

# Integrate+ - not a final conference

Daniel Kraus

## The way ahead

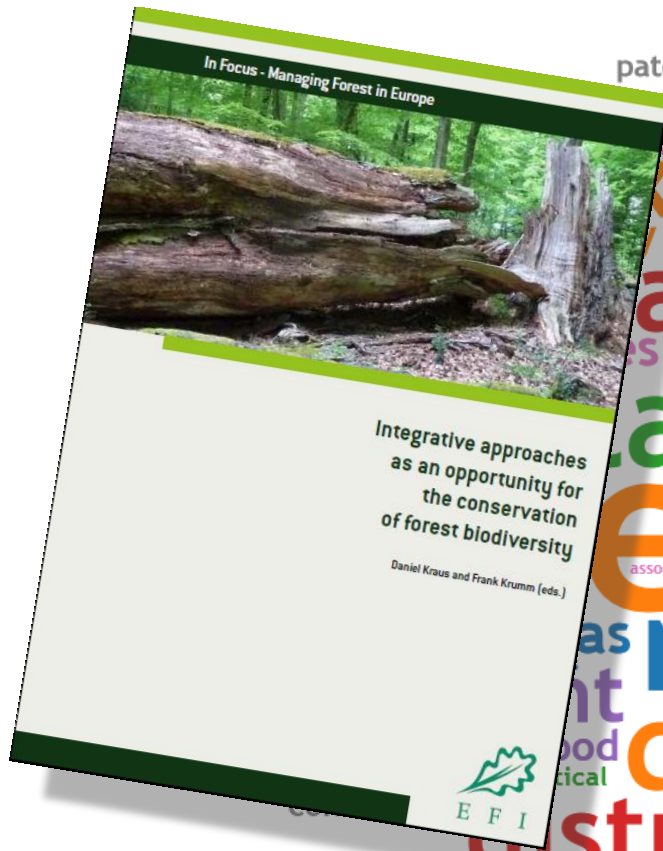




**Forestry – how dangerous is it really?**



**How did we call the green wrath upon us?**



patches features microhabitats position mortality maintain structural traditional diversity cultural dynamics change  
abiotic sites local given spatial studies devel particular amount  
land ha use al time bark stand old-growt  
low eto gap history systems larger  
associated dead spruce size cavities higher pattern Europe  
as management occur likely biotic regions mountain example types general  
nt food odical deadwood stages meadows biodiversity available suitable conditions  
disturbance network large conservation ecosystems range provide  
elements scale



