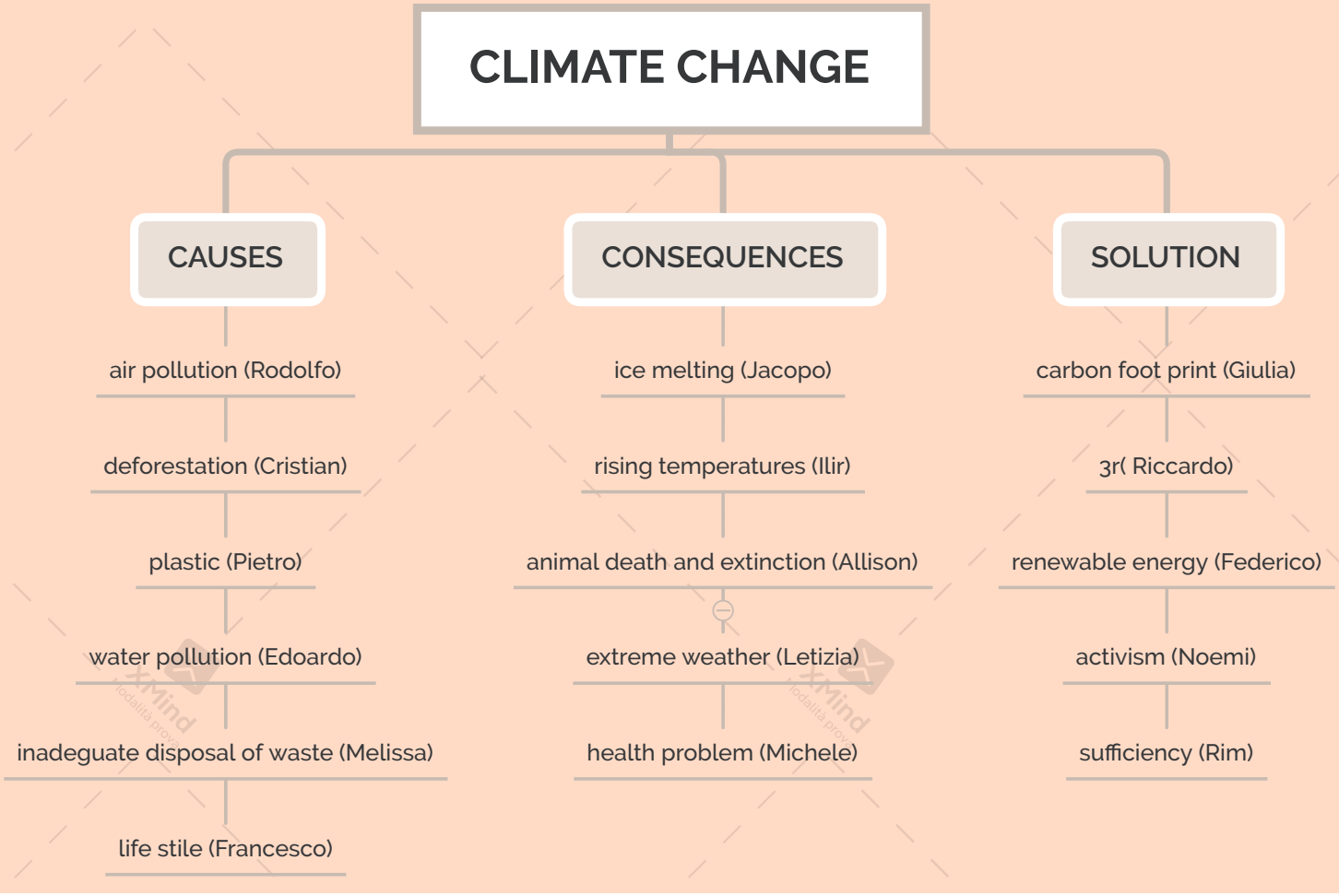
Lettura di un articolo **NEVER TOO SMALL TO MAKE A DIFFERENCE** riferito alla protesta di Greta Thunberg davanti al parlamento Svedese nel 2018 e alla nascita del movimento Fridays for Future.


