Report of the State Party on the State of Conservation of the World Heritage Property Inscribed on the World Heritage List

Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany (Slovakia N 1133bis)

The Slovak Republic appreciates that the property "Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany" has been inscribed on the UNESCO World Heritage List. Through the competent government ministries and their competences, the Slovak Republic resolves the issues identified in Decision no. 39 COM 7B.19 of the World Heritage Committee, adopted at its 39th session in Bonn, and expresses its interest in keeping the property inscribed on the UNESCO World Heritage List.

1. Executive summary of the report

The Slovak part of the UNESCO World Heritage Property was inscribed on the UNESCO World Heritage List in 2007 under the name "Primeval Beech Forests of the Carpathians" as a bilateral Slovak and Ukrainian property. In 2011, after the extension by additional components in Germany, it became part of the trilateral property "Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany". At the level of the State, the Slovak part of the property is covered by the Ministry of Environment of the Slovak Republic, and in compliance with the valid legislation, the expert organisation of the Ministry the State Nature Conservancy of the Slovak Republic is responsible for management and protection.

In connection with the issues in the territory of the Slovak part of the property identified in Decision of the World Heritage Committee 39 COM 7B.19 and based on the recommendations resulting from the conclusions of the IUCN UNESCO reactive monitoring mission, which took place on 29 September to 3 October 2014, the Member State Slovakia organised an advisory mission in the territory of the Slovak part of the property. The mission was led by Dr. Pierre Galland from Switzerland and Prof. Hans Knapp from Germany. The first phase of the mission took place in Bratislava on 21 July 2015, the second one directly in the region of the World Heritage Property on 14 - 18 September 2015. The mission's objective was to support the preparation of the process of accurate specification of boundaries and determination of the area of the Slovak part of the World Heritage Property and the preparation of the corresponding Management plan of the Slovak part of the World Heritage Property.

The Slovak Republic made effort to solve the problems identified by declaring in December 2015 the new nature reserve "Borsukov vrch", in which, by increasing from the second to the fifth (highest) degree, non – intervention regime applies in part of the World Heritage Property, concretely the component Stužica – Bukovské vrchy. In July 2016 The Government of the Slovak Republic also approved the Management plan of the Poloniny National Park for 2017-2026, which specifies an ecological functional area that includes the forests stands except the existing reserves used by private owners, which are part of the core zone of the component Stužica – Bukovské vrchy. Although these stands remains in the third degree of protection in accordance with Act No. 543/2002 Coll. on nature and landscape protection as amended, while negotiating the Management plan, the owners, administrators and lessees of the lands granted their preliminary consent to the step provided that the State will provide compensation for loss. The Management plan includes a action plan prepared in cooperation with land owners, administrators and lessees. Its objective is to implement the measures of the Management plan and the activities, which are suitable, need to be and can be performed beyond the ambit of the Management plan. The action plan has a greater scope than the Management plan and is prepared in particular as a background document for the activities in relation to regional development, and it is also determined for the work group under creation in the region that will be made up of representatives of the entities interested. The project, through which the measures of the Management plan will be implemented from structural funds, concretely from the Operational Programme Quality of Environment 2014 - 2020, is under preparation.

In 2016, the activities within the project "Nature Conservation as an Opportunity for Regional Development" mentioned in the previous report were commenced. The project will be implemented till April 2017 and is focused on the cross-border cooperation with Ukraine and financed from the Norwegian Financial Mechanism. It emphasises in particular the support of alternative regional development with the objective to overcome the unfavourable state of the region with the orientation to cross-border cooperation and obtaining of local community support for nature conservation and development of soft tourism forms.

The project mentioned in the previous report "Development of Nature Conservancy and Protected Areas in the Slovakian Carpathians" financed from the Swiss Financial Mechanism also continued and was successfully completed

in November 2016. Its objective was to support the development of institutional, human and technical resourcesfor the support of nature protection in the protected areas in Slovakia and the UNESCO property was a pilot area.

Within the subsequent process of extension of the existing trilateral property "Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany" by new components, the Slovak Republic managed to establish cooperation with the leader of the process (Austria) as well as with other potential partner countries that showed interest in entering the nomination process. The representatives of the Slovak Republic actively participated in work meetings organised by the Austrian party with the participation of all potential partner countries. During the meetings all the necessary steps were negotiated that had to be taken within the entire nomination process in order to complete it successfully through the submission of a nomination project to the World Heritage Centre. The negotiations and activities of all countries concerned resulted in the successful preparation of the nomination project. The Slovak Republic expressed its consent to the extension of the existing trilateral property through the supporting letter of the Ministry of Environment of the Slovak Republic, which was sent to the World Heritage Centre in January 2016.

2. Response of the State Party to Decision of the World Heritage Committee No.39 COM 7B.19, paragraph by paragraph.

3. The Committee Commends the States Parties of Germany, Slovakia and Ukraine for their cooperation concerning the protection and management of the property and for signing the Joint Declaration of Intent and encourages the States Parties to continue their efforts

The trilateral cooperation further continued in compliance with the document *Joint Declaration of Intent.* The partners from Ukraine took part in the advisory mission which took place on 14 - 18 September 2015. They participated in a series of negotiations with the stakeholders in the region, a field inspection of the Slovak part of the World Heritage Property, and provided valuable information and experience in the form of presentation at the workshop which took place within the advisory mission and was intended for the stakeholders, state organisations, local governments of land owners and users in the region of the World Heritage Property. A representative of Austria, which at that time was the leading country in the process of extending the trilateral World Heritage Property by other components in 11 European countries, also accepted the invitation to the advisory mission. Mr. Robert Brunner, independent expert of the Council of Europe, also took part in the advisory mission in connection with the European Diploma for the Poloniny National Park.

The cooperation and mutual communication also continued through the exchange of information and experience at the meeting of the Joint Management Committee which took place in Snina, Slovakia, on 26 - 27 October 2015 under the sponsorship of the Ministry of Environment of the Slovak Republic. In addition to the partners from Germany and Ukraine, two representatives from Austria also took part in the meeting. During the meeting, the partners negotiated the issues concerning the specification of the boundaries, the area and management of the Slovak part of the World Heritage Property. They could see the current state of individual components of the property within the field inspection and they also met representatives of relevant institutions that are responsible for forest management in the territory. They were also familiarised with the results of the advisory mission, which took place in the territory of the property, as well as with the proposals for the modification of the boundaries of the Slovak part of the property, and they could comment on the proposals. During the negotiation, the Austrian partners provided information on the current state of extending the trilateral property, as well as on possible models of managing, financing and cooperating within the extended property in case of its successful nomination. The partners also agreed upon the name of the extended property.

In the reference period, the activities within the project *Nature Conservation as an Opportunity for Regional Development* (http://www.sopsr.sk/norsky-projekt/) mentioned in the previous report were commenced. The project will be implemented till April 2017 and is focused on the cross-border cooperation with Ukraine and financed from the Norwegian Financial Mechanism. It emphasises in particular the support of alternative regional development with the objective to overcome the unfavourable state of the region with the orientation to cross-border cooperation and obtaining of local community support for nature conservation and development of soft tourism forms. Currently, the existence of the region's local communities greatly depends on exploiting natural resources (mainly forests); however, these do not provide sufficient employment possibilities, while the development of other alternatives of sustainable life is quite rare here. The project supports activities focused on the development of soft tourism by promoting mainly the values of the UNESCO World Heritage as well as other natural and cultural/historical values in the cross-border area (including the traditional architecture, clerical and military cultural/historic monuments and sites), whose benefits will be in favour of local inhabitants.

The State Nature Conservancy of the Slovak Republic, concretely its organisational units Poloniny National Park Administration and the Administration of the Vihorlat Protected Landscape Area containing individual components of the World Heritage Property, participate in the project for the Slovak party. The Uzhanskiy National Natural Park in

Ukraine is among the foreign partners of the project; the component Stuzhytsa – Uzhok adjacent to the Slovak component Stužica – Bukovské vrchy is situated in its territory.

The project partners from Slovakia include local government representatives - the Association of Municipalities of the Ulič Valley Micro Region associating nine municipalities (Nová Sedlica, Zboj, Uličské Krivé, Ulič, Kolbasov, Ruský Potok, Topoľa, Runina, and Príslop) from the region of the part of the World Heritage Property in the territory of the Poloniny National Park.

The main goals of the project are as follows:

1. To support opportunities and conditions of alternative regional development, based on the cultural and natural values and soft tourism of the protected cross-border territories in Slovakia and Ukraine.
2. To build the capacities of the participating entities and institutions for the development of eco-tourism and environmental education in the protected areas of both countries and perform networking at various levels.
3. To contribute to the protection and management of natural and cultural values of the region and to the sustainable exploitation of natural resources, in accordance with the international obligations and national priorities.

