



FORRISK

Final Conference

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Manual for future crisis and risk management in forestry – Assessment and consequences of risk factors and associated challenges and economic risks in Czech Republic

Factors involved in the implementation of the forest enterprise goals	Relation to change of production and risk (i - intensive, e - extensive)	Possibility of change (y - yes, n - no)
Habitat conditions affecting the increment and quality of wood (timber)	i	n
Representation of tree species	i	y
Age and spatial composition of forest tree stands	i	y
Quantity and quality of wood stocks on the stump	e	y
Limitations in the choice of forest production technologies	e	n
State of the forest transport and forest road network	e	y
Equipment with long-term tangible assets	e	y
Numbers of employees	e	y
Qualifications of employees	i	y
Work shifts	i	y
Transport distance of employees to the workplace	i	n
Current status of assets	e	y



LOGGING AND TRANSPORT COSTS

AVERAGE PERFORMANCE COSTS	FELLING	SKIDDING	TIMBER TRANSPORT	FULL COST (F+S)	FULL COST (F+S+T)
CZK/m ³	210	233	185	443	628
EUR/ m ³	8,75	9,71	7,71	18,46	24,17

FINANCIAL CONTRIBUTIONS TO ECOLOGICAL AND ENVIRONMENTALLY FRIENDLY TECHNOLOGIES

TYPE OF CONTRIBUTION	SKYLINE SKIDDING	HORSE SKIDDING	IRON HORSE SKIDDING	FORWARDIND (max. 6000 kg/axle)	CRUSHING AND CHIPPING
CZK/m ³	200	120	80	50	60
EUR/ m ³	8,33	5	3,33	2,08	2,5
Share of full cost (F+S)	45,15%	27,09%	18,06%	11,29%	13,54%
Share of full cost (F+S+T)	31,85%	27,09%	18,06%	11,29%	13,54%

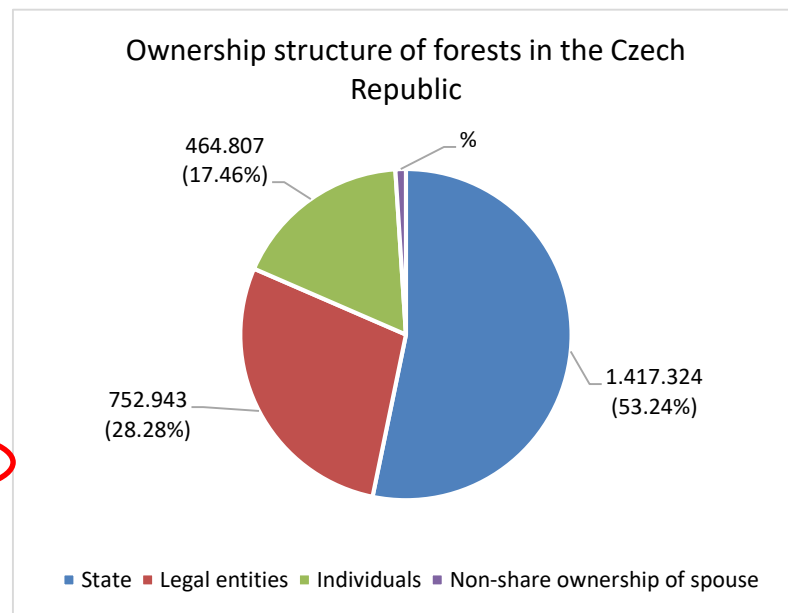


COSTS OF REFORESTATION AND MEASURES						
AVERAGE PERFORMANCE COSTS	REFORESTATION	SILVICULTURAL MEASURES	FOREST PROTECTION	CLEANING	AVERAGE COST MEASURES (CZK/ha ⁻¹ (EUR/ha ⁻¹)of woods)	FULL COSTS OF ESTABLISHED PLANTATION
CZK/ha ⁻¹	100 800	12 200	400	14 700	3 500	237 500
EUR/ha ⁻¹	4 200	508,3	16,7	612,5	145,8	9 895,8
FINANCIAL CONTRIBUTIONS TO REFORESTATION AND MEASURES						
TYPE OF CONTRIBUTION	NATURAL REGENERATION	ARTIFICIAL REGENERATION	SILVICULTURAL MEASURES	CLEANING	FENCING	ESTABLISHED forest stand
CZK/ha ⁻¹	25 000	78 000	16 000	10 000	28 000	50 000
EUR/ha ⁻¹	1 041,7	3 250	666,7	416,7	1 166,7	2 083,3
Share of average performance costs	24,80%	77,38%	126,98%	68,03%	---	---
Share of full costs of established plantation	76,63%					



