



*BKT FOREST S.R.L.*  
*Nr. 145 / 18.07.2022*

## **FINAL REPORT**

**A 1. general technical measures for natural pasture restoration and improvement of the surfaces  
destined for wildlife food, surface of min. 10 ha, measures meant to improve the quality of pastures, by  
increasing their feeding potential**

**Service contract no. 26/4.8.7;4.8.8/0010 din 27.04.2020**

**S.C. BKT FOREST S.R.L.** .....

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## 1. Name of contract and context:

**SERVICES OF FOREST RESOURCE MANAGEMENT (CPV code 77231100-9) / i) Restoration and improvement of areas intended for wildlife food and ii) forest edge restoration, in order to improve ecological connectivity., (called A 2.): includes a technical report on the description of the stages related to the activity A 2, Romanian and English language.**

**Current report includes Deliverable 1: technical measures implemented for natural pasture restoration, technical report in English language.**

Current report is delivered in the framework of Open Borders for Wildlife in the Carpathians Project (1.10.2019 – 31.03.2022), [www.openbordersforbears.com](http://www.openbordersforbears.com). The project is funded under the Hungary-Slovakia-Romania-Ukraine, ENI Cross-border Cooperation Programme 2014-2020. Project partners include WWF-Romania – Maramureş Branch as lead beneficiary, the Slovak Ornithological Society/BirdLife, NGO RachivEcoTur (Ukraine) and Aggtelek National Park (Hungary).

**Ecological corridors** are functional zones of passage between several natural zones for a group of species used for movement, reproduction and refuge.

In a world of change, when natural habitats are more and more fragmented, the ecological corridors are very relevant for protection of viable populations of wildlife species (including large carnivores); securing corridors is a must as there are many threats encountered by large carnivores, such as:

- Habitat loss and fragmentation given by developments leading to limited ecological connectivity;
- Human disturbance: pressure from forestry activities in critical areas (e.g. shelter for species), off-road leisure activities, and pressure from people collecting non timber forest products;
- Lack of coordinated approach and conservation measures for protection of ecological corridors;



- Limited knowledge available and insufficient human resources.

Improving the natural conditions for wildlife species (via technical measures: planting of forest edge restoration, natural pasture restoration) has multiple benefits for the species but also reducing human-wildlife conflicts, as the wildlife species would be allured in the areas where these technical measures are implemented, away from communities.

## 2. Technical measures, activities and sub-activities carried out under the service contract:

During this activity A 1, we performed natural pasture restoration – for a surface of 11 ha (according to contract the min. required surface was of 10 ha; according to contract value paid was for 10 ha). These technical measures benefit the ecological connectivity in Maramures improving ecological connectivity and functionality of corridors; the measures aim at (i) improving the mosaic of habitats serving as shelter habitats and food during the vegetative season for bear as an umbrella species; (ii) increasing the natural food diversification and iii) reduce human-wildlife conflict.

## 3. Sub-activities and technical measures carried out within Activity A 1:

**The following sub activities (according to table below) have been implemented during the contract implementation period:**

A 1. general technical measures for natural pasture restoration and improvement of the surfaces destined for wildlife food, surface of min. 10 ha, measures meant to improve the quality of pastures, by increasing their feeding potential		
Sub activity	Expected results	Execution period
A.1.1. Collection / threshing of seeds from the meadows or natural meadows in the area, purchased from the locals, for the restoration of the herbaceous bed;	The use of local seeds, adapted to the conditions of the selected areas, taking into account the data from Annex 2.	April-July 2020 for an area of 6 hectares, respectively, April-July 2021 for an area of 3 hectares



