

## IMPLEMENTATION OF THE ECOLOGICAL EUROPEAN NETWORK “NATURA 2000” IN THE AREA OF GRASSLANDS AND HAYFIELDS

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**Abstract:** *The economic development of Europe provides advantages to people, but in the same time represents a potential risk too. The main risk is to become a more artificial continent – to lose the nature and all that human being could gain from it. The ecological network Natura 2000 is the solution through which the Europe strives to preserve the nature in all its actual diversity and to promote economic activities without prejudice to the biodiversity. We could say that NATURA 2000 tries to conciliate two needs of humans, both vital: the need to gain incomes and the need to preserve the nature alive, which is not an untouchable objective but it requires much equilibrium and wisdom. The present paper proposes to approach both the problems faced at the implementation of the Ecological European Network “Natura 2000” in the area of grasslands and hayfields and to offer solutions of good practices regarding the rational exploitation of the grasslands and hayfields both in protected and unprotected areas. Among the main causes which contribute to degradation of the grasslands and hayfields there are: overgrazing, non-grazing, land clearing and arson of Pinus mugo woods, the conversion of the grasslands into arable lands, changing of land usage, the absence of a coherent management and other causes. Also, a special threat is constituted by the precarious state of the local agricultural economy. The traditional agricultural non-profitable methods, the massive emigration of population out of the rural medium led to abandonment of the marginal lands and to intensification of exploitation of the lands easy of access. All the problems and their solving must be introduced within the management plans of the protected natural areas and the authorities of local public administration must respect the obligations stipulated by the law in this field. Concomitantly, the present paper proposes to approach the legal framework existing in Romania regarding the protection, rational exploitation, organization and arrangement of grasslands depending on their recovery capacity, including those located within the perimeter or in the neighborhood of a protected natural area.*

**Key words:** *grassland and hayfields, the Ecological Network “Natura 2000”, legal framework.*

### INTRODUCTION

Natura 2000 is a European ecological network of protected areas, designated by the Member States of the European Union basing on Habitats Directive and Birds Directive, its implementation being an obligation assumed by Romania through the Treaty of Accession to the European Union. Non-fulfillment of this obligation, even partially, can lead to the release of the infringement procedure.

Romania owns a realistic natural patrimony, having numerous species and habitats of community and international importance. Their protection constitutes a global objective, all member states trying to stop the decline of the natural ecosystems that became more visible.

The natural habitats of community interest are those which present at least one the following features:

- are in danger of disappearing in their natural habitat;
- have a small natural habitat;
- are representative samples with typical characteristics for one or more biogeographical regions.

The Habitats Directive - 92/43/EEC establishes also the notion of priority habitats, in danger of disappearing, for whose conservation is necessary to pay a special attention. These priority habitats are listed in the Annex I of the Directive distinguished by an asterisk (\*), in this category being also included the natural habitats of grasslands.

### MATERIAL AND METHODS

The main material used in elaboration of the present paper was represented by the national and community in force legislative documents in the field of nature protection and ecological biodiversity. The used method was the comparative analysis of these legislative documents in order to establish the transposing degree and the legal regime applicable to the natural grassland habitats. Another material was the Standard Forms Natura 2000 and the reports regarding the environmental state elaborated by the competent authorities for environment protection with the purpose to implement the Ecological Network Natura 2000, in order to highlight the conservation stadium of different habitats of grasslands and hayfields within the protected natural areas.

### RESULTS AND DISCUSSIONS

The main national normative document which assures the implement of the Directive *92/43/EEC* (modified and completed) regarding the conservation of natural habitats and of wild species of flora and fauna is O.U.G. no. 57/2007 regarding the regime of the protected natural areas, conservation of the natural habitats and of wild flora and fauna, *modified and completed by the Urgency Ordinance of Government no. 154/2008*.

Table 1

Natural habitats of grasslands whose conservation necessitates the designation of special areas of conservations (According to Annex no. 2 of OUG no. 57/2007 with ulterior modifications and completions.)