Predisposizione di una **mappa concettuale condivisa relativa ai cambiamenti climatici** e approfondimenti fatti dagli studenti sui diversi argomenti e sulle tematiche principali relativi al **Green Deal Europeo.**

In allegato alcune presentazioni a titolo esemplificativo



# Renovating buildings for greener lifestyles

Noemi Arisi 5^AA

# Renovating our homes and buildings will:

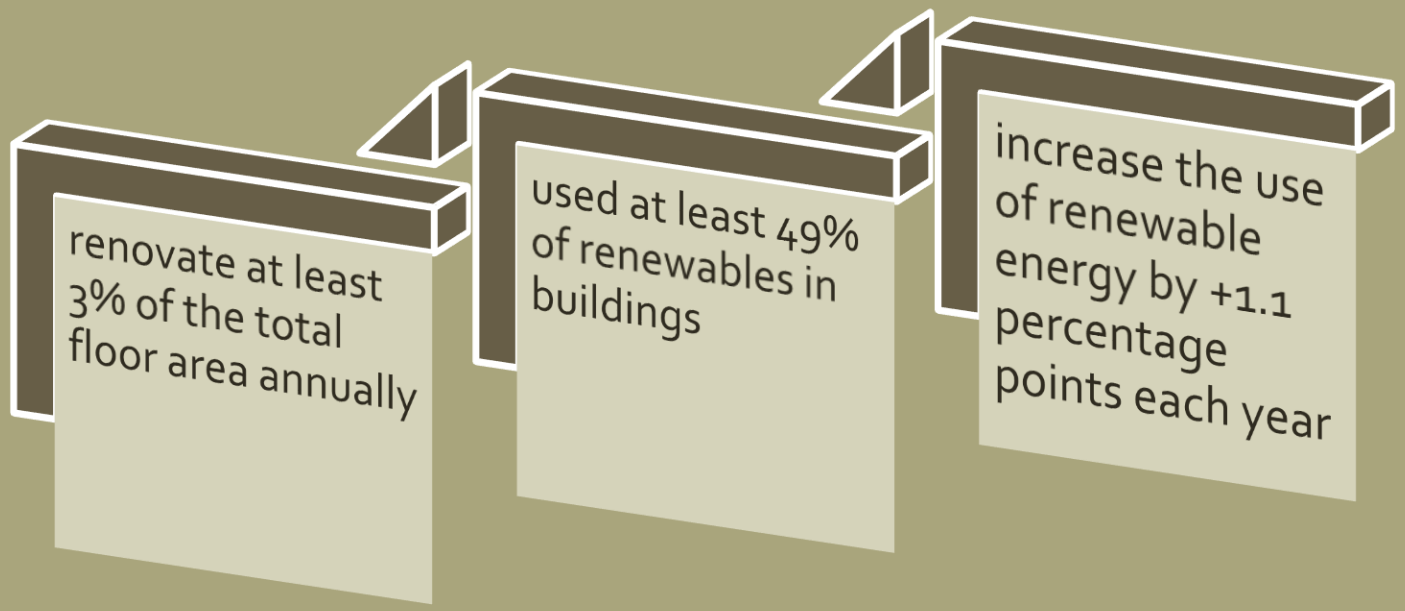
- Protect against extreme cold
- Save energy
- Protect against extreme hot
- Tackle energy poverty

# The Social Climate Fund:

will support EU citizens most affcted or at risk of energy or mobility poverty

will help mitigate the costs

ensure that the transition is fair and leaves no one behind




It will provide EUR 72.2 billion over 7 years in funding for renovation of buildings, access to zero and low emission mobility, or even income support. however, the commission proposed that, by 2030, we have to:

