

Crossed assessment of the history of the charcoal production and of the wood exploitation in the *Pays de Bitche*

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Founding
event



Maginot Line

Mon village : cœur de ma mémoire ! (1)

Le Pays de Bitche entre Guerre de 30 ans et rattachement à la France en 1766

Tétanisé par les ravages de la Guerre de Trente Ans, le Comté de Bitche ressemblait vers 1660 davantage à un champ de ruines qu'à un espace humanisé.

↓ l'ami hebdo 21 - 2017

The Pays de Bitche between 30yrs war and affiliation to France in 1776

Paralyzed by the ravages of the 30yrs war, the county of Bitche in 1660 looked like a field of ruins instead a humanized space

Military camp of Bitche, 1934

Socio-ecosystems in mutation => With regard to what reference(s)? What initial state(s)?
What mechanisms? With what consequences? Etc.

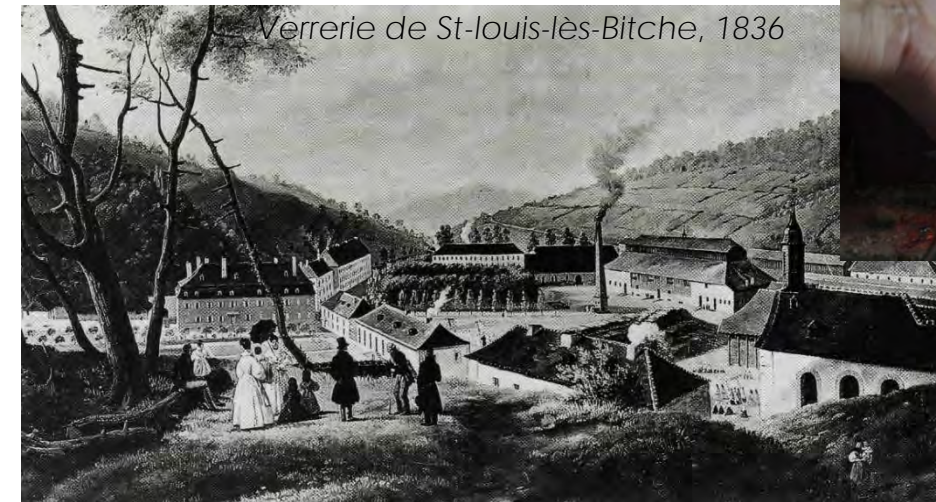
Constitution of a knowledge base to understand the on-going socio-ecosystemic trajectories in the OHM

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Constitution of a knowledge base to understand the on-going socio-ecosystemic trajectories in the OHM



