



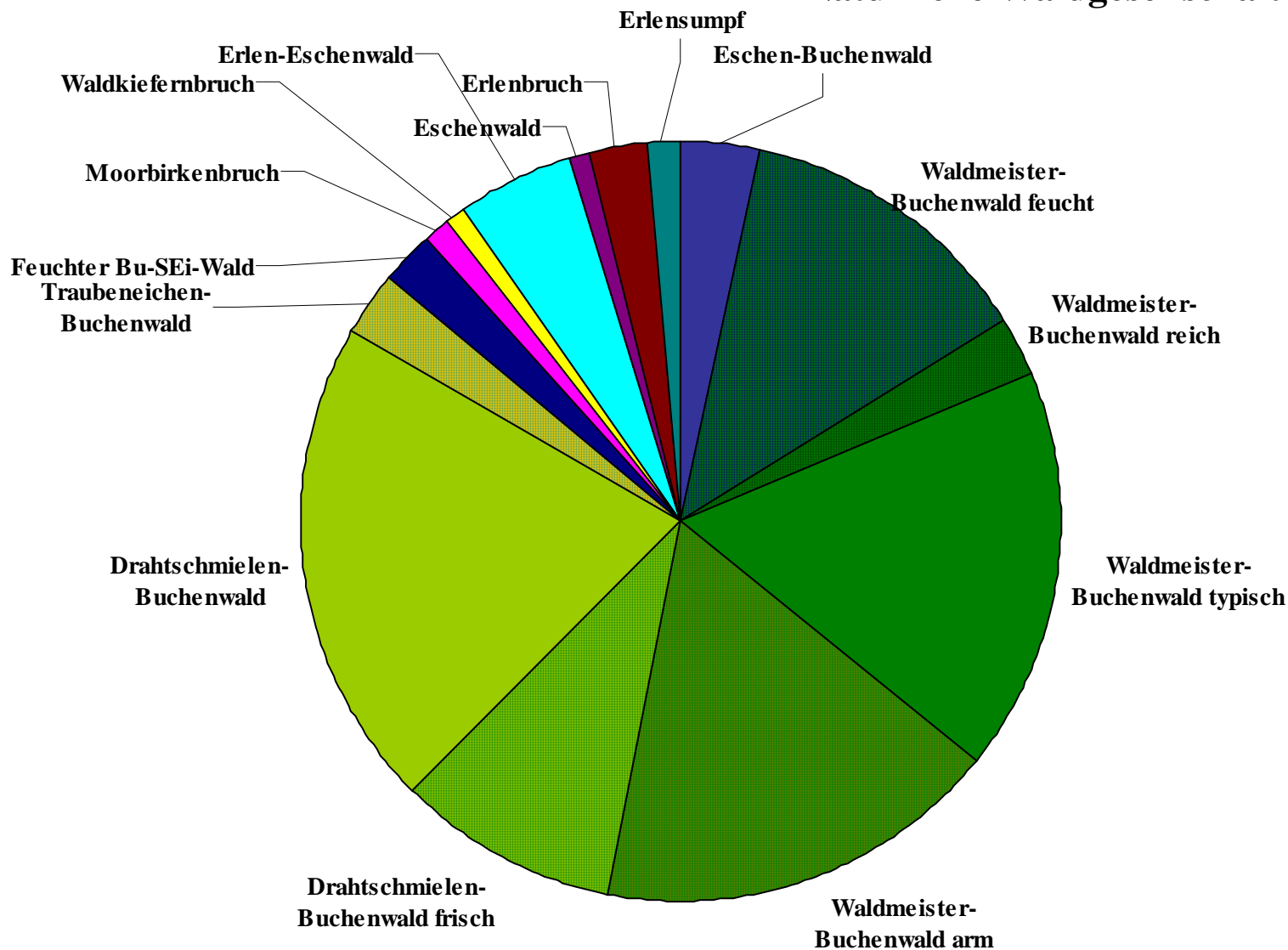
# Best practices of CTN-forestry and challenges for research

- Introduction
  - our forest enterprise
  - its natural conditions
- Best practices
  - development from age classes forest - shelterwood cut – with delayed clearance - to - structured perpetual forest – with selection felling
  - specific features of beech perpetual forests
- Challenges for research
  - our empirical examinations and natural results
  - economic effects - marginal return questions not a taboo in CTN - forestry !?
  - ecological effects
- Summary



