Natura 2000 in Romania.

Forest management - threat or advantage?

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The Natura 2000 network

The general overall aim…

- is to ensure the long-term survival of species and habitats of community interest, while taking into account the economic, social and cultural requirements and regional and local characteristics.

How?

- by maintaining or improving the conservation status of species and habitats of community interest

What does this imply?

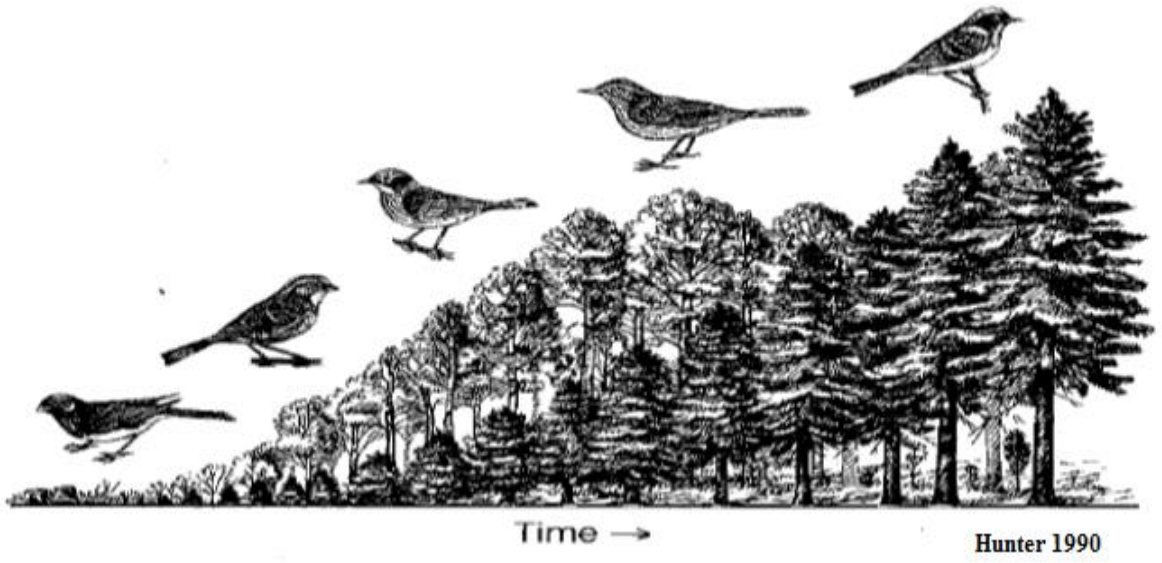
- … maintain good conditions for many different species and habitats (i.e. biodiversity)

A high biodiversity …how? what conditions?

Favorable habitat for many different species! But …

1). Different species **have different habitat requirements** (i.e. they look for different environments), and…

2). **Forests are dynamic**, they change in time = **habitat conditions for species are changing along time in the same place!**



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Very important to understand …

Change is inevitable! Is change good or bad?

Any type of disturbance creates growing space for some species and degrades growing space for others!

Change is always good news for some species and bad news for others!

So, how to acquire the favorable habitat in order to accommodate most or all species?

Maintain the presence of all stages of forest development in the same landscape (**not in the same place** but in different places along time - because of dynamics of nature), **inside the same landscape**!

The ***shifting steady-state mosaic*** (Kimmins 2002) provides in the same time (in different places but inside the same landscape) all different structures = **space-for-time substitution**

Hunter 1990

What are the conditions to acquire this?

- Large areas (**landscape approach**), to allow for presence of various stages of development (various habitat conditions), large enough to accommodate vigorous population of the wanted species
- **Controlled management** to ensure the presence of all stages of development, in a **balanced proportion** at landscape level

The high biodiversity of Romania.

Why? and How?

- What ensures the presence of so many species in the Romanian forests?
- How such favorable conditions are obtained? How to maintain them?