Forge de Bærenthal, XVIIe siècle



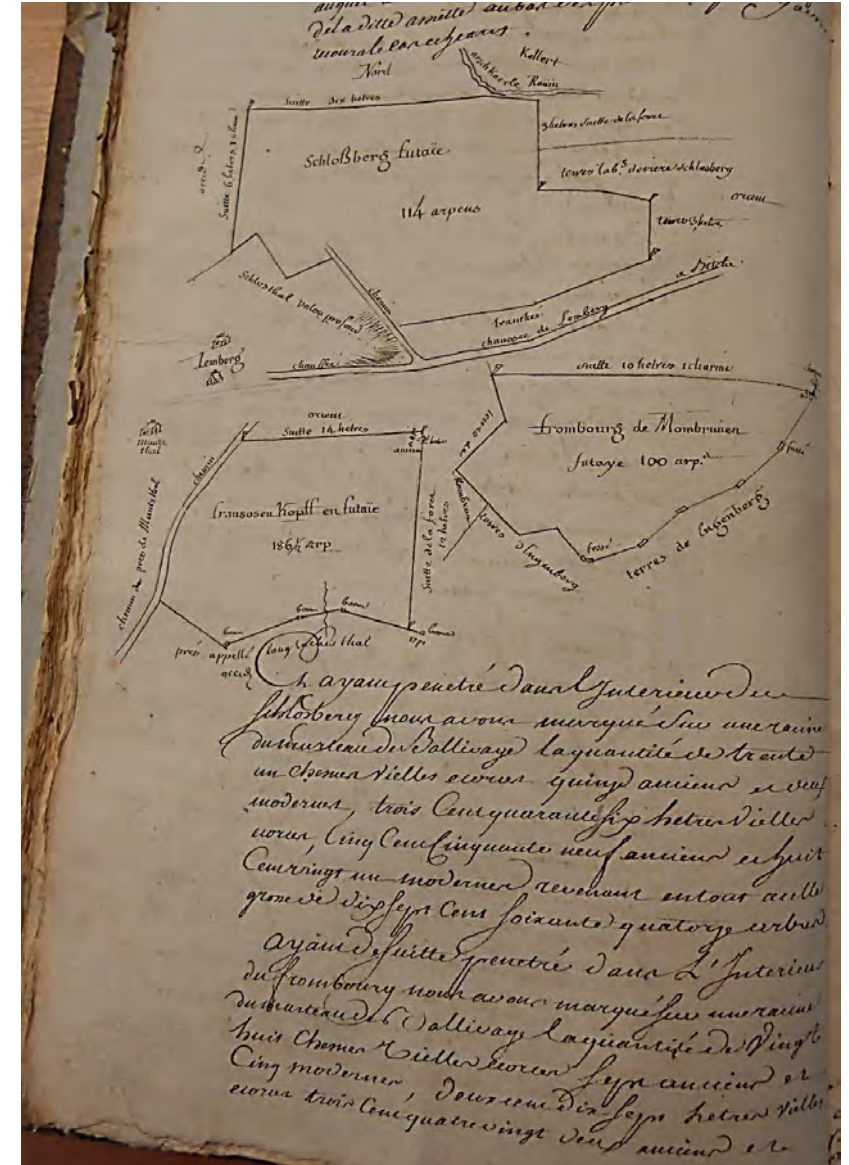
Verrerie de St-louis-lès-Bitche, 1836



History of the charcoal production and of the wood exploitation

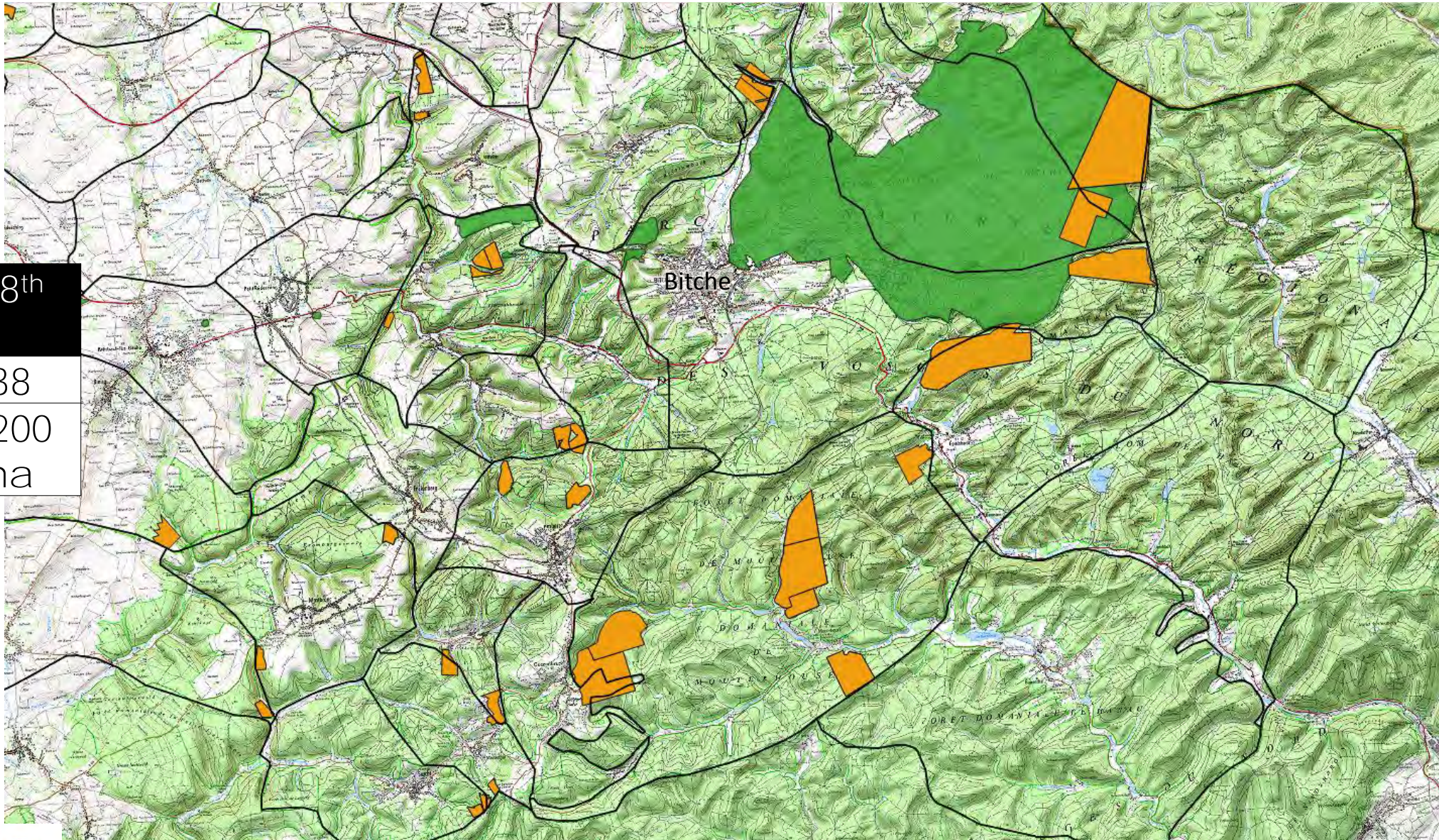


Harvest chronology?
Mode & Type of harvest?
What species?
To do what? Where?



