

# The use of marteloscopes in research



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Marteloscope Manager Workshop

Sharing experiences on the use of marteloscopes for training, education and research

28-29/06/2022

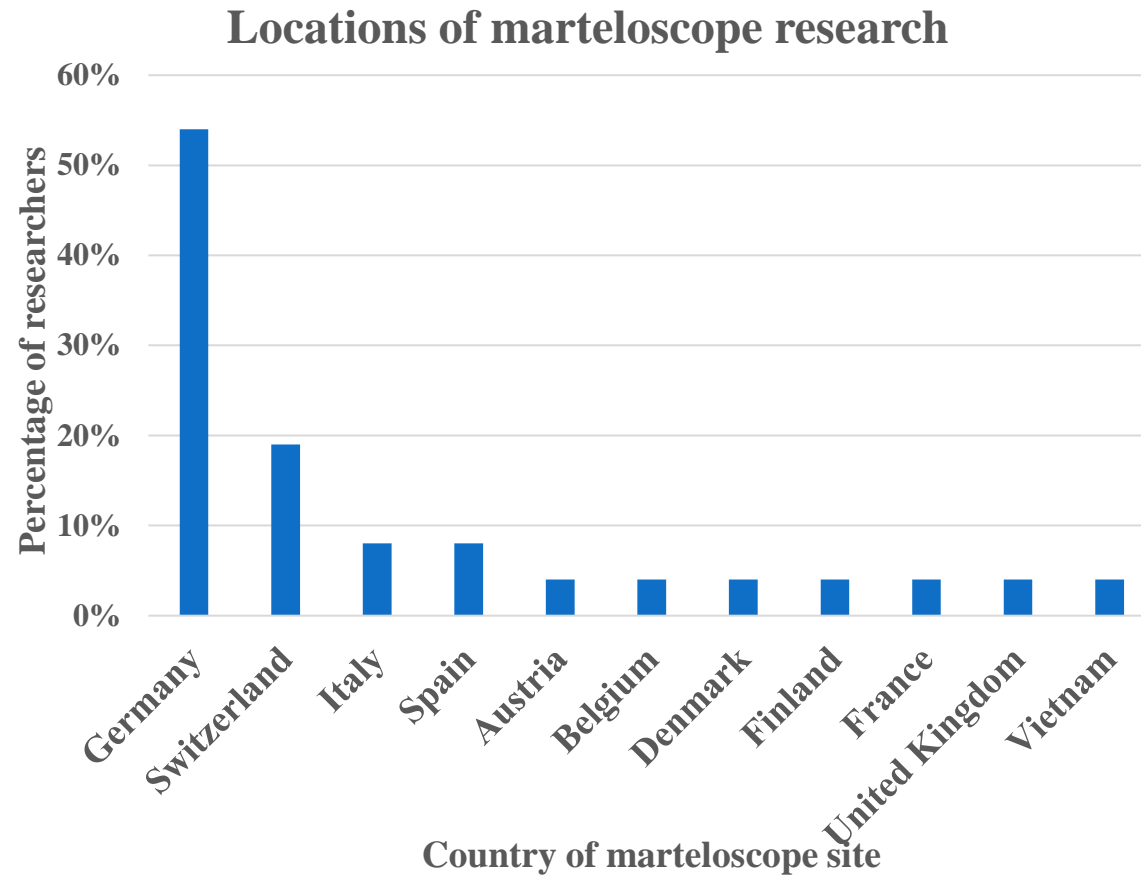
Wissenschaftszentrum Bonn, Germany

Lyla O'Brien, Jakob Derks

# Questionnaire introduction

- Questionnaire for researchers & students
  - examples, feedback, & future potential of marteloscopes for research
- Develop report to guide scientists & students / facilitate/develop 'European Marteloscope Network'