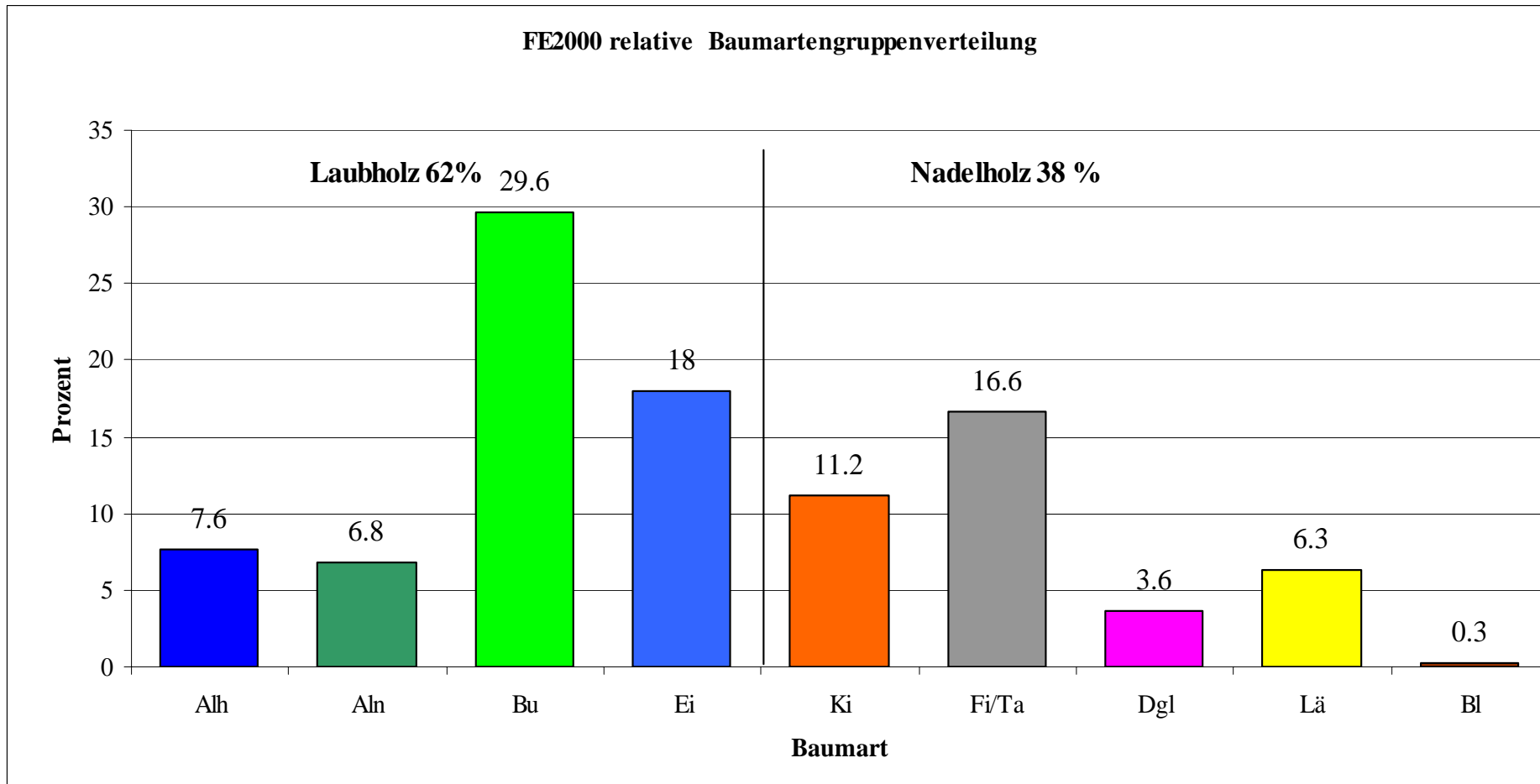
# Kreisforsten: Natural woodland communities

