

The narrative report

NGO's identification dates

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Project's identification dates

Title of project: Sustainable management in Vanatori Neamt Natural Park's European bison population

Reference number:16_04_06

Location of project: Neamt County, the target area being inhabited by around of 45,000 citizens (a town - Targu Neamt – 25,000 citizens and 4 villages – Vanatori, Baltatesti, Cracaoani and Agapia), the latitude and longitude of the project's location being between 47°03'10'' and 47°18'20'' nordic latitudine and 26°4'20'' and 26°22'32'' estic longitude.



Fig.1. the Bison Land area (project area)

Period of project's implementation: July 2006 - July 2007

Activities

The main contribution of this project will be the increment of the capacity for biodiversity conservation in Romania particularly for the reintroduction of bison.

The European bison provides the natural mechanism for maintaining a balance of forest and meadow ecosystems and this project would help to establish a management that incorporate these processes and protect the ecological integrity of the ecosystem, taking care about Romanian specific conditions.

The bison, apart from its natural function as a keystone species, can serve as an excellent flagship species for the promotion of nature conservation and the creation of public awareness. Its very presence would also provide economic benefits through an increased attractiveness of the region for eco-tourists, naturalists, etc. For these reasons, the interest in Romania for the free bison herds is increasing and a management plan in order to obtain national support and development is required.

The European bison is included among the priority species for Natura 2000 system. A Management plan of free European Bison in Romania will be useful into the planning of the Romanian part of Natura 2000 network (it must take into consideration also the corridors linking Vanatori park with other neighbouring abroad protected areas as Bukovynskaia Reserve in Ukraine).

The activities performed under this final report are related by period between July 2006 – July 2007.

Education:

Three theoretically and field trainings sessions addressing educational component by involving schools and ecological clubs within the project reference area. For these sessions, environmental NGO's and children from local schools were involved. For theoretically sessions was used an existing Ecosilvex's manual about bison and a PowerPoint presentation called '*Teledetection and bison monitoring*'. For the field training session, childrens were divided in several crews and the animals were identified by radio-telemetry system. As well, the participants learned about bison in freedom (spoor, tracks, feeding etc.), interaction between human and bison, potential threats, etc.

Survey and monitoring:

The activity of monitoring of European bison population intended to get real results regarding bison behaviour in semifreedom conditions (180 hectares for 13 animals herd – 6 males and 7 females).

In August 2006, a bison female was radio-collared and already were performed first results in relation with refugees, habitat preferences, etc. The results are not very clear due the short monitoring period which included winter time (animals have a lower spatial distribution in comparison with the seasonal vegetation).

As first conclusions from field activity:

- the herd of 13 animals was divided in 2: one small herd of 6 animals and one small herd of 7 animals and occasionally the animals are meeting during grazing time;
- during vegetational season, the animals prefer openings and small pastures for grazing;
- the herd does not prefer shady forest with low herbaceous vegetation (e.g. coniferous forest);
- the carrying capacity of the field reveals that bison have proper conditions for development;
- the damages for forest (debarking, overgrazing, etc.) are insignificant for a herd of 13 animals.

During the next years the animals will be bred in the acclimatisation enclosure (180 hectares) until fully accommodation (when animals will have progenies, no case of unknown disease, etc.) which has a length of 7 kilometers and an area of 176 ha in order to establish their bond with the site, and to increase the number of the herd. After this they will be released in family groups of four to six animals, which will be monitored using radio telemetry to assess their habitat use, movements, and preference for refuges. Based on the data gained, the most suitable migration corridors will be identified and proposed as part of a national ecological network.

Precious observations were performed by rangers during their monitoring using direct observations (behaviour, suitable habitats, resting, etc).

Database:

Materials and method for research were decided. We realized that identifying the major vegetation types in the Park's area is not enough, so in order to find different conditions for vegetation types, we took into consideration new aspects: forest site, forest type, flora type and consistency of the forest. Using Romanian forest classifications and terminology we determined 28 specific cases for Park's area. Assessment will be done, starting with spring, for these 28 cases. We must stress that the conclusions for these cases will be easily apply anywhere in Romanian Carpathians or anyway in Carpathian chain after equivalences between national forest classifications will be done (Romanian, Polish, Ukrainian or Slovak).

