their environmental impact.



DEVELOPING THE ECODSIGN "MADE IN FRANCE": NUMEROUS BENEFITS

80% of the environmental impact of goods is determined at conception, and equally 80% to 90% of the cost of recycling is determined by the conception (dismantling, type and mixture of material)¹¹. Beyond the required changes in consumptions patterns, it is also the conception of a product and its packaging which determines its energy footprint. Eco-conception is beneficial in many ways:

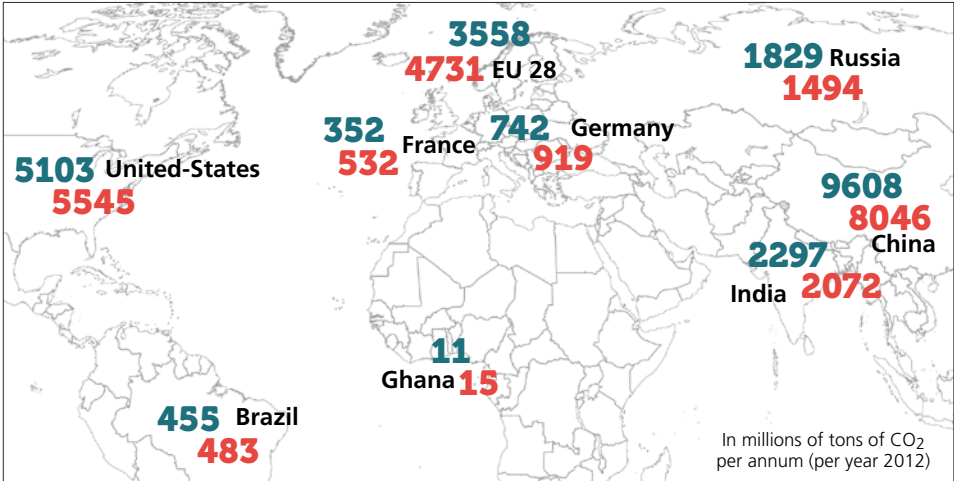
- Increasing the ratio of recycled material or recyclability but most importantly the lifespan of goods means a lower consumption of raw material, a lower energy consumption during production and less unnecessary greenhouse gas emissions.
- Setting up energy efficiency and ecodesign standards gives companies a competitive advantage in a world where energy prices are highly fluctuating.
- Ensuring that products are repairable is a way to create employment in the field of workmanship. For some products, ensuring a better «quality» may result in a higher price which will be made up for by a longer life span.
- Today each French citizen produces on average, 590kg of waste a year. Reducing the quantity of packaging is part of the measures beneficial both environmentally and economically. Acting both on the amount of raw materials and on the energy consumption during the production, it also represents an economical asset for the industrial sector.

MORE INFORMATION

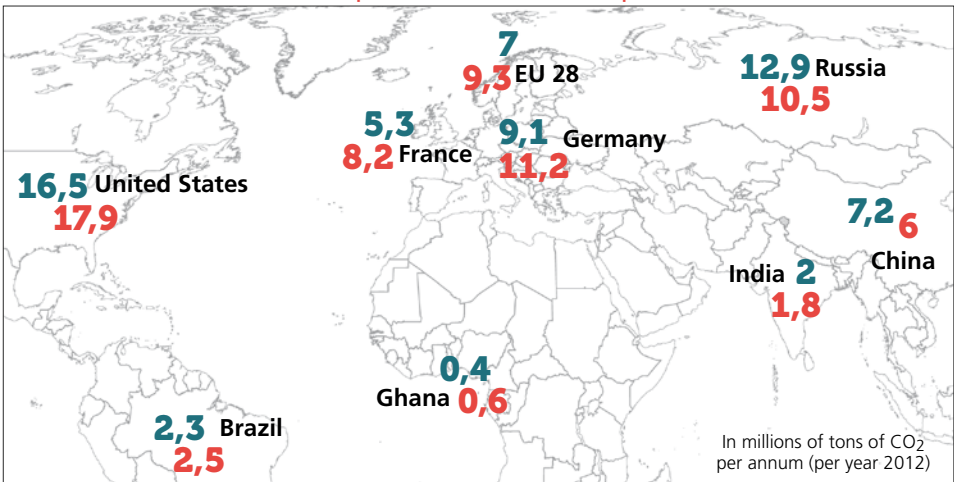
Alléger l'empreinte environnementale de la consommation des Français en 2030 - *Vers une évolution profonde des modes de production et de consommation*. ADEME, 2014.

Territorial emissions and consumption-based emissions in the world: the CO₂ situation*

Territorial CO₂ emissions / country
Consumption-based CO₂ emissions / country



Territorial CO₂ emissions / capita
Consumption-based CO₂ emissions / capita



* This map shows carbon dioxide (CO₂) emissions only. There are other greenhouse gases (methane, nitrous oxide, fluorinated gases), but we lack measurement data.

En 2012

- The country with the biggest difference between territorial emissions and consumption-based ones was China with a net export position over 1500 Mt of CO₂ (an amount almost equivalent to that of the European Union and United States combined).
- The EU's consumption-based CO₂ emissions were about 30% higher than those linked to territorial production.
- **Each French citizen imported (through their domestic consumption) almost 3 tons (net) of CO₂, the equivalent of a 40km car drive everyday for a year¹².**

To find out more on the subject, two complete studies from Réseau Action Climat (http://www.rac-f.org/Nos-publications):



Les émissions importées - Le passager clandestin du commerce mondial
- Written by Réseau Action Climat, ADEME, CITEPA (2013); 52 pages.



Réduire les émissions liées à la consommation - Quelles mesures politiques ? - Written by Réseau Action Climat, ADEME, CITEPA (2014); 52 pages.



Les Guides de l'Ademe:
Consommer mieux, 2014



Les Guides de l'Ademe: *Les Logos environnementaux sur les produits*, available on www.ademe.fr/guides-fiches-pratiques

**réseau
action
climat** france

Réseau Action Climat-France (RAC-F) is an organisation specialised in climate change issues gathering 16 national organisations dealing with international solidarity, public transport and alternative energy.

All the information is available on www.rac-f.org



Le Réseau Action Climat fédère les associations impliquées dans la lutte contre les changements climatiques



The views and opinions expressed here are those of RAC-F. Their partners cannot be held responsible for them.

1 - Source WTO.

2 - According to data from Global Carbon Project, the increase could be as high as 5%.

3 - In 2013, in terms of value, 17,2% of our imports came from Germany while only 8,1% came from China http://www.tresor.economie.gouv.fr/9470_10-premiers-partenaires-commerciaux-de-la-france-en-2013

4 - Source CGDD / SOeS (2012)

"L'empreinte carbone de la consommation des Français: évolution de 1990 à 2007", Le point sur n° 114 - March 2012.

5 - Products subjected to EU ETS, such as cement (particularly relevant because of the high levels of emissions produced).

6 - California has taken similar measures in the electricity sector and is currently working on a border carbon adjustment

for the cement sector. China has also mentioned the implementation of a similar framework of measures.

7 - For more information: <http://www.bilans-ges.ademe.fr/fr/accueil>

8 - Eviter le gaspillage alimentaire, ADEME, June 2014.

9 - Here, we are not talking about cars, which generate high level of greenhouse gas but they are included in the transport sector accounting.

10 - ADEME (2012) "Filières et recyclage - Le colloque des professionnels sur les produits hors d'usage".

11 - Legrain et al. (2014) "Transition vers une industrie économe en matières premières"; avis du CESE - Conseil économique, social et environnemental.

12 - Source Ademe.