



**Faculty
of Forestry
and Wood
Technology**

**The Role of Forest Functions within
Ecosystem Services
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The Approach to Assessing the Recreational Forest Function of the Interest Area

**Mendel
University
in Brno**



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Department of Forest and Wood Products
Economics and Policy

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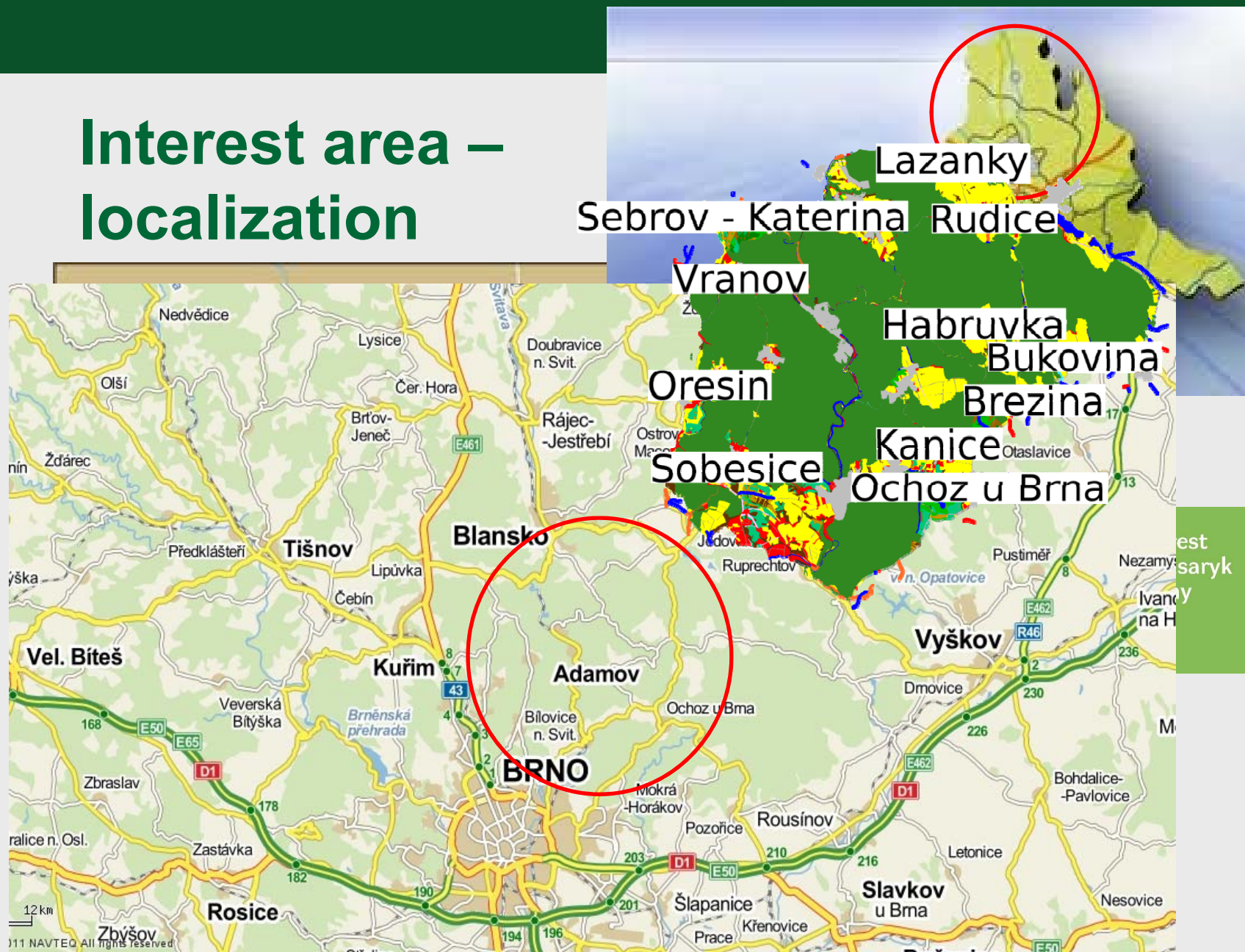
Introduction

- **the aim:** to describe a methodological approach of research activities of FFWT, Mendel University in Brno
- focus on identifying the actual and potential cash flows in the area of interest and benefits of forest enterprises for the local economy
- 2015: Internal Grant Agency project of FFWT No. LDF_VT_2015010
- 2016: Internal Grant Agency project of FFWT No. LDF_VT_2016007