Conditions for a high biodiversity in Romanian forests …

- Diverse environments (5 biogeographical regions)
- Diverse tree species assemblages, matching natural compositions
- Diverse structures (uniform, relatively uniform, relatively diversified, diversified)
- Age diversity – mosaic of different age classes in the landscape
- Old forest stage (usually over 100-140 yr. + special cases of virgin forests > 300-400 yr.) constantly present in the mosaic (habitat for some specialized species)
- Gradual transition (most common) from old to young forest and (less frequent) sudden transition
- Maintenance of forestland area (control of land use change) and even increase
- A well connected forestland (e.g. 1 km buffer dist. = one cluster of 6.076.055,32 ha or 85% of all forests, around the Carpathians. Together with 11 more existing clusters larger than 10.000 ha = the percentage is around 91%) (COREHABS Project/Contract 6326/2015).

Are all these a result of chance?
Or of rational management?

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Conditions in forest management (regardless of ownership)…

- Diverse native tree species assemblages = natural composition of stands is imposed by norms (both in plantations and natural regeneration process)
- Diverse structures (uniform to diversified) = silvicultural treatments imposed by norms and adapted to the functions attributed to a stand (according to norms)
- Stand age diversity (landscape mosaic) = principle of sustained yield imposed by norms
- Old forest stage constantly present = rotation length imposed by norms; virgin forests protected
- Gradual transition (most common) from old to young forest and (less frequent) sudden transition = silvicultural treatments imposed by norms and adapted to the functions attributed to a stand (according to norms)
- Maintenance of forestland area and its connectivity = strict control of land use change by law and high costs of land-use change

Forest management and Natura 2000 …

Such **rules**, inherited from the past and constantly applied for several decades and even more than a century in some places, **produced a very biodiverse forestland at country level! And they can maintain it further!** Of course one condition is to control illegal activities which have raised serious concerns recently.

Probably the most **important advantage** is the fact that **they are implemented at national level** (not only in Natura 2000 sites), thus **providing habitats at the largest scale possible**!

=the secret of the widespread and well connected biodiversity across Romania, in and outside Natura 2000 network

Forest management planning and Natura 2000 planning…

Forest management planning …

- done by specialized companies accredited by the ministry (**not by owners** themselves)
- according to national norms (**not according to owners goals**)
- Norms enforce **all rules** mentioned above (**related to good conditions for biodiversity**), on entire forestland
- Plans, before implementation, are **approved by ministry** (supervised and controlled by the state)
- Implementation of plans only by specialized entities (**not by owner**) and **controlled by state** (Forest Guard)

Natura 2000 planning …

- Many cases refer to **obeying principles** and even **measures** proposed in **forest management plans or laws, norms**.
- In most cases they seek maintenance of natural forests but **they show lack of understanding of forest dynamics (shifting steady-state mosaic)**!!
- They usually come with **some detailed measures** (retaining deadwood, trees with nests; buffer zones around nests/dens etc.) – linked to implementation of forest management not on planning (**not contradicting them**).
- Very seldom they talk about **compensations for owners as a condition** for implementing restrictions

….therefore, **forest management planning rules are compatible with Natura 2000 planning**. Some detailed measures make the difference but don't bring contradiction.

Challenges/threats for the present context

- **Lack of understanding of forest stand dynamics and its effects on biodiversity dynamics**

- Small size and fragmented ownership makes unappealing the forest management system imposed by the state (as being very costly!) or sometimes impossible (as the precise location/boundaries are unknown). Procedures in Natura 2000 sites are even more complicated and costly!

- Lack of incentives or compensations for owners accepting and following the strict rules for forest management. **Especially for those who apply management** (active management maintains the very large scale connected and stable shifting steady-state mosaic) which implies accepting **all planning rules** as well.

