Economic Commission for Europe

Inland Transport Committee

Working Party on Transport Trends and Economics

Group of Experts on cycling infrastructure module

Second session
Geneva, 28 and 29 November 2022
Item 2 of the provisional agenda
United Nations Economic Commission for Europe cycling network

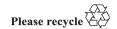## Draft guide for designating national cycling network

Submitted by secretariat

I. Introduction

1.   The Group of Experts on cycling infrastructure module (GE.5) agreed at its first session that a draft of a guide for designating national cycling network should be developed. This guide should contain and explain recommended steps for the initial designation of national cycling networks, which could be applied by countries which neither have procedure in place nor experience in designating cycling networks.

2.   This document presents a draft of the guide. It was elaborated based on the Guidelines to Define National Cycle Route Network prepared in the framework of the Danube Cycle Plans Project and other available material. This document further contains placeholders for cycling infrastructure types and their parameters which should be applied to constitute the network and other placeholders for GE.5 recommendations.

3.   GE.5 is invited to consider this document and elaborate it further as deemed necessary.

II. Setting objective

4.   Cycling networks should be an important component of a mobility strategy of a country, region or a municipality. They need therefore to be, if not done so yet, an integral part of the infrastructure and mobility plans.

5.   The networks at the municipality and regional levels should serve as a backbone for the intercity and inter-points-of-interest connections to form the national network. In such a way, the network is able to serve various types of users both as a whole or at its different sections. Such network would support the everyday commuting and leisure needs of the population. It can also support the tourism offer of a country or region.

6.   Therefore, when designating a cycling network at a national level, there should be a full clarity and understating as to:

- types of users the network or parts thereof need to serve,

- needs and priorities the different types of users have, and

- types of infrastructure the different users need.

7.　　When it comes to cyclists, one can differentiate between everyday, leisure or tourist cyclists. At the same time, within the three groups, one can differentiate by their experience or ability to cycle or by the type of cycle they use.

8.　　 There are numerous and different needs and priorities that cyclists may have across the different groups of users. Among them, e.g.:

- safety: the cycling route has to be safe both in terms of interaction with motorised traffic (external interaction), with other cyclists (internal interaction) or between the cyclist and the infrastructure,

- directness: the cycling route should allow for a most direct, short connection between two places,

- continuity: the cycling route should be uninterrupted, well connected and signposted,

- attractiveness: the cycling route crosses through recommended points of interests, and

- comfort: the cycling route allows easy use (no steep slopes; clear signage, access to facilities, connectivity to public transport, rest areas and equipment along the route) and comfortable flow of traffic.

9.　　There are different types of cycling infrastructure developed and operated in accordance with specific parameters. Depending on the infrastructure type and its parameters it can be suitable to serve more some user needs and their priorities rather than other from the list above.

10.　　Availability of the already existing infrastructure which can be used by cyclists, or which would need to be adapted to the needs of cyclists is another important aspect in developing cycling network and in taking a decision on what specific type of infrastructure (and with which parameters) would be the most appropriate one, also from the angle of the investment needs, in constituting the network.

11.　　Generally, different cycling infrastructure types can be clustered into three groups, as below, to specify when cyclists could use the available road infrastructure depending on volumes and speed of motorised traffic.

12.　　These three clusters are:

- Cycle tracks (including greenways)

- Cycle lanes (including bus-and-cycle lanes and contraflow cycle lanes)

- Mixed traffic (including cycle streets, streets with contraflow cycling, agricultural / forestry / industry / water management roads).

13.　　This analysis could be further reinforced by taking into account additional factors such as e.g. volume of cycling traffic but also other factors.

14.　　In situations, where the cycling traffic is significant, while the motorized traffic is low, an earlier built road serving motorized traffic can be reclassified for example to a cycle street in the process of cycling network development. In such a case, the road will continue serving a mixed traffic, however it will give priority to cyclists over other users.

15.　　The table below lists a possible type of infrastructure depending on different speeds and volumes of motorised traffic. In particular, it shows in which situations mixed traffic is not appropriate and should not be allowed. This simple table can thus serve as an objective guide in prioritizing investments needs for upgrading infrastructure on a planned network. Again, it is a simplified approach, and the grouping may change if additional factors, such as cycling traffic volume or others are also taken into account.

	Up to 30 km/h	*31-50 km/h*	*51-79 km/h*	*80+ km/h*
1-500 vehicles/day	Mixed traffic	Mixed traffic	Mixed traffic	Mixed traffic Cycle lane Cycle track
501-2000 vehicles/day	Mixed traffic	Mixed traffic Cycle lane Cycle track	Cycle lane Cycle track	Cycle lane Cycle track
2001-4000 vehicles/day	Mixed traffic Cycle lane Cycle track	Cycle lane Cycle track	Cycle lane Cycle track	Cycle lane Cycle track
4001-10000 vehicles/day	Cycle lane Cycle track	Cycle lane Cycle track	Cycle lane Cycle track	Cycle track
> 10000 vehicles/day	Cycle lane Cycle track	Cycle track	Cycle track	Cycle track

16.   As stated above, the designation of the cycling network is a complex task. It should follow therefore a comprehensive and structured process. Steps recommended in this process are listed and explained in section III.