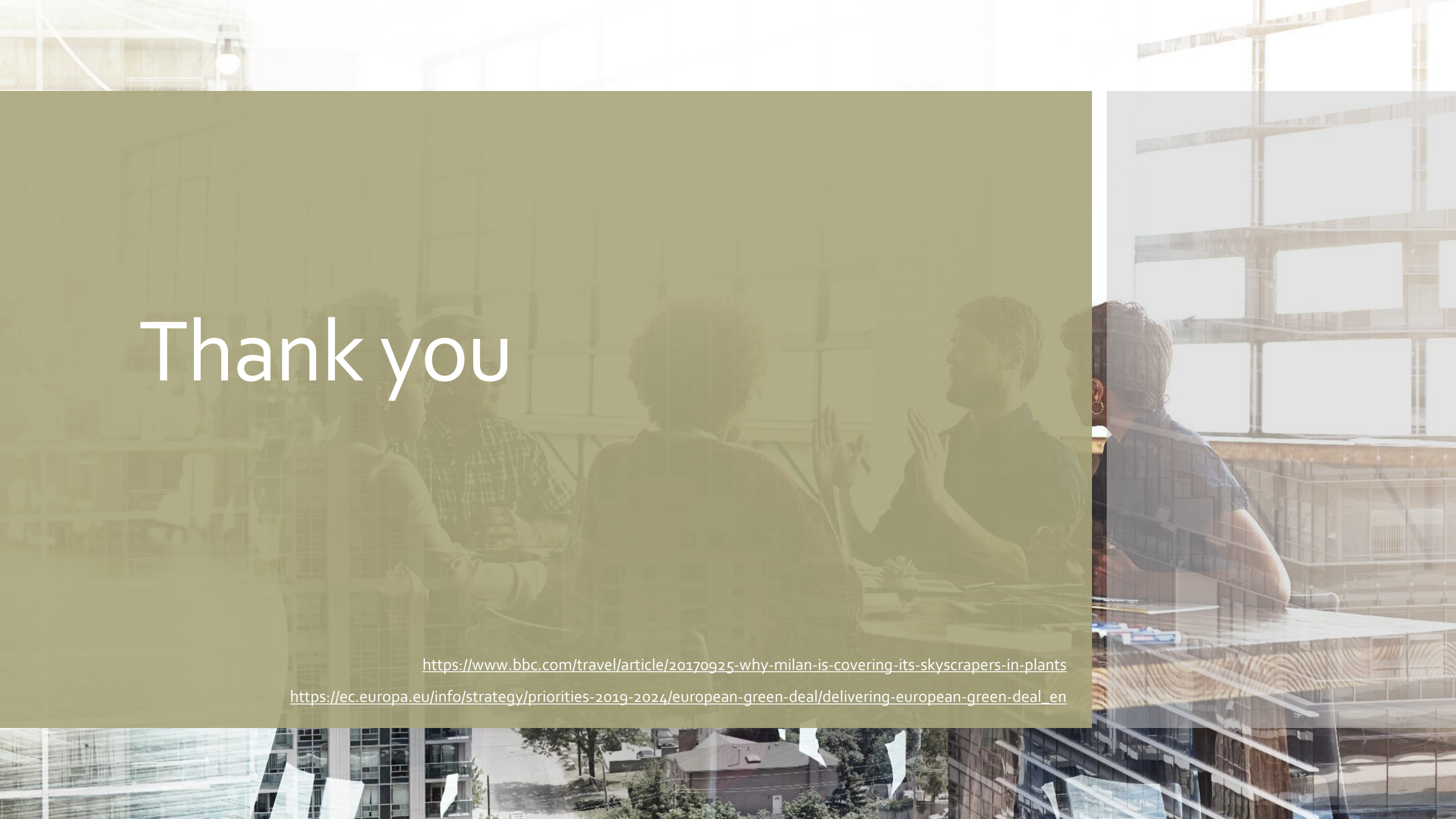
In addition to homes, public buildings must also be renovated to use more renewable energy, and to be more energy efficient.

Milan, the Italy's second biggest city, is reinventing itself, with a shining horizon of brand-new skyscrapers dramatically changing the landscapes.

Two towers covered with plants from the Vertical Forest by the architect Stefano Boeri stand out.

The basic idea is to give back to nature the space that urbanization is taking away from it. Sustainable residential buildings contribute to the construction of a microclimate by producing humidity, absorbing $CO_2$ and dust particles and returning oxygen.

