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CURRICULUM FOR TRAINERS

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I. INTRODUCTION

The curriculum for trainers provides formats for those who want to present the project's results to an audience interested in the project's content for various reasons. This project is funded by the Erasmus+ program, the European Union's program for education, training, youth, and sports. The objective of the project is to develop solutions for sustainable tourism within the framework of the conversion and enhancement of industrial heritage by working on the following options:

- Developing concepts of sustainable tourism as diversification and management aimed at the sustainability of tourism processes.

- Designing intermodal transport mechanisms that encourage proximity tourism to mitigate the negative effects of mass tourism and reduce emissions related to transportation, especially air travel.

- Promoting, enhancing, and networking sites related to the decommissioning of industrial heritage as a factor in the economic and social promotion of depressed areas.

- Valorizing vintage automobile heritage as a driving force for micro-entrepreneurship in the tourism sector.

Two types of potential scenarios with accompanying presentation proposals are identified. Of course, the project, with its various tools, offers a broader range of possibilities for those interested in promoting its content for academic or entrepreneurial purposes.

I.I WHO IS THIS COURSE AIMED AT?

This toolkit has been designed to provide tools and suggestions to teachers and trainers who will use the materials made available by the Cool Classic Cars platform and the homonymous project. The courses and exercises proposed are possible uses of the project intended for both experienced trainers and teachers, as well as those without experience, aimed at developing users' skills or facilitating the presentation of topics. They can be used in online or face-to-face courses, or in hybrid versions.

This toolkit does not claim to be exhaustive and aims to be a guide for those who want to approach training work. For this reason, online materials will be made available that are the product of the research work of the Cool Classic Cars project. In addition to the two possible presentations proposed according to the assumed target, and the 9 activities suggested to facilitate the work of trainers during the lessons, the toolkit includes a brief introduction to adult education in general.

2. INTRODUCTION AT TRAINING

2.I SOME WAYS OF LEARNING

The approach to teaching should be learner-oriented. Focusing on the student means understanding in advance what knowledge, skills, competencies, and objectives the listener possesses. Based on these factors, the communication strategy should change not only to make the lesson more effective but also to avoid it producing an effect contrary to the desired one.

There are different types of teaching and theories on how to make them effective. What we propose here is Kolb's learning cycle. According to this approach, there are four stages that Kolb identifies as experiential, reflective observation, abstract conceptualization, and active experimentation. On the educator's side, it involves understanding how to identify learning needs, how to design the lesson, consolidate teaching, and evaluate it.

Being aware of the various types of learning that an audience may have implies adopting different styles, even simultaneously, to try to make one's activity as effective as possible. While some are more stimulated by a visual type of teaching, consisting of maps and graphs, for others, writing or listening is the most direct way to internalize information. Obviously, this type of stylistic choice changes depending on the audience and the environment in which the lessons take place, whether face-to-face or online, for example.

It is also useful to understand the difference between a teacher, educator, and facilitator: if the former is responsible for transmitting knowledge, the facilitator acts as a mediator in the transmission of information between peers, while the educator

can be seen as a middle ground between the two, focusing on a psychological and practical approach.

2.2 SOME CONCEPTS ON COMMUNICATION

Being effective in a learning environment involves certain communicative skills that are essential for an educator. Being able to communicate in terms of how to present a topic, being able to actively listen and effectively question, encompass some of the basic aspects of communication. Since education is a relationship that adjusts to its listeners, it is also crucial to give and receive feedback constructively.

One must be able to listen and communicate with nonverbal language, as much of what can be understood in a classroom passes through this type of language: gestures, movements, positioning explain to the listener what their predispositions and difficulties are and make it clear how the teacher intends to relate to a class.

At the same time, teaching has decidedly changed after the COVID-19 pandemic, and one must know how to use the appropriate tools when in a virtual work environment. Often here, written communication is the effective one, and the considerations made about nonverbal language now become irrelevant.

It is equally useful to imagine communication within group models: since one of the most effective tools for transmitting teaching is to stimulate group work, where experiences, knowledge, ideas are shared by different people, knowing how to guide the debate and communication among individuals becomes an integral part of an educator's toolkit.

2.3 SOME QUALITIES AND FUNCTIONS OF THE EDUCATOR

In addition to communicative skills, an educator must possess some personal qualities. One of the most important is empathy. Understanding the feelings and emotions of one's audience are fundamental characteristics for creating an environment of listening and operational confrontation that facilitate the understanding of topics. Especially when it comes to evaluating or giving feedback, the way it is done implies the possibility for an educator to exercise an active and effective action on their audience, just as knowing how to accept empathetically observations and feedback on one's work help to organize a more effective teaching in progress.

Since educating can be a combination of teaching and facilitation activities, one of the functions of the educator is that of a facilitator. This quality is linked to understanding

how to bring out the competencies and knowledge that individuals possess. Certain impartiality and neutrality, listening skills, are necessary to perform this role and make possible the active participation of individuals in a group. There are a whole series of activities that can help in this regard, such as brainstorming, ice-breaking activities, or role-playing.

2.4 CREATING LEARNING OBJECTIVES, TASKS AND ASSESSMENTS

As educators, we must first have a clear understanding of what we want our audience to know, understand, and be able to do at the end of our work. To do this, we must initially consider what these objectives are and how they can be achieved. It is necessary, therefore, to identify the most appropriate tasks to achieve the desired results, and the method of effectively evaluating whether our work has achieved them.

Referring to the learning cycle model, we have seen how teaching consists of different phases in which planning, measurement, and reporting are necessary steps for effective work.

Another indicator that can help establish objectives, tasks, and assessments appropriately is the S.M.A.R.T. system (specific, measurable, attainable, resourced, and time-bound), which, focusing on certain aspects, offers solutions for appropriately designing all the necessary teaching tools. To this framework, the Bloom's taxonomy can be associated, which refers to six key values: knowledge, understanding, commitment, analysis, synthesis, and evaluation. Such a tool can

facilitate the writing of objectives commensurate with the audience's levels.

Even the tasks assigned during work must be thought of as tools useful for achieving specific objectives, whether they are assessments or obtaining a qualification. In any case, they should be seen as a litmus test of one's work, thus helping to shape one's teaching strategies in progress.

2.4 SOME CONSIDERATIONS ON ONLINE LESSONS

Virtual teaching is becoming increasingly important within the framework of training activities. Clearly, it must be recognized that teaching in person or remotely significantly changes the entire teaching and learning experience. Therefore, it is necessary to develop specific strategies in the context of virtual teaching that can make the work performed impactful and effective. The first problem is that the use of computer tools often requires support from the teacher. Not everyone is yet accustomed to using platforms and specific programs for this type of activity.

Getting users accustomed to the platforms that the educator uses from time to time, giving them time to understand how to share a screen or a resource, are not obvious activities and, although intuitive, are often overlooked by those who approach these methodologies too superficially.

1 DAY WORKSHOP

Target: Entrepreneurs and professionals in the tourism sector.

Course duration: 1 day

The course aims to present the content of the Cool Classic Cars project succinctly. The primary objective of the Cool Classic Cars project is to explore the potential of the vintage car market in the context of sustainable tourism development and awareness of the challenges of climate change. The tourism sector, contributing significantly to global greenhouse gas emissions, requires an innovative approach to mitigate negative impacts. This project aims to combine a passion for classic cars with attention to the territories involved in tourism activities to critically address mass tourism and promote alternatives that favor closer, sustainable, and community-friendly experiences.

In this context, the Cool Classic Cars project focuses on two converging themes: vintage cars as a resource and industrial archaeology sites. If utilized properly, the growing vintage car market can contribute to a circular economy, offering new possibilities in the tourism sector and supporting sustainable mobility initiatives.

The course can focus in the morning on general climate and tourism issues, addressing the more specific aspects of the project related to vintage motorism and industrial tourism later. These topics can be addressed by referring to the materials in resource packs 1 and 3, which provide data and statistics on global warming and tourism industry trends. Videos designed to enrich the presentation and moments dedicated to reflection can conclude the morning before the lunch break.

A suggested initial exercise could be to conduct a debate on the pros and cons of mass tourism and sustainable tourism, engaging the audience by referring to direct experiences, discussing the type of travel that left them most satisfied, and, more generally, what is considered desirable for developing innovative entrepreneurial initiatives. This can be based on the experience of those present, in this case, entrepreneurs who could provide direct insights into practices and projects focused on sustainable and eco-friendly tourism.

In the afternoon, referring to resource packs 2, 4, 5, and 6, the idea of promoting vintage cars as innovative tools for slow tourism, capable of fitting into the framework of reusing and enhancing existing resources, will be addressed. Some of the best practices collected in the manual can also be presented.

Another exercise, guided by the instructor, aimed at creating an alternative itinerary to mass tourism circuits and calculating its ecological footprint, could conclude the day.

> Cool Classic Cars Tool: 1 Day Course

EXTENDED COURSE

Target: Students and participants in tourism management master's programs or other subjects related to the project's themes.

Course duration: 3 days

The results of the project can be envisioned as a module within university courses or broader training on tourism, innovation, transportation, or climate change mitigation. In this case, a longer and more detailed exposition of the material allows for a structured and effective discussion of the project's objectives.

A possible breakdown of the work could be:

Day 1: A more in-depth analysis of the problems of climate change and the implications it has in the tourism sector. Referring to resource packs 1 and 3, the course can be divided into a morning session on global warming and an afternoon session on the tourism sector. A debate at the end of the day on sustainable tourism and mass tourism could introduce students to the course themes.

Day 2: Insights into the European and international regulatory framework aimed at combating climate change and an exposition of the Life Cycle Assessment (LCA) approach in assessing the environmental impact of ecological transition in the transport industry could be the discussion topics for a second day of work. Understanding the tools available to administrators and businesses should be seen as preparatory topics for the CCC project proposal. Materials, data, and studies can be derived from resource packs 1, 2, and 3. The themes of intermodality, sharing mobility, and the sharing economy can be addressed at the end of the day in the form

of an exercise, where participants independently research examples of innovative tools that have changed the way people move in urban contexts, such as bike and car-sharing services or similar.

Day 3: The results of the research and the CCC project will be the themes of the last day of work. Referring to resource packs 4, 5, 6, an attempt will be made to delve into the specifics of the collector car market and vintage motorism, highlighting characteristics and potential. Subsequently, the definition of industrial tourism and industrial heritage tourism, and possible connections between the two sectors, will be addressed. The study of best practices will complete the presentation. To conclude, a simulation exercise of alternative itineraries to mass tourism circuits developed through some proposed tools and an analysis of costs in terms of ecological footprint will close the day.

> Cool Classic Cars Tool: 3 Days Course

COOL CLASSIC CARS

TRAINING ACTIVITIES

Training activity 1

Sustainable tourism

Time required: 1 hr

Relevant key topic: Topic 1: Sustainability in tourism Sub-topic(s): (1.1) : approaching shared programmation in touristic site

Context / prior knowledge: For learners: - read Resource Pack modules 1 and 3. For the trainer: - read Handbook Cap 1 *Climate and Tourism: Holidays and Challenges in the Light of Climate Change.* - read Best Practice Manual Chapter 2:*Towards a sustainable tourism*

Description of the activity: Role playing game ● Divide the participants into groups/couples. If possible, include representatives of different types of stakeholders in each group. ● Give each group access to materials of Resource Pack from modules 1 and 3. Prepare and introduce the activity. (5 mins) ● Participants take on the roles of different actors in the tourism sector (such as hotel managers, tour operators, local residents). Ask them to negotiate and make decisions that take into account environmental and social sustainability.

- The groups will present their cards to the class and discuss what types of sustainable transport are imaginable in the tourism.
- Leave 30 mins to presentation, discussion and conclusions.

Resources:

- Resource pack Module 1 **Environmental education**
- Resource pack Module 3: **Sustainable tourism**.
- Best Practice Manual
- Annex 1 Strategies and tactics to manage high usage levels

Annex 1 Strategies and tactics to manage high usage levels

1. Reduce use of the entire protected area (PA)	1. Limit number of visitors to entire PA 2. Limit length of stay 3. Encourage use of other areas 4. Require certain skills and/or equipment 5. Charge a flat visitor fee 6. Make access to PA more difficult
2. Reduce use of problem areas	1. Inform about problem areas and alternative areas 2. Discourage or prohibit use of problem areas 3. Limit number of visitors in problem areas 4. Encourage/require a stay limit in problem areas 5. Make access to areas harder/easier 6. Eliminate facilities/attractions in problem areas; improve facilities/attractions in alternative areas 7. Encourage off-trail travel 8. Establish different equipment/skill requirements 9. Charge differential visitor fees
3. Modify the location of use within problem areas	1. Discourage/prohibit certain activities (e.g. camping) 2. Encourage/permit certain activities in specified areas 3. Locate facilities on durable sites 4. Concentrate use through facility design or information 5. Discourage/prohibit off-trail travel 6. Segregate different types of visitors
4. Modify the timing of use	1. Encourage use outside of peak use periods 2. Discourage/ban use when impact potential high 3. Fees in periods of high impact potential
5. Modify type of use and visitor behaviour	1. Discourage/ban damaging practices/equipment 2. Encourage/require behavior/skills/equipment 3. Teach a wilderness ethic 4. Encourage/require a party size limit 5. Discourage/prohibit horses/pets/overnight use

6. Modify visitor expectations	1. Inform visitors about appropriate PA uses 2. Inform about potential conditions in PA
7. Increase the resistance of the resource	1. Shield the site from impact 2. Strengthen the site
8. Maintain/rehabilitate resource	1. Remove problems 2. Maintain/rehabilitate impacted locations

Source: Adapted from Eagles, P.F.J., Haynes, C.D., McCool, S.F. (2002). “Sustainable tourism in protected areas: guidelines for planning and management”. IUCN: Gland. (Table 7.1 p 88-89)

Training activity 2

Climate change

Time required: 30 minutes

Relevant key topic: Topic 1: Reading the global situation starting from data Sub-topic(s): (1.1) Data analysis

Context / prior knowledge: For learners: - Read the Resource pack module 1 . For the trainer: - Read Handbook Cap 1 *Climate and Tourism: Holidays and Challenges in the Light of Climate Change.*

Description of the activity: data analysis ● Give each group access to materials from module 1. Prepare and introduce the activity. (5 mins) ● Ask participants to use real climate data, such as average temperatures, atmospheric CO2 levels, or sea ice extent. Ask them to analyze the data and draw conclusions about climate change and its potential consequences.

Resources:

- Resource pack Module 1 **Environmental education**.

Training activity 3

Paris Deals and international agreements

Time required: 70 mins

Relevant key topic: Topic 1: International deals on Climate Sub-topic(s): (1.2) Simulation of international panels

Context / prior knowledge: For learners: - Read Resource pack modules 1 and 3 . For the trainer: - read Handbook Chapter 1: *Climate and tourism: holidays and challenges in the light of climate change.* - read Best Practice manual Chapter 2: *Towards sustainable tourism.*

Description of the activity: Role playing game ● Divide the participants into groups/couples. If possible, include representatives of different types of stakeholders in each group and assign them the role of representatives from different countries or regional blocs. ● Each group will research news and information online about their country and bloc in terms of economic, strategic development, political, climate policies, and resources, with particular reference to the history of climate agreements (25 mins).

- Ask them to negotiate and draft an international climate agreement, considering the various positions, interests, and priorities of the different actors (20 mins).
- The groups will present their agreements in a summary document, and difficulties and conclusions about the conduct of the exercise will be discussed (15 mins).

Resources:

- Resource pack Mod 1: **Environmental education**.
- Resource pack Mod 3: **Sustainable tourism**.

Training activity 4

Intermodality

Time required: 1 hr

Relevant key topic: Topic 1: Explaining intermodality

Context / prior knowledge: For learners: - Read Resource pack modules 1 and 3. For the trainer: - Read handbook Chapter 1 *Climate and Tourism: Holidays and Challenges in the Light of Climate Change.* - Read Best practice manual Chapter 2:*Towards a sustainable tourism*

Description of the activity: ● Divide the participants into groups/couples. If possible, include representatives of different types of stakeholders in each group. ● Give each group access to materials from module 3 and module 1. Prepare and introduce the activity. (5 mins) ● Ask the groups to use 20-25 mins to identify the points where an intermodal approach facilitates the transition to a sustainable tourism system. ● The groups will present their cards to the class and discuss what types of sustainable transport are imaginable in the tourism sector. Allow 30

minutes for presentation, discussion, and conclusions.

Resources:

- Resource pack Mod 1: **Environmental education**.
- Resource pack Mod 3: **Sustainable tourism**.
- Best Practice manual

Training activity 5

Industrial heritage tourism

Time required: 45 mins

Relevant key topic: Topic 1: Explanation of what is Industrial heritage tourism Sub-topic(s): (1.2) Imagining possible uses and conversions of abandoned industrial sites

Context / prior knowledge: For learners: - Read Resource pack modules 4 and 5 . For the trainer: - read Handbook Chapter 3 *Sustainable Tourism: Concrete Steps Towards a Greener, Aware, and Enjoyable Tourism*; Chapter 4 *From past to future: Industrial heritage tourism as a sustainable solution.* - read Best practice manual Chapter 2 :*Towards sustainable tourism***;** Chapter 4: *Industrial heritage tourism: rediscovering a close past***.**

Description of the activity: - Give each group access to materials from modules 4 and 5. Provide copies of the Best Practice manual. Prepare and introduce the activity. (5 mins) - Provide participants with a series of images or descriptions of famous industrial archaeological sites. Ask them to examine the characteristics

of each site and discuss their historical significance, environmental impact, and potential challenges and opportunities in promoting sustainable tourism in those places. (From the Best Practice manual, to abandoned industrial sites researched online and possibly related to the location where the presentation takes place)

Resources:

- Resource pack Mod 4: **Industrial heritage**.
- Resource pack Mod 5 : **Industrial heritage tourism**
- Best Practice manual

Training activity 6

Industrial tourism

Time required: 30 mins

Relevant key topic: Topic 1: industrial tourism sites analysis Sub-topic(s): (1.1) Role of museum and multiservices centers. Sub-topic(s): (1.2) European Route of Industrial Heritage study

Context / prior knowledge: For learners: - Read Resource pack modules 4 and 5. For the trainer: - Read Handbook Chapter 3 *Sustainable Tourism: Concrete Steps Towards a Greener, Aware, and Enjoyable Tourism*; Chapter 4: *From past to future: Industrial heritage tourism as a sustainable solution*. - Read Best practice manual Chapter 2: *Toward sustainable tourism*; Chapter 4: *Industrial heritage tourism: rediscovering a close past***.**

Description of the activity: ● Give each participant access to materials from Module 4 and Module 5. Provide copies of the Best Practice manual. Prepare and introduce the activity. (5 mins) ● choose on the Route of Industrial Heritage study any museum or cultural sites.