# Integrate +

## A critical but constructive donor





# Integrate +



## Advisory Group



**Kurt Bollmann, WSL**

**Laurent Larrieu, INRA**

**Ulrich Mergner, BaySF**

**Bege Jonsson, MIUN**



# Kick-off event

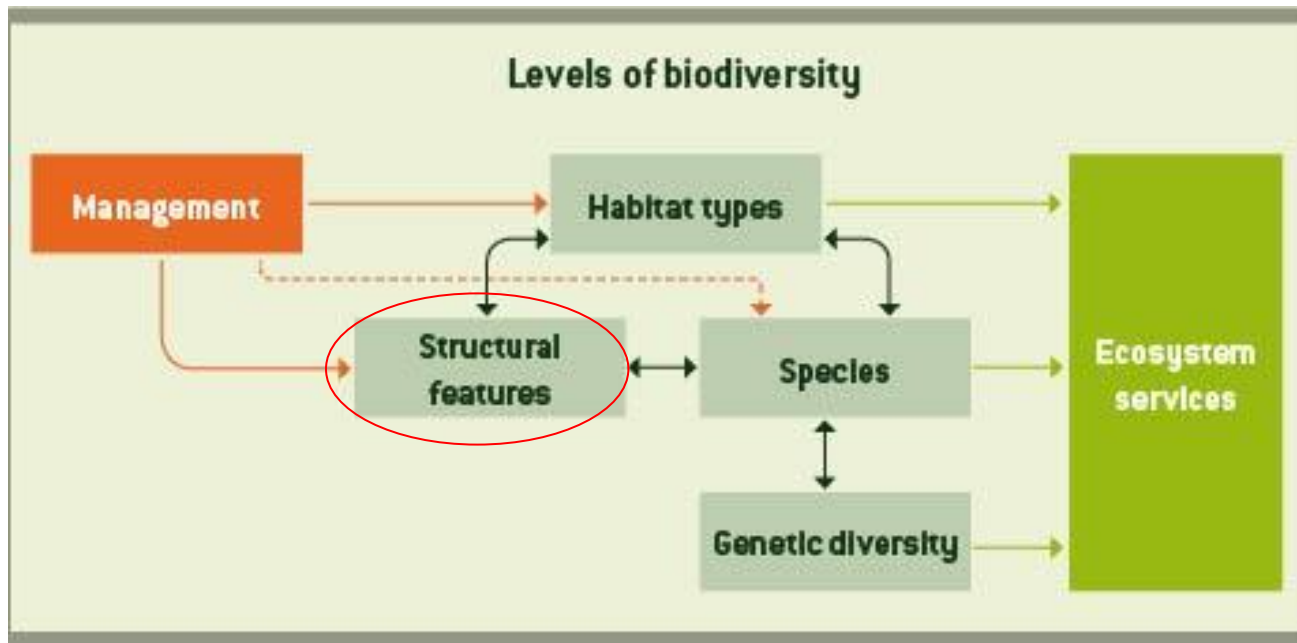


Kick-off meeting took place in March 2014 in Fontainebleau with main partners





## What does biodiversity in forests actually mean?



*(Jonsson & Siitonen, 2013).*







## What does biodiversity in forests actually mean?

**Art. 7 CBD, Bern Convention and Habitats directive:**

**Conservation of rare, threatened or endemic species**

-

**A clearly differentiated, qualitative approach!**


*(Jonsson & Siitonen, 2013).*







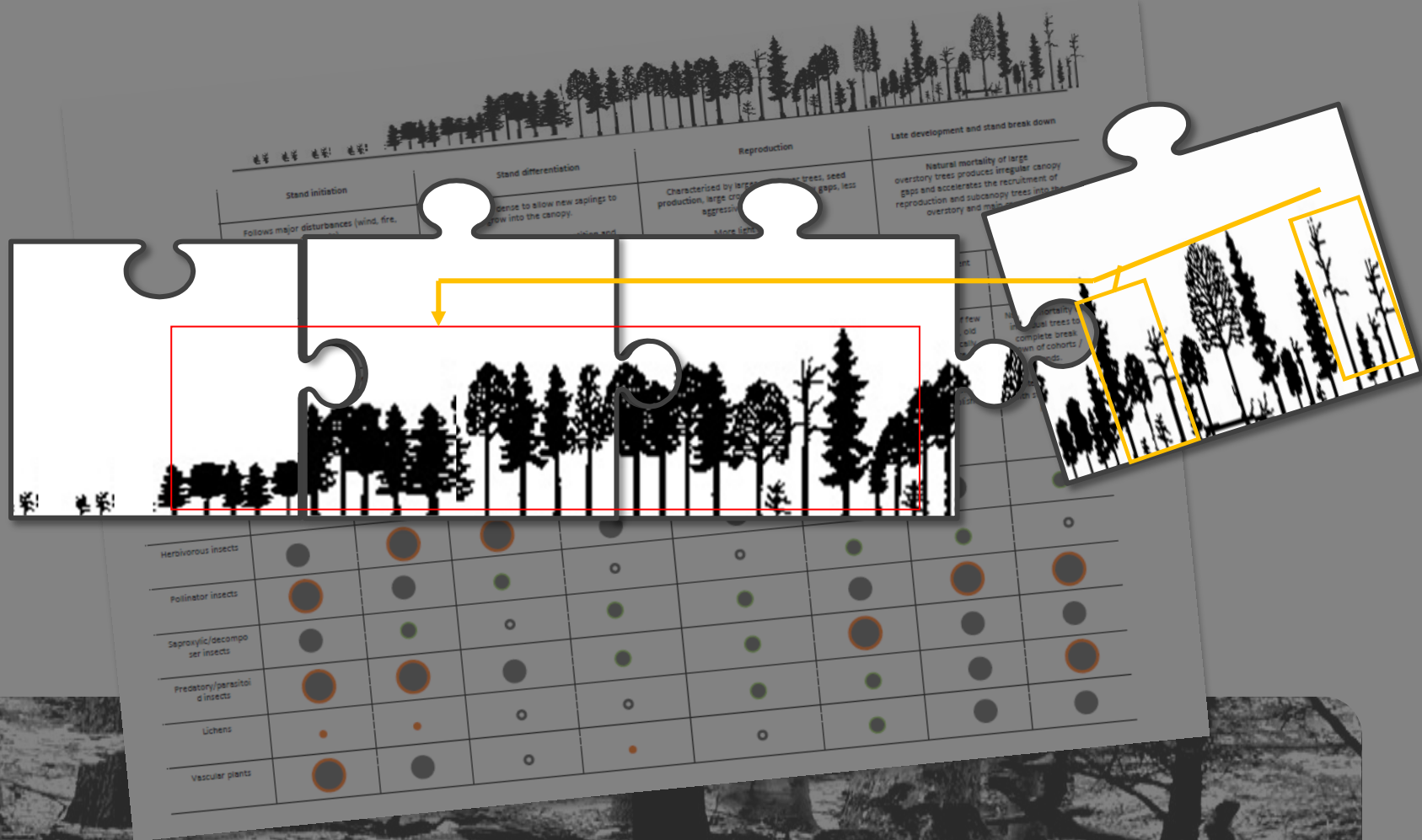
# Forest dynamics and species composition



Stand initiation		Stand differentiation		Reproduction		Late development and stand break down	
Follows major disturbances (wind, fire, clearcuts). Stage ends when canopy becomes continuous and trees begin to compete with each other for light and canopy space.		Canopy is too dense to allow new saplings to grow into the canopy. Characterized by growth, competition and mortality produces spatial adjustments		Characterized by larger and fewer trees, seed production, large crowns, larger canopy gaps, less aggressive crown expansion. More light reaching the forest floor.		Natural mortality of large overstory trees produces irregular canopy gaps and accelerates the recruitment of reproduction and subcanopy trees into the overstory and main canopy.	
Pioneer and Ruderal phase	Regeneration phase	Early	Late	Early maturity	Late maturity	Late development	Stand break down
Few pioneer trees, grasses, first perennials	Regeneration of open space from seed, sprouts and advance regeneration. In managed forests: tree planting	Competition is intense and density dependent self-thinning occurs.	Mortality rates are high, especially in the intermediate and suppressed crown classes; full utilization of growing space, possibility of stagnation.	Remaining trees may use resources to grow and reach their economic maturity. Small canopy gaps occur. In managed forests: potential conversion to a continuous forest cover system.	Gap dynamics, canopy gaps increase and young trees may establish naturally. This stage marks the transition of an even-aged to an uneven-aged stand	Development of few trees to large, old and economically overmature individuals. Regeneration is already established.	Natural mortality of individual trees to complete break down of cohorts / stands. Potential overlap with stand initiation phase.
Herbivorous insects	●	●	●	●	●	●	●
Pollinator insects	●	●	●	●	●	●	●
Saprophytic/decomposer insects	●	●	●	●	●	●	●
Predatory/parasitoid insects	●	●	●	●	●	●	●
Lichens	●	●	●	●	●	●	●
Vascular plants	●	●	●	●	●	●	●



