Publication Series
Policy Pathways towards 1.5-Degree Lifestyles

Reshaping Mobility Policy for Equitable 1.5 Degree Lifestyles

Mobility in a Carbon-Neutral Europe

zoe institute for future-fit economies

1.5 degree lifestyles

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Policy Pathways towards 1.5-Degree Lifestyles

This policy brief is part of a publication series that explores *Policy Pathways towards 1.5-Degree Lifestyles* – lifestyles which are compatible with staying within 1.5°C global warming. This series presents insights from academic research and discussion in Policy Labs with members of the European Commission and civil society organisations. In this series, five publications outline the potential and options for reducing consumption-related greenhouse gas emissions:

- *Reducing Emissions through Equitable 1.5 Degree Lifestyles: An Essential Plank in Bridging the Emissions Gap*
- *Equitable 1.5 Degree Lifestyles: How socially fair policies can support the implemen-tation of the Green Deal*
- *Housing in a Climate-Neutral Europe: Reshaping Housing Policy for Equitable 1.5-Degree Lifestyles*
- *Mobility in a Climate-Neutral Europe: Reshaping Mobility Policy for Equitable 1.5-Degree Lifestyles*
- *Demand-side solutions to address energy shortages. How the EU and Member States can boost energy savings through effective, socially balanced policy measures*

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Executive Summary

The European Union aims to achieve climate neutrality by 2050. To reach this target, GHG emissions need to be cut quickly and robustly in every sector of the economy. The transport sector is a key contributor as it covers approximately 30 % of the EU's emissions. The EU set itself an overarching target to cut transport emissions by at least 90 % by 2050. In the EU's current transport strategy, regrouped in the Sustainable and Smart Mobility Strategy, the Fit for 55 package and the REPowerEU plan, the dominant climate mitigation method is increasing energy efficiency and transitioning to electric mobility. This is exemplified by the EU's aim to end the sale of vehicles with combustion engines and only sell 100 % carbon-neutral vehicles by 2035.

This policy paper shines a light on the current gap in the EU's transport strategy: Coupling supply-side energy efficiency measures, such as those present in the policies mentioned above, with a suite of demand-side policies that prioritise equity and limit material and energy demand is largely missing. Energy-efficiency measures are fundamental, yet not sufficient to reach climate targets if not coupled with socio-cultural mobility and transport policies aimed at decreasing energy and material demands in an equitable way. This is because current gains in emissions reduction with energy-efficiency measures are being offset by emissions increase via growing energy and material demand.

Systemically rethinking EU citizens' lifestyles by designing a transport system that improves wellbeing with less materials and energy is key to unlock untapped potential to meet the aspirational 1.5° C target and climate neutrality by 2050. Finally, this paper puts forward four socio-cultural mobility policies aimed at both improving equity and citizen wellbeing whilst reducing GHG emissions. These are street redesign and public space management, increase investment in public transport, substitution of short-haul flights with train connections, and incentivising shared mobility. Policies such as banning the sale of vehicles with internal combustion engines remain fundamental and their emission reduction potential will significantly increase with policies aimed at systems redesign.

Introduction

The free movement of people through multiple forms of travelling and moving within the EU enables citizens and residents to live self-determined, flexible and independent lives, and is one of the cornerstones of the European Single Market. However, growing transport volumes and most notably, unsustainable mobility patterns in the EU cause significant environmental harm. The transport sector produces nearly 30 % of the EU's emissions.[1] Moreover, EU's transport-related greenhouse gas (GHG) emissions have increased by 26 % since 1990 and continue to rise to date.[2] This is because private car ownership has increased as well as the overall demand for mobility.

Thus, decarbonising the transport sector remains a major a challenge for the EU on the pathway to limit global warming to 1.5°C, as set by the Paris Agreement. The EU recognises the strategic importance of tackling emissions in the transport sector and aims to cut transport emissions by at least 90 % by 2050. The EU has determined targets and policies, regrouped in its Sustainable and Smart Mobility Strategy (SSMS) and its Fit for 55 package. The EU's mobility strategy is primarily focused on increasing energy efficiency to decarbonise the sector. These measures are fundamental yet not sufficient as stand-alone policies. Indeed, gains in emission reduction are currently being offset by emissions increase via growing energy and material demand.[3]

What is missing in the current EU's mobility strategy is a demand-side perspective on lifestyles that avoid, shift, and reduce unsustainable mobility practices. This is required because the average carbon footprint for mobility needs to drop by 72 % until 2030 in developed economies[4] to achieve the internationally agreed climate goals. Taking a lifestyles perspective and systemically rethinking EU residents lifestyles, how one moves and travels, is key to unlock untapped potential to reduce GHG emissions and limit energy and material demand from the mobility sector. However, individual lifestyles and people's ways of traveling and commuting depend on institutional settings, cultural frameworks, infrastructures and political-institutional frameworks.[5] It is public policy that frames the social and cultural context which shapes the way people live, travel and commute. Therefore, demand-side policy changes are an essential ingredient to reducing mobility emissions across the EU.

Equity considerations are also an essential component of transitioning towards sustainable ways of moving and travelling. Current emissions reductions achieved in Europe have disproportionately come from reducing the emissions of low-income groups.[4] At the same time, the GHG emissions generated by the top 10 % have risen by 3 %, and the top 1 % by 5 %.[6] High-consuming individuals thus have an important opportunity to mitigate climate change on the demand side. Public policy has a pivotal role to play in making policies explicitly fair, strengthening the capacities of vulnerable groups while reducing carbon-intensive luxury forms of mobility.

Against this background, this policy paper emphasises the importance of demand-side solutions aimed at designing equitable and transformative transport and mobility policies that limit material and energy demand. In doing so, this brief puts forward key recommendations for the mobility and transport sector according to their contributions towards advancing equity and reducing GHG emissions, whilst having co-benefits for people's wellbeing. These include incentivising shared mobility, street redesign and public space management as well as substituting short-haul flights for train connections.

This brief is structured as follows: The next chapter sets out key EU policy targets for the mobility system. This is followed by an analysis of the EU's commitments and targets for the mobility system from a 1.5-degree lifestyle perspective, including equity considerations. The policy brief concludes with key policy recommendations for an EU mobility system that prioritises equity and has the potential to sustainably reduce GHG emissions.

EU commitments for a sustainable future in the mobility system

The EU has determined targets and policies for more sustainable transport patterns in Europe in line with the goal of limiting global warming to 1.5° C, as set by the Paris Agreement. These policies and targets regrouped in the EU's Sustainable and Smart Mobility Strategy (SSMS) and its Fit for 55 package, as outlined below.

The Sustainable and Smart Mobility Strategy (SSMS)

2020: The EU aims to cut emissions by 90 % in the transport sector by 2050. The Sustainable and Smart Mobility Strategy (SSMS)[7] is the EU's action plan to achieve this goal. The SSMS's focus is on ensuring a green and digital transformation of the transport sector, whereby every mode of transport is decarbonised (European Commission, 2020). In particular, the SMSS outlines three key pillars of action, and sets subsequent milestones (see Box 1).

The Fit for 55 package

2021: In addition to the SSMS's approach, the Fit for 55[8] package further put forth a set of complementary proposals in the transport sector. Most importantly, the Commission proposed a set of revisions to the current EU Trading Scheme (ETS)[I]. These revisions aim to include emissions from maritime transport, and to phase out free allocation of emission allowances to the aviation sector. In addition, the Fit for 55 set a new target of 100 % carbon-neutral vehicles by 2035. Indeed, the EU will entirely end the sale of vehicles with combustion engines by 2035. To ensure the feasibility of such measures, the Commission presented proposals to accelerate the deployment of infrastructure for recharging or refuelling vehicles. Moreover, targets for renewable energy sources in the overall energy mix increased from at least 32 % to at least 40 % by 2030. Simultaneously, the Commission established a Social Climate Fund with the ETS revenue to address the social and distributional impacts of the new emission trading system.[8]

The REPowerEU plan

2022: In response to the war in Ukraine, the EU stated that it rapidly needed to move away from its reliance on Russian fossil fuels. This accelerated the need to decarbonise the EU's transport sector. In this light, the REPowerEU plan, presented in May 2022, set out the goal of at least 40 % of renewable energy sources by 2030 increased to 45 %. Additionally, new policies were announced in the aim of incentivising more economic driving, and prioritising public transport where possible. Furthermore, the EU Commission will coordinate Member State's energy demand reduction measures, including those addressing changes in the transport and mobility sector to lower energy consumption.

I The EU Emissions Trading System (ETS) is a carbon market, based on a system of cap-and-trade of emission allowances for energy-intensive industries and the power generation sector. On 29th June 2022, the European Council reached a general agreement on the expansion of the ETS to other carbon-intensive sectors of the economy (maritime sector, road transport, buildings) by 2025 as part of the legislative proposals of the Fit for 55 package.

Box 1: The pillars and milestones of the SSMS

The three pillars of the SSMS:[7]

Pillar 1: Make all transport modes more sustainable:

- Flagship 1: Boosting the uptake of zero-emission vehicles, renewable & low-carbon fuels and related infrastructure
- Flagship 2: Creating zero-emission airports and ports

Pillar 2: Make sustainable alternatives widely available in a multimodal transport system:

- Flagship 3: Making interurban and urban mobility more sustainable and healthy
- Flagship 4: Greening freight transport

Pillar 3: Put in place the right incentives to drive the transition:

- Flagship 5: Pricing carbon and providing better incentives for users

The key milestones of the SMSS for the mobility sector:

By 2025:

- at least 30 million zero-emission cars will be in operation on European roads
- 100 European cities will be climate neutral
- high-speed rail traffic will double across Europe
- scheduled collective travel for journeys under 500 km should be carbon neutral
- automated mobility will be deployed at large scale

By 2035:

- zero-emission large aircraft will be market-ready

By 2035:

- nearly all cars, vans, buses as well as new heavy-duty vehicles will be zero-emission
- rail freight traffic will double
- a fully operational, multimodal Trans-European Transport Network (TEN-T) for sustainable and smart transport with high-speed connectivity

Efficiency improvement measures will only go so far to reaching climate change ambitions

The EU's mobility strategy on road travel primarily focuses on supply-side, energy efficient policies to reduce GHG emissions. This is because current road vehicles contribute to around one-fifth of the EU's total emissions of CO_2.[9] As such, the wide-spread deployment of zero-emissions battery electric vehicles (BEVs) as a replacement of current high-emission internal combustion engine vehicles (ICEVs) is thought to adequately reduce the transport sector's carbon footprint.[9] However, as a stand-alone solution, supply-side policies ensuring energy efficient vehicles will not be sufficient to meet the EU's short- and medium-term climate targets.[10]

First, BEVs may be more energy efficient than vehicles with internal combustion engines, however they are not 100 % GHG emission-free. This is because more than half of emissions from road traffic come from tyres, brakes, and the road surface rather than combustion engines.[11] In addition, there are emissions associated with both their production, and with the electricity needed for charging.[12] The Joint Research Centre estimated that BEVs account for 50–60 % lower carbon dioxide emissions than internal combustion engines vehicles.[13] Due to variations in electricity mix, emissions vary between EU countries, from 7–9 CO_2/km in Sweden to 169–265 CO_2/km in Latvia.[12] In this light, energy efficiency gains due to technological improvements are currently insufficient to achieve 90 % emission reduction in the transport sector by 2050.

Second, energy efficiency gains with BEVs are being offset by an increase in private ownership of internal combustion engines vehicles, and an increase in demand for mobility.[2] In particular, private car ownership rose by 9,7 % between 2015 and 2020[14], which has more than offset the efficiency gains of the average car's GHG emissions.[1] Furthermore, the overall demand for transport has followed a similar path.[2] For example, the current business-as-usual scenario expects an 42 % increase in passenger transport[II] by 2050. This drastic increase makes the upward pressure on emissions unlikely to disappear.[2] Notably, air travel rose by 39 % between 2009 and 2017 and, without efforts of downscaling, is expected to double by 2050. [15,1]

Even though wide scale technological solutions for transport are necessary, a substantial part of the discussion on climate mitigation is currently being overlooked: It is crucial that supply-side measures and negative emissions technologies are coupled with demand-side policies that limit energy and material demand.[16,17,18] There are enormous untapped opportunities for far lower emissions if policy efforts are focused on designing systems that improve people's wellbeing with less energy and materials.[19] Research shows that in realistic pathways to a climate-neutral Europe by 2050, demand-side policies targeting lifestyle changes play a key role.[4,20] If designed well, these measures not only help to reduce GHG emissions but are also compatible with higher life satisfaction, stable and more equitable societies, and prospering economies.[21] The next chapter demonstrates the potential of adapting a lifestyles perspective and strengthening demand-side measures for achieving climate-neutrality in Europe by 2050.

[II] Passenger transport refers to passengers using rail transport (railways, trams and metros), road transport (passenger cars, motorised two-wheelers, buses or coaches), air transport or maritime transport.

Coupling supply and demand side approaches to achieve net-zero

Mobility accounts for around 17 % of lifestyle related GHG emissions, that is, GHG emissions in the mobility sector tied to household consumption.[17] Ivanova et al.[22] estimate that, to achieve the 1.5° C target, the global average carbon footprint for transport needs to drop from the 2011 range of 0.2–4.66 t CO_2eq/cap down to an overall global average of 0.7 t CO_2eq/cap. In developed countries, this represents a 72 % reduction from the current average carbon footprint in mobility until 2030.[4] Thus, achieving the internationally agreed climate commitments of the EU will hinge upon successfully tackling lifestyle related GHG emissions and enabling sustainable ways of living.

In line with definitions by the United Nations Environment Programme (UNEP), sustainable lifestyles are characterised by habits and patterns of behaviour that "minimise the use of natural resources and generation of wastes, while supporting fairness and prosperity for all".[18] However, for sustainable lifestyles to properly develop, societal institutions, norms and infrastructures must be restructured to make sustainable behaviour easier and render sustainable choices the "default" option.[5] The EU plays a key role in shaping these lifestyles. The overall goal is to enable people to pursue sustainable ways of living, with a view to limiting global warming to a maximum of 1.5° C compared to 1990 levels.

A major advantage of the demand-side approach is that lifestyle changes do not depend on the effectiveness of future technologies and thus, there is no risk of unpredicted ecological side effects.[20,23] In addition, significant well-being co-benefits exist from demand-side policies. These include health improvements, higher overall subjective wellbeing, pollution reductions, and the bolstering of local communities.[24] For example, transforming streets to create people-friendly places and encouraging active mobility can spark collaboration between residents, local businesses and organisations and local policymakers.[25] Moreover, calculations suggest that 84 % of the costs incurred to reduce emissions to a level compatible with 1.5-Degree Lifestyles in the EU could be offset by savings in health care costs.[26]

Equity considerations in mobility emissions

Not everyone has the same starting conditions, and some can contribute more to reducing lifestyle related GHG emissions than others. In fact, income is the primary determinant of GHGs emissions. On average, a person in the top 10 % consumes five times more energy compared to someone belonging to the bottom 10 %[27] (see Figure 1). High-consumption individuals have an important opportunity to mitigate climate change on the demand side. For this reason, equity considerations play a crucial role in the transition to sustainable lifestyles.

Currently, emissions reductions achieved in Europe have disproportionately come from reducing emissions of low-income groups[6] (see Figure 2). Since 1990, the GHG emissions generated by the bottom 50 % have fallen by 24 % while the GHG emissions generated by the top 10 % have risen by 3 %, and the top 1 % by 5 %.[6] The emissions mitigation potential of air travel provides an example of transport modes with significant imbalances: while around 41 % of the carbon footprint of the highest-emitting 1 % of EU households comes from air travel, it accounts for less than 1 % of the emissions of the poorest 50 % of households.[18] At a global level, this disparity is even more striking as frequent flyers representing 1 % of the world's population contribute towards half of all aviation-related emissions.[29]

Just and equitable climate policies are however crucial if the EU is to achieve its climate targets for two reasons. First, targeting the luxury emissions of high emitters will not have negative repercussions on meeting essential human needs. As the IPCC states, climate action needs to be focused on reducing consumption and mobility of top 10 % polluters by exploring the good life consistent with sustainable consumption.[3] Second, it will ensure strong political action needed to achieve EU climate targets. This is because one-size fits all homogenous climate policies create political backlash from poor households which are low GHGs emitters ("gilets jaunes" backlash in France for example), which disincentivizes strong and fast climate action.[30] Designing and implementing climate policies which target luxury consumptions of high-income groups provides a wide window of opportunity for GHGs reduction in the EU.

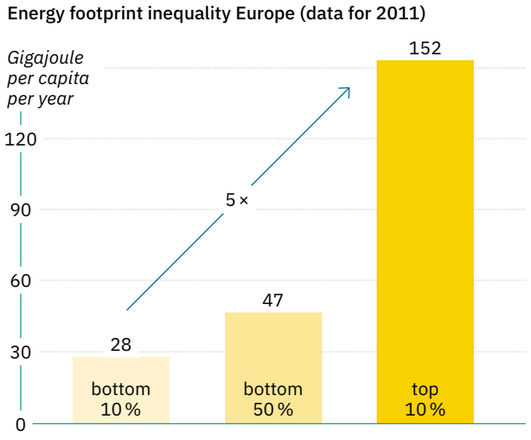

Figure 1: *Per capita energy consumption of the top and bottom 10 % of income in the EU (Source: Oswald[28] for this paper)*

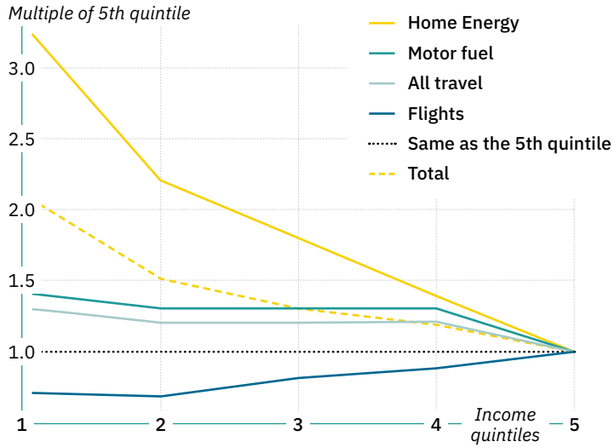

Figure 2: *Distribution of carbon tax burdens in the EU (Source: Büchs[31])*

Avoiding disproportionate effects of carbon taxes for low-income groups

Demand-side policies which neglect to address equity while further aggravating the situation for lower-income households are likely to provoke backlash, as in the case of the Yellow Vest movement in France. As such, carbon taxation policies pose a risk to undermining social support by disproportionately burdening low-income groups.[32]

Likewise, including transport emissions in the EU ETS can eschew in an unequal distribution of financial burdens. This is because low-income households are often located in areas with poor public transport connections and are thus forced to rely more on the use of private cars. A similar argument holds true for people with walking disabilities.

To mitigate negative consequences for low-income groups, the European Commission's Social Climate Fund (SCF)[33] aims to address social and distributional impacts. This is important yet additional aspects need to be considered. First, there are concerns as to whether the fund can adequately compensate for all the side-effects of the ETS extension because only a portion of the EU ETS revenue is destined for the SCF. Second, concerns are raised about the fund's ex-post character. There is a considerable amount of time between the time consumers can receive compensation and the time the burden happened.[34]

The design of the policy mixes are thus essential support low-income households, which, in turn, are likely to lead to higher public acceptance of demand-side measures.[35]

Policy recommendations

There are several policy recommendations that contribute to reducing GHG emissions as well as material and energy demand in the transport sector, whilst prioritising equity and not compromising people's wellbeing. ZOE's Sustainable Prosperity Database[III] gives an overview of transformative policy tools that can lead the way towards 1.5-degree lifestyles, including recommendations for transport and mobility systems. Important work has also been done by Best et al[36] in systematically collecting and structuring policy instruments in the Sufficiency Policy Database.

This policy brief presents four socio-cultural demand-side measures that have a particularly high potential to contribute to a fair and sustainable transformation of the current EU mobility systems, whilst benefitting people's wellbeing. These are street redesign and public space management, increasing investment in public transport, substituting of short-haul flights with train connections, and incentivising shared mobility. It is important to note, however, that this list is non-exhaustive, and a policy-mix approach is essential to solving these challenges systemically.

Street redesign and public space management

Street redesign and public space management focus on accommodating multiple transport modes and uses beyond transport.[19] Currently, public space is primarily allocated to roads for cars.[19] A fairer allocation of public space will create proximity and increase the attractiveness of active and shared modes of transport.[19] A successful example is the redesign of one of the most frequented streets in Vienna, Mariahilferstraße. The design was built to provide equal space to pedestrians, cyclists, and recreational users.[37]

Expected lifestyles impact:

GHG emissions reductions potential	Social impact	Lifestyles co-benefits
Re-designing public spaces will indirectly reduce GHG emissions because it will give more space to pedestrians and cycling lanes (environmentally friendly options). It will provide space for less carbon-intensive transport structures.	Policies aimed at re-designing current car-dominant public spaces will give more space to pedestrian and cycling lanes. Given that the users of these lanes are predominantly vulnerable groups (elderly, disabled, children, or those unable to afford individual car mobility), these policies will provide a more equitable transport structure.	The transformation of current urban ecosystems will bring health, safety, social and environmental benefits (better air quality for example) in the short-term. Incentivising active mobility is likely to bring about wellbeing improvements.[16] Green public spaces can have co-benefits for biodiversity and can provide shade and lower temperatures in urban spaces.

III ZOE Institute's sustainable prosperity Policy Ideas Database: www.sustainable-prosperity.eu/policy-database

Increasing investments to expand public transportation infrastructure

Currently, citizens residing in rural areas have difficulty accessing efficient public transport. This provides a strong incentive for rural citizens to use private transport. However, this problem is not only in rural areas. Many cities also need investment in peri-urban mobility infrastructure to ensure equal access to public transport as well as the regularity and reliability needed to make it usable for every resident on a daily basis. Developing an interconnected and efficient public transport system across the EU would not only close the rural-urban divide but also contribute to climate mitigation.

Expected lifestyles impact:

GHG emissions reductions potential	Social impact	Lifestyles co-benefits
Increasing investment into public transportation infrastructure can incentivise public transport usage over private cars. This will directly impact emission reduction as cars will be used less.	Increasing the availability and affordability of public transport will most notably benefit low-income households, as they tend to be more dependent on public transport.	An increase in the use of public transport over private transport will bring health, safety, social and environmental benefits (better air quality for example) in the short-term.

Substitution of short-haul flights for train connections

Short-haul flights are the most damaging emitters per passenger and per kilometre.[38] As such, introducing regulations that ban short-haul flights that could be substituted with train transportation unlocks considerable emission reductions. We define these flights as distances that can be travelled by train in under 4 hours. These types of policies already exist in some EU member states. For example, France implemented a law banning domestic flights where a rail alternative of under 2 and ½ hours exists.[35]

However, policies aimed at subsidising short distance flights with train connections can have a negative impact on equity considerations if not coupled with a restructuring of state subsidies. Short-haul flights are currently substantially cheaper than the equivalent journey by train. This is because governments have been subsidising airline industries and investing heavily in airline infrastructure.[39] As a result, domestic flights are often substantially cheaper than the equivalent journey by train. As such, for these types of policies to have positive equity considerations, train journeys need to be subsidised and made cheaper.

Expected lifestyles impact:

GHG emissions reductions potential	Social impact	Lifestyles co-benefits
Air travel contributes intensively to GHG emissions. Decreasing air travel will therefore contribute positively to reducing GHG emissions. For example, the positive climate impacts of flight avoidance will accumulate quickly. Depending on the length, one less flight could entail annual savings of between 0.2 to 4.5 t CO_2eq/cap.[40]	This measure has a positive social impact and a progressive effect as lower-income groups fly the least, thus high-emitters are hardest hit by the implementation of this regulation.[35] While around 41 % of the carbon footprint of the highest-emitting 1 % of EU households comes from air travel, it accounts for less than 1 % of the emissions of the poorest 50 % of households.[18]	Opting for virtual meetings instead of business fights significantly improves air quality.[16] If train journeys are chosen instead of flights, the accessibility of railway stations compared to airports is an advantage, as this choice saves travellers the often long and expensive journey to airports outside of cities.

Incentivising shared mobility

Shared mobility refers to modes and services that are additional to conventional route-based public transport services. They include on-demand transport, shared taxis, car-pooling, car-sharing, community/volunteer schemes etc. Apps for geolocation and booking trips or vehicles facilitate the use of shared transport modes.[19]

The availability of on-demand shared transport can also promote active mobility through (e-)bikes, cargo bikes and e-scooters. Mainstreaming shared mobility services encourages a decrease in private car ownership, which unlocks considerable emission reductions. Shared on-demand transport can also shift trips from private vehicles with low occupancy rates to shared vehicles with high occupancy rates. In this way, shared mobility can not only significantly reduce greenhouse gas emissions, but also free up the road space used for parking and private transport.[19]

However, as demonstrated by EIT and McKinsey[41], the offer of shared mobility services needs to be enlarged so that it responds to various trip purposes and population size. Cargo bikes, for instance, remain quite limited in most places.[19] To ensure equal access to shared mobility services, targeted public subsidy schemes based on careful analysis of the socio-economic conditions of beneficiaries should be preferred over generalised subsidies and flat rates.[19]

Expected lifestyles impact:

GHG emissions reductions potential	Social impact	Lifestyles co-benefits
Incentivising shared mobility has direct effects on GHG emission reductions through fewer car journeys. Ridesharing can directly reduce petrol consumption, if the passenger(s) would have completed the same trip individually.	Enabling and promoting car and ride sharing has an inclusive effect and improves access to mobility for those who cannot drive themselves or do not own a car. Especially in rural areas where public transport is poorly developed, this measure can have a particularly positive effect on the accessibility of low-carbon mobility services.	Incentivising shared mobility and expanding on-demand shared transport services can incentivise a modal shift away from private cars. This has a high positive impact on air quality and improves health and safety.[16] Moreover, bike sharing schemes can lower expenditures for households and increase accessibility to public transport as well as physical activity.[42]

Conclusion

In support of the overall goal of climate neutrality, the EU aims to reduce GHG emissions from the transport and mobility sector by 90 % by 2050 compared to 1990 levels.[43] In this paper, we have shown that lifestyles related emissions for mobility have a significant role in achieving this goal. Thus, complementing the EU's current mobility strategy with demand-side policies that support an equitable transition towards sustainable ways of travelling and moving will not only reduce GHG emissions but can also decrease energy and material demand in an equitable way.

In many places, change is already underway: The 2020 Covid-19 pandemic has proven to be an opportunity to accelerate the transition towards more sustainable forms of commuting in cities. In a very short time, many cities in the EU have redesigned their streets to adapt to the spatial implications of social distancing. For example, within only three weeks, the City of Berlin rolled out 12 km of new protected bike lanes.[1] Likewise, the National Recovery and Resilience Plans that Member States had to submit to receive funding from the EU's Recovery and Resilience Facility, incentivised EU governments to push for reforms and investment in sustainable mobility infrastructures. The Austrian Mobility Master Plan, for example, provides for extensive investments in the construction of new railway lines and introduced a climate ticket for public transport in the country.[44]

To achieve the EU's goal of drastically reducing transport related GHG emissions, policy efforts towards sustainable transport systems need to be consistent and profound. Given current efforts to accelerate independence from Russian fossil fuels, a focus on enabling long-term sustainable lifestyles is essential for transitioning towards sustainable transport systems that use less energy overall. As such, it will be important that initiatives and measures, both part of the REPowerEU plan and beyond i. e., at national and EU level, adopt ambitious and transformative actions to enable sustainable and equitable ways of travelling and commuting.

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