ENABLING LOW-CARBON LIFESTYLES

POLICY BRIEF 2

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101003880.

INTRODUCTION

As outlined in **Policy Brief 1**, achieving the 1.5°C target of the Paris Agreement will require the adoption of low-carbon lifestyles at scale. Current provisioning systems for mobility, leisure, nutrition and housing are unsustainable by design and lead to the adoption of carbon-intensive lifestyles. The EU 1.5° Lifestyles project identified **50 key lifestyle options** to mainstream to help achieve the 1.5°C target. These options were identified through literature review and expert interviews and used in **Citizen Thinking Labs** to engage with citizens in five countries (Germany, Hungary, Latvia, Spain, and Sweden). The Citizen Thinking Labs are pioneering in their integration of gamification and participatory methods. They emphasise the necessity of combining individual behavioural shifts with systemic changes, providing a roadmap for policymakers and stakeholders.

This policy brief proposes ambitious measures to enable some of the most impactful lifestyle changes identified in the EU 1.5° Lifestyles project—options that received high acceptability in the Thinking Labs. It incorporates solutions suggested by participants and insights from those already adopting low-carbon lifestyles. The policy measures include a case study that provides evidence on their current application, highlighting the need for scaling up. To ensure successful replication and upscaling, however, it is important that these policies are adapted to local contexts through participatory processes.

FINDINGS AND POLICY RECOMMENDATIONS

1. Mobility: Reduce car use and switch to public transport, cycling and walking

The uptake of more sustainable modes of transport is hindered by current systems dynamics where car-dependency is locked-in. However, the Citizen Thinking Labs provided evidence of citizens' willingness to opt for sustainable mobility options, if systems are designed accordingly. A transformative shift from car-centred mobility to more inclusive and greener urban areas and transport networks requires increased availability of convenient, safe, and affordable public transport. Moreover, the introduction of solutions towards sustainable mobility would help address current social inequalities, prioritising transport modes that are accessible for all (e.g. walking, cycling and public transport) while giving less space to modes accessible only by some (e.g. cars).

Key Recommendations:

- Reconfigure public space to reduce private car use and promote green, active and shared mobility options (e.g. in Belgium)
- Invest in the expansion, improvement and electrification of urban and rural public transport (e.g. in The Netherlands)
- Require car advertising to inform about the environmental impacts of fossil fuel mobility and the multiple benefits of alternative modes (e.g. walking and cycling) (e.g. in France)

2. Housing: Use renewable heating/energy systems and reduce floorspace

The Citizen Thinking Labs highlighted that successfully implementing low-carbon housing on a wide scale requires cohesive policies that: promote smaller living spaces and energy efficiency, prioritize the decarbonization of energy systems, and minimize resource consumption, while also ensuring affordable housing, accessible energy, and a decent standard of living for everyone.

Key Recommendations:

- Provide incentives to retrofitting existing buildings, particularly for low-income households and those affected by energy poverty (e.g. in Denmark)
- Enable and support renewable energy communities, including with incentives for producing renewable energy (e.g. in Italy)
- Encourage small housing by planning for high-quality shared-facilities, communal spaces, public transport hubs, and green public areas (e.g. in Poland and The Netherlands)
- Mandate a percentage of renovation as well as new construction projects to include smaller apartments and shared housing units (e.g. in the EU Renovation Wave)

3. Nutrition: Move towards plant-based nutrition

Shifting to healthier and low-carbon diets requires solutions that address economic, social and cultural barriers. The Citizen Thinking Labs provided insights on the structural changes needed to overcome these barriers.

Key Recommendations:

- Subsidise plant-based food with a low-carbon footprint and remove subsidies for high-carbon foods such as meat (e.g. in Denmark)
- Use public procurement to supply plant-based food options in schools and public canteens (e.g. in Germany)
- Include education on sustainable nutrition and its impacts in primary and secondary schools (e.g. in Sweden)
- Regulate animal-based products advertising and implement mandatory information on environmental impacts of meat and dairy (e.g. in France)

4. Leisure: Reduce flying

On an individual level, the choice of transport options for holidays is extremely impactful when it comes to emissions. Importantly, the Citizen Thinking Labs provided evidence of high levels of citizens' willingness to reduce flying if alternatives are practical, accessible and fairly priced.