For an overview of the project activities see Annex No.1 hereto. In relation to fulfilling these activities, several meetings between the State Nature Conservancy of the Slovak Republic and Uzhanskiy National Natural Park have taken place so far. In additions events (conferences, workshops) were held in Slovakia and Ukraine with the participation of all partners and relevant stakeholders were organised. The project territory was visited by the Norwegian partners and subsequently the representatives from Slovakia went to Norway to gain some experience. Management measures were taken that were focused on preserving the landscape character in the Poloniny National Park. Several information materials were issued for the promotion of the project territory. At present information panels are under installation, which will be situated in the municipalities that are partners within the project, diaporama and soft tourism objects (small information centres in six municipalities) are under preparation. The summary of and more detailed information on the activities already completed is published at http://www.sopsr.sk/norsky-projekt/index-en.php .

The project mentioned in the previous report *Development of Nature Conservancy and Protected Areas in the Slovakian Carpathians* financed from the Swiss Financial Mechanism (http://www.sopsr.sk/svajciarsky-web/?page_id=4&lang=sk) also continued and was completed in November 2016. Its objective was to support the development of institutional, human and technical resources for the support of nature protection in the protected areas in Slovakia and the UNESCO property was a pilot area. Within the project, for example new shelters for tourists were built at the places reserved for camping, the exposition about the Poloniny National Park in its information centre at Nová Sedlica was updated, the movie *Primeval Beech Forests of the Carpathians in Slovakia* presenting the beauty and values of the World Heritage Property was made. During the 39th meeting of the World Heritage Committee in Bonn, the Slovak Republic organised an accompanying event with a short verbal presentation of the World Heritage property and the above-mentioned movie was also screened. For an overview of the project activities see Annex No.2 hereto.

As part of its Village Renovation Programme, the Ministry of Environment of the Slovak Republic approved financing of some projects both in 2015 and 2016. In 2015, the projects supported the construction of minor infrastructure objects in municipalities (information panels, planting and renewal of vegetation, completion of areas around historical monuments, etc.). In the region of the World Heritage Property, in particular in the Ulič Valley, the municipalities Kolbasov, Príslop, Runina, Nová Sedlica, Topoľa, Uličské krivé, and Zboj applied for financial support and were granted subsidies. In 2016, the Village Renovation Programme – Rural Environmental Quality Improvement and the Village Renovation Programme – Green Village for 2016 concerned the support in revitalisation of public areas of municipalities, cleaning of public areas, replacement of street lighting, construction of summer houses, bus stops, landscape gardening etc. The municipalities Kolbasov, Príslop, Ruský potok, Nová Sedlica, Topoľa, Uličské krivé, and Zboj were awarded subsidies for project financing.

4. ***The Committee welcomes the progress achieved by the State Party of Slovakia towards enhancing cooperation between relevant Ministries responsible for the management of Slovak components of the property, but notes with concern that an integrated management framework for the Slovak components of the property is still lacking and that forest management plans providing for logging apply to some areas within the property boundaries***

As mentioned in the previous report, a cooperation and collaboration framework agreement between the Ministry of Environment of the Slovak Republic and the Ministry of Agriculture and Rural Development of the Slovak Republic was entered into in the past reference period, which guarantees the interest and active approach of the departments interested. An interdepartmental coordination group was established based on this framework agreement. The negotiations regarding the conclusion of a similar framework agreement with the Ministry of Defence of the Slovak Republic and its departmental organisations are still under way.

In the previous period, several meetings of the interdepartmental work group took place, and the meetings of representatives of the Ministry of Environment of the Slovak Republic with representatives of the other ministries concerned (Ministry of Defence of the Slovak Republic, Ministry of Foreign and European Affairs of the Slovak Republic, Ministry of Culture of the Slovak Republic, Ministry of Transport, Construction and Regional Development of the Slovak Republic, Ministry of Interior of the Slovak Republic) also continued to negotiate the coordination of the approach to the World Heritage Property and to seek solutions for the provision of protection, proper management and detail specification of boundaries of the Slovak components of the World Heritage Property. Meetings with the representatives of local government as with state organisations (Vojenské lesy a majetky SR, š.p., Lesopoľnohospodársky majetok Ulič, š. p., Lesy SR, š. p. etc.) also took place. These meetings negotiated, inter alia, the protection and management of the World Heritage Property. Communication with the stakeholders in the region (both state stakeholders and private ones) also continued resulting in the elaboration of several alternatives of cooperation with them permitted by the amendment to the Act No. 543/2002 Coll. on Nature and Landscape Protection. Some of the private entities owning lands in the property expressed their interest in exchanging the lands for state-owned lands (Lesopasienková spoločnosť (Silvicultural and Grazing Company) Rovenky Stakčín, Súkromné lesy Kredba a Mudroch, spol. s r.o.). Negotiations concerning long-term lease to the State Nature Conservancy of the Slovak Republic are being conducted with some of these entities.

The above effort resulted in particular in the following goals achieved:

1. On 1 January 2016, Government Order of the Slovak Republic No. 6/2016 Coll. (Annex No.3) declaring the nature reserve "Borsukov vrch" came into force. It is a new nature reserve in the territory of the Poloniny National Park with an area of 146.7928 hectares, in which, by increasing from the second to the fifth (highest) degree, the strict protection of a part of the World Heritage Property is provided for, concretely the component Stužica – Bukovské vrchy (see the map in Annex No. 8). This nature reserve is situated in the state-owned territory.
2. On 7 July 2016, the Government of the Slovak Republic approved the Management plan of the Poloniny National Park for 2017-2026, which specifies ecological functional area No. 1b (EFP1B) (Annex No. 8) that includes the forest growth except the existing reserves owned or used by private owners, which are part of the core zone of the component Stužica – Bukovské vrchy. The growth remains in the third degree of protection in accordance with Act No. 543/2002 Coll. on nature and landscape protection as amended but while negotiating the Mangement plan, the owners, administrators and lessees of the lands granted their preliminary consent to the step provided that the State will provide compensation for loss. The way of loss reimbursement has not been exactly agreed yet. The English translation of the Management plan is attached in Annex No.4, the Slovak version approved by the Government of the Slovak Republic is published at http://www.sopsr.sk/web/?cl=119. The project, through which the measures of the Management Plan will be implemented from structural funds, concretely from the Operational Programme *Quality of Environment 2014 - 2020,* is under preparation.

Designation of the nature reserve "Borsukov vrch" (Borsuk Hill) and approval of the Management plan of the Poloniny National Park for 2017 – 2026 significantly improved the protection and management of three World Heritage components in the territory of the Poloniny National Park. Intensive negotiations with the competent ministries as well as with owners, administrators and lessees of the affected forest lands took place within the Vihorlat component situated in the territory of the Vihorlat Protected Landscape Area. During the negotiations with the administrators of forest lands (Lesy SR, š.p. OZ Sobrance and VLM SR, š.p., OZ Valaškovce), preliminary proposals for detail specification of the boundaries of the property and its buffer zone were prepared. These proposals cannot be considered final because neither of the two organisations have an official permit from their departments to leave the territory in the management mode required by World Heritage Property. Consequently, it will be necessary to summon interdepartmental negotiations and to finally resolve these issues directly with the competent ministries. Two private entities operate in the territory of the Vihorlat component, with which accurate conditions of compensations still need to be agreed upon like for the component Stužica – Bukovské vrchy (with an alternative of protected area declaration as well).

The annexes to the management plan of the Poloniny National Park for 2017 – 2026 include the Action plan prepared by the State Nature Conservancy of the Slovak Republic – Poloniny National Park Administration in cooperation with land owners, administrators and lessees. Its objective is to implement the measures of the Management plan and the activities, which are suitable, need to be and can be performed beyond the ambit of the Mangement plan. The possibilities and conditions of involvement of the entities in the care of the National Park were negotiated, which created room for an initiative from the owners, municipality mayors and other stakeholders in the matter of utilisation of natural, cultural and other values of the National Park for the development of the area. Thus, the Action plan has a greater scope than the Management plan and is prepared in particular as a background document for the activities in

relation to regional development, and it is also determined for the work group under creation in the region that will be made up of representatives of the entities interested.
In 2015, at the request of the State Nature Conservancy of the Slovak Republic, the expert organisation Lesprojekta, s.r.o. worked out draft forest management measures in the buffer zone of the Primeval Beech Forests of the Carpathians. The document was used in preparing the Management plan and it will also represent the basic document for further negotiations with land owners and users within the framework of preparation of binding documents concerning silviculture in the buffer zone of the World Heritage Property.

