

# The Conservation Measures of NATURA 2000 “Someșul Rece” Site Management Plan

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## ABSTRACT

Natura 2000 is a European network of protected natural areas including a significant number of natural habitats and wild species for the interest of community. Natura 2000 ROSCI 0233 “Someșul Rece” Site is situated in the south-western county of Cluj, on the administrative territory of Măguri-Răcățău and Ierii Valley. It has an area of 8529 ha and is a framed area of the Apuseni Mountains Alpine bioregions. The site preserves the following natural habitats: Rough mountain beech forests *Asperulo-Fagetum*, beech forests of *Luzulo-Fagetum*, forests acidophilous *Picea Abies* mountain region and protect important species and active fish fauna, flora and fauna of the Apuseni Mountains. It is also home for several species (mammals, amphibians, fish and beetles) like: lynx, wolf or otter. The conservation measures of Natura 2000 Someșul Rece Site, elaborated in order to protect the habitats and the species are part of the management plan. These measures were developed in close connection with the conservation status of habitats and species, but also taking into account the needs of local communities. These measures include: maintaining habitats in favorable conservation status; maintain the current habitat areas; preventing and combating poaching and overfishing; ensuring peace in areas of rock (for large mammals).

**Keywords:** *Site Natura2000, developing management plan, habitat, favorable condition.*

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## INTRODUCTION

Natura 2000 is a European network of protected natural areas including a significant number of natural habitats and wild species for the interest of community (The Council Directive 92/43/EEC). Natura 2000 site ROSCI 0233 “Someșul Rece” is situated in the south-western county of Cluj, on the administrative territory of Măguri-Răcățău in Ierii Valley. It covers an area of 8529 ha and is a framed area of the Apuseni Mountains Alpine bioregions. The site preserves the following natural habitats: Rough mountain beech forests *Asperulo-Fagetum*, beech forests of *Luzulo-Fagetum*, forests acidophilous *Picea Abies* mountain region and protect important species and active fish fauna, flora and fauna of the Apuseni Mountains (Management plan of Natura 2000 Someșul Rece Site).

The site was declared for the following priority habitats: 6520 Rough Mountain -; 6150

Pajiti boreal and alpine silicon substrate; 9110 beech forests of *Luzulo-Fagetum*; 9130 beech forests *Fagetum Asperulo*; 91E0\* Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) - priority habitat; 9410 Forest acidophile *Picea Abies* in the mountain region (*Vaccinio-Piceetea*); 7110\* active peatlands - priority habitat; 91D0\* peatland forest vegetation - priority habitat.

Regarding fauna, on the territory of the site we encounter the next protected species:

- Mammals: *Canis lupus* (wolf), *Lynx lynx* (lynx)
- Amphibians: *Bombina variegata* (yellow-bellied toad)
- Fishes: *Gobioura uranoscopus* (Danubian longbarbel gudgeon), *Sabanejewia aurata*, *Cottus gobio* (European bullhead), *Eudontomyzon danfordi* ( Carpathian brook lamprey)

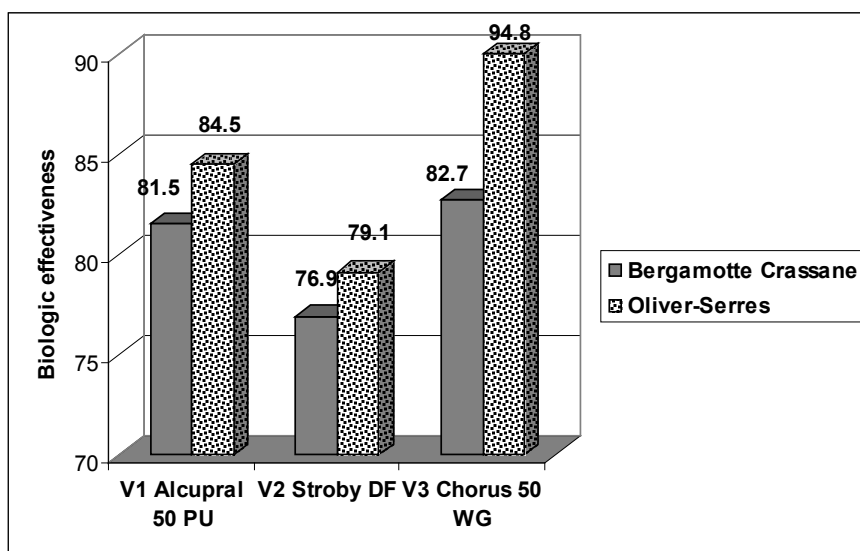
## MATERIALS AND METHODS

The conservation measures were established using field studies and bibliographic data. According to the field studies, conservation status for each type of habitat and species was set. Knowing the conservation status (favorable, unfavorable, inadequate, bad), we could elaborate proper conservation measures for all the community interest habitats and species within the site.

