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# The Transition Frieze The Carbon Footprint Game

## Educational guide to support facilitation



#TEDDAprojet

CEPS Projets Sociaux  
<http://www.asceps.org>



**Mda**  
Maison des Associations  
de TOURCOING



**POUR LA  
SOLIDARITÉ**  
European think & do tank

# Presentation of the project

This guide has been produced as part of the European TEDDA project.



This European project, funded by Erasmus Plus, is aimed at supporting European associations and their public with their ecological transition, by creating innovative tools. These tools are designed to inform, raise awareness and create a shared level of awareness and knowledge about climate change, in a fun way, and to encourage people to take action.

Four complementary educational resources have been developed as part of this project :

1. A gallery of inspiring portraits of associations that have developed concrete, innovative proposals ;
2. Educational and entertaining tools to raise awareness of climate change and the ecological emergency, and to encourage people to take action ;
3. A methodological guide for self-diagnosis and the implementation of concrete changes ;
4. A White Paper to deliver a common European message in favour of the ecological transition of small and medium-sized associations.

You can find all the information you need about the TEDDA project on the website [www.tedda.eu/](http://www.tedda.eu/)

It will be accessible to everyone to strengthen our knowledge and skills in order to act collectively in the face of environmental and climate challenges.

Partnership :

The TEDDA project brings together 5 associations from 3 EU member states: Maison Régionale de l'Environnement et des Solidarités HdF (MRES - France), Association pour une économie solidaire (Apes - France), Maison des associations de Tourcoing (MdA - France), Associacio per a la Creacioi Estudis de Projectes Socials (CEPS - Spain), and Pour la Solidarité (PLS - Belgium).

The TEDDA project website <https://www.tedda.eu/en/>



SCAN ME

# FACILITATOR – USER GUIDE

This educational guide is designed for associations, organisations, and more broadly aimed at actors wishing to run workshops and take advantage of the fun tools developed within the context of the TEDDA project : the Transition Frieze and the Carbon Footprint Game.

By conducting such workshops they will allow participants to decipher and understand contemporary climate issues, and the component parts of their carbon footprint. These tools also aim at identifying action levers to reduce our impact on the environment.

Here, we will show you examples of alternative animation sequences. These can be conducted together or separately, depending on the audience and the duration of the workshop.

Of course, it is possible to expand on the sequences proposed in this guide, or to integrate them into larger sets of activities.

These elements are supplemented at the end of the manual by resources to make it easier to get started with the Carbon Footprint Game.

This User Manual can be supplemented by the technical tool guide, which presents their historical timeline, as well as key elements allowing them to be recreated.

For further information, or to access the various tools we offer, go to the TEDDA project website : [tedda.eu](http://tedda.eu), or to the Maison Régionale de l'Environnement et des Solidarités website, tab "Imaginaires de la transition" : [mres-asso.org](http://mres-asso.org)

## Contents

Presentation of the project - Page 2

Presentation of the guide and contents - Page 3

Tool designers and TEDDA partners - Page 4

The Transition Frieze - Page 6

Discovering the Transition Frieze - Page 7

When curves speak - Page 8

Inventions and events that speak volumes ! - Page 10

Grasping the notion of the carbon footprint - Page 11

The Carbon Footprint Game - Page 13

1. Give me your carbon footprint, I'll tell you who you are ! - Page 15

2. And what about me ? what is my carbon footprint ? - Page 17

3. Let me create my own portrait - Page 19

Appendices - Page 21

Question sheet - Page 21

The carbon footprint, kezako ? - Page 23

Solutions to the Carbon Footprint Game - Page 25

# DESIGNERS OF EDUCATIONAL TOOLS

## La Maison Régionale de l'Environnement et des Solidarités (MRES)

Today it brings together nearly 120 associations from the Hauts-de-France region working in the fields of nature, the environment, solidarity and human rights. Over 5,000 volunteers and nearly 500 employees take part in that network.



The MRES aims to facilitate and develop the life and activities of associations, by providing open workspace and meeting rooms. As network head, the MRES interconnects its member associations and runs collaborative projects (eco-citizen challenges, knowledge and conference series, etc.). As a resource place, the MRES runs a documentation center on the themes of transition, energy, community life and eco-pedagogy.

Today's energy and climate challenges make its humanist project even more essential : building a better world for a desirable future.

