TEXTE
177/2020

Let's go!

Framework for a National Walking Strategy
International Version

German Environment Agency

Umwelt Bundesamt

TEXTE 177/2020

Environmental Research of the Federal Ministry for the Enviroment, Nature Conservation and Nuclear Safety

Project No. FKZ 3716 5810 40
FB000156/ANH,ENG

This English publication is intended for an international audience and contains extracts from our framework for a strategy: “Geht doch! Grundzüge einer bundesweiten Fußverkehrsstrategie“ which was the result of task 6 of the project „Erstellung einer bundesweiten Fußverkehrsstrategie: Status Quo und Best-Practice“ from the Environmental Research project „Aktive Mobilität: Mehr Lebensqualität in Ballungsräumen“.

https://www.umweltbundesamt.de/publikationen/geht-doch Report No. 75/2018

Let’s go!

Framework for a National Walking Strategy

International Version

by

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On behalf of the German Environment Agency

Imprint

Publisher
Umweltbundesamt
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Report completed in:
September 2018

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Publication as pdf:
http://www.umweltbundesamt.de/publikationen

ISSN 1862-4804

Dessau-Roßlau, October 2020

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BMU	Bundesministerium für Umwelt, Naturschutz und Reaktorsichheit (Federal Ministry for the Environment, Nature Conservation and Nuclear Safety) (since 2018)
BMUB	Bundeministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit (Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety) (until 2018)
BMVI	Bundesministerium für Verkehr und digitale Infrastruktur (Federal Ministry of Transport and Digital Infrastructure)
DIfU	Deutsches Institut für Urbanistik gGmbH (German Institute of Urban Affairs)
LGVFG	Landesgemeindeverkehrsfinanzierungsgesetz (State municipal transport financing law)
MiD	Mobilität in Deutschland (Mobility in Germany)
StVO	Straßenverkehrsordnung (Road Traffic Regulations)
UBA	Umweltbundesamt (German Environment Agency)
VwV-StVO	Allgemeine Verwaltungsvorschrift zur Straßenverkehrsordnung (General Administrative Provisions to the Road Traffic Regulations)
WHO	World Health Organization

Preface to International Version

The intention of this English translation is to make the general guidelines for a national walking strategy for Germany accessible to as many decision-makers as possible beyond the country's borders. Presented here is a selection of chapters from the original document which we consider to be of particular relevance for those outside Germany with an interest in this topic. The development of the strategy itself drew significant initial inspiration from the walking strategies produced by other countries, such as Austria and Scotland, and benefited from their approaches, processes and experiences. We hope that this document will now help to encourage other countries to develop and implement national walking strategies and so promote walking more widely. We also hope that it will contribute to international debate and engagement on this issue and we would welcome any feedback or experiences you may wish to share.

The strategy is not conceived as an end in itself, rather it is intended to stimulate dialogue among decision-makers in politics, government and other areas. The outcome of this dialogue should be a shared vision for what a national strategy for Germany might look like and how it should be implemented.

The promotion of walking must take place at different levels of government (national, regional and local authority) and involve different departments (transport and urban planning, civil engineering, environment, economic development, health etc.) and stakeholders (organisations, business and academics). The framework for a walking strategy was thus developed through a process of detailed discussion with selected representatives from these spheres in May and September 2017. We would like to take this opportunity to extend our thanks to all of them.[i]

German Environment Agency

Figure 1: Attractive façades and a range of convenient facilities and services mean people feel inclined to walk

Summary

Walking is the healthiest, cheapest and most environmentally friendly means of transport. Furthermore, active mobility, such as walking and cycling, is an essential element in successfully transforming the transport sector and achieving sustainable urban mobility. While cycling has become an established element of German national policy, walking is still considered unimportant, unattractive and somewhat outmoded.

This needs to change. The German Environment Agency is therefore seeking to address a range of issues – from how to raise awareness around walking and how to create the conditions to support walking in everyday life to what is needed to encourage cities and municipalities to be more consistent in their efforts to support and promote walking. To this end, the German Institute of Urban Affairs was commissioned to develop a 'Framework for a national walking strategy' for Germany through an intensive process of dialogue with selected experts. The results and findings are presented here for public debate.

Why should the German Government adopt a national walking strategy?

The transport sector has thus far failed to make the contribution to climate protection required of it. However, climate change mitigation is not the only reason for promoting walking. Many local authorities have issues with noise and air pollution in the centres of towns and cities, capacity bottlenecks in public transport and a shortage of public space as a result of on-street car parking. It is imperative for them to act.

A partial solution lies in the most natural transport mode for humans: walking is particularly well suited as an intermodal link within environmentally friendly transport to help reduce carbon dioxide emissions. Furthermore, walkable towns and cities enjoy great popularity. High levels of pedestrian traffic indicate that people feel comfortable and safe. Pedestrians bring streets and squares to life and enhance the sense of safety within communities. Walking brings people together and encourages them to interact and communicate.

In 2017, on average, one fifth of all trips in German towns and cities were made on foot. Depending on the location, the proportion may vary between 25 % and 45 % (see Ahrens 2016; infas 2018). Looking more closely at trip distances, considerable potential for active forms of mobility becomes evident. Many trips currently made by car could be substituted by walking or cycling. Almost 50 % of car journeys are shorter than five kilometres and 10 % are less than one kilometre (see infas 2008). Walking therefore has the potential to replace a significant amount of car traffic – all the more so in combination with public transport. Improving pedestrian infrastructure is cost-effective in comparison with the infrastructure for other modes of transport and is relatively quick to implement. Demographic changes and an aging society mean that walking is set to become even more important in the future.

Walking is clearly by no means a niche topic. However, to realise its potential and take account of the many aspects involved, there must be coordinated action from the German federal government, states and local authorities as well as contributions by different departments, such as transport and urban planning, civil engineering, environment, health, education and culture. A national walking strategy would mean the German government could facilitate an integrated and targeted course of action. A national strategy could raise awareness of walking among the general public, ministries, political parties and organisations. A national walking strategy could be groundbreaking in terms of future support for walking and would be a clear statement of intent to support and promote walking in Germany.

Let's go!