Risk and corporate structure (small, medium-sized, large companies) and institutions (especially public authorities) in Czech Republic

CATEGORY	FOREST AREA (ha)	SHARE OF THE AREA	AVERAGE SIZE OF OWNERSHIP (ha)	NUMBER OF OWNERS
State	1,417,324	53.24%	-	1
Legal entities	752,943	28.28%	56.03	13,439
Individuals	464,807	17.46%	1.34	346,345
Non-share ownership of spouse	27,315	1.03%	1.01	27,079
Total	2,662,389	100.01%	3.22*	386,863*
* all without a state				





Ownership in Czech Republic

CATEGORY without state forests	SHARE OF THE NUMBER <50 ha	SHARE OF THE NUMBER 50-250 ha	SHARE OF THE NUMBER >250 ha	TOTAL	SHARE OF AREA <50 ha	SHARE OF AREA 50- 250 ha	SHARE OF AREA >250 ha	TOTAL
Municipalities	67.48%	25.67%	6.85%	100.00%	10.61%	32.89%	56.50%	100.00%
Church	92.22%	5.45%	2.33%	100.00%	6.43%	4.91%	88.66%	100.00%
Companies	96.88%	2.04%	1.08%	100.00%	13.58%	11.34%	75.08%	100.00%
Individuals	99.87%	0.10%	0.03%	100.00%	66.41%	8.07%	25.52%	100.00%



OWNERSHIP CATEGORY/RISK FACTOR- RATE	State	Municipalities			Church			Companies			Individuals		
Property size		<50ha	50-250ha	>250ha	<50ha	50-250ha	>250ha	<50ha	50-250ha	>250ha	<50ha	50-250ha	>250ha
Damage identification, reaction speed	1	3	2	1	3	1	1	3	1	1	3	2	1
Ensuring production capacities	2	2	2	2	2	2	1	2	2	1	3	2	1
Processing, sanitation	3	2	2	1	3	2	1	3	2	1	3	2	1
Warehousing, sales, logistics	2	2	2	1	3	2	0	3	2	0	3	2	0
Communication with the state administration, administration of applications	0	1	1	0	2	1	0	2	1	0	3	1	0
Creating financial reserves, economic stabilization of property	0	3	3	2	3	2	0	2	2	1	3	2	0

SCALE: 0 – no risk; 1 – low risk; 3 – extreme high risk

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OWNERSHIP CATEGORY/RISK FACTOR-RATE	State	Municipalities			Church			Companies			Individuals		
Property size		<50ha	50-250ha	>250ha	<50ha	50-250ha	>250ha	<50ha	50-250ha	>250ha	<50ha	50-250ha	>250ha
Possibilities of calamity wood storage	1	3	3	2	3	3	1	3	2	0	3	3	0
Possibility of sanitation of stored wood	1	3	3	2	3	3	1	3	2	1	3	3	1
Transport of calamity wood - road transport	1	3	2	1	3	2	1	3	1	1	3	2	1
Transport of calamity wood - railway transport	1	3	3	2	3	3	1	3	2	1	3	3	1
Order of railway wagons for timber transport	1	3	3	2	3	3	1	3	2	1	3	3	1
Possibilities of selling saw log	0	2	2	1	2	2	0	2	1	0	3	2	0
Possibilities of selling pulp wood	0	2	2	2	2	2	0	2	2	0	3	2	0