A.1.2. Gathering and transporting displaceable stones from pastures;	Cleaning the ground of stones, helping to install the grass bed and sowing the empty places.	April-July 2020 for an area of 6 hectares, respectively, April-July 2021 for an area of 3 hectares
A.1.3. Removal of residues from forestry exploitations and vegetal residues, their transport and shearing outside the pasture, in the neighboring forest;	Cleaning the land of exploitation residues, helping to install the herbaceous bed and sowing the empty places	April-July 2020 for an area of 6 hectares, respectively, April-July 2021 for an area of 3 hectares
A.1.4. Removal of household waste / residues and their transport to authorized landfills or specially designated places;	Cleaning the land of household waste, helping to install the grass bed and sowing the empty places, stopping the pollution.	April-July 2020 for an area of 6 hectares, respectively, April-July 2021 for an area of 3 hectares
A.1.5. Selective removal of woody vegetation with the objective of maintaining the category of land use; However, trees / tree bodies important for biodiversity will be preserved;	Creating optimal conditions for the development of grassy and woody species that contribute to wildlife feeding and increasing their development area. Maintaining useful trees and shrubs on areas selected for biodiversity	April-July 2020 for an area of 6 hectares, respectively, April-July 2021 for an area of 3 hectares
A. 1.6. Maintenance of the usable subtree vegetation ("blueberries maintenance");	Providing a source of food for wildlife, from the products that the subtree can provide (fruits, leaves, vines, etc.)	April-July 2020 for an area of 6 hectares, respectively, April-July 2021 for an area of 3 hectares
A.1.7. Ground leveling - made only to allow access	Facilitating access to selected areas.	April-July 2020 for an area of 6 hectares, respectively, April-July 2021 for an area of 4 hectares
A.1.8. Manual mobilization / scarification of the soil and, if necessary, mechanized stoning when manual mobilization cannot be performed	Creating optimal conditions for germination of signs for the herbaceous blanket.	April-July 2020 for an area of 6 hectares, respectively, April-July 2021 for an area of 4 hectares



A.1.9. Removal (manual / mechanical) outside the pasture of grassy vegetation composed of useless, ruderal or invasive species or with low nutritional value (eg fern, etc.), which occupied the land, inadequate to the assigned role.	Elimination of useless / harmful species or with a low nutritional value	April-July 2020 for an area of 6 hectares, respectively, April-July 2021 for an area of 4 hectares
A.1.10. Sowing of the selected areas with seeds resulting from the collection / threshing previously done, the completion of the quantity will be done with the species and quantities specified in annex 1; in case the species / quantities from Annex 1 will not be used and the use of other species / quantities will be required, the Purchaser will be consulted regarding the species / quantities (approval of the new species / quantities)	Creating or restoring a uniform herbaceous bed, with species with a high nutritional value, adapted locally and resistant to biotic and abiotic factors	April-July 2020 for an area of 6 hectares, respectively, April-July 2021 for an area of 4 hectares April-July 2022 for an area of 1 hectare
A.1.11. Manual and mechanized mowing of grassy vegetation;	Supplementing the amount of game food, increasing and maintaining biodiversity, natural sowing for next year.	April-July 2020 for an area of 6 hectares, respectively, April-July 2021 for an area of 4 hectares April-July 2022 for an area of 1 hectare
A.1.12. Creation and installation of information panels;	5 wooden structure information panels (min 70/120 cm) for informing the citizens on critical ecological corridors and their importance	April-July 2022
A.1.13 Preparation of the technical report on the implementation of technical measures A 1 (DELIVERABLE 1)	Technical report	July 2021