## Natürliche Waldgesellschaften





# Kreisforsten: Distribution of tree species





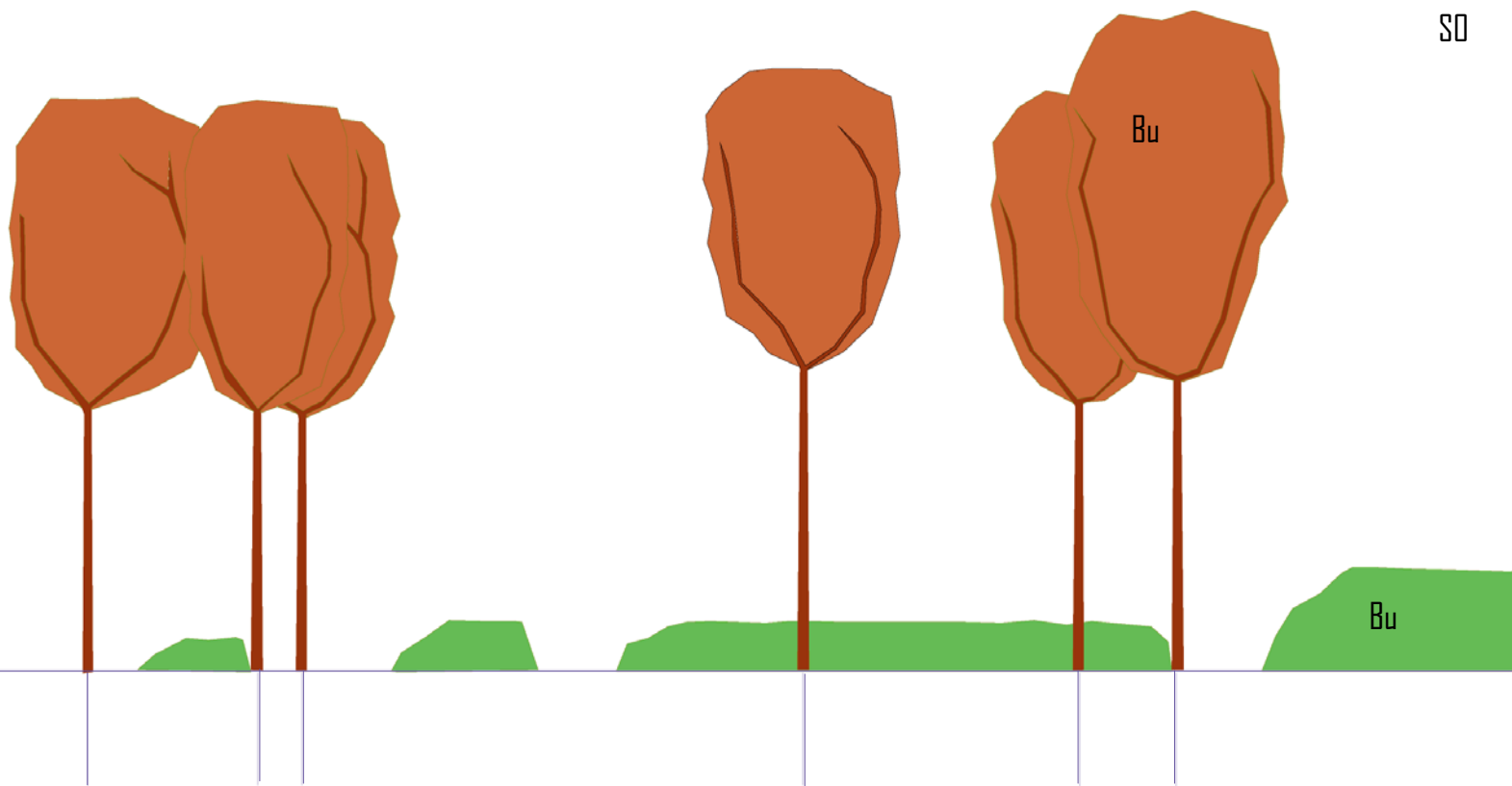
# Age classes forest, shelterwood cut with delayed clearance