Linked to those above
- lack of management plans (no active management to maintain all advantages mentioned before)
- trespassing of management planning rules = illegal logging

Misinterpretations which hinder understanding the real context of forest management

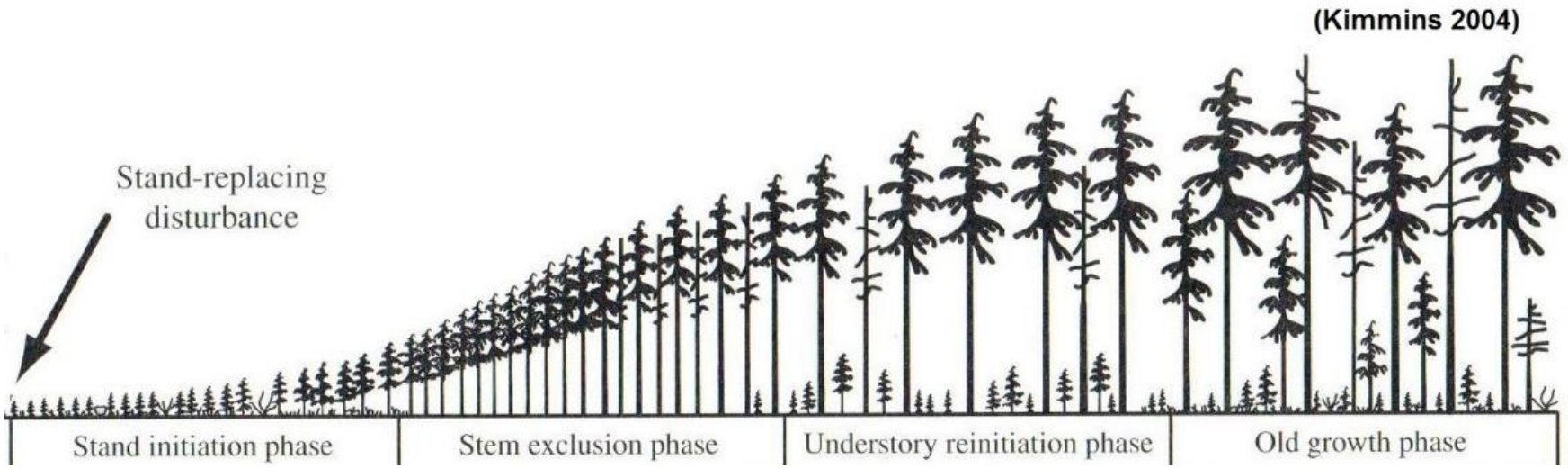
Despite the evidence of usefulness of forest management rules in maintaining the species and habitats at large scale, there are myths (rooted most probably in the lack of understanding of forest dynamics – the ***shifting steady-state mosaic***) – which rather **hinder** than help **implementation of Natura 2000 in Romania**.

Some important examples of such myths:

- Doing nothing is better (always and everywhere)
- Only the old forest is good for Natura 2000; replacing old forest with young forest is therefore always bad.
- Forests of 100 -140 years old should be strictly protected as they are old-growth untouched forests
- Single tree selection is the only treatment good for Natura 2000; clearcutting is always bad

Myth = “Doing nothing is better, always and everywhere”

First of all – **all forests are dynamic**. They don’t remain young if they are young at present, they don’t remain old if they are at present old. Moreover, **natural disturbances shape them** in very different ways, not very different from forest management. Therefore is completely **wrong to perceive them as being static**.



Myth = “Doing nothing is better, always and everywhere”