Current number	Code Natura 2000	Name of the habitat type
1	1340	* Inland salt meadows
2	4060	Alpine and Boreal heaths
3	4030	European dry heaths
4	6110	* Communities of rupicolous calcareous or basophilic grasslands of the <i>Alyso-Sedioni albi</i>
5	6120	* Xeric sand calcareous grasslands
6	6150	Siliceous alpine and boreal grasslands
7	6170	Alpine and subalpine calcareous grasslands
8	6190	<i>Rupicolous pannonic grasslands (Stipo-Festucetalia pallentis)</i>
9	6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates ( <i>Festuco Brometalia</i> ) (*sites important for the orchids)
10	6230	* Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas
11	6240	* Sub-pannonic steppic grasslands
12	6250	* Pannonic loess steppes
13	6260	* Pannonian and west-pontic sandy grasslands
14	62DO	Acidified Oro-Moesiene grasslands
15	6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils ( <i>Molinion caeruleae</i> );
16	6420	Mediterranean tall humid herb grasslands
17	6440	Alluvial meadows of river valleys of the <i>Cnidion dubii</i>
18	6510	Lowland hay meadows ( <i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i> )
19	6520	Mountain hay meadows

In Romania, has been designated by the Order no. 1964/2007 a number of 273 Sites of Community Importance as an integrant part of the European ecological network Natura 2000 in Romania (SCI). Among these, we list below few sites whose protection objective is represented also by the natural habitats of grasslands (Order 1964-2007 - Annex 4 – List of

habitat types and species of community interest for which has been designated each site of community importance).

**ROSCI0002 . Apuseni Mountains**

6110\* - Communities of rupicolous calcareous or basophilic grasslands of the *Alyssosedioni albi*; 6150 – Siliceous alpine and boreal grasslands; 6170 - Alpine and subalpine calcareous grasslands; 6190 - *Rupicolous pannonic* grasslands (*Stipo-Festucetalia pallentis*); 6210\* - Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*); 6230\* - Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas; 6410 - *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); 6510 - Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*); 6520 - Mountain hay meadows;

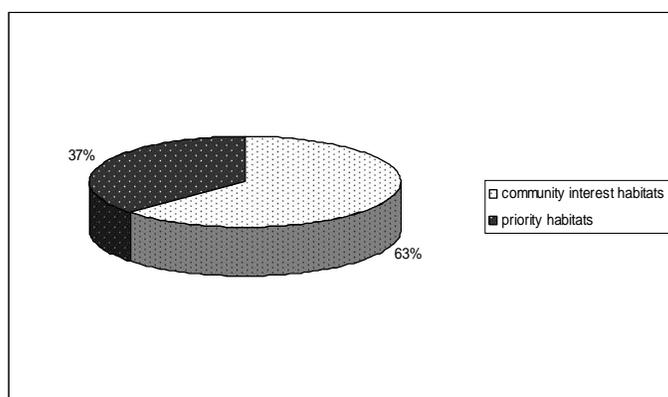


Figure no. 1. The percentage of the priority habitats\* of grasslands within the habitats of community interest designated in Romania as integrant part of the Ecological Network Natura 2000

**ROSCI0005 . Balta Albă - Amara - Jirlău - Lacul Sărat Căineni**

1530\* - Pannonic salt steppes and salt marshes;

**ROSCI0006 . Balta Mică a Brăilei**

6410 - *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); 6430 - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels; 6440 – Alluvial meadows of river valleys of the *Cnidion dubii*; 6510 - Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*);

**ROSCI0007 . The Basin of Ciucul de Jos (Bazinul Ciucului de Jos)**

6410 - *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); 6440 - Alluvial meadows of river valleys of the *Cnidion dubii*; 6510 - Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*):

**ROSCI0008 . Betfia**

Types of habitats: 6250\* - Pannonic loess steppes

**ROSCI0009 . Bisoca**

Types of habitats: 6520 - Mountain hay meadows

**ROSCI00012 . Brațul Măcin**

6430 - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels; 6440 - Alluvial meadows of river valleys of the *Cnidion dubii*; 6510 - Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*);

**ROSCI00013 . Bucegi Mountains**

6110\* - Communities of rupicolous calcareous or basophilic grasslands of the *Alyso-Sedioni albi*; 6170 - Alpine and subalpine calcareous grasslands; 6230\* - Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas; 6430 - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels; 6520 - Mountain hay meadows;