# Forest dynamics and species composition



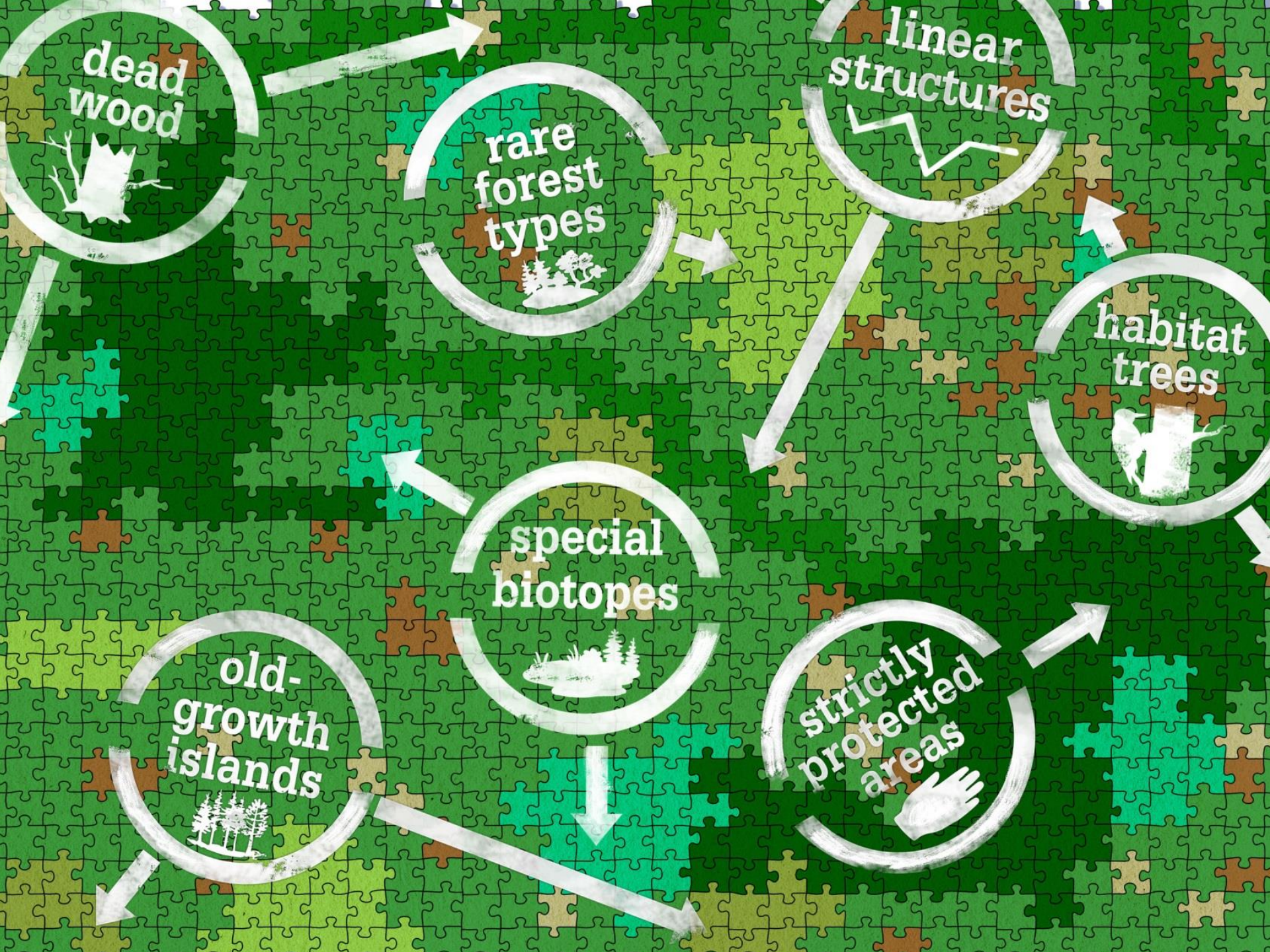




## Deficit on deadwood structures



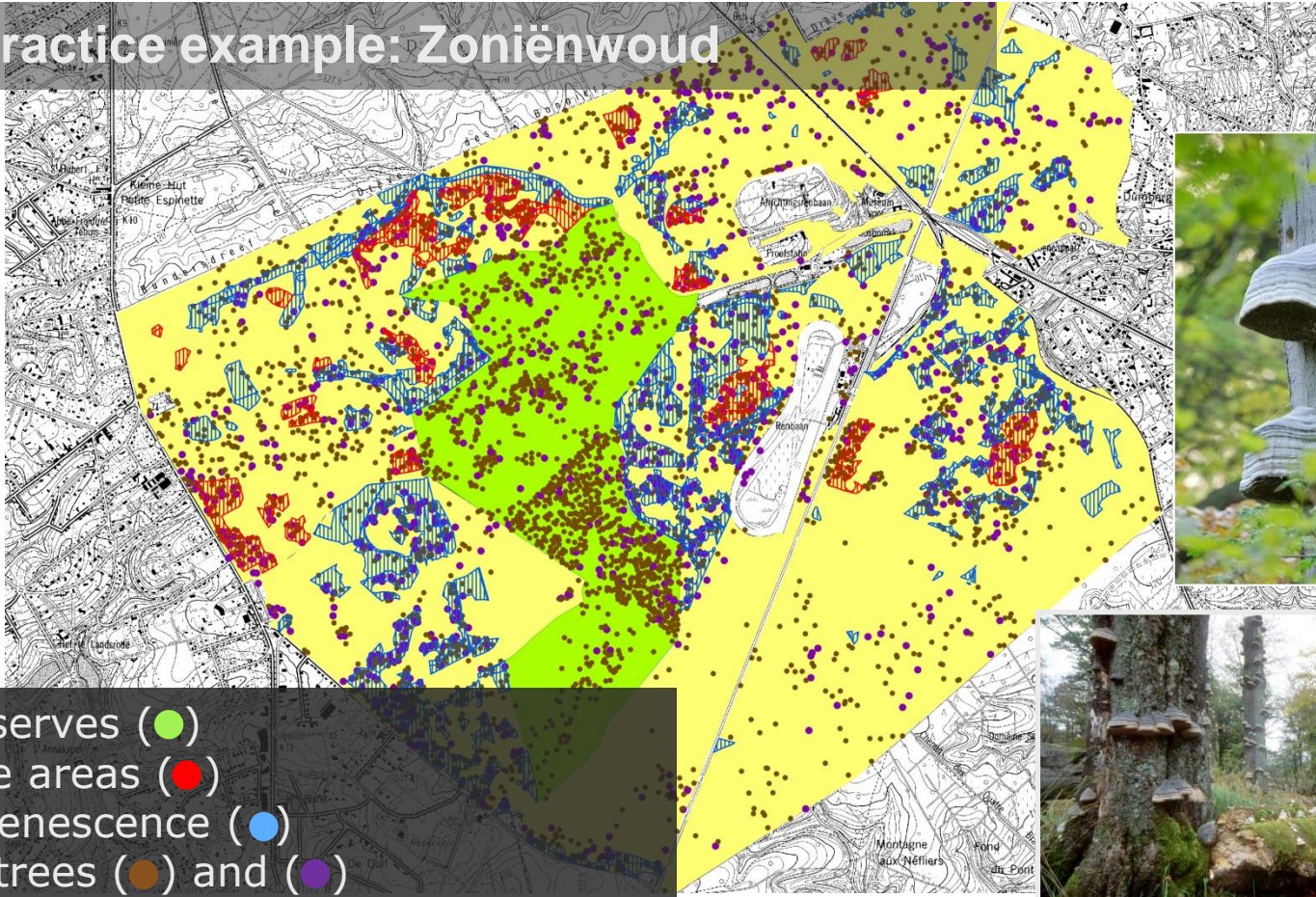








## Practice example: Zoniënwoud



Strict reserves (●)  
Set-aside areas (●)  
Ilot-de-senescence (●)  
Veteran trees (●) and (●)