## Virage Énergie



Virage Énergie is an association specializing in energy and societal forecasting. It creates, discusses tools for raising awareness and contributes to public decision-making to limit the use of energy and natural resources in our current and future modes of consumption, production and exchange.

Since 2006, the production of studies, reports and analyses has enabled the association to build up solid expertise in the fields of energy and climate. Virage Énergie supports communities and territories in the implementation of sober energy strategies by creating animation supports and educational tools. The association also works on the question of imaginaries and scenarios for energy transition.





# PROJECT PARTNERS

The MRES is a stakeholder in the TEDDA project. It works with four other partners :

## APES (Acteurs Pour une Economie Solidaire)



APES is a network of stakeholders in the solidarity economy in Hauts-de-France, an active contributor to social and ecological economic transitions.

The association accompanies the stakeholders in the development of territorial policies and solidarity activities. It strives to contribute to the improvement of practices for over 20 years.

[www.apes-hdf.org](http://www.apes-hdf.org)



## Maison des Associations de Tourcoing

A true pillar of local associative life, the MdA (in English : The House of Associations of Tourcoing)

It is a place of resources, exchanges and meetings at the service of people involved in associative and civic life.

[www.mda-tourcoing.fr](http://www.mda-tourcoing.fr)

## Pour la Solidarité (PLS)



PLS is an independent European Think and Do Tank, committed to a solidar and sustainable. Europe that is committed to defend and consolidate the European social model, a subtle balance between economic development and social justice.

[www.pourlasolidarite.eu](http://www.pourlasolidarite.eu)

## CEPS Projectes Socials

CEPS Projectes Socials  
<http://www.asceps.org>



The mission of CEPS Projectes Socials (Barcelona) is to enable citizens to access the social and cultural capital of their communities by reinforcing the autonomy of people, promoting social cohesion and social inclusion and fighting against discrimination.

[www.asceps.org](http://www.asceps.org)

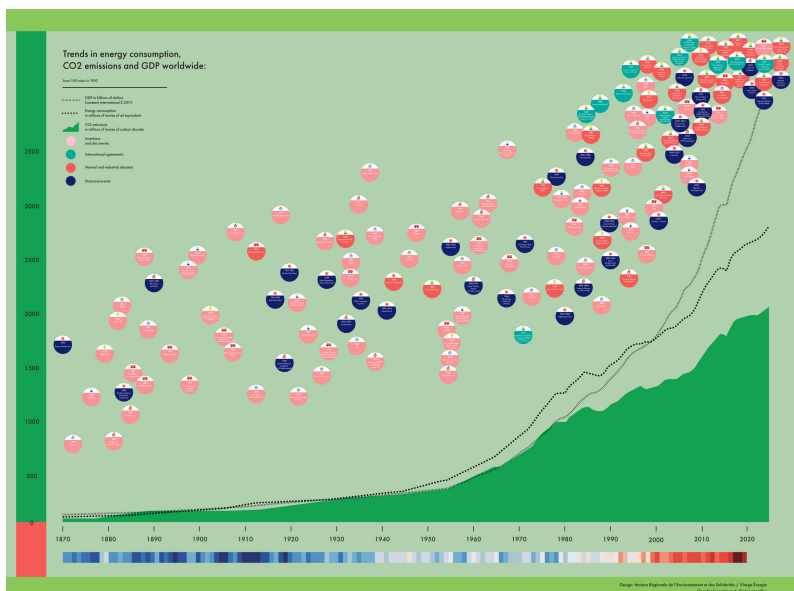
# THE FRIEZE OF TRANSITIONS

Designed in partnership with the association Virage Énergie, the Frieze of Transitions is a large-format educational tool that highlights the challenges for reducing our greenhouse gas emissions. A first prototype was tested for a whole weekend during the MRES Environment and Solidarity Festival in June 2018. It confirmed the relevance of the large format and the need to articulate the global vision with its concrete impact on visitors : “Why am I concerned?”. The tool was presented to the general public for the first time during the 2021 edition of the European Energy Transition Conference.

In 2022, as part of the TEDDA project, the Frieze of Transitions was adapted to the European context and relevant data was updated.

The objective : to provide information, raise and obtain a shared level of awareness and knowledge on climate change and ecological urgency. Above all, this tool combined with the carbon footprint game, allows you to evaluate your carbon footprint and measure the collective efforts to be made within your association.

