

Valuation and mapping of recreational benefits provided by forests

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Ecosystem services provided by forests



Ecosystem services

1. Provisioning

- Wood/fiber (building blocks, energy)
- Food (game, fruits, herbs, seeds, honey)
- Chemical and medicinal products
- Water

2. Supporting

- Habitats for wildlife (biodiversity)
- Photosynthesis/primary production
- Soil formation
- Circulation of nutrients
- Pollination, seed dispersal

3. Regulating

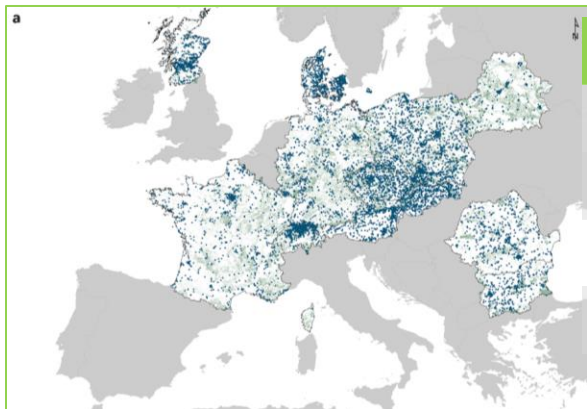
- Carbon storage (above/below ground)
- Air purification
- Water purification
- Climate regulation
- Erosion/leveling protection
- Flood mitigation
- Protection from coastal erosion and storms

4. Cultural

- Recreation/aesthetics
- Spirituality
- Education



Preference survey - results for 12 countries (sample size N=11660)



	AT	BY	CH	CZ	DE	DK	FR	PL	SK	SCO
% people visiting forest (last 12 months)	0.86	0.79	0.90	0.87	0.75	0.84	0.74	0.90	0.81	0.71
Number of forest visits	47	11	60	39	43	49	32	41	36	25
% visits on foot/bike	0.60	0.48	0.72	0.48	0.56	0.60	0.36	0.57	0.53	0.24
Round distance	10.5	21.7	5.7	14.3	9.7	7.5	21.3	14.7	13.7	32.4

	Walking	Dog walking	Observing nature	Landscape	Playing with kids	Running	Biking	Mushroom/berries	Hunting
AT	0.71	0.21	0.51	0.45	0.12	0.03	0.05	0.14	0.01
BY	0.26	0.06	0.18	0.27	0.12	0.02	0.04	0.54	0.03
CH	0.65	0.21	0.45	0.43	0.14	0.12	0.07	0.06	0.01
CZ	0.59	0.20	0.33	0.35	0.18	0.05	0.03	0.48	0.01
DE	0.66	0.23	0.47	0.48	0.14	0.05	0.08	0.14	0.01
DK	0.52	0.24	0.57	0.43	0.09	0.06	0.07	0.07	0.01
FR	0.64	0.23	0.28	0.52	0.15	0.04	0.07	0.21	0.01
PL	0.72	0.16	0.54	0.41	0.13	0.05	0.12	0.27	0.01
SK	0.56	0.19	0.63	0.49	0.16	0.02	0.05	0.39	0.02
SCO	0.54	0.31	0.32	0.44	0.18	0.02	0.05	0.03	0.01



A photograph of a forest floor with large tree trunks and exposed roots. The text is overlaid on the image.

Characteristics of the forest

Do they matter: foresters vs. the public?



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Characteristics of the forest: foresters vs. the public



Experts' assessments differ significantly from people's.

Experts underestimate the importance of the characteristics of the forest for its attractiveness.

They underestimate the importance of the impact of management activities on the decline of the forest's attractiveness.