linear trans-section-picture 100\*10m

Bestand 2\_54 a3

NW

SO



0 m

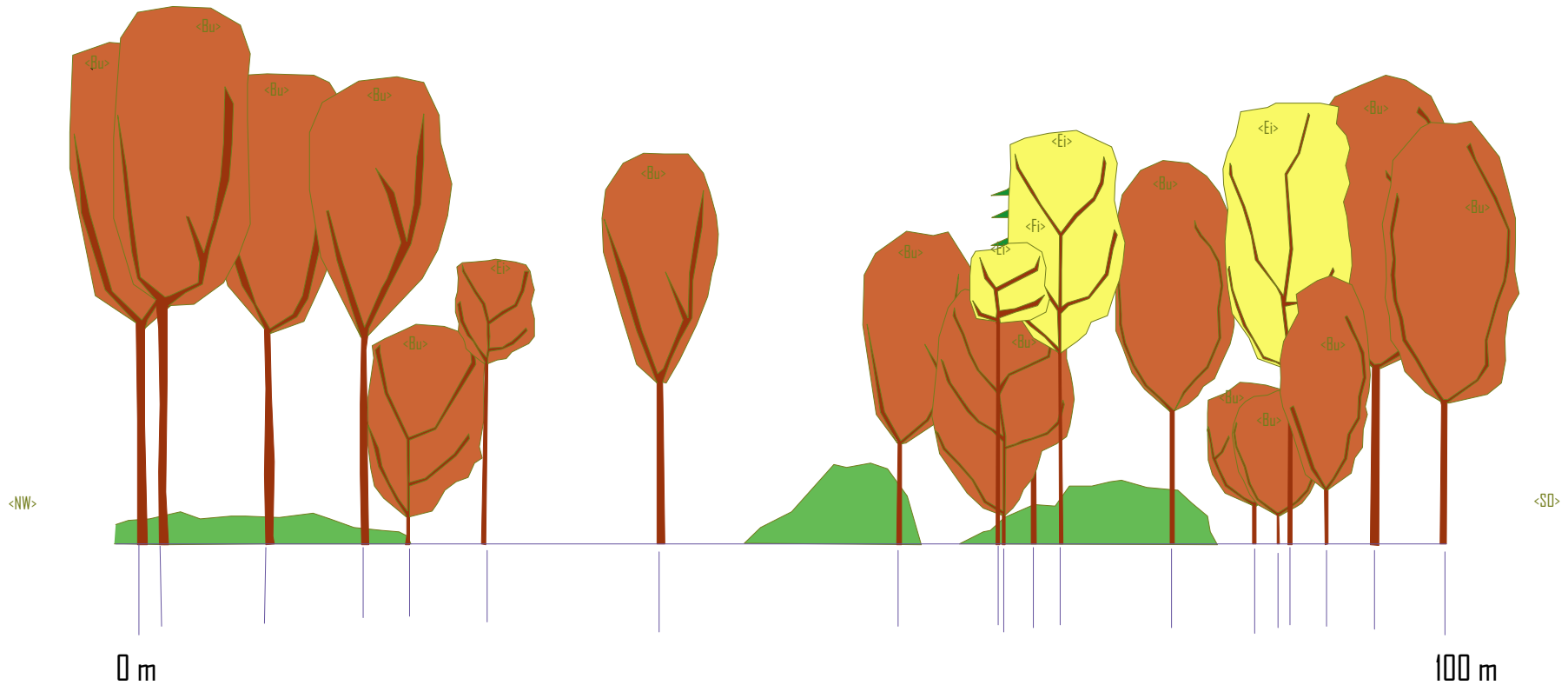
100m



# Structured perpetual forest with group-selection felling

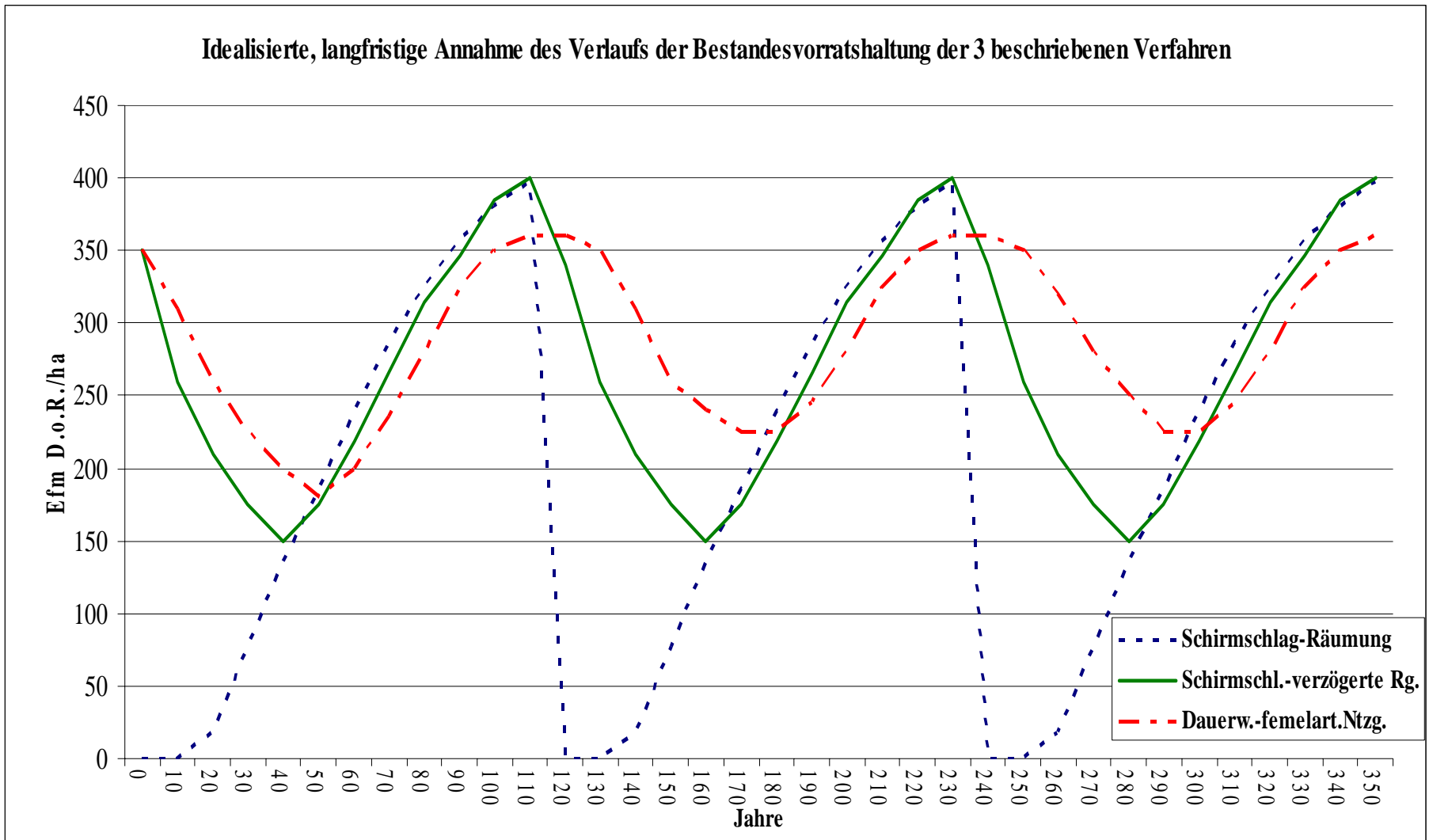
linear trans-section-picture 100\*10m

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# Kreisforsten: Stock level developement of stands; idealised, three kinds of treatment