History of the charcoal production and of the wood exploitation in the PdB

- 5 km
- Municipality border
- Coupes historiques
- Military camp

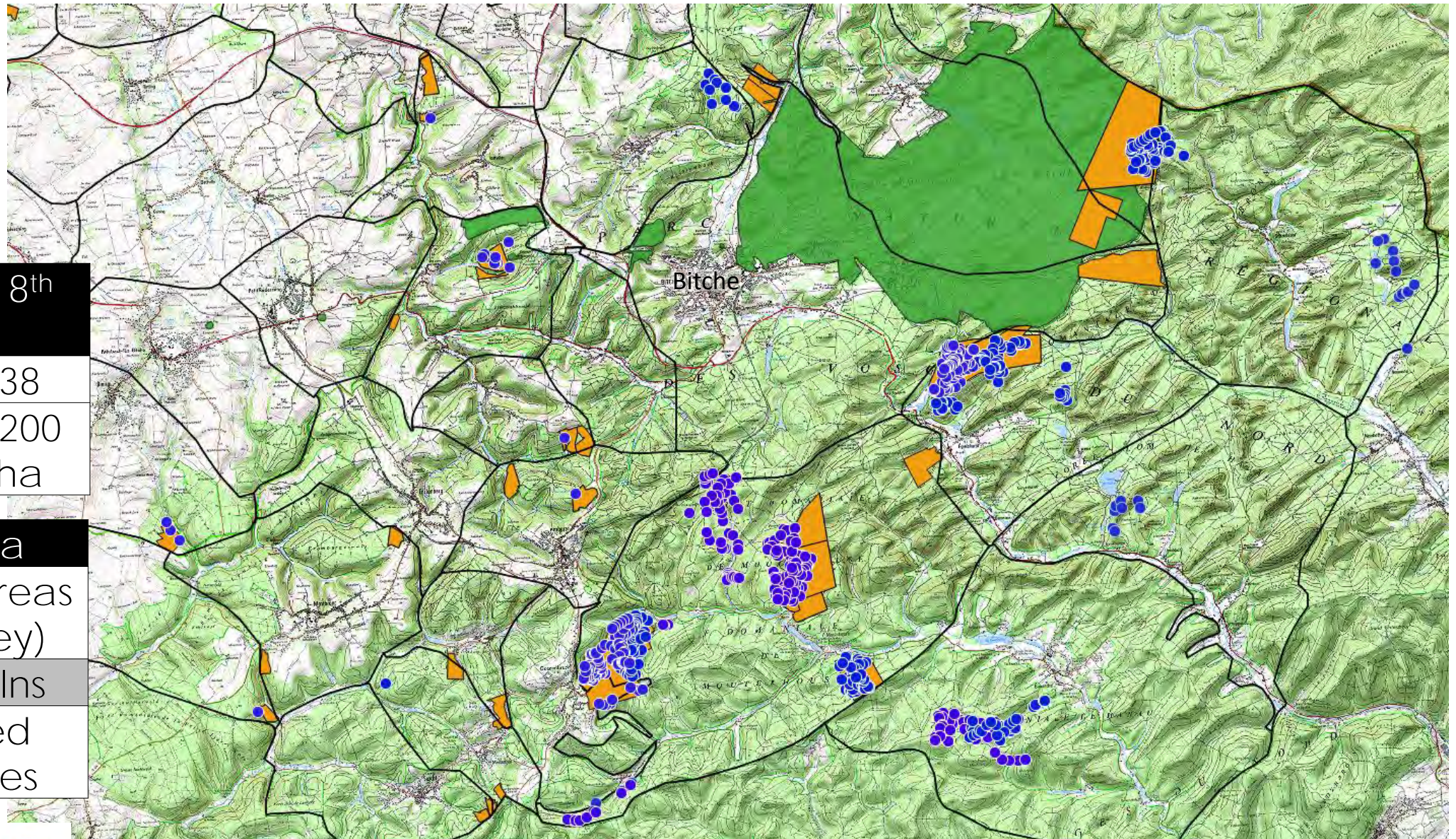


Harvest of the 18th century

# of harvest	38
Surface of harvest	1200 ha

History of the charcoal production and of the wood exploitation in the PdB

- 5 km
- Municipality border
- Coupes historiques
- Military camp
- Charcoal kiln