Introduction

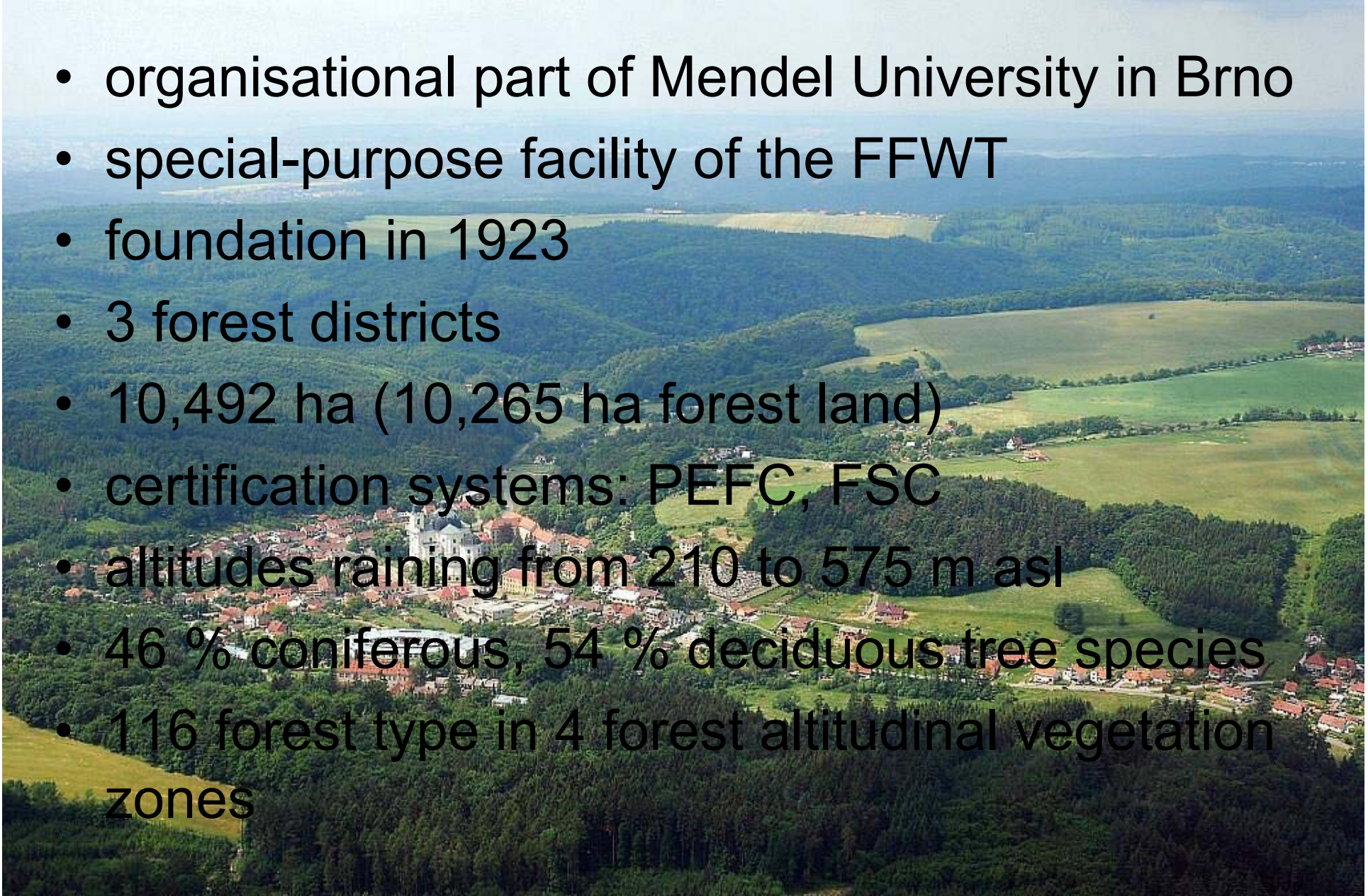
- cooperation:
 - Department of Forest and Wood Products Economics and Policy
 - Department of Landscape Management