Map of forestry initiatives/disputes



Social, grassroots forestry initiatives in Poland (the last 5 years)

456

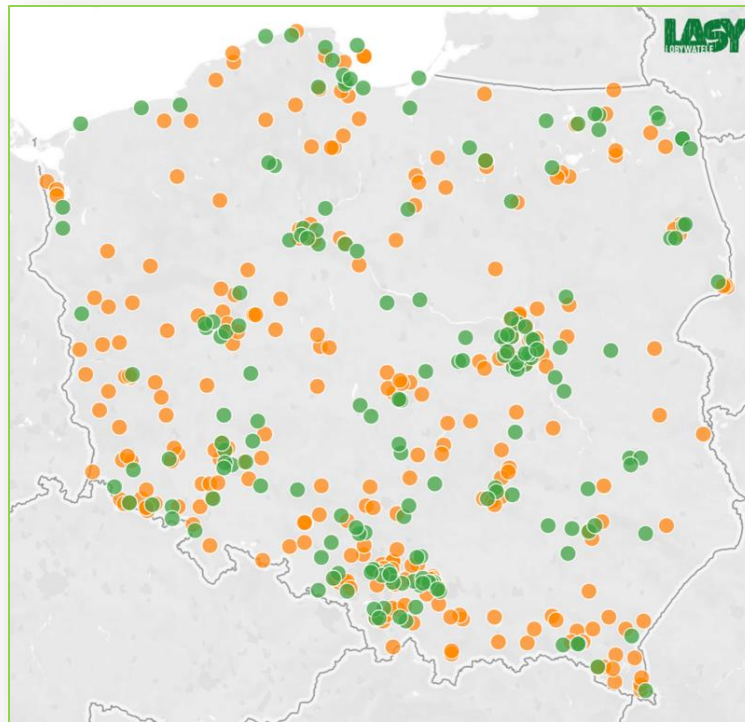
Total identified grassroots forestry initiatives