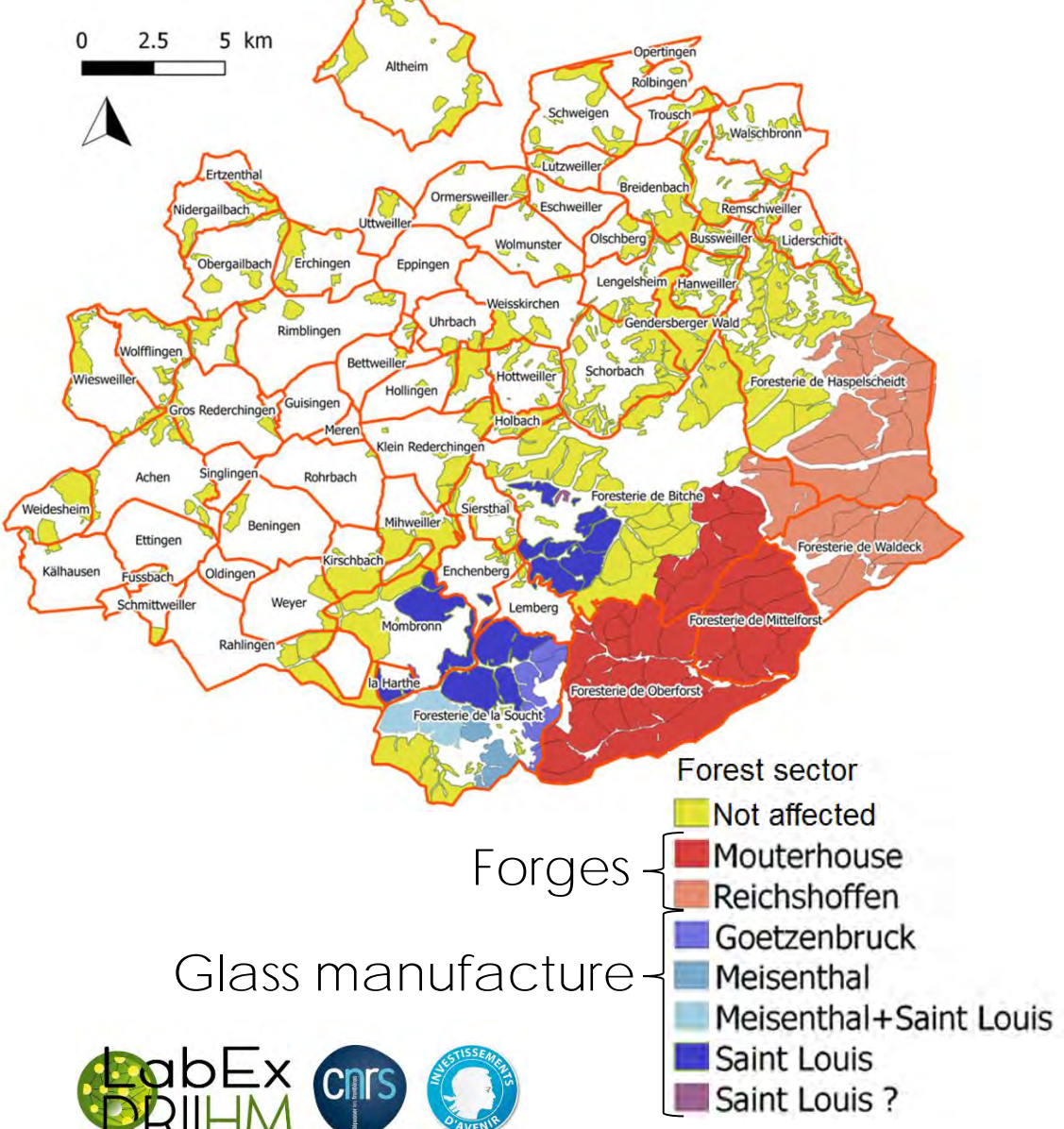
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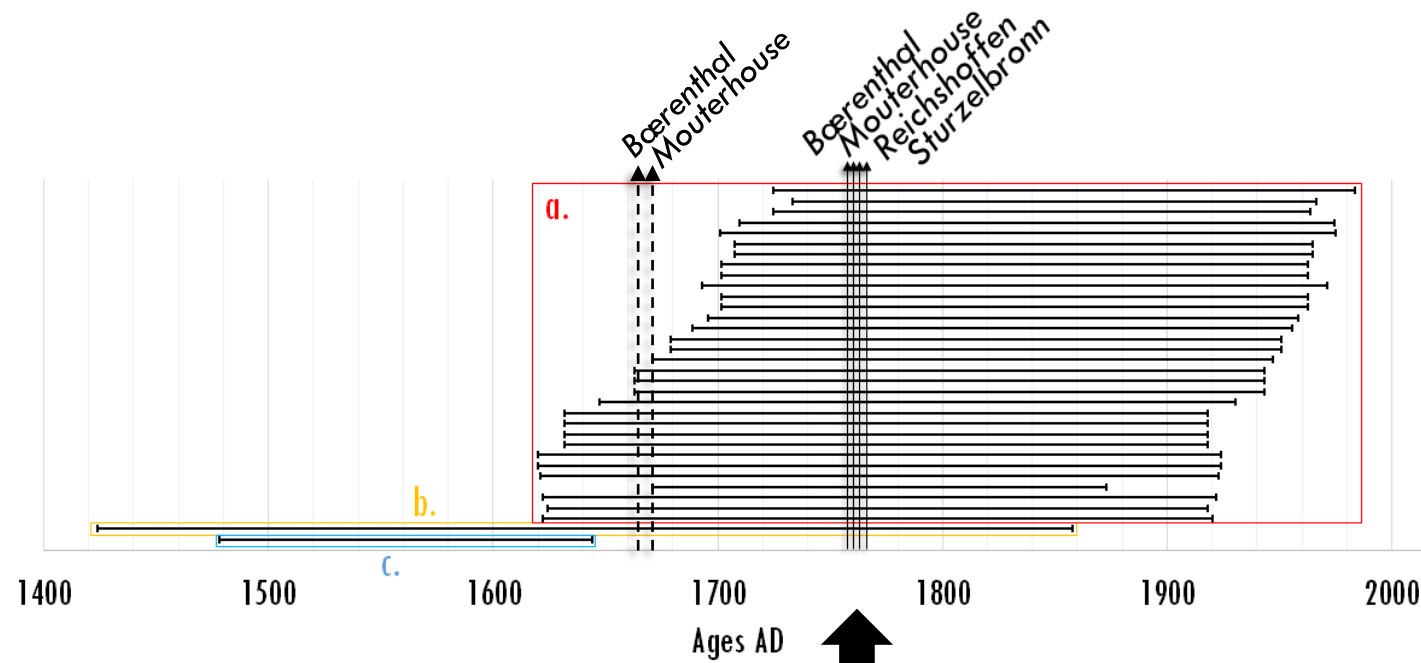
Charcoal data

- 739 kilns on 20 areas (180km of survey)
- 222 sampled kilns
- 19075 identified charcoal pieces

Forest sector affectation (1771)