Interest area – localization



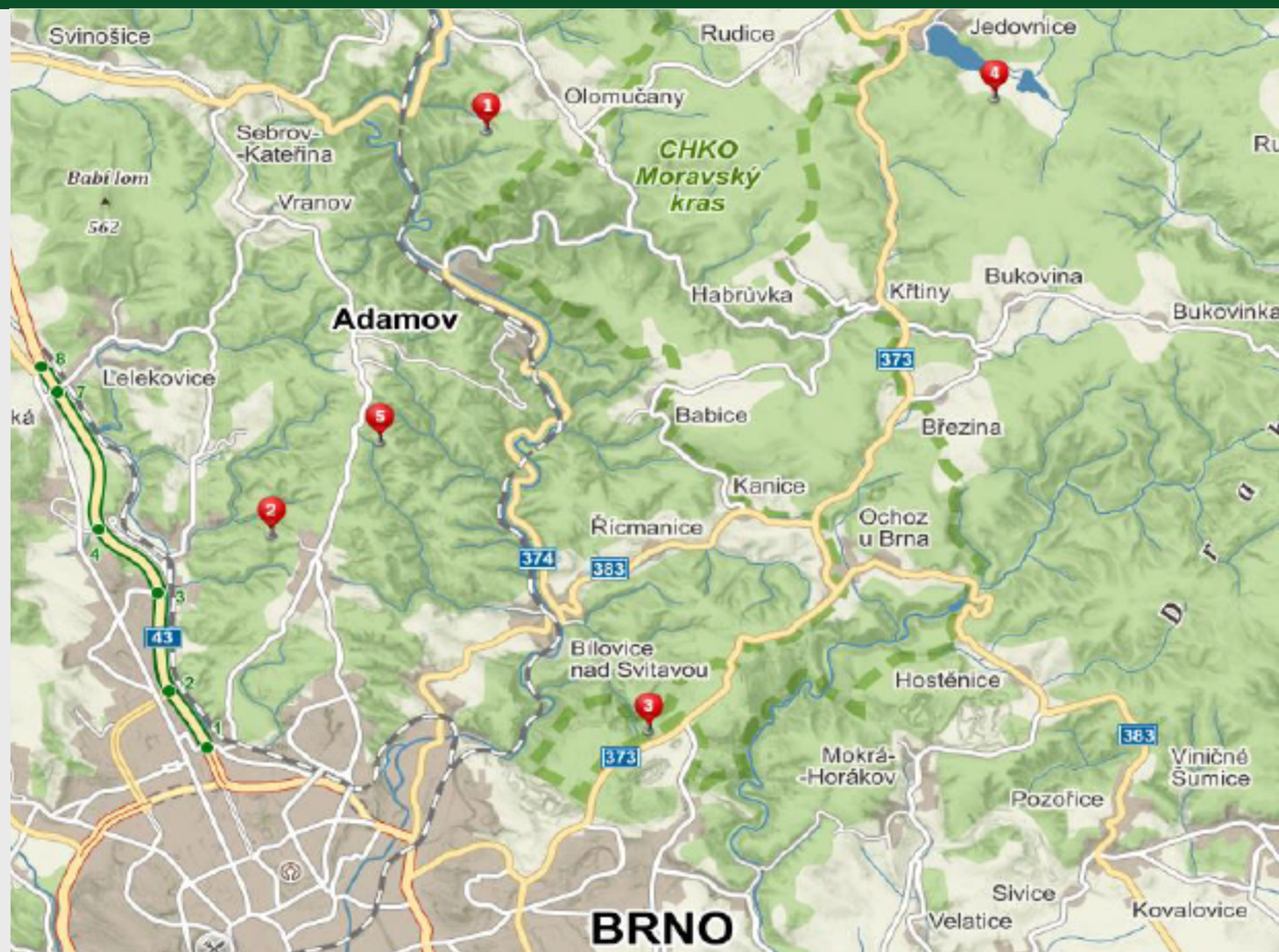
Training Forest Enterprise Masaryk Forest Křtiny

- organisational part of Mendel University in Brno
- special-purpose facility of the FFWT
- foundation in 1923
- 3 forest districts
- 10,492 ha (10,265 ha forest land)
- certification systems: PEFC, FSC
- altitudes ranging from 210 to 575 m asl
- 46 % coniferous, 54 % deciduous tree species
- 116 forest types in 4 forest altitudinal vegetation zones



Methodology and its application

- comprehensive survey of actual and potential cash flow of the forest ecosystem functions provided by TFE Křtiny
- 2 parts of solution:
 - analysis of recreational use
 - economic analysis (LM3 calculation)