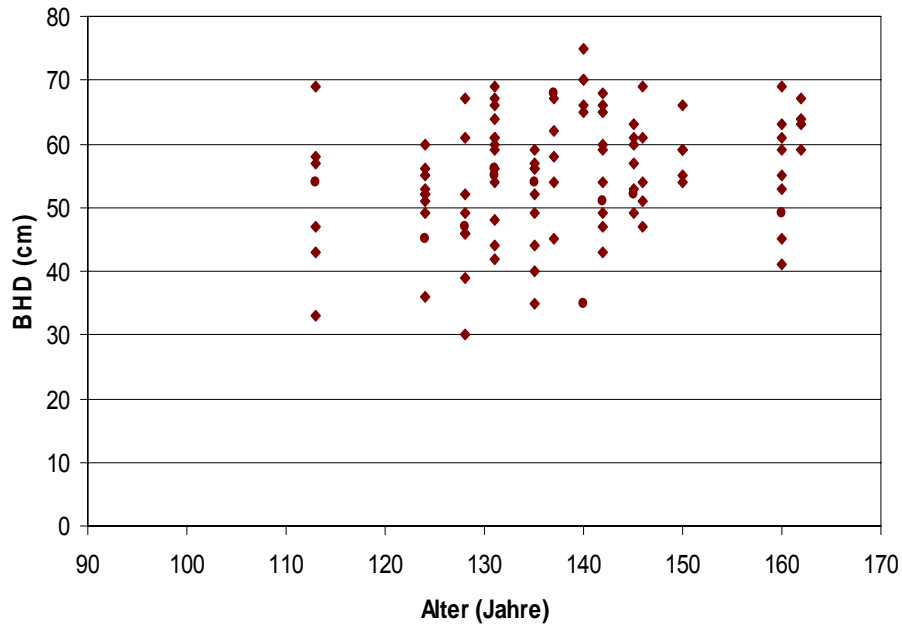
## Challenges (questions) for research

- **1. Are the qualitative and quantitative natural results of this kind of management of the beech stands comparable with the traditional way or better? (E.g. quality of the trees harvested, quality of the next generation of trees, optimisation of growth or rather use of the location's potential?)**
- **2. Are the economic results and the total operating efficiency of this kind of management comparable or better than the traditional way of doing it?**
- **3. Can the acceptance of nature conservation for the (further) usage of beech stands be improved in this way or even be brought into line?**

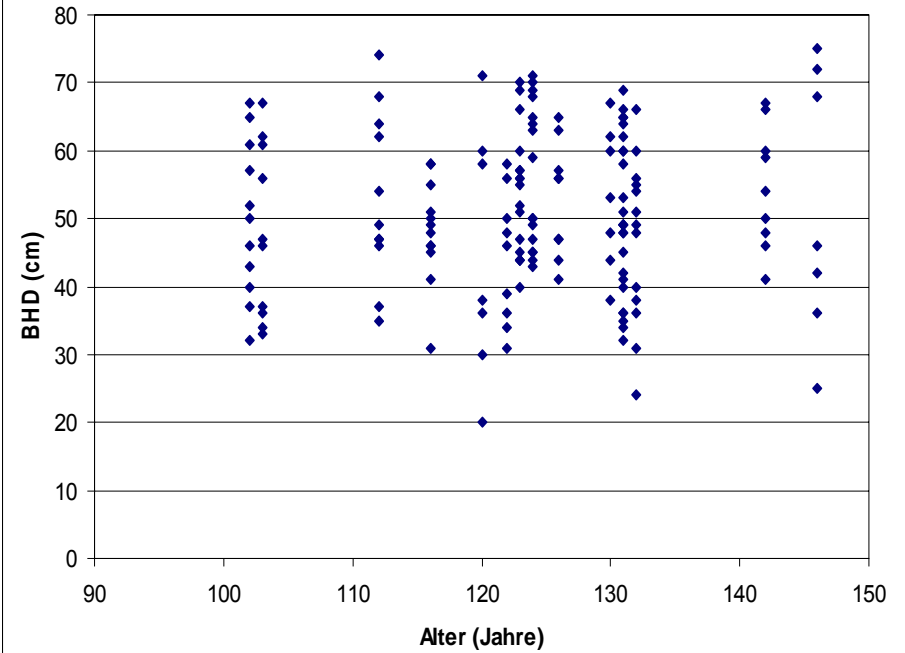


# Kreisforsten: Distribution of diameters (brest high) two kinds of treatment

### Durchmesserverteilung älterer zweischichtiger Bestände



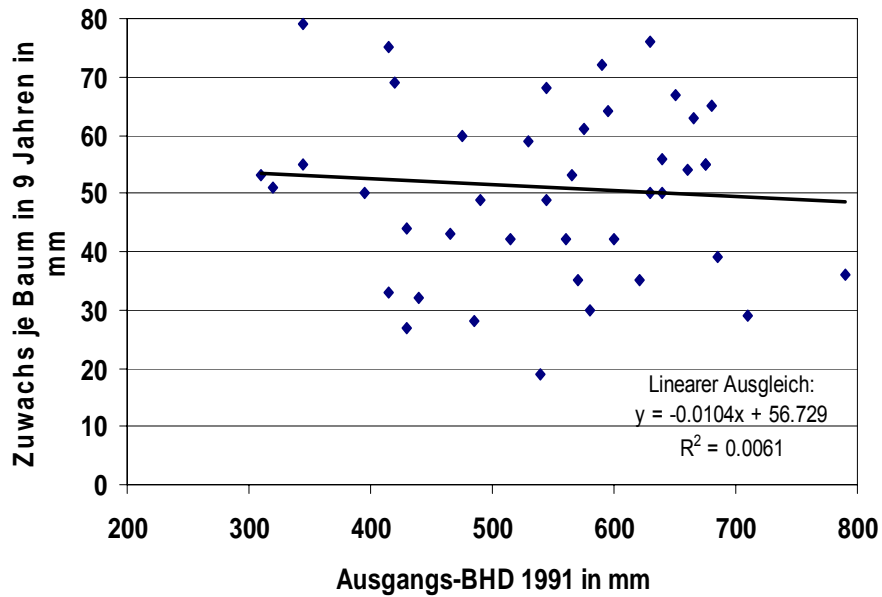
### Durchmesserverteilung älterer gut strukturierter Bestände