5. The Committee endorses the recommendations of the 2014 reactive monitoring mission and requests the State Party of Slovakia to implement them

In the report prepared by Dr. Galland from the reactive monitoring mission, the following recommendations were included; we provide our comments on them:

R1: ***In consultation with the States Parties of Germany and Ukraine who share responsibility for this serial transnational property, undertake a thorough scientific assessment of the conservation value of the Slovak components of the inscribed property and their buffer zones; and proceed with a proposal for a significant boundary modification in order to strengthen Outstanding Universal Value in line with the relevant provisions of the Operational Guidelines and consistent with the design of the whole transnational property. The proposal should take into account the property and user rights, and should include recalculated surfaces on the basis of accurate GIS maps.***
The previous report informs that within the above-mentioned Swiss project, the National Forestry Centre of Zvolen mapped more than 7,000 hectares of forest habitats in Poloniny and in Vihorlat in 2014, in accordance with the Methodical Procedure on Delimiting Natural Forests to Identify the State of Forests and to Identify Primeval Forests and Natural Forests within the UNESCO World Heritage Property. The mapping as well as knowledge based on other researches executed in the Poloniny National Park represented the basis for the draft detailed specification (modification) of the core zone boundary in the problematic component Stužica – Bukovské vrchy. This newly specified component also includes, in addition to the existing nature reserves, the newly declared nature reserve "Borsukov vrch" and so-called Ecological functional area No. 1B defined in the Managent plan. As mentioned in Item 4, the ownership relations and rights were also taken into account. For the new specification of this sub-property, the geographic information system (GIS) and accurate maps – GIS-layers supplied by authorised institutions in Slovakia (Geodesy, Cartography and Cadastre Authority of the Slovak Republic, National Forest Centre) were used, so, the procedure was in compliance with the recommendation.
The component Vihorlat has not been specified in such a way yet. Intensive negotiations between the stakeholders in the component are still under way.
Negotiations for specification were not necessary for the components Havešová and Rožok, the boundaries were only specified more precisely by means of GIS.

R2: ***In consultation with the States Parties of Germany and Ukraine and consistent with the management provisions for the entire property, prepare an Integrated Management Plan for the Slovak components of the property, focused on nature conservation and taking into account all international designations, such as World Heritage Property, Biosphere Reserve and European Diploma. This Plan should as one specific objective, ensure that all current and future commercial activities in and around the WH property are regulated/adapted in order to be fully compatible with the conservation objectives of these areas, and the protection of OUV.***
A separate Integrated Management plan for the Slovak components of the World Heritage Property has not been prepared yet. In the preparation of the Management plan of the Poloniny National park for 2017 – 2026, all international approaches were taken into account. However, the Management plan concerns the components in the territory of the Poloniny National Park; no management plan has been prepared for the component Vihorlat so far.

R3: ***Establish an effective institutional dialogue at national level among all the concerned Ministries, in particular the Ministry of Environment and the Ministry of Agriculture and Rural Development in order to ensure that national priority tasks and commercial activities are fully compatible with the conservation objectives of the property.***
More detailed information regarding this recommendation is provided in Item 4.

R4: ***Start a comprehensive information and outreach campaign at national and local levels focused on communicating the World Heritage status of the area, and fully integrate the local actors in all steps of the management and boundary modification process.***
The main activities in the both above-mentioned projects financed within the Swiss financial mechanism and the Norwegian financial mechanism include the activities focused on promotion of various phenomena (elements) in the territories of the Poloniny National Park and of the Vihorlat Protected Landscape Area. Attention is also paid to the

World Heritage Property. The list of activities and materials produced within these two projects with the objective to inform the affected stakeholders, persons interested as well as the general public is attached in Annexes No. 1 and 2 to the Report. The science popularisation movie "Primeval Beech Forests of the Carpathians in Slovakia" was made within the Swiss project and it was broadcast in the public-service television with national coverage and screened within the accompanying event organised during the 39th meeting of the World Heritage Committee in Bonn.
It has to be mentioned that within the meeting of the advisory mission in October 2015 (see more information in Item 8), a workshop on the Slovak World Heritage Property took place at the Grammar School Snina. The workshop was determined for the general public, thus, the regional press and media representatives as well as the pedagogues and students from the Grammar School in Snina took part in it in addition to the affected stakeholders.
As mentioned in Item 4 in relation to the declaration of the nature reserve Borsukov vrch and approval of the Management plan of the Poloniny National Park for 2017 - 2026, local stakeholders were also involved in the preparation and approval process. They also take part in the process of new specification of the Vihorlat component that is under way. Basically, this is not possible without the participation of local stakeholders because the Slovak legislation does not allow establishing a new protected area (nature reserve) or accepting and adopting a document like the Management plan without the consent of the affected owners or users.

R5: ***Undertake a Strategic Environmental Assessment on the planned and potential sustainable development of the region surrounding the World Heritage property, in order to define how added value may be secured from the World Heritage and other international designations, and to explore alternative sources of income and benefits for local people.***
At present there is no plan for the implementation of development projects within the property, which could have a direct or significant effect on the World Heritage Property. Currently no development projects, which would require the environmental impact assessment, are planned in the region. No new buildings/structures (roads, buildings, ski resorts etc.) have been constructed in the World Heritage Property in the last 20 years; only the maintenance of the existing infrastructure and tourist trails has been provided.
If proposals of new projects and plans affecting the World Heritage Property are submitted in the future, in accordance with the valid legislation of the Slovak Republic they will have to undergo the process of environment impact assessment, and in compliance with Article 172 of the Operational Guidelines they will also be submitted to the World Heritage Centre.
As regards the potential of the region adjacent to the World Heritage Property, no comprehensive document, strategy, study or planning documentation has been prepared so far, which would deal with this region as one and compact whole (the Poloniny National Park and the Vihorlat Protected Landscape Area together) in terms of its potential, sustainable development, alternative sources of income etc. The problem is partially solved for the territory of the Poloniny National Park by the Action plan attached to the Management plan of the Poloniny National Park for 2017 – 2026 mentioned above in Item 4. According to the administrative division of Slovakia, these protected areas are situated in two regions having (the Košice region) or preparing (the Prešov region) a separate land-use planning documentation. However, their land-use planning documentation covers a large and rather varied territory of both regions. It cannot fully take into account the needs of the region in the close vicinity of the World Heritage Property.

R6: ***Establish a joint national scientific advisory committee in Slovakia for the World Heritage property, the whole Poloniny National Park (European Diploma) and the Slovak part of the East Carpathian Biosphere Reserve.***
Such institute has not been created yet. However, it should be noted here that the institute should deal not only with the territory of the Poloniny National Park, as mentioned in the recommendation; if this is to affect the entire Slovak World Heritage Property, such scientific council will also have to deal with the territory of the Vihorlat Protected Landscape Area.

6. The Committee also requests the State Party of Slovakia to ensure that no logging operations take place within the property's boundaries until this issue is resolved through the development, in consultation with the States Parties of Germany and Ukraine, of an integrated management framework for the Slovak components of the property, focused on nature conservation and taking into account all international designations, such as World Heritage property, Biosphere Reserve and European Diploma

This request is fulfilled only in the part of the World Heritage Property. For three components situated in the territory of the Poloniny National Park, logging is currently prohibited in the territory of the existing nature reserves with the fifth degree of protection (the components Havešová and Rožok). For the component Stužica – Bukovské vrchy, the request is fulfilled partially, within nature reserves or national nature reserves (Stužica, Jarabá skala, Pľaša, Borsukov vrch, Šípková, and Udava), as well as in such a way that a part of this component in the third degree of protection (permitting logging activities) is allocated to the Ecological functional area No. 1b specified within the Management plan of the Poloniny National Park for 2017 - 2026. Logging activities are not executed in this territory for the time being thanks to the attitude of the affected private owners that have agreed with the specification of this area and with the no-intervention regime. The owners granted their consent on condition that the state will provide compensation for the

resulting loss. The way and amount of the compensation is being solved concurrently with the preparation of the project *for the Operational Programme Quality of Environment 2014 – 2020*. The territory of the Poloniny National Park is also part of the East Carpathian Biosphere Reserve and it has been granted the European Diploma of the Council of Europe for protected areas. For the East Carpathian Biosphere Reserve, the project financed from the *Operational Programme Quality of Environment* is under preparation, which could help improve the positive perception of the biosphere reserve in the region.
As regards the situation in the component Vihorlat in the territory of the Vihorlat Protected Landscape Area, negotiations on the new specification of the boundaries of the World Heritage Property and its zone of protection are under way. In the growth considered to represent the World Heritage Property, no logging activities are carried out mainly thanks to the attitude of the entities concerned. After an unambiguous boundary of the World Heritage Property has been specified, the property will be protected in the strictest fifth degree of protection.

7. The Committee notes that the current delineation of the Slovak components of the property does not provide for adequate protection of the property's Outstanding Universal Value (OUV) and further requests the State Party of Slovakia to develop a proposal for boundary modification of its components, in close cooperation with the States Parties of Germany and Ukraine, as well as other States Parties who are currently preparing a proposal for an extension of the property

The response to this question is provided above in Item 5 to the recommendation R1 from the report prepared by Dr. Galland from the reactive monitoring mission. In addition to partners from Ukraine (Carpathian Biosphere Reserve), this question was consulted at the advisory mission in October 2015, with the participation of Prof. Hans Dieter Knapp from Germany and Mr. Hanns Kirchmeir from E.C.O. Institute for Ecology from Austria that coordinates the process of extension of the World Heritage Property by territories in other European countries. All the participants could discuss the proposals for the modification of boundaries of the Slovak part of the property with the representatives of the State Nature Conservancy of the Slovak Republic, state institutions responsible for forest management and with the private owners during work meetings and directly in the field. See more information on the course and results of the advisory mission in Item 8.