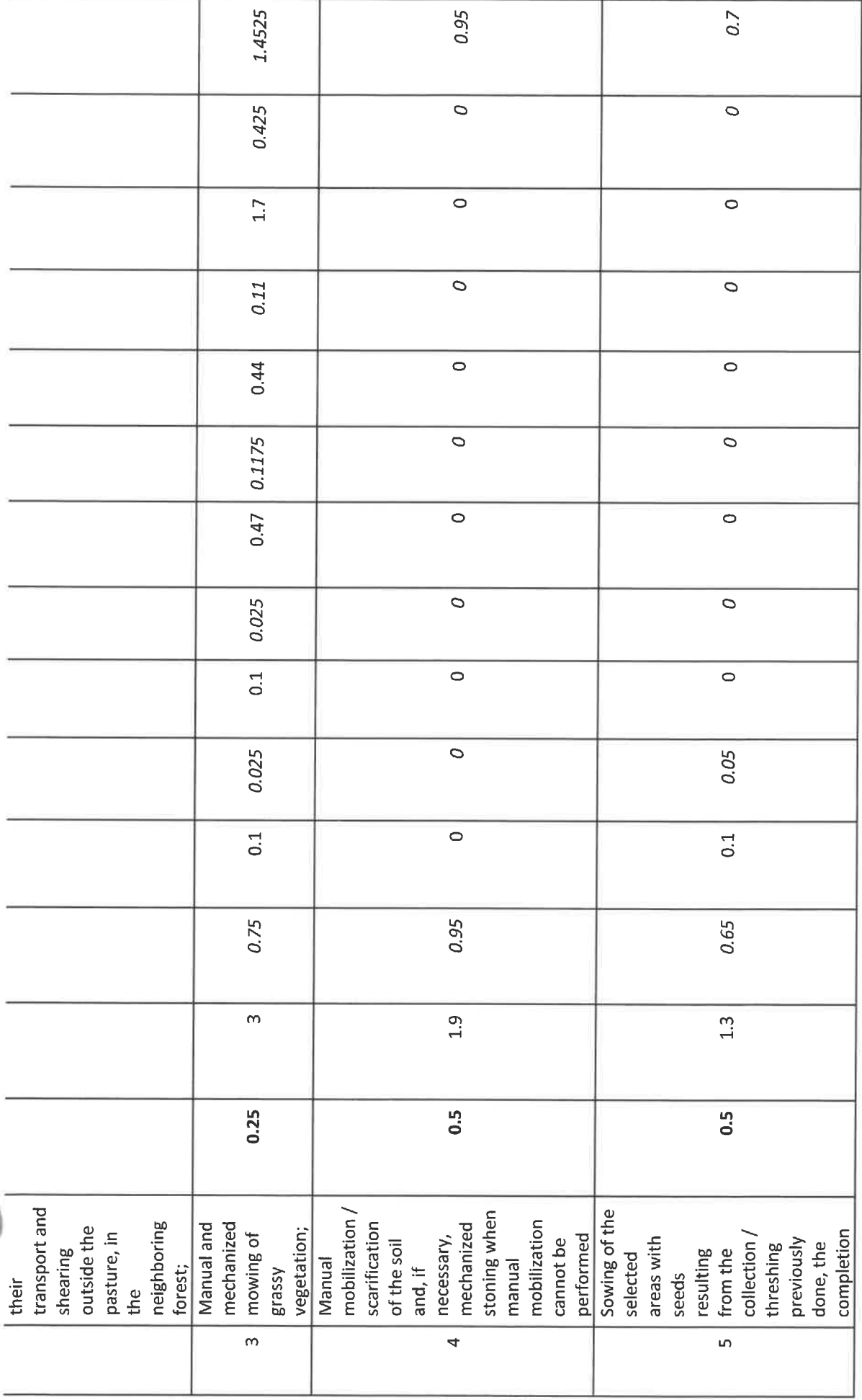
#### 4. Locations and technical aspects for the edging planting activity carried out.

The following table includes technical measures of natural pasture restoration performed in 4 phases (April-July 2020 for an area of 5 hectares; April-July 2020 for an area of 1 hectare; April-July 2021 for an area of 4 hectares, and April –July 2022 for an area of 1 hectare - including placement of 5 information panels):