- Ask participants to examine the role of museums and interpretation centers in promoting awareness and appreciation of industrial archaeological heritage. They can discuss best practices for presenting information, interactivity, and visitor education.

Resources:

- Resource pack Mod 4: **Industrial heritage**.
- Resource pack Mod 5: **Industrial heritage tourism**.
- Best Practice manual

Training activity 7

Lca Analysis

Time required: 30 mins

Relevant key topic: Topic 1: LCA analysis Sub-topic(s): (1.2) Using product ecological footprint softwares

Context / prior knowledge: For learners: - Read Resource pack modules 1 and 2. For the trainer: - Read Handbook Chapter 1: *Climate and Tourism: Holidays and Challenges in the Light of Climate Change* - Read Best practice manual Chapter 2: *Towards sustainable tourism* - Download one of the software OpenLCA.org or Footprint Calc.org

Description of the activity: - Participants will be invited to participate in conducting a Life Cycle Assessment (LCA) on products related to the labor market using one of the recommended software programs in the classroom. - After the exercise, a debate and reflection on the topic of product life cycles and their environmental impact will be proposed.

Resources:

- Resource pack Module 2: **Cool Classic Cars**
- Resource pack Module 1: **Environmental education**.

Training activity 8

Cool Classic Cars

Time required: 40 mins

Relevant key topic: Topic 1: the world of classic cars collectors and lovers Sub-topic(s): (1.1) Making an inquiry on a market frame

Context / prior knowledge: For learners: - Read Resource pack Modules 2 and 6. For the trainer: - read Handbook Chapter 5: *The vintage car market and the potential of industrial tourism.* - read Best Practice manual Chapter 3: *Cool classic cars: the heritage of the historic car park as an asset to be exploited in the context of sustainable tourism.*

Description of the activity: ● Divide participants into groups/couples. ● Give each group access to materials from Module 3 and Module 1. Prepare and introduce the activity. (5 mins) ● Encourage active research on the internet and social media about enthusiasts of one or more specific genres of vintage cars (such as Fiat

500, Mini Minor, Citroen C4, etc.), analyzing the number of "owner club" groups, types of promoted events, available data on the spread and membership in historical vehicle registries, etc.

- Ask the groups to spend 20-25 mins identifying the most significant and interesting aspects from a market research perspective.
- The groups will present their findings to the class. Allow 20 minutes for presentation, discussion, and conclusions.

Resources:

- Resource pack Mod 2: **Cool Classic Cars**
- Resource pack Mod. 6: **Cool classic cars proposal**
- Best Practice manual

Training activity 9

Over Tourism and mass tourism

Time required: 40 mins

Relevant key topic: Topic 1: Imagining destinations and routes alternative to mass tourism Sub-topic(s): (1.1) Calculating a trip ecological footprint

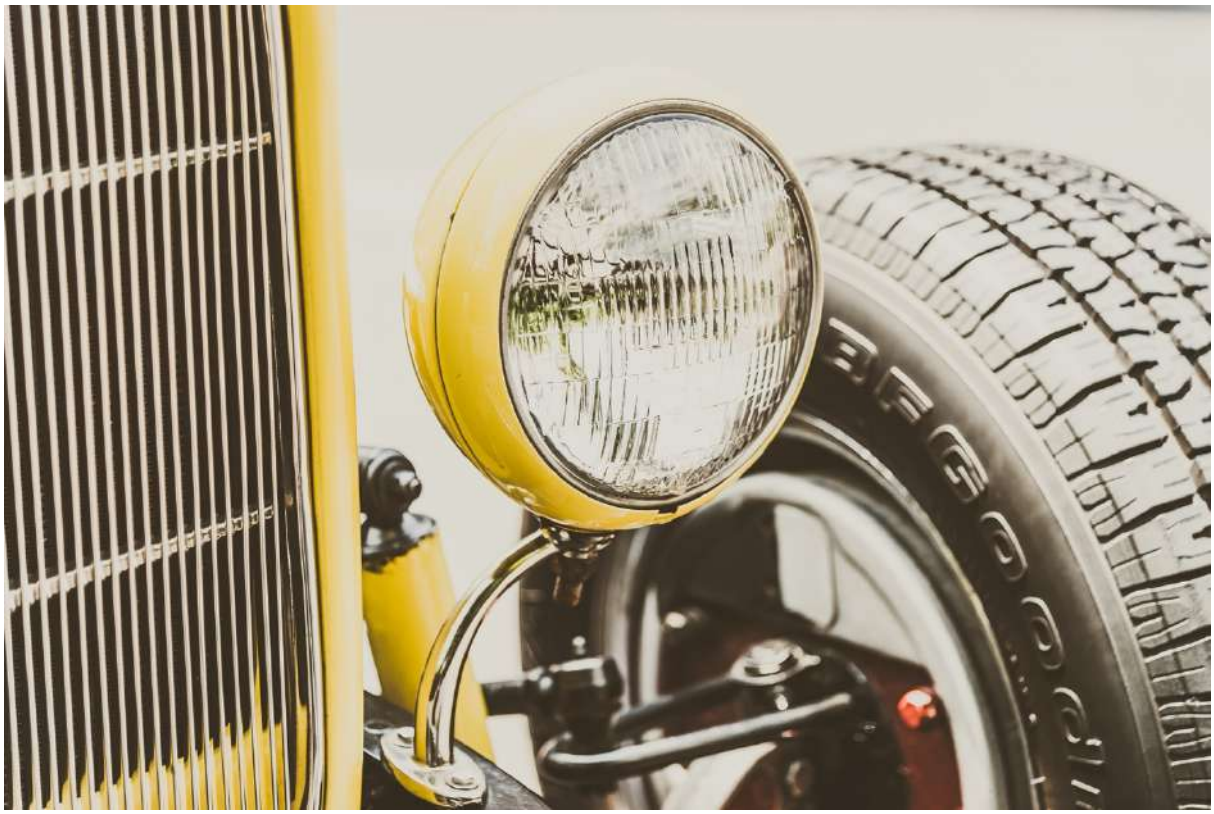
Context / prior knowledge: For learners: - Read Resource pack Modules 1 and 3. For the trainer: - Read Handbook Chapter 1: *Climate and Tourism: Holidays and Challenges in the Light of Climate Change.* - Read Best Practice manual Chapter 2: *Towards a sustainable tourism*

Description of the activity: designing a sustainable travel ● Divide participants into groups/couples. ● Give each group access to materials from Module 3 and Module 1. Prepare and introduce the activity. (5 mins) ● Using websites such as Expedia, Booking, or others, plan trips to highly attractive tourist destinations such as capitals, seaside resorts, or ski resorts located outside of one's own country. Calculate the cost for a weekend for two people.

- Plan trips online to destinations outside of mass tourism destinations and reachable without air travel, seeking, where possible, eco-friendly accommodations. Calculate the cost for a weekend for two people.
- Using tools like carbon footprint calculator calculate the environmental impact of both travels per person.

Resources:

- Resource pack Mod 1 **Environmental education**
- Resource pack Mod 3 **Sustainable tourism**.
- Best Practice manual



Curriculum for Trainers

1 DAY COURSE

DAY PROGRAM

- 9:00 - presentations
- 9:30 -climate and tourism
- 11:00- break
- 11:15- debate on mass tourism and sustainable tourism
- 12:30 -lunch
- 13:30 -The vintage car market
- 14:45- coffee break
- 15:00 -industrial tourism
- 16:00 - exercise
- 16:30- conclusions and cheers

Presentation

The guide for the Cool Classic Cars project, funded by the Erasmus+ program, is dedicated to the still relatively unexplored intersection between vintage cars, sustainable tourism, and industrial heritage awareness. This manual aims to raise awareness of the crucial connections between emerging technologies and the knowledge required to embrace sustainable recreational practices, promoting environmentally conscious tourism.

The primary goal of the Cool Classic Cars project is to explore the potential of the vintage car market within the context of sustainable tourist development, addressing the challenges of climate change. The tourism sector, a significant contributor to global greenhouse gas emissions, requires an innovative approach to mitigate negative impacts. This project aims to unite the passion for classic cars with a focus on territories affected by mass tourism, promoting alternatives that prioritize closer, sustainable, and community-respecting experiences.

In this context, the Cool Classic Cars project focuses on two converging themes: vintage cars as a resource and industrial archaeology sites. When utilized properly, the growing vintage car market can contribute to a circular economy, offering new possibilities in the tourism sector and supporting sustainable mobility initiatives.

CLIMATE AND TOURISM

Image by Vecteezy

What consumers want?

According to research carried out by the travel agency Expedia in 2022, the consumers, from 11 different countries, seems to be more concerned on their impact on environment while travelling than in the past years, and the tendencies goes in the direction of fair more.

5-8 %

The constribution of travel and tourist bussiness at global emission of GHG

According UNWTO, the goals to reach sustainability

- Make optimal use of environmental resources that constitute a keay element in tourism development, maintaining essential ecological processes and helping to conserve natural heritage and biodiversity.

- Respect the socio-cultural authenticity of host communities, conserve their built and living cultural heritage and traditional values, and constribute to inter-cultural understanding and tolerance.

- Ensure viable, long-term economic operations, providing socio-economic benefits to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities and contributing to poverty alleviation.

UNWTO
World Tourism Organization

Actionable steps for a greener tourism

- **Using resources sustainably**. The consservation and sustainable of resources-natural, social and cultural- is crucial and makes long-term business sense.
- **Reducing over-consumption and waster.** Reduction of over-consumption and waste avoids the costs of restoring long-term environmental damage and contributes to the quality tourism.
- **Maintaining biodiversity.** Maintaining and promoting natural, social and cultural diversity is essential for long-term tourism and creates a resilient base for the industry.
- **Integrating tourism into planning.** Tourism development which is integrated into national and local strategic planning framework and which undertake environmental impact assessments increase the long-term viability of tourism.
- **Supporting local economies.** Tourism that supports wide range of local economic activities and which takes environmental costs and values into account, both protects these economies and avoids environmental damage.

Actionable steps for a greener tourism

- **Involving local communities. T**he full involvement of local communities in the tourism sector not only benefits them and the environment in general but also improves the quality of the tourism experience.
- **Consulting stakeholders and the public.** Consulting between the tourism industry and local communities, organizations and institutions are essential if they are to work alongside each other and resolve potential conflicts of interest.
- **Training staff.** Staff training which integrates sustainable tourism into work practices, along with recruitment of personnel at all levels, improves the quality of the tourism product.
- **Marketing tourism responsibly.** Marketing that provides tourists with the full and responsible information increases respect for the natural, social and cultural environments of destination areas and enhances customer satisfaction.
- **Undertaking research.** Ongoing research and monitoring by the industry using effective data collection and analysis are essential to help solve problems and to bring benefits to destinations, the industry and consumers.

BREAK

The 3 keypoint of sustainability

Community

Respect and enhance the hosting communities

Environment

Preserve the resources and the habitats of the living

Economy

Strengthen the local economies, involving all the stakelholders

Community

The community that hosts must be involved and their culture and history must be preserved by tourists and institutions.

Some examples:

The typical late 50ies cars of Cuba has become one of the most attractive experience on the island, according at the owners a business opportunity that enhance their heritage and gives fair work to many people.

Environment

The biodiversity and natural resources must be taken care by those who travel.

Some examples:

For many years tourists raided the beaches of Sardinia to collect self made souvenir from their sand. Regional Law 16/2017 prohibits the collection of sand, shells, stones and pebbles from the beaches and the sea of Sardinia. This offense provides for an administrative fine ranging from 500 to 3,000 euros.

Economy

Involve local people businessto grow the share of wealth with the hosting communities, support fair wages and labour.

Some examples:

Turning to a greener economy, also in touristic sector, gives to a more sustainable growth for all communities.

The new trends fo a sustainable travelling

On the way of sustainability, some trends are setting the consumer consciousness:

Are some of the ways in which travellers and organizations are giving the possibility of a more sustainable, meaningful and richer form of journeys, travel.

CLIMATE AND TOURISM

Resources

- overtourism
- mass tourism
- ecoturism
- sustainable tourism

Debate

The class will be divided into three groups: one highlighting the advantages, another addressing the issues related to mass tourism, and the third acting as an evaluation group for the discussion. Each group will develop their arguments within a 15-minute timeframe.

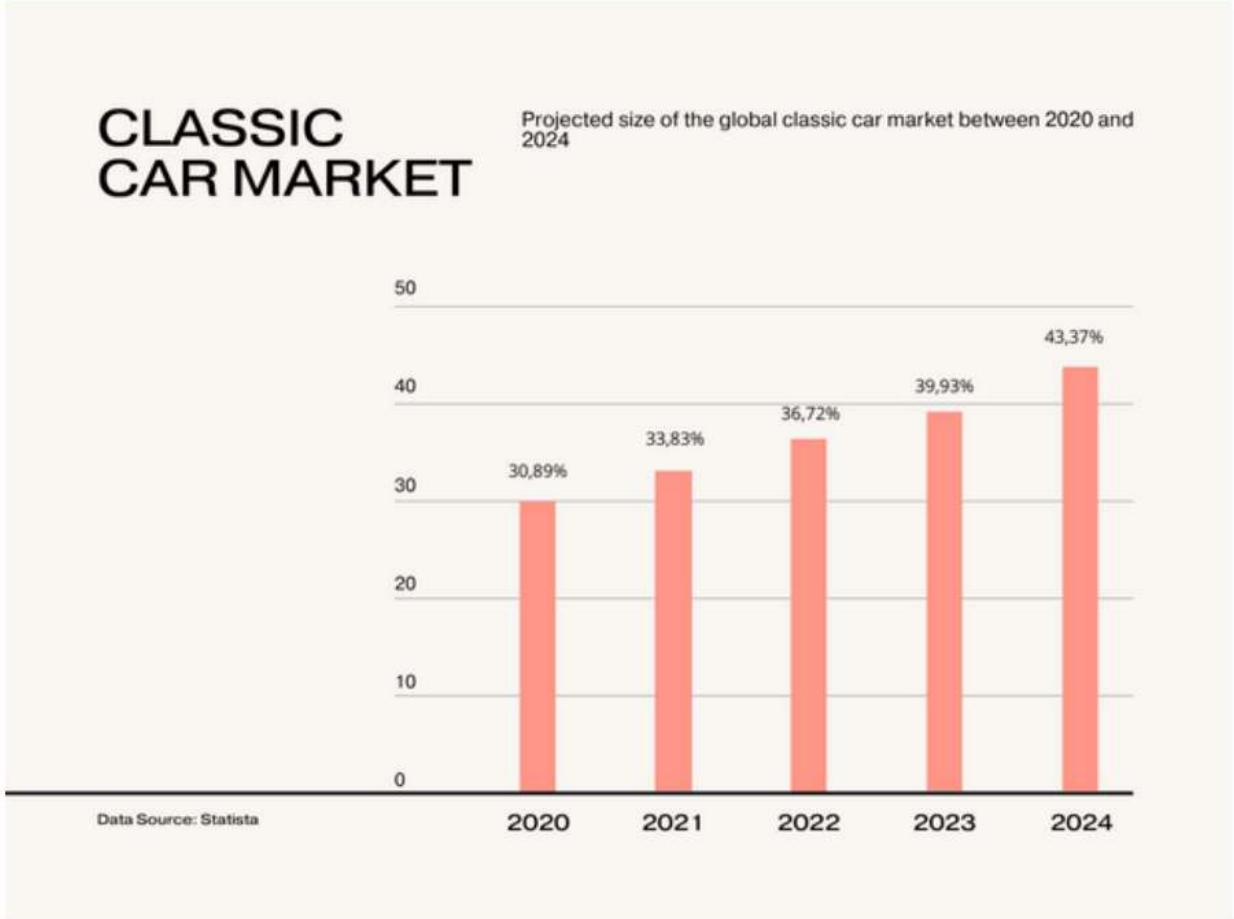
The subsequent 15 minutes will be dedicated to presenting the arguments and engaging in debate.

The evaluation group will decide which group has presented the most convincing arguments.

Image by Vecteezy

The vintage car maket and the potential of industrial tourism

This market is experiencing continuous growth driven by a series of factors, such as increased investments from major companies, interest in technical heritage, and the pleasure derived from vintage design by enthusiasts.



Some data confrontation

In Europe

With a total volume of 429 billion euros in 2021, the used car market in Europe is similar to that of new cars. In 2021, 32 million used cars were sold in Europe.