Evaluating the conservation status is crucial in the process of developing a management plan for a protected area. The specific objectives, measures, activities and rules required for each type of habitat, species or group of species of the areas result from their present state of preservation (Proorocu, 2008, Proorocu and Beldean, 2007).. Thus, if the conservation status is evaluated as favorable when we elaborate a management

plan, the activities must maintain the conservation status for long-term. The rules and the results of the human impact must prevent and combat those activities whose potentially impact could influent the favorable conservation status in the future (Proorocu, 2008).

If the conservation status of a species/a habitat is evaluated as “unfavorable-inadequate” or “unfavorable-bad”, the activities of the management plan should focus in order to improve those parameters that prevent these species and/or habitat to reach a favorable conservation status. Also, the rules and the results of the human impact must reduce or eliminate the present activities with impact on the species/habitat type; it is also necessary to avoid any future activities that could affect species or habitats that have an unfavorable conservation status (Proorocu,



**Fig. 1.** The evaluation of the conservation status of habitats

**Tab. 1.** Conservation status for priority species of the site.

Type species	Conservation status	Causes that may affect the conservation status
Mammals <i>Canis lupus</i> <i>Ursus arctos</i> <i>Felis silvestris</i> <i>Lutra lutra</i>	favorable	Forestry, wood transportation, hydropower development on Someșul Rece River; local community activities.
Amphibians and reptiles <i>Bombina variegata</i>	unfavorable-inadequate	Pressures due to the opening of forestry roads in the site, modification of water regime due to hydro exploitation, the construction works that require changes of the morphology hydropower land, tourism activities that harm the habitat of the species by improper waste disposal.
Fishes Gobioura uranoscopus, <i>Sabanejewia aurata</i> , Cottus gobio, <i>Eudontomyzon danfordi</i>	favorable	Modification of water regime due to hydro exploitation, the construction works that require changes of the morphology hydropower land.

**Tab. 2.** Conservation measur for habitats with unfavorable inadequate status

Nr.	Habitat name	Conservation measures
11	9110 – Beech forest <i>Luzulo- Fagetum</i>	Conservative management of natural regeneration; Uncontrolled logging forbided;
22	9130 – Beech forest <i>Asperulo-Fagetum</i>	Maintenance of dead wood (fallen trees) because they provide food or habitat for other species of vertebrates or invertebrates
33	9410 – Acidophile <i>Picea abies</i>	medium and long term halting logging races. halting the planting of non-indigenous species, especially conifers elimination of expanding the network of forest roads
44	91E0* - <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> forests	maintaining woody plant species diversity - the role of this type of habitat is for protection and ecological stability; the habitat, slows down the water, protects bank erosion
55	91D0 *- peatlands with rabies forest vegetation	prohibiting any cuts in the habitat and the adjacent habitat; maintaining watercourses crossing areas; avoid grazing in these areas

2008, Proorocu and Beldean, 2007).

When the conservation status is evaluated as "unknown", the activities of the management plan should proceed to collect data in order to establish the conservation status of the habitat type, species or group of species. The rules and the results of the human impact must reduce the effect of the present impact activities or must forbid other future activities that could affect the species or habitat type, according to the precautionary principle.

In these conditions, we must therefore avoid a situation where the species/habitat reaches an

unfavorable conservation status, because of the absence or insufficient information necessary to evaluate their conservation status. Thus, measures, activities and rules of the management plan must be preventive, effective, adequate, efficient, integrated, in order to provide the framework for species and habitats of conservation interest to maintain or reach a favorable conservation status (Proorocu, 2008, Proorocu and Beldean, 2007).