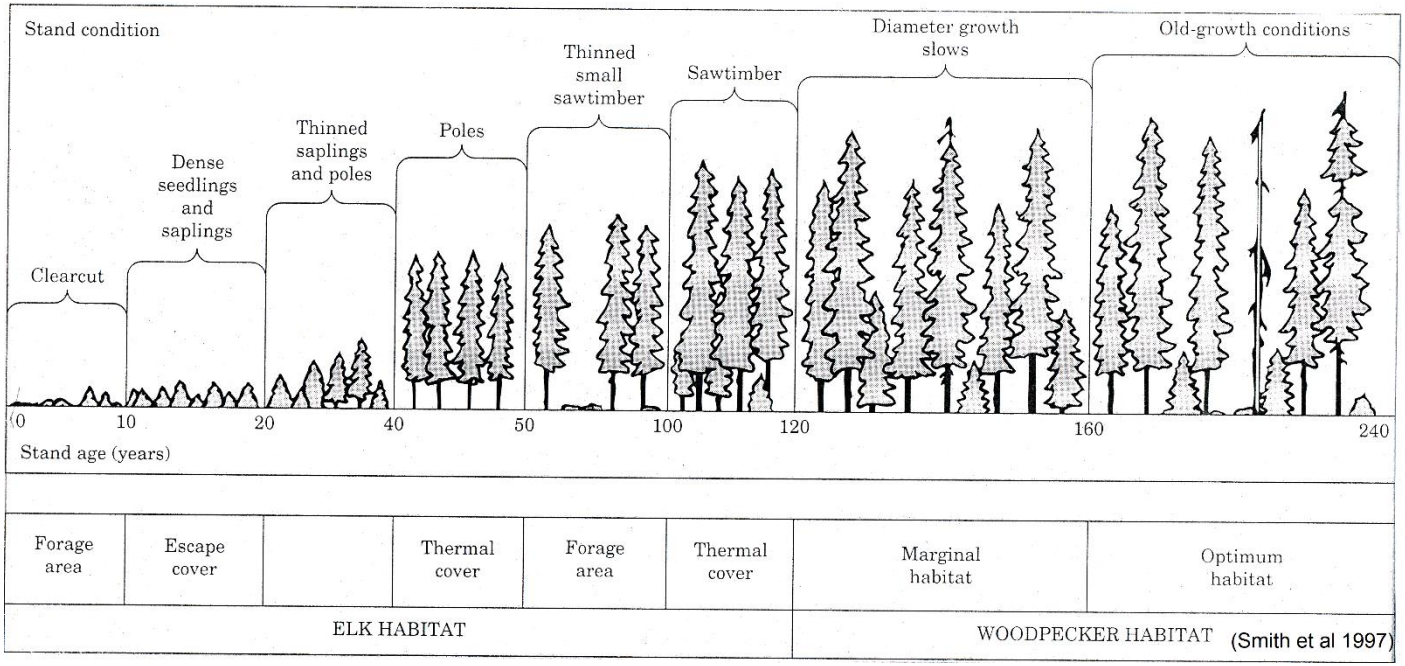
- Second, maintenance of diverse habitat conditions for all species requires **controlled** and **continuous management** (the shifting steady-state mosaic cannot be guaranteed by no-management). Management (in diverse forms, more or less intensive) is therefore needed for Natura 2000.
- Last but not least, very important, Natura 2000 is about **conservation in partnership** with humans **not** by **exclusion** of humans nor by **dispossessing people of their lands and rights**
- Also, imposing/increasing non-intervention shifts the burden on the rest of the area (with more potential negative effects on diversity)

So, “Doing nothing is better ” is not true in general and definitely not for Natura 2000 (which aims at **maintaining** and improving status, **not** leaving this goal to **chance**).

Myth = “Only the old forest is good for Natura 2000; replacing old forest with young forest is therefore always bad”.

- Each **stage offers certain habitat conditions (not all habitat conditions!)**.
- **None** of the development stages alone **includes all species**.
- Moreover, many species **need more stages in the same time** to fulfill their basic needs.

Therefore, **only one stage (even the old-forest) is not favorable** for existence of **all species**.



