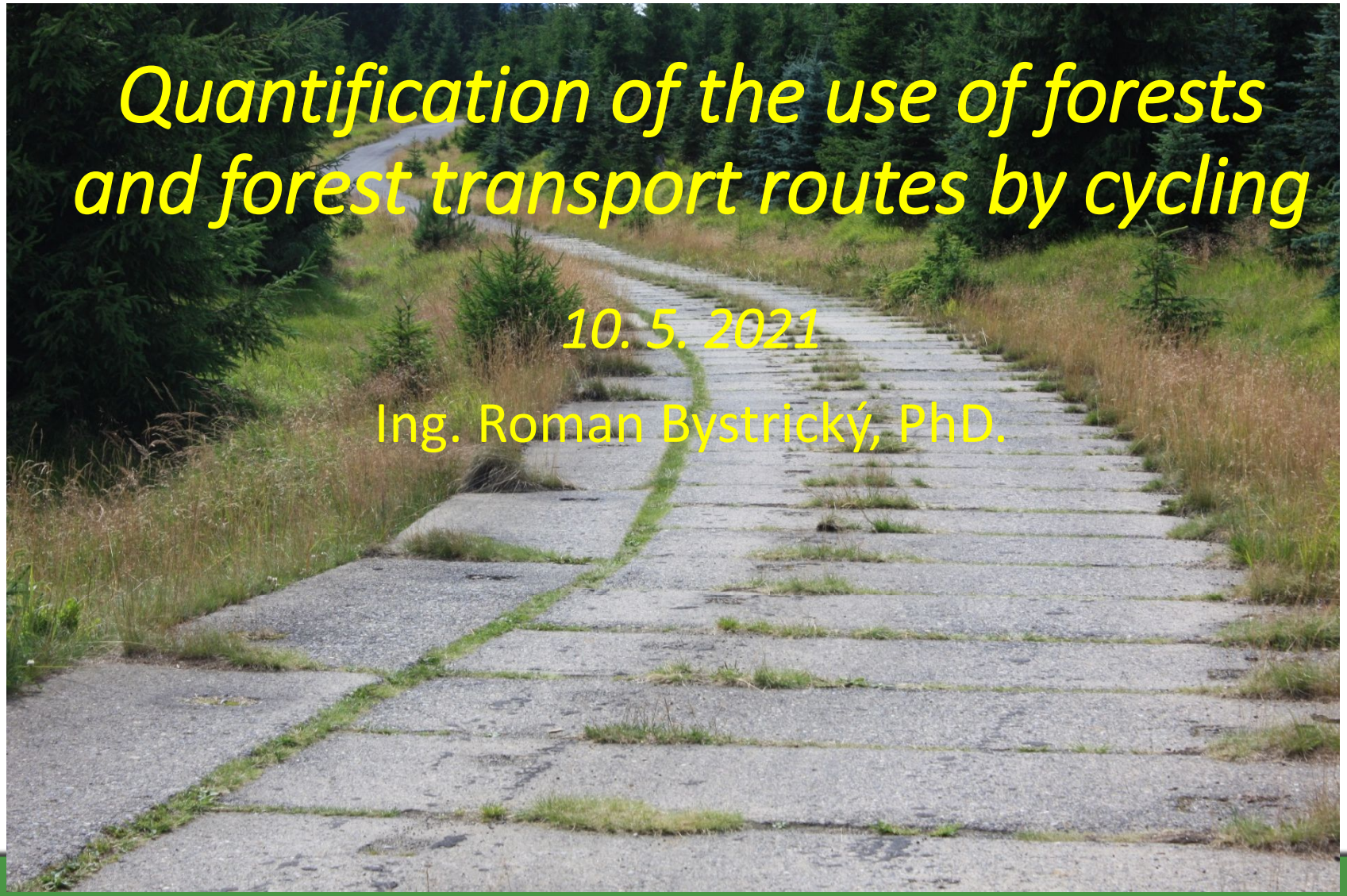
Česká zemědělská univerzita v Praze
Fakulta lesnická a dřevařská



# *Quantification of the use of forests and forest transport routes by cycling*

*10. 5. 2021*

Ing. Roman Bystrický, PhD.

# Introduction

- Cycling, together with hiking, is an important phenomenon in the use of the landscape, especially the forest.
- In 2016, about 42,000 km of hiking trails were registered.
- The cycle routes also showed similar length, when about 40,000 km were marked in the Czech Republic.
- The basic aspect of the evaluation of the recreational use of forests is the fact that the dominant volume of information was surveyed by various sociological surveys and questionnaires.

# Introduction

- There was often a different understanding of the content of the question between the interviewer and the interviewee.
- The measured values were difficult to express qualitatively or quantitatively, or this expression was not entirely obvious.
- An important aspect is the essentially positive understanding of recreation in the forest and disregard of the negative consequences of the mass movement of the population in the forest.