#### Phase 1, 5 ha, 23.07.2020

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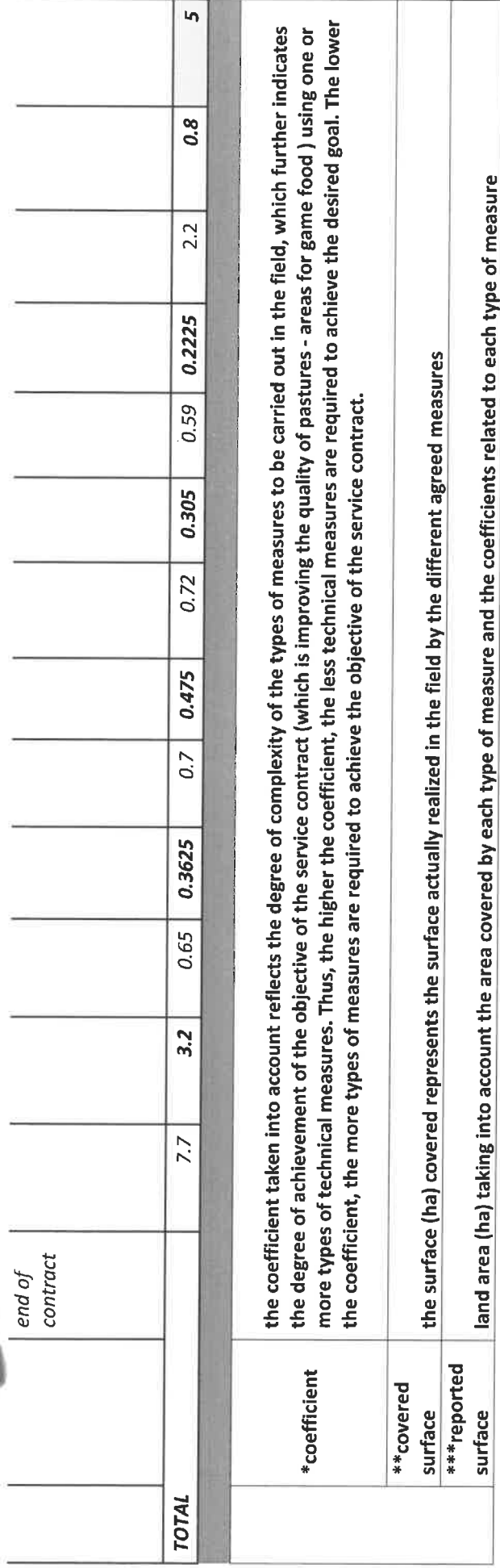
No	Type of measure	Coefficient*	OS Strambu Baiut 127V, 3.43 ha (**)	OS Strambu Baiut 127V (***)	OS Strambu Baiut 86V1 0.48 ha (**)	OS Strambu Baiut 86V1(*) (**)	OS Strambu Baiut 78V 0.92 ha **)	OS Strambu Baiut 78V ***)	OS Strambu Baiut 77 V 1, 0.93 ha **)	OS Strambu Baiut 77 V 1, (***)	OS Strambu Baiut 77V2, 0.44 ha (**)	OS Strambu Baiut 77V2 (***)	OS Strambu Baiut 75A. 2.35 ha (**)	OS Strambu Baiut 75A (***)	Total reported (ha)
1	Gathering and transporting displaceable stones from pastures;	0.75	0.3	0.23	0.1	0.075	0	0	0	0	0	0	0	0	0.30
2	Removal of residues from forestry exploitations and vegetal residues,	0.75	0.4	0.30	0.15	0.1125	0.1	0.075	0.1	0.075	0.05	0.0375	0	0	0.6





	of the quantity will be done with the species and quantities specified in annex 1;																			
6	clearing tree branches	0.75	0.5	0.20	0	0	0.5	0.375	0.1	0.075	0.05	0.0375	0.5	0.375	1.0625					
7	Removal of residues from forestry exploitations and vegetal residues, their transport and shearing outside the pasture, in the neighboring forest;	0.75	0.1	0.08	0.2	0.1	0	0	0.05	0.0375	0.05	0.0375	0	0	0.25					
8	other measures (ponds, drainage etc, anthill etc.)	0.25	0.2	0.05	0	0	0	0	0	0	0	0	0	0	0.05					
8	placing information panels	no coefficient, they will be accounted for in	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					