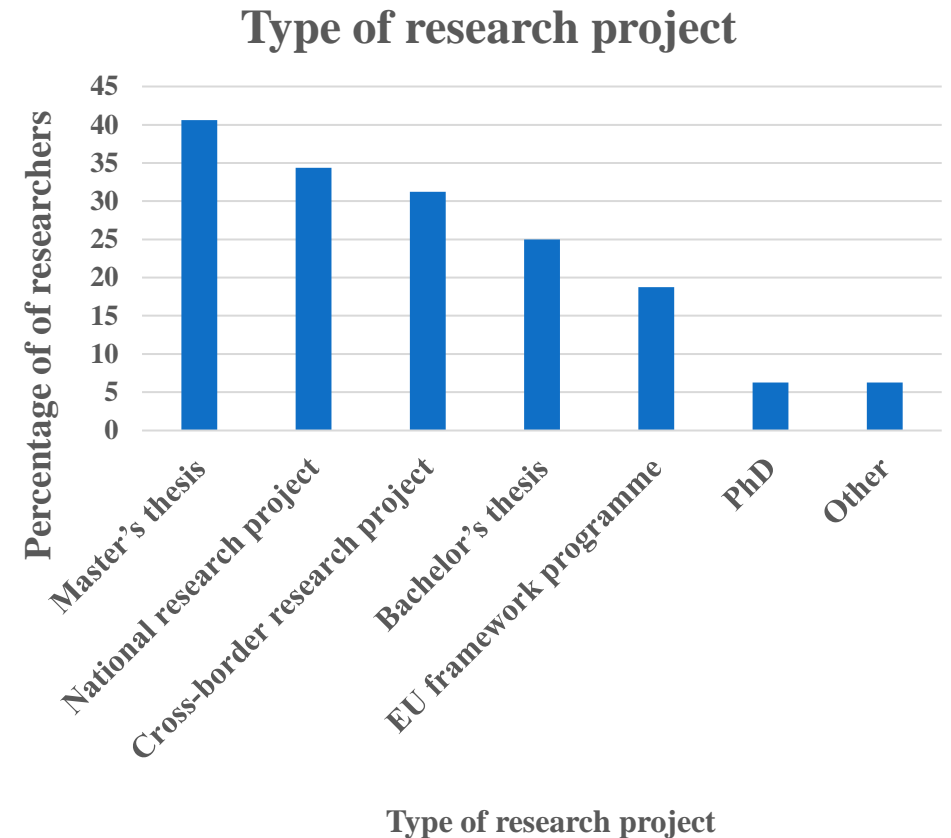
# Main findings



- 48 respondents from 12 different countries
- 73% set-up a marteloscope in the past
- 65% conducted marteloscope research
- 53% had plans to

# Past and ongoing research

- Research with marteloscopes sites or using marteloscope data (i.e., GBIF)
- Natural science research most often conducted
- Educational & social science also common
- Large variety of different types of research projects



# Examples

- Cosyns, H., Joa, B., Mikoleit, R., Krumm, F., Schuck, A., Winkel, G., & Schulz, T. (2020). Resolving the trade-off between production and biodiversity conservation in integrated forest management: comparing tree selection practices of foresters and conservationists. *Biodiversity and Conservation*, 29(13)
- Courbaud, B., Larrieu, L., Kozak, D., Kraus, D., Lachat, T., Ladet, S., Müller, J., Paillet, Y., Sagheb-Talebi, K., Schuck, A., Stillhard, J., Svoboda, M. & Zudin, S. (2021, submitted). Factors influencing the formation rate of tree related microhabitats and implications for biodiversity conservation and forest management.
- Vítková, L., Ní Dhubháin, Á and Pommerening, A. (2016). Agreement in tree marking: What is the uncertainty of human tree selection in selective forest management? *Forest Science* 62, 288-296
- ....