Some federal states in Germany are already actively promoting walking. They are supporting municipalities that are undertaking surveys of walking and developing local mobility concepts (Baden-Württemberg, Hesse and North Rhine-Westphalia) or have passed mobility legislation (Berlin) and they are providing targeted funding to municipalities for pedestrian infrastructure (Baden-Württemberg). However, in view of the enormous environmental and social potential of walking, these are only tentative first steps.

Without doubt, walking will attract greater attention and increasing importance in the years to come. Therefore towns and cities are calling for a clear commitment from the German federal government on the importance of walking. They need greater authority to pass laws and regulations relating to roads in urban areas and a consistent set of rules. Furthermore, they need clear signals from the German government to promote pedestrian traffic which would be provided by a nationwide walking strategy.

A walking strategy could help raise awareness about the role to be played by walking within more sustainable urban development. It could draw attention to healthier alternatives to car travel and the benefits of more compact urban areas. Last but not least, towns and cities would be motivated to improve conditions for people travelling on foot.

Although decisions about provisions for pedestrians are generally taken at the local level, they are nevertheless embedded in a national system of rules and regulations. In order to be able to take effective action, many municipalities are calling for more power to implement measures within the local transport infrastructure and road network. Much remains to be done, but the old saying rings truer than ever here: even the longest journey begins with a single step.

1 The importance of walking for quality of life and mobility

Living cities and communities

- Areas for walking have a high amenity value and encourage people to linger
- Pedestrians bring cities, streets and squares to life
- Walking enables people to interact and communicate and strengthens neighbourhoods and social cohesion

Trip chains

- Walking is part of every trip chain
- Improved conditions for pedestrians promote ecomobility

Health

- Walking is healthy and can help prevent certain diseases
- Walking is enjoyable and helps to prevent depression
- Walking helps to reduce excess weight

Environment

- Walking is the most environmentally friendly form of transport
- Walking helps to avoid many short car journeys
- Walking contributes to reducing greenhouse gases, air pollution and noise
- Walking reduces land-use and makes urban areas pleasant places to be

Economy

- Walking supports retail and gastronomy
- Walking reduces the costs of healthcare and avoidable inpatient and nursing home admissions
- Pedestrian infrastructure is comparatively cheap

Social justice

- Pedestrian infrastructure increases social inclusion for children, older people and people living in poverty
- Reducing pollution and noise levels leads to greater environmental justice
- Promoting walking contributes to gender equality in mobility
- The promotion of walking is people-oriented, practical and attracts positive media coverage

Investment in the future

- Walking has a high level of resilience and robust infrastructure
- As young people move into urban areas pedestrian and cycle traffic increases
- Attractive networks of footways are an important component in transforming the transport sector

2 Stumbling blocks along the way – short deficit analysis

Insufficient data on walking available

- Walking is not adequately recorded and taken into account. Data collection on mobility to date has been based on the main mode of transport rather than considering individual trip stages
- Accidents involving pedestrians are only recorded where they involve other road users; accidents resulting from poor pedestrian infrastructure are not included

Unattractive urban spaces hinder walking

- Walking has largely been pushed to the margins in our predominantly car-centric towns and cities
- Noise along main roads, high concentrations of pollutants, footways that are too narrow and poor lighting and safety have led to a decline in walking

Accessible mobility is still a long way off

- Accessible mobility is still very much in its infancy and is a long-term undertaking in rural areas

Safety is inadequate

- The risks to pedestrians in urban areas are comparatively high

Walking is disadvantaged in rules and regulations

- Although the German road traffic regulations (StVO) do not favour any one mode of transport, in practice permission procedures tend to prioritise the requirements of motorised transport
- Walking plays a role in the regulations primarily in relation to road safety. In contrast, pedestrian infrastructure quality is not subject to binding regulations

Walking is not sufficiently institutionally embedded in government

- Adequate human and financial resources for walking are the exception rather than the rule in federal, state and local administrations

Lack of research and funding

- In comparison with other modes of transport, much less funding is available for expanding and developing pedestrian infrastructure
- Walking plays a negligible role in research funding

Lack of awareness about the importance of walking

- Walking is not a business model and there is almost no effective lobbying

- Although over a third of trips in the centres of towns and cities are made on foot, walking is barely acknowledged as part of everyday travel

Figure 2: If walking is to be an attractive option it needs space, but the width and attractiveness of pavements in German municipalities is very variable

Source: Hartmut Topp

Table 1: Overview of infrastructure shortcomings that make walking unattractive

Walking may become an unattractive option due to:
Physical barriers (curbs, steps and faulty escalators and lifts)
Poor quality footways (damaged surfaces, lack of space, inadequate clearing and gritting in winter, poor lighting, trip hazards and obstructions caused by bicycles, rubbish bins etc.)
Main roads, tram and rail tracks which are difficult to cross
Traffic lights with long waiting times or multiple-stage crossings
Land-use conflicts over the available space (cars parking / stopping, delivery vehicles on footways, cyclists on footways)
Lack of awareness of their own wrongdoing on the part of car drivers and cyclists, fines for parking on footways or restricting visibility at junctions too low, lack of incentive for local authorities to penalise offences
Areas may be unappealing to pedestrians due to noise, exhaust fumes and lack of places to sit or play
Lack of safety in underpasses and quiet areas and on poorly lit footways

