Briefing

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European Parliament

Cycling mobility in the EU

SUMMARY

As an everyday activity for millions of Europeans, cycling is increasing in importance in European society. In economic and social terms, it influences or impacts upon transport, mobility, environment and climate change, the economy and tourism.

Currently, no cycling strategy exists at EU level. Cycling policies are a matter for Member States, which provide the regulatory frameworks and – in many cases – country-wide cycling programmes, while concrete actions are generated mostly at local or regional levels, notably in cities. Nevertheless, the EU has taken an active role in cycling promotion, trying to make the best use of this mode of transport, including in efforts to achieve Europe 2020 strategy targets. Accordingly, a number of EU policies and programmes take cycling into account.

The EU's overall approach aims to bring about a lasting change in people's behaviour, in favour of more cycling. To attain this goal, several different aspects of cycling promotion could benefit from coordinated development. EU support consists principally of guidance, exchange of best practice, and financial support, oriented towards local and regional authorities promoting a stronger culture of cycling mobility.

More and more people use cycling for their everyday travel. As a means of transport over short distances, cycling brings certain economic, environmental and health-related benefits. In parallel, cycling for leisure and tourism is also evolving, thanks to a growing network of cycle paths. One of the most visible cycling developments is taking place in cities, where recent trends such as the introduction of bicycle sharing systems, electric bicycles and cargo bikes, are transforming the cityscape and contributing to a broader acceptance of cycling in society.

For its part, the European Parliament contributes to cycling promotion with continuous active support. Stakeholders are already looking ahead and aiming for a coordinated EU approach to cycling.

In this briefing:

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Context

For more than a century, people have been cycling for leisure, to commute, or for sport. Today, cycling directly impacts a number of key economic sectors. These include: transport, environment and climate change, urban planning and tourism.

The starting point for the current increase in cycling activities is the growing demand for mobility, accentuated by the demographic changes of the second half of the twentieth century. With a large majority of Europeans living in cities,[1] previous mobility patterns have changed considerably. Distances grew shorter thanks to motorised transport, but in parallel, pollution and congestion became serious problems. As the urban population is expected to grow further, cities are striving to achieve more sustainable urban transportation. Many of them began to consider cycling as part of the solution, and started monitoring the share of cycling in their transport mix.

Alongside the development of cycling as an urban phenomenon,[2] national and international cycling as a recreational and holiday activity is on the rise. Cycling tourism has developed into an economically important sector; investment in cycling infrastructure opens up remote regions and creates local and rural employment. Experts estimate that cycling tourism has a high growth potential.

Member States approach cycling policy in different ways. Some have a dedicated national cycling plan or strategy; others include cycling policies in more general national plans for transport, environment or health. In several countries, the national level commitment is limited to regulating road safety, and concrete actions remain mainly within the competence of regional and local authorities. The share of cycling trips in all daily trips varies from country to country, but is lower in Central and Eastern European countries (1-5% of all journeys) than in Western Europe (5-10%), where two countries stand out (the Netherlands at 27% and Denmark at 18%).

The European Union (EU) has taken an active role in cycling promotion, recognising the relevance of cycling for several areas of EU action, notably in transport and tourism, energy and environment, regional and cohesion policy, and public health. Cycling can also contribute to achieving some of the Europe 2020 targets, in particular those concerning climate change and energy sustainability (for instance reducing greenhouse gas emissions by at least 20%, compared to 1990 levels). EU actions generally focus on offering guidance to local authorities promoting cycling mobility, facilitating the exchange of best practice, and supporting projects financially.

Cycling as transport

Cycling offers certain economic, environmental and health-related benefits. The economic advantages are significant, notably in urban environments (according to earlier estimates calculated for the EU-27, at least €205 billion per year, including health benefits, reduced congestion, emissions, pollution and noise). For an individual, the bicycle can be the fastest transport mode for distances up to five kilometres, particularly in congested city centres. When combined with public transport, it can extend commuters' travel range. Apart from the initial purchase, bicycles are relatively cheap to run, require limited maintenance and take up little public space. For society, investment in cycling infrastructure is relatively low-cost,[3] compared to other modes of transport, and makes effective use of urban land. More cycling also opens up new, often local, jobs. These concern not only bicycle manufacture and the retail trade, repairs,