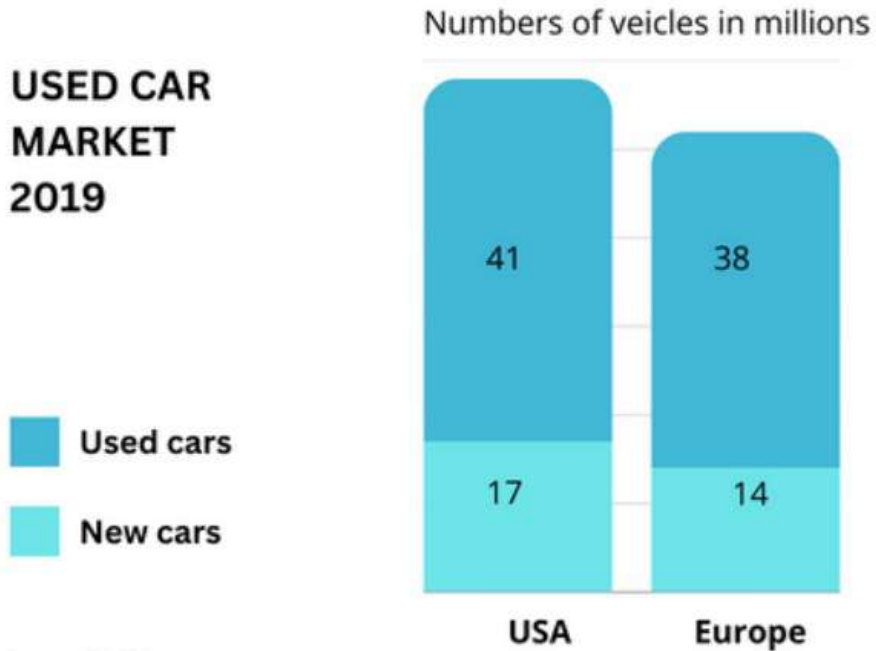
In Italy

More than 25% of the vehicle fleet consists of cars that are 20 years old or older. Considering those that are actually vintage cars, the number remains significant: over 300,000 cars, 7% of the total circulating cars in Italy, evenly distributed between the North and the South, with a value of 103.9 billion euros and a collateral market - including insurance, events, specialized services, etc. - of 5.2 billion euros annually, accounting for 0.3% of the national GDP.

Some data confrontation

In Spain

The Spanish used car market was valued at 37.06 billion USD in 2021, and it is expected to reach 58.74 billion USD by 2027. In February 2020, car registrations in Spain decreased by 4.8% compared to 2021. However, there was a 17% increase in demand for vehicles over 20 years old.



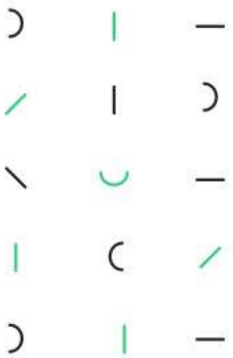
HOW MUCH GREENER IS A GREEN CAR? 🚗🌱❓

Worldwide vehicle production growth over the past decades has caused strong emissions increments which have affected both population and industrial sectors globally. EU-28's CO_2 emissions correspond to 10.8% of global CO_2 emissions.
In 2017, the transport sector contributed to 27.9% of the EU-28 CO_2 production, with a passenger cars participation of 43.5%, which hence represents about 12.1% of the total EU-28 CO_2 emissions.

With a view to eco-sustainable mobility, battery electric vehicles (BEVs) and hybrid electric vehicles (HEVs) are nowadays proposed as clean or light-environmental impact technologies for road transport. In particular, BEVs are often promoted as zero-emitting vehicles since they are propelled by the use of electric energy, in contraposition to internal combustion engine vehicles (ICEVs) and HEVs, which instead make use of fossil fuels.

What we do with all this old cars?

With a percentage of almost a quarter of the circulating vehicles the old cars represent a big portion of the general cap park of several countries. The disposal or renovation of this portion is a big deal and should be thinked in the way of a useful and gradual dimission. While battery and hybrid engine vehicles represent still a minimal percentage of the complessive car park, the classic and historical cars should be considered an heritage to enhance.



THE ITALIAN CAR PARK

age	years (periodo)	number of cars
<20	2004-2022	30.366.809
20-29	1994-2003	5.883.436
30-39	1984-1993	2.251.586
40-49	1974-1983	921.767
50-59	1964-1973	658.437
60-69	1954-1963	55.479
>=70	<=1953	25.446
tot		40.162.960
ND		39.230
TOT		40.202.190

BREAK

INDUSTRIAL TOURISM

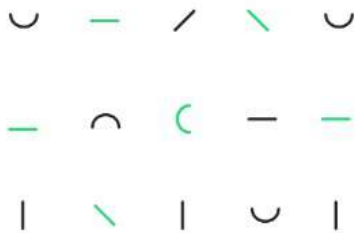
Some Definitions

Usually we don't tend to associate industrial activities with leisure activities, we imagine that they are two completely opposite worlds that have nothing in common.
Yet this is not always the case: industries (and technical-industrial heritage in general) attract people interested in technical objects (machines), modern architecture, more or less spectacular production techniques (for example in the steel industry) or specific final products, for their aesthetic (e.g. glass) or culinary (e.g. beer) value. Hundreds of thousands of visitors to Europe testify to the attractiveness of such objects in the context of educational or recreational activities. The same goes for the remains of former industrial activities, whether they are well-preserved industrial monuments or simple ruins of buildings and machinery.
These types of activities, for which the term "industrial tourism" is proposed, are of considerable interest for the promotion of less traditional tourist flows and places less subject to mass tourism.

Some Definitions

Industrial tourism is still not a very well defined concept but we will analyze the most important conceptualizations

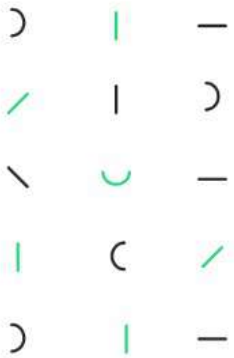
Dietrich Soyez, vice-president of International Geographical Union, defines industrial tourism as “any type of movement made by external visitors attracted by industrial landscapes in which there is an operational or even disused factory.
(Soyez Dietrich, “Industrietourismus”, Erdkunde, vol. 40, n. 2, 1986)



For Soyez, in fact, the concept of "industrietourismus" should not focus so much on a particular type of industrial attraction, but more on the reason why tourists are driven to visit it, i.e. the interest in the industrial world (whether past or present).

Some Definitions

Another important definition is the one provided by the Australian scholar **Ann Frew** that defines industrial tourism as «visits by tourists to operatioal sites where the core activity of the site is non-tourism oriented».
The term industry, in this case, should not be understood as a «manufacturing industry» but as a sector of the economy. This expands the type of companies that can open their doors to visitors with the exception of businesses that produce goods intended exclusively for tourists.



AND NOW? A GROWING MARKET

2021

The global industrial tourism market size in 2021 was $986 million,

2023

in 2023 would reach $ 1.663,6 million

2033

and it would surpass $ 18.739 million by 2033

Source www.futuremarketinsights.com

Exercise

Imagine offers for alternative destinations to major tourist hubs and carriers to reach them using the european map of industrial heritage and calculate carbon footprint of your journey.

Compare the results with a trip to major European capitals done by airplane.

Good work!

Thank you and goodbye

To know more: www.coolclassicars.info

Curriculum for Trainers

EXTENDED COURSE

DAY PROGRAM

DAY 1 CLIMATE AND TOURISM

- 9:00 - presentations
- 9:30 -climate crisis scenarios
- 11:00- break
- 11:15- not only atmospheric pollution
- 12:30 -lunch
- 13:30 -climate and tourism
- 14:45- coffee break
- 15:00 - debate on mass tourism and sustainable tourism
- 16:00- conclusions

DAY 2 LCA AND LEGISLATION

- 9:30 -From Kyoto to Paris: COP and international climate agreements
- 10:15 -european programs
- white paper on transportation
- 11:00- break
- 11:15- debate 30 years of struggle against climate changing
- 12:30 -lunch
- 13:30 - LCA analysis: a wholesome approach to transition
- 14:45- coffee break
- 15:00 - dabate: sharing economy e sharing mobility
- 16:00 - conclusions

DAY 3 VINTAGE CAR AND INDUSTRIAL TOURISM

- 9:30 - vintage cars: an expanding market
- 11:00- break
- 11:15- some trend in tourism
- 12:30 -lunch
- 13:30 -industrial tourism and industrial heritage tourism
- 14:45- coffee break
- 15:00 -best practices
- 15:30 -exercise: how much a travel with an old car could pollute?
- 16:30- conclusions

Presentation

The guide for the Cool Classic Cars project, funded by the Erasmus+ program, is dedicated to the still relatively unexplored intersection between vintage cars, sustainable tourism, and industrial heritage awareness. This manual aims to raise awareness of the crucial connections between emerging technologies and the knowledge required to embrace sustainable recreational practices, promoting environmentally conscious tourism.

The primary goal of the Cool Classic Cars project is to explore the potential of the vintage car market within the context of sustainable tourist development, addressing the challenges of climate change. The tourism sector, a significant contributor to global greenhouse gas emissions, requires an innovative approach to mitigate negative impacts. This project aims to unite the passion for classic cars with a focus on territories affected by mass tourism, promoting alternatives that prioritize closer, sustainable, and community-respecting experiences.

In this context, the Cool Classic Cars project focuses on two converging themes: vintage cars as a resource and industrial archaeology sites. When utilized properly, the growing vintage car market can contribute to a circular economy, offering new possibilities in the tourism sector and supporting sustainable mobility initiatives.

DAY 1
CLIMATE AND TOURISM

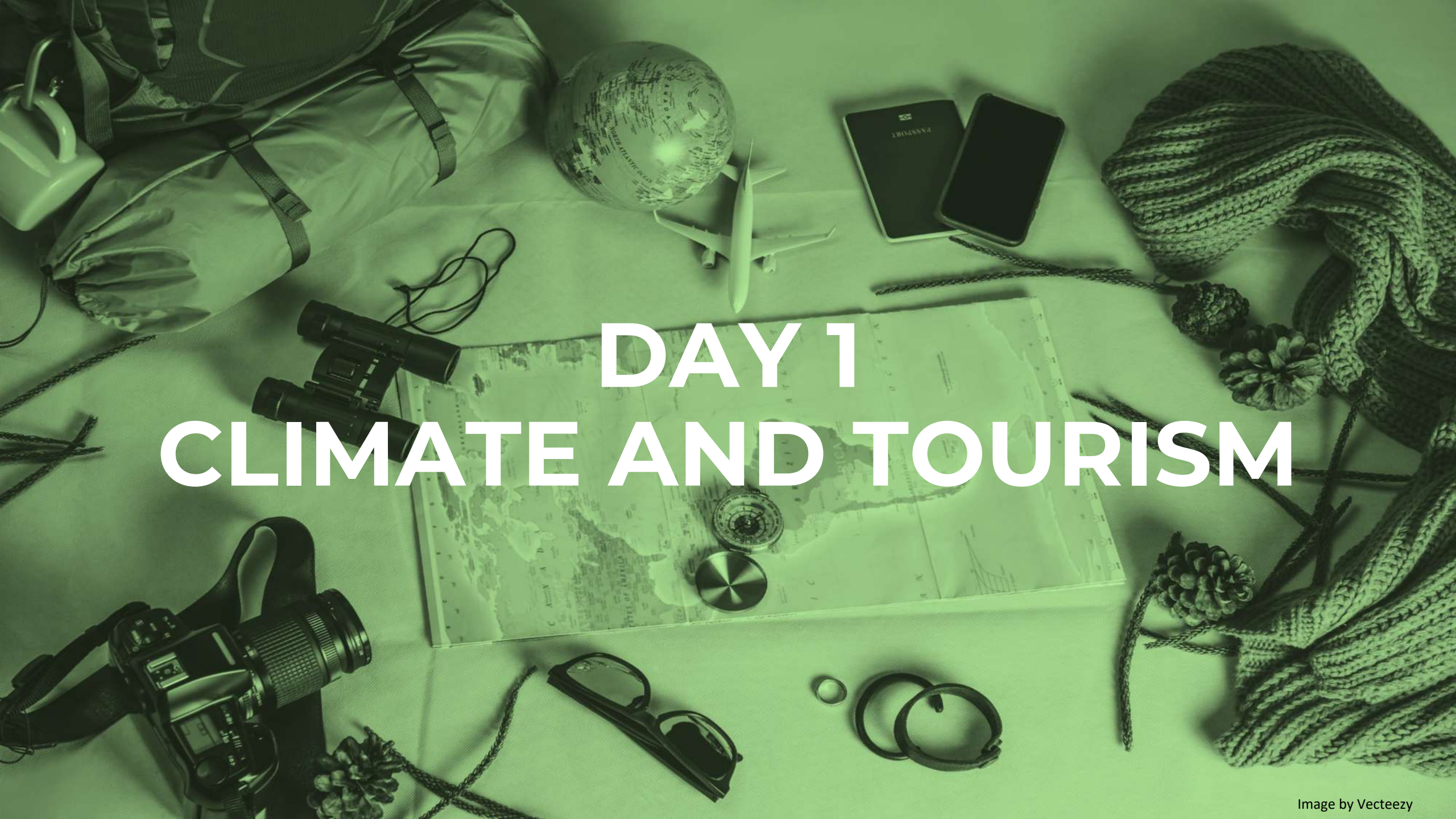


Image by Vecteezy

The problem of Global Warming

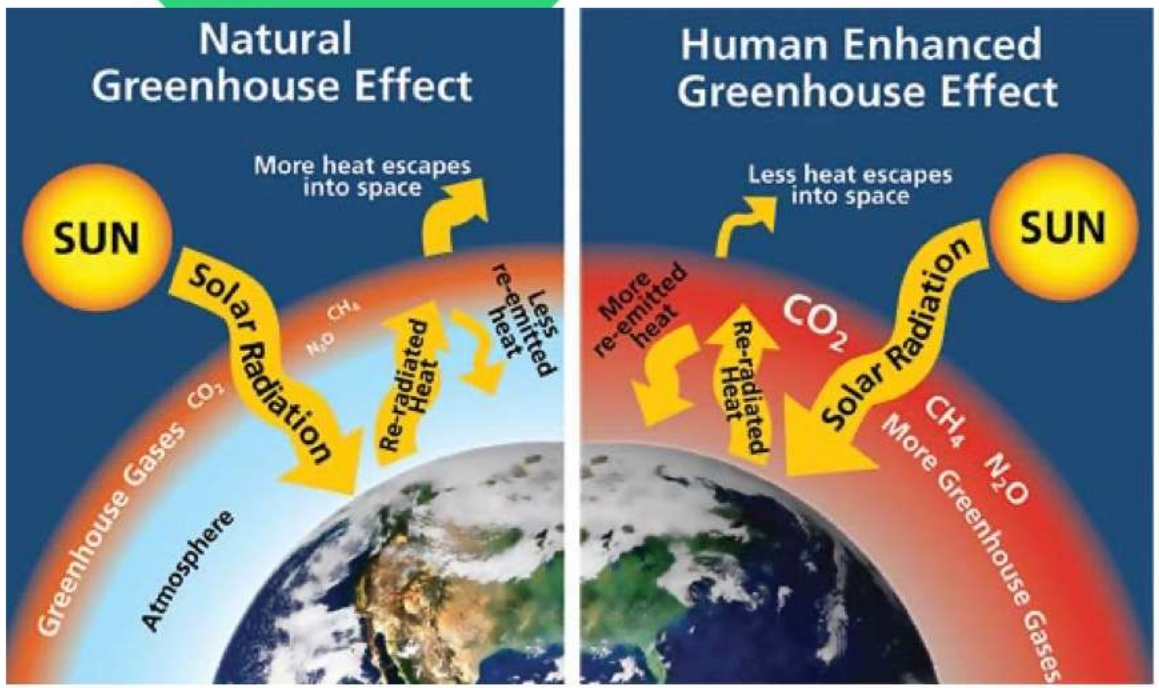
Global warming is the unusually rapid increase in Earth's average surface temperature over the past century primarily due to the greenhouse gases released by people burning fossil fuels.

In Earth's history before the Industrial Revolution, Earth's climate changed due to natural causes unrelated to human activity. These natural causes are still in play today, but their influence is too small or they occur too slowly to explain the rapid warming seen in recent decades.

The greenhouse effect

The greenhouse effect is a process that occurs when gases in Earth's atmosphere trap the Sun's heat. This process makes Earth much warmer than it would be without an atmosphere. The greenhouse effect is one of the things that makes Earth a comfortable place to live.

Earth's natural greenhouse effect makes life as we know it possible and carbon dioxide plays a significant role in providing for the relatively high temperature on Earth.