179

Long-term and medium-term initiatives

277

One-time initiatives



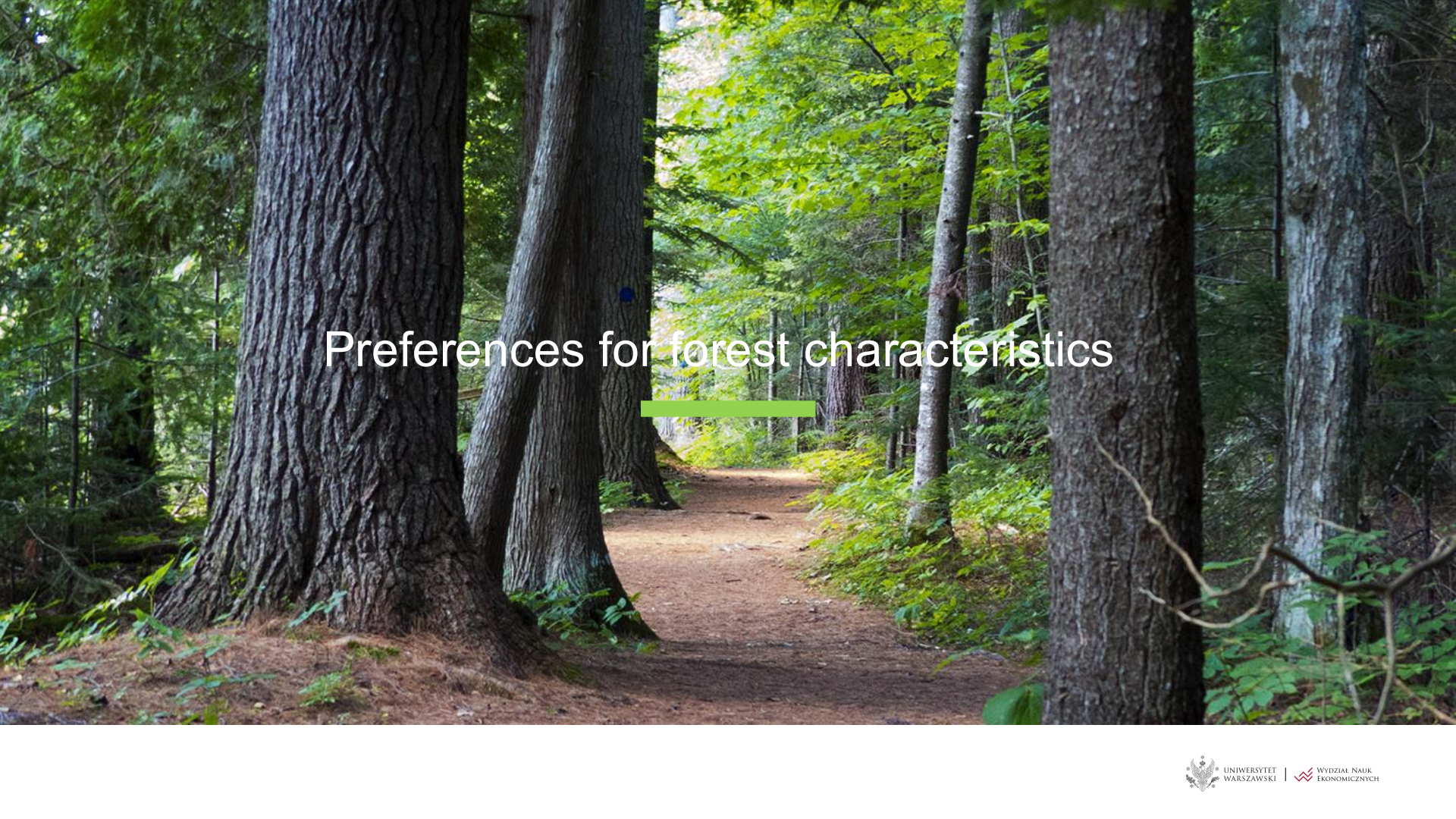
Source: Lasy i Obywatele



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A photograph of a forest path with large, mature trees and a dirt trail leading into the distance. The text "Preferences for forest characteristics" is overlaid in white, with a green horizontal bar underneath it.

Preferences for forest characteristics



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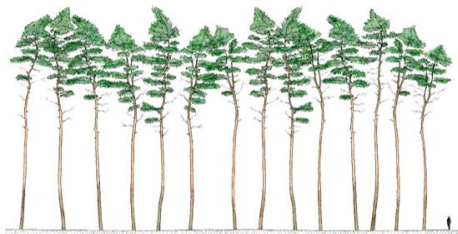
Choice Experiment



Please indicate the forest that, considering the distance, you would prefer to visit

Forest A

Single-aged, single-species coniferous forest.
Height of tallest trees - 18 m. No dead wood.
There is no recreational infrastructure in the forest



Distance 6 km

Forest B

Two-aged old mixed forest.composed of two species of trees. Height of the tallest trees - 24 m.
No dead woodThere are picnic spots in the forest.



