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Data collection on cycling infrastructure

Note by the secretariat

Summary

This document discusses the importance of data collection on cycling infrastructure, focusing on the need for standardized definitions and methodologies across the ECE region. It outlines the efforts of the Group of Experts on cycling infrastructure module and the Working Party in defining and collecting data on cycling infrastructure to support sustainable urban mobility and informed policy-making.

I. Introduction

1. The rising share of cycling as a mode of transport, spurred by the COVID-19 pandemic and its promotion as a sustainable transport mode, necessitates the development of safe infrastructure to ensure the safety of this vulnerable road user group. A comprehensive cycling network should be an important element of mobility strategies at national, regional, or municipal levels.

2. This situation calls for a targeted approach to collecting comprehensive data, which is pivotal for urban planners, policymakers, and governments in fostering cycling-friendly environments and advancing sustainable urban mobility. Such efforts are in alignment with the Sustainable Development Goals, particularly Goal 11 (Sustainable Cities and Communities).

3. There exists a pressing need to standardize data collection methodologies across the ECE region to ensure comparability and consistency. The Working Party provides an ideal platform to facilitate this standardization through international cooperation and guidelines. This need aligns with the efforts of ECE's Group of Experts on cycling infrastructure module (GE.5), a subsidiary body of the Working Party on Transport Trends and Economics (WP.5). GE.5 has been instrumental in gathering geographic information system (GIS) data on the existing and proposed national cycling network in the ECE region.

4. This document aims to inform the Working Party on the activities of GE.5 and to initiate a discussion on how the Working Party can coordinate its efforts with those of GE.5 to achieve coherence in collecting data on cycling infrastructure.

II. Defining cycling infrastructure

5. The diversity of terms and definitions related to cycling infrastructure, such as "noncompulsory cycle track", "advisory cycle lane", "cycle street", and "cycle highway", presents a significant challenge for consistent data collection and analysis. These varying terminologies can lead to confusion and inconsistencies in both national and international contexts. The lack of a standardized lexicon hinders the effective comparison of cycling infrastructure data across different regions and countries.

6. Defining and agreeing upon uniform terminology for cycling infrastructure is of utmost importance. Clear and consistent definitions will facilitate more accurate and reliable data collection, allowing policymakers, urban planners, and researchers to make informed decisions. Internationally agreed definitions will also ensure that data collected is comparable across different geographical and administrative contexts, thereby enhancing the effectiveness of transnational studies and policy formulations. The Working Party, in collaboration with GE.5, has a pivotal role in spearheading this effort.

7. GE.5 has discussed and agreed on definitions for various types of cycling infrastructure. The Eurostat – ITF – UNECE Glossary for Transport Statistics, last updated in 2019, includes terms and definitions related to cycling infrastructure. Annex I lists the draft definitions for types of cycling infrastructure proposed by GE.5 in the cycling infrastructure module and indicates whether each is included in the Glossary.

III. United Nations Economic Commission for Europe cycling network

8. Data on national cycling networks of UNECE countries has been made available on the ECE-led International Transport Infrastructure Observatory (ITIO) GIS platform.¹ This also includes relevant EuroVelo routes and data from the Danube Cycle Plans project (see the figure below).

¹ https://gis.unece.org/portal/apps/experiencebuilder/experience/ ?id=ee9f8fb39436409b91b3563c778eff1e&page=page_7.

UNECE cycling network on ITIO



9. Currently, only the routes of the network are featured on the platform. However, it would be beneficial to also include:

- The type of infrastructure (e.g. cycle track, cycle lane, cycle highway); and
- Technical parameters per infrastructure category,² such as width.

IV. Discussion and concluding remarks

10. In light of the ongoing work of GE.5, the Working Party may wish to consider the incorporation of national cycling infrastructure data into the Common Questionnaire. This proposal is also under discussion as part of the upcoming streamlining process for the Common Questionnaire (ECE/TRANS/WP.6/2024/6).

11. To facilitate this integration, it is imperative to include relevant terminologies and their respective definitions in the Glossary for transport statistics. The Glossary is currently intended to be published in an interactive online format (ECE/TRANS/WP.6/2024/9). The terminologies and definitions proposed by GE.5, as listed in Annex I, will be given due consideration in this regard.

12. The Working Party is also encouraged to provide feedback on the proposed terminologies and definitions to ensure a more unified approach in capturing data across diverse national contexts.

² GE.5 classifies cycle routes into three categories: basic cycle route, main cycle route, and cycle highway.

Annex

Draft definitions for types of cycling infrastructure proposed by ECE Group of Experts in cycling infrastructure module