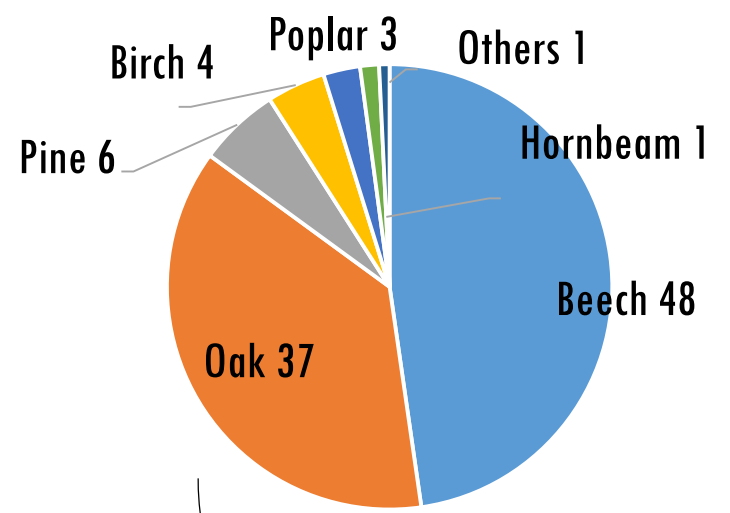


Age ranges of 34 radiocarbon dates (yrs. cal. AD)

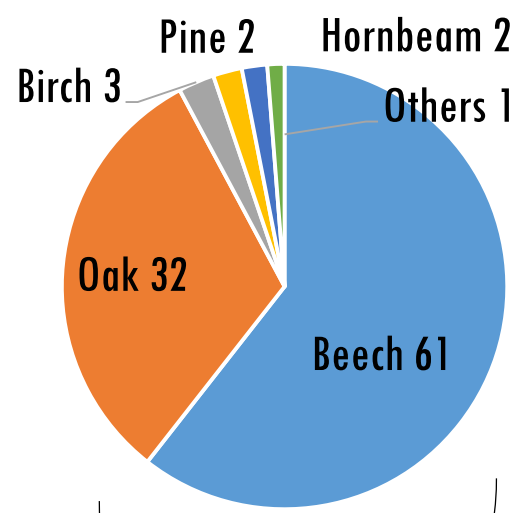


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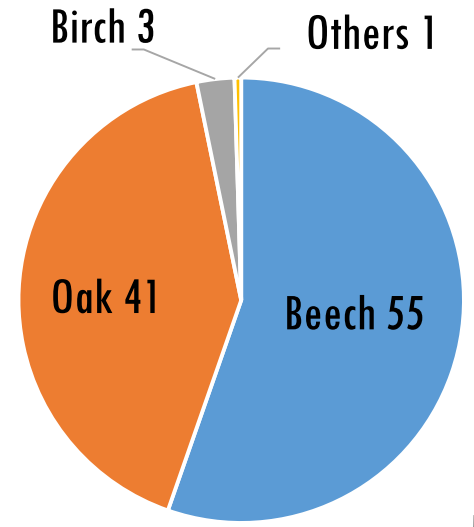
Charcoal identification out of historical harvest areas (%; n=6915)

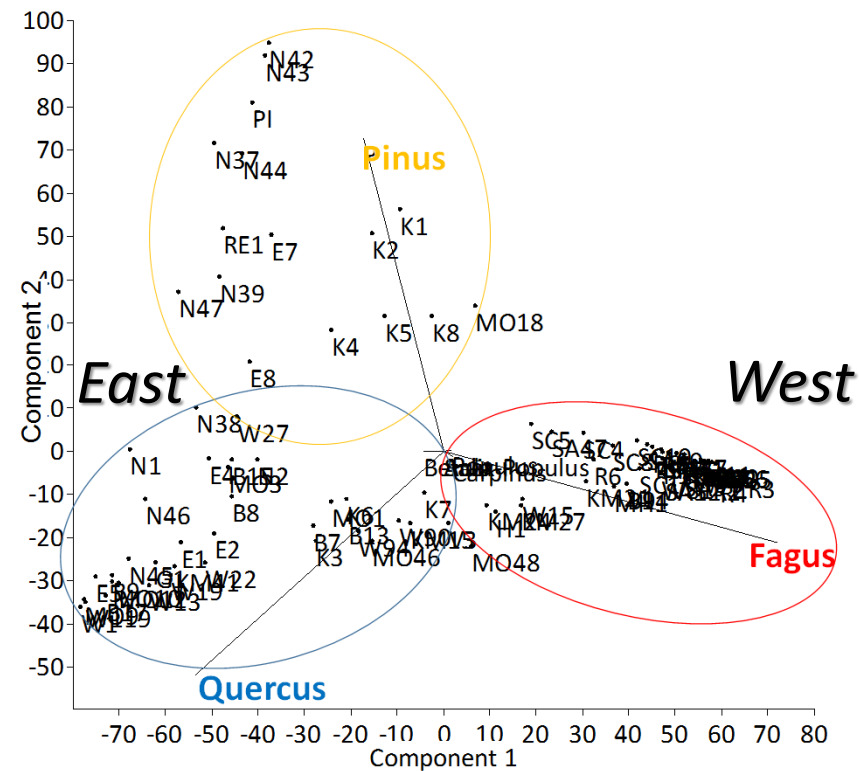


Charcoal identification in of historical harvest areas (%; n=4664)