When the management plan was drowed up, we have developed a series of measures for each type of habitat and for each species of the site. These measures were developed in close

**Tab. 3.** Conservation measur for habits with a favorable conservation status

Nr.	Habitat name	Conservation measures
11	7110* - active peatlands	moderation in operating activities peat - swamp tame reduced grazing at the edges - pollution by eutrophication especially in areas of marsh edge
22	6520 – Rough mountain	- Limiting human pressures through continued practice of traditional mowing and grazing a non intensive
33	6150 –boreal grasslands and Alpine silicon substrate	- Maintaining a rational grazing; - where appropriate, removing woody vegetation.

**Tab. 4.** Conservation measur for the species within the site

No.	Habitat name	Conservation measures
11	<i>Canis lupus</i> <i>Ursus arctos</i> <i>Felis silvestris</i> <i>Lutra lutra</i>	prohibiting any activities in areas of steep and rocky; making replanting deforested areas to the level where natural regeneration is not a viable option (80% forests of different types and ages, 20% meadows and marshes; informing the population on the importance of the species (financial aid). in case of small hydro, it must deliver a servitude which represent annual average flow naturally minimum that is recorded in the Somesul Rece River driest month of the year – for otter
22	<i>Bombina variegata</i>	prohibition of draining wetlands, drainage works, removing culverts, preventing overflows streams on flat areas through consolidation of banks, creation of artificial whites etc. prohibiting the exploitation of natural resources and vegetation in wetlands. prohibiting the investment that modifies the hydric regime of the area or requires specific interventions in natural habitats.
33	<i>Gobioura uranoscopus</i> , <i>Sabanejewia aurata</i> , <i>Cottus gobio</i> , <i>Eudontomyzon danfordi</i>	microhydro are not recommended because: 1) induce the phenomenon of consagvinizare; 2) are reduced or impaired specific habitats for breeding, feeding, resting or wintering; 3) natural productivity decreases. removing natural or artificial barriers

connection with the conservation status of habitats and species, but also taking into account the needs and the opinion of local communities. These measures include: maintaining the favorable conservation status of habitats and maintain the current habitat areas. The conservation measures have been established by making field studies and bt suding and collecting bibliographic data. According to field studies, conservation status for each habitat and species was established. Knowing the state of conservation (unfavorable inadequate, favorable, unfavorable bad), we were able to develop appropriate conservation measures for

all habitats and species of community interest from the site (Doniță *et al.*, 2005; Proorocu, 2008, Proorocu and Beldean, 2007).

## RESULTS AND DISCUSSION

According to field studies we could determinate that the largest land area of the site is in an unfavorable conservation status or in bad conservation status (4.600 ha).

In the following graphic, we can see the situation of the conservation status of the habitats:

Regarding fauna, mammals and fish species have a favorable conservation status, but the

amphibian species, *Bombina variegata*, has an unfavorable-inadequate conservation status.

Conservation measures were elaborated for all habitats and species within the site, as written in the tables below.

Conservation measures favorable to existing habitats are maintained through various activities carried out by people from the use of land.

## CONCLUSION

Conservation measures ROSCI0233 Someșul Rece management plan were developed in order to protect habitats and species within the site. The measures do not prohibit local human activities within the site, being slightly more restrictive in some small and precise areas.

About the habitats we can conclude by saying that active peat habitat, with an area of 255 ha, has a favorable conservation status, along with mountain meadows (8.5 ha) and boreal and alpine meadows (8.5 ha) habitats.

Beech forests *Asperulo Fagetum* habitat, with an area of 85 ha, along with *Alluvial forests* with *Alnus* and *Fraxinus* (59 ha) habitat and peat bogs with forest habitat (426.5 ha) have an unfavorable inadequate conservation status.

*Picea Abies* acidophile forest habitat occupies the largest area of the site (4600 ha) and has an unfavorable bad conservation status.

Regarding the evaluation of the conservation status of species, we can conclude that mammals (wolf, bear, lynx, and otter) have a favorable conservation status. However, there are several reasons that could lead to an imbalance: forestry, wood transportation planning and related works hydropower on the river, etc.

The species of amphibian, yellow-bellied toad (*Bombina variegata*), has an unfavorable inadequate conservation status, due to the pressure of forestry opening roads, or modification of water regime due to hydro exploitation or the construction works that require changes of the morphology hydropower land.

All species of fish have a favorable conservation status.

For all types of habitats and species within the site, a series of conservation measures were established, such as: stopping illegal deforestation, preserving the diversity of wood species or ensuring peace in steep and rocky areas.

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