3 Possible destination: suggested targets for a national walking strategy

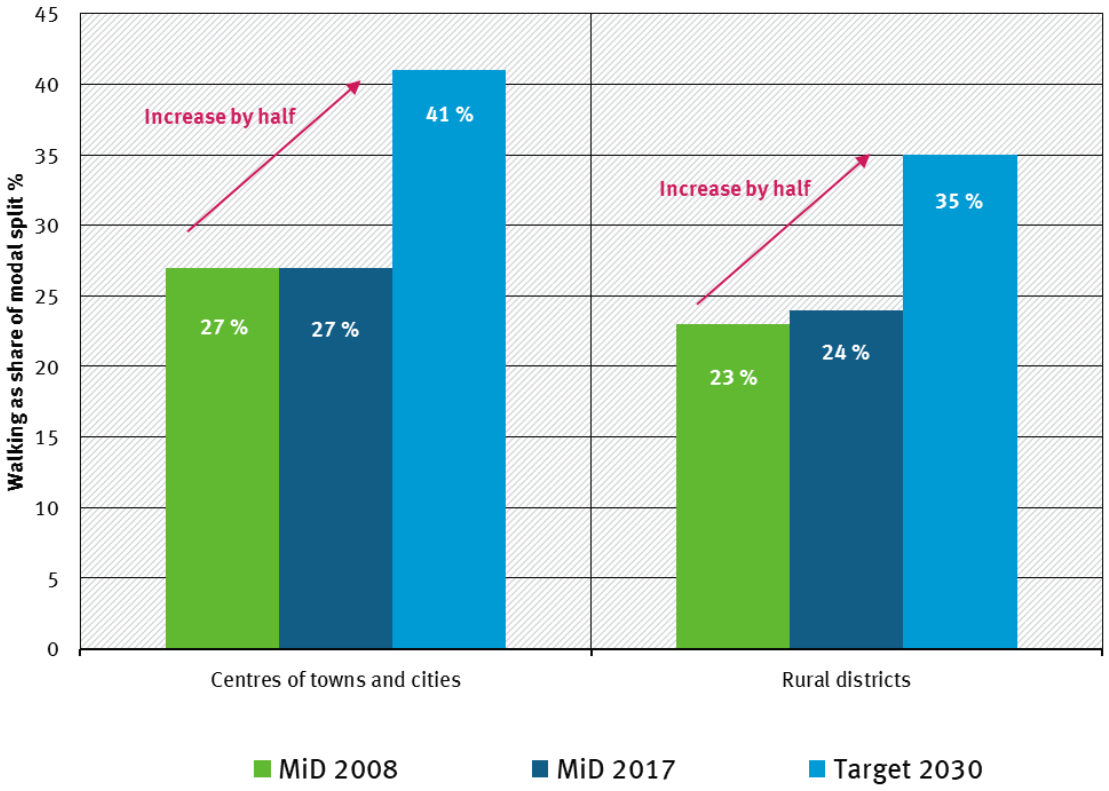
Walking can contribute to meeting Germany's climate change and sustainable urban development targets. A national walking strategy therefore provides a solid basis for promoting walking and guidance for towns and cities as they continue to develop their local transport systems. The main objectives for such a strategy are set out below.

3.1 More people travel on foot

The primary aim of a national walking strategy should be for the importance of walking to increase significantly across the country. Based on current data collection methods, the share of walking in Germany should increase by around half from an average of 27 % (MiD 2017) to 41 % in the centres of towns and cities and, correspondingly, from an average of 24 % (MiD 2017) to 35 % in rural areas by 2030.

- Target: share of walking increased from 27 % to 41 % in the centres of towns and cities and from 24 % to 35 % in rural areas by 2030 compared to 2008

Figure 3: More people travel on foot: increase in walking as a share of total traffic volume by half by 2030 compared to 2008



Source: internal

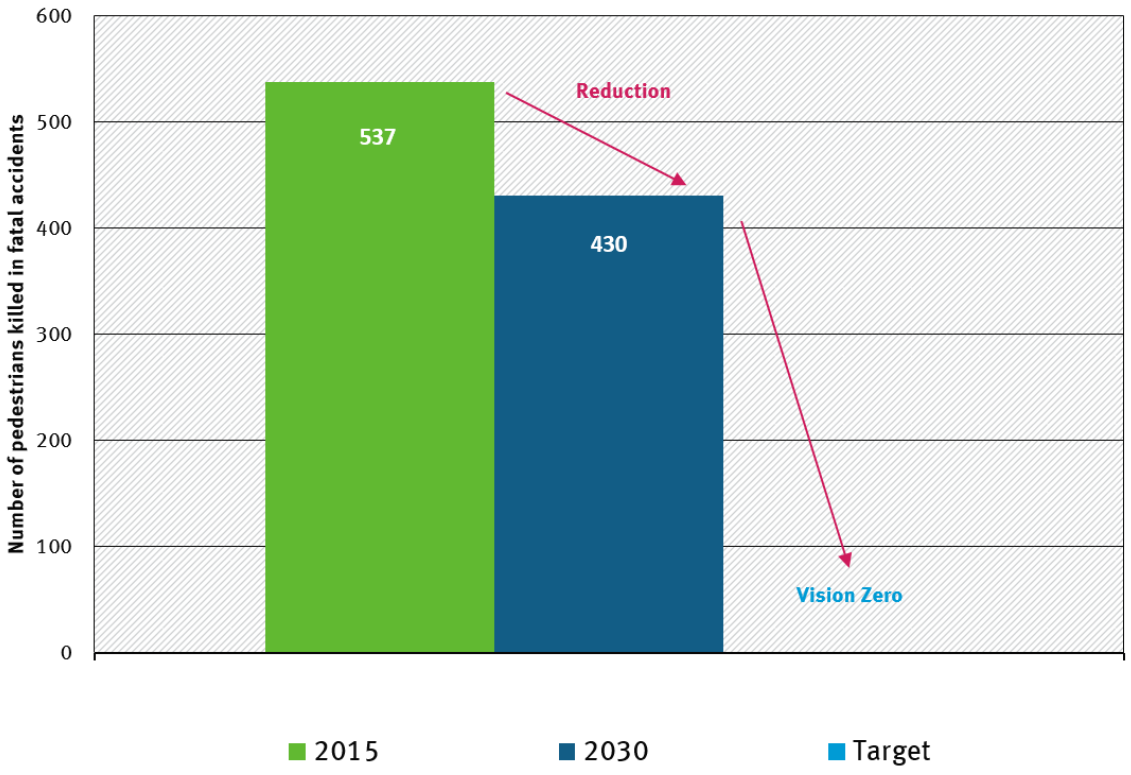
Different local circumstances must be taken into account. While some local authorities have already met the average target, others must make significant additional efforts. It is recommended to use the same model as the National Cycling Plan (*Nationaler Radverkehrsplan*) which sets out different phases of development. Municipalities can then use these to undertake a self-assessment:

- Municipalities just beginning to promote walking (Beginners)
- Municipalities which have already made progress in promoting walking (Intermediate)
- Municipalities with high levels of walking promotion (Trailblazers)

3.2 Walking in Germany becomes safer

To make walking safer, the number of pedestrians killed in road traffic accidents (in urban areas) must be reduced by at least 20 % (or 107 people) by 2030 compared to the base year of 2015. In the long term fatal accidents should eliminated completely (Vision Zero).