Example for Vanatori Neamt Nature Park

Nr	Forest site	Forest type	Flora type	Consis.	Nr.of ua	Surface-ha
1	3332	2212	31	I	35	509,3
2				II	11	93,5
3				III	4	96,1
4	3333	1311	31	I	62	979,4
5				II	73	1422,4
6				III	13	168,9
7		2111,	21	I	247	3046,8
8		2211		II	124	1963,2
9				III	34	405,7
10			31	I	265	3534
11				II	189	2975,2

12				III	50	783,9
13	4420	4114	31	I	9	100,5
14				II	14	139,8
15		4131	32	I	22	577,4
16	4430,	4111	31	I	116	1985,3
17	3333			II	81	1867,9
18				III	15	184,8
19			41	I	34	405,8
20				II	27	215,9
21	5153	5111	61	I	45	277,1
22				II	53	315,9
23				III	12	96,3
24		5211	41	I	12	110,7
25				II	19	182
26	5243	4211,	41	I	88	668,1
27		4311		II	38	374
28				III	10	100,1
	TOTA				170	
	L				2	23580

total forested area 26322 ha

89,60%

To calculate a number of plots representative for particular vegetation types the following formula was applied

$$N = ([S/1000] - [600/S] + 3) \times 10$$

N – Number of plots

S - Surface of a certain vegetation type

[] – “whole part of number” function (for example [3,46]=3)

According to proposed formula, the number of plots representative for consecutive area ranges are presented in following table:

Table

Area range in ha	Number of plots
1-300	10
301-600	20
601-1000	30
1001-2000	40
2001-3000	50
3001-4000	60

Subsequently, necessary number of plots, for each unitary type of vegetation that can be find in our area is given in following table :

Table

Nr.type	Nr.of UA	Area - ha	Nr. of plots
1	35	509,3	20
2	11	93,5	10
3	4	96,1	10
4	62	979,4	30
5	73	1422,4	40
6	13	168,9	10
7	247	3046,8	60
8	124	1963,2	40
9	34	405,7	20
10	265	3534	60
11	189	2975,2	50
12	50	783,9	30
13	9	100,5	10
14	14	139,8	10
15	22	577,4	20
16	116	1985,3	40
17	81	1867,9	40
18	15	184,8	10
19	34	405,8	20
20	27	215,9	10
21	45	277,1	10
22	53	315,9	20
23	12	96,3	10
24	12	110,7	10
25	19	182	10
26	88	668,1	30
27	38	374	20
28	10	100,1	10
Total	1702	23580	660

To obtain comparable results, plots in sets of 10 will be placed in single subcompartments. Therefore, the number of subcompartments involved will be 66.

National and natural parks in Romanian Carpathians provide the largest potential area for free-ranging bison population, however due to isolation of some parks by anthropogenic barriers and their sub-optimal habitat for this species, only two groups of parks can be seriously considered as suitable for bison introduction.

First assessments of most suitable habitats as bison refuges in freedom indicate 5 protected areas in the North-East of Romanian Carpathians: Calimani National Park, Ceahlau National Park, Cheile Bicazului-Hasmas National Park, Muntii Rodnei National Park and Muntii Maramuresului Natural Park, all above parks being placed in near proximity of Vanatori Neamt Natural Park.

Undoubtedly, Romanian Carpathians represent an optimal area for breeding of European bison in freedom due to high variety of habitats and ecosystems and the considerable number of protected areas, being potential refuges for future bison herds.

Forest management plan:

Proposals of modifying existing forest management plan in order to assure good conditions for bison herds respecting also FSC's principles.

Some of our proposals were included in the new "Guide for forestry practice in protected areas" (the retain of dead wood, clear cutting allowed just for areas less than 1,0 ha and only for some species, buffer zones around most watercourses, etc).

Public awareness:

Raising the public attention about the presence of bison in semi-freedom and about impending releasing in freedom (local authorities, Vanatori Neamt Natural Park's staff, local stakeholders, volunteers, children, etc. are deeply involved in public awareness actions).

Two leaflets in Romanian version (one of them is about Natura 2000 – bison is a priority species in the Nature 2000 network and the other is about bison in freedom) were edited and already distributed to the target groups of the present project: local environment NGO, local communities, local authorities, childrens and schools within the reference area, etc.

As well, two panels high dimensions (2 x 3 m) were conceived with technical support of local NGO's and volunteers and were already fitted on the field.

Sharing experience:

Between 18-20th of May 2007, at Oglinzi took place a workshop called **Sustainable management of free European Bison in Romania** with participation of representatives of local NGO's, Vanatori Neamt Natural Park Administration, stakeholders, teachers, etc. The aim of the workshop was dissemination of work performed within this project and a strategy **Sustainable management of free European Bison in Romania** developed under this project ready for print.

As a result of the project, 500 copies of first draft for Romanian European Bison Strategy called 'Sustainable management of free European Bison in Romania' was already printed and distributed to the stakeholders (environmentalists, teachers, students, local authorities, etc.)