8. The Committee takes note of the State Party of Slovakia's intention to invite a joint World Heritage Centre/IUCN Advisory mission to provide advice on the management of the Slovak components of the property and on the development of a proposal for boundary modification

Based on the recommendation resulting from the conclusions of the reactive monitoring mission (in 2014), the Slovak Republic organised an advisory mission of the World Heritage Centre/IUCN. Based on an official invitation from the Slovak Republic, the advisory mission was led by Dr. Pierre Galland from Switzerland; Prof. Dr. Hans Dieter Knapp from Germany also took part. In addition to the invited experts, partners from Ukraine (Uzhanskiy National Natural Park and Carpathian Biosphere Reserve) also took part in the advisory mission. The invitation was also accepted by Hanns Kirchmeir from the organisation E.C.O. Institute of Ecology, which was at that time responsible for the preparation of the nomination project for the extension of the existing trilateral property. Mr. Robert Brunner, independent expert of the Council of Europe, also took part in the mission in connection with the European Diploma awarded to the Poloniny National Park. The mission was divided into two phases and its objective was to support the preparation of the process of accurate specification of boundaries and determination of the area of the Slovak part of the World Heritage Property and the preparation of the corresponding programme of care of the Slovak part of the World Heritage Property. The first meeting took place in Bratislava on 21 July 2015 with the participation of Dr. Galland; the agenda included the exchange of information about what had happened since the reactive monitoring mission, the preparation of an agenda for the 2nd phase of the advisory mission and creation of a schedule of individual steps till the completion of the mission's 2nd phase. The 2nd phase of the mission took place directly in the region of the World Heritage Property on 14 – 18 September 2015. It consisted of several official meetings with the representatives of the affected private owners of forest lands, state organisations responsible for forest management, as well as local government representatives. The non-governmental organisation Lesoochranárske združenie VLK was also invited, however, it did not send its representatives to the meeting with the experts (Dr. Galland and Prof. Knapp). The advisory mission also included a field inspection of individual property components and a 1-day workshop with the topic: *Benefits of protected territories with international designations for the Zemplín region* determined for stakeholders, state organisations, local governments, land owners and users from the region of the World Heritage Property. Local grammar school students and regional media representatives also supported the workshop by participating. Presentations of foreign guests focused on the importance of international designations for the protected areas, their benefits for regions, stakeholders, development of tourism and other opportunities brought by them, took place during the workshop. The guests provided specific information and shared their experience, specifying the way and type of research and monitoring taking place in the protected territories with international designations, and informing how they managed to utilise the potential of international designations for local inhabitants. Information was provided on the projects being implemented in the Poloniny National Park and in the Vihorlat Protected Landscape Area (the projects financed from the Swiss financial mechanism and the Norwegian financial mechanism), as well as other potential

financial sources. Hanns Kirchmeir from the organisation E.C.O. Institute of Ecology also informed the workshop participants about the process of extension of the trilateral World Heritage Property Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany. A discussion with workshop participants followed. The conclusions of the advisory mission resulted in several recommendations of both experts. It is necessary to continue in the communication with relevant entities and to negotiate the modification of the boundary of the World Heritage Property with them. All the proposals for boundary modification presented to the experts and partners from Ukraine, Germany and Austria during the mission, which will be subsequently negotiated at national level, will also have to be discussed with IUCN experts. Taking into account that varied responsibility for forest growth (several ministries and their expert organisations, as well as private land owners), and a various level of protection and various methods of management represent the main problem of the Slovak part of the World Heritage Property, it will be necessary to find a uniform mechanism and to reach an unambiguous agreement of all stakeholders, which will provide for property protection and management in compliance with the requirements of the Convention concerning the Protection of the World Cultural and Natural Heritage. The Slovak Republic gradually takes steps leading to the fulfilment of the recommendations resulting from the advisory mission.

9. The Commission requests furthermore the State Party of Slovakia to submit to the World Heritage Centre, by 1 December 2016, an updated report, including a 1-page executive summary, on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 41st session in 2017.

With reference to Decision No. 39 COM 7B.19 of the World Heritage Committee, adopted at its 39th session in Bonn in June 2015, the Slovak Republic sends the Report on the State of Conservation of the World Heritage Property by 1 December 2016, based on the instructions from the World Heritage Centre resulting from the above-mentioned letter.
The report was prepared on the bases of information and background documents available to the Slovak Republic at a national level and on the sources provided by the partner countries.

The report has been consulted with the partners in Germany, Ukraine, and Austria.

3. Other current conservation issues identified by the State(s) Party(ties), which may have an impact on the property´s Outstanding Universal Value

No other serious circumstances have been identified in the territory of the Slovak components of the property, which could adversely impact its integrity and influence its outstanding universal value.

The previous report provided information about the project implemented, which was focused on research and development under the title *World Heritage Beech Forests*. In response to World Heritage Committee Decision 35 COM 8B.13 (para 5), the project was commissioned by Germany. The task of the project was to initiate and support a process on expert and governmental level aiming at a serial transnational nomination to extend the trilateral World Heritage Property to fully represent the history of post-glacial beech forest distribution and the high diversity of this forest ecosystem in terms of altitudinal range, climate and soil conditions as well as the resulting variety of beech forest communities. The result of the project was that the representatives of Nature and Biodiversity directorates of 14 countries confirmed their interest in participation in the further extension nomination process, which will be led by Austria. Within the subsequent process of extension of the existing trilateral property Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany by new components, the Slovak Republic managed to establish cooperation with the leader of the process as well as with other potential partner countries that showed interest in entering the nomination process. The representatives of the Slovak Republic actively participated in work meetings organised by the Austrian party with the participation of all potential partner countries. During the meetings all the necessary steps were negotiated that had to be taken within the entire nomination process in order to complete it successfully through the submission of a nomination project to the World Heritage Centre. The negotiations and activities of all countries concerned resulted in the successful preparation of the nomination project. The Slovak Republic expressed its consent to the extension of the existing trilateral property through the supporting letter of the Ministry of Environment of the Slovak Republic, which was sent in January 2016 to the World Heritage Centre (Annex No. 5).

Within its approved issuance plan, the National Bank of Slovakia issues commemorative and collector coins, and at the request of the Ministry of Environment of the Slovak Republic, the plan also contains the motifs of protected areas. In 2015, the National Bank of Slovakia issued a silver collector coin at a nominal value of €10 and a gold collector euro coin at a nominal value of €100 under the title *World Natural Heritage – Primeval Beech Forests of the Carpathians*.

The silver coin was sold for the first time in Bratislava on 23 March 2015, and the gold coin sale started in Banská Bystrica on 3 December 2015. Notices of the National Bank of Slovakia if the issuance of these coins are attached in Annex No. 6. Find more information at http://www.nbs.sk/en/banknotes-and-coins/euro-coins/collector-coins/silver-collector-coin-in-nominal-value-of-10-euro-carpathian-mountain-area and http://www.nbs.sk/en/banknotes-and-coins/euro-coins/collector-coins/100-gold-collector-coin-forests-of-the-carpathians .

4. In comformity with Paragraph 172 of the Operational Guidelines, describe all the potential major restorations, alterations and/or new construction(s) intended within the property, the buffer zone(s) and/or in the corridors or other areas, where such developments may affect the Outstanding Universal Value of the property, including the authenticity and integrity

In Government Resolution of the Slovak Republic No. 568 dated 12 November 2014 (Annex No. 7), the government supported the development of Eastern Slovakia, the development of activities focusing on the support of employment, not only in the industrial sectors but also in exploiting natural values of the region to develop soft tourism, including the renovation of the access road to the Poloniny National Park, which includes the 6 km long road segment "Ruské – Ruské sedlo" of the historical road "Porta Rustica" (Annex No. 8).

The above steps represent a set of activities, which the Slovak Republic sees as feasible in the near future.

5. Public access to the state of conservation

The Slovak Republic agrees with saving the report in the World Heritage State of Conservation Information System (http://whc.unesco.org/en/soc) so that it is available to the public.