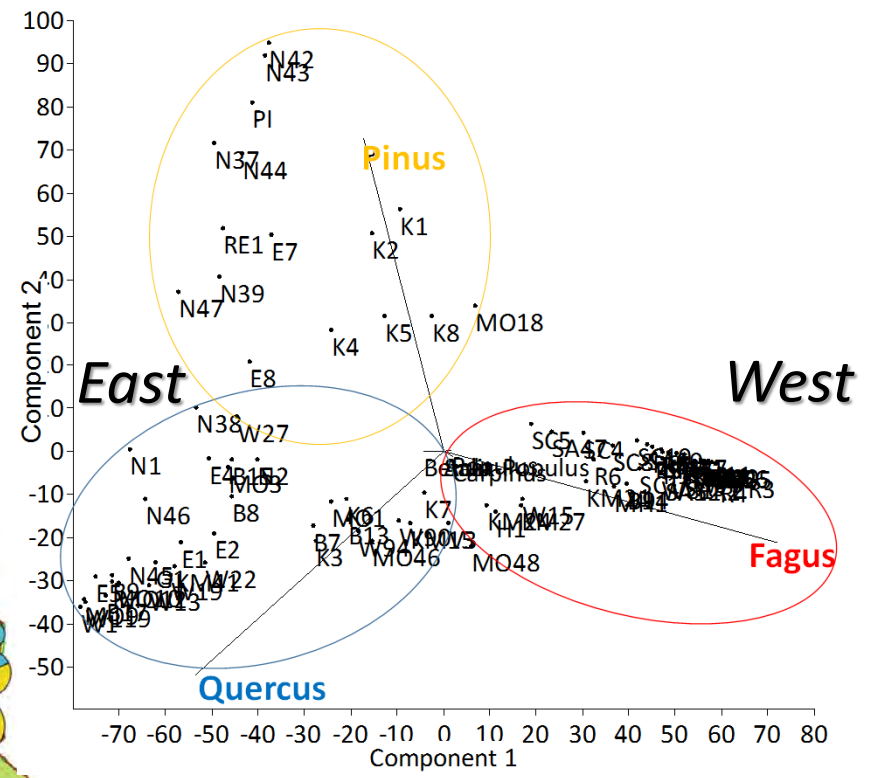
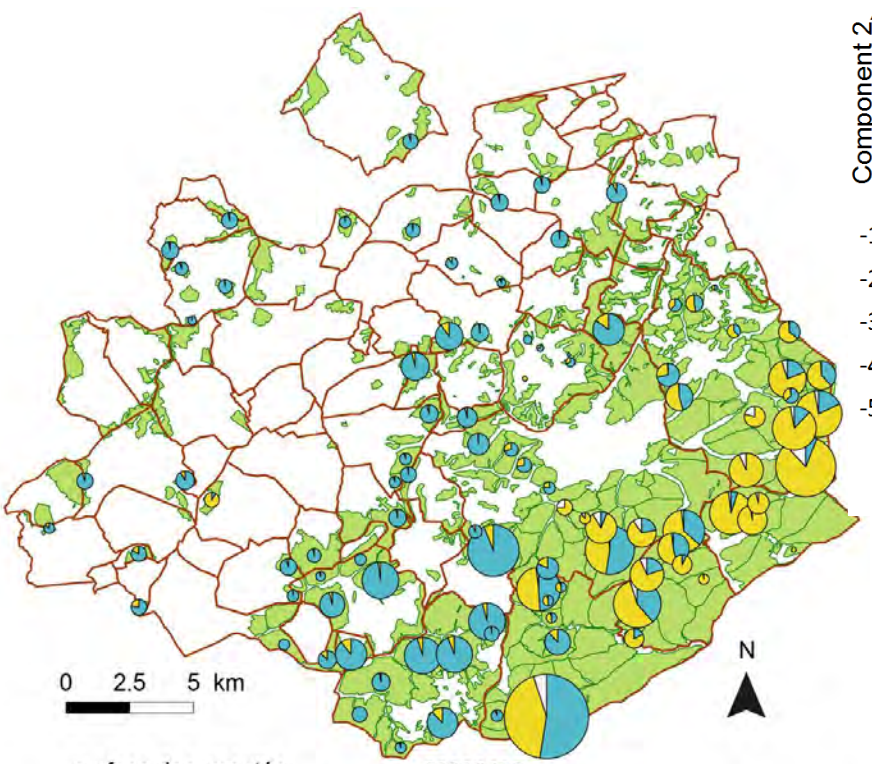
Maintained trees after the historical harvest