SCALE: 0 – no risk; 1 – low risk; 3 – extreme high risk





General consent of road managers II. and III. Class/county	weight to 48 t, width to 3.5 m, height to 4.5 m, length to 30 m	weight to 48 t, width to 4.5 m, height to 5.0 m, length to do 35 m	weight to 52 t, width to 2.8 m, height to 4.5 m, length to do 23 m
Středočeský kraj	approval	approval up to a length of 30 m	approval
*Jihomoravský kraj	approval	disapproval	disapproval
*Jihočeský kraj	approval	disapproval	disapproval
Pardubický kraj	approval	disapproval	disapproval
Královéhradecký kraj	approval	approval	disapproval
*Kraj Vysočina	approval	disapprovals	disapproval
Karlovarský kraj	approval	approval	disapproval
Liberecký kraj	conditional approval only up to 21 t	disapproval	disapproval
Olomoucký kraj	approval	approval	disapproval
Plzeňský kraj	approval	disapproval	disapproval
Moravskoslezský kraj	approval	approval	disapproval
Ústecký kraj	approval with the exception of the listed road sections	disapproval	disapproval
Zlínský kraj	approval	approval	approval



Information risks in Czech Republic

OWNERSHIP CATEGORY/RISK FACTOR-RATE	State	Municipalities			Church			Companies			Individuals		
Property size		<50ha	50-250ha	>250ha	<50ha	50-250ha	>250ha	<50ha	50-250ha	>250ha	<50ha	50-250ha	>250ha
Approach and knowledge of MGS	0	2	1	0	2	1	0	2	1	0	3	2	0
Knowledge of inclusion in a specific mode of management	0	2	1	0	3	1	0	2	1	0	3	2	0
Ability to apply a measure derogating from the provision	0	3	2	0	3	2	0	3	2	0	3	2	0

SCALE: 0 – no risk; 1 – low risk; 3 – extreme high risk



Measures of a general scope (MGS)



Measures of a general scope (MGS) (issued on 2 April 2020, File No. 17110/2020 MZE 16212 for an indefinite period), derogating from the provisions of § 29 para. 1, § 31 para. 6, § 32 para. 1 and § 33 para. 3 of Act No. 289/1995 Coll., On Forests and on Amendments to Certain Acts.

1. In forests in the territory of the Czech Republic, with the exception of forests in the territory of national parks and their protection zones
 1. stipulates that tree effected by bark beetle is not subject to the obligation of the forest owner to prefer incidental harvesting until 31 December 2022; the obligation of the forest owner to actively search for trees effected by bark beetle, to carry out their timely harvesting and effective sanitation is maintained;
 2. stipulates that clear cut created as a result of salvage cutting must be afforested within 5 years and forest stands secured within 10 years of its occurrence;
 3. stipulates that, in the period up to 31 December 2022, by way of afforestation from the provisions of Section 29 (1) of the Forest Act, forest reproductive material from any natural forest area and altitude may be used. This does not apply to afforestation with spruce reproductive material. Rules for the management of forest tree reproductive material pursuant to Act No. 149/2003 Coll. forest tree material), as amended, are not affected.
2. In forests in the region which consists of cadastral regions, which are listed in Annex No. 1 to this measure of a general scope, which is an integral part of it
 1. stipulates that the forest owner is not obliged to use traps and set traps trees as a defensive measure; the obligation of the forest owner to actively search for trees effected by bark beetle, carry out their timely harvesting and effective sanitation is maintained;
 2. for afforested calamitous clear cuts with a continuous area of more than 2 ha, unforested stripes up to 5 meters wide, clearing forms the edge of the forest, it is allowed to leave an unforested strip up to 5 meters wide to create a vegetation mantle;
 3. it is stipulated that if the forest owner leaves an unforested strip or strips in accordance with point 2.2, these strips are considered to be forest-free and the area designated for afforestation within the clearing area may



The following financial contributions and support programs are available to forest owners, forestry entrepreneurs and users of hunting grounds:

- forest management allowances from the budget of the Ministry of Agriculture,
- forest management allowances from the budget of the regions,
- contributions for selected hunting activities,
- contribution to support the adaptation of forest ecosystems to climate change,
- reimbursement of costs under the Forestry Act,
- services provided to forest owners,
- support for accredited forestry consultancy activities,
- subsidies for the protection and reproduction of the forest tree gene pool,
- selected operations of the Rural Development Programme 2014-2020 and information for the 2021-2022 transition period,
- selected programmes of the Support and Guarantee Fund for Agriculture and Forestry,
- refund of tax on diesel consumed in forest management.



INTERREG V-A ATCZ 251 FORRISK

Output T.1.2. – Manual for future crisis and risk management in forestry