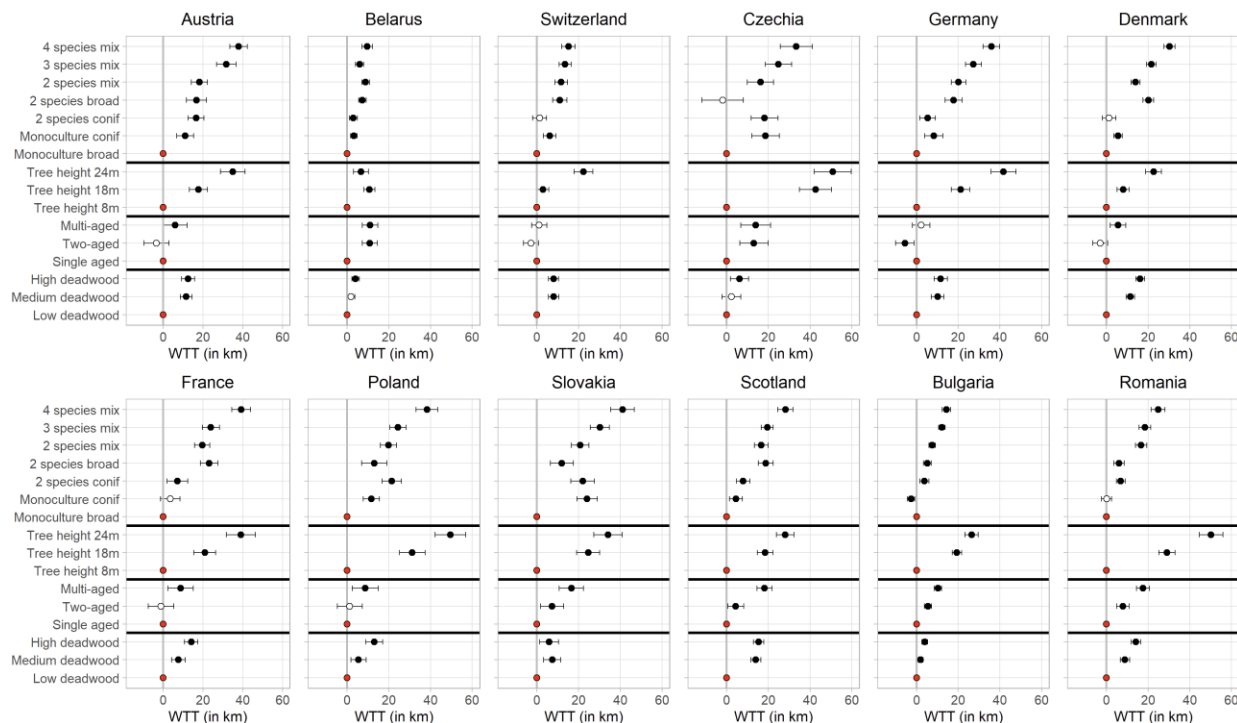
Distance 12 km



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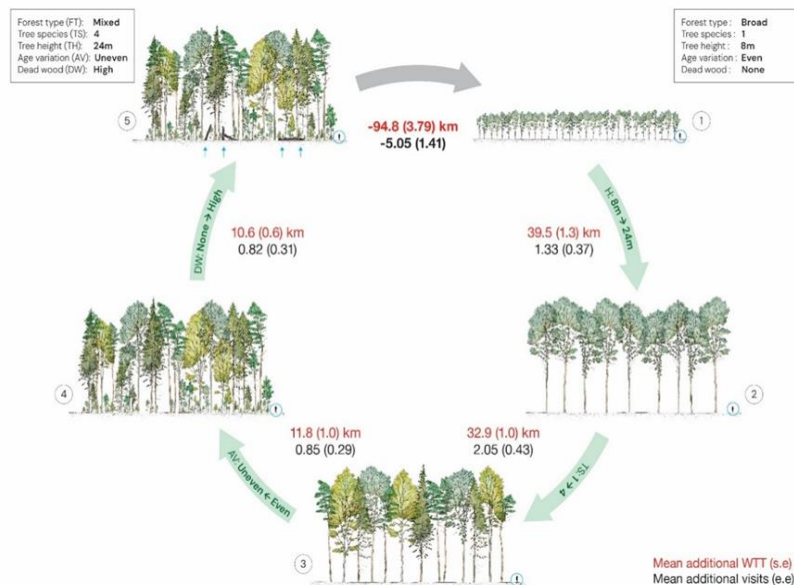
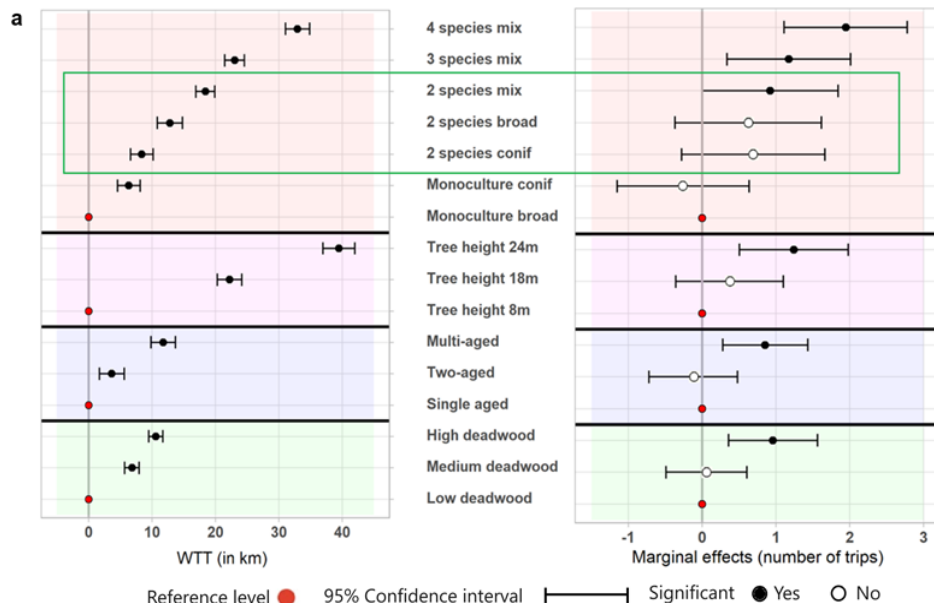
European results