Figure 4: Walking in Germany becomes safer: reduction by at least 20 % in the number of pedestrians killed in traffic accidents by 2030 compared to the base year of 2015



Source: internal

In addition to older people, children and young people are particularly prone to accidents while walking. The consistent application of safe routes to school plans is therefore a priority. There are noticeable improvements in subjective perceptions of the safety of walking and of urban areas generally as the number of people travelling on foot increases.

- Target: reduction by at least 20 % of the number of pedestrians killed in road traffic accidents by 2030 compared to the base year of 2015; complete elimination of fatal accidents in the long term

3.3 Active mobility keeps people healthy

Regular physical activity has a positive impact on health and wellbeing at all ages. Promoting sport and exercise are therefore an essential component of public health measures. The representative data in the 'Study of the health of adults in Germany' ('*Studie zur Gesundheit Erwachsener in Deutschland*', DEGS1) illustrate how those surveyed assessed their own physical activity. According to the study, around one third of adults aged between 18 and 79 make sure they do enough physical activity; around a quarter regularly take part in sporting activities for at least two hours per week. However, only around one fifth of the population completes the minimum level of moderate-intensity activity of 2.5 hours per week recommended by the World Health Organization (WHO) (Krug et al. 2013).

Thus it is increasingly important to incorporate opportunities for physical activity into everyday life (In Form 2016). Physical activity reduces the risk of cardiovascular problems, high blood pressure, diabetes and certain types of cancer. On average, people who are active throughout the year experience two days less illness (Kemen 2016). Walking for just half an hour a day lowers blood pressure and cholesterol levels. In addition, physical activity reduces stress and helps counteract depressive mood (WHO 2015a).

- Target: based on the WHO recommendation, more than half the population does at least 30 minutes of physical activity every day

3.4 People with reduced mobility can get around independently

To enable older people and those with reduced mobility to live independent lives, it is essential that they are able to reach, access and use facilities and services without encountering obstacles. Ensuring accessibility must be a priority in those places where barriers stop people from meeting their daily needs. This is generally the case in the centres of towns and cities where large numbers of people are on the move. Special attention should also be paid to frequently used routes and transport infrastructure. Uninterrupted routes (trip chains) should be given particular priority.

As society ages, accessibility will become a mark of quality for towns and communities. The unrestricted participation of everyone in public life is an essential prerequisite for thriving communities and people taking responsibility and getting involved, as well as for active citizenship.

- Target: independent mobility is possible in the future for almost everyone without assistance

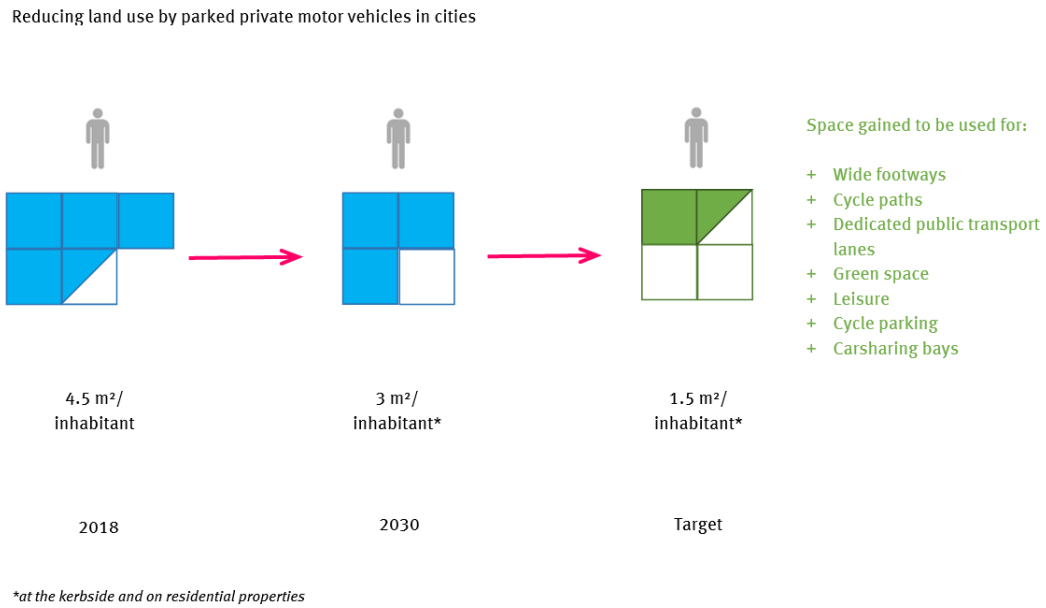
3.5 Walking benefits the environment and reduces pressure on land use

Substituting short car journeys for walking, together with the targeted promotion of walking, increases ecomobility overall and makes a valuable contribution to protecting the climate and environment and reducing land and resource use.

The German federal government's climate protection targets (see the Climate Protection Plan 2050) include a reduction in greenhouse gas emissions of 80 to 95 % by 2050 compared to 1990 levels (BMUB 2016a, p. 21; UBA 2016a, p. 7). With its Climate Protection Plan 2050 the German federal government has set itself the target of developing a transport system by 2050 which 'will not depend on fossil fuels containing carbon', which means 'it will also be largely greenhouse gas neutral' (BMUB 2016a, p. 48). To meet this target the Climate Action Programme 2020 also refers to the need to raise levels of walking in Germany, particularly through specific support programmes, promoting intermodality and strengthening ecomobility (including better allocation of road space to improve ecomobility) (BMUB 2014, p. 50).

More people walking reduces greenhouse gas emissions, air pollutants such as particulates and nitrogen oxides and lessens road traffic noise which, according to an environmental awareness survey conducted by the German Environment Agency, 76 % of people in Germany feel troubled by (BMUB and UBA 2017, p. 51). Significantly, walking helps to avoid the negative environmental consequences caused by using new land for transport infrastructure. This is of core importance, since the German government has set a target in its Sustainable Development Strategy of reducing consumption of new land to 30 ha per day by 2030 (Federal Government 2017, p. 38). In fact, in its Integrated Environmental Programme, the German Ministry for the Environment recommends a nationwide reduction to 20 ha per day, with reduction targets at state level as well (BMUB 2016b).