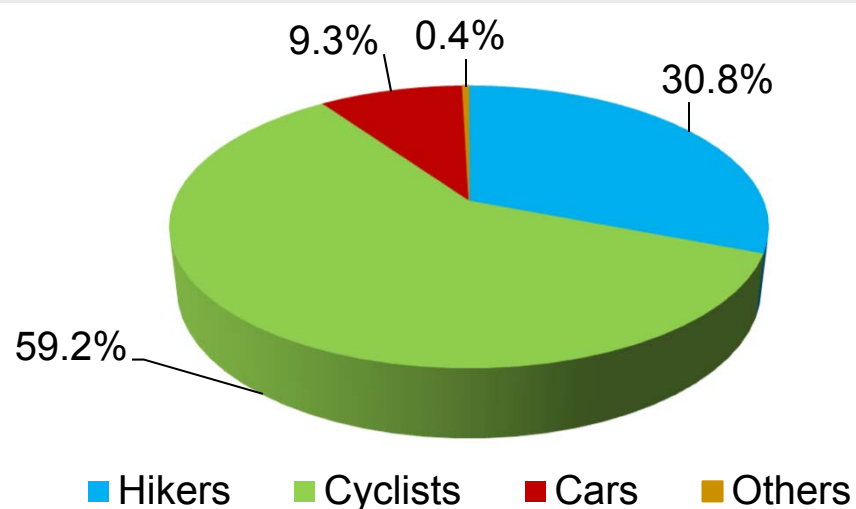
Visitors monitoring by specialized firm

- pyro electric sensor
 - records the thermal radiation of human body
 - adds up all users
 - option of directional movement resolution
- calibration of sensors was performed by FFWT students



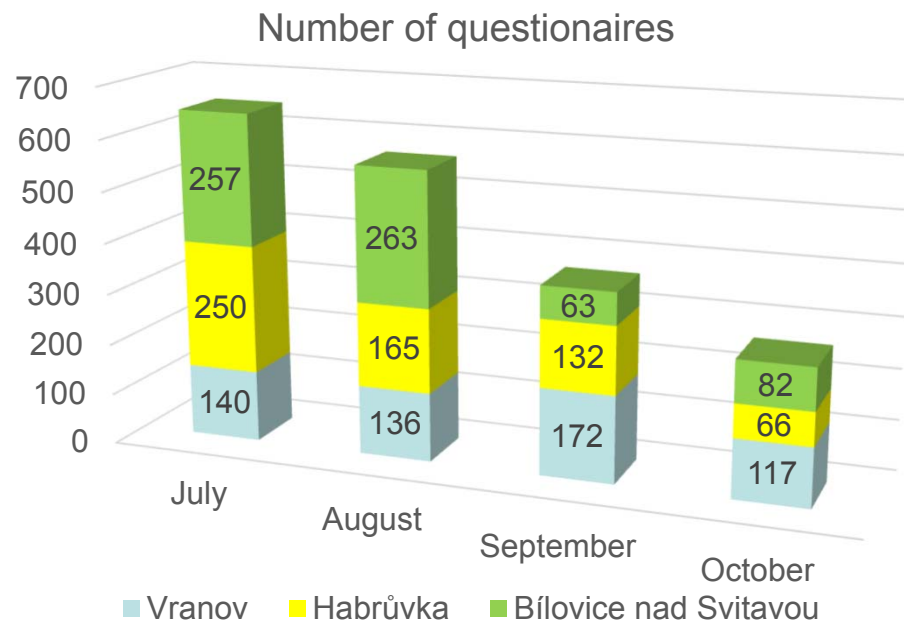
Visitors monitoring by specialized firm

Indicator	Locality 1	Locality 2	Locality 3	Locality 4	Locality 5
Total number of visitors	8,643	19,295	36,054	10,036	14,784
Daily maximum	370	352	631	366	527
Daily minimum	1	0	22	0	4
Most frequent day	Saturday	Sunday	Sunday	Sunday	Saturday
Monthly average	1,719	3,839	7,173	1,997	2,941



Visitors monitoring by students

- 5 localities
- a questionnaire survey
- July and October 2015 – a total of 1,843 questionnaires were filled out

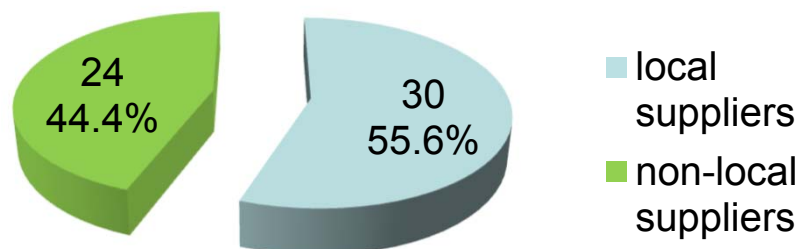


Economic analysis

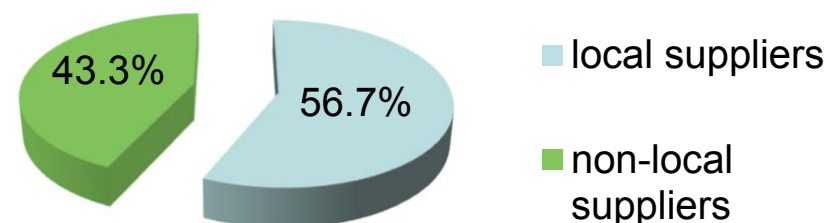
- The methodology of the calculation of the LM is divided into four parts:
 - defining the area of interest (TFE Křtiny)
 - districts of Brno-Country and Blansko
 - calculation of LM2
 - calculation of LM3
 - a questionnaire survey necessary to calculate LM3