**ROSCI00015 . Buila - Vânturarița**

4060 – Alpine and Boreal heaths; 6110\* - Communities of rupicolous calcareous or basophilic grasslands of the *Alyso-Sedioni albi*; 6170 – Alpine and subalpine calcareous grasslands; 6410 - *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); 6430 - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels; 6520 - Mountain hay meadows;

**ROSCI00017 . Căian**

6240\* - Sub-pannonic steppic grasslands;

**ROSCI00018 . Căldările Zăbalei**

6520 - Mountain hay meadows;

**ROSCI00019 . Călimani - Gurghiu**

4060 - Alpine and Boreal heaths; 6150 - Siliceous alpine and boreal grasslands; 6230\* - Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas; 6410 - *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); 6430 - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels; 6440 - Alluvial meadows of river valleys of the *Cnidion dubii*; 6520 - Mountain hay meadows;

**ROSCI00020 . Plain of Carei (Câmpia Careiului)**

6260\* - Pannonian and west-pontic sandy grasslands; 6410 - *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); 6430 - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels; 6510 - Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*);

**ROSCI00021 . Plain of Ier (Câmpia Ierului)**

1530\* - Pannonic salt steppes and salt marshes; 6250\* - Pannonic loess steppes; 6430 - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels;

**ROSCI00022 . Canaralele Dunării**

6440 - Alluvial meadows of river valleys of the *Cnidion dubii*; 6510 - Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*);

**ROSCI00024 . Ceahlău Mountains**

6110\* - Communities of rupicolous calcareous or basophilic grasslands of the *Alyso-Sedioni albi*;

6170 - Alpine and subalpine calcareous grasslands; 6520 - Mountain hay meadows;

**ROSCI00025 . Cefa**

1530\* - Pannonic salt steppes and salt marshes; 6430 - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels; 6510 - Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*);

**ROSCI00029 . Cheile Glodului, Cibului și Măzii**

6190 - Rupicolous pannonic grasslands (*Stipo-Festucetalia pallentis*);

**ROSCI00031 . Cheile Nerei - Beușnița**

6110\* - Communities of rupicolous calcareous or basophilic grasslands of the *Alyso-Sedioni albi*; 6190 – Rupicolous pannonic grasslands (*Stipo-Festucetalia pallentis*); 6210\* - Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*); 6430 - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels;

(Great crested newt); 2001 - *Triturus montandoni* (Carpathian Triton)

**ROSCI00035 . Cheile Turzii**

6110\* - Communities of rupicolous calcareous or basophilic grasslands of the *Alyso-Sedioni albi*; 6190 - *Rupicolous pannonic* grasslands (*Stipo-Festucetalia pallentis*); 6210\* - Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*); 6240\* - Sub-pannonic steppic grasslands; 6430 - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels;

**ROSCI00036 . Cheile Vârghişului**

6210\* - Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*)

**ROSCI00038 . Ciucaş**

4060 - Alpine and Boreal heaths; 4070\* - Bushes with *Pinus mugo* and *Rhododendron myrtifolium*; 6170 - Alpine and subalpine calcareous grasslands; 6230\* - Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas; 6430 - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels; 6520 - Mountain hay meadows;

**ROSCI00039 . Ciuperceii - Desa**

1530\* - Pannonic salt steppes and salt marshes; 6260\* - Pannonian sand steppes; 6440 - Alluvial meadows of river valleys of the *Cnidion dubii*; 6510 - Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*);

**ROSCI00044 . Corabia - Turnu Măgurele**

6440 - Alluvial meadows of river valleys of the *Cnidion dubii*;

**ROSCI00045 . Coridorul Jiului**

1530\* - Pannonic salt steppes and salt marshes; 6440 - Alluvial meadows of river valleys of the *Cnidion dubii*; 6510 - Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*);

**ROSCI00046 . Cozia**

4060 - Alpine and Boreal heaths; 6150 - Siliceous alpine and boreal grasslands; 6230\* - Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas; 6430 - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels; 6520 - Mountain hay meadows;

**ROSCI000108 . Lunca Mureşului Inferior**

6430 - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels; 6440 - Alluvial meadows of river valleys of the *Cnidion dubii*; 6510 - Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*);

**ROSCI000115 . Mlaştina Satchinez**

1530\* - Pannonic salt steppes and salt marshes

**Threats of the natural habitats of the grasslands** (According to notices registered in the Standard Forms Natura 2000)

The main causes that are found in most of natural habitats of grassland contributing to their degradation are: overgrazing, non-grazing, land clearing and arson of *Pinus mugo* woods, the conversion of the grasslands into arable lands, changing of land usage, the absence of a coherent management and other causes.