# Global Biodiversity Information Facility

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'Tree – tree' interactions are important structuring mechanisms for forest community dynamics. Forest management takes advantage of competition effects on tree growth by removing or retaining trees to achieve management goals. Both competition and silviculture have thus a strong effect on density and distribution of tree related microhabitats (TreMs) which are key features for forest taxa at the stand scale (e.g. Bouget et al. 2013, 2014). In particular, spatially explicit data to understand pat... [More](#)



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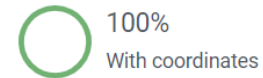
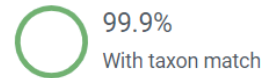
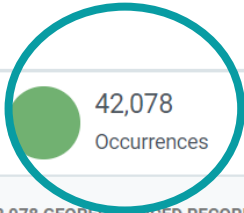
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# Strengths

- Availability of data (e.g., TreMs)
- Stimulate discussions
- Research on tree-selection behaviour
- Educational & practical training

# Weaknesses

- Availability of data (e.g., TreMs)
- Stimulate discussions
- Research on tree-selection behaviour
- Educational & practical training

# Opportunities

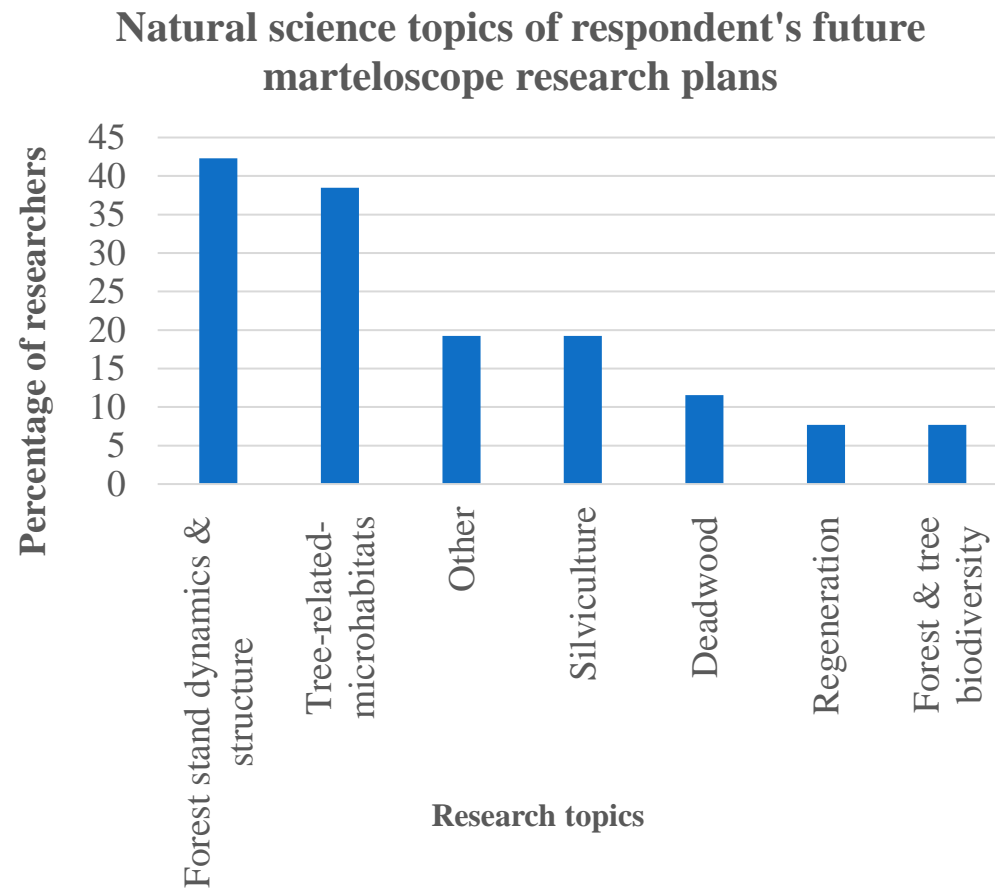
- Large & permanent network creates many opportunities
- Exploration of new topics (e.g., modelling, TreMs, forest dieback, climate change, tree-selection behaviour)
- Further combine research & education
- Research with additional variables collected by researchers (e.g., deadwood, local wood prices, tree age, etc.,)
- Collection on training exercise meta-data

# Threats

- Large & permanent network needs to be maintained



# Future research



- 53% had plans to conduct marteloscope related research in the future (→ 15% new)
- Mostly natural science
- Less social science

# Future research

- Report coming with all the results  
→ [www.iplus.efi.int](http://www.iplus.efi.int)





# Thank you

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