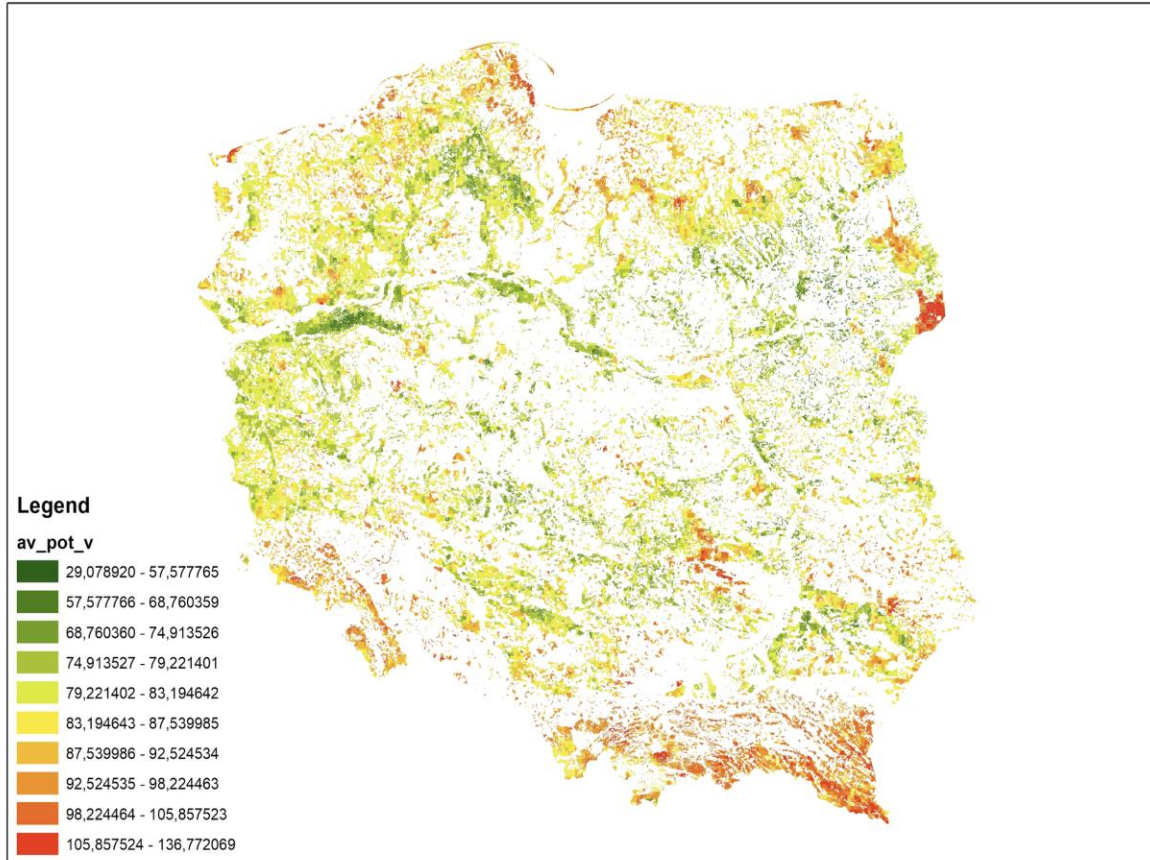
	Forest type			Tree species (Mixed)			Stand height			Stand age variation			Dead wood		
	Conifer	Broad	Mixed	2	3	4	8m	18m	24m	Even	Two	Uneven	Low	Medium	High
Most preferred	3	3	6	0	0	12	0	1	11	0	0	12	0	2	10
2nd	1	5	6	1	11	0	0	11	1	5	7	0	0	10	2
3rd	8	4	0	11	1	0	12	1	0	7	5	0	12	0	0
Mean rank	2.4	2.1	1.5	2.9	2.1	1.0	3.0	1.9	1.1	2.6	2.4	1.0	3.0	1.8	1.2