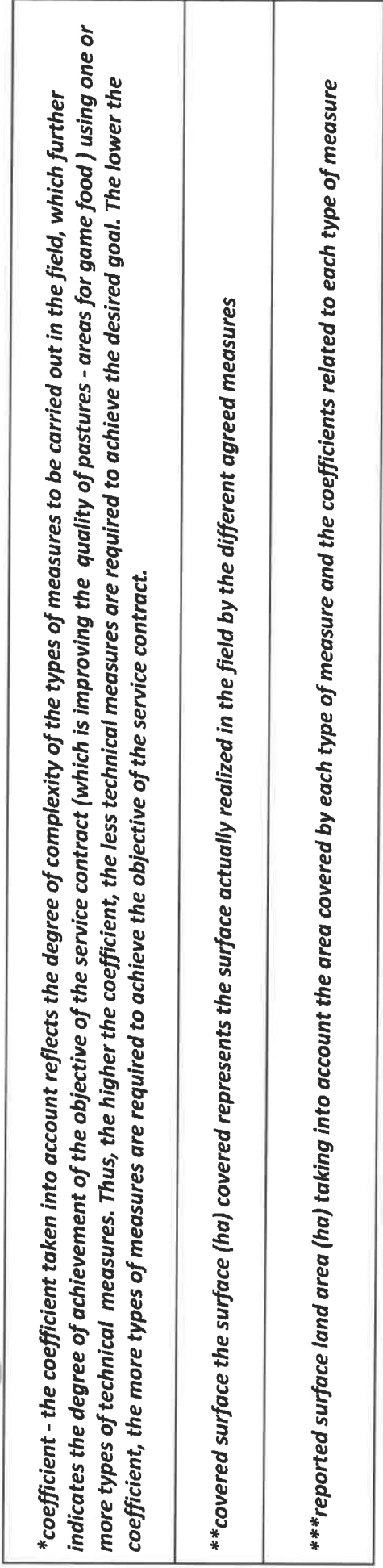


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No	Type of measure	Coefficient*	OS Strambu Baiut 86V2, 1.8 ha (covered surface**)	OS Strambu Baiut 86V2, 1.8 ha (reported surface***)	Total reported (ha)
1	Gathering and transporting displaceable stones from pastures;	0.75	0	0.00	0.00