# Materials and methods

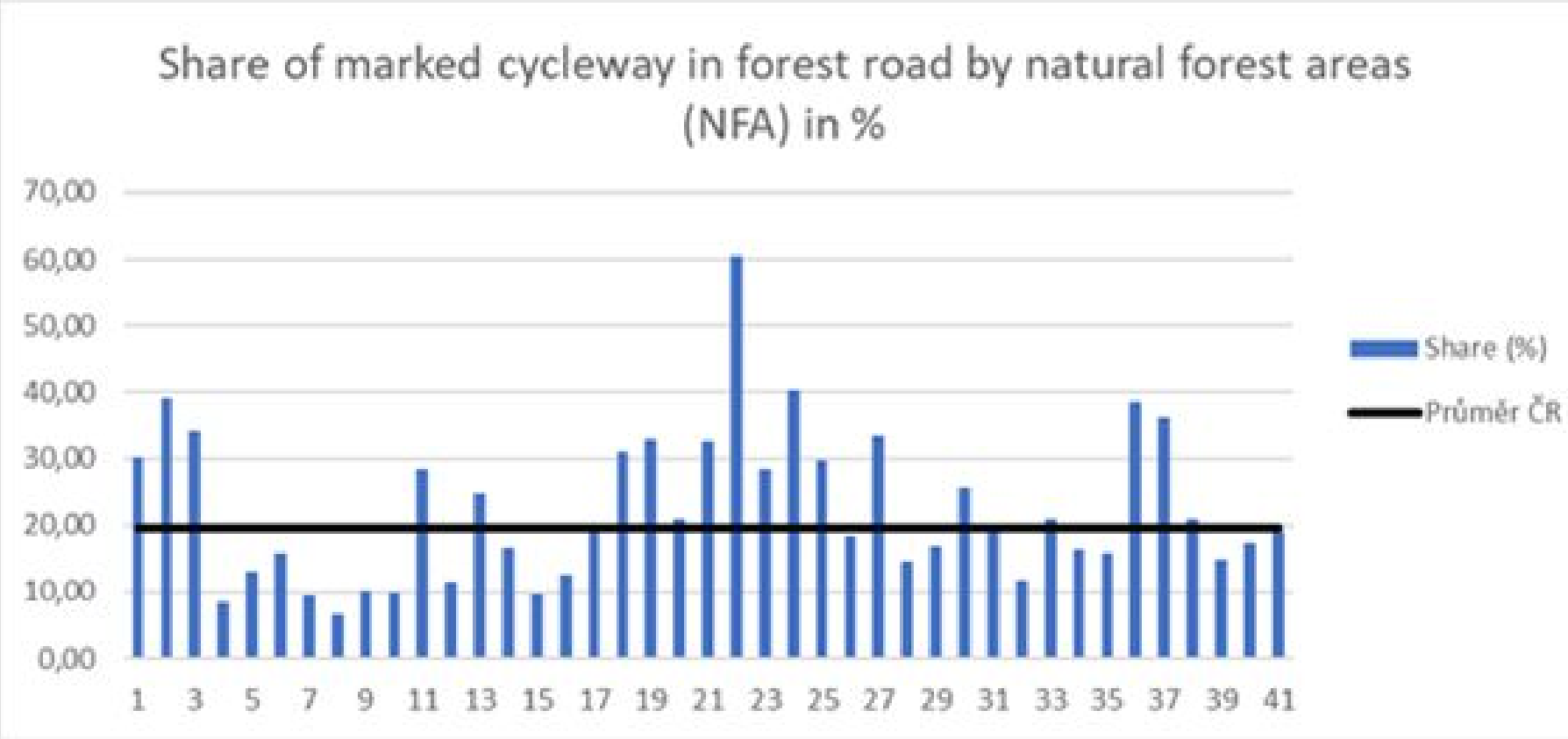
- The basic hypothesis is similar to that concerning hiking routes (Bystricky 2020) and is based on the fact that a significant part of the above-mentioned hiking routes, cycling and other routes use forest transport routes of class 1L or 2L.
- This can be relatively objectively quantified and qualified and is not burdened by subjective assessment or misunderstanding of a particular criterion.
- The problem is the different geometry of linear objects of forest transport routes and cycling routes, due to the analysed data did not come from the same sources and were digitized on different materials.