T4.2 + 4.3 Biophysical ecosystem services (ES) modelling | Forest recreation

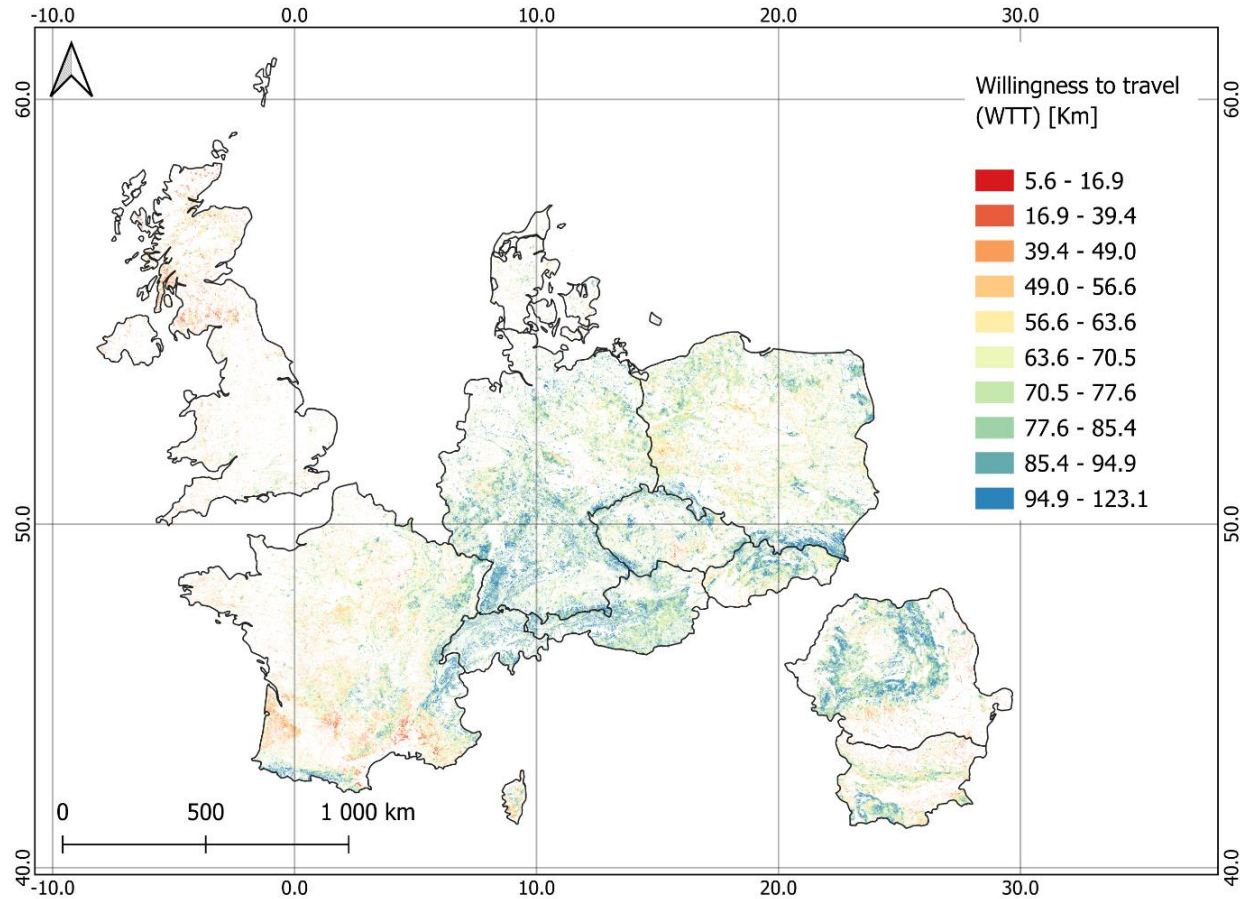
Preferences for forest characteristics



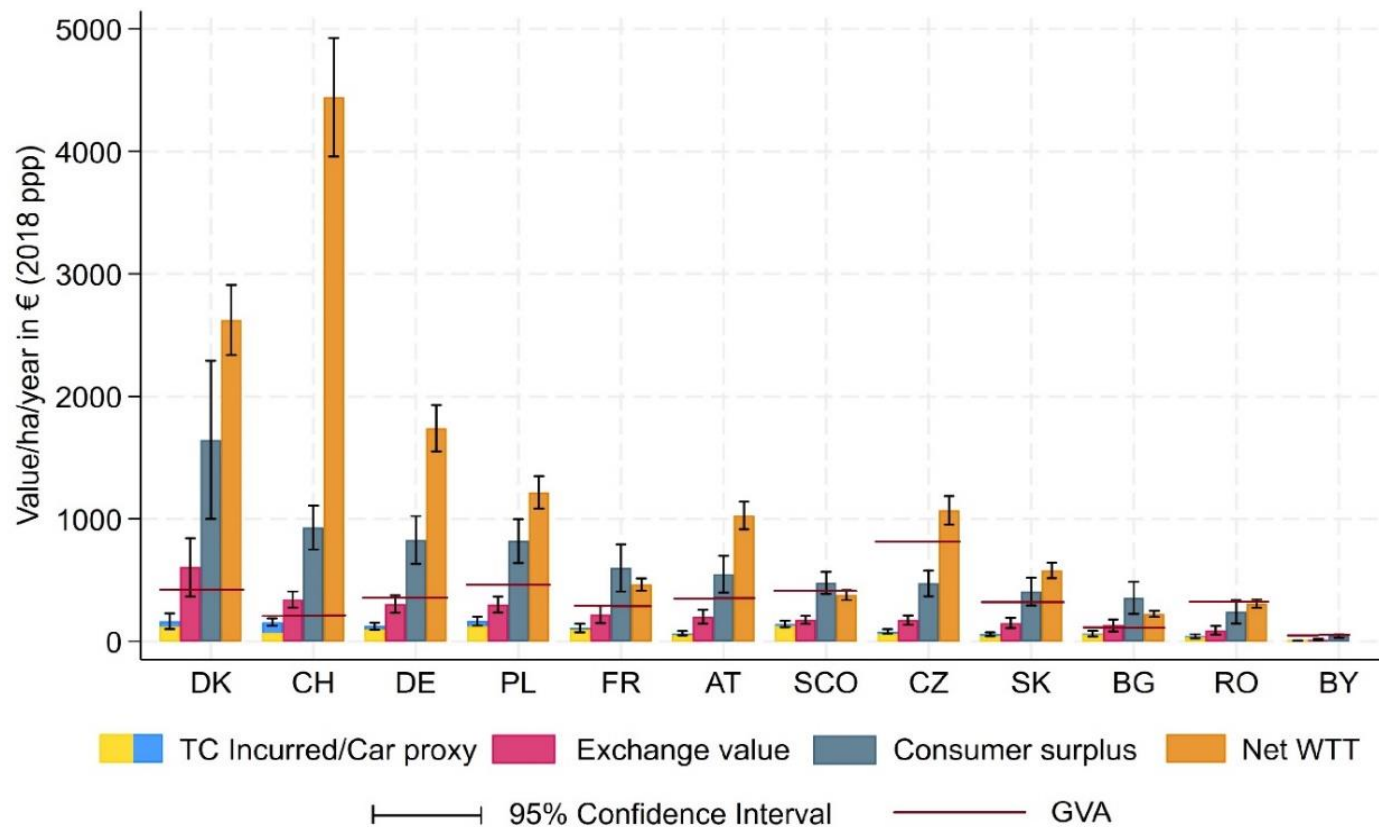
Recreational potential: the case of Poland - mapping



Recreational potential: the pan-European case - mapping



What is the value of recreation in the forest?





Thank you!



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