Also, a special threat is constituted by the precarious state of the local agricultural economy. The traditional agricultural non-profitable methods, the massive emigration of population out of the rural medium led to abandonment of the marginal lands and to intensification of exploitation of the lands easy of access.

An example in this sense is represented by the natural habitats of alpine grassland from the superior zone of the Mountains Bucegi and Piatra Craiului located at 1600-2500 m. Within meadows a significant surface is occupied by grasslands which represent 119980 ha in Braşov County. The grasslands are the most amenable to degradation process especially by anthropic activities (the intensive grazing during entire year) and also because of the water

deficit in the soil. In the areas with dense population and with access roads toward the mountain zone (Bran zone), in the grasslands from the Massifs of Piatra Craiului and Bucegi, the animal charging per ha is 2-3 times higher than the possibilities of grassland maintenance (Agency Of Environment Protection Braşov – State Of Environment Under Aspect Of Biological Diversity Conservation Of The Protected Areas).

*Protection measures of the natural habitats of grasslands and hayfields stipulated by the environmental legislation in force.*

According to art. 52 of OUG no. 195/2005 with ulterior modifications and changes, the compliance with all stipulations comprised in the management plan and regulation of the protected natural area, approved in conformity to specific legislation, is obligatory. This mark is in concordance with the stipulations of art. 22 of OUG no. 57/2007 with ulterior modifications and changes which enounces that within a protected natural area of national interest the management plan must define and delimit the internal zones (zones with strict protection, zones of integral protection, zones of sustainable development etc.), each of them having a well defined purpose, including the establishment of the allowed activities or the interdictions regarding the development.

Also, the OUG no. 195/2005 stipulates that on the surface of protected natural areas, in addition to interdictions enounced by the management plans and regulations, is forbidden to exploit any type of mineral non-renewable resources within the national parks, natural reservations, nature monuments and within the areas with strict protection, areas of integral protection and areas of sustainable management of the natural parks.

Art. 69 of the same legislative document stipulates the following obligations which constitute the task of all owners which posses any title of forestry fund, of forestry vegetation from outside of forestry fund and of grasslands, as well as any natural person or legal entity which develops activities on such lands, without owning a legal title:

a) to maintain the surface of forestry vegetation from outside of forestry fund, including the existing *Pinus mugo* woods, shrubs and grasslands, being interdicted their reduction, excepting the cases enounced by the law;

h) to assure the rational exploitation, the organization and arrangement of the grasslands, depending on their recovery capacity;

j) to exploit the grasslands within the limits of soil potential ratings, with appropriate number and species of animals and within adequate established time periods, basing on specialty studies and specific legal stipulations;

k) to protect the forestry, cynegetic, piscicultural and grassland patrimony of the protected natural areas, respecting the terms established by the management plans and specific regulations;

l) to inform authorities in the field of environment protection on accidents or activities which affect the forestry ecosystems or other similar terrestrial ecosystems.

The OUG no. 57/2007 establishes the rule that any plan or project which has not direct connection or is not necessary for the management of the protected natural area of community interest, but which could significantly affect the area, alone or in combination with other plans and projects, will be adequate evaluated under aspect of potential effects on the protected natural area of community interest, taking into account its conservation objectives according to specific legislation in the field.

### **CONCLUSIONS**

The natural habitats of grassland are very well represented within the Ecological Network Natura 2000 implemented in Romania, in the sites designated by the Order no. 1964/2007, existing as a significant number of priority habitats. As a general rule, the natural

habitats of grassland are founded within a site of community importance together with other types of habitats and species of flora and fauna in a complete interdependency. Therefore, is very decisive to apply the legal regulations upper mentioned and to realize the Management plans and the regulations of the protected natural areas. The activity of rational utilization of the grasslands and hayfields in an activity comparable to these types of habitats, including those located within a protected natural area, in condition of a rational establishment and according to stipulations registered in the Management Plan and in the Regulation of the Protected Natural Area.

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