6. Signature of the Authority

Ministry of Environment of the Slovak Republic
Námestie Ľ. Štúra 1
812 35 Bratislava 1
Slovak Republic

In Bratislava on 28 November 2016

Annexes:

1. Overview of the activities of the project entitled *Nature Conservancy – a Regional Development Opportunity*, implemented by the State Nature Conservancy of the Slovak Republic and financed from the Norwegian Financial Mechanism
2. Overview of the activities of the project entitled *Development of Nature Conservancy and Protected Areas in the Slovakian Carpathians*, implemented by the State Nature Conservancy of the Slovak Republic and financed from the Swiss Financial Mechanism
3. Government Order of the Slovak Republic No. 6/2016 Coll. of 9 December 2015, declaring the nature reserve "Borsukov vrch" (Borsuk Hill), which came into effect on 1 January 2016
4. Management of the Poloniny National Park for 2017-2026 – English version
5. Supporting letter of the Ministry of Environment of the Slovak Republic
6. Notices of the National Bank of Slovakia of the issuance of the silver and gold collector euro coins
7. Government Resolution of the Slovak Republic No. 568 dated 12 November 2014 to the Analysis of the Social and Financial Situation of the Districts of Prešov, Humenné, Medzilaborce, Snina and Stropkov and the Proposals for Social and Economic Improvement
8. Map – Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany – Slovak part

Executive summary of the report of the State Party of Slovakia on the State of Conservation of the World Heritage Property "Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany"

The Slovak part of the UNESCO World Heritage Property was inscribed on the UNESCO World Heritage List in 2007 under the name "Primeval Beech Forests of the Carpathians" as a bilateral Slovak and Ukrainian property. In 2011, after the extension by additional components in Germany, it became part of the trilateral property "Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany". At the level of the State, the Slovak part of the property is covered by the Ministry of Environment of the Slovak Republic, and in compliance with the valid legislation, the expert organisation of the Ministry the State Nature Conservancy of the Slovak Republic is responsible for management and protection.

In connection with the issues in the territory of the Slovak part of the property identified in Decision of the World Heritage Committee 39 COM 7B.19 and based on the recommendations resulting from the conclusions of the IUCN UNESCO reactive monitoring mission, which took place on 29 September to 3 October 2014, the Member State Slovakia organised an advisory mission in the territory of the Slovak part of the property. The mission was led by Dr. Pierre Galland from Switzerland and Prof. Hans Knapp from Germany. The first phase of the mission took place in Bratislava on 21 July 2015, the second one directly in the region of the World Heritage Property on 14 - 18 September 2015. The mission's objective was to support the preparation of the process of accurate specification of boundaries and determination of the area of the Slovak part of the World Heritage Property and the preparation of the corresponding Management plan of the Slovak part of the World Heritage Property.

The Slovak Republic made effort to solve the problems identified by declaring in December 2015 the new nature reserve "Borsukov vrch", in which, by increasing from the second to the fifth (highest) degree, non – intervention regime applies in part of the World Heritage Property, concretely the component Stužica – Bukovské vrchy. In July 2016 The Government of the Slovak Republic also approved the Management plan of the Poloniny National Park for 2017-2026, which specifies an ecological functional area that includes the forests stands except the existing reserves used by private owners, which are part of the core zone of the component Stužica – Bukovské vrchy. Although these stands remains in the third degree of protection in accordance with Act No. 543/2002 Coll. on nature and landscape protection as amended, while negotiating the Management plan, the owners, administrators and lessees of the lands granted their preliminary consent to the step provided that the State will provide compensation for loss. The Management plan includes a action plan prepared in cooperation with land owners, administrators and lessees. Its objective is to implement the measures of the Management plan and the activities, which are suitable, need to be and can be performed beyond the ambit of the Management plan. The action plan has a greater scope than the Management plan and is prepared in particular as a background document for the activities in relation to regional development, and it is also determined for the work group under creation in the region that will be made up of representatives of the entities interested. The project, through which the measures of the Management plan will be implemented from structural funds, concretely from the Operational Programme Quality of Environment 2014 - 2020, is under preparation.

In 2016, the activities within the project "Nature Conservation as an Opportunity for Regional Development" mentioned in the previous report were commenced. The project will be implemented till April 2017 and is focused on the cross-border cooperation with Ukraine and financed from the Norwegian Financial Mechanism. It emphasises in particular the support of alternative regional development with the objective to overcome the unfavourable state of the region with the orientation to cross-border cooperation and obtaining of local community support for nature conservation and development of soft tourism forms.

The project mentioned in the previous report "Development of Nature Conservancy and Protected Areas in the Slovakian Carpathians" financed from the Swiss Financial Mechanism also continued and was successfully completed in November 2016. Its objective was to support the development of institutional, human and technical resourcesfor the support of nature protection in the protected areas in Slovakia and the UNESCO property was a pilot area.

Within the subsequent process of extension of the existing trilateral property "Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany" by new components, the Slovak Republic managed to establish cooperation with the leader of the process (Austria) as well as with other potential partner countries that showed interest in entering the nomination process. The representatives of the Slovak Republic actively participated in work meetings organised by the Austrian party with the participation of all potential partner countries. During the meetings all the necessary steps were negotiated that had to be taken within the entire nomination process in order to complete it successfully through the submission of a nomination project to the World Heritage Centre. The negotiations and activities of all countries concerned resulted in the successful preparation of the nomination project. The Slovak Republic expressed its consent to the extension of the existing trilateral property through the supporting letter of the Ministry of Environment of the Slovak Republic, which was sent to the World Heritage Centre in January 2016.

1st of December, 2016

Annex No. 1

The summary of activities planned within the project "Nature Conservancy - a Regional Development Opportunity", which will be financed from the Norwegian Financial Mechanism, implemented within the Slovak components of the "Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany" World Heritage Site

- Creation of a financial strategy for the protected areas
- Creation of a strategy for the development of sustainable tourism
- Preparation of publicity materials - printings - brochures, leaflets, maps, PEXESO card game for the Slovak Republic and Ukraine
- Diaporama
- Meeting of representatives of cross-border region local governments in the Slovak Republic and Ukraine
- Production of soft tourism objects in the Slovak Republic
- Manufacturing and installation of educational boards
- Maintenance of bicycle trails and footpaths in the Slovak Republic
- Workshop on the implementation of natural tourism strategies in the Slovak Republic
- International networking conference in the Slovak Republic
- Workshop concerning the management of the Poloniny Mountains

Annex 2

Overview of the activities implemented within the project "Development of Nature Conservancy and Protected Areas in the Slovakian Carpathians", financed from the Swiss Financial Mechanism, implemented within the Slovak components of the Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany World Heritage Property

1. Re-classification of protected areas in accordance with the IUCN methodology

The administrations of the Poloniny National Park and the Vihorlat Protected Landscape Area are currently performing the reclassification of their protected areas in accordance with the IUCN methodology.

2. "World of the Carpathians" Educational Programme

- 46 pcs of the educational programme and 250 pcs of the publication "Abundance of Life in the Carpathians" were handed over to the Administration of the Poloniny National Park
- The Administration of the Poloniny National Park organised a meeting with primary and secondary school teachers on 22 October 2013, where the above material was handed out
- 33 pcs of the educational programme and 170 pcs of the publication "Abundance of Life in the Carpathians" were handed over to the Administration of the Vihorlat Protected Landscape Area

3. Promotion materials

a) Mobile expositions

- 3 banners (roll-ups) about the Poloniny National Park
- 3 banners (roll-ups) about the Vihorlat Protected Landscape Area

b) Printings

- Primeval Beech Forests of the Carpathians folded leaflet
- Primeval Beech Forests of the Carpathians - a Part of the World Heritage brochure
- Trilateral Biosphere Reserve brochure
- Information posters on the Poloniny National Park and the Vihorlat Protected Landscape Area
- Information leaflets on the educational trails in the Poloniny National Park and the Vihorlat Protected Landscape Area

c) DVD

A film is being produced on the Primeval Beech Forests of the Carpathians

4. Educational trails

- 6 panels manufactured for the Vihorlat Protected Landscape Area
- 18 panels manufactured for the Poloniny National Park

5. Preparation of recovery plans

Recovery plans have been prepared for the following sites within the Vihorlat Protected Landscape Area:
- National Nature Reserve Motrogoň - peat bog Hypkania
- National Nature Reserve Postávka
- Nature Reserve Ďurova mláka
- Nature Reserve Pod Tŕstím

Recovery plans have been prepared for the following sites within the Poloniny National Park:
- Nature Reserve Stinská slatina
- Nature Reserve Bahno
- National Nature Reserve Pod Ruským (Sihla)

6. Purchase of management equipment

- A chainsaw and a scrub-cutter have been purchased for the Administration of the Poloniny National Park.