# Practice example: Lörudden skog

Boulder-strewn land with  
pine, aspen, and dead trees

Rocky slope

Rock outcrops

Groups of aspen

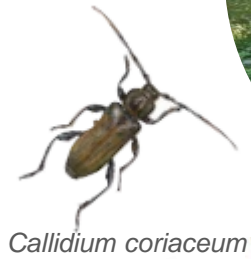
Area with  
emerging birch

Riparian zone

Waterlogged forest

Headland with old pine

Edge zone bordering lake



*Callidium coriaceum*



*Dicerca furcata*



Nature value tree

Sallow trees with  
wood fungus

Dead trees, snags and  
windthrow

Wet hollow

Mountain ash

Artificially created  
snags

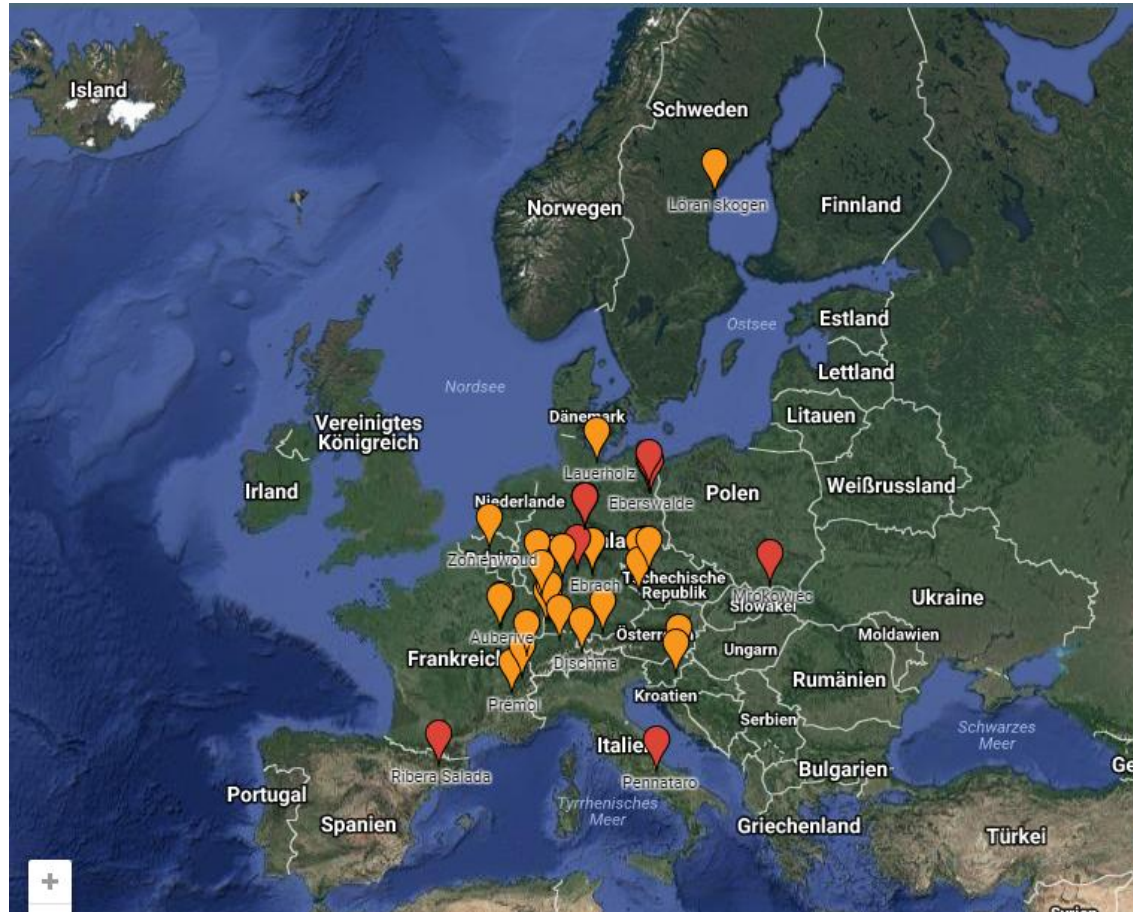
Group of aspen

Sallow