THE GREEN HOUSE GASSES (GHG)

06

Table 2: Global Warming Potentials (GWP) and Atmospheric Lifetimes (Years) Used in the Inventory

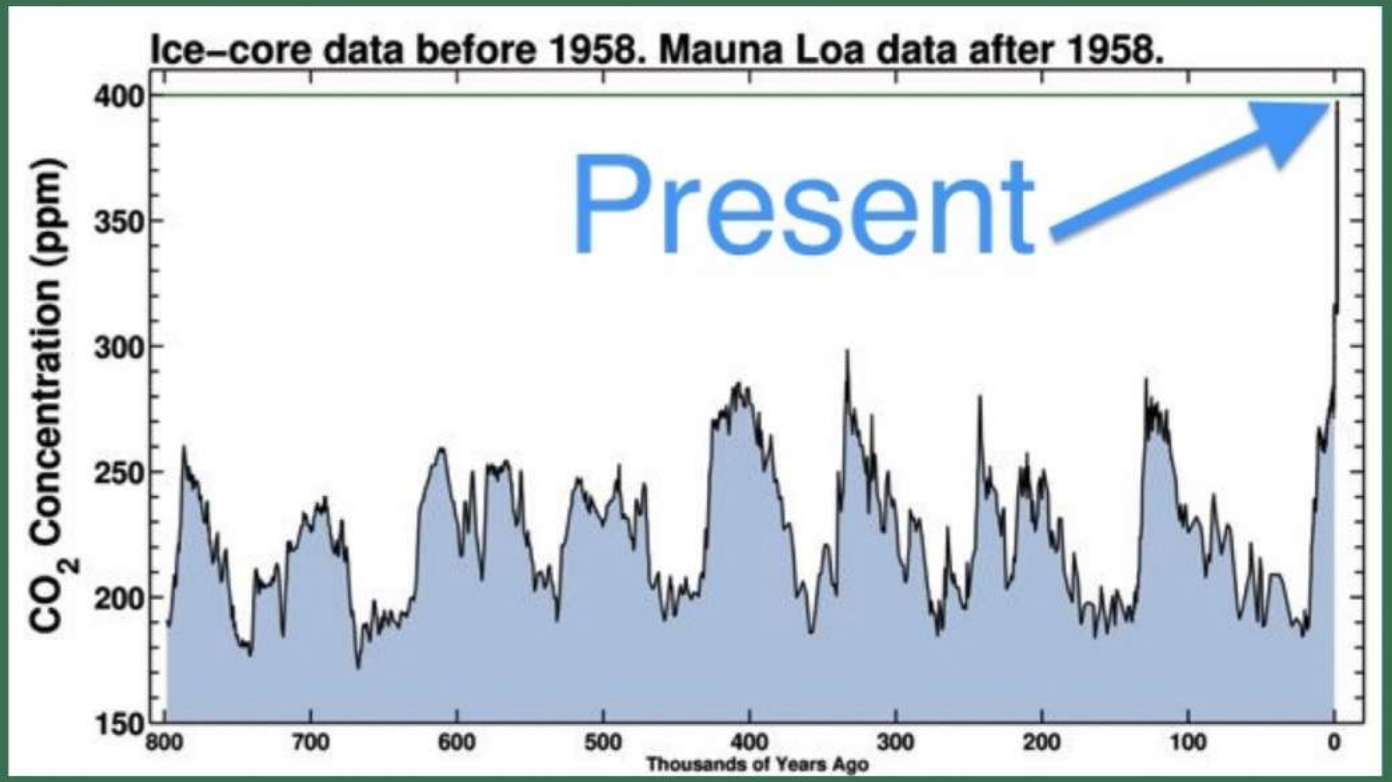
Gas	Atmospheric Lifetime	100-year GWP[a]	20-year GWP	500-year GWP
Carbon dioxide (CO_2)	50-200	1	1	1
Methane (CH_4)[b]	12±3	21	56	6.5
Nitrous oxide (N_2O)	120	310	280	170
HFC-23	264	11,700	9,100	9,800
HFC-125	32.6	2,800	4,600	920
HFC-134a	14.6	1,300	3,400	420
HFC-143a	48.3	3,800	5,000	1,400
HFC-152a	1.5	140	460	42
HFC-227ea	36.5	2,900	4,300	950
HFC-236fa	209	6,300	5,100	4,700
HFC-4310mee	17.1	1,300	3,000	400
CF_4	50,000	6,500	4,400	10,000
C_2F_6	10,000	9,200	6,200	14,000
C_4F_{10}	2,600	7,000	4,800	10,100
C_6F_{14}	3,200	7,400	5,000	10,700
SF_6	3,200	23,900	16,300	34,900

Source: IPCC (1996)

[a] GWPs used here are calculated over 100 year time horizon

[b] The methane GWP includes the direct effects and those indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO_2 is not included.

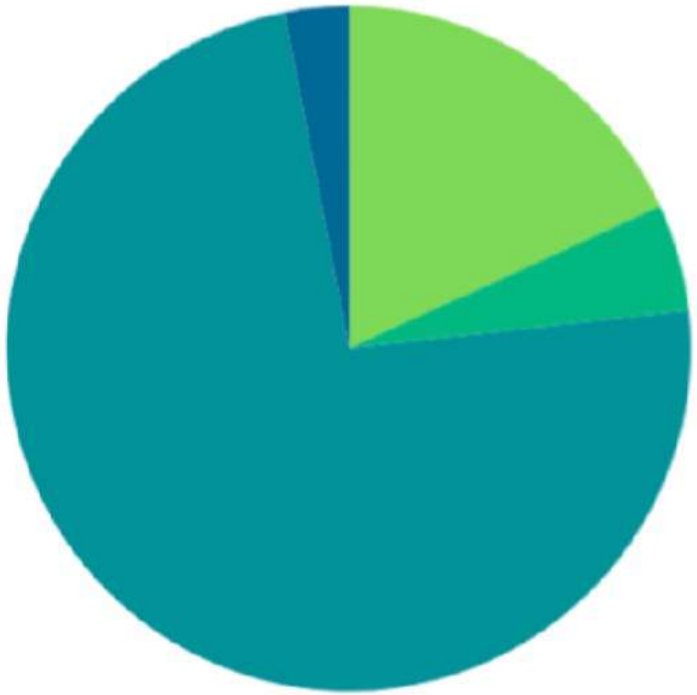
800000 YEARS OF CO2 EMISSIONS



07

2016

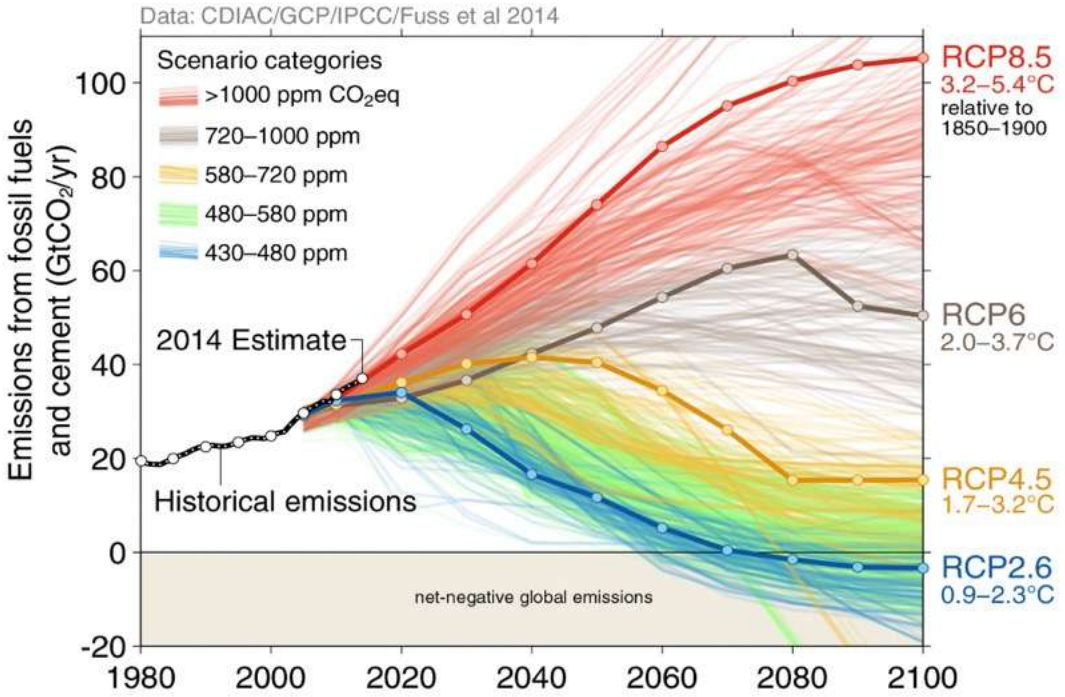
GLOBAL GHG EMISSIONS BY SECTOR



- Agricolture, forestry and land use
- Industry
- Waste
- Energy
  Transports, buildings

Source: our world in data

THE SCENARIOS ON GHG EMISSIONS



The IPCC have studied various scenarios in relation on ghg emission an the consequent global warming of the planet.

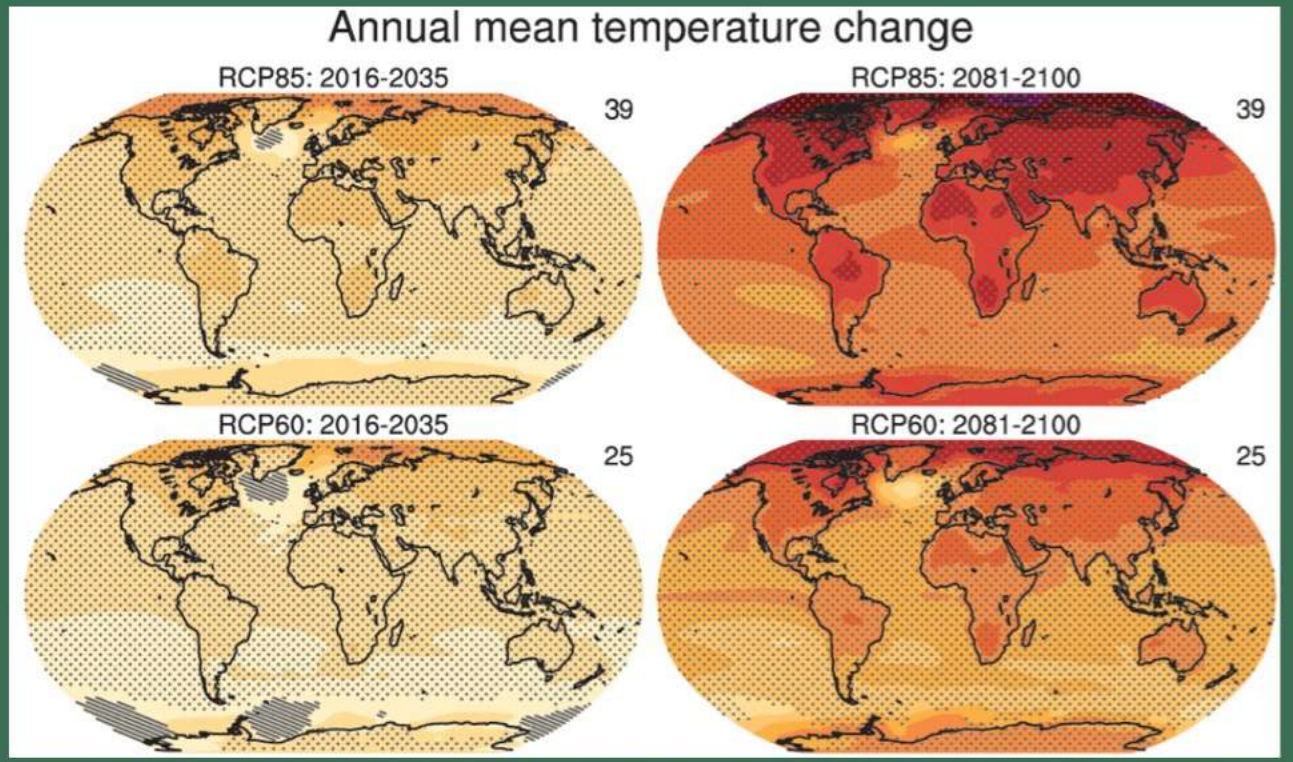
It must be known that even the minimum deal reached in the international agreements involve some changes that will be strongly impacting on out environment

IPCC SCENARIOS

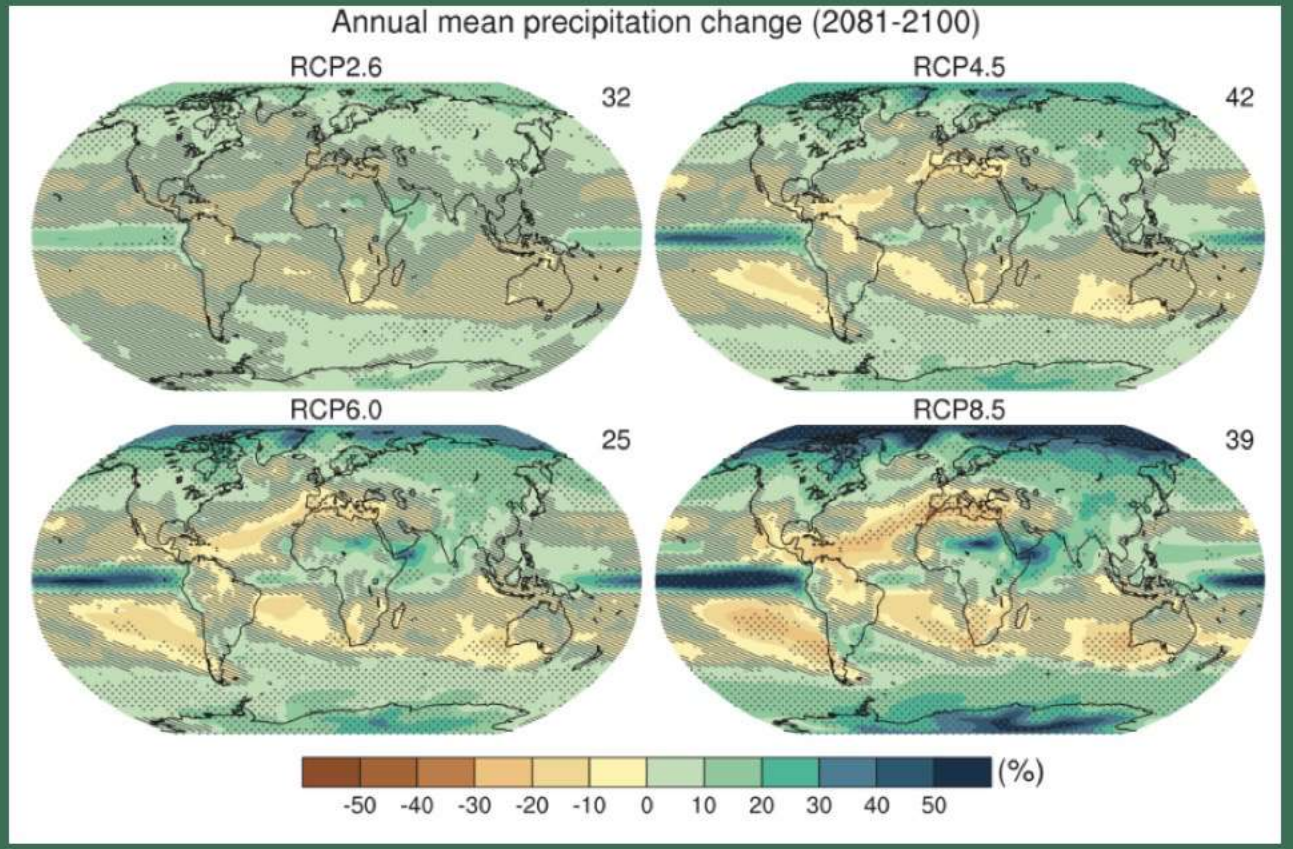
Table SPM.2 | Projected change in global mean surface air temperature and global mean sea level rise for the mid- and late 21st century relative to the reference period of 1986–2005. {12.4; Table 12.2, Table 13.5}

		2046–2065		2081–2100	
	Scenario	**Mean**	***Likely* range[c]**	**Mean**	***Likely* range[c]**
Global Mean Surface Temperature Change (°C)[a]	RCP2.6	1.0	0.4 to 1.6	1.0	0.3 to 1.7
	RCP4.5	1.4	0.9 to 2.0	1.8	1.1 to 2.6
	RCP6.0	1.3	0.8 to 1.8	2.2	1.4 to 3.1
	RCP8.5	2.0	1.4 to 2.6	3.7	2.6 to 4.8
	Scenario	**Mean**	***Likely* range[d]**	**Mean**	***Likely* range[d]**
Global Mean Sea Level Rise (m)[b]	RCP2.6	0.24	0.17 to 0.32	0.40	0.26 to 0.55
	RCP4.5	0.26	0.19 to 0.33	0.47	0.32 to 0.63
	RCP6.0	0.25	0.18 to 0.32	0.48	0.33 to 0.63
	RCP8.5	0.30	0.22 to 0.38	0.63	0.45 to 0.82