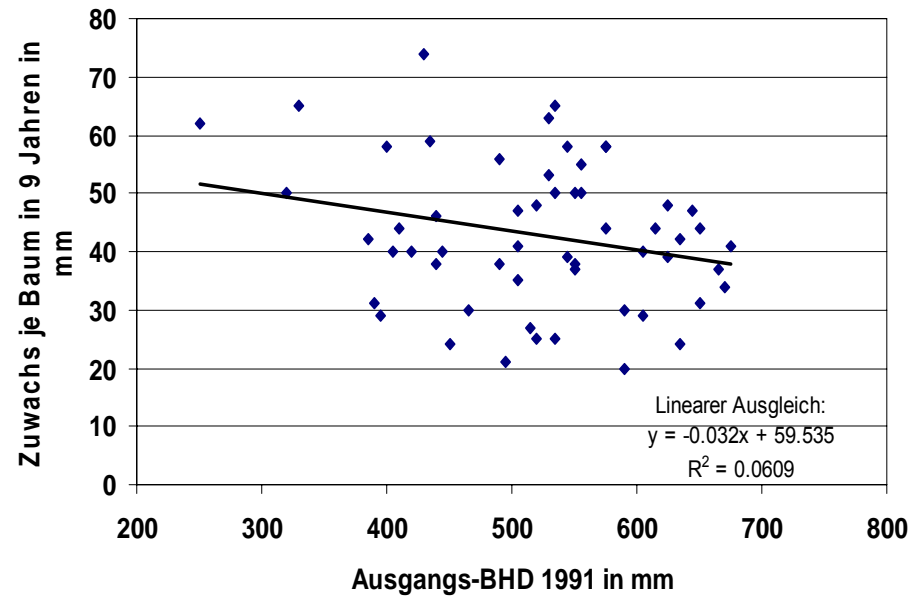


# Kreisforsten: Relation between b.h. diameter and increment (two kinds of treatment)

Beziehung zwischen dem Ausgangsdurchmesser (BHD) und dem Zuwachs in 9 Jahren (Buche, zweischichtige Bestände)