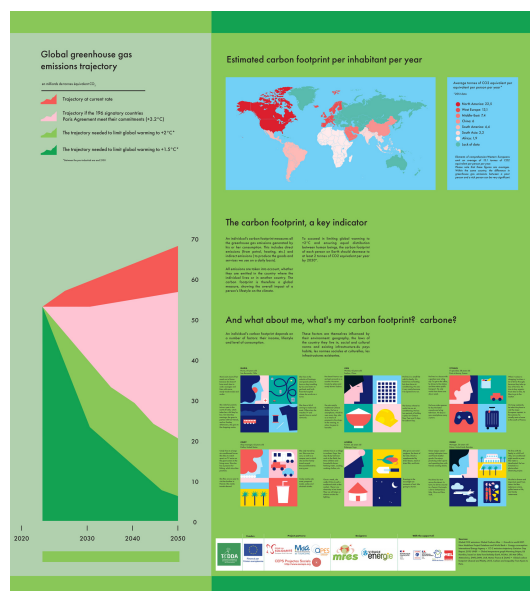
The tool is presented in the form of two panels :



Panel one represents the evolution of CO2 emissions and energy consumption on a global scale over the period 1870-2020. Major key dates are shown there, to provide benchmarks on energy and climate issues and to understand the uses of energy.

Panel Two completes the frieze and presents the different trajectories for reducing greenhouse gas emissions by 2050. The lower part of the panel is devoted to the concept of the carbon footprint : you will find a map of carbon footprint averages per inhabitant and per year according to the major regions of the world, plus a “definition and objectives” section and 6 profiles of people around the world whose carbon footprints vary greatly.

Testimonies and graphs combine to better understand the intricacy between the behaviour of individuals and that of collective choices.



# WORKSHOP SEQUENCES

## Discovering the Frieze of Transitions

Participants :  
5 to 10

Time allowed :  
5 to 10 minutes

Age :  
from 16 on

### Objectives :

- Immersing oneself

### Supports :

- The two panels of the Frieze

### Running of the workshop :

The facilitator invites participants to walk individually up to the panels and examine the information displayed.



#### Panel 1 :

- Evolution of energy consumption, CO<sub>2</sub> emissions and world GDP (base 100 in 1900)
- Inventions and discoveries
- International agreements
- Natural and industrial disasters
- Historical events
- Average temperature variations

#### Panel 2 :

- Trajectories of global greenhouse gas emissions in billions of tons of CO<sub>2</sub> equivalent, compared to commitments
- Estimated carbon footprint per inhabitant and per year
- Definition of the carbon footprint
- Typical profiles and their income, lifestyles and consumption modes

# When curves speak for themselves

Participants :  
5 to 10

Time allowed :  
10 minutes

Age :  
from 16 on

## Objectives :

- Understanding the evolution of global emissions by examining Panel 1 of the Frieze

## Support :

- Panel 1 of the Frieze

## Running the workshop :

The facilitator asks questions to the group for pooling the information reviewed and sharing what struck them. The facilitator encourages a discussion within the group which he or she initiates through questions from different angles :

- What do the different curves represent ?
- What is the relationship between them ?
- What are the significant changes over time ?
- Are there “remarkable/odd” years ?
- What surprises you ?

The curves of the Frieze of Transitions represent the evolution of three different types of data, at the global level between 1870 and 2020 :

- Energy consumption in millions of tons of oil equivalent
- CO<sup>2</sup> emissions in millions of tons of carbon dioxide
- The increase in GDP (Gross Domestic Product) in billions of dollars



The curve of CO<sup>2</sup> emissions is represented by a color band. That is the data that makes the most sense in the face of the challenge of climate change. The data comes from the Global Carbon Atlas and only takes into account CO<sup>2</sup> emissions related to the use of fossil fuels and industry (notably cement production).



The energy consumption curve can easily be compared with the CO<sup>2</sup> emissions curve. Indeed, the two curves being strongly linked, it is essential that the parallel be made visually. The data comes from the International Energy Agency (IEA).



Finally, the GDP (Gross Domestic Product) curve raises important questions, particularly about the correlation between growth and the level of greenhouse gas emissions. This subject being controversial, it appears in a less visible way, so as to be able to approach (or not)



the subject based on the group, the objective of the workshop and the amount of time available to the facilitator. Note that participants often notice the exponential growth of GDP. Data is taken from the New Maddison Project Database and World Bank.

To compare these three curves with different units, it was chosen to use a base 100, which allows us to compare the percentage increase and not the change in absolute value. The base 100 was defined for the year 1900.