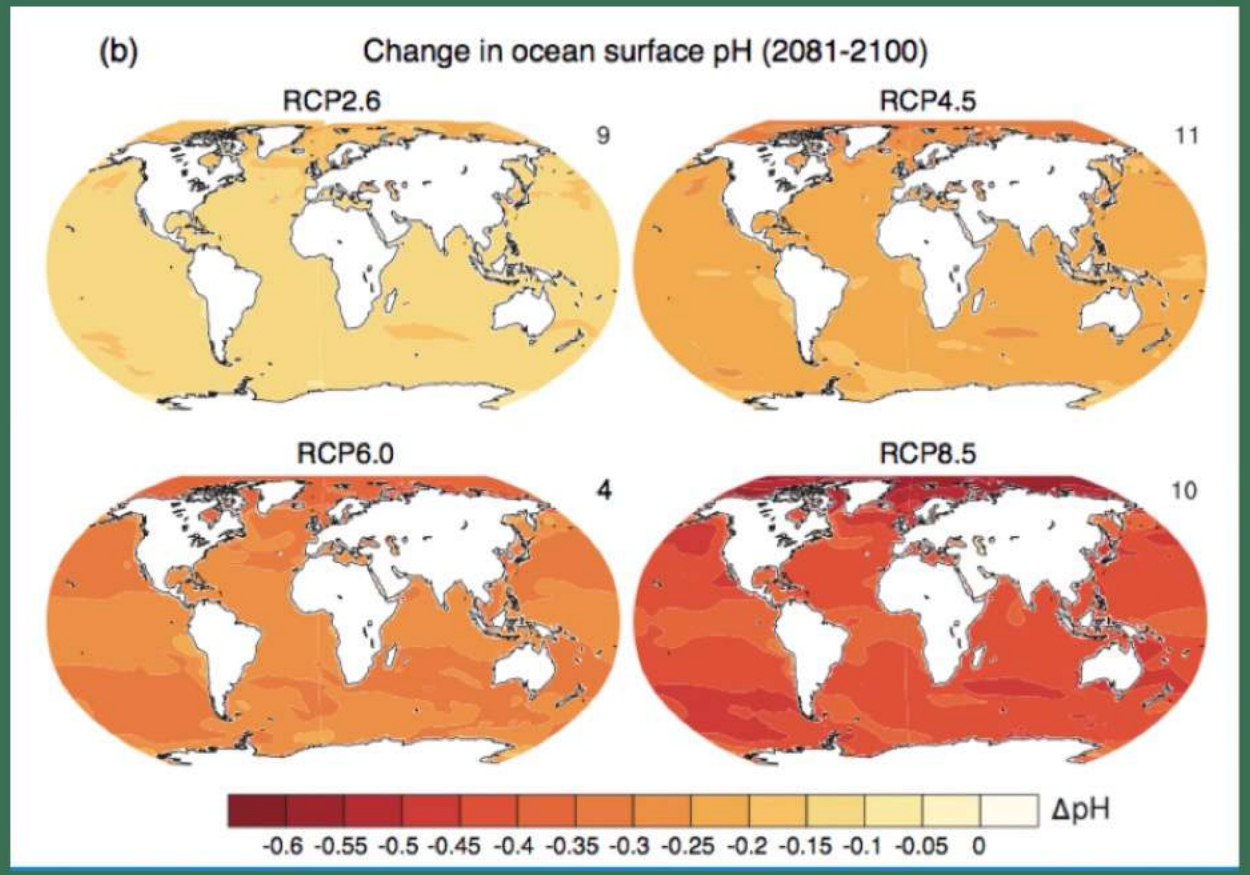
SURFACE TEMPERATURE



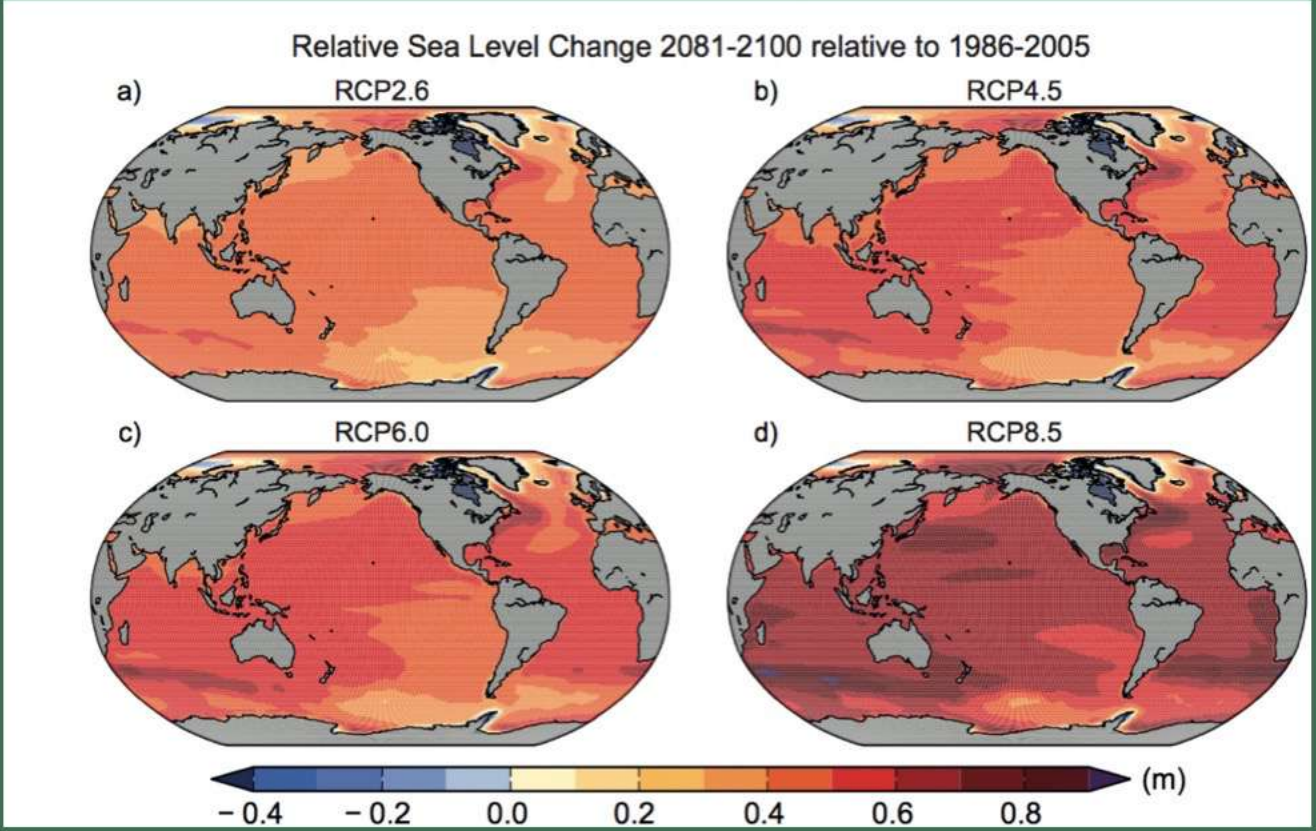
AVERAGE PRECIPITATION



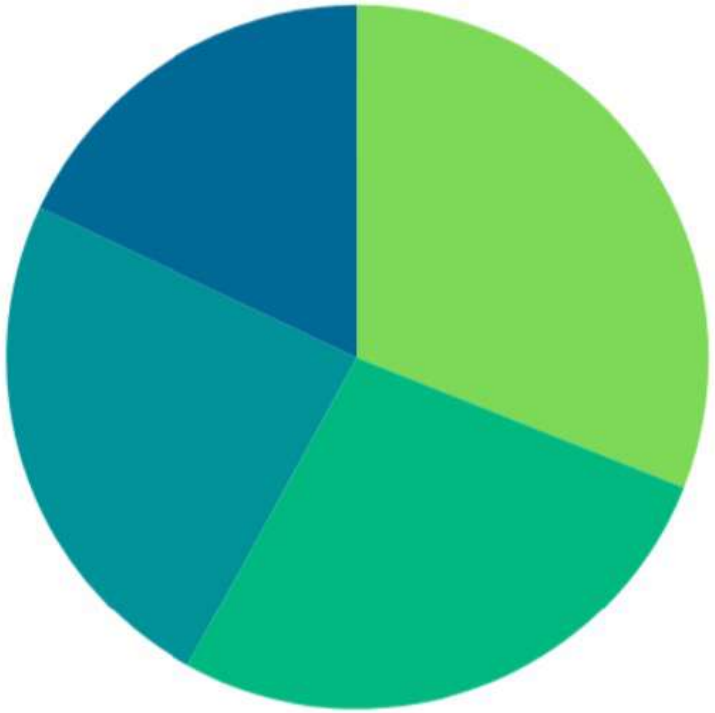
PH OCEANS


(b)
Change in ocean surface pH (2081-2100)
RCP2.6
9
RCP4.5
11
RCP6.0
4
RCP8.5
10
ΔpH
-0.6 -0.55 -0.5 -0.45 -0.4 -0.35 -0.3 -0.25 -0.2 -0.15 -0.1 -0.05 0

SEA LEVEL


Relative Sea Level Change 2081-2100 relative to 1986-2005
a)
RCP2.6
b)
RCP4.5
c)
RCP6.0
d)
RCP8.5
(m)
− 0.4
− 0.2
0.0
0.2
0.4
0.6
0.8

GLOBAL GHG EMISSIONS FROM FOOD PRODUCTION

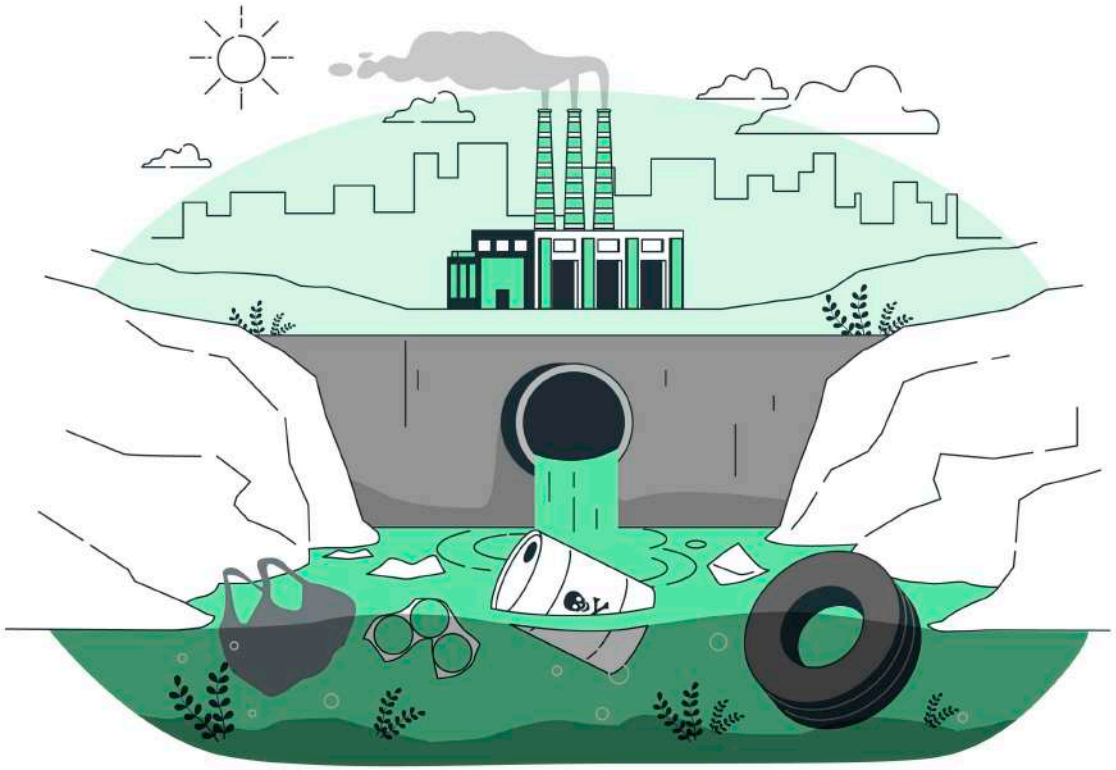


- Livestock and fisheries 31%
- Crop production 27%
- Supply chain 18%
- Land use 24%

Source: ourworldindata

BREAK

Not only atmospheric pollution



SOIL CONTAMINATION

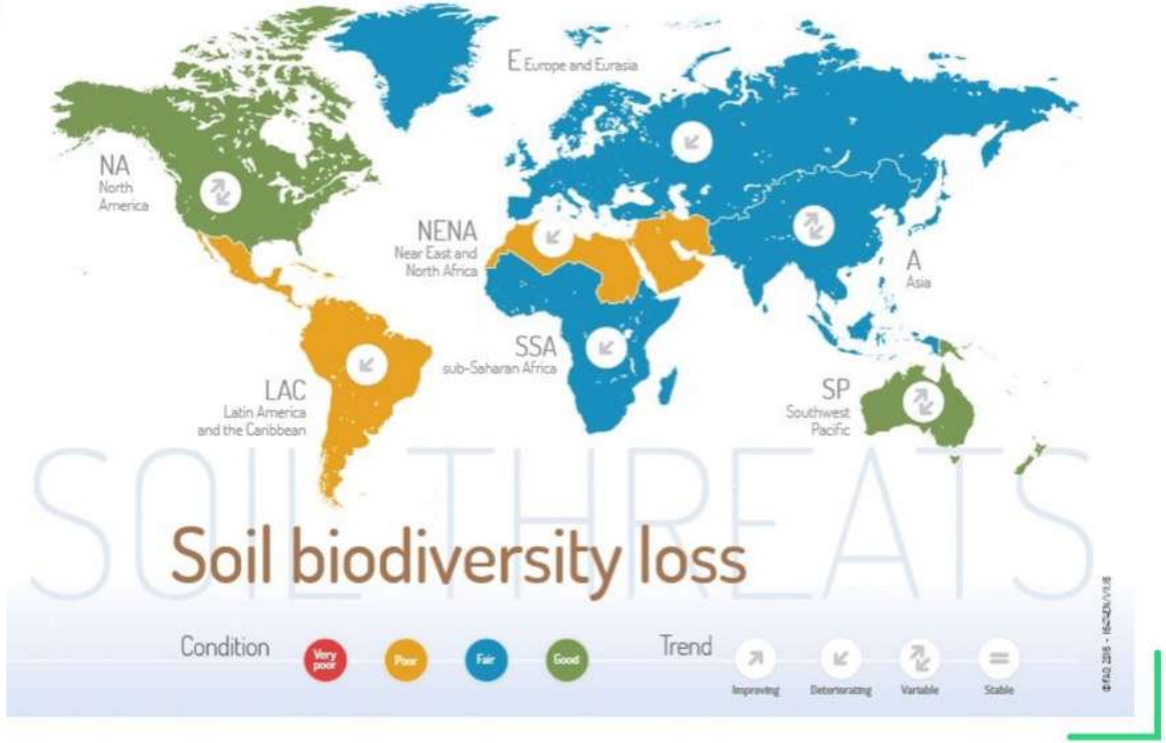
The increase of toxic compounds (heavy metals, pesticide, etc.) in soils affect human health and damage the soil ecosystem. The three major pathways for diffuse soil contamination are atmospheric deposition agriculture and flood events. Soil contamination can reduce food security by decreasing crop yields and rendering crops unsafe for consumption.

SOIL ACIDIFICATION

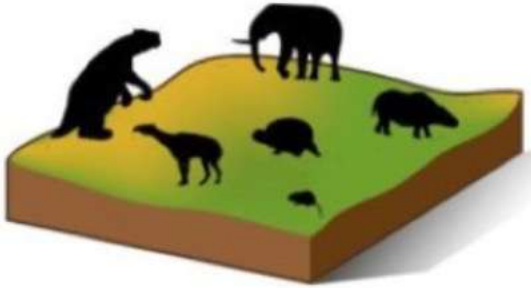
The map explains soil acidification is a process of lowering of the soil pH caused by the buildup of H+ and Al3+ ions in the soil and the leaching of base cations such as Ca2+, Mg2+, K+ and Na+.
The map further explains the major causes of soil acidification: that are long term rainfall, draining of potentially acid sulphate soils, acid deposition, excessive application of ammonium-based fertilizers, deforestation, and land use practices that remove all harvested materials.

SOIL LOSS OF BIODIVERSITY

It is a wide known fact that approximately a quarter of our planet's biodiversity exists in the soils. Hence, the decline in the diversity of organisms present in the soil affects multiple ecosystem fuctions, including plant diversity, decomposition, nutrient retention and cycling, plant and animal health, soil carbon sequestration and greenhouse gas emissions. Therefore, preserving soil biodiversity is important for enhancing the soil health.

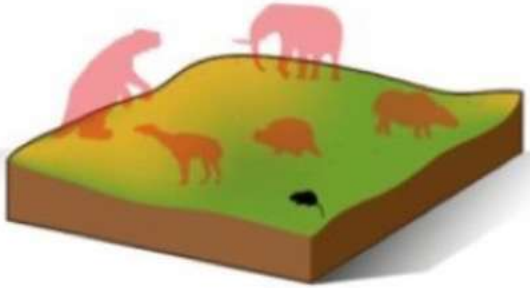


The Ice Age



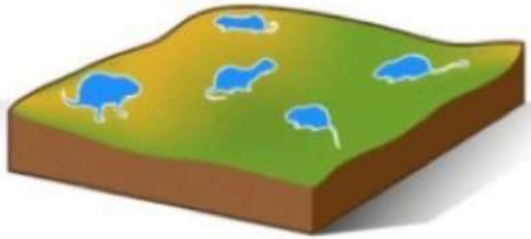
During the Ice Age, many large mammals roamed the earth, filling out deep branches on the mammal Tree of Life

The Present

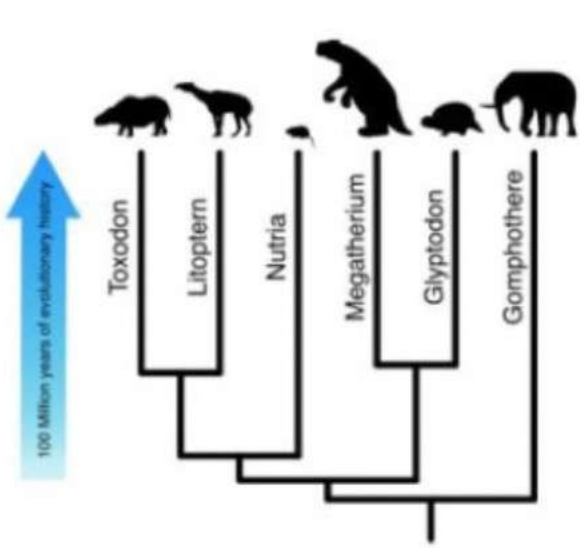


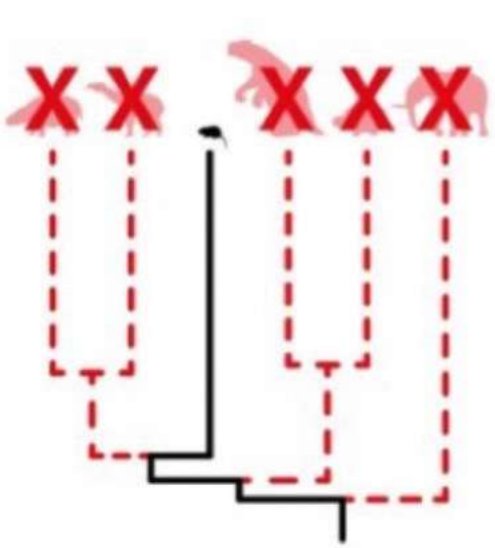
Since then, all the largest species have been chopped off the mammal Tree by extinctions

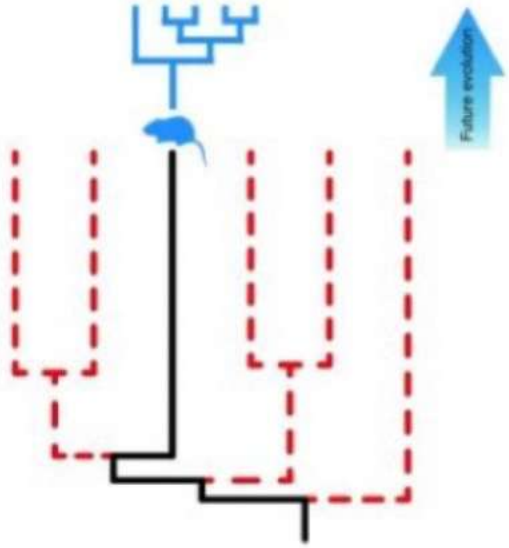
The Future?