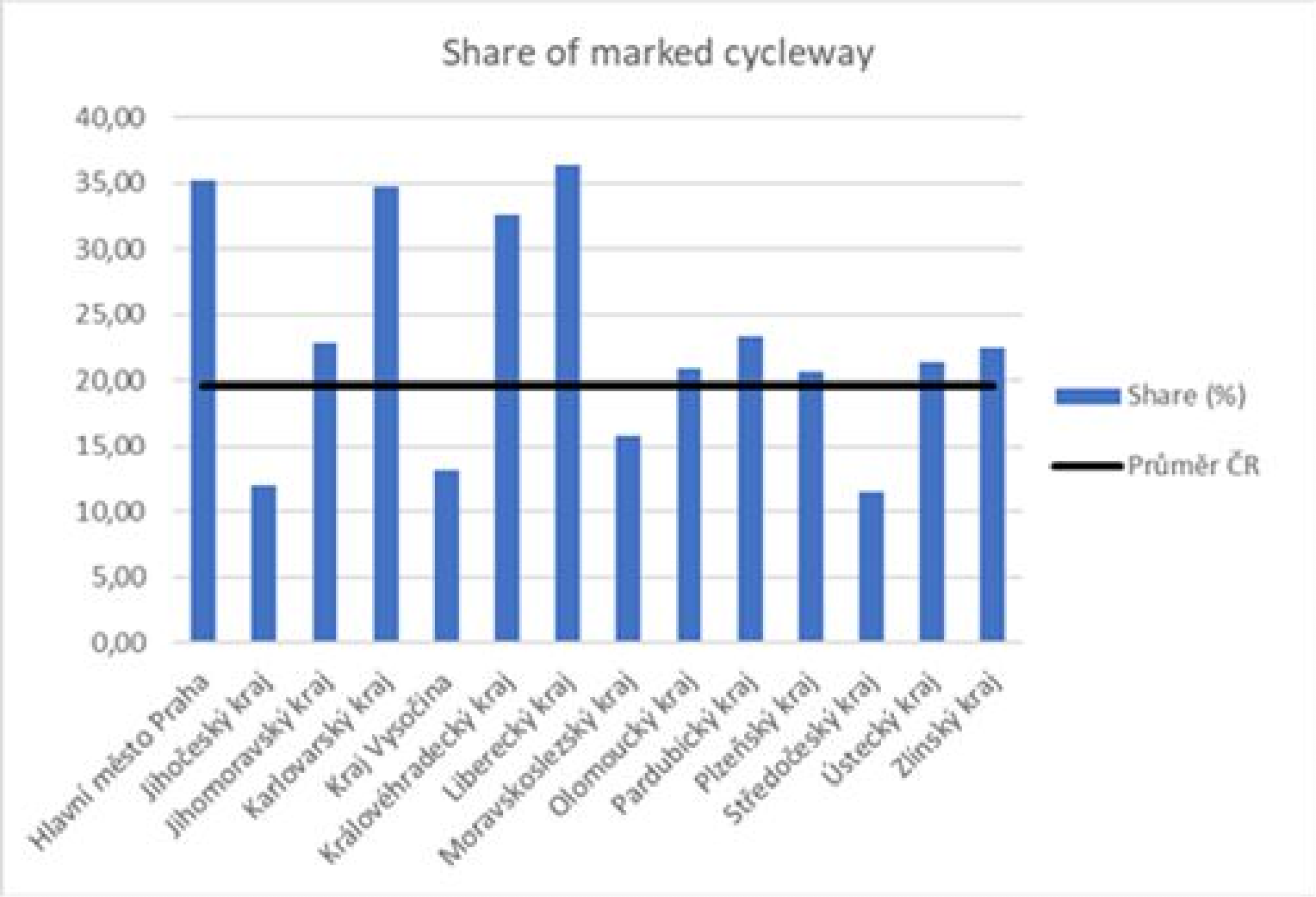
# Materials and methods

- Concurrence of forest transport routes and other types of routes can be used for assessment of the the conformity of geometry.
- Only cycling routes in the belt of 20 meters far from the line of the forest road will be assessed, to verify the above hypothesis.
- All lines in distance further than 20 m far away will be considered as separate lines, not restricting forest traffic.
- The aim of all works and analyses will be:
- - Assessment of the consistency of cycling and forest routes
- - Evaluation and initial quantification of the use of forest transport routes

# Results

- From the provided documents and analyses results, that on average are in forest natural area used approx. 20% of all forest paths for recreation.
- However, in comparison with regions, the differentiation and variance of values is much higher.
- Natural forest areas (NFA) 2, 24 and 36 show the highest share - over 40% of all forest roads are used for cycling activity.
- The extreme is NFA 22 – The Giant Mountains (Krkonoše), where the share of forest transport routes used for cycling reaches almost 61%.


Share of marked cycleway in forest road by natural forest areas (NFA) in %
70,00
60,00
50,00
40,00
30,00
20,00
10,00
0,00
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41
Share (%)
Průměr ČR


Share of marked cycleway
40,00
35,00
30,00
25,00
20,00
15,00
10,00
5,00
0,00
Hlavní město Praha
Jihočeský kraj
Jihomoravský kraj
Karlovarský kraj
Kraj Vysočina
Královéhradecký kraj
Liberecký kraj
Moravskoslezský kraj
Olomoucký kraj
Pardubický kraj
Plzeňský kraj
Středočeský kraj
Ústecký kraj
Zlínský kraj
Share (%)
Průměr ČR

# Conclusion

- The aim of the paper was to propose a procedure for an objective assessment of the burden on landscape by cycling activity. As Bystricky (2020) proposed, it is crucial to create, after further examination, the prerequisites for designing measures and procedures for individual types of territory. Thus, minimizing discrepancies between different types of forest use, which may actually make a rational forest management impossible.
- These documents are gradually being used in newly processed Regional Plans of Forest Development (RPFD).

# Thank you for your attention