The presence of stickers labelled “events / inventions / disasters / international agreements” on the Frieze makes it possible to illustrate, in a more concrete way, the increase in energy consumption, carbon emissions and greenhouse gas emissions. Indeed, the labels make it possible to establish links between the level of energy consumption and the lifestyle at a given period. By combining curves and labels, one can articulate the political and social history of energy.



That was a matter of choices (therefore those are not exhaustive) and of an arbitrary positioning (the visual effect of the overall expansion at the end of the period should be emphasized).

The color band underneath the curves represents the evolution of global temperatures between 1870 and 2020. The colors represent the deviations from the average temperature between 1961 and 1990, on a global scale. Indeed, it is not relevant to compare the average temperature of year on year because these are “normal” annual variations. To ensure the reliability of measurements of climate change, the reference temperature is always an average temperature over 30 years, here the period 1961-1990.

The color scale varies from  $-0.75^{\circ}\text{C}$  (bluest) to  $+0.75^{\circ}\text{C}$  (reddest).

For example, on a global scale, the year 2018 was  $0.75^{\circ}\text{C}$  warmer than the average temperature between 1961 and 1990.



The curves of the Transition Frieze can be put into perspective with the increase in world population. World population numbered around 8 billion inhabitants in 2022. It reached only the one billion mark in 1800 and has doubled over the last fifty years (4 billion in 1974). It is expected to continue to grow and could reach nearly 10 billion by 2050.



# Inventions and events that speak volumes !

Participants :  
5 to 10

Time allowed :  
30 minutes

Age :  
from 16 on

## Objectives :

- Question one's relationship to technology, innovation, and more broadly one's relationship to consumption
- Share and debate

## Supports :

- Panels 1 & 2 of the Frieze
- Hand out one answer sheet per participant (see appendix)
- Pencils

## Running the activity :

The facilitator hands out an answer sheet to each participant. Everyone is invited to answer the following questions, with regard to the elements displayed on the first panel of the Frieze :

1. What do these curves represent ?\*
2. How do they interrelate ?\*
3. Are there any events or periods that particularly strike you ?\*
4. In your opinion, when did people first become aware of climate change ?\*  
\*These questions relate to the first two sequences of activities
5. In your opinion, what inventions can our society do without ? Name 5
6. More difficult... what inventions can our society not do without AT ALL ? Name 5
7. What do you think is the most recent stupid/useless invention created ?
8. What do you think will be the next revolutionary invention ?
9. What objects or events are directly linked to the use of oil and its derivatives ?

The facilitator suggests sharing the responses of those who wish to express themselves. He or she proposes to focus on questions 5 and 6, jotting on a paper board the inventions which could be abandoned, then those which should be kept. He or she invites the group to react for a brief collective discussion.

The debate around inventions to be kept or abandoned can reveal very different perceptions in terms of innovations or progress. It is not necessary to be exhaustive by going through all the participants' proposals, but be sure to maintain the attention of the group. Here are some interesting avenues and themes to address :



Goog to know !

- Medical or paramedical inventions : can we do without medicine ?
- Inventions relating to comfort : what is essential ? (e.g. refrigerator, smartphone, processed foods, etc.)
- Inventions having a social impact : for example the emancipation of women (washing machine, Barbie doll, etc.)
- Inventions linked to well-being or leisure (music, toys, etc.)

# Grasping the notion of the carbon footprint

Participants :  
5 to 10

Time allowed :  
15 to 20  
minutes

Age :  
from 16 on

## Objectives :

- Understanding the notion of carbon footprint

## Support :

- Panel 2 of the Frieze

## Running the activity :

The facilitator presents the display at the top of Panel 2 of the Frieze and invites answers from the participants :

- What does this map represent ?
- Does anything strike you ?

After an initial phase of discussion, the facilitator gives the definition of the carbon footprint and points out the average value for the French carbon footprint, as indicated on the panel :

### The carbon footprint, a key indicator

An individual's carbon footprint measures all of the greenhouse gas emissions generated by their consumption. That includes direct emissions (petrol, heating, etc.) and indirect emissions (to produce food, objects and services used on a daily basis). All emissions are recorded, whether they are produced in France or in some other country. The carbon footprint is therefore a comprehensive measure, which illustrates the overall impact of a person's lifestyle on the climate.