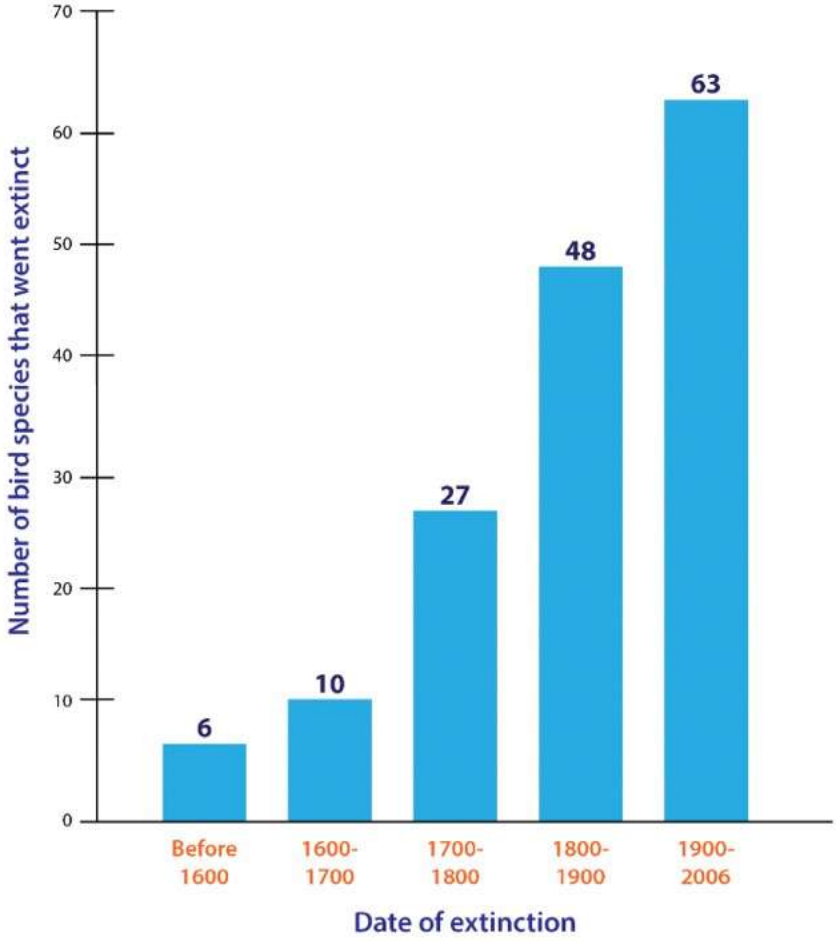


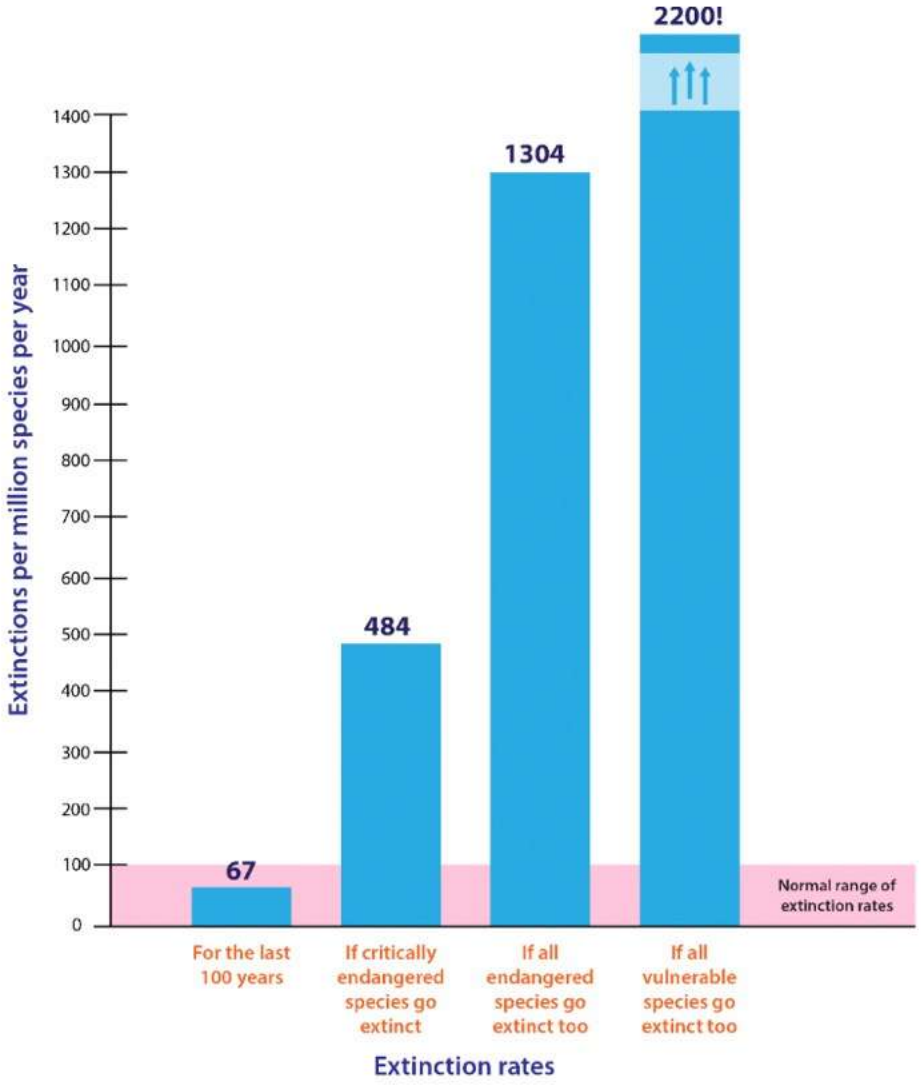
Surviving species will have to diversify for millions of years to restore this missing evolutionary history and regrow the Tree of Life








Number of bird species that went extinct
70
60
50
40
30
20
10
0
6
10
27
48
63
Before 1600
1600-1700
1700-1800
1800-1900
1900-2006
Date of extinction


Extinctions per million species per year
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
2200!
1304
484
67
Normal range of extinction rates
For the last 100 years
If critically endangered species go extinct
If all endangered species go extinct too
If all vulnerable species go extinct too
Extinction rates

5-8 %

The constribution of travel and tourist bussiness at global emission of GHG

According UNWTO, the goals to reach sustainability

- Make optimal use of environmental resources that constitute a keay element in tourism development, maintaining essential ecological processes and helping to conserve natural heritage and biodiversity.

- Respect the socio-cultural authenticity of host communities, conserve their built and living cultural heritage and traditional values, and constribute to inter-cultural understanding and tolerance.

- Ensure viable, long-term economic operations, providing socio-economic benefits to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities and contributing to poverty alleviation.

UNWTO
World Tourism Organization

Actionable steps for a greener tourism

- **Using resources sustainably**. The consservation and sustainable of resources-natural, social and cultural- is crucial and makes long-term business sense.
- **Reducing over-consumption and waster.** Reduction of over-consumption and waste avoids the costs of restoring long-term environmental damage and contributes to the quality tourism.
- **Maintaining biodiversity.** Maintaining and promoting natural, social and cultural diversity is essential for long-term tourism and creates a resilient base for the industry.
- **Integrating tourism into planning.** Tourism development which is integrated into national and local strategic planning framework and which undertake environmental impact assessments increase the long-term viability of tourism.
- **Supporting local economies.** Tourism that supports wide range of local economic activities and which takes environmental costs and values into account, both protects these economies and avoids environmental damage.

Actionable steps for a greener tourism

- **Involving local communities. T**he full involvement of local communities in the tourism sector not only benefits them and the environment in general but also improves the quality of the tourism experience.
- **Consulting stakeholders and the public.** Consulting between the tourism industry and local communities, organizations and institutions are essential if they are to work alongside each other and resolve potential conflicts of interest.
- **Training staff.** Staff training which integrates sustainable tourism into work practices, along with recruitment of personnel at all levels, improves the quality of the tourism product.
- **Marketing tourism responsibly.** Marketing that provides tourists with the full and responsible information increases respect for the natural, social and cultural environments of destination areas and enhances customer satisfaction.
- **Undertaking research.** Ongoing research and monitoring by the industry using effective data collection and analysis are essential to help solve problems and to bring benefits to destinations, the industry and consumers.

BREAK

The 3 keypoint of sustainability

Community

Respect and enhance the hosting communities

Environment

Preserve the resources and the habitats of the living

Economy

Strengthen the local economies, involving all the stakelholders

Community

The community that hosts must be involved and their culture and history must be preserved by tourists and institutions.

Some examples:

The typical late 50ies cars of Cuba has become one of the most attractive experience on the island, according at the owners a business opportunity that enhance their heritage and gives fair work to many people.

Environment

The biodiversity and natural resources must be taken care by those who travel.

Some examples:

For many years tourists raided the beaches of Sardinia to collect self made souvenir from their sand. Regional Law 16/2017 prohibits the collection of sand, shells, stones and pebbles from the beaches and the sea of Sardinia. This offense provides for an administrative fine ranging from 500 to 3,000 euros.

Economy

Involve local people businessto grow the share of wealth with the hosting communities, support fair wages and labour.

Some examples:

Turning to a greener economy, also in touristic sector, gives to a more sustainable growth for all communities.

The new trends fo a sustainable travelling

On the way of sustainability, some trends are setting the consumer consciousness:

Are some of the ways in which travellers and organizations are giving the possibility of a more sustainable, meaningful and richer form of journeys, travel.

CLIMATE AND TOURISM

Resources

- overtourism
- mass tourism
- ecoturism
- sustainable tourism

Debate

The class will be divided into three groups: one highlighting the advantages, another addressing the issues related to mass tourism, and the third acting as an evaluation group for the discussion. Each group will develop their arguments within a 15-minute timeframe.

The subsequent 15 minutes will be dedicated to presenting the arguments and engaging in debate.

The evaluation group will decide which group has presented the most convincing arguments.

Image by Vecteezy

DAY 2
LCA AND LEGISLATION

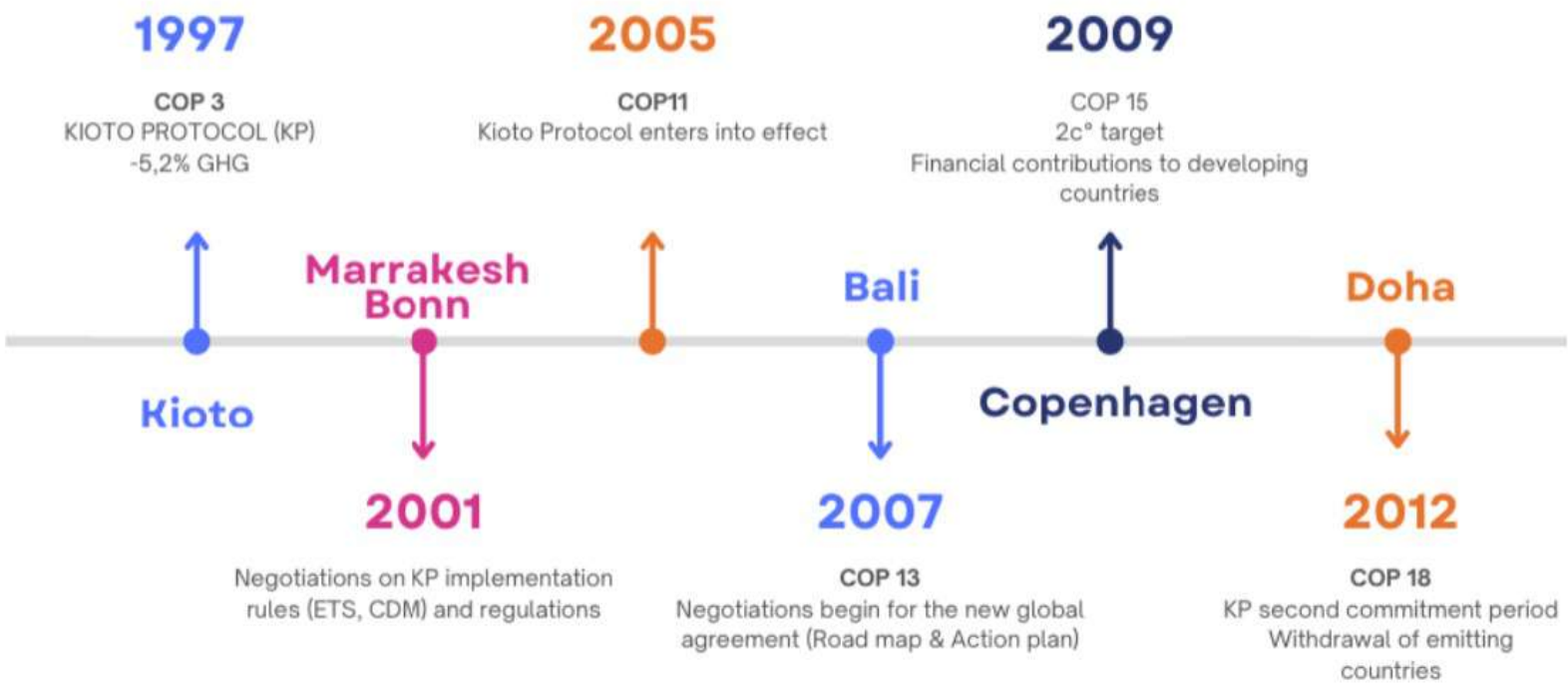
THE PARIS AGREEMENT

The Paris Agreement (French: Accord de Paris), often referred to as the Paris Accords or the Paris Climate Accords, is an international treaty on climate change. Adopted in 2015, the agreement covers climate change mitigation, adaptation, and finance. The Paris Agreement was negotiated by 196 parties at the 2015 United Nations Climate Change Conference near Paris, France. As of February 2023, 195 members of the United Nations Framework Convention on Climate Change (UNFCCC) are parties to the agreement. Of the four UNFCCC member states which have not ratified the agreement, the only major emitter is Iran. The United States withdrew from the agreement in 2020, but rejoined in 2021.

The goals are:

- Holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change.
- Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production.
- Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.

FROM KIOTO TO PARIS

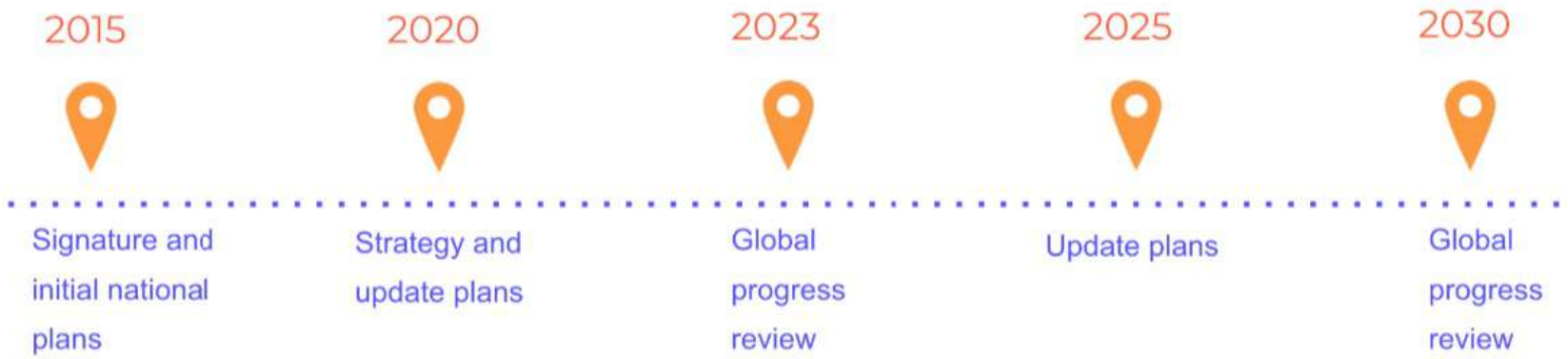


The Paris Agreement: the EU's road to climate neutrality

In december 2015 for the first time al countries worldwide agreed on a collective effort to:

Keep global warming well below 2c°

Take climate change effects



EU goals about climate: 2030 Climate Target Plan

Based on a comprehensive impact assessment, the Commission has proposed to increase the EU's ambition on reducing greenhouse gases and set this more ambitious path for the next 10 years. The assessment shows how all sectors of the economy and society can contribute, and sets out the policy actions required to achieve this goal.

Objectives:

- Set a more ambitious and cost-effective path to achieving climate neutrality by 2050.
- Stimulate the creation of green jobs and continue the EU’s track record of cutting greenhouse gas emissions whilst growing its economy
- Encourage international partners to increase their ambition to limit the rise in global temperature to 1.5°C and avoid the most severe consequences of climate change

EU programs to reach 2030 agenda goals

Europe has set a series of broad-ranging objectives to achieve ecological neutrality by 2050, with milestones set for 2030. In this regard, the Commission finances various initiatives and programs that support businesses and administrations in the direction of systemic changes necessary to meet the goals of the agenda.

Optimization and responsible resource reuse are among the main strategies for mitigating climate impact, as evidenced, for example, by the LIFE program.

LIFE Programme

[Life programme website]

Europe and transportation

Even in the field of transportation, European guidelines are highly detailed, starting from the 2011 White Paper that outlines the path for reducing carbon emissions in private transport and logistics. In particular, the concept of intermodality comes into play as a necessary approach to sustainable mobility.

WHITE PAPER

Roadmap to a Single European Transport Area. Towards a competitive and sustainable transport policy COM(2011) 144 final:10 objectives

Developing and using innovative and sustainable fuels and propulsion systems:

1 Halving the use of "conventionally fueled vehicles" in urban transport by 2030 and eliminating it entirely by 2050; achieving a zero-emission CO2 urban logistics system in major cities by 2030.