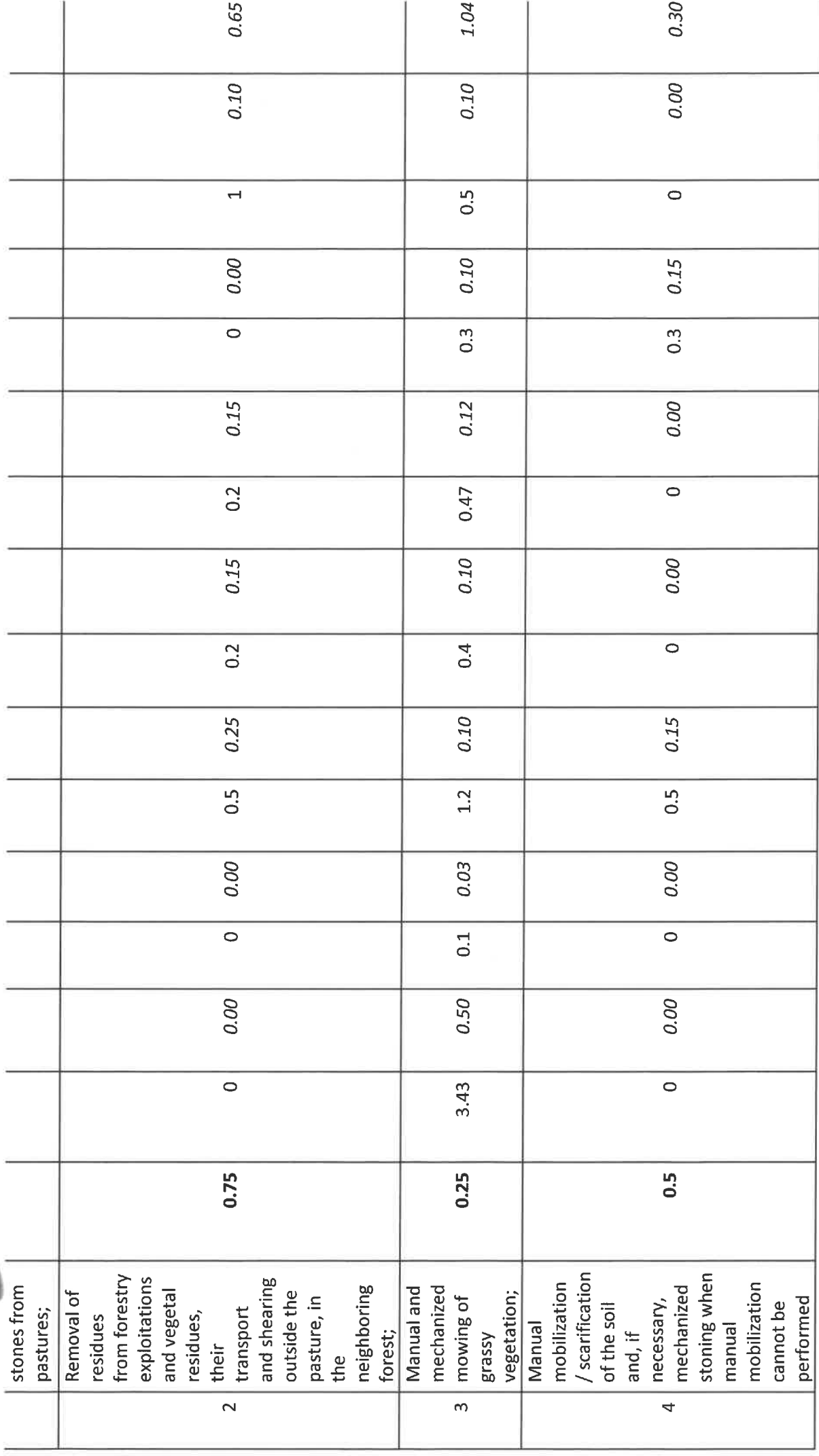


2	Removal of residues from forestry exploitations and vegetal residues, their transport and shearing outside the pasture, in the neighboring forest;	0.75	0.4	0.30	0.3
3	Manual and mechanized mowing of grassy vegetation;	0.25	1.8	0.45	0.45
4	Manual mobilization / scarification of the soil and, if necessary, mechanized stoning when manual mobilization cannot be performed	0.5	0	0.00	0
5	Sowing of the selected areas with seeds resulting from the collection / threshing previously done, the completion of the quantity will be done with the species and quantities specified in annex 1;	0.5	0	0.00	0
6	clearing tree branches	0.75	0.3	0.20	0.2
7	Removal of residues from forestry exploitations and vegetal residues, their transport and shearing outside the pasture, in the neighboring forest;	0.75	0	0.00	0
8	other measures (ponds, drainage etc, anthill etc.)	0.25	0	0.00	0
8	placing information panels	Fara coeficient, ei vin contabilizati ca bucati (la finalizare masuri)	NA	NA	NA
<b>TOTAL</b>			2.5	0.95	0.95



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Nr crt	Type of measure	Coefficient *	OS Strambu Baiut 127V, 3.43 ha (**)	OS Strambu Baiut 127V (***)	OS Strambu Baiut 86V1 0.48 ha (**)	OS Sighet, UP I Huta, 80V - 1.47 ha(**)	OS Sighet, UP I Huta, 80V (***)	OS Sighet, UP IV Ronisoara, 101C, 0.42 ha (**)	OS Sighet, UP IV Ronisoara, 74V, 0.47 ha(**)	OS Sighet, UP IV Ronisoara, 74V, 0.3 ha (**)	OS Sighet, UP IV Ronisoara, 87V, 0.3 ha (**)	OS Sighet, UP IV Ronisoara, 87V (***)	OS Baia Sprie, UP III Cavnice 96 V (***)	OS Baia Sprie, UP III Cavnice 96 V (***)	TOTAL
1	Gathering and transporting displaceable	0.75	0	0.00	0	0	0.00	0	0.00	0	0.00	0.00	0	0.00	0.00