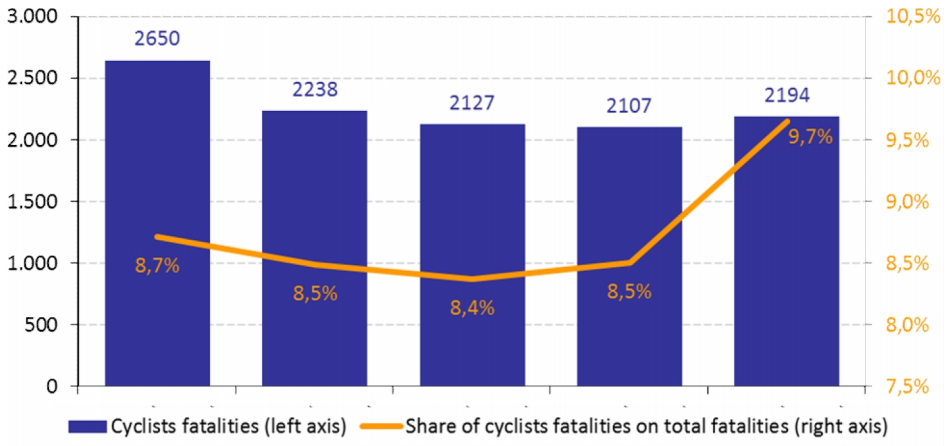
infrastructure construction and maintenance, but also jobs in cycling tourism and services (as a mode of transport, cycling generates 30 000 jobs in France and 18 000 in Austria). On a long-term perspective, investment in cycling schemes can pay off, for example one national study estimated the average economic benefit-to-cost ratio at 13:1.

Cycling is green. By saving fuel, bicycles help lower energy dependence. They also contribute to reducing car traffic and its negative consequences: congestion, greenhouse gas emissions, and air and noise pollution. Nevertheless, these positive effects can come about only to the extent that cycling replaces driving (as opposed to walking or public transport). Nevertheless, research in Dutch, Danish and German cities shows that pro-cycling policies significantly reduce traffic emissions. Many cities in Northern Europe recognise cycling as a key factor in making the urban environment more liveable. The take-up of urban cycling helps regain public spaces occupied by cars and brings new life to the streets.[4] Cycling has become a symbol of a specific urban lifestyle, associated with freedom of movement.

As a physical activity, cycling brings important health benefits. The World Health Organisation recommends such regular moderate exercise as a means of prevention of cardiovascular diseases and obesity. With more people improving their fitness through regular cycling, the mortality and disease-related costs for society decrease.[5]

To best exploit these potential benefits, cycling must be safe, which is not always the case. In contrast with the progress in reducing the number of all road fatalities in the EU, the share of cycling fatalities in all road fatalities was 9.7% in 2014 (compared to 26% for pedestrians). While the numbers slowly decreased[6] up to 2013, 2014 data show a new increase (see Figure 1).

Figure 1 – Cyclist fatalities in road fatalities in EU countries between 2010 and 2014



Data source: European Commission, DG MOVE, Statistical pocketbooks 2010-2014.

Crash-related injuries and the exposure of cyclists to air pollution in traffic are also a concern. However, studies show that for society as a whole the health benefits are substantive when set against the safety risks[7] and the positive effects could be even greater if the environment was more cycle-friendly.

EU policies and support for cycling

While no cycling policy currently exists at EU level, cycling is relevant to several EU policy areas. In the area of transport in particular, policy developments on issues such as urban mobility or road safety have a direct bearing on cycling. Cycling initiatives are

also possible within other programmes or frameworks including, for example, regional policy or research.

The European Commission takes cycling into account in various transport policy documents. In its 2010 policy orientations on road safety 2011-2020 , one of the strategic objectives identified was the protection of vulnerable road users (including cyclists), with subsequent publication of a call for proposals in 2014 for actions to improve road safety in this respect.

In its Urban Mobility Package of 2013, the Commission recommends an approach based on sustainable urban mobility plans. These should coordinate all action on mobility across individual policy areas to foster balanced development and better integration of the different transport modes, while encouraging more sustainable ones. In this way, cycling can be fully integrated into urban mobility policies and infrastructure design.

Cycling is also taken into account in relation to cycling tourism. In the context of developing sustainable tourism, the Commission awarded grants to selected projects to develop cycling routes throughout Europe. It also supported the coordination and promotion of the international EuroVelo routes (see box) and cycle tourism in a wider context.

From 2013 onwards, EU legislation encourages the development of transport and tourism synergies on the trans-European transport network.