Figure 5: More attractive towns and communities: more room for pedestrians by reducing the space occupied by parked private motor vehicles



To meet the land-use reduction target, the German Environment Agency recommends, for example, that cities should, for private motor vehicles, initially reduce the allocation of kerbside and residential property parking per inhabitant to no more than 3 m² per inhabitant. Following measures to further reform the conventional 'car-centric city', this figure then falls to around

1.5 m² per inhabitant. The areas thus made available will then be used for wider pavements, cycle paths and dedicated public transport lanes, as well as for leisure and green space and – to a limited extent – for carsharing (UBA 2017b, p. 16).

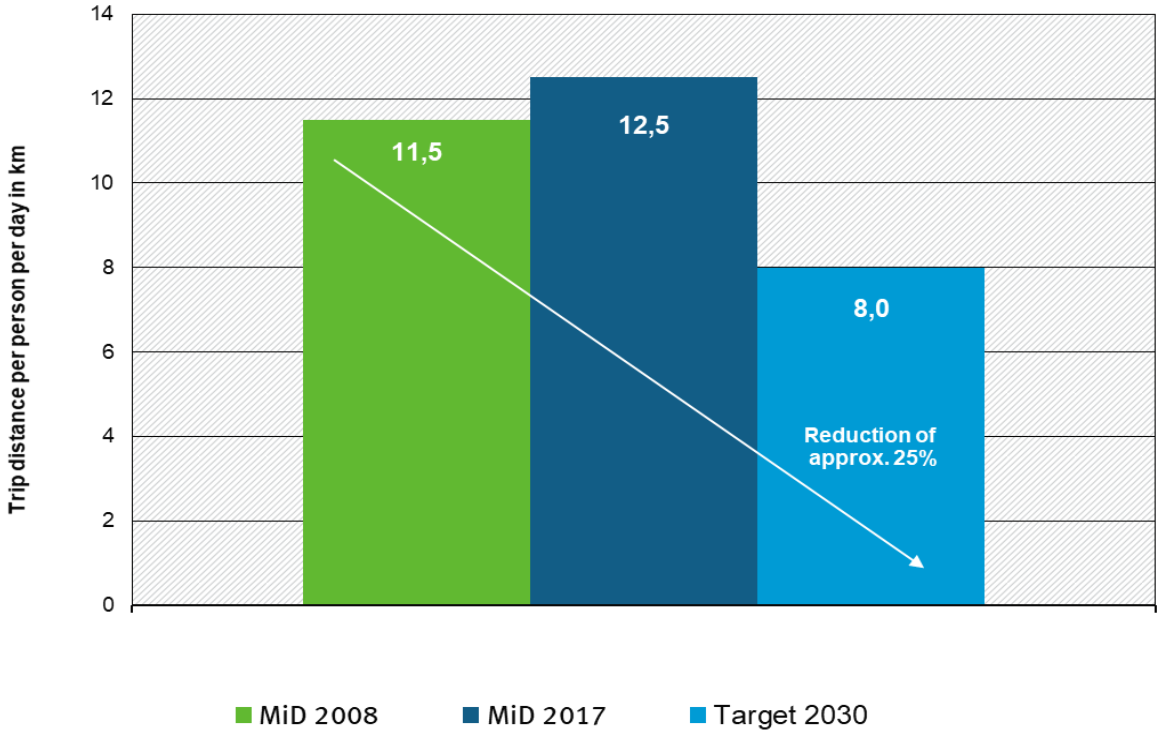
- Target: reduction of greenhouse gases, noise and air pollution
- Target: for cities – 3 m² land use per inhabitant for stationary private motor vehicles at the kerbside and on residential property. After measures to reform car-centric cities this figure is reduced further to 1.5 m² per inhabitant

3.6 Walking in cities and communities becomes more attractive

Promoting walking is by no means only a transport planning issue, rather it is the responsibility of a range of different authorities and stakeholders. Attractive pedestrian infrastructure in urban areas requires space for people to walk and to stop and linger, as well as peaceful and varied surroundings, well-linked green spaces and short, direct routes between places.

The concept of the compact, mixed-function city provides a model for how this might work. In this setting there are almost no private cars parked in public spaces. Consistent management of parking spaces makes parking more expensive and the number of public car parking spaces is significantly reduced. In turn, public transport, carsharing and bikesharing options are increased and an attractive pedestrian infrastructure is developed or expanded. In the long term this means it will be possible for cities of over 100,000 people to have a target of 150 cars per 1,000 inhabitants. Currently, the average is 450 cars per 1,000 inhabitants (UBA 2017b, pp. 13 and 49).

Figure 6: Walking in cities and communities becomes more attractive – possible target: reduction of average trip distance to 8 km per trip



Source: internal

A compact city is a 'city of short distances'. The average trip distance is just 8 km or 28 km per person per day – around 25 % less than today (UBA 2017b). This requires careful and consistent planning of the streetscape 'from the outside in', to give walking and cycling sufficient space and priority. Uniform quality standards for designing the street environment ensure a network of footways which minimise detours and maximise accessibility and safety within an overall transport system which facilitates simple, direct mobility for everyone.

- Target: applying the model of the compact, mixed-function city to urban development reduces average trip distance to 8 km per trip or 28 km per person per day – around 25 % less than today (city of short distances)
- Target: car density is reduced to a long-term goal of 150 cars / 1,000 inhabitants in cities

3.7 Awareness grows of the importance of walking

Nobody walks if the possibility doesn't even occur to them. Awareness must therefore be raised in planning, policy-making and society of walking as a fully valid mobility option. This is the primary goal of a walking strategy. Targeted communication supports a mobility culture in which walking is regarded positively: walking is enjoyable, fosters independence, encourages people to slow down, promotes health and relaxation and enables everyone to take part in public life.

Walking must gain acceptance at national, state and community level as the fundamental mode of transport. Only then will it be treated on a par with other modes of transport and recognised in terms of legislation, funding programmes, research funding, allocation of responsibilities and local implementation.