Annex 7

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7. Performance of management measures by the employees of the State Nature Conservancy of the Slovak Republic

Management measures have been executed within the territory of the Poloniny National Park at the following sites:

Site	Surface area (hectares)
Nature Reserve Stinská slatina	2.76
National Nature Reserve Stinská	3
Nature Reserve Bahno	0.5
National Nature Reserve Pod Ruským (Sihla)	8

Management measures have been executed within the territory of the Vihorlat Protected Landscape Area at the following sites:

Site	Surface area (hectares)
National Nature Reserve Motrogoň - peat bog Hypkania	1.20
National Nature Reserve Postávka	1.00
Nature Reserve Ďurova mláka	0.27
Nature Reserve Pod Tŕstím	0.40

8. Purchase of personal protective equipment

Personal protective equipment has been purchased for the employees of the administrations of the Poloniny National Park and the Vihorlat Protected Landscape Area implementing management measures

9. Monitoring activities

- Equipment and necessary tools have been purchased for the establishment of monitoring sites
- Monitoring plans have been prepared for the respective sites

10. Identification of natural forests and proposal of a management pilot programmeat sites having a potential of transformation into natural forests

- Preparation of a methodical procedure to identify natural forests
- Identification of natural forests and proposal of a management pilot programme at sites having a potential of transformation into natural forests

11. Amendment to the Forest Management Plan for the declaration of special purpose forests

12. Implementation of the management pilot programme in the Primeval Beech Forests of the Carpathians

13. Preparation of a supportive study for the sustainable development plan of the Poloniny National Park

No. Grant name

1. Porta Rusica – a technical monument connecting nations
2. Primeval Beech Forests of the Carpathians World Heritage Property, cadastre of Nová Sedlica
3. Ubľa – entry point of the Poloniny National Park and the Primeval Beech Forests of the Carpathians World Heritage Property
4. History of the Poloniny Mountains revived in old wood
5. Adaptation of the area of the stone monolith for cyclists
6. Improvement of rural tourism conditions
7. European Day of the Poloniny National Park - 2014
8. World Cultural and Natural Heritage in the Poloniny Mountains
9. Revival of the Osadné mineral water spring in the Poloniny National Park

COLLECTION OF LAWS
OF THE SLOVAK REPUBLIC
Volume 2016

Promulgated on: 1 January 2016 Time version of the regulation effective from: 1 January 2016

The content of the document is legally binding.

6

GOVERNMENT ORDER
of the Slovak Republic
of 9 December 2015,
declaring the nature reserve "Borsukov vrch" (Borsuk Hill)

Pursuant to Article 17 (9) and Article 22 (1) and (6) of Act No. 543/2002 Coll. on nature and landscape protection as amended (hereinafter the "Act"), the Government of the Slovak Republic orders:

Article 1

(1) The nature reserve "Borsukov vrch" (Borsuk Hill) is declared (hereinafter the "Nature Reserve").

(2) The subject of Nature Reserve conservation is included in Annex No. 1.

Article 2

(1) The Nature Reserve is situated in the district of Snina in the cadastral territories Nová Sedlica and Zboj.

(2) The Nature Reserve's area amounts to 146.79 hectares. The boundary of the Nature Reserve is specified in Annex No. 2.

Article 3

(1) The fifth degree of protection applies to the Nature Reserve's territory.

(2) The zone of protection pursuant to Article 17 (7) of the Act does not apply to the Nature Reserve.

Article 4

The map displaying the boundary of the Nature Reserve is stored at the Ministry of Environment of the Slovak Republic. The graphic background documents containing the boundary of the Nature Reserve are stored at the District Office Snina.

Article 5

This Government Order shall come into effect on 1 January 2016.

Robert Fico m. p.

Annex No. 1
to Government Order No. 6/2016 Coll.

THE SUBJECT OF NATURE RESERVE CONSERVATION

1. Complex of forest communities unchanged significantly by human activity that are part of a territory with international importance – the sites “Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany” inscribed on the UNESCO List of World Heritage.
2. Habitats of Community interest: Ls4 Tilio-Acerion forest of slopes, screes and ravines (*9180), Ls5.1 Asperulo-Fagetum beech forests (9130), Ls5.2 Luzulo-Fagetum beech forests (9110), Ls5.3 Medio-European subalpine beech woods with Acer and Rumex arifolius (9140).
3. Animal species of Community interest: yellow-bellied toad (Bombina variegata), Carpathian newt (Triturus montandoni), hazel grouse (Bonasa bonasia), white-backed woodpecker (Dendrocopos leucotos), black woodpecker (Dryocopus martius), red-breasted flycatcher (Ficedula parva), collared flycatcher (Ficedula albicollis), European honey buzzard (Pernis apivorus), grey-headed woodpecker (Picus canus), Ural owl (Strix uralensis), northern birch mouse (Sicista betulina), European bison (Bison bonasus), grey wolf (Canis lupus), Eurasian lynx (Lynx lynx), brown bear (Ursus arctos), and Rosalia longicorn (Rosalia alpina).

Note:
The habitats of Community interest are designated in compliance with Annex No. 1 Part B to Decree No. 24/2003 Coll. implementing Act No. 543/2002 Coll. on nature and landscape protection as amended.

Annex No. 2
to Government Order No. 6/2016 Coll.

SPECIFICATION OF NATURE RESERVE BOUNDARY

The territory of the Nature Reserve is specified according to the vector cadastral maps with the state of the Real Estate Register as at 1 January 2015, and according to the digital forestry vegetation map for the Forestry Economic Unit Zboj, Forestry Unit "Lesy LPM Zboj" (plan code: LA073) with the state as at 1 January 2014, from which the boundary of the Nature Reserve was transmitted to the digital Basic Map of the Slovak Republic (SVM50) at a scale of 1:50,000.

Nature Reserve boundary description

The boundary of the Nature Reserve starts at an altitude of Čierťaž at 1,071 m a.s.l. on the Slovak-Polish state border, from where it continues along the side ridge south-south-west on the boundary between forest parts 148 and 189 as far as farm hill No. 89. Here, it continues in a west direction, later in a south-west direction along the border between forest parts 188 and 189 and reaches the forest road C11 leading from the valley of Zbojský brook to the Kýčera forester's lodge. From there it continues along the northern edge of the forest road C11 approximately in a west direction, later in a south-west direction as far as the boundary of the forest growth 193B, consisting of young wood. The boundary of the Nature Reserve bypasses this young wood at first on the eastern side, then on the northern side, and finally it again leads south to reach the forest road C11. From there, it continues along the northern edge of this forest road as far as the cross-road of this forest road and an old forest road called Hungarian Road. Here, the border sharply turns and continues east-north-east, later approximately to the north along the eastern edge of this twisty road as far as the cross-road with the forest road C14. From there the boundary of the Nature Reserve runs approximately in a north-west direction on the northern edge of the forest road C14, cutting forest growths No. 194, 205A, 206, 207, and 223 to two parts. In the point where this forest road crosses a hunting path, the boundary of the Nature Reserve leaves the northern edge of the forest road and runs approximately in a north-west direction along the hunting path, which also creates the south-western boundary of forest parts 223, 237, 235, 240, 248, and 249. At farm hill No. 125, it leaves the hunting path and leads at first in a north-north-west direction and then in an east-north-east direction along the border between forest growths No. 249 and 251A, and reaches the edge of so-called Bunguľské meadows stretching along the Slovak-Polish state border. Here, the boundary of the Nature Reserve runs along the southern edge of the meadows approximately in a south-east direction and reaches the state border 130 m to the east from the altitude Čelo 1,159 m a.s.l. From there, crossing the altitudes Čelo and Borsukov vrch (991 m a.s.l.) to the east, then to the south-east, and later to north-north-east as far as meadow No. PH141 at Sedlo pod Čierťažou, the boundary of the Nature Reserve is identical with the Slovak-Polish state border. It bypasses meadow No. PH141 at Sedlo pod Čierťažou on the eastern edge, first to the east, and then in a North-north-east direction, then it returns back to the state border, from where it returns along the state border in a north-east direction to the starting point at an altitude of Čierťaž.

List of parcels of the Nature Reserve

District of Snina

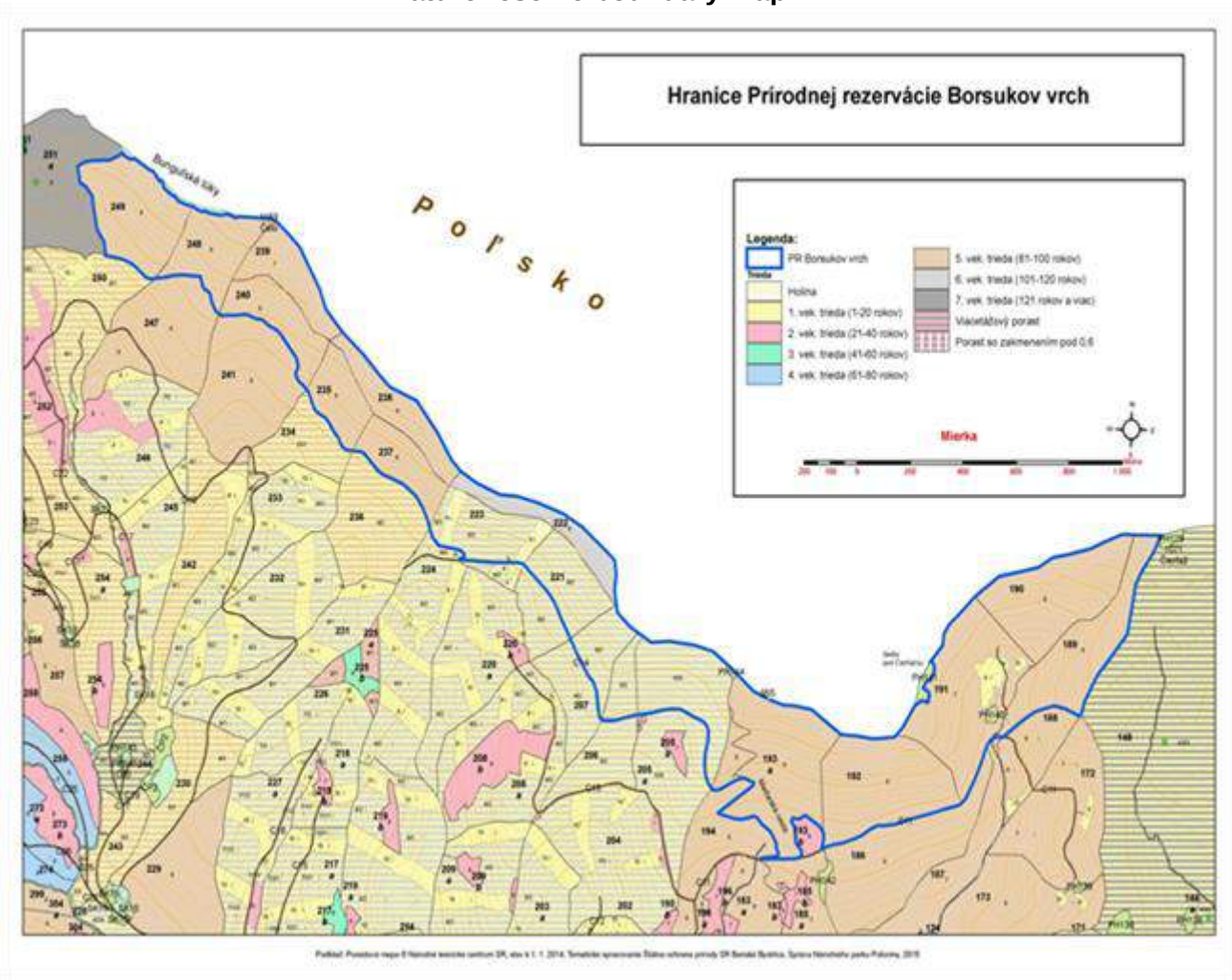
Cadastral territory Nová Sedlica:
1084/1 – a part, 1085, 1086 – a part, 1088/4 – a part, 1096/1 – a part, 1099 – a part, 1100 – a part, 1104 – a part, 1120 – a part