2 In the aviation sector, using 40% low-carbon fuels by 2050; also, by 2050, reducing CO2 emissions caused by fuel oils used in maritime transport by 40% in the European Union, and if feasible, by 50%.

WHITE PAPER

Optimizing the effectiveness of multimodal logistics chains, including increasing the use of more energy-efficient modes of transport:

3 For distances exceeding 300 km, 30% of road freight transport should be shifted to other modes, such as rail or waterways, by 2030. By 2050, this percentage should increase to 50% through efficient and ecological freight corridors. Adequate infrastructure will need to be developed to achieve this goal.

4 Completing the European high-speed rail network by 2050. Tripling the existing high-speed rail network by 2030 and maintaining a dense rail network in all Member States. By 2050, the majority of passenger transport over medium distances should occur by rail.

5 Having a fully operational "essential" multimodal TEN-T network throughout the European Union by 2030 and a high-quality and high-capacity network with a series of connected information services by 2050.

6 Connecting all major airports to the rail network by 2050, preferably the high-speed rail network. Ensuring that all major seaports are sufficiently connected to the freight rail transport system and, where possible, to inland waterways.

WHITE PAPER

Improving the efficiency of transportation and infrastructure use through information systems and market incentives:

7 Making the modernized air traffic management infrastructure (SESAR) operational in Europe by 2020 and completing the Single European Sky. Implementing equivalent traffic management systems for land and maritime transport, as well as the European Global Navigation Satellite System (Galileo).

8 Defining a framework for a European system of information, management, and payment in multimodal transport by 2020.

9 Progressing towards the "zero victims" goal in road transport by 2050. In line with this objective, the number of casualties should be halved by 2020, and the European Union should strive to become a global leader in safety across all modes of transport.

10 Moving towards the full implementation of the "user pays" and "polluter pays" principles, ensuring that the private sector commits to eliminating distortions, including harmful subsidies, generating revenue, and ensuring funding for future investments in the transport sector.

Debate: 30 years of struggle against climate changes

Watch the video

The first international agreements on climate change date back to 1997.

In your opinion, have commitments and objectives for climate conservation been achievable and consistently pursued? What more should be done to mitigate global warming, while maintaining a realistic approach and being mindful of the economic needs of global communities?

BREAK

HOW MUCH GREENER IS A GREEN CAR? 🚗🌱❓

Worldwide vehicle production growth over the past decades has caused strong emissions increments which have affected both population and industrial sectors globally. EU-28's CO_2 emissions correspond to 10.8% of global CO_2 emissions.
In 2017, the transport sector contributed to 27.9% of the EU-28 CO_2 production, with a passenger cars participation of 43.5%, which hence represents about 12.1% of the total EU-28 CO_2 emissions.

With a view to eco-sustainable mobility, battery electric vehicles (BEVs) and hybrid electric vehicles (HEVs) are nowadays proposed as clean or light-environmental impact technologies for road transport. In particular, BEVs are often promoted as zero-emitting vehicles since they are propelled by the use of electric energy, in contraposition to internal combustion engine vehicles (ICEVs) and HEVs, which instead make use of fossil fuels.

WHAT WE MEAN FOR GREY ENERGY?

Unfortunately, electric energy is not produced exclusively by means of renewable sources, but is still obtained by a mix of different sources which may have a carbon footprint (e.g., coal, natural gas, oil) or may produce different and hazardous waste, such as nuclear energy.

Table 5. Composition of the electricity mixes considered in the LCA [20].

	China (2018)	EU-28 (2019)	Germany (2019)	Norway (2019)	Poland (2019)
Coal	66.4%	15.4%	30.0%	0.121%	73.72%
Oil	0.153%	1.64%	0.822%	0.013%	1.09%
Natural gas	3.28%	21.9%	15.3%	1.732%	9.18%
Nuclear	4.09%	25.3%	12.1%	0%	0%
Hydro	17.1%	10.9%	4.24%	93.4%	1.63%
Wind	5.07%	13.3%	20.4%	4.1%	9.20%
Solar PV	2.45%	4.07%	7.69%	0.010%	0.44%
Biofuels	1.26%	5.27%	7.22%	0.03%	4.30%
Waste	0.187%	1.60%	2.03%	0.31%	0.38%
Geothermal	0.002%	0.206%	0.0317%	0%	0%
Solar thermal	0.004%	0.178%		0%	0%
Tide	0.0002%	0.0152%		0%	0%
Other sources		0.141%	0.168%	0.244%	0.05%

THE LIFE CYCLE IMPACT ASSESSMENT

To evaluate the real impact of a product, in particular of the BEVs and HEVs, evidence comes that the only focus could not be on emissions of GHG in their use stage or on road emission. To comprehend the real impact and sustainability we must consider the entire life cycle of a product.
The LCA points to analyze tall this aspects:

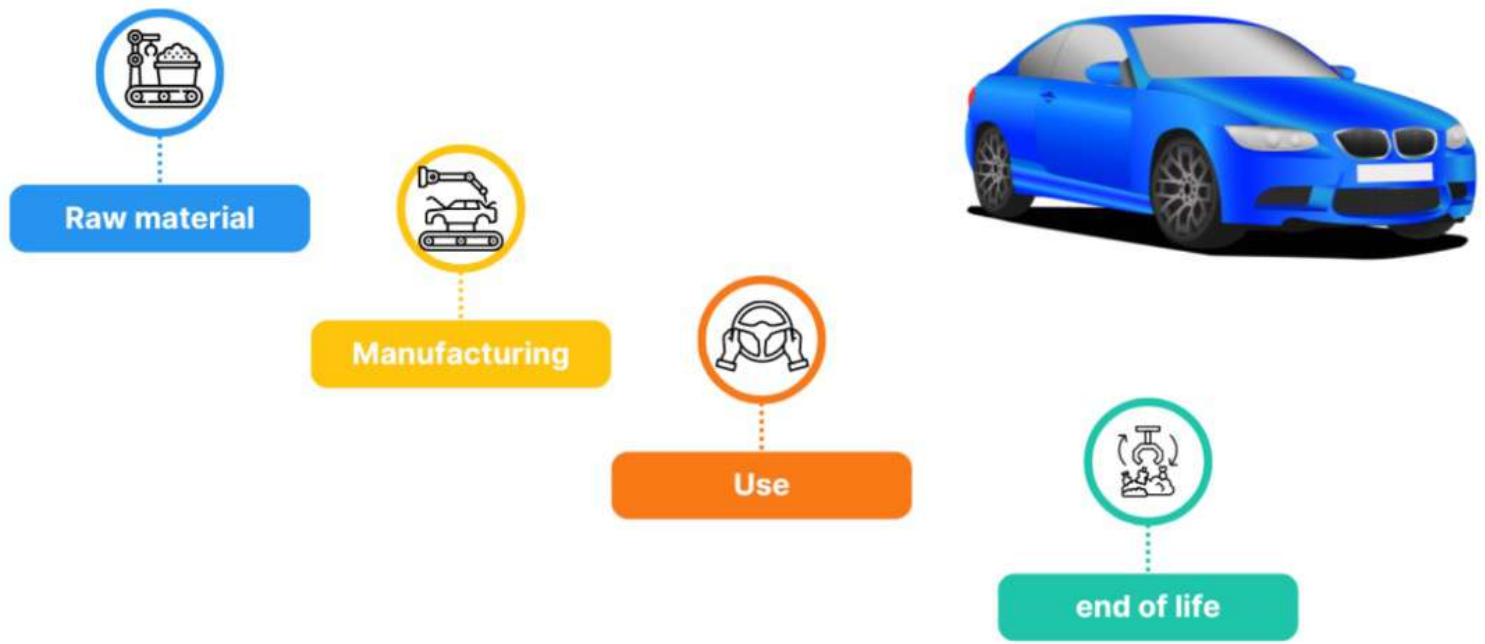
- Production Stage
- Battery Production
- Vehicle Production Results
- Use Stage
- On-Road Emissions
- End-of-Life
- Electric Vehicle Battery Disposal

LCA ANALYSIS

Some studies point out that comparing the LCA of BEVs and HEVs to other internal combustion engine vehicles (ICEVs) it results that especially in the production phase BEVs and HEVs are significantly more impacting on global warming. If the sustainability is comprehensive on the global terrain acidification and of specific particulate matter potential formation and specific ore surplus potential, the transition on this kind of vehicles is far more problematic than it seems, and the benefits are smaller that one could think.

Considering a lifetime distance of 150,000 km, BEVs turn out to be the least impactful solution among the three alternatives considered, with a 41.4% reduction in CO2 emissions compared to ICEVs and a 31.8% reduction compared to HEVs. During the first 32,500 km of use (about the first 2.6 years, based on the European average of 12,529 km per year), gasoline vehicles are the least emissive. This superiority extends up to 41,250 km (3.3 years) compared to BEVs. For HEVs, the advantage over BEVs extends up to 46,250 km (3.7 years).

https://www.mdpi.com/2071-1050/13/19/10992



Lithium Battery Production:

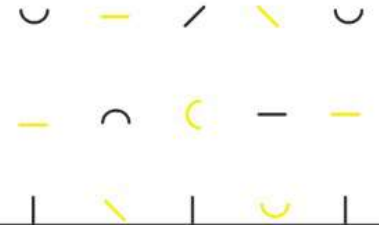
The production of lithium-ion batteries for BEVs is responsible for most terrestrial acidification, with 60.3 kg of SO2 equivalent, which represents 73% of the total impact generated in the production phase. This is caused by emissions of sulfur oxides (SOX) and nitrogen oxides (NOX) during the extraction and refining of nickel, copper, and aluminum, as well as during cell production and synthetic graphite processes. Acidification has a series of negative effects on the environment, damaging plants, causing soil nutrient loss, and polluting water with consequences for the fauna and flora of a given area.

A further critical issue with respect to battery raw materials concerns the social impact that the extraction of these metals has in some nations where the main mines are located, such as Indonesia for nickel and Congo for cobalt. In these countries we often witness serious violations of human rights and the use of child labor (Amnesty International).

IN CONCLUSION

At this point, a consideration needs to be made: if, at the end of its life, an electric vehicle has caused a global warming impact similar to that of a traditional gasoline or hybrid vehicle (as in the average European and Polish cases), from an environmental point of view, it cannot be defined as a success. In fact, compared to a traditional gasoline vehicle, an electric vehicle causes approximately twice the acidifying and particulate emissions and requires the extraction of five times the amount of minerals. If a partial reduction in greenhouse gases is achieved, we must also be prepared to face other environmental impact categories such as acidifying and particulate emissions. Since an overall reduction in all impact categories is desirable, it is necessary to promote research towards the development of more efficient and less polluting battery production processes, significantly reducing the reliance on rare minerals and fossil energy sources.

Furthermore, there is a heritage of vintage or classic cars that it is still worthwhile to utilize rather than scrap. Using these historic vehicles can be a sustainable option as it avoids the environmental impact associated with the production of new vehicles and the scrapping of existing ones. Therefore, maintaining and using vintage cars can contribute to the overall reduction of environmental impact, complementing the transition towards cleaner technologies.



Debate: Sharing economy and sharing mobility

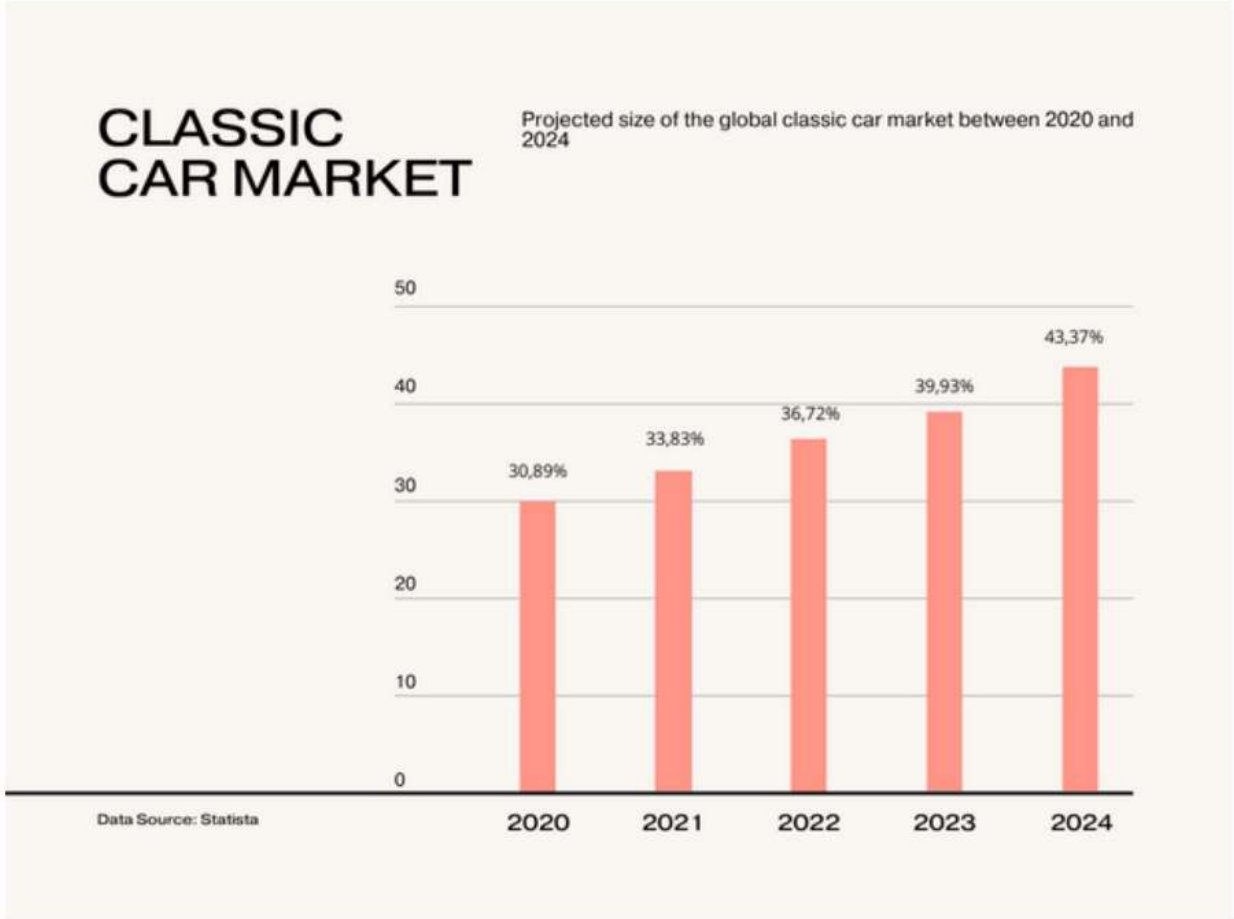
The introduction of sharing transportation systems and innovations in Intelligent Transportation Systems (ITS) has significantly transformed mobility in recent years, helping to reduce the impact on pollution and congestion. From bike-sharing to car-sharing, an increasing number of people are opting for smart and efficient ways to move around cities, foregoing private vehicles.

In groups, conduct a brief research on the most common sharing transportation methods in major cities, narrating their history, highlighting their advantages and disadvantages.

DAY 3
VINTAGE CAR AND INDUSTRIAL TOURISM

The vintage car market and the potential of industrial tourism

This market is experiencing continuous growth driven by a series of factors, such as increased investments from major companies, interest in technical heritage, and the pleasure derived from vintage design by enthusiasts.



Some data confrontation

In Europe

With a total volume of 429 billion euros in 2021, the used car market in Europe is similar to that of new cars. In 2021, 32 million used cars were sold in Europe.

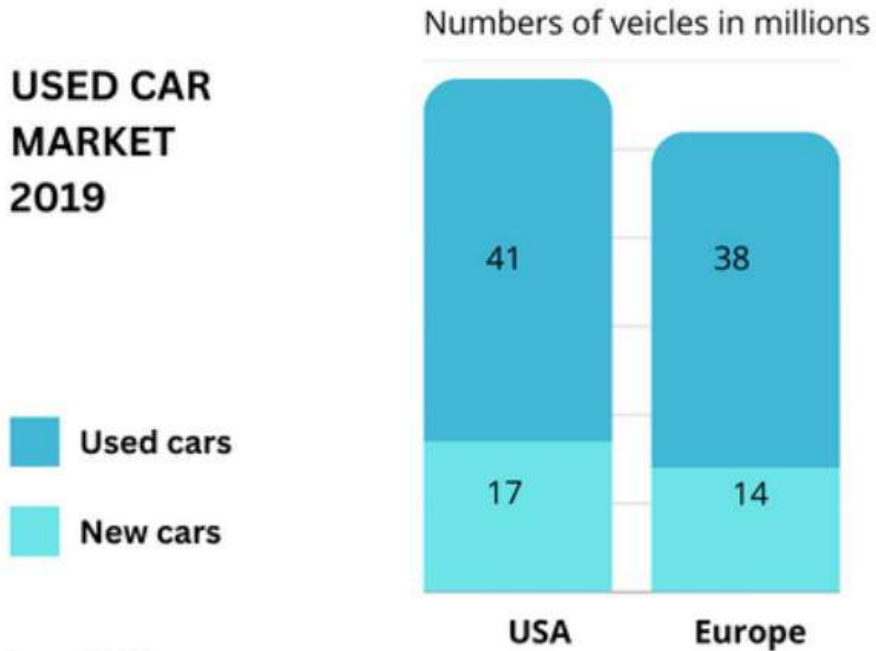
In Italy

More than 25% of the vehicle fleet consists of cars that are 20 years old or older. Considering those that are actually vintage cars, the number remains significant: over 300,000 cars, 7% of the total circulating cars in Italy, evenly distributed between the North and the South, with a value of 103.9 billion euros and a collateral market - including insurance, events, specialized services, etc. - of 5.2 billion euros annually, accounting for 0.3% of the national GDP.