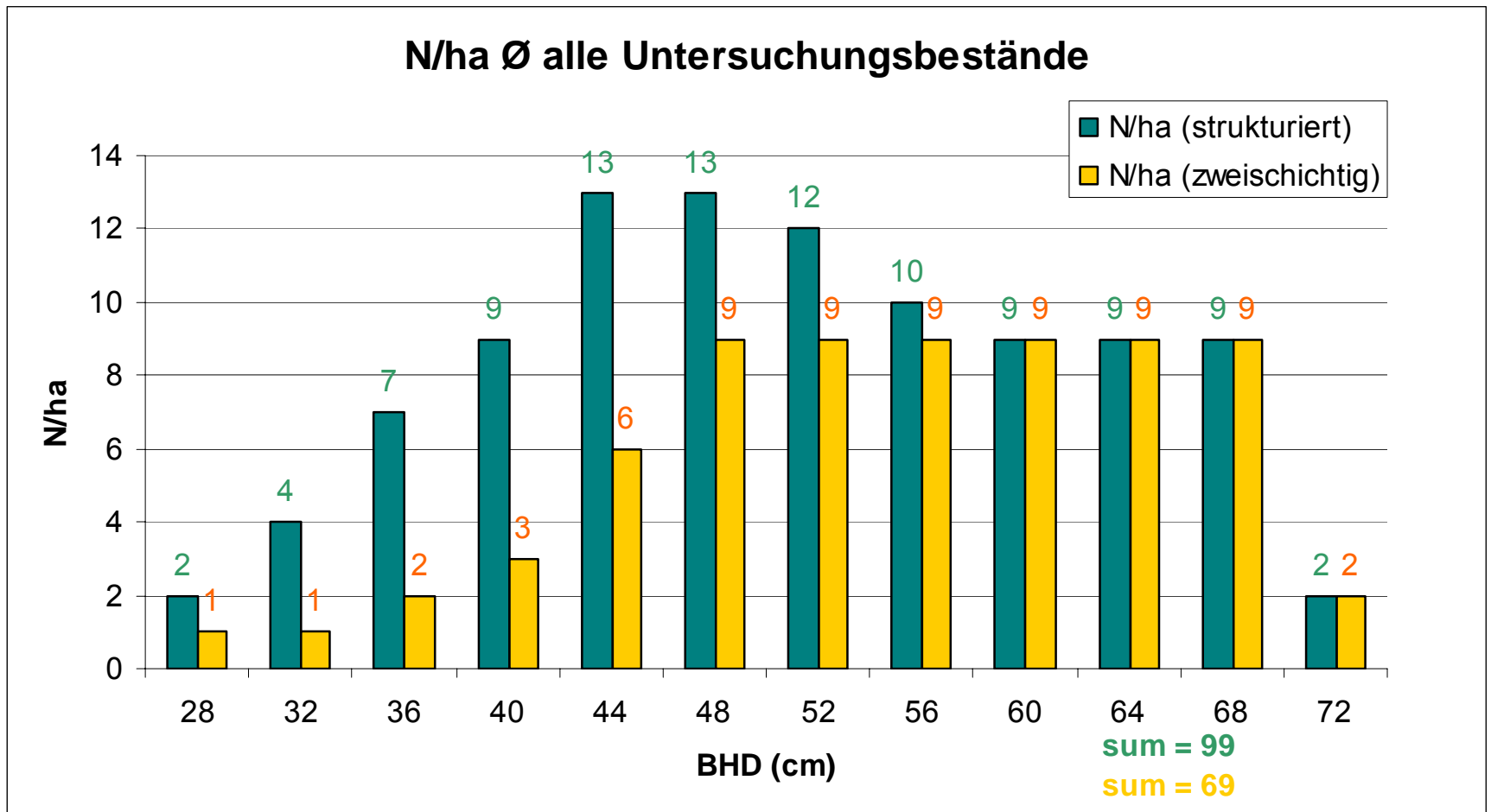


Beziehung zwischen dem Ausgangsdurchmesser (BHD) und dem Zuwachs in 9 Jahren (Buche, strukturreiche Bestände)





# Kreisforsten: Number of stems/ha; two kinds of treatment





## Kreisforsten: Model calculation (two kinds of treatment)

<b>Modellrechnung anhand von Weiserbeständen</b>				
<b>Verfahren: Schirmhieb-verzögerte-Räumung</b>			<b>jeweils Efm D.o.R.</b>	<b>Euro</b>
<b>Spalte</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Zeitraum	Vorrat am Anfang d. Jz.	Zuwachs im Jz.	Nutzung am Ende d. Jz.	<b>holzerntekostenfreier Erlös</b>
120 - 130 Jahre	286	63	130	5200
130 - 140 Jahre	219	56	140	5920
140 - 150 Jahre	135	35	100	4500
150 - 160 Jahre	70	16	86	3655
<b>Summe</b>			<b>456</b>	<b>19275</b>
<b>Verfahren: Femel-Dauerwald-strukturiert</b>			<b>jeweils Efm D.o.R.</b>	<b>Euro</b>
Zeitraum	Vorrat am Anfang d. Jz.	Zuwachs im Jz.	Nutzung am Ende d. Jz.	<b>holzerntekostenfreier Erlös</b>
120 - 130 Jahre	286	63	120	4800
130 - 140 Jahre	229	59	100	4250
140 - 150 Jahre	188	56	95	4275
150 - 160 Jahre	149	49	90	4275
160 - 170 Jahre	108	35	80	3600
170 - 180 Jahre	63	16	79	3358
<b>Summe</b>			<b>564</b>	<b>24558</b>
<b>Differenz</b>			<b>108</b>	<b>5283</b>