5	Sowing of the selected areas with seeds resulting from the collection / threshing previously done, the completion of the quantity will be done with the species and quantities specified in annex 1;	0.5	0	0.00	0	0.00	0.5	0.15	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0.15
6	clearing tree branches	0.75	0	0.00	0	0.00	0.4	0.30	0.2	0.20	0.1	0.08	0	0.00	0.6	0.15	0.73		
7	Removal of residues from forestry exploitations and vegetal residues, their transport and shearing outside the pasture, in the	0.75	0	0.00	0	0.00	0	0.00	0.3	0.10	0	0.00	0	0.00	1	0.21	0.31		

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*\*coefficient - the coefficient taken into account reflects the degree of complexity of the types of measures to be carried out in the field, which further indicates the degree of achievement of the objective of the service contract (which is improving the quality of pastures - areas for game food ) using one or more types of technical measures. Thus, the higher the coefficient, the less technical measures are required to achieve the desired goal. The lower the coefficient, the more types of measures are required to achieve the objective of the service contract.*

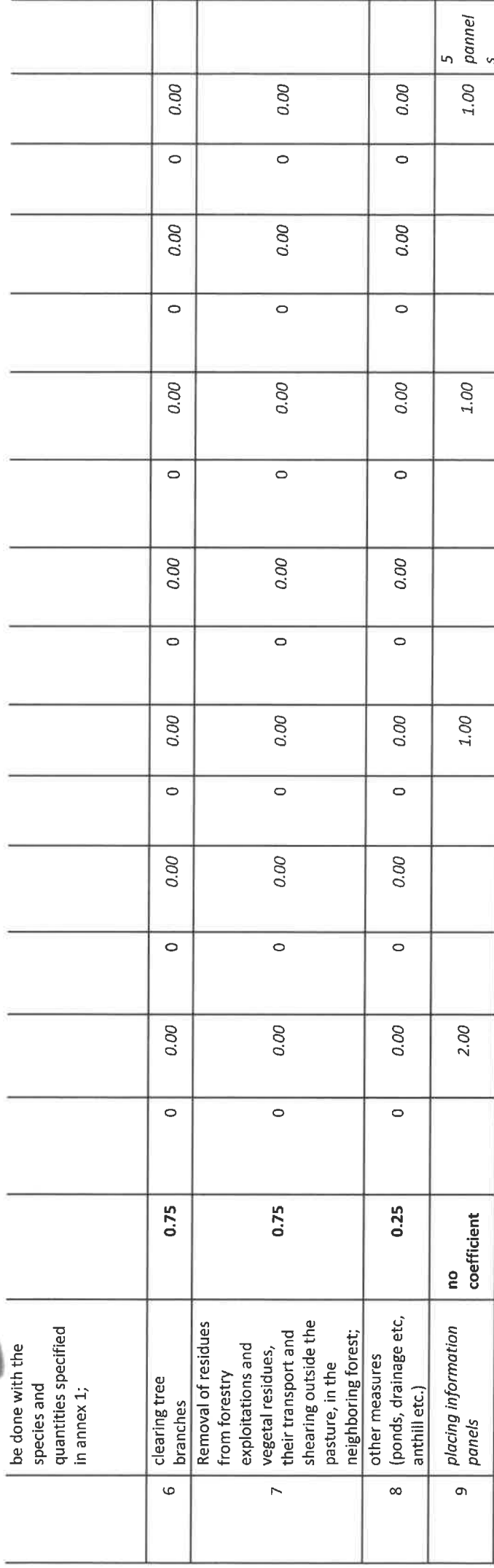
**\*\*covered surface the surface (ha) covered represents the surface actually realized in the field by the different agreed measures**

\*\*\*reported surface land area (ha) taking into account the area covered by each type of measure and the coefficients related to each type of measure



Reported measures A 1, (1 ha, 5 panels, 18.07.2022)