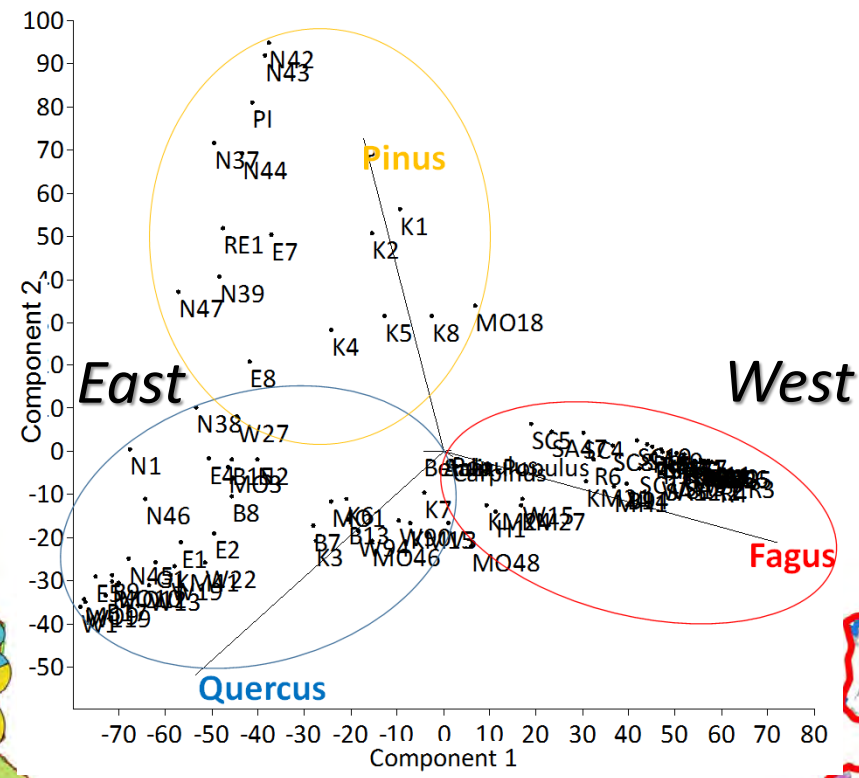
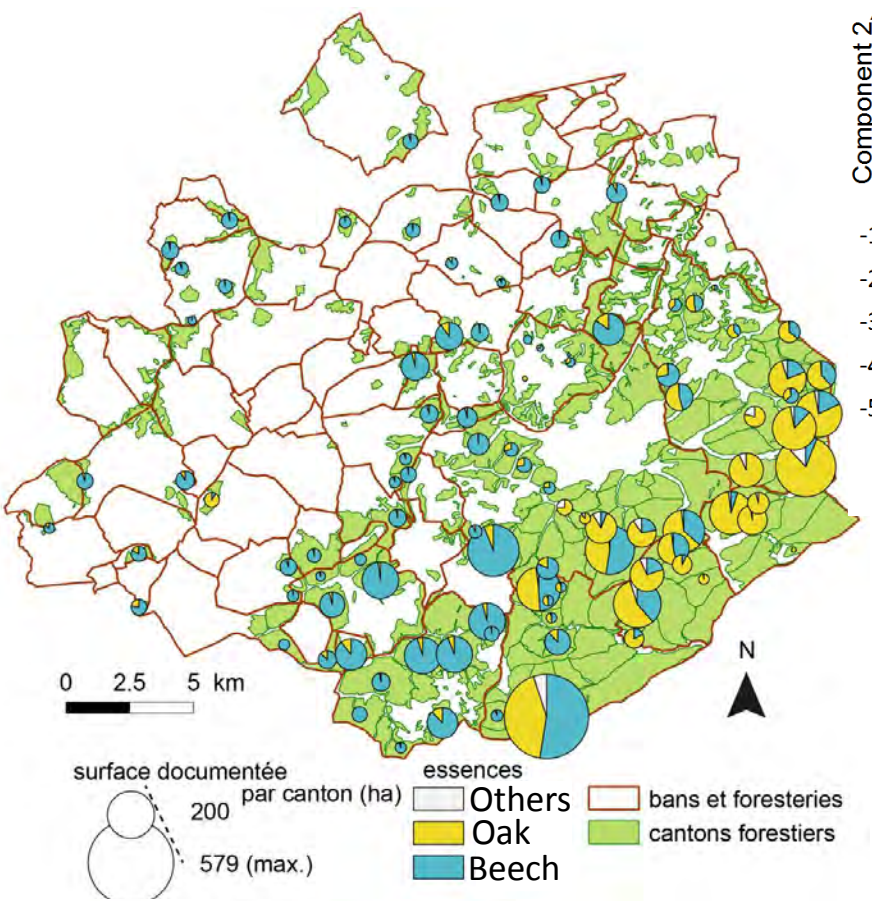
Kilns composition under PCA