Cadastral territory **Zboj:**
3790 – a part, 3844

Note:

The parcels of the site of Community interest are designated in bold type (Article 27 (9) of the Act). The whole territory of the Nature Reserve “Borsukov vrch” is part of the site of Community interest SKUEV0229 Bukovské vrchy.

Nature reserve boundary map



A simplified geometric plan represents the technical background document for the registration of the Nature Reserve’s boundary.

Publisher of the Collection of Laws of the Slovak Republic, administrator of the content and operator of the legal and information portal Slov-Lex available at the website www.slov-lex.sk:
Ministry of Justice of the Slovak Republic, Župné námestie 13, 813 11 Bratislava, tel.: 02 888 91 137, fax: 02/52442853, e-mail: helpdesk@slov-lex.sk.

					Appendix 6.6.13	
Measures to Fulfil the Poloniny National Park Management Goals						
Operational Goal/Measure Number	***Operational Goal/Measure Description***	***Expected Output/Measurable Fulfilment Indicator***	***Expected Implementation Deadline***	***Implemented by/Responsibility of***	***Expected Source of Funding***	***Ecologically-Functional Area (EFA)****
Plant Life Protection - P						
P.1.	***Operational Goal: to maintain or improve the protected and endangered plant species condition***					
	Measurable Fulfilment Indicator: plants populations and the characteristic meadow habitats types presence					
P.1.1.	*Managed care about sites with Eastern Carpathians plant species.*	*Number of sites with managed care and the condition of habitats.*	*Once in 2 years.*	*Owner, administrator, user, the State Nature Conservancy of the Slovak Republic (SNC SR) - Poloniny NP Administration.*	*Own resources - the State Nature Conservancy of the Slovak Republic (SNC SR) budget.*	*EFA1–EFA3 and EFA6–EFA13*
P. 1.2.	*Managed care about sites with rare and endangered plant species.*	*Number of sites with managed care and the condition of habitats.*	*Once to twice a year.*	*Owner, administrator, user.*	*Own resources - the SNC SR budget.*	*EFA1–EFA3 and EFA6–EFA13*
P.1.3.	*Elimination of non-native species expansion, removal of invasive plant species and the prevention of their spread.*	*Condition of habitats*	*Once to twice a year.*	*Owner, administrator, user.*	*Own resources - the SNC SR budget.*	*EFA8 and EFA9*
P.1.4.	*Managed care of Poloniny meadows.*	*Managed care area* *Condition of habitats*	*Once in 2 years.*	*Owner, administrator, user.*	*Own resources - the SNC SR budget.*	*EFA6, EFA7*
P.1.5.	*Managed care of mire communities (sites: Stinská slatina and Bahno Nature Reserves).*	*Managed care area* *Condition of habitats*	*Yearly.*	*Owner, administrator, user.*	*Own resources - the SNC SR budget.*	*EFA11, EFA12 and EFA13*
P.1.6.	*Managed care of non-forest communities rich in biodiversity (sites: Pod Ruským National Nature Reserve, Ruské Nature Reserve, Gazdoráň Nature Reserve and Bzaná Nature Reserve).*	*Managed care area* *Condition of habitats.*	*Yearly.*	*Owner, administrator, user.*	*Own resources - the SNC SR budget.*	*EFA8–EFA13*
P.1.7.	*Monitoring of meadow communities condition in established permanent monitoring areas in the Poloniny NP).*	*Number of permanent monitoring areas (PMAs).*	*Once in 3 years.*	*Institute of Landscape Ecology of the Slovak Academy of Sciences, Nitra.*	*Own resources - the SNC SR budget.*	*EFA6–13*

Operational Goal/Measure Number	*Operational Goal/Measure Description*	*Expected Output/Measurable Fulfilment Indicator*	*Expected Implementation Deadline*	*Implemented by/Responsibility of*	*Expected Source of Funding*	*Ecologically-Functional Area (EFA)**
Animal Life Protection - A						
A.1.	***Operational Goal: to ensure research and monitoring of invertebrate, bird and mammal species of Community and national importance, subject to conservation measures in forest ecosystems***					
	Measurable Fulfilment Indicator: presence of species and their favourable condition.					
A.1.1.	*Research and monitoring of Transylvanian bush-cricket (Pholidoptera transsylvanica) and Stys's bush-cricket (Isophya stysi).*	*Material for assessing the condition (favourable, unfavourable).*	*2017–2026*	*SNC SR, scientific institutions and universities focusing on natural sciences.*	*Own resources - the SNC SR budget, other resources.*	*EFA1–EFA4*
A.1.2.	*Research and monitoring of Carabus variolosus beetle, Carabus zawadszkii beetle and Rosalia longicorn (Rosalia alpina).*	*Material for assessing the condition (favourable, unfavourable).*	*2017–2026*	*SNC SR – Poloniny NP Administration, scientific institutions, universities focusing on natural sciences.*	*Own resources - the SNC SR budget, other resources.*	*EFA1–EFA4*
A.1.3.	*Quantitative research of birds in Stužica, Havešová and Grúnik Nature Reserves.*	*Material for assessing the condition (favourable, unfavourable).*	*2017–2026*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget.*	*EFA1–EFA4*
A.1.4.	*Complementing critical sections of overhead electric lines with perch discouragers.*	*Lower electric lines caused bird mortality.*	*2017–2026*	*VSE a. s. (power distribution company in the East of Slovakia)*	*VSE a. s. budget.*	*EFA1–EFA16*
A.1.5.	*Monitoring and ensuring the adherence to the Regulation 25/2008 Coll. of the Ministry of Environment of the Slovak Republic which declares the Special Protection Area Bukovské vrchy.*	*Improvement in current bird species condition.*	*2017–2026*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	*EFA1–EFA16*
A.1.6.	*Monitoring of birds of prey populations development and recording specific nesting sites.*	*Ascertaining number of birds.*	*2017–2026*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	*EFA1–EFA4*
A.1.7.	*Securing the surveillance of the Golden eagle nest.*	*Number of hatched chicks.*	*2017–2026*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	*EFA1–EFA4*
A.1.8.	*Maintaining and/or increasing the current large carnivores condition: grey wolf (Canis lupus), wildcat (Felis sylvestris), Eurasian lynx (Lynx lynx) and brown bear (Ursus arctos).*	*Ascertaining number of animals.*	*2015–2025*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	*EFA1–EFA10*