Key Recommendations:

Promote train travel over flying with subsidies and price adjustments to make it more accessible and affordable while improving connections across Europe (e.g. in Germany and Spain)

- Internalise external costs into the price of flying through taxation instruments (e.g. through CO_2 taxation, fuel taxation, VAT on European cross-border flights) (e.g. in Austria)
- Invest in local tourism and promote locally based leisure options (e.g. "staycations") (e.g. in Italy)
- Introduce per-capita caps on the number of flights per year (e.g. in the UK)
- Ban short-haul flights and low-cost fares (e.g. in France)

ANNEX 2

METHODOLOGY FOR SELECTING LOW-CARBON LIFESTYLE OPTIONS

This document describes a rigorous process developed under the EU 1.5° Lifestyles project to identify the most impactful low-carbon lifestyle options. The methodology is structured into three main phases:

1. Initial literature review and compilation

The project began with a qualitative review of existing literature (2015 onwards). The review focused on four main domains of consumption: nutrition, mobility, housing, and leisure. Each domain included sustainable lifestyle options reflecting three sustainability strategies: sufficiency (reducing consumption), efficiency (reducing emission intensity), and consistency (adopting systemic sustainable practices). Search strings were developed in English and translated into languages of the five focus countries (Germany, Hungary, Latvia, Spain, Sweden) to enhance regional relevance. From this process, a comprehensive list of more than 500 low-carbon options was created. These ranged from dietary changes to transport and housing adjustments.

2. Prioritization and refinement

The 500 options were qualitatively ranked by their potential impact on carbon reduction: low, medium, or high. Rankings were informed by expert judgement and, where available, evidence from reviewed studies. Options that were redundant, difficult to quantify, or applicable to only niche populations were excluded. For example, "refraining from using megayachts" was deemed too niche. Options were reformulated for clarity and specificity. For instance, broad recommendations like "eat organic and seasonal food" were divided into separate options ("eat organic" and "eat seasonal"). The aim was to create a focused short list of about 50 relevant options suitable for further analysis.

3. Validation and finalization

A consensus workshop among project consortium members refined the short list, re-evaluating each option's potential impact and feasibility. Semi-structured interviews with national and international experts validated the options. The final list of options underwent stylistic refinement for use in communication tools and public engagement, such as a puzzle game designed for the project.

Methodological Focus Areas

The selection methodology prioritized:

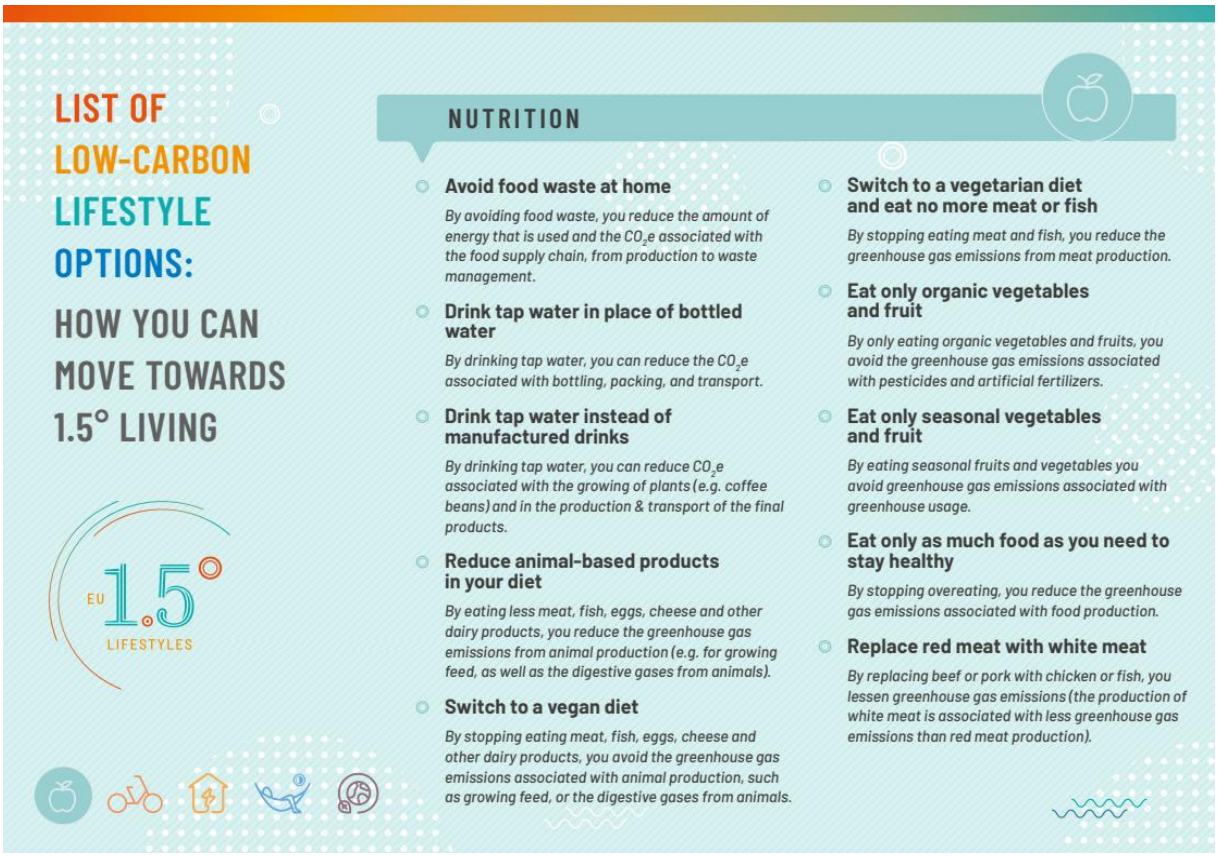
- Options with measurable impacts on household carbon footprints.
- Alignment with scientific standards for consistency and replicability.

- A balance between local relevance and broader applicability.

The methodology acknowledged limitations, such as the reliance on qualitative rankings, gaps in regional literature, and the challenge of addressing diverse demographic profiles.

LIST OF 50 LOW-CARBON LIFESTYLE OPTIONS

The resulting 50 options provide a targeted toolkit for driving household climate action. These options are designed to be actionable, scalable, and aligned with the EU's climate goals under the Horizon 2020 framework.



LIST OF LOW-CARBON LIFESTYLE OPTIONS:

HOW YOU CAN MOVE TOWARDS 1.5° LIVING

EU 1.5° LIFESTYLES

MOBILITY

Switch to using a smaller car

By choosing a smaller car that consumes less fuel, you can reduce your fuel emissions. When buying your next car, choose a car that consumes less for your driving.

Carpool

By offering rides to people who need them, or by taking rides with people that offer them, you can reduce the amount of emissions per person. Sharing a ride is more space- and cost-efficient.

Switch from using a conventional car to an electric car

By switching your combustion engine car for an electric car when you buy your next one, you can reduce your emissions. The lifecycle emissions of an electric car are lower, despite the greater manufacturing footprint.

Give up your car and walk or cycle instead

By giving up your car and replacing 10-50 kilometres per day by walking or cycling, you can significantly reduce your carbon footprint. Walking and cycling are the most climate-friendly mobility modes.*

*In the EU 1.5° Lifestyles project we quantified different distances for different countries, resulting in bigger or smaller CO_2 savings.

Replace your car with the use of public transport

By giving up your car and replacing it with the use of public transport such as trains and buses, you can reduce your emissions effectively.

When moving house, move closer to your workplace

By moving closer to your workplace, you will commute less each week. After the initial big step, your emissions will be reduced.

Favour working at a home office

By favouring remote work, you will commute less every remote-working day. Teleworking reduces the need to travel to the workplace and hence your transport-related emissions.

Replace your car by using a car-sharing service

By giving up your car and taking up a car-sharing service you can reduce your share of emissions, as fewer cars will need to be manufactured.

Replace your SUV with a less CO_2-intensive car

By replacing your current large-sized car with a less carbon-intensive one, your car's fuel consumption will be reduced and hence your emissions.

LIST OF LOW-CARBON LIFESTYLE OPTIONS:

HOW YOU CAN MOVE TOWARDS 1.5° LIVING

EU 1.5° LIFESTYLES

HOUSING

Repair your ICT products and use them for longer

By repairing your broken devices and extending their lifespan, the emissions associated with the production of new ones will be avoided.

Use second-hand ICT devices and pass old ones on

By using second-hand ICT and passing on devices you no longer use, the emissions associated with manufacturing new ones can be avoided.

Buy environmentally certified ICT products

By buying environmentally certified ICT products (e.g. those with the EU Ecolabel), you will reduce the emissions associated with the production and use phase.

Lower the room temperature of your home

By lowering the temperature of your home by 2 °C you can effectively reduce heating energy consumption. Make it a habit to wear more clothes indoors during the colder seasons.

Save hot water

By saving hot water (using less, and lowering the outflow temperature by 2 °C) you can cut down on the energy required for heating water, and hence reduce your emissions.

Install efficient lighting

By installing LED light bulbs you can reduce your electricity consumption and hence emissions.

Switch to using energy efficient household devices

By replacing old and energy-intensive appliances with very energy-efficient ones you reduce the emissions associated with electricity.

Give up one big household device, such as a dryer

By giving up one high-consumption device, such as your dryer when it gets old, you can save energy and materials.

Share a household device with your neighbours

By sharing one high-consumption device, such as a washing machine, you can reduce the use of energy and materials.

Choose shared housing

By using less living space per person you can heat more efficiently and reduce electricity use, avoiding emissions from energy.

Give up excess square meters

By renting out a part of your house, moving to a smaller house, or giving up a second residence, you reduce your personal living space. This reduces the share of energy you use and hence your emissions.

Insulate your house

By insulating walls and roofs and renovating old windows and doors, you can reduce the heating energy you need. Identify where heat is escaping from your detached house and seal the leaks.

Reduce energy use by monitoring your consumption

By monitoring energy use with domestic devices (i.e. with meters, smart home devices, etc.), you can make your home more energy efficient. This can reduce your energy emissions.

Replace your heating system with a heat pump

By updating your heating system from an oil or gas boiler to a ground or air-source heat pump, you can effectively reduce your heating emissions from fossil fuel burning.

Replace your heating system with a biomass boiler

By updating your heating system from an oil or gas boiler to a biomass boiler, and burning wood material, you can effectively reduce your heating emissions from fossil fuel burning.

Switch to renewable electricity

By choosing any renewable grid electricity option instead of fossil energy, you will reduce your emissions. Hydro, wind, biomass, solar and geothermal energy are all carbon neutral.

Install a solar thermal system

By using the sun's energy to heat your water, you can effectively reduce your heating-energy-related emissions. A solar collector collects heat efficiently.

Install your own solar panels

By installing your own solar panels, you will replace grid electricity with carbon-neutral energy you produce at home. This reduces your electricity emissions.

EU 1.5° LIFESTYLES

LIST OF LOW-CARBON LIFESTYLE OPTIONS: HOW YOU CAN MOVE TOWARDS 1.5° LIVING

EU 1.5° LIFESTYLES

LEISURE

- **Get a small(er) pet, if you get a new one**
  By switching from owning a large pet to a smaller dog or a cat, you reduce your carbon footprint as your pet will eat less.
- **Buy pet food with a smaller carbon footprint**
  Pet food based on poultry and occasionally pig is better for the climate than cattle-based feed.
- **Go on vacation by train instead of plane**
  By giving up flying and choosing the train instead, you can significantly reduce your carbon footprint.
- **Reduce the driving associated with your holidays**
  Travelling less by car for or during holidays reduces your carbon footprint.
- **Fly less for leisure and holidays**
  Flying fewer hours per year significantly reduces your carbon footprint. Flying has a big impact on your greenhouse gas emissions.
- **Buy fewer clothes and shoes**
  By buying fewer new clothes and shoes you can save CO_2e. Shoe and textile production consumes lots of energy and water.
- **Drive less for your hobbies and leisure**
  By reducing your car or motorcycle trips by 10-200 kilometres a week you will reduce emissions. Instead of traveling further for hobbies, shopping, and weekend trips, you can explore local possibilities.*

* In the EU 1.5° Lifestyles project we quantified different distances for different countries, resulting in bigger or smaller CO_2 savings.

LIST OF LOW-CARBON LIFESTYLE OPTIONS: HOW YOU CAN MOVE TOWARDS 1.5° LIVING

EU 1.5° LIFESTYLES

OTHER

- **Make only ecological and ethical personal investments into green financial options**
  By investing in green (climate-friendly, ecological-ethical) finance you will help reduce emissions, as these investments will not contribute to activities that damage the climate and environment.
- **Reduce your working hours and your spending on goods**
  By working less and reducing your income, you will have less excess money to spend on high-carbon goods such as electronics or textiles, thereby reducing your carbon footprint.
- **Spend more money on non-consumptive activities instead of buying goods**
  By spending less money on goods (like textiles and electronics) and maximising non-materialist satisfaction (like participating in education and having experiences, such as going on a hike), you reduce your carbon footprint.
- **Donate money to environmental causes or organisations**
  By donating a part of your income to environmental causes or organisations, you will spend less on high-carbon goods. This will reduce your carbon footprint.

Disclaimer: This document assembles the option list we are currently analysing and working with. Please note that the list of options may still be subject to changes during the course of the project. The current option list includes options with different levels of impact for CO_2e reductions in households. The degree of impact will be communicated in the coming months. Stay tuned!

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EU 1.5° LIFESTYLES

INNOVATIVE METHODS FOR CITIZEN ENGAGEMENT IN THE EU 1.5° LIFESTYLES CITIZEN THINKING LABS

The Citizen Thinking Labs (CTLs), a key component of the EU 1.5° Lifestyles project, embody a novel approach to understanding and advancing sustainable lifestyles across Europe. These labs serve as interactive workshops where citizens from Germany, Hungary, Latvia, Spain, and Sweden evaluate and discuss low-carbon lifestyle options. The primary objective is to identify not only the acceptance and feasibility of these options but also the barriers and enablers influencing their mainstream adoption.

Gamified engagement: The labs utilize the Climate Puzzle, a gamified tool that visualizes the emissions impact of various lifestyle choices. Tailored for each country, this game facilitates an engaging way for participants to explore their personal carbon footprints and potential reductions. It makes complex sustainability concepts accessible and actionable, emphasizing behavioural change in fields like nutrition, housing, mobility, and leisure.

Structured feedback mechanism: Participants are asked not only to reflect on which changes they find acceptable but also to discuss conditions under which rejected options might become viable. This dual-layered approach captures insights into motivations, attitudes, and structural barriers, enriching the research with nuanced, actionable data.

Diverse representation and contextualization: Citizens were recruited through diverse channels to ensure representation of various demographics. The implementation of the labs in multiple countries helps adapt the low-carbon lifestyle options to local realities, enhancing their relevance and applicability.

IMPORTANCE OF CITIZEN ENGAGEMENT

Citizen participation is central to identifying practical pathways for transitioning to low-carbon lifestyles. The labs underscore the following:

Understanding acceptance: Insights into what lifestyle changes citizens are willing to adopt provide essential guidance for policy design. For example, participants explored practical steps such as transitioning to public transport, adopting plant-based diets, or reducing household energy use.

Unveiling barriers: Discussions highlight systemic obstacles, such as insufficient infrastructure or social norms, that hinder the adoption of sustainable practices. Addressing these barriers is key to driving widespread change.

Co-creation of solutions: By involving citizens directly, the labs foster a sense of ownership and encourage the co-creation of viable solutions, bridging the gap between top-down policies and individual actions.

FURTHER READINGS

EU 1.5°C Lifestyles Consortium (2022) "Methodology for the Selection of Low-Carbon Lifestyle Options." Zenodo. doi:10.5281/zenodo.10513512.

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ABOUT US:

The EU 1.5 LIFESTYLES consortium includes ten research partners (universities, research institutes, enterprises and NGOs) from **Germany, Finland, Hungary, Latvia, Netherlands, Spain and Sweden.**

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