The European Commission Intelligent Energy Europe Programme (IEE) encouraged cycling as a contribution to climate action policy and clean and sustainable energy. In the Energy in Transport (STEER) area, the programme supported several non-infrastructure projects, aimed at promoting cycling for everyone as a daily mode of transport, by helping cities to develop a cycling policy strategy, exchanging good practice among cycling cities or targeting the uptake of electric bicycles. The IEE programme ended in 2013, although some projects are still running.

EuroVelo routes

EuroVelo is a network of long distance cycle routes covering the European continent, which can be used both by cycle tourists and by local people. Its objective is to promote all aspects of sustainable travel. The network is coordinated by the European Cyclists' Federation. EuroVelo currently incorporates 14 routes and should be completed by 2020. In 2013, the Commission awarded grants to two projects related to EuroVelo: the Iron Curtain Trail and the Mediterranean route.

Funding in the research area continues under the framework programme for Research and Innovation Horizon 2020, where the EU can support innovation and research projects oriented at smart, green and integrated transport (earmarked with €6.3 billion for 2014-2020). In parallel, cycling was taken into account in the EU Health Programme 2008-2013, which, for instance, financed a project encouraging more physical activity and integrating cycling as the main means of transportation into citizen's daily routines.

The EU also supports platforms for the exchange of best practice, such as the CIty VITAlity Sustainability Initiative (CIVITAS), the European Platform on Mobility Management (EPOMM) and the Urban Mobility Observatory (ELTIS), which contain cycling data. The Transport Research and Innovation Portal (TRIP) offers information on transport, including cycling-oriented, research projects and activities funded throughout Europe.

In the programming period 2007-2013, the EU made an estimated €600 million available for cycling-related projects, in particular from structural and cohesion funds, distributed mostly through national authorities in line with their relevant programming

documents. By way of illustration, projects co-financed from the European Regional Development Fund (ERDF) concerned, for example, improving the share of cycling in transport over short distances including infrastructure adaptation (such as marking separate cycle lanes or cycle-friendly crossings), or integrating cycling within sustainable mobility management schemes. Funding opportunities from the European Structural and Investment Funds in the programming period 2014-2020 depend on the content of partnership agreements with individual Member States, which determine co-financing possibilities from the ERDF and the Cohesion Fund.[8] In addition, the Connecting Europe Facility (CEF) can support large infrastructure projects connected to the trans-European transport network, which can include elements of cycling infrastructure.[9]

Cycling promotion in the Member States

National cycling plans or strategies currently exist in 15 Member States. In countries such as The Netherlands and Denmark, cycling has become one of the principal means of travel in cities, partly because of long-term support from their governments. In Germany, the federal government promotes cycling as part of a modern transport system both in urban and rural areas, both in passing relevant legislation, and by constructing cycle tracks along federal transport infrastructure. Its national cycling plan calls for better coordination among the federal states, local authorities, and authorities responsible for sub-regional planning, with the aim of achieving a 15% cycling share of traffic volume by 2020. While the car maintains a strong position, the overall results of long-term cycling promotion appear positive. As an example, Freiburg, which has long experience in coordinating transport and land use policies, has seen the number of trips by bicycle triple, and trips by car have reduced from 38% to 32%. More interesting still are former car-oriented cities which are currently in the process of developing cycling, such as Munich, where the proportion of journeys made by bicycle jumped from 6% in 1996 to 17% in 2011.

Cycling promotion concentrates on four themes: strategic integrated urban transport planning; infrastructure planning; services for cyclists; and communication and marketing aimed at behavioural change; which need to be coordinated to be effective.

As the danger posed by motorised traffic discourages cycling, the central element of pro-cycling policies is to improve both the real and perceived safety of cyclists. The OECD affirms that well-designed, targeted and sustained policies can increase both numbers of people cycling and their safety. It recommends that efforts to increase cyclist numbers should make the whole traffic system safer for all participants (safe system approach), not just provide partial improvements for cyclists. Measures to increase safety put forward by different players range from traffic calming (limiting speed on shared infrastructure to 30 km/h), improving signalisation, introducing rules for sharing street space with cars, buses or pedestrians, to the construction of separate cycling infrastructure, and adapting intersections and crossings.

Next to the cycling activity itself, end-of trip facilities matter. These include bicycle parking facilities, preferably locked or supervised, to prevent theft and vandalism, lockers and changing rooms, maintenance services and bike accessory shops. The range of daily bicycle users can be increased through better traffic intermodality, both with trains and public transport, by way of providing bicycle racks on vehicles and storage space.