Selected results – suppliers

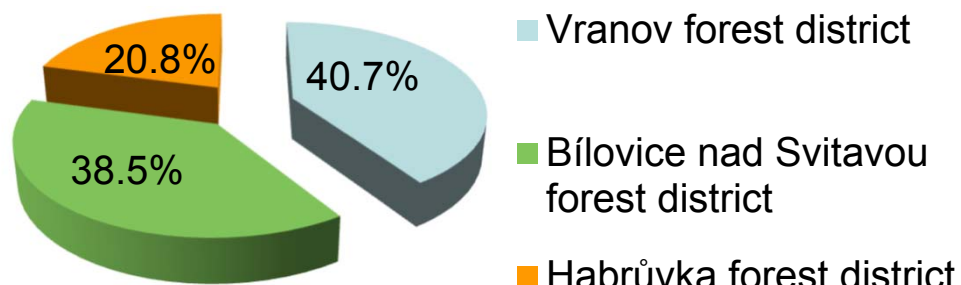
The number of suppliers



The expenditure on suppliers

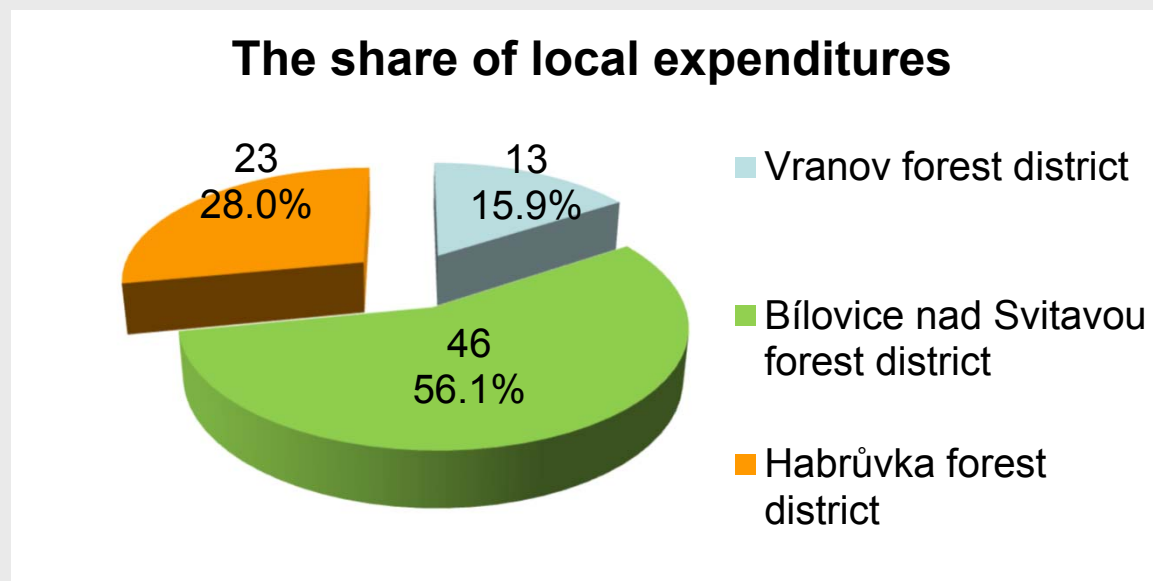


The share of local expenditures



Using structured interviews, a total of 23 filled out questionnaires were obtained from 30 local suppliers (76.67 %).

Selected results – employees



- A total of 57 filled out questionnaires were obtained from structured interviews (69.51 %).

Local multiplier

- the value of LM2 score: 1.23
- the value of LM3 score: 1.52
- compare with recommended values and with similar enterprises

Conclusion

- methodological approach to the quantification of the importance of a forest enterprise for the local economy
- contribution to the research in the area of evaluation forest functions
- economic evaluation of real cash flows from the recreational use of the area of interest

A photograph of a forest scene. In the foreground, a tree trunk with white bark and black lenticels (likely a birch) stands prominently. A small white rectangular tag is attached to it with a thin wire. The ground is covered with fallen brown leaves. In the background, many other trees with green foliage are visible, creating a dense forest atmosphere. A dark green horizontal bar is at the top of the slide.

Thank you for your attention...

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