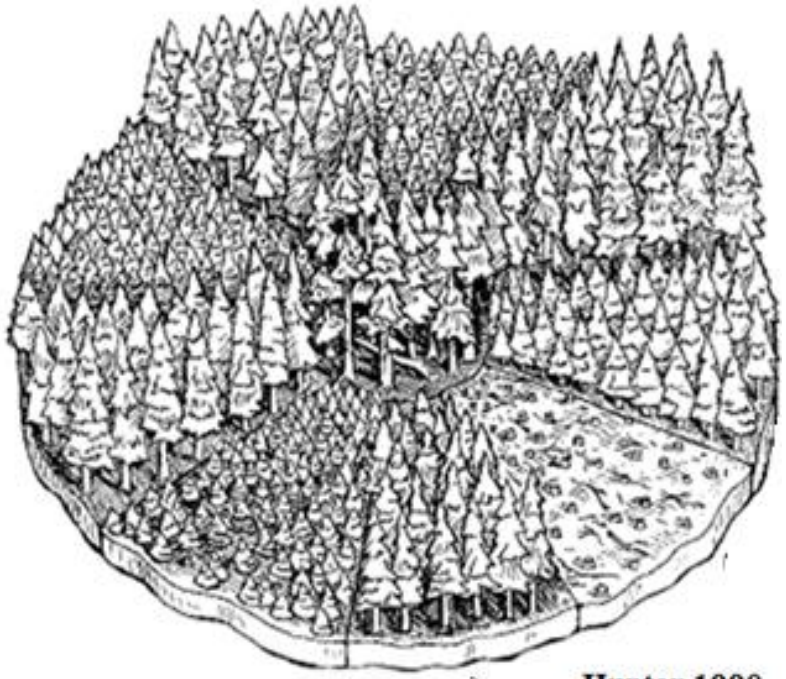
Species care about resources not about aesthetics or human emotions!

Myth = “Forests of 100 - 140 years old should be strictly protected as they are old-growth untouched forests”.

First of all, the complex management in Romania ensures that **most forests reach 100-140** years before the regeneration cuttings. **For many**, e.g. the forests with certain protection functions (representing more than half of the forestland) **rotation is even longer** = trees get to even older ages.

However, these forests are a result of certain type of management (of various intensities) not of **abandonment** or of **being untouched** and can be **produced and maintained by such management**.

Stopping management now will **prevent their presence** in other places inside the mosaic **in the future** (by reducing the rotation length in managed forests) = **definitely not good for biodiversity at country level**



Hunter 1990

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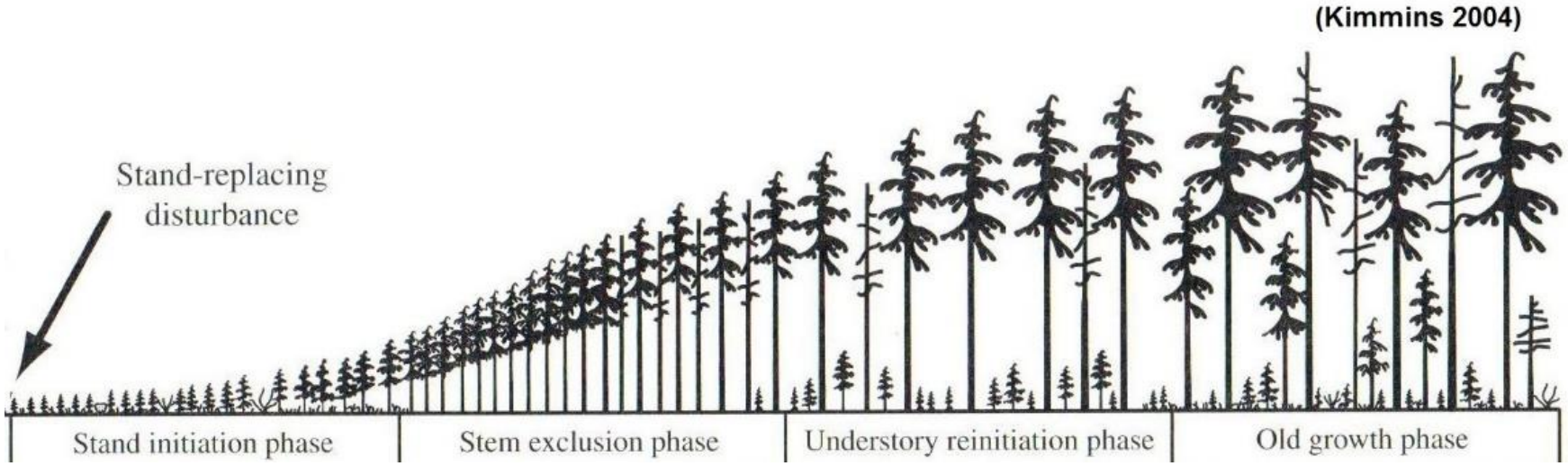
Myths – Forests of 100 - 140 years should be strictly protected as they are old-growth untouched forests.