Nr crt	Type of measure	Coefficient *	OS Strambu Baiut 127V, 3.43 ha (*)	OS Strambu Baiut 127V (**) (*)	OS Strambu Baiut 86V1 0.48 ha (*)	OS Strambu Baiut 86V1(**) (*)	OS Sighet, UP I Huta, 80V - 1.47 ha(*)	OS Sighet, UP I Huta, 80V (**) (*)	OS Sighet, UP IV Roniso ara, 101C, 0.42 ha (*)	OS Sighet, UP IV Roniso ara, 101C, 101C, (**) (*)	OS Sighet, UP IV Roniso ara, 74V, 0.47 ha(*)	OS Sighet, UP IV Roniso ara, 74V, (**) (*)	OS Sighet, UP IV Roniso ara, 87V, 0.3 ha (*)	OS Sighet, UP IV Roniso ara, 87V (**) (*)	OS Baia Sprie, UP III Cavnic 96 V 2.05 ha (*)	OS Baia Sprie, UP III Cavnic 96 V (**) (*)	TOTAL
1	Gathering and transporting displaceable stones from pastures;	0.75	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	
2	Removal of residues from forestry exploitations and vegetal residues, their transport and shearing outside the pasture, in the neighboring forest;	0.75	0	0.00	0	0.00	0	0.25	0	0.00	0	0.00	0	0.00	1	0.00	
3	Manual and mechanized mowing of grassy vegetation;	0.25	1.5	0.38	0.1	0.03	0	0.30	0	0.00	0.2	0.05	0.1	0.03	0	0.00	
4	Manual mobilization / scarification of the soil and, if necessary, mechanized stoning when manual mobilization cannot be performed	0.5	0	0.00	0	0.00	0	0.15	0	0.00	0	0.00	0	0.00	0	0.00	
5	Sowing of the selected areas with seeds resulting from the collection / threshing previously done, the completion of the quantity will	0.5	0	0.00	0	0.00	0	0.15	0	0.00	0	0.00	0	0.00	0	0.00	

[illegible]

5 information panels were placed in the ecological corridors in Maramures. The following locations were used:

- OS Baia Sprie UP III Cavnice, 96V- 1 panel
- OS Sighet, UP I Huta, FE 004, (101 D) – 1 panel
- OS Sighet, UP IV Ronisoara, near 74 V, on entrance of Valea Cornetului;
- OS Strambu Baiut, U.P.I., Paltin – FE 012, (154 D) – 1 panel
- OS Strambu Baiut, U.P.I., Valea Rotii – FE 008, (150 D) – 1 panel.

The information panels include information about ecological corridors, wildlife species (large carnivores) as well as restoration measures performed in the field. The structure of panels is wood and is very well integrated in the landscape.





## 5. Other aspects to be mentioned regarding the implementation of technical measures:

During the implementation of these technical measures, the service provider permanently communicated with the forest fund administrators and with the WWF RO Maramures Branch team.

## 6. Problems encountered, situations that require attention:

No problems were encountered during the implementation of these technical.

## 7. Recommendations

- Ecological connectivity is an important instrument to maintain viable populations of wildlife species. There is a need to secure these ecological corridors in order to have healthy populations of wildlife species as well as a balanced ecosystem and provision of ecosystem services. These technical measures may also reduce human-wildlife conflicts as wildlife species will be kept in these places where they have a diversified mosaic of habitats offering shelter and food during the vegetative season.
- There is a good potential and need to replicate these technical measures in Maramures (and beyond) on larger scale, to have model of good practices for improving ecological connectivity and securing populations of large carnivores. Having these measures in place could reduce the anthropic intervention of hunting management units' administrators that are currently providing food for wildlife (under extreme weather conditions).
- There is need for support from stakeholders in order to have sustainability of measures (forest fund administrators, hunting management units etc). MoU signed within the project offered successful context for implementation of measures as well as a good intervention model for the future.

**Economic operator: S.C. BKT FOREST S.R.L.**

**Date: 18.07.2022**

**Signature of legal representative: FLORIN BUDA**





Annex 1 Pictures from the restoration activity