Type of cycling infrastructure	Definition	Included in the Glossary?
Cycle track	A cycle track is an independent road or part of a road designated for cycles, signposted as such. A cycle track is separated from other roads or other parts of the same road by structural means. <i>The cycle track shall be</i> <i>signposted as compulsory cycle track if the track</i> <i>parameters, as per national legislation in force, allow</i> <i>for seamless cycle traffic on the track by all cyclist user</i> <i>categories at any time. The cycle track shall be</i> <i>signposted as non-compulsory cycle track in any other</i> <i>case.</i>	Yes, except the portion in italics.
Greenway	A greenway is a non-mandatory cycle track independent from the road network, which often follows a canal or a disused railroad. Its use is open to road users as signposted or defined in the national legislation.	No
Cycle lane	A cycle lane is a part of a carriageway designated for cycles. A cycle lane is distinguished from the rest of the carriageway by longitudinal road markings.	Yes
Advisory cycle lane	An advisory cycle lane is a part of the carriageway distinguished from the rest of the carriageway by longitudinal road markings which does not directly imply any restrictions or obligations on road users. In particular, motor traffic is allowed to enter the advisory cycle lane. Advisory cycle lane markings should not be considered as a delimitation of a space exclusively for cyclists. They can be an indicator of the space cyclists need or of the recommended position of a cyclist on the carriageway, especially if it is not directly adjacent to the edge of the carriageway.	Yes
Sharrows	Sharrows are road markings indicating recommended position of cyclists on the carriageway. They do not imply any restrictions or obligations, but they can serve to guide cyclists (for example, to keep safe distance from parked cars) on sections they share with motorised traffic. They can also warn other road users about the presence of cyclists. Sharrows are often used in connection with contraflow cycling, on roundabouts, or in places where cyclists can ride on a carriageway despite the existence of a segregated infrastructure (because, for example, the cycle track does not serve all directions on the next crossing).	No
2-1 road	2-1 road is a bidirectional road with two advisory cycle lanes marked on the carriageway, where the remaining carriageway is not wide enough for two motor vehicles other than motorcycle. Power driven vehicle drivers are advised to use the central lane in both directions, only	No

Type of cycling infrastructure	Definition	Included in the Glossary?
	deviating to the edge of the carriageway in the case of passing a vehicle incoming from the opposite direction. 2-1 roads are typically used on rural roads with low volumes of motorised traffic.	
Cycle street	A cycle street is a specially designed section of road or an area where special traffic rules apply and it is signposted as such at its entries and exits.	No
	Cycle street, provisions for special regulations:	
	(a) Speed limit 30 km/h,	
	(b) Cyclists are exempted from any prohibition from travelling two or more abreast, if such a prohibition exists in national legislation for other situations,	
	(c) Drivers shall not put cyclists at risk even if traveling two or more abreast. If necessary, drivers should stop to allow cyclists to pass,	
	(d) Parking is forbidden except where allowed by parking signs.	
	Cycle street, conditions for use:	
	(a) Volume of cycle traffic exceeds 40% of the volume of motorised traffic.	
	(b) Volume of motorised traffic does not exceed 2,500 cars/day.	
	(c) Through traffic of motorised vehicles has been eliminated (e.g. through traffic filters, a system of one-way streets, etc.).	
Street with contraflow cycling	A street with contraflow cycling is a road that is one- way for general traffic but may be used by cyclists in both directions. The cycling contraflow is signposted at its entries by relevant signage. Additionally, horizontal marking for sharrows might be used to remind motor vehicle drivers of the possibility of incoming cycle traffic.	Yes
Bus-and-cycle lane	A bus-and-cycle lane is a lane reserved for (public transport) buses and cycles.	Bus lane and cycle lane as separate terms are included in the glossary.
Sidewalk with cycling allowed	A sidewalk with cycling allowed is a part of the road originally designed for pedestrians where cycling has been (conditionally) authorised, either by general rules or through a cycle panel under the pedestrian track sign.	No
Agricultural / forestry / industry / water management road	An agricultural, forestry, industry and/or water management road is a non-public road closed to general traffic. These roads typically carry very low motor vehicle traffic, and with proper signs, cycling can be exempted from the general prohibition.	No

Type of cycling infrastructure	Definition	Included in the Glossary?
Cycle crossing	A cycle crossing is the place where cyclists need to interact with motor vehicles on a crossing even if cycle tracks can provide physical separation in between the crossings. The crossing space should be denoted by transversal horizontal markings and, if considered advisable by competent authorities, also by road signs for approaching motor vehicles.	No
Grade- separated cycle crossing	A grade-separated cycle crossing is a cycle tunnel or bridge on a cycle track which offers cyclists a way of crossing a natural or artificial barrier, such as a river, a busy road, or a railway line.	No
Advanced stop line, bike box, bike lock	An advanced stop line, bike box or bike lock is an area on an entry arm of a junction that reserves space for cyclists and either makes it easier for a cyclist to perform a turn manoeuvre or increase the cyclists' visibility for car drivers.	No
Indirect / hook / two-stage turn provision	An indirect / hook / two-stage turn provision provides space on the carriageway and/or signing allowing cyclists wishing to turn to cross the intersection in two separate stages.	No
Cycle parking	A cycle parking is a dedicated place for parking cycles. Two main types of cycle parking are cycle stands (mostly for short term parking) and cycle lockers (for long-term parking or for cycle tourist). Additional characteristics of cycle parking may include:	No
	• Its suitability for cargo cycles;	
	• Its location on-street or in an area with regulated access;	
	• Its roof-cover;	
	• Its electric power charging options for assisted cycles.	
Traffic-light exemption for cyclists	A traffic-light exemption for cyclists allows cyclists to bypass a traffic light. A dedicated sign underneath or next to the traffic light indicates in which directions cyclists might go without observing the traffic light while giving priority of way to perpendicular traffic and pedestrians.	No
Cycle highway	A cycle highway is a mobility product that provides a high-quality cycling connection for commuting purposes and in this way serves as a backbone of a cycle network connecting cities with their suburbs, residential areas and major (work) places and offers cycling experience satisfying all its users.	No

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