Apart from efforts to include basic cycling techniques in the school curriculum, as established in some Member States, promotional schemes may cover encouraging

commuting to school and work, as well as cycling-in-traffic training programmes for adults, and awareness raising initiatives aimed at car drivers. In the Czech Republic, cycle training is included in transport education, an obligatory part of the basic school curriculum since 2013. After five lessons of theory, ten-year-olds spend five lessons in a transport playground, to safely experience life-like transport settings.

Recent developments

Bike sharing systems (BSS)

Schemes where people can borrow a bicycle at one docking station and leave it at another have become increasingly popular following their successful introduction in Paris and Barcelona, cities where cycling was little developed. While only some systems were running in 2000, by 2014 as many as 700 were set up worldwide. Both large and medium-size cities adopt the schemes as a signal of their bicycle-friendly orientation, and to complement public transport.

Existing BSS differ in fleet size, pricing policy, user registration, and operating models. For instance, the Dutch OV-fiets system has bikes located at more than 100 railway stations, which, apart from bicycle rental, also offer staffed cycle parking and repair services. The German 'call a bike' system is linked to long-distance railway stations and allows users to reserve a bicycle in advance.

Counting on local political and media support, successful introduction of a BSS also depends on the existing city cycling infrastructure, its maintenance, and integration with other modes of transport. Other factors of success are: safety and accessibility for users, the quality of bikes offered, and a financing model with attractive pricing. The network needs a good density of docking stations (every 300 metres in Paris) with steady rental capacity and appropriate servicing and redistribution, especially in uphill locations. Information on bike availability, particularly if accessible via smart applications, is also a plus. As for the environmental impact of these schemes, the proportion of the car-to-bike shift is as yet uncertain, as the pollution caused by the servicing vans, which move bikes from one station to another, is not insignificant.

Electric bicycles

Bikes equipped with an electric motor are known under the generic name 'electric bicycles'. According to the type and level of assistance the motor offers, two main types are available, pedelecs[10] (with limited assistance) and e-bikes. Allowing the user to climb hills easily and cover longer distances than bicycles (cyclists on electric bicycles cover on average 6.3 km per trip, compared to 3.6 km on 'normal' bikes), they make riding easier for people who consider conventional cycling too strenuous. They are used for many professional purposes, for instance postal services, deliveries and couriers. One concern with the first models was their battery range, but today their capacity can accommodate even cyclists who need a high level of assistance. In case the battery runs out, the cyclist can always continue cycling as on a conventional bike, though this will be more strenuous because of the additional weight of the motor. An important aspect for regular use is the recharge time, typically three to five hours. With the number of electric bikes increasing (for example, sales figures in Germany have risen by 30 to 50%), battery recycling schemes will require more attention. A problematic issue for bicycles in general and – due to their higher value – for electric bicycles in particular, is security from theft. Apart from standard bicycle locks, the newer models have an additional protection in form of a removable 'smart' display or a removable battery, without which the electric assistance cannot be used. Some Member States promote electric bicycles

through purchase subsidies or tax relief to companies within cycle-to-work schemes incentivising commuters, or by making them available for rent in a BSS.

Cargo bikes

Congested cities and the search for new solutions for the 'last mile' delivery of goods were the drivers behind the EU-financed project CycleLogistics promoting the use of cargo bikes. The idea is to substitute unnecessary motor vehicle use with more cycles and pedelecs for transportation of goods in urban centres. A project study evaluating cargo bike potential, calculated on the basis of a seven kilometre transport distance, concluded that 25% of urban goods could be delivered by bicycle (and up to 50% of light goods). A bicycle can transport up to 250 kg, but is often used for smaller deliveries.

Compared to trucks and vans, cargo bikes and electric cargo bikes are cheaper to buy, maintain and run. In traffic, they are fast, cost-efficient and reliable. They can be used by businesses, municipalities and private individuals, for instance for shopping or transporting children. Greater uptake of these new trends depends on municipal authority support, to regulate motorised traffic speed or introduce peak time access.

The European Parliament

The European Parliament (EP) has long been an active supporter of cycling. In 2011, in the context of the Roadmap to a Single European Transport Area, the EP urged that EuroVelo should be included in the TEN-T network. In its 2013 Resolution on road safety, and in the context of protecting vulnerable road users, the EP asked the European Commission 'to provide an overview of urban areas with a 30 km/h speed limit, and the effects of that limit on reducing fatalities and serious injuries' and 'to consider linking EU co-financing of urban transport projects to sustainable urban mobility plans that include EU reduction targets for road fatalities and serious injuries'. The EP amended the Commission proposal on the TEN-T Regulation (EU) No 1315/2013 by recommending synergies between bicycle infrastructure and trans-European transport network projects for 'long-distance cycling paths like the EuroVelo routes'.

In 2014, several Members of the EP, from across the political spectrum, founded 'Cycling Forum Europe', bringing together policy-makers and stakeholders for a better understanding of, and exchange of views on, cycling-related policy issues.

Stakeholders

Active at the European level, the European Cyclist's Forum (ECF) brings together over 70 cycling-oriented organisations from Europe and beyond. It seeks to change attitudes, policies and budget allocations at the European level in favour of more cycling. Before the European Parliament elections in 2014, it published a manifesto calling for action in ten key areas where EU policies could make a difference. It recommended adoption of a European Master Plan on Cycling by 2019, calling for a horizontal approach to cycling promotion. It proposes targets for urban mobility and share of cycling in transport.

At the global level, the intergovernmental body Transport, Health and Environment Pan-European Programme (PEP) advocates for transport integration, health and environmental objectives in politics at national level. Coordinated by the World Health Organisation (WHO) and the United Nations Economic Council for Europe (UNECE), it has 56 signatory states. In 2014, PEP decided to prepare a pan-European Master Plan for Cycling Promotion, to be adopted by 2019.

Main references

Cycling, Health and Safety, OECD/ITF, 2013.
The European cycle route network Eurovelo, EP Policy Department B, European Parliament, 2012.
Promotion of Cycling: Give cycling a push, PRESTO Cycling Policy Guide, 2010.
The promotion of cycling, EP Policy Department B, European Parliament, 2010.

Endnotes

1 In 2012, 71.7% of the EU‑28 population lived in a densely populated, or an intermediate, urbanised area.
2 In a 2013 Eurobarometer survey exploring urban mobility, respondents answered how often they cycle. Those who cycle daily were most numerous in the Netherlands (43%) and Denmark (30%), only 1% of respondents in Malta cycle daily and 93% never cycle.
3 The German national cycling plan 2020 calculates local authorities' funding needs for cycling, depending on the starting situation and future prospects of a given locality, at €8-19 per resident and year. This includes construction, maintenance and operation of cycling infrastructure, parking facilities, and 'soft' measures, such as communications and service.
4 T. A. Carstensen and A. Ebert, *Cycling cultures in Northern Europe: from "Golden Age" to "Renaissance"*, in Cycling and Sustainability, John Parkin Ed., Emerald Group Publishing Limited, 2012, pp. 23-58.
5 Copenhagen data affirm 30% reduction of mortality for adults who cycle to and from work every day and estimate the annual health benefits from cycling in Copenhagen at about €230 million.
6 In the decade 2001-2010 cyclist fatalities decreased by 38% in the EU-20 countries where comparable data was available.
7 'Virtually all scientific studies show that the health benefits of cycling far offset the traffic dangers.' P. L. Jacobsen and H. Ruter, *Cycling Safety* (p. 142), in City Cycling, ed. J. Pucher and R. Buehler, Massachusets Institute of Technology, 2012, pp. 141-156.
8 Member States eligible for funding from the Cohesion Fund in 2014-2020 are: Bulgaria, the Czech Republic, Estonia, Greece, Croatia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Portugal, Romania, Slovenia and Slovakia, while Cyprus will receive phasing-out support.
9 The CEF transport call 2014 (p.3) stipulates that 'Where applicable as part of a broader project of common interest, actions may include activities for the adaptation of TEN-T infrastructure to ensure the continuity of bicycle infrastructure for long-distance cycling paths such as the EuroVelo routes. These activities may include relevant adaptation of traffic signalling systems or the addition of infrastructure dedicated to cyclists and pedestrians.'
10 Pedelecs are 'cycles with pedal assistance which are equipped with an auxiliary electric motor having a maximum continuous rated power of 0,25 kW, of which the output is progressively reduced and finally cut off as the vehicle reaches a speed of 25 km/h, or sooner, if the cyclist stops pedalling'. Directive 2002/24/EC uses this definition to exclude them from the scope of two/three-wheel motor vehicles requiring type approval, confirming their classification as bicycles. Pedelecs can be freely used on cycle lanes, whilst e-bikes (with motor assistance exceeding 25 km/h) are classified as mopeds, implying related obligations (helmet, insurance, age limit, or driving licence and number plate).

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