Forests of European beech, Norway spruce, silver fir, oaks are not in the old-growth stage at 100-120-150 years. They are in the intermediary stages of stem exclusion-understory reinitiation.

The real old-growth forests (over 300 years old) are the virgin and quasi-virgin forests (already mentioned in the legislation and strictly protected).



Stopping the management of old managed forests now will

not save the real old-growth forests !

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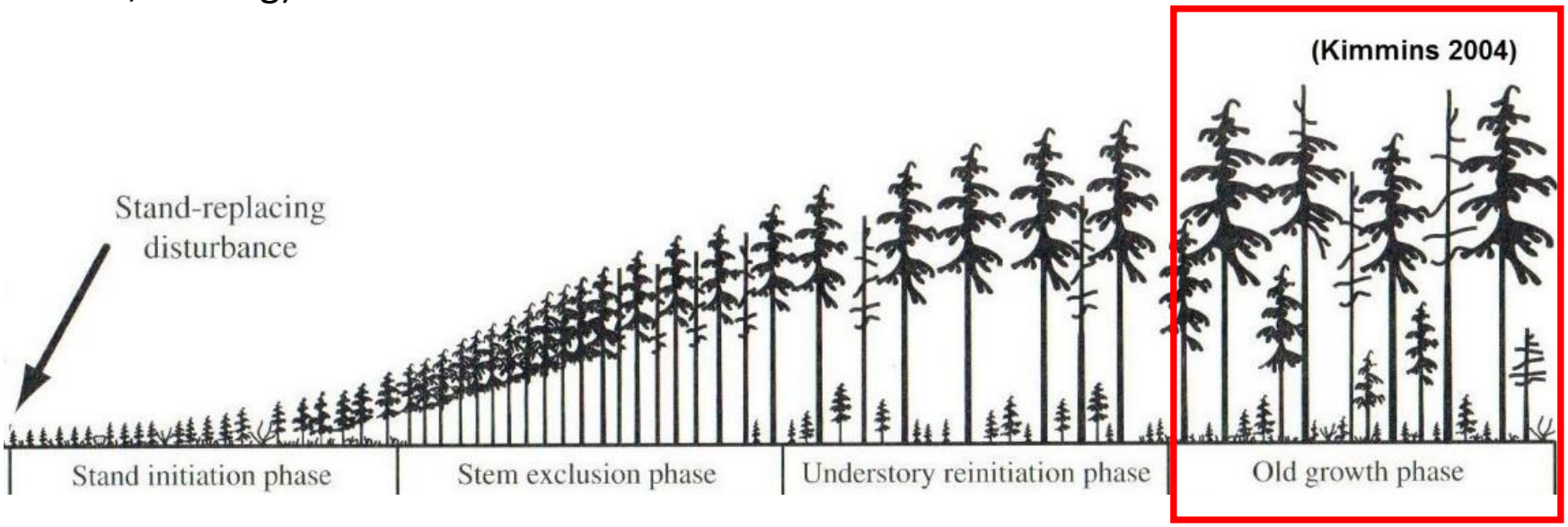
Myth = “Single tree selection is the only treatment good for Natura 2000; clearcutting is always bad”.

Single tree selection creates and maintains **only one structure** (similar to **but not necessarily old-growth = old-growth implies age as well not only structure**).

While this structure favors some species, **it is not favorable for many species** (light demanding small size plants and therefore all their associated animal species), **not best for many others** (does not offer compact areas of enough size for escape cover, thermal cover, feeding).



1). Structures produced by single tree selection do not accommodate needs of all species!

Myth = “Single tree selection is the only treatment good for Natura 2000 ….”.

Management?