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A.1.9.	*Ensuring area-wide monitoring of large carnivores.*	*Ascertaining number of animals.*	*2015–2025*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	*EFA1–EFA10*
A.1.10.	*Maintaining and/or increasing the current population of European bison (Bison bonasus).*	*Increasing number of animals in a herd.*	*2015–2025*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	*EFA1–EFA10*
A.1.11.	*Veterinary care for bison.*	*Good health.*	*2015–2025*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	*EFA1–EFA10*
A.1.12.	*Supplemental feeding of bison in winter.*	*Good health.*	*2017–2026*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	*EFA1–EFA9*
A.1.13.	*Telemetric monitoring of bison.*	*Knowledge of spatial distribution.*	*2017–2026*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	*EFA1–EFA10*
A.1.14.	*Establishing permanent bird monitoring areas in Havešová, Jarabá skala and Stužica Nature Reserves.*	*Established and marked PMA.*	*2017–2026*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	*EFA1.*
A.2.	***Operational Goal: to ensure research and monitoring of reptile and bird species of Community and national importance, subject to conservation measures in shrubs and groups of trees outside forest***					
	Measurable Fulfilment Indicator: presence of species and their favourable condition.					
	Research and monitoring of Aesculapian snake (*Elaphe longissima*) and sand lizard (*Lacerta agilis*).			*SNC SR – Poloniny NP Administration, scientific institutions, universities focusing on natural sciences.*		
A.2.2.	*Quantitative research of birds in 2 sites (Nová Sedlica and Ruské).*	*Material for assessing the condition (favourable, unfavourable).*	*2017–2026*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	*EFA5.*
A.2.3.	*To monitor mulching in the nesting period.*	*Favourable condition of habitats.*	*2017–2026*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget.*	*EFA5*
A.2.4.	*Establishing permanent bird monitoring area in Zboj.*	*Established and marked PMA.*	*2017–2026*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	*EFA5*

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A.3.	***Operational Goal: to ensure research and monitoring of invertebrate, reptile, bird and mammal species of Community and national importance, subject to conservation measures in meadows, pasturelands and fields.***					
	Measurable Fulfilment Indicator: presence of species and their favourable condition.					
	Research and monitoring of clouded Apollo (*Parnassius mnemosyne*).			*SNC SR – Poloniny NP Administration, scientific institutions, universities focusing on natural sciences.*		
A.3.2.	*Research and monitoring of bumblebees (*genus *Bombus).*	*Material for assessing the condition (favourable, unfavourable).*	*2017–2026*	*SNC SR – Poloniny NP Administration, scientific institutions, universities focusing on natural sciences.*	*Own resources - the SNC SR budget, other resources.*	*EFA6–EFA10*
A.3.3.	*Quantitative research of birds in 2 sites (Nová Sedlica and Ruské).*	*Material for assessing the condition (favourable, unfavourable).*	*2017–2026*	*SNC SR – Poloniny NP Administration, scientific institutions, universities focusing on natural sciences.*	*Own resources - the SNC SR budget, other resources.*	*EFA6–EFA9*
A.3.4.	*Maintaining the native meadow habitats while limiting use of chemicals.*	*Favourable condition.*	*2017–2026*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	*EFA6–EFA10*
A.4.	***Operational Goal: to ensure research and monitoring of invertebrate, amphibians and bird species of Community and national importance, subject to conservation measures in wetlands and stagnant waters.***					
	Measurable Fulfilment Indicator: presence of species and their favourable condition.					
	Research and monitoring of species European fire-bellied toad (*Bombina bombina*), yellow-bellied toad (*Bombina variegata*), European green toad (*Bufo viridis*), European tree frog (*Hyla arborea*), moor frog (*Rana arvalis*), agile frog (*Rana dalmatina*), northern crested newt (*Triturus cristatus*), Carpathian newt (*Triturus montandoni*).			*SNC SR – Poloniny NP Administration, scientific institutions, universities focusing on natural sciences.*		
	Research and monitoring of the odonata species: azure hawker (*Aeschna caerulea*), emperor dragonfly (*Anax imperator*), northern damselfly (*Coenagrion hastulatum)*, sombre goldenring (*Cordulogaster bidentata*), small pincertail (*Onychogomphus forcipatus*), keeled skimmer (*Orthetrum coerulescens*), genus *Somatochlora*, common winter damselfly (*Sympecma fusca*), banded darter (*Sympetrum pedemontanum*).			*SNC SR – Poloniny NP Administration, scientific institutions, universities focusing on natural sciences.*		

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A.4.3.	*Research and monitoring of birds at the Starina Reservoir.*	*Material for assessing the condition (favourable, unfavourable).*	*2017–2026*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	*EFA11, EFA12 and EFA13*
A.4.4.	*To monitor and preserve reproduction sites size and quality.*	*Favourable and functional sites condition.*	*2017–2026*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	*EFA11, EFA12 and EFA13*
A.4.5.	*To create 3 new reproduction sites for amphibians and water-dependent invertebrates.*	*Improvement of living opportunities.*	*2017–2026*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	*EFA11, EFA12, EFA13, and EFA14*
A.5.	***Operational Goal: to ensure research and monitoring of invertebrate, reptile, bird and mammal species of Community and national importance, subject to conservation measures in flowing waters with bank vegetation.***					
	Measurable Fulfilment Indicator: presence of species and their favourable condition.					
A.5.1.	*Monitoring of European otter (Lutra lutra).*	*Material for assessing the condition (favourable, unfavourable).*	*2017–2026*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	*EFA11, EFA12, EFA13, and EFA14*
A.5.2.	*Monitoring of Eurasian beaver (Castor fiber).*	*Material for assessing the condition (favourable, unfavourable).*	*2017–2026*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	*EFA11, EFA12, EFA13, and EFA14*
A.5.3.	*Research and monitoring of the Carpathian brook lamprey (Eudontomyzon danfordi).*	*Material for assessing the condition (favourable, unfavourable).*	*2017–2026*	*SNC SR – Poloniny NP Administration, scientific institutions, universities focusing on natural sciences.*	*Own resources - the SNC SR budget, other resources.*	*EFA14*
A.5.4.	*Establishing permanent bird monitoring area at the Ulička river near Kolbasov.*	*Established and marked PMA.*	*2017–2026*	*SNC SR – Poloniny NP Administration.*	*The SNC SR budget.*	*EFA14*
A.5.5.	*Establishing permanent fish monitoring area at the Ulička river by the state border.*	*Established and marked PMA.*	*2017–2026*	*SNC SR – Poloniny NP Administration, scientific institutions, universities focusing on natural sciences.*	*Own resources - the SNC SR budget, other resources.*	*EFA14*
A.5.6.	*To eliminate detrimental construction within water flow regulation.*	*Favourable condition of water flows.*	*permanent*	*SNC SR – Poloniny NP Administration.*	*The SNC SR budget.*	*EFA14*

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A.6.	***Operational Goal: to ensure research and monitoring of mammal species of Community and national importance, subject to conservation measures in urban and suburban habitats.***					
	Measurable Fulfilment Indicator: presence of species and their favourable condition.					
A.6.1.	*Research and monitoring of the barbastelle (Barbastella barbastellus), northern bat (Eptesicus nilssoni), serotine bat (Eptesicus serotinus), Bechstein's bat (Myotis bechsteini), lesser mouse-eared bat (Myotis blythii), Brandt's bat (Myotis brandti), pond bat (Myotis dasycneme), Daubenton's bat (Myotis daubentoni), Geoffroy's bat (Myotis emarginatus), greater mouse-eared bat (Myotis myotis), whiskered bat (Myotis mystacinus), Natterer's bat (Myotis nattereri), lesser noctule (Nyctalus leisleri), common noctule (Nyctalus noctula), common pipistrelle (Pipistrellus pipistrellus), brown long-eared bat (Plecotus auritus), grey long-eared bat (Plecotus austriacus), greater horseshoe bat (Rhinolophus ferrumequinum), lesser horseshoe bat (Rhinolophus hipposideros) and parti-coloured bat (Vespertilio murinus).*	*Material for assessing the condition (favourable, unfavourable).*	*2017–2026*	*SNC SR – Poloniny NP Administration, experts on bats, SBCS – Slovak Bat Conservation Society (Spoločnosť pre ochranu netopierov), scientific institutions, universities focusing on natural sciences.*	*Own resources - the SNC SR budget, other resources.*	*EFA15*
A.7.	***Operational Goal: to ensure research and monitoring of mammal species of Community and national importance, subject to conservation measures in caves and underground habitats.***					
	Measurable Fulfilment Indicator: presence of species and their favourable condition.					
A.7.1.	*Research and monitoring of the barbastelle (Barbastella barbastellus), northern bat (Eptesicus nilssoni), serotine bat (Eptesicus serotinus), Bechstein's bat (Myotis bechsteini), lesser mouse-eared bat (Myotis blythii), Brandt's bat (Myotis brandti), pond bat (Myotis dasycneme), Daubenton's bat (Myotis daubentoni), Geoffroy's bat (Myotis emarginatus), greater mouse-eared bat (Myotis myotis), whiskered bat (Myotis mystacinus), Natterer's bat (Myotis nattereri), lesser noctule (Nyctalus leisleri), common noctule (Nyctalus noctula), common pipistrelle (Pipistrellus pipistrellus), brown long-eared bat (Plecotus auritus), grey long-eared bat (Plecotus austriacus), greater horseshoe bat (Rhinolophus ferrumequinum), lesser horseshoe bat (Rhinolophus hipposideros) and parti-coloured bat (Vespertilio murinus).*	*Material for assessing the condition (favourable, unfavourable).*	*2017–2026*	*SNC SR – