Mobility Budget Policy Guidance





Individual Mobility Budgets





Why Mobility Budgets

Road travel accounts for about three-quarters of global transport emissions, mainly from passenger vehicles such as cars. Emissions per person-kilometre need to be reduced dramatically for us to have any chance of stopping global warming.

European countries need to reduce transport emissions by up to 95% by 2050. The data has been clear for years, but regulatory measures and technological solutions have been unable to reverse the trend.



The concept of Mobility Budgets breaks down larger emission reduction targets into smaller efforts.

To reach the goal of reducing emissions by 95% in 16 years, each year has to see a reduction by 17% compared to the previous year. This means measures will have to be taken to ensure that households produce on average 17% fewer emissions through their mobility every year.

In this way, a massive challenge becomes a goal reduced to a personal level. How savings are achieved and what framework conditions are necessary to make this possible can be determined by those affected.

How does it work

- 1. The nationally available CO2 emissions are calculated based on national emission targets, which are derived from Nationally Determined Contributions (NDCs) following the Paris Agreement. This process leads to a gradual reduction of mobility budgets as nations progress towards climate neutrality.
- 2. Every year, this annual emission budget in the passenger transport sector is broken down to the level of the population to achieve an average personal emission budget.
- Until measures which allow low-emission accessibility are in place, the individual budget shall not jeopardise a person's needs. Therefore, individual budgets are adapted to social and geographical needs.
- 4. People can freely choose how to allocate their budgets, which can be provided as information-only or attached to rewards for goals reached.
- 5. In regions where low-emission mobility is not feasible, measures are demanded to improve accessibility of locations providing everyday functions such as schools, workplaces, retail options, and recreational areas.



In a nutshell

- Emissions per per person-kilometre need to be reduced dramatically for us to have any chance of stopping global warming.
- The concept of Mobility Budgets breaks down larger emission reduction targets into smaller efforts, making them easier to grasp and achieve.
- Mobility Budgets represent a (theoretical) right to mobility that can be freely utilised.
- Where a reduction is not possible, the conditions for it must be created.



How can Mobility Budgets be applied

For information and education

- ... in apps for self-monitoring
- ... as illustration for explaining emission goals and reduction opportunities



For improving fairness

- ... in analytical and monitoring tools for assessing minimum mobility needs
- ... as discussion base for public debates about a fair future of mobility



For targeting measures

- ... in planning tools for soft infrastructure to improve local accessibility
- ... in transport management tools for optimising fair transport access



For creating new businesses

- ... in guidelines for re-installing access to local everyday functions
- ... as analytical tool for strategic local reduction consultation



MyFairShare | Fact Sheet | Individual Mobility Budgets





Imprint

This publication serves the dissemination of results of the project "MyFairShare – Individual Mobility Budgets as a Foundation for Social and Ethical Carbon Reduction". The authorship lies with the MyFairShare project consortium, represented by project lead AIT Austrian Institute of Technology The MyFairShare project consortium partners: AIT Austrian Institute of Technology GmbH; Deutsches Zentrum für Luft- und Raumfahrt e.V.; Florian Lorenz, PR-consultant; Latvia University of Life Sciences and Technologies; London School of Economics and Political Science; Transportøkonomisk institutt; University of Latvia; University of Natural Resources and Life Sciences, Vienna

Communicating Mobility Budgets



Communicating Mobility Budgets

Based on the findings from the Living Labs, we hereby present insights into communication that promotes acceptance on the topic of individual carbon budgets for mobility.

The mobility carbon budget defines the upper limit for an acceptable level of greenhouse gas emissions for all activities involving means of transportation. It provides the framework within which activities or the places where they take place and mode choices are adapted.

The budget is meant to persuade people to limit themselves and change their behaviour – which is not very popular.

The aim of the communication strategy is therefore to further the understanding and acceptance of the budget among relevant target groups.



Aspects of Carbon Mobility Budgets

In the six Living Labs the following four aspects of Carbon Mobility Budgets have been considered.

The Carbon Mobility Budget as:

- a thought experiment
- a political measure with various design options
- a budget to limit car use
- a guide for climate-friendly mobility behaviour



The six Living Labs investigated different aspects of the mobility budget.

Raising awareness and influencing behaviour:

We investigated how feedback on personal mobility behaviour affected participants' awareness and understanding and whether this feedback influenced their intentions and actually changed their travel behaviour.

Monitoring the carbon budget:

We investigated methods for monitoring the consumption of the mobility carbon budget, including the potential use of cell phone data.

Fairness and decision-making:

We investigated participants' perceptions of fairness and the decision-making processes involved in the introduction of mobility carbon budgets.

 Acceptance of carbon budgets: We investigated the acceptability of individual

carbon budgets, considering different designs and types, and their impact on participants' attitudes and behaviour.



Target Groups

For direct communication:

- Citizens
- Employers
- Businesses / Chambers of Commerce and Industry
- Policy-makers (members of national and European parliaments) as well as Local Political Decision-Makers

As multipliers:

- Media Outlets
- Organised Civil Society

How to Support Acceptance

Inform clearly on goals and benefits

- Expert discussions and mobility budget details can motivate and engage people
- Context-specific information on climate change and car use is appreciated, but should be easy to understand.
- Address doubts about the achievability of climate protection targets and the ability of individuals to make a difference.
- Avoid generic, moralizing information; focus on arguments relating to the environment and public health.

Communicate proactively before implementation

• If the carbon budget is being considered as an actual policy measure, provide information on the impact of the instrument before its implementation to build support and understanding.

Present the budget as guidance

- Present the carbon mobility budget as a tool to increase awareness of people's carbon footprints and to help track individual impact and progress over time.
- Highlight that the budget can provide a data source for evidence-based decision-making.

Do not overstate individual responsibility

• Highlight the need for systemic measures alongside individual actions.

Put solidarity and fairness at the center

- Emphasise the importance of sharing the burden of emission reduction fairly and of maintaining social balance
- Show that special circumstances of people who are highly dependent on cars, e.g. due to long commutes or poor public transport services, are taken into account

Frame climate action as self-empowerment

- Address a lack of trust in politicians' ability to act on climate change. Highlight the role of civil society in the implementation of climate protection measures.
- Encourage others to stay voluntarily within the personal budget limits.
- Avoid the impression of authorities trying to control and interfere in citizens' lives.



How to Involve Target Groups

Citizens

- ... reach out to the public via media coverage
- ... encourage initiatives and policy-makers to have a public debate

Policy-makers and Local Political Decisionmakers

- ... make direct contact with politicians and leading administrative staff responsible for transport and climate issues
- ... offer consultancy, provide information

Employers and Business Representatives

- ... identify interested and progressive employers and contact them
- ... offer consultancy, provide information

Organised Civil Society and Media Outlets

- ... provide tangible and easy-to-understand information via website and by approaching people directly
- ... offer scientific support on how to present information





Imprint

This publication supports the dissemination of results of the project "MyFairShare – Individual Mobility Budgets as a Foundation for Social and Ethical Carbon Reduction". The authorship lies with the MyFairShare project consortium, represented by project lead AIT Austrian Institute of Technology The MyFairShare project consortium partners: AIT Austrian Institute of Technology GmbH; Deutsches Zentrum für Luft- und Raumfahrt e.V.; Florian Lorenz, PR-consultant; Latvia University of Life Sciences and Technologies; London School of Economics and Political Science; Transportøkonomisk institutt; University of Latvia; University of Natural Resources and Life Sciences, Vienna

Mobility Budget Planning Scenarios





Why Planning Scenarios

A series of initiatives have been adopted in the European Union to address greenhouse gas emissions and establish a society that is resilient to climate change.

In response to these initiatives, the implementation of mobility budgets offers a more precise strategy for addressing carbon footprints associated with travel.

Prioritising localised carbon footprint control, mobility budgets are calculated and customised according to distinct regions, goals, and target demographics.

How does it work

- 1. Carbon footprint management typically involves the implementation of carbon budgets that are applied on regional, national, and industry levels.
- 2. By understanding fair public transport as equally meaning accessible, fast, secure, reliable, and CO₂ neutral.
- 3. By placing an emphasis on localised carbon footprint management, mobility budgets are calculated and customised based on specific regions, objectives, and target demographics.
- 4. Minimum mobility budget is defined by how much CO2 emissions have to be accepted for a person to reach the nearest everyday functionalities.
- 5. Data-driven decision-making in the planning of municipal transport routes that considers the principles of fairness and equity in travel, using a monthly mobility budget as the basis.
- 6. Users can personally customise the online self-assessment tool and are requested to furnish statistical data on their personal mobility behaviour, including daily distances travelled per mode of transport.
- 7. Users can contribute input for potential scenarios related to the evolution of transportation options.

When prioritising the mobility budget as the central objective in municipal transport route planning, the focus should encompass principles of fairness and equity in travel. This entails considering factors such as accessibility, variety of mobility choices, inclusivity of transportation modes, and social justice.



In a nutshell

- For planning the municipal transport system, public transportation routes and travel times are used.
- The tool allows modelling and whatif analysis based on different input data and input parameters for travel frequency and travel mode.
- Different input data could be used to model exceptional situations like special events and extreme behaviour of people.
- Balance can be achieved between meeting the decarbonization objectives and establishing a sustainable public transport network that caters to the needs of citizens.



How can Planning Scenarios be applied

For citizens

- ... new accessibility to social infrastructure and working places by optimisation and planning of the public transport network.
- ... the provision of optimised public transport routes and timetables.
- ... use of alternative, more carbon neutral transportation modes.



For municipalities

- ... to deploy specific strategies that will require restrictions on the use of some transport modes.
- ... to make and explain decisions for modelling and presenting.
- ... to provide fair accessibility of social infrastructure by making trade-offs between travel time and CO₂ footprint.



For targeting measures

- ... re-planning actions concerning the locations of public transport stations.
- ... data-driven approach to successfully model, implement, monitor, and communicate changes.



For creating new businesses

- ... improving public transportation efficiency.
- ... visualisation tool acts as a guide for estimating the mobility budget in different scenarios.
- ... city planning and social infrastructure planning to provide greater accessibility with minimal mobility budgets.



MyFairShare | Fact Sheet | Mobility Budget Planning Scenarios





Imprint

This publication supports the dissemination of results of the project "MyFairShare – Individual Mobility Budgets as a Foundation for Social and Ethical Carbon Reduction". The authorship lies with the MyFairShare project consortium, represented by project lead AIT Austrian Institute of Technology The MyFairShare project consortium partners: AIT Austrian Institute of Technology GmbH; Deutsches Zentrum für Luft- und Raumfahrt e.V.; Florian Lorenz, PR-consultant; Latvia University of Life Sciences and Technologies; London School of Economics and Political Science; Transportøkonomisk institutt; University of Latvia; University of Natural Resources and Life Sciences, Vienna

Dealing with Ripple Effects



Dealing with ripple effects from mobility budgets

To avoid simply shifting problems to other sectors, mobility budgets need to be carefully designed. For example, loopholes such as having items delivered to reduce one's own trips to the store should be closed.

Therefore clear system boundaries are required, which define the spatial, temporal, modal, and physical dimensions of the mobility budget. These boundaries clarify which human activities and GHG emissions are to be covered, while indicating the proper accounting methods for quantifying GHG mitigation efforts.

The globally accepted Greenhouse Gas (GHG) Protocol defines <mark>3 scopes</mark>:

Scope 1 includes direct emissions, e.g. fuels used in vehicles.

Scope 2 covers emissions occurring during energy supply, e.g. from electricity generation. Scope 3 includes all indirect emissions that occur along global supply chains.

An example for mobility budgets

Mobility budgets for individuals in Austria, per month, in greenhouse gas emissions per passenger km for all modes of transport, are calculated as scope 1+2+3 consumption-based GHG/carbon footprints.

The focus of mobility budgets on individuals and their mobility makes it easy to clearly communicate and monitor the important goal of reducing GHG emissions of personal mobility. At the same time, it is essential to avoid unintended ripple effects.

Importantly, changing everyday mobility practices requires adequate infrastructure, cultural meanings and individual capabilities. Mobility budgets should be supported by additional measures aimed at social justice and climate mitigation in order to accelerate the uptake of low-/no-carbon mobility modes.

In a nutshell

- Carbon footprints of everyday life need to be reduced to stop global warming.
- Mobility Budgets help to reduce personal carbon footprints by defining targets and benchmarks which are easy to communicate, and which are transparent and fair.
- Reducing mobility carbon footprints must not result in causing more emissions with other activities. Their ripple effects need to be addressed proactively.
- Changing the structural conditions for everyday life across all activities, i.e. mobility, housing, food, work, care, and leisure, is crucial for achieving internationally agreed upon climate protection targets.
- Individual carbon budgets for mobility as well as other domains can improve communication, inform specific measures, monitor progress, and address concerns of fairness and justice.



Other domains

Carbon budgets can also be developed for other domains, such as buildings and housing, consumer goods, and food

It is crucial to ensure high quality service provisioning, appropriate infrastructure, positive health effects, and time wealth, for a good life for all!

MyFairShare | Fact Sheet | Dealing with Ripple Effects

What is a ripple effect?

The concept of ripple effects summarises several specific issues, including rebound effects, spillovers, moral licensing, and burdenshifting.

'Rebound effects' occur due to the individual re-allocation of money and time saved because of certain improvements. For example, more fuel-efficient car engines can result in more car driving (direct rebound), the money saved on fuel might also be spent on air travel, as well as other goods and services ('indirect rebound').

'Spillover effects' can be positive, when environmental-friendly behaviour spills over to other areas of consumption. They can also be negative when people calm their conscience with environmentally friendly behavior in one area, and because they have 'done their part' engage in more energy-intensive consumption behaviour in other areas. For example, because someone achieved car-free everyday mobility, they might say that holiday travel by airplane is okay.

'Burden shift effect' occurs when solving one environmental burden creates other, or even new environmental problems. For example, more stringent social and environmental standards in one country can result in increased production and exports in other countries with lower standards.



... in personal mobility?

Energy-efficient vehicles can increase car usage with 30-80% of the emissions reductions from efficiency improvements eventually lost.

Teleworking reduces work-related commuting, but potentially results in overall longer distances travelled. Rebound effects could reduce potential savings of 300 kt CO_2 -equ./yr by 30%.

Spending of financial savings from car sharing can result in other consumption sectors.

'Moral licencing' describes how people rationalise that certain activities with known high climate impacts are okay, because of some other climate-friendly activity. For example, going on holidays by airplane might be justified because of a vegan diet.

Carbon budgets in other areas of activities are needed to avoid the increase in online shopping, food delivery, and demand for technical equipment that could result from the adoption of a mobility carbon budget.





MyFairShare | Fact Sheet | Dealing with Ripple Effects





Imprint

This publication supports the dissemination of results of the project "MyFairShare – Individual Mobility Budgets as a Foundation for Social and Ethical Carbon Reduction". The authorship lies with the MyFairShare project consortium, represented by project lead AIT Austrian Institute of Technology The MyFairShare project consortium partners: AIT Austrian Institute of Technology GmbH; Deutsches Zentrum für Luft- und Raumfahrt e.V.; Florian Lorenz, PR-consultant; Latvia University of Life Sciences and Technologies; London School of Economics and Political Science; Transportøkonomisk institutt; University of Latvia; University of Natural Resources and Life Sciences, Vienna

MyFairShare Project Information





Sufficiency - Not the best is just enough, but just enough is the best.

Reducing carbon emissions is one of the most important goals to prevent the world from disastrous future consequences of climate change. The transport sector requires specific actions, as it proves most difficult to decarbonise and transport emissions are decreasing too slowly.

However, efforts to foster mobility behaviour change largely fail, as future national reduction goals are too unspecific to induce in citizens a sense of personal responsibility and engagement.



Main objectives

- 1. To identify baseline conditions and perceptions regarding mobility budgets through defining fairness in the mobility context, exploring structural differences (e.g., spatial structure, accessibility), and categorising needs of target groups.
- 2. To design methods for allocating mobility budgets and assessing impacts by combining existing knowledge, data, and models with the identified constraints and requirements, and including an estimation of potential rebound and spill-over effects.
- 3. To explore potential mobility budget scenarios in Mobility Budget Living Labs by testing methods of distributing mobility budgets and measuring the consumption of allowances and impacts, and by analysing the effects and observing the dynamics of communities acting within budget limits.
- 4. To provide guidance for launching mobility budgets in different settings by condensing the findings and results into recommendations for adapting mobility budgets to different local framework conditions across multiple levels of governance.

MyFairShare builds on studies exploring the applicability of sufficiency principles to change mobility habits, e.g. through individual mobility budgets. Transport emissions can be effectively reduced by limiting allowances for carbonintensive transport modes, but would only be acceptable if the individual share of allowances is perceived as fair.

MyFairShare combines and expands relevant knowledge, data, and models to construct a scheme for fair distribution of individual mobility budgets, and identifies effective policy strategies.

Project profile

Funding programme

JPI Urban Europe ERA-NET Cofund Urban Accessibility and Connectivity (ENUAC)

Project title

MyFairShare – Individual Mobility Budgets as a Foundation for Social and Ethical Carbon Reduction

Coordinator

AIT Austrian Institue of Technology

Project partners

- German Aerospace Center
- Florian Lorenz, PR-Consultant
- Latvia University of Life Sciences and Technologies
- University of Latvia
- London School of Economics and Political Science
- Institute of Transport Economics
- University of Natural Resources and Life Sciences

Project duration 05/2021-07/2024

Project funding EUR 1.500.000

Six Living Labs across Europe



Main results

Accessible and comprehensible knowledge

The MyFairShare website provides easy-tofollow explanations about how sufficiency can help to reduce emissions and improve fairness.

Transparent standards and tools

MyFairShare developed a definition for groupspecific Minimum Mobility Standards that can disclose requirements for starting discussions about implementing mobility budgets.

Hands-on best practice

Experiences and learnings from our Living Labs help develop processes for communicating sufficiency and motivating active engagement.

Recommendations and actionable guidance

Change can happen now! Fact Sheets and Tool Manuals provide orientation and practical advice for effectively applying the project results.





MyFairShare | Fact Sheet | Project Information





Imprint

This publication supports the dissemination of results of the project "MyFairShare – Individual Mobility Budgets as a Foundation for Social and Ethical Carbon Reduction". The authorship lies with the MyFairShare project consortium, represented by project lead AIT Austrian Institute of Technology The MyFairShare project consortium partners: AIT Austrian Institute of Technology GmbH; Deutsches Zentrum für Luft- und Raumfahrt e.V.; Florian Lorenz, PR-consultant; Latvia University of Life Sciences and Technologies; London School of Economics and Political Science; Transportøkonomisk institutt; University of Latvia; University of Natural Resources and Life Sciences, Vienna