- Target: walking receives more attention at all levels, from legislation to the implementation of specific infrastructure measures by local government in towns and cities, as well as in smaller communities
- Target: walking becomes visibly embedded in the transport departments at federal, state and local government level

3.8 Suggested walking strategy targets at a glance

More people travel on foot

- Walking in Germany increases by half from an average of 27 % to 41 % of traffic volume in the centres of towns and cities and from an average of 23 % to 35 % in rural areas by 2030

Walking in Germany becomes safer

- The number of pedestrians killed in road traffic accidents falls by at least 20 % by 2030 compared to the base year of 2015; in the long term fatal accidents should be eliminated completely (Vision Zero)

Active mobility keeps increasing numbers of people healthy

- More than half the population does over 30 minutes of physical activity every day

People with reduced mobility can get around independently

- Independent mobility is possible in the future for almost everyone without assistance

Promoting walking benefits the climate and the environment and reduces pressure on land use

- Greenhouse gases, air pollution and traffic noise are reduced
- Land use falls to 3 m^2 per inhabitant for stationary private motor vehicles at the kerbside and on residential property. After measures to transform car-centric cities this figure is reduced further to 1.5 m^2 per inhabitant

Walking in cities and communities becomes more attractive

- Applying the model of the compact, mixed-function city to urban development reduces average trip distance to 8 km per trip or 28 km per person per day
- Car density car is reduced to a long-term goal of 150 cars / 1,000 inhabitants in cities of over 100,000 people

Awareness grows of the importance of walking

- Walking receives more attention at all levels, from legislation to the implementation of specific infrastructure measures
- Walking becomes visibly embedded in the transport departments at federal, state and local government level

4 A way forward: recommendations for action to promote walking

Walking takes place primarily at the local level within communities. Since responsibility for roads in the municipalities lies with the local authorities, they are largely responsible for the way walking is affected by the built environment. However, many municipalities would like a clear acknowledgment from the federal government of the importance of walking for sustainable urban development and climate protection. In addition, they are calling for greater decision-making powers on regulations affecting roads in urban areas and a consistent set of regulations. They also want a clear signal to be sent through targeted support for walking.

A walking strategy could enable the federal government to take a clear position and highlight the importance of active forms of mobility for future transport systems. Effective levers are available both in terms of the legislative framework and in terms of financial investment and non-monetary support, as well as organisational, coordinating and networking activities.

4.1 Legal scope for action by central government and the federal states

Embedding walkability into planning law

Any initiative to promote walking will come to nothing unless attractive destinations can be reached easily and quickly on foot. Therefore promoting walking is by no means a transport planning issue alone, rather it is inextricably linked to urban development as a whole (N.B. 'cities of short distances' and the Leipzig Charter) and the entire culture of urban planning.

'Walkability' could be incorporated into the German Building Code (*Baugesetzbuch*) as an essential criterion for settlement design and development and embedded in plans and regulations. To this end, urban and transport planning and legally binding urban land-use planning must ensure optimum mixed use in urban areas, providing attractive networks of footways with abundant short cuts. In future, municipalities should be empowered to opt for infill development rather than build on the edge of town to make urban centres more compact. In this respect, the 2017 amendment of German construction law, which introduced the new land-use category of 'urban area', allows commercial, leisure and residential facilities to be located in close proximity and creates greater opportunities for establishing a mixed-use 'city of short distances'.

Taking greater account of walking in road traffic law

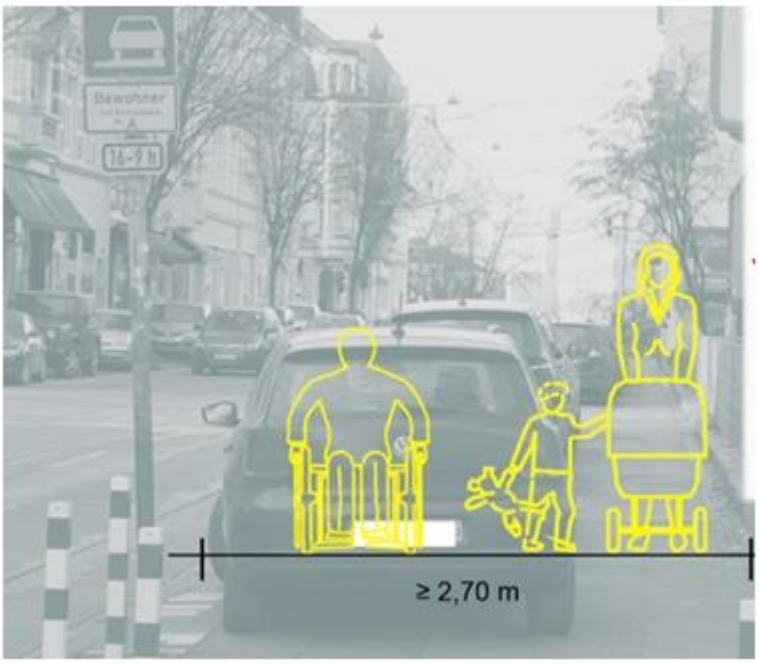
Road traffic law must be reviewed. Concepts such as 'traffic fluidity' date from a time when the predominant focus was on motorised transport. In fact, the old road traffic law could be replaced by a modern mobility law. In June 2018 the Berlin state parliament passed Germany's first mobility law. The intention is that it will make the city more cycle friendly and reduce the number of road casualties. Following the adoption of the first two parts of the law on public transport and cycling, work has now turned to the sections of the law which focus on walking.