- ❑ it needs a dense roads for timber extraction (if no such network is available, damage to soils is very high and continuous);
- ❑ damages to regeneration and residual trees are higher;
- ❑ frequency of harvesting is higher (disturbing more frequently animals)

Naturalness?

After more than a century of applying single-tree-selection almost everywhere in Switzerland, the single-tree selection system was considered

…“a **typical man-made system**, which can only function as long as periodic interventions correct the tendency towards stand closure” and

“**for light-demanding** species, single-tree selection **does not seem to be** the **appropriate** way to ensure regeneration of appropriate species”

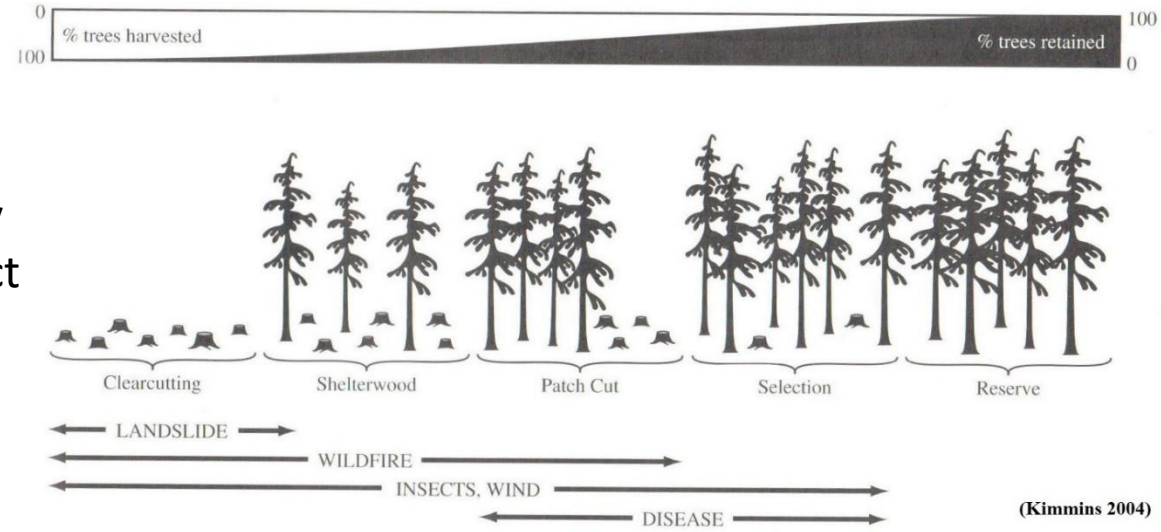
(Schutz 1999 – ***Close-to-nature silviculture: is this concept compatible with species diversity?*** Forestry, vol. 72, No. 4)

2) Single tree selection = Not always and for all forests the only 100% natural way!

Myth = “clearcutting is always bad”.

Clearcutting **emulates** some **common natural disturbances** (windthrow, insect outbreaks, fires), natural disturbances with **similar effects** (compared to controlled management) on species.

Effects on biodiversity:
e.g. in freshly open areas = enough light for the light demanding species, especially herbs and shrubs which attract most of the animal species as well (conditions not found in small gaps in tall forests).



It is therefore **not always bad** for all species and definitely **not on small areas** (e.g. it is restricted to up to 3 ha in Romania).

Remember:

1) Change is always bad for some species but good for others.

2) Species care about resources not about aesthetics or human emotions!

In the end…

1. Natura 2000 needs **wise management** (based on **knowledge** and **experience**) in **partnership** with humans (especially local communities and land owners)

2. The forest management in Romania has proved it is very efficient but also **very costly**!

3. Control of illegal activities but also subsidizes/incentives are needed to continue this (EU funding needs reconsideration = stimulate also good management imposed by the state and good for Natura 2000!)

4. But all of these will be futile without **a thorough understanding of forest dynamics** and **a pragmatic approach on conservation in partnership** with humans (especially **local communities** and **land owners**)

THANK YOU FOR YOUR ATTENTION !

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