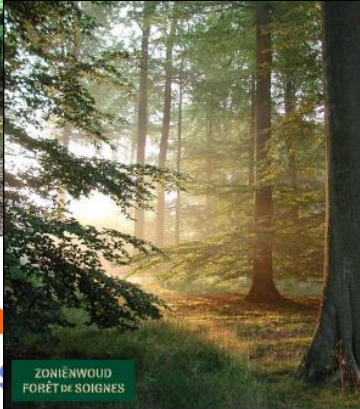
# D1.3



D1



## The Steine Martelos



ZONIENWOU  
FORÊT DE SOIGNES

## The Groene Martelos



INSTITUUT  
NATUUR- EN BOSONDERZOEK



## The Goumoëns Marteloscope

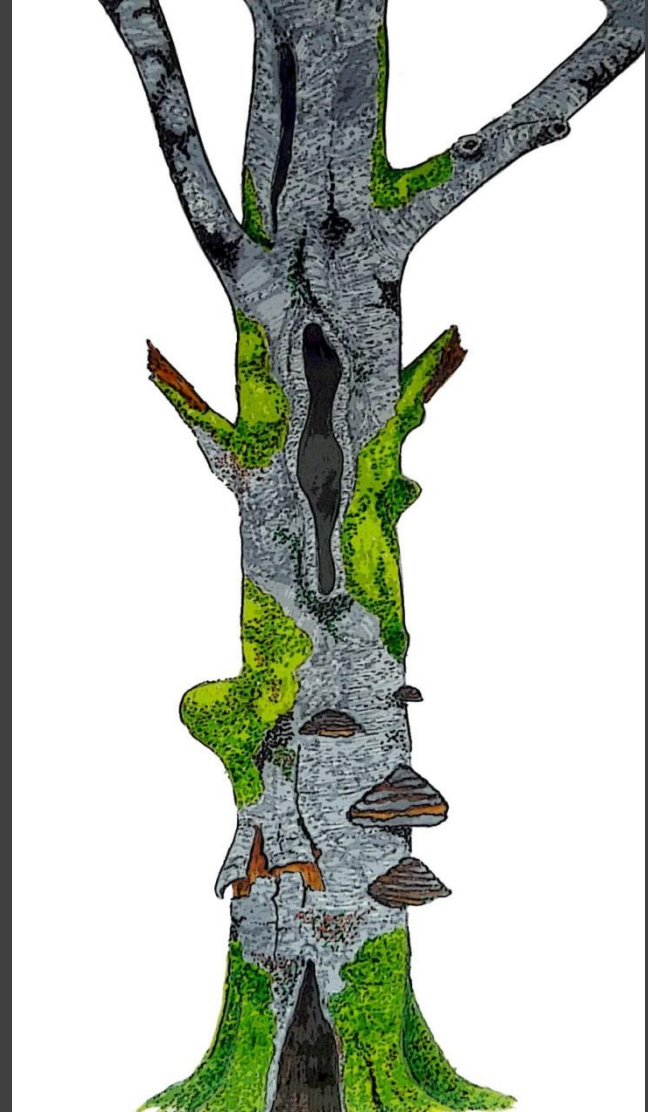
Field guide





D5.9

## Information packages:



# D5.9

## Information packages:





D5.8

## Feature Film





WP3

# Professional exchange visits





D3.2

## Field visits





## D3.3

## Training exercises





# The future



More than just a network  
community?

**Can it be the  
Integrate Clan?**