Irrespective of such fundamental changes, the following criteria are pivotal to make walking attractive and safe:

- Minimum building standards (e.g. on pavement widths and surfaces)
- Linear crossings which allow walkers to cross the road anywhere along the carriageway (e.g. amendment to § 25 (4) StVO)

- Removal of obstructions and hazards for walkers (made mandatory in the General Administrative Provisions to the Road Traffic Regulations (VwV-StVO))
- Pedestrian-friendly traffic light phasing (short waiting times, longer minimum safe crossing phases and single-stage crossing)

Figure 7: Municipalities generally comply with minimum pavement widths but footways are often made impassable by parking offenders. A standard width of 1.5 m has become established, but according to experts pedestrians can only pass unimpeded with a width of app



Source: Arne Blase

Making walking safe

Safety is paramount. To avoid conflict between pedestrians and cyclists, cycling on footways should only be permitted in limited circumstances and with strict conditions. When cycle paths are laid out sufficient space must be reserved for pedestrians. In addition, the way the road space is allocated for different uses must be changed: instead of planning 'from the inside out', beginning with the carriageway for private motor vehicles, followed by bus lanes, cycle lanes and then footways, the concept should be reversed, so the space is planned 'from the outside in', that is from the buildings to the centre of the road (see RASt 06).

To increase the safety of footways the speed limit in urban areas should be reduced from 50 km/h to 30 km/h by amending the Road Traffic Regulations: § 3 Abs. 3 Nr. 1 StVO (UBA 2017c, p. 4 ff.). Imposing a 30 km/h limit only at accident hotspots and near schools, nurseries and care homes is not sufficient. Road traffic law should be amended to empower municipalities to set speed limits. The German Insurance Association (*Gesamtverband der deutschen Versicherungswirtschaft*) is currently exploring whether and how the safety of pedestrians and cyclists is affected by stationary vehicles. Safety measures implemented to date, such as safety barriers, chicanes and underpasses, do not provide pedestrians with adequate protection. The familiar zebra crossing could be more widely deployed, as it ensures better visibility.

Transferring more powers to the municipal level

Many municipalities have expressed the desire for greater scope to find appropriate ways of resolving conflicts in the road space. The Association of German Cities (*Deutsche Städtetag*) is calling for individual towns and cities to be enabled to try out variations to the current provisions of the StVO. Its specific proposals include inserting a flexibility clause into § 45 StVO, so that municipalities can introduce their own provisions for the benefit of pedestrians (e.g. a speed limit of 30 km/h in built-up areas, zebra crossings and pedestrian priority zones) and to encourage ecomobility.

Urban space is finite. To avoid hazards for pedestrians and to facilitate unimpeded travel for people with pushchairs and wheelchairs or walking frames there should be severe penalties for illegal parking. Local authorities must consistently ensure compliance with the regulations on parking on footways (in accordance with the VwV StVO). However, revenues are often insufficient to cover the administrative costs of enforcement and so insufficient inspections are carried out.

In this context fines play a crucial role. Compared with other countries, the fines imposed in Germany are very low. Higher fines would make it clear that illegal parking in Germany will no longer be tolerated as a trivial matter. They would also have an educational effect and would ensure revenues sufficient to cover the administrative costs. The schedule of fines should be amended so that obstructing or endangering pedestrians and cyclists would be more severely penalised.

Figure 8: Temporary road closure in Ghent: inserting a flexibility clause into the road traffic law would give municipalities more room to experiment and try out alternative transport solutions

Source: Ulrike Wachotsch 2014

4.2 Financial scope for action by central government and the federal states

Changes to the transport system require adequate financial resources. This also applies to arrangements for pedestrians. To ensure they get the priority and space they need, the

necessary financial support must be made available. Improving existing funding mechanisms should be prioritised over the introduction of new mechanisms.

Integrating walking into research funding

The federal government can distribute funds derived from the relevant departments of the ministries concerned (e.g. Environment, Transport or Health Ministries). In particular, this involves research programmes, competitions and funding for pilot projects. In this context the departmental research programmes of the Ministry for the Environment, Ministry of Transport, Ministry of the Interior, Ministry of Education and Research and Ministry of Health should focus greater attention on projects related to walking. The funding options in the National Cycling Plan could also conceivably be increased and expanded specifically to integrate walking.

Embedding infrastructural, cultural and other changes

Walking contributes to climate and environmental protection. Locally, at the municipal level, it primarily supports the expansion and development of ecomobility. Urban development programmes should therefore be more rigorous in taking the needs of pedestrians into account. Thus funding for pedestrian infrastructure could be mandatorily integrated into the 'Active town and district centres' development programme. This would make sense, since attractive networks of footways and the regeneration of urban centres are closely linked. More funding could be put into reducing oversized roads and carparks.

The federal government's municipal guidelines 2016/17, entitled 'Protecting the climate, supporting communities' (National Climate Protection Initiative) could be extended to include funding for improvements to pedestrian infrastructure, which would also encompass smaller, local measures. In addition, a partial extension of funding is needed to include footways, such as paths to and from public transport stops (AG Fußverkehr von SRL & FUSS e.V. 2001; Dittrich-Wesbuer und Bräuer 2002).

The following measures would be particularly effective:

- Improvements to pedestrian infrastructure (closing gaps in the network, pavement widening, linear crossings, pedestrian-friendly traffic light settings and crossing modifications to avoid detours)
- Modification of pedestrian infrastructure to increase accessibility (junctions, areas around public transport stops and seating in public spaces)
- Development of an uninterrupted, safe network of footways without detours
- Removal of hazards and installation of energy-saving lighting for footways
- Signage installation
- Replacement of underpasses with overground crossings

Pedestrian infrastructure is funded by local authorities. Some federal states have special funding programmes for improving pedestrian infrastructure (e.g. Hesse: local mobility funding guidelines; Baden-Württemberg: state municipal transport financing law (LGVFG). Concepts that take into account ecomobility as a whole are particularly effective. Another mechanism which is to be commended is the provision of special funding at short notice for individual investment measures.

Figure 9: Signage system in London: walking times provide motivation for walking

Source: Manuela Weber 2014

In addition, another useful tool is provided by federal state programmes which support non-investment measures, such as transport development plans with sections on walking, municipal walking strategies, walkability checks and accessible local mobility.

Moving forward together

Competitions foster creativity and publicise good practice. A nationwide 'Climate Protection through Walking' competition (similar to the 'Climate Protection through Cycling' competition) would help to provide incentives for walking, raise awareness and improve infrastructure locally.

Willingness to cooperate plays a major role in all activities. This applies both nationally and at state level. The modification or extension of footways largely falls within the remit of local municipalities, while responsibility for the carriageway of roads and highways lies with the federal or state government. This delineation tends to make the process of agreeing and financing suitable measures more complicated. The federal government must take action here, for example by facilitating improvements to the situation in urban areas through an optimised planning process.

4.3 Organisational scope for action by central government and the federal states

Embedding walking institutionally

A serious active walking policy needs to be institutionally embedded, the responsibilities must be clearly set out and there should be greater investment in human resources. Responsibilities at the national, state and local levels in relation to walking must be clearly regulated. A first step could be for local authorities to employ walking officers. In addition, it is essential to establish binding responsibilities, as in the cases of the administrations in Berlin, Leipzig and Viersen. The ideal solution would be to have local mobility teams or cross-departmental working groups to ensure sufficient human resources are dedicated to the issue.

Raising awareness of walking and its importance

If walking is to become more important, awareness must be raised among policy-makers and administrations. A wide range of measures and initiatives may be employed to this end. For example, good practice examples of walking promotion could be publicised on a relevant web portal. Awards for walking-friendly cities or particularly successful walking initiatives draw attention to the importance of walking locally. Targeted publicity campaigns can also be helpful.

Figure 10: Raising awareness of walking: 'Pedestrian-friendly communities in Austria' campaign: "Don't park on our pavements"

Source: walk-space.at

Training and networking opportunities for municipalities can be provided by a national skills network, 'Sustainable urban mobility'. Furthermore the Bicycle Academy at the German Institute of Urban Affairs could be expanded to address public transport and walking and the points of intersection with ecomobility. Conferences on walking strengthen networks and facilitate

sharing of experience between local authorities. They can be planned and organised through collaborations between federal government, local authority umbrella organisations, the federal states, municipalities, road safety organisations, health insurance companies, churches and academics. Ideally, such events would take place every two years, hosted by the relevant government department together with a federal state and other partners. In addition, a working group on walking, bringing together federal government and the states, could coordinate the activities of different departments and states.

Effective communication of the advantages of walking

Anything which is considered to be particularly healthy automatically generates attention. Walking is indisputably healthy and can prevent health problems. Thus it is necessary to establish whether the advantages of walking can be particularly successfully communicated through its positive health effects. There is now a high level of awareness among the German public of the WHO recommendation to walk 10,000 steps every day. Fitness trackers and apps which can be used through smartphones provide a fun and low-threshold way of motivating people to make more everyday journeys on foot. Local authorities can build on this by providing safe and attractive footways, signposted with walking times and numbers of steps. Thus modern electronic devices can be harnessed to help promote exercise.

4.4 Recommendations for action at a glance

Walking gains greater importance in research

- Walking is more firmly embedded in the departmental research programmes of the Ministry of Transport, Ministry of the Environment and Ministry of the Interior and in selected urban development programmes

Rules and regulations establish a binding basis for planning

- Introduction of a new criterion in urban planning to ensure that new developments are reachable by foot
- Amendment of road traffic law to create a mobility law
- Changes to § 25 StVO to make road crossings easier
- Addition of a flexibility clause to § 45 StVO
- Harmonisation of the guidelines of the Road and Transport Research Association (*Forschungsgesellschaft für Straßen- und Verkehrswesen, FGSV*)
- Inclusion in the General Administrative Provisions of the Road Traffic Regulations (VwV StVO) of minimum standards for pedestrian infrastructure / footways
- Modification of the schedule of fines to provide more effective protection for pedestrians

Financial support is provided for investment in pedestrian infrastructure

- Programmes to promote walking at state level (devolution)
- Greater support for pedestrian infrastructure through the climate protection programme for local authorities (*Klimaschutzrichtlinie*)

- Establishment of a national 'Climate protection through walking' competition
- Support for local authorities where responsibilities are divided (e.g. to redevelop urban roads and highways)

Transport departments have a clear remit for walking

- Clear allocation and securing of human resources for walking at the Ministry of Transport, the Federal Highway Research Institute, state ministries and local authorities

The federal government raises awareness and coordinates activities to promote walking

- Web portal for walking
- Walking or urban mobility academy (for training)
- Regular national walking conference
- Working group on walking bringing together federal government and the states
- Working group on walking at the annual transport law conference (*Verkehrsgerichtstag*)

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Endnote

[i] We would like to acknowledge the experts who took part in discussions on the fundamental principles for a national walking strategy on 8 May and 11 September 2017: Thomas Arndt (Bundesamt für Naturschutz), Dirk Bartel (Senatsverwaltung für Umwelt, Verkehr und Klimaschutz), Dr Dirk Boenke (Studiengesellschaft für Tunnel und Verkehrsanlagen e.V. (STUVA)), Tilman Bracher (Deutsches Institut für Urbanistik gGmbH), Alena Büttner (Umweltbundesamt), Dr Katrin Dziekan (Umweltbundesamt), Dr Michael Frehn (Planersocietät – Stadtplanung, Verkehrsplanung, Kommunikation), Niels Hartwig (Bundesministerium für Verkehr und digitale Infrastruktur (BMVI), Bernd Herzog-Schlagk (FUSS e.V.), Thomas Kiel (Deutscher Städtetag), Dr Juliane Korn (NVBW – Nahverkehrsgesellschaft Baden-Württemberg mbH), Juliane Krause (plan & rat Büro für kommunale Planung und Beratung), Ulrich Malburg (Ministerium für Verkehr des Landes Nordrhein-Westfalen), Jörg Ortlepp (Gesamtverband der Deutschen Versicherungswirtschaft e.V.), Katharina Reimann (Deutscher Städtetag), Jochen Richard (Planungsbüro Richter Richard), Carolin Ritter (Verkehrsclub Deutschland e.V. (VCD)), Petra Röthke-Habeck (Umweltbundesamt), Norbert Schläger (P.3 Agentur für Kommunikation und Mobilität), Andreas Schmitz (Ingenieurbüro für Stadt- und Mobilitätsplanung (IKS) Kassel), Thomas Schweizer (Fußverkehr Schweiz), Jörg Thiemann-Linden (büro thiemann-linden stadt & mobilität), Dr Minh-Chau Tran (Universität Duisburg-Essen), Frank Uekermann (Stadt Freiburg im Breisgau), Thomas Wehmeier (Bundesamt für Bauwesen und Raumordnung (BBR))