The average carbon footprint of a French person comes to around 9.8 tons of CO<sup>2</sup> equivalent per year. Yet, in order to successfully limit global warming to +2°C and ensure equal distribution among humans, the carbon footprint of each person on earth should decrease to at least 2 tons of CO<sup>2</sup> equivalent per year in 2050.

The facilitator introduces the portraits featured on the panel. After a free reading time, a time for discussion is proposed around these topics :

- In your opinion, who has the highest carbon footprint ? Why so ?
- Who has the lowest carbon footprint ?
- What influences our carbon footprint ? (If it's too difficult phrase it as follows: "Could Omar have the same carbon footprint as Ashera if he made a maximum of efforts?" The idea being to insist on the fact that one's carbon footprint is conditioned in part by one's choices but also by the society in which one lives.)



The carbon footprint can be defined as the most comprehensive measure of the impact of a person's lifestyle on climate change. This notion, which surfaced only recently in political and media debates, is sometimes misunderstood and not very concrete for a majority of the population. Yet, it makes it possible to give interesting orders of magnitude while addressing questions of social justice.



The question of China is often directly raised by participants :  
The map highlights the average carbon footprints by major region of the world. It allows the facilitator to test the participants' grasp of that notion. Indeed, the average carbon footprint of a Chinese person (about 7 tons of CO<sup>2</sup> equivalent) comes as a surprise to many participants. It is therefore important to remind the group that the emissions produced in China are mainly used to produce goods that will be used in North America or Europe, and that they are therefore legitimately attributed to the carbon footprints of Americans or Europeans. This map is therefore very useful for making the link between carbon footprint and social justice.



It is also necessary to differentiate between the individual component (I choose to go on holiday by plane every year) and the collective component (I do not have access to public transport and the nearest bakery is 15kms away) of the carbon footprint. It should be noted that the carbon footprint is conditioned in part by our choices but also by the society in which we live.



To find out more about the carbon footprint, you can refer to the appendix "The carbon footprint, kezaoko?".

# THE CARBON FOOTPRINT GAME

The Carbon Footprint Game was created in 2021 by MRES and Virage Énergie following up on the Frieze of Transitions, the objective of which is to help participants understand the global challenges of climate change and to situate themselves by addressing the issue of the carbon footprint.

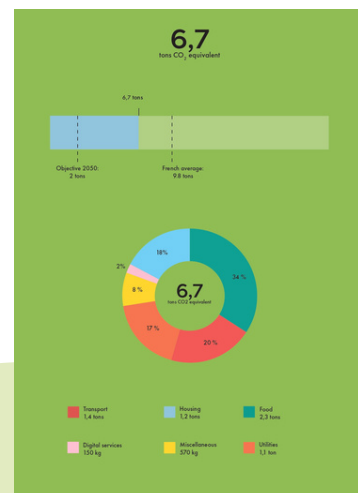
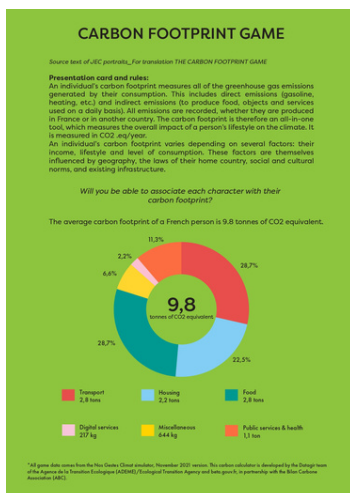
Its creation was financed and supported by Lianes Coopération and the Hauts-de-France Region as part of the RECITAL project. It has been adapted to the European associative context as part of TEDDA in 2022, presenting profiles of associative audiences.

The tool is part of the “Imaginaires de la Transition” program co-led by the MRES and

Virage Énergie. The program is based on the observation that the energy transition also depends on a change in imagined representations : climate challenge is of such magnitude that it questions our representations, our ways of thinking and of projecting ourselves into the future. The objective of the program is therefore to rely on fiction, visual arts and human and social sciences to move towards a low-carbon society.

The Carbon Footprint Game is made up of 13 cards :

- 6 “Portrait” cards
- 6 “Carbon Footprint” cards
- 1 answer card



**Associations presentation card**  
This game is part of the TEDDA project.  
**The TEDDA project - Ecological Transition and Sustainable Development of Associations**

Supported by the France 3 program, the TEDDA project aims at engaging European associative organizations and audiences in their ecological transition, through the production of innovative tools: portraits of inspiring initiatives, climate change emergency awareness tools and essential cardboards to initiate a sustainable ecological transition.