Some data confrontation

In Spain

The Spanish used car market was valued at 37.06 billion USD in 2021, and it is expected to reach 58.74 billion USD by 2027. In February 2020, car registrations in Spain decreased by 4.8% compared to 2021. However, there was a 17% increase in demand for vehicles over 20 years old.



What is a classic car?

there isn't a common definition of classic cars. It changes from country to country, as the laws that gives them specific insurance policies or regulation. Here there is a defintion of th cars by the year it was manufactured that is proposed by the review "classic cars collectors" of the U.S.

- **Vintage Car:** Manufactured between 1919 and 1930
- **Antique Car:** Manufactured 1975 or earlier (>45 years old)
- **Classic Car:** Manufactured 2000 or earlier (>20 years old)

THE LEGISLATION ON CLASSIC CARS

In Italy are classic cars or “auto storiche” if they have more then 20 years from their matriculation. In that case you have to register on a registry called ASI. If a car is canceled from the Public registry of Autovehicoles, or is registered for more than 30 years on the ASI they become “auto d’epoca”. Both have specific reduction on assurance and on taxes. The second ones have limitation on their circulation, could move only on specific events and with some restrictions.

THE YOUNGTIMERS

As it’s said no clear rule defines what and when a car become classic. A definition that is become familiar to the european collectors is “youngtimer”, wich indicates generally cars produced after the 70ies and are on the edge of the shift between analogical and electronic revolution in automotive.
For their price and their characteristic the youngtimers are considerate as an entry level on the cars collectors field.

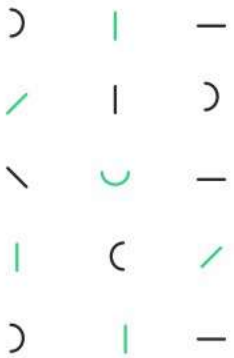
A growing heritage: the “youngtimers”

Every year new cars become older enough to become “historic cars”. On the way of defining which models are effectively of some historical interest in Italy some associations, like ACI storica,propose a way, called “Lista di salvaguardia”, to update the list of the youngtimers by some criteria like:

🚙 The rarity of the model

🚗 The historical/cultural or technical relevance

🚌 The success of the commercial or industrial project



THE ITALIAN CAR PARK

age	years (periodo)	number of cars
<20	2004-2022	30.366.809
20-29	1994-2003	5.883.436
30-39	1984-1993	2.251.586
40-49	1974-1983	921.767
50-59	1964-1973	658.437
60-69	1954-1963	55.479
>=70	<=1953	25.446
tot		40.162.960
ND		39.230
TOT		40.202.190

5900000

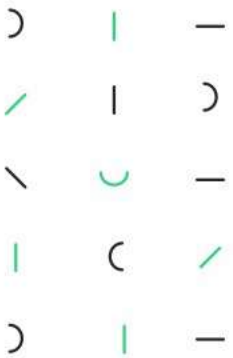
THE CIRCULATING VEHICLES WITH MORE THAN 20 YEARS

25%

OF THE CAR PARK IN ITALY IS OF CARS BUILT BEFORE THE 2003

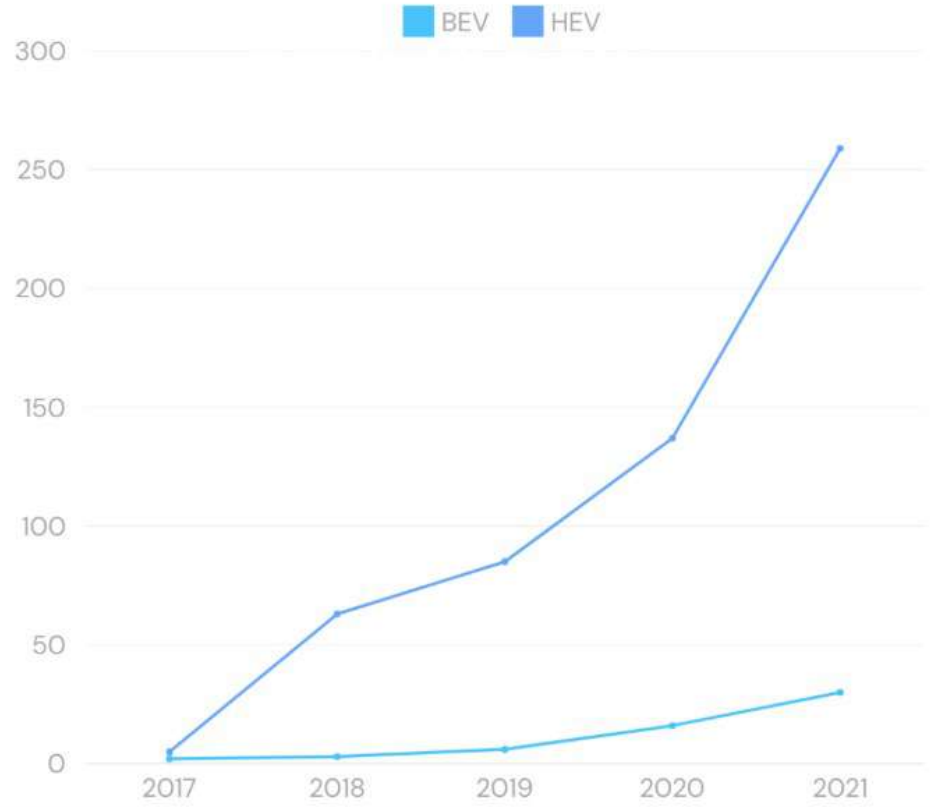
What we do with all this old cars?

With a percentage of almost a quarter of the circulating vehicles the old cars represent a big portion of the general cap park of several countries. The disposal or renovation of this portion is a big deal and should be thinked in the way of a useful and gradual dimission. While battery and hybrid engine vehicles represent still a minimal percentage of the complessive car park, the classic and historical cars should be considered an heritage to enhance.



BEVs AND HEVs MATRICULATION IN ITALY

The percentage of the EHVs and BHVs circulating in Italy is less than the 3%, even if is significally grown in the last few years remarkably with a 30% of the 2021 matriculation of new cars.



THE FIAT PANDA

The Fiat Panda is a city car manufactured and marketed by Fiat since 1980.The first generation Panda (Mk 1: 1980–1986 & Mk2: 1986–2003) was designed by Giorgetto Giuggiaro and Aldo Mantovani. Approximately 4.5 millions of the first generation Panda was produced and sold.

Is surely one of the most iconic and loved car among youngsters and its fame is equal at others italian classics like fiat 500. Is the first city car in history that reached the 5200 meters camp base on Everest mountain and its sturdiness still represent an example of products built to resist.

The Millemiglia

Mille Miglia is one of the most famous vintage car competitions that take place in Italy, in the city of Brescia. Each edition of the Mille Miglia traditionally sees historic cars cross Italy in four stages: Cervia – Milano Marittima, Rome, Parma, Milan and then the return to the city.

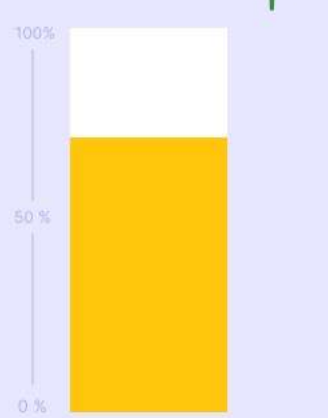
What consumers want?

According to research carried out by the travel agency Expedia in 2022, the consumers, from 11 different countries, seems to be more concerned on their impact on environment while travelling than in the past years, and the tendencies goes in the direction of fair more.

90 %

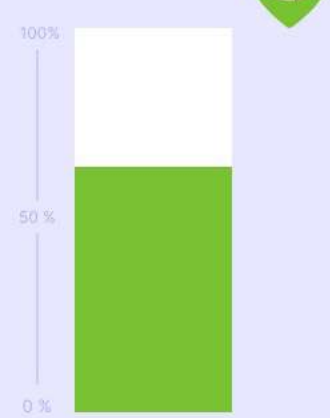
of consumer search for sustainable options when they travel

What do consumers see as part of sustainable travel?



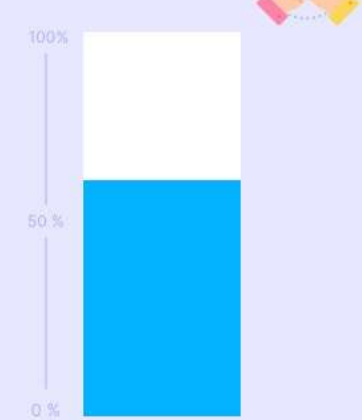
69 %

Lessening **environmental impacts**



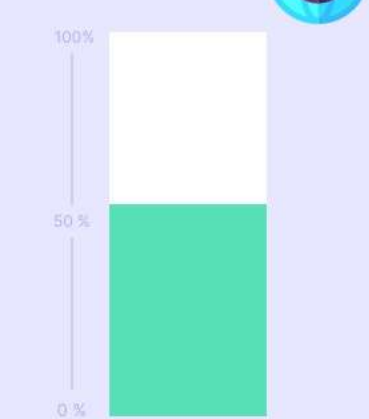
66 %

Supporting **local economies**



65 %

Supporting **local cultural and communities**



52 %

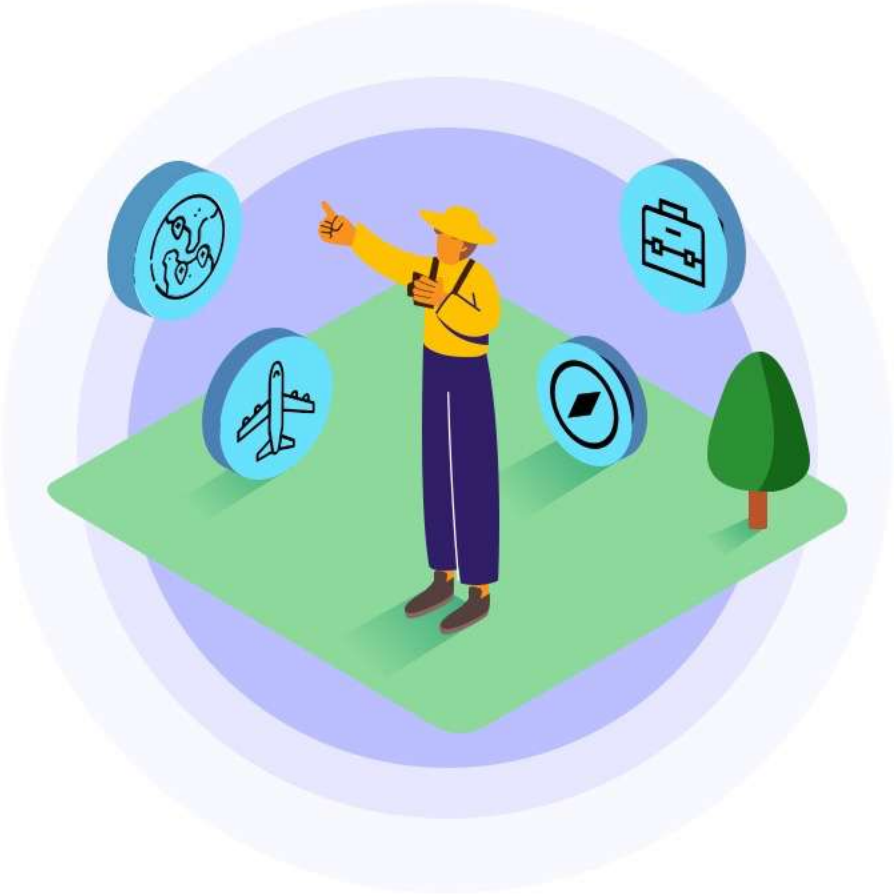
Visiting **lesser-known destinations**

Consumers are already trying to make

meaningful decisions when travelling

The responses recorded from a study conducted by Expedia with 11,000 of its clients worldwide indicate that the trend towards more sustainable travel is increasing.

The growth in offerings for destinations far from mass tourism, reachable through more sustainable forms of transportation, is expected to contribute significantly to this trend.



But half of consumers

would be willing to pay more

for transportation, activities, and lodging if the option was more sustainable

BREAK

INDUSTRIAL TOURISM

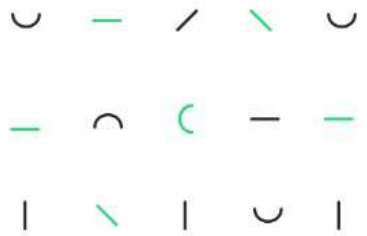
Same Definitions

Usually we don't tend to associate industrial activities with leisure activities, we imagine that they are two completely opposite worlds that have nothing in common.
Yet this is not always the case: industries (and technical-industrial heritage in general) attract people interested in technical objects (machines), modern architecture, more or less spectacular production techniques (for example in the steel industry) or specific final products, for their aesthetic (e.g. glass) or culinary (e.g. beer) value. Hundreds of thousands of visitors to Europe testify to the attractiveness of such objects in the context of educational or recreational activities. The same goes for the remains of former industrial activities, whether they are well-preserved industrial monuments or simple ruins of buildings and machinery.
These types of activities, for which the term "industrial tourism" is proposed, are of considerable interest for the promotion of less traditional tourist flows and places less subject to mass tourism.

Some Definitions

Industrial tourism is still not a very well defined concept but we will analyze the most important conceptualizations

Dietrich Soyez, vice-president of International Geographical Union, defines industrial tourism as “any type of movement made by external visitors attracted by industrial landscapes in which there is an operational or even disused factory.
(Soyez Dietrich, “Industrietourismus”, Erdkunde, vol. 40, n. 2, 1986)



For Soyez, in fact, the concept of "industrietourismus" should not focus so much on a particular type of industrial attraction, but more on the reason why tourists are driven to visit it, i.e. the interest in the industrial world (whether past or present).

Some Definitions

Another important definition is the one provided by the Australian scholar **Ann Frew** that defines industrial tourism as «visits by tourists to operatioal sites where the core activity of the site is non-tourism oriented».
The term industry, in this case, should not be understood as a «manufacturing industry» but as a sector of the economy. This expands the type of companies that can open their doors to visitors with the exception of businesses that produce goods intended exclusively for tourists.

AND NOW? A GROWING MARKET

2021

The global industrial tourism market size in 2021 was $986 million,

2023

in 2023 would reach $ 1.663,6 million

2033

and it would surpass $ 18.739 million by 2033

Source www.futuremarketinsights.com

UNESCO WORLD HERITAGE CONVENTION

The UNESCO World Heritage Convention is part of a few treaties adopted after the 1972 United Nations Conference on Human Environment held in Stockolm, Sweden.

It brought together the conservation of cultural and natural heritage under a single legal instrument.
It provides for the protection of those cultural and natural properties
considered being of exceptional interest and outstanding universal value.

The Convention defines the kind of natural or cultural sites which can be considered for inscription on the World Heritage List.
However, there is no specific list nor a specific program of UNESCO regarding the industrial heritage.

Industrial heritage included in the UNESCO list usually refers to the UNESCO Modern Heritage Program

UNESCO MODERN HERITAGE PROGRAMME

At the start of 2001 the UNESCO World Heritage Centre, ICOMOS (International Council on Monuments and Sites) and DOCOMOMO (Working Party for the Documentation and Conservation of buildings, sites and neighbourhoods of the Modern Movement) launched a joint programme for the identification, documentation and promotion of the built heritage of the 19th and 20th centuries - the Programme on Modern Heritage.

The process of the recognition of the 20th century properties as a heritage identifies consequently 20th century heritage through new thematic approaches, such as the modes of occupation of land and space, industrial technology, urban ensembles, vernacular and reused buildings, environment and cultural landscape.

ICOMOS AND TICCIH

ICOMOS - International Council on Monuments and Sites is the head international institution founded in 1965 with the task to care for cultural monuments. Soon, the industrial monuments were included on its lists and since then it is possible to talk about a systematic management of such monuments.

TICCIH - The International Committee for the Conservation of the Industrial Heritage is the international society dedicated to the study of industrial archaelogy and the protection, promotion and interpretation of the industrial heritage.

The two most significant charters brought in this last period are The Nizhny Tagil Charter for the Industrial Heritage in Moscow in 2003 by TICCIH organization and The Dublin Principles brought at the 17th ICOMOS General Assembly in November 2011. These two charters systematically define the status and the modern interpretation, as well as the way of treating the overall industrial heritage.

By including the industrial heritage into the lists of protected cultural goods of a certain country, the heritage gains a completely new status. Its items and buildings with specific functional characteristics, made in the original industrial stage, gain a new role. The experts estimate the historical significance and the aesthetic characteristics of a certain location and provide guidelines for future conversion.

EUROPEAN ROUTE OF THE INDUSTRIAL HERITAGE

It is a project born in 1999 when the German Society for Industrial Culture (now dissolved) proposed to set up a virtual network with the aim of connecting the main European sites of industrial archeology. Thus a system of (virtual) routes of Anchor Points, Regional Routes and European Thematic Routes is structured.

The map: https://www.erih.net/i-want-to-go-there

The points of interest along the route, considered i symbolic places of European industrial history, are defined as Anchor Points and, to date, there are more than 2000 distributed in 56 different countries. Anchor Points cover the complete range of European industrial history. After that, they tell tourists what they can see at a local level. Visitors of all ages can relive their industrial heritage through fascinating guided tours, exciting multi-media presentations and outstanding special events.

Best practices

At the conclusion of the course we would like to offer some examples of best practices that can give an idea of how the tourism market is maturing and how initiatives aimed at the recovery and enhancement of both industrial and automotive heritage are moving in the direction of enriching the tools available to make the sector more sustainable.

Read more: Cool Classic Cars Manual of Best Practices

Exercise

Imagine offers for alternative destinations to major tourist hubs and carriers to reach them using the european map of industrial heritage and calculate carbon footprint of your journey.

Compare the results with a trip to major European capitals done by airplane.

Good work!

Thank you and goodbye

To know more: www.coolclassicars.info