III.   Steps in designating the cycling network

17.   The following steps are recommended to be followed for designating cycling infrastructure at the national level:

Step 1:   Set up a team for designating the cycling network at the national level.

Step 2:   Set objectives for the cycling network service – define users, their needs, and ways to address them.

Step 3:   Assess available routes and existing infrastructure – identify what cycling routes exist at different administrative levels and of what type, which can constitute national cycling network as well as evaluate available infrastructure which can be adapted for cycling.

Step 4:   Define criteria for use of specific infrastructure type on the network.

Step 5:   Designate the network – draw the network and identify links to other networks as necessary.

Step 6:   Hold public consultations – involve administrative bodies, public, cycling organisations and associations and collect and consider their feedback on the network as well as redesign options.

Step 7:   Detail the network and indicate the missing links or network section for improvement to achieve the criteria set up in step 3.

Step 8:   Approve the cycling network and implement it.

Step 1:   Set up the team:

18.   Depending on the administrative organisation of a country, and to have a good insight into the work done at various administrative levels, it should be considered to set up a team consisting of experts from various administrative levels. The team, if possible, may also include experts from cycling associations and industry.

[Placeholder for specific GE.5 recommendation]

Step 2:   **Set objectives for the cycling network service**:

19.   In this step, the objectives as discussed in section II should be considered and defined.

20.   As any network should follow the priority for safety, criteria need to be set up for achieving adequate safety level taking into consideration the external (with motorised traffic) and internal (among cyclists) interactions as well as the cyclist interaction with the infrastructure.

21.   Legislation and policies should be examined on user classification, separation requirements in place/in force.

[Placeholder for GE.5 recommendations for:

    (a)   user classification,

    (b)   separation of cyclists from motorised traffic, and

    (c)   separation between types of cyclists and classification of routes].

Step 3:   **Assess available routes:**

22.   The aim of this step it is to obtain an up-to-date status of the existing cycling infrastructure and relevant services (access to facilities, connectivity to public transport). Other planed or existing cycling networks should also be taken into account, especially EuroVelo, the European Cycle Network or other trans-national cycle networks.

23.   It is also important under this step to assess available road and other infrastructure that could be used or adapted and used for safe and comfortable cycling. This would involve assessment of ordinary roads or special roads such as service roads, or evaluation of river valleys, canal towpaths or even unused railway lines on their appropriateness for locating cycling routes.

24.   The evaluation should encompass for each cycling route or its section the type of the infrastructure and its parameters. It is recommended that this information is collected and stored in the Geographic Information System (GIS) environment.

[Placeholder for GE.5 recommendations on the classification of types of cycling infrastructure and the parameters]

Step 4:   **Define usage criteria:**

25.   The aim of this step is to define the types of infrastructure for the network (if not done so yet), and the values of their parameters. Furthermore, depending on the route classification as a function of their primary users, the parameters can be defined for different classes of routes/their primary users.

26.   Legislation and standards in place should be examined. Efforts should be made to introduce binding standards in the country.

[Placeholder for GE.5 recommendations with parameter values for selected types of infrastructure and proposed user/route classification]

Step 5:   **Designate the network:**

27.   The aim of this step is to designate an achievable cycling network at the national level taking into account:

    • the defined objectives, criteria and classifications,

    • the existing infrastructure, and when necessary, the indications for upgrade.

28.   The network plan should be drawn up in GIS environment.

29.   When drawing it, the following issues should be re-analysed in connection with the objectives set for the network:

    • connectivity to important urban centres at national and regional level,

    • linking to the important tourist attractions,

- route attractiveness – along waterways, in nature,
- route comfort (inclination),
- connectivity to public transport,
- cross-border-connectivity, especially with transnational cycle routes such as EuroVelo.

[Placeholder for specific GE.5 recommendations]

Step 6:   Hold public consultations:

30.   Public consultations is an important step to get the necessary buy-in for the network but also to correct its design by receiving the feedback from the future users, public at large from own as well as neighbouring countries and other important stakeholders, including the local communities and administration through which the network would cross. For the connectivity across borders, also administration from neighbouring countries should be consulted.

31.   Public consultation and public participation may be in any case a requirement as per national legislation in force, in particular for countries, Contracting Parties to the Aarhus Convention.

32.   Through the public consultation the following should be confirmed:

- is the network meeting the expectations and requirements of the stakeholders,
- other.

[Placeholder for specific GE.5 recommendations]

Step 7:   Detail the network

33.   The aim of this step is the preparation of a detailed business plan for the development and maintenance of the network. For the development phase the focus needs to be given to put in place an achievable plan for construction of the missing links and for upgrades of the available but deficient infrastructure.

34.   The step should also incorporate preparation of legislative acts, if not yet available in the country, for introducing binding standards.

[Placeholder for specific GE.5 recommendations]

Step 8:   Approve the cycling network and implement it

35.   The aim of this step is the approval of the plan at the government level together with a business plan for its implementation. It is also the adoption of the legal acts and standards and their publication.

[Placeholder for specific GE.5 recommendations]

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