These different supports will provide a new way to inform and raise awareness as well as achieve a shared level of awareness and knowledge on climate change and ecological emergency. Finally, promoting a desire to act.

The Carbon Footprint Game was initially created in 2021 by MRES and Virage Énergie, as part of the Imaginaires de la Transition program, financed and supported by Lianes Coopération and the Hauts-de-France region as part of RECITAL. It organizes representations of the nature of the carbon footprint, not through a calculation but through examples of life stories of characters that participants can identify with.

The TEDDA project brings together 5 partner associations from 3 EU member states:  
- the Réseau Régional de l'Environnement et de la Solidarité Régional House for the Environment and Solidarity (France)  
- the Réseau des associations de Transition / Réseau of Associations of Transition (France)  
- the Réseau des associations de Transition / Réseau de la Solidarité-développement (France)  
- Association des Initiatives locales de production modeste (Spain)  
- Four to Solidarity / For Solidarity. FS (Belgium)

Project website: [tedda.org](http://tedda.org)  
Contact: [tedda@tedda.org](mailto:tedda@tedda.org)

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Project reference: 2021-1-FR0-KA220-ADU-000012349

Partner:

Funder:



The portraits that make up the Carbon Footprint Game are built on the basis of testimonies from real people, and more precisely from people linked to the associative sphere (volunteers, administrators, employees, etc.) residing in European countries taking part in the TEDDA project, so that they resonate as much as possible with the reality and lifestyle of the participants.

This makes it possible to best take into account the different factors determining the carbon footprint : There are characters constrained in their choices : imposed sobriety with a low carbon footprint or strong geographical constraints which imply a high

carbon footprint. Other characters are very conscious and free in their choices. These differences highlight the fact that if the carbon footprint depends on the character's individual choices, it is also constrained by external factors : geography, infrastructure, social and cultural norms, etc.

The data relating to the French Carbon Footprint and the footprints of the characters come from the Nos Gestes Climat calculator ([nosgestesclimat.fr](http://nosgestesclimat.fr)), a tool developed by ADEME, a French public institution whose mission is to participate in elaborating national and local ecological transition policies.

# Animation sequences

How to play the Carbon Footprint Game ?

The main objective of the game is to associate the character cards with the corresponding carbon footprint card based on the description of their way of life, but that's not all !

In the following pages, we will therefore present various possible animation sequences.

Give me your carbon footprint, I'll tell you who you are !

Per game :  
3 to 6 people

Time allowed :  
30 to 40  
minutes

Age :  
From 16 on

## Objectives :

- Understanding the notion of carbon footprint and identifying the factors that come into play in its calculation

## Support :

- Carbon Footprint Game - 1 game for 3 to 6 people maximum

## Running of the sequence :

In small groups, the participants are invited to familiarize themselves with the cards, read them, then associate the different portraits with what they think is their own carbon footprint. After a time for reading and collective reflection (20 minutes on average, but the duration can be extended if necessary), the participants give their answers and compare them with those of others. Groups are invited to justify their choices if they wish to. The facilitator then shares the various solutions.

Once each character has been associated with their carbon footprint, the objective is to open the discussion with the participants :



- What impacts the carbon footprint of the characters the most ?
- What steps should be taken to have a reduced carbon footprint ?
- How do these characters compare to the national average ?
- What steps could the characters take to reduce their carbon footprint ?
- Which character comes closest to your way of life ?
- Do all characters have the same ability to reduce their carbon footprint ?



The answers to the game can be found in the appendix to this guide.



Food for thought : It is perhaps simpler to fly less to go on vacation than not to use your car for daily trips when there is no other alternative.





# And what is my own carbon footprint ?

Participants :  
5 to 10

Time allowed :  
15 to 20  
minutes

Age :  
From 16 on

## Objectives :

- Estimating your carbon footprint

## Support :

- A smartphone or computer connected to the site Nos Gestes Climat, per participant

## Running of the sequence :

Using the Nos Gestes Climat simulator, each participant is invited to estimate their carbon footprint.

The facilitator accompanies the group on the first page of the site. The climate footprint test is intended for individual use, but it is possible to have several people take it in “Group mode”. Everyone will be behind their screen, but will be able to visualize the results of others in real time.

The facilitator solves possible technical connection problems.

During the test, the facilitator ensures that the participants respond within the same time frame. He or she can suggest that participants wait for each other to have completed each theme (food, transport, etc.).