# Thank you



https://www.bbc.com/travel/article/20170925-why-milan-is-covering-its-skyscrapers-in-plants

https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/delivering-european-green-deal_en

# Making transport sustainable for all

Our transition to greener mobility will offer clean, accessible and affordable transport even in the most remote areas.

The European Commission proposes more ambitious targets for reducing the CO2 emissions of new cars and vans.

- 55% reduction of emissions from cars by 2030
- 50% reduction of emissions from vans by 2030
- 0 emissions from new cars by 2035

The Commission also promotes the growth of the market for zero and low emissions vehicles.

In addition, from 2026, road transport will be covered by emissions trading, putting a price on pollution, stimulating cleaner fuel use, and re-investing in clean technologies.

The Commission is also proposing carbon pricing for the aviation sector, which benefited from an exception until now. It is also proposing to promote sustainable aviation fuels.

# Sustainable mobility

Around one-quarter of global CO2 emissions come from the transportation of people and goods. Creating sustainable transportation solutions is one of the greatest challenges facing cities today but also a great opportunity for the low-carbon development of cities.

Sustainable urban mobility requires a mind shift: where transport in private cars and trucking give way to different modes of public transport. Like bicycle and pedestrian lanes, electric vehicles, car sharing and rail freight. More and more cities around the world are rising to the challenge. Creating solutions that ensure the vital flow of people, goods and services. While mitigating climate change and creating climate-safe cities.


# Reducing $CO_2$ emissions from heavy-duty vehicles

Lorries, buses and coaches are responsible for about a quarter of $CO_2$ emissions from road transport in the EU and for some 6% of total EU emissions.

The first-ever EU-wide $CO_2$ emission standards for heavy-duty vehicles, adopted in 2019, set targets for reducing the average emissions from new lorries for 2025 and 2030.

The Regulation also includes a mechanism to incentivise the uptake of zero and low emission vehicles, in a technology-neutral way.

# Benefits

The Regulation will:

- contribute to the achievement of the EU's commitments under the Paris Agreement
- reduce fuel consumption costs for transport operators – mostly Small and Medium Enterprises – and consumers,
- help maintain the technological leadership of EU manufacturers and suppliers.

Expected benefits include:

- Around 54 million tonnes of $CO_2$ reduced in the period 2020 to 2030
- Savings at the pump amounting to around €25 000 in the first 5 years of use for a new lorry bought in 2025 and up to about €55 000 in the first 5 years of use for a new lorry bought in 2030
- Oil savings of up to 170 million tonnes of oil over the period 2020 to 2040
- GDP increases resulting in the creation of jobs

# Target levels

From 2025 on, manufacturers will have to meet the targets set for the fleet-wide average $CO_2$ emissions of their new lorries registered in a given calendar year. Stricter targets will start applying from 2030 on.

The targets are expressed as a percentage reduction of emissions compared to EU average :

- from 2025 onwards: 15% reduction
- from 2030 onwards: 30% reduction

The 2025 target can be achieved using technologies that are already available on the market. The 2030 target will be assessed in 2022 as part of the review of the Regulation.

As a first step, the $CO_2$ emission standards will cover **large lorries**, which account for 65% to 70% of all $CO_2$ emissions from heavy-duty vehicles.

As part of the 2022 review, the Commission should assess the extension of the scope to **other vehicle types** such as smaller lorries, buses, coaches and trailers.

# Cost-effective achievement of targets

- **Banking and borrowing** to take account of long production cycles, including a reward for early action, while maintaining the environmental integrity of the targets.
- Full flexibility for manufacturers to **balance emissions between the different groups of vehicles** within their portfolio.
- **Vocational vehicles** , such as garbage trucks and construction vehicles, are **exempted** due to their limited potential for cost-efficient $CO_2$ reduction.

# Small City, Big Ambitions


- Monterìa
- Green City 2019 Plan
- Immigration
- Deforestation
- Green Car Days

# Asia's BRT Pioneer

- Transjakarta
- More than 300000 passengers/day
- Most air-pollution in the world
- 30% reduction of GHG

# New dreams in the old town

- Velib’
- Le Mobilien
- 1400kms of bike lanes by 2020
- Parisians’ choice

# Working with nature to protect our planet and health

Nature is an importantally in the fight against climate change.

The Commission proposes therefore to restore Europe’s forests, soils, wetlands and peatlands.

to ensure that carbon dioxide disappears several changes have been made including:

- improve our living conditions
- maintain a healthy environment
- create quality jobs
- provide sustainable energy resources

# The soil

- Most of us consider soil stepping on as simple loam. Yet, the soil plays a fundamental role in regulating the planet's climate: in fact, it stores carbon mainly in the form of organic matter.
- It's the second largest carbon deposit on Earth.

# The forest

- Forests are major players in climate change.
- On the one hand, they release greenhouse gases when trees are cut down or decay and they're contributing to global warming.
- On the other hand they capture greenhouse gases through photosynthesis, thus contributing to the cooling of the planet.

# Deforestation and program REDD plus

- up to 80% of tropical deforestation is used to create land that can be used for agriculture, the deforestation not only accelerates climate change, but causes the destruction of the habitats.
- The program REDD plus helps tropical countries to adopt more sustainable approaches. REDD + pays the inhabitants of developing countries to preserve the forests and this can be a way to incentivize people not to destroy forests.

# Some innovations

- Several cities have started growing plants on walls and roofs to absorb heat and help regulate the temperature inside buildings when it's hot outside.
- There are innovative ways to avoid wasting water, such as systems for the reuse of 'gray water' (where the water used for washing is reused for flushing the toilet) in homes.
- Innovative farmers are also using drip irrigation systems at night, so that the water goes directly to the roots and does not evaporate with the heat of the day.

# The 3 Things We Must Do To Solve Problems In The World

If we follow the path that science shows us, we have the power to save nearly all habitat types across the world's lands.

# First thing

Produces More Food on Less Land

Problem:

- Today's version of large-scale agriculture drives deforestation that worsens climate change, uses 70 percent of the world’s freshwater supply and relies on fertilizer practices that pollute our waters.
- How to fix it:
- It produces food where it's most likely to thrive, which will use less water and less land.

# Second thing

Eliminate Overfishing

Problems:

- Overfishing endangers food webs and ocean ecosystems by disrupting the balance of all sea life and it threatens billions of people who rely on seafood as an important source of livelihood and animal protein.

- How to fix it:

- Ensure that fish populations catch only enough fish to feed themselves so that the oceans will be richer in fish in the future.

# Third thing

- Increase Clean Energy
- Problem:
- We must reduce carbon emissions to, or below, levels agreed to in the Paris Climate Agreement to prevent catastrophic harm.
- How to fix it:
- Shift 85 percent of the world's energy supply to non-fossil fuel sources and invest in strategies like reforestation that capture carbon dioxide.

# Renovating buildings for greener lifestyles

Renovating our homes and buildings will save energy, protect against extremes of heat or cold and tackle energy poverty.

So many governments have decided to lower costs to create eco-sustainable houses so that more people can follow this view to use more renewable energy.
In addition to homes also public buildings must also be renovated in that way.
The best expression we can use to talk about that is “low energy house” which are buildings with a reduced enviromental impact.