Distribution & composition of the historical harvest



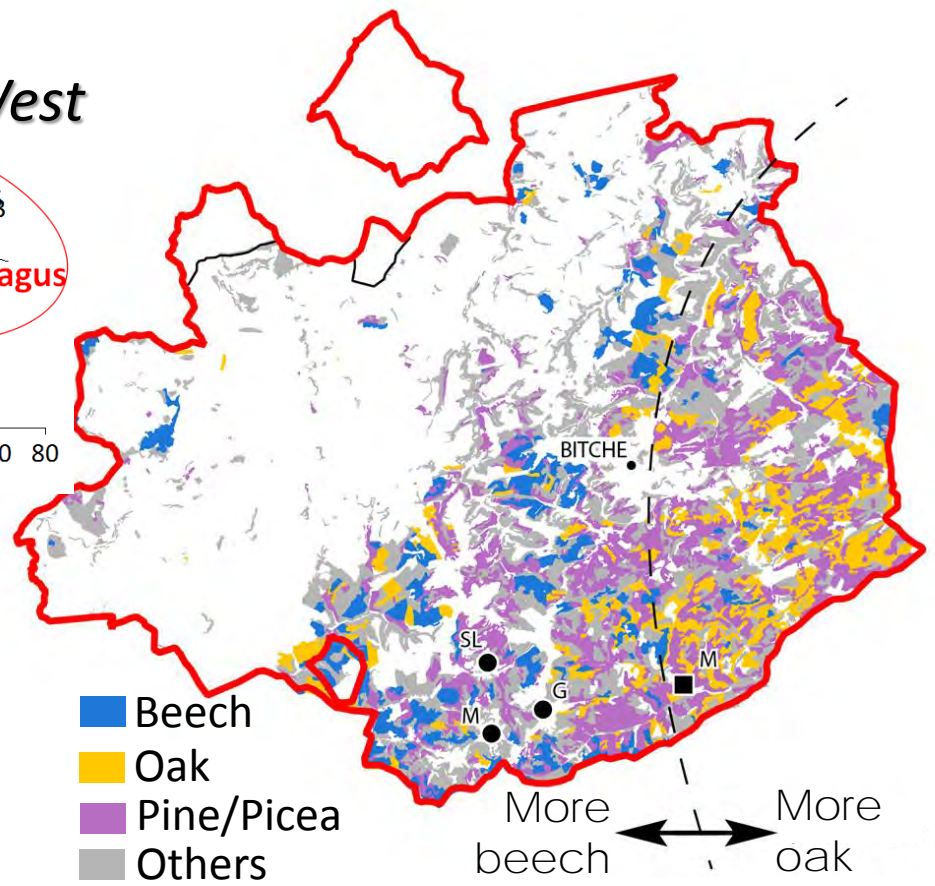
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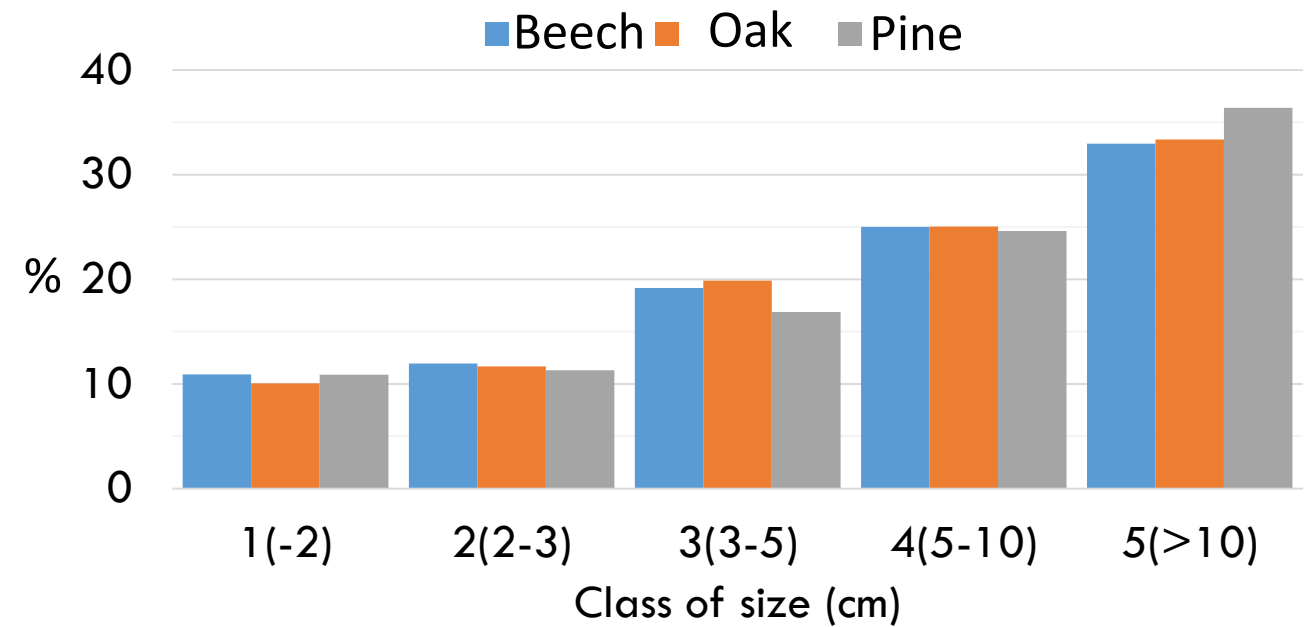
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Current forest tree distribution

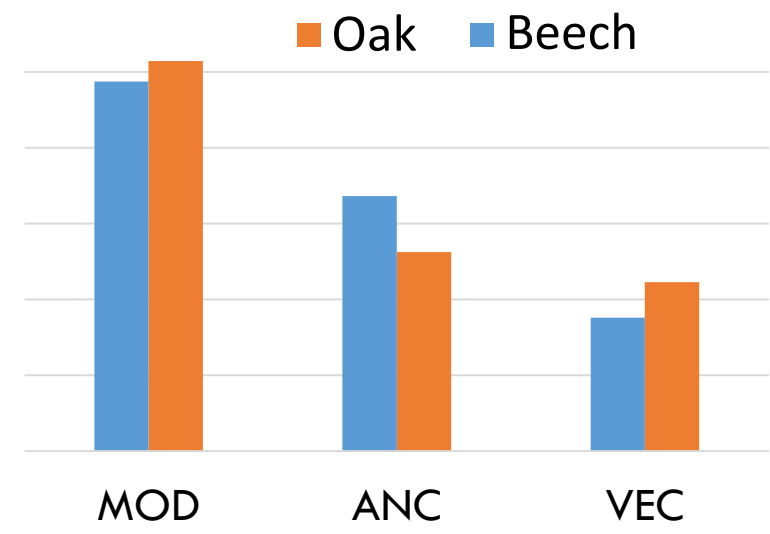




Charcoal curviness (n=9579)



Size of the maintained tree after harvest



50
40
30%
20
10
0

Coppice rotation => 40 yrs
 Modernes (MOD; 1 rot.)
 < Ancien (ANC; 2 rot.)
 < Vieilles écorces (VEC; 3 rot.)

Conclusion

Key results

- ❖ Chronological synchronicity of historical harvest and periodic deforestation
- ❖ Spatial coherency between forest sector affectation and resource usage
- ❖ Coherency between past and current forest composition
- ❖ Correspondence between wood and charcoal dimensions

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- ⇒ Important influence of local regulation
- ⇒ Secular legacy of the current forest landscape
- ⇒ The military presence has established and changed in a strongly man-influenced/managed landscapes, with significant role of local authorities

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Relevance of this interdisciplinary approach as contribution
to the knowledge base of the OHM *Pays de Bitche*

*l'expérience
à vivre*



Thanks for your attention