The calculator is structured along 5 themes:

- Transport
- Housing
- Food
- Digital sphere
- Consumer goods



It is ideal for the facilitator to calculate their own footprint before the animation sequence, in order to identify potential stumbling blocks for participants and elements to be taken into consideration (for example: calculating the individual footprint requires knowing the amount of their household's energy bills, or even certain elements relating to the distances traveled each year, etc.).



The facilitator may be required to clarify certain instructions. He or she therefore should become familiar with the test beforehand. Example : question regarding meals : there are 14 meals in total. The participant must figure out how many vegetarian meals / with cheese / with chicken / ... he or she takes.



Point of caution : sharing your carbon footprint with other members of the group is not compulsory. It is better to identify weak points, things that everyone can improve. Above all, it is a question of not discriminating against people with high carbon footprints but of identifying levers for development and action.



Here are tips to help you complete the test :

- Answer the questions on your behalf, not on behalf of your household : this is an individual test.
- Answer with regard to your personal life, not your job or studies. Only one exception : your commute must be included in the kilometers/mileage traveled.



An FAQ as well as a documentary resources page are provided to go further.



To find out the carbon footprint by consumption item, it is possible to follow up on [impactCO2.fr](http://impactCO2.fr) after the Nos Gestes Climat test.



# Let me create my own portrait

Participants :  
5 to 10  
people

Time allowed :  
60 to 90  
minutes

Age :  
From 16 on

## Objectives :

- Grasping the notion of carbon footprint
- Identifying the levers to reduce one's carbon footprint
- Identifying the individual and collective components of the carbon footprint

## Supports :

- Paper
- Pencils

## Running the sequence :

Individually or in small groups, participants are invited to create their own portrait. This can be imported directly from the calculation previously made on the Nos Gestes Climat simulator or can consist in a typical or ideal carbon footprint (lowest possible / strongest possible / that of a professional football player / a person in a nursing home / a social media influencer / a rural farmer / an office worker / etc.).

In order to create a comprehensive game, one should take into consideration the target audience. Indeed, for the Carbon Footprint Game to work, the portraits of the game must sound real and reflect the lifestyle of participants. For example, if the game is run mainly within sports associations, it is important that the characters represented be also sportsmen, even if their way of life, their social level, their interests, etc. may vary.

Beyond the type of profile, it is important to come up with a fairly exemplary character (4 tons or less) and a high emissions character (at least above the national average) to illustrate the possible differences and facilitate the game through contrasts.

For each of the extremes, it is interesting to have a character who is very constrained in his or her choices (imposed sobriety in the case of a low carbon footprint or, on the contrary, strong geographical constraints which imply a high carbon footprint for example) and a character who is very conscious and free to choose (either a low carbon footprint -chosen sobriety- or a high one). Those differences highlight the fact that while the carbon footprint depends on the character's individual choices, it is also constrained by external factors : geography, infrastructure, social and cultural norms, etc.

By themselves or with the help of the calculator, participants invent the character's income, lifestyle and consumer habits. They take into consideration around the following themes :

- Transportation
- Housing
- Food
- Digital sphere
- Consumer goods
- Family situation : is the character married, does he have brothers and sisters, children ?
- Occupation : is this a person employed, retired or a student ?
- Hobbies, habits, community involvement ? Sports, activities, music, etc.
- Holidays : which destination ? For how long, with whom ?



Once the characters have been created, participants calculate the carbon footprint using the calculator. They must pay special attention to the causes, difficulties and the contexts chosen.

For example, we can note that a person who travels 10,000 km per year because he or she works away from home will have the same carbon footprint as the person who travels 10,000 km per year to travel around France during his/her vacation. However, the action levers will be very different. Similarly, a person may eat very little meat by choice (for reasons of animal welfare, health, carbon footprint) or by financial constraint. When sketching out the portrait, it is essential to note these explanatory elements, which supplement the numerical data.

To finalize the profiles of the characters, participants can :

- Choose a character name
- Comment on his or her lifestyle in the form of a story
- Associate the calculated carbon footprint



# the transitions FRIEZE

A century and half of  
climate change

What do these curves represent ?

What is the relationship between them ?

Are there any events or periods that particularly strike you ?

In your opinion, when did awareness  
around climate change start ?

**In your opinion, what inventions can our society do without ?**  
Name 5

**More difficult... What inventions can our society not do without AT ALL?**  
Name 5

**What do you think is the latest stupid invention that was created ?**

**What do you think the next revolutionary invention will be ?**

**What objects or events are directly linked to the use of oil and its derivatives ?**

## THE CARBON FOOTPRINT: KEZAKO ?

The carbon footprint is an indicator that calculates the impact that human activities have on the environment, and more specifically the greenhouse gas emissions generated by these activities. It can be calculated on an individual's scale -based on one's way of life-, but also on that of a company -based on its activities-, or a territory.

Although many calculators exist today, it is not possible to know one's carbon footprint precisely. To do this, it would be necessary to know the origin of each product consumed, the materials and energies used to produce it, the energy mix of the country of origin... A very difficult job, indeed ! In that case, why calculate one's carbon footprint ?

The main usefulness of the footprint is to give orders of magnitude, and provide data about the main categories of pollution generated by -an individual, company, or community-.

For example, the main household pollutants in France in 2022 are :

- Transportation
- Food
- Housing
- Goods and services

The average French carbon footprint was estimated at 9.9 t CO<sub>2</sub>eq in January 2022, far from the objectives set during the Paris Agreements (COP 21), where the State pledged to achieve carbon neutrality by 2050, and limit global warming to +2°C in 2100 compared to pre-industrial levels.

### How to calculate it?

Acting for the environment by reducing one's carbon footprint first requires knowing one's own personal emissions level.

Several calculators exist and are freely accessible on the internet. Among the most comprehensive carbon footprint calculators, we find in France the one developed by ADEME, Nos gestes climat.

(...)

Unsurprisingly, these calculators make it possible to observe a correlation between the standard of living and the emissions produced by households : French people with the highest incomes have on average the highest carbon footprint. So, if your carbon footprint amounts to 10t CO<sub>2</sub>eq, you will have to act to cut down on that figure ! Calculators provide many tips and simple everyday actions to achieve this.

The task is substantial, since the average carbon footprint of the French should decrease by around 80% by 2050 to achieve the 2 t CO<sub>2</sub>eq/year compatible with the objectives of the Paris Agreement. But to what extent can individual action contribute to this goal ?

Although everyday actions are essential, that will not suffice to achieve the French objectives of neutrality by 2050. Individual measures must be accompanied by structural measures.

That requirement has also been highlighted in the latest IPCC report : limiting the rise in temperatures to 1.5°C on average by the end of the century implies reducing our greenhouse gas emissions by half by 2030. To achieve this, it is absolutely necessary to join forces in a collective effort towards sobriety.

## Choosing a carbon footprint calculator

Before playing the Carbon Footprint Game, it is necessary to have identified a reliable national carbon footprint calculator. Three criteria seem important to take into account when choosing the calculator :

- The person or structure behind the calculator : what is their legitimacy and level of expertise ? Do they defend particular interests or positions ?
- Data transparency : is it possible to find the hypotheses used for the calculations of each component of the carbon footprint ? What input data is the tool based on ?
- The durability of the tool over time : is it a tool that is regularly updated ? Is it likely to still be online in 6 months, 2 years, 5 years ?

For the creation of the French Carbon Footprint Game, we relied on [nosgestesclimat.fr](http://nosgestesclimat.fr), a tool produced by ADEME (A French Public Institution whose mission is to participate in the elaboration of national and local policies for ecological transition). The code and calculation methods for [nosgestesclimat](http://nosgestesclimat.fr) are transparent. The tool is regularly updated.



Were you able to pair up the characters with their carbon footprint?

FATIHA



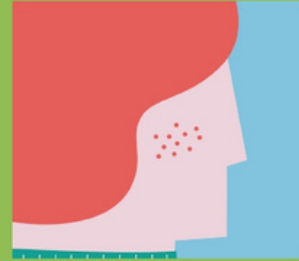
7,2 tons  
CO2 equivalent

YACINE



6,7 tons  
CO2 equivalent

STANISLAS



6,4 tons  
CO2 equivalent

GEORGES



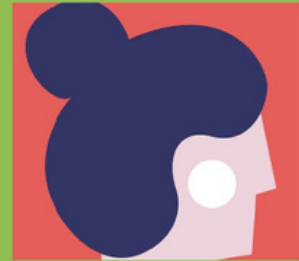
10 tons  
CO2 equivalent

CATHERINE



5,3 tons  
CO2 equivalent

ANNE



7,7 tons  
CO2 equivalent



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