**Some data that agree with the idea of creating much more eco-sustainable buildings**.

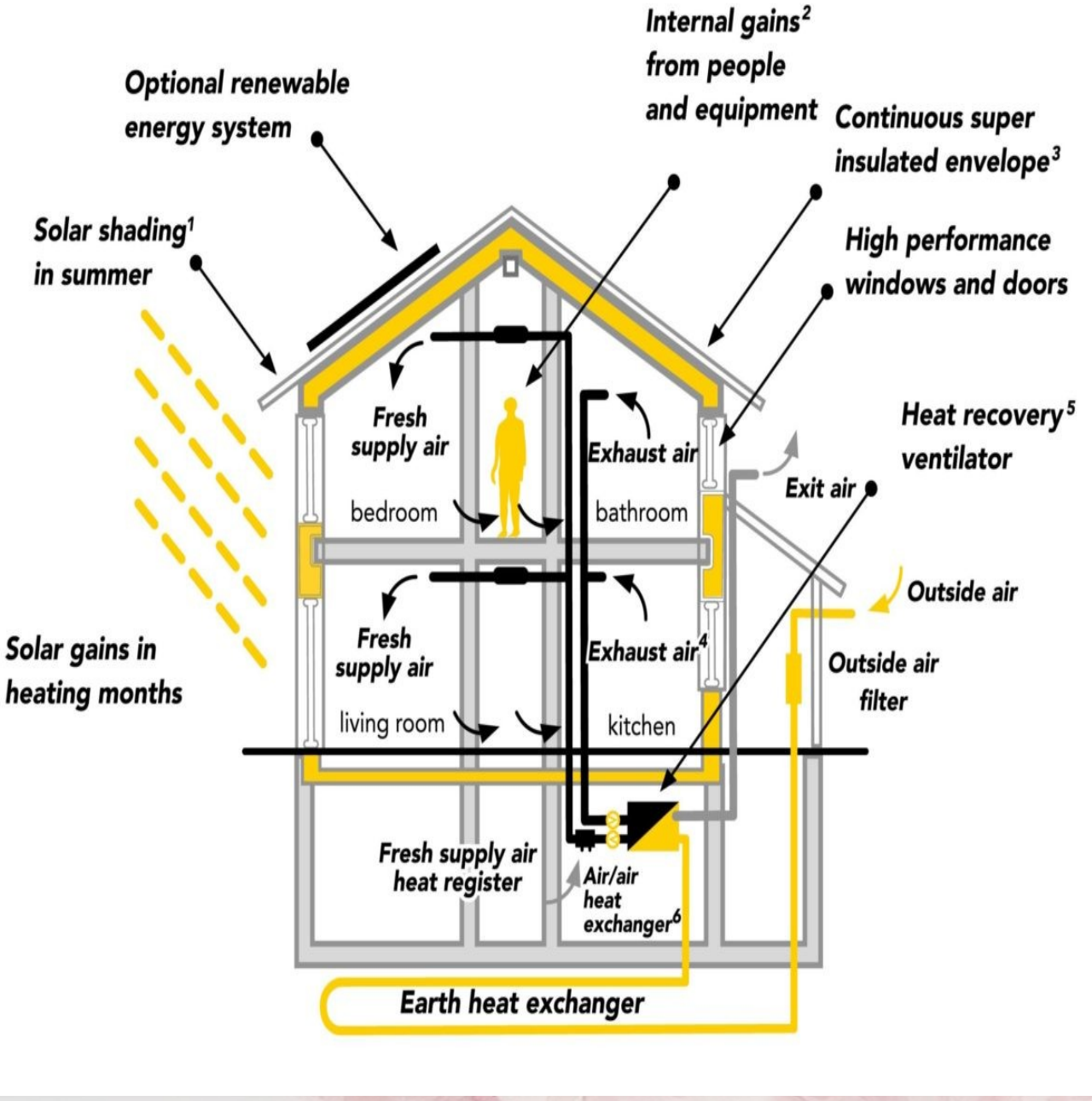
- Require Member States to renovate at least 3% of the total floor area of all public buildings annually
- Set a benchmark of 49% of renewables in buildings by 2030
- Require Member States to increase the use of renewable energy in heating and cooling by +1.1 percentage points each year, until 2030
- Buildings are responsible for 36 percent of greenhouse gas emissions in the EU; 40 percent in the United States; and 42 percent in the United Kingdom.
- New global data shows 79 percent of people would renovate their homes to make them more energy efficient, if adequate financial and administrative support is available; 73 percent support mandatory energy efficiency improvements.

# A green renovation

A green renovation is more friendly on your bank account and the planet. By using more energy-efficient, low-tox, biodegradable and recycled materials in your next renovation project, you'll lessen your impact on the environment.

## Passive design

Passive design refers to the use of the sun's natural rays for the heating and cooling of your home. Naturally, it takes the climate into consideration. According to the Nationwide House Energy Rating Scheme, integrating passive design into home renovations increases the home's efficiency without raising costs.



# Planet-friendly flooring

The floor covering in your home can add or detract from your home’s efficiency. Concrete and brick absorb heat during the day, cooling warm rooms in the summer. During the winter, these same dense materials protect a room from getting too cold from outside temperatures. If you’d prefer a softer flooring option, consider sustainable materials like for example Bamboo. Reclaimed hardwood could be a choice if you prefer a more traditional design. It’s a recycled wood that helps cut down on landfill space while giving your home the wood flooring you desire.

# Green roofs

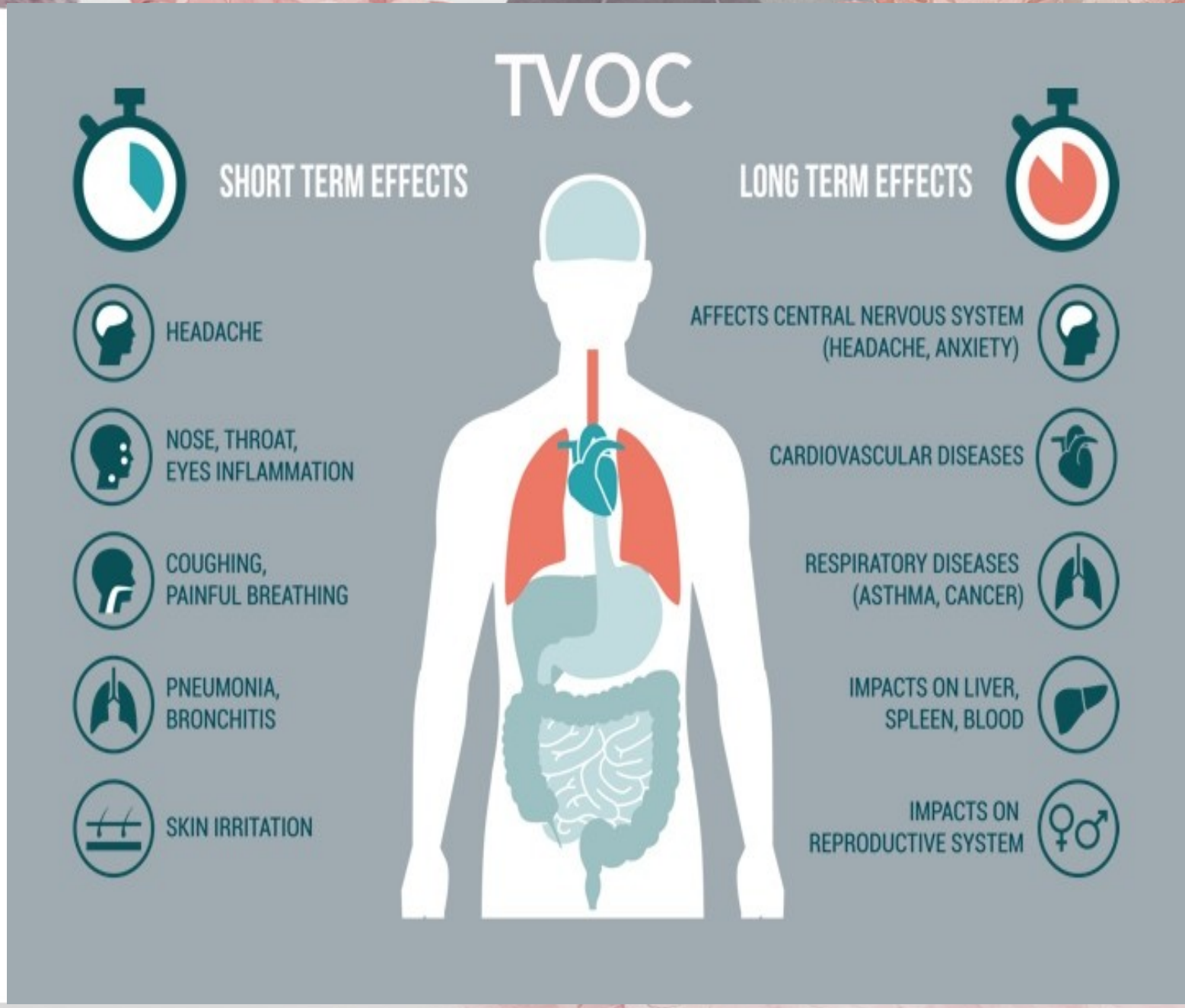
What you put on top of your home is just as important to energy savings as the materials inside. A greener roof option is one that will last the lifetime of your home and can accommodate solar panels. Cool metal roofing has a reflective surface. This keeps heat from going into your home. To make an even greener use of your roof, consider installing solar panels, you could cut your energy costs drastically. Some solar panel users even eliminate their electricity bills entirely by going off-grid or producing more energy than the home consumes. You'll also lower your carbon footprint with solar while saving money over time.

# Sustainable kitchen

Kitchen counters need to be durable, but the popular stone materials may not be as eco-friendly as you think if you consider resource extraction and transportation. For the lowest environmental impact, we can choose some kitchens that are made with recycled materials. Paper countertops are not what you think. Recycled paper gets bound together with a hard resin that’s durable. Additionally, the installation costs for this type of counter are much lower than others, and it costs less than recycled glass. The downside to this material is its relative newness, which makes it difficult to find stockists who supply this sustainable material.

# Go low VOCs to no VOCs

Volatile organic compounds pollute the air in your home. These potentially carcinogenic compounds may be twice as high inside your home as outside. Being around them can cause eye and lung irritation, nausea and headaches. To avoid creating an environmental health hazard in your home, choose low or no VOC paints. You and your home will be healthier. VOCs are not just in paints, though. Flooring, varnishes and other building materials may contain VOCs. Educate yourself on the contents of all products you put into your home. During remodeling, keep your home well-ventilated to encourage VOCs to dissipate.



# Thank YOU

Melissa Civolani 5AA

# Working with nature to protect our planet and Health

by
Rodolfo Ferrari

Nature is an important ally in the fight against climate change, but if we do not value it and if we do not keep it intact humanity will continue to destroy it.

The European Commission proposes therefore to restore Europe's forests, soils, wetlands and peatlands.

A circular and sustainable management of these resources will:

- Improve our living conditions
- Maintain a healthy environment
- Create quality jobs
- Provide renewable energy resources

## The Habitats Directive

Stretching over 18% of the EU's land area and more than 8% of its marine territory, the Habitats Directive was adopted in 1992 to help maintain biodiversity.

It protects over 1000 animals and plant species and over 200 types of habitats. It also established the EU-wide Natura 2000 network of protected areas.

This will increase absorption of $CO_2$ and will make our environment more resilient to climate change

Restoring ecosystems is a remarkable solution:

- It slows climate change.
- It brings back lost biodiversity.
- It creates productive agricultural land.
- It provides jobs.
- It restores nature’s defences against diseases and pandemics.
- It helps vulnerable communities adapt to the changing climate.

# Natura 2000

- Natura 2000 is a network of breeding and resting sites for rare and threatened species, and some rare natural habitat types.
- It stretches across all 27 EU countries, both on land and at sea.
- The aim of the network is to ensure the long-term survival of Europe's most valuable and threatened species and habitats
- Natura 2000 is not a system of strict nature reserves from which all human activities would be excluded.
- It includes strictly protected nature reserves, but most of the land remains privately owned.
- The approach to conservation and sustainable use of the Natura 2000 areas is centered on people working with nature rather than against it.
- Member States must ensure that the sites are managed in a sustainable manner, both ecologically and economically.

# Carbon Footprint

A carbon footprint corresponds to the whole amount of greenhouse gases (GHG) produced to, directly and indirectly, support a person's lifestyle and activities.
Carbon footprints are usually measured in equivalent tons of CO2, during the period of a year, and they can be associated with an individual, an organization, a product or an event, among others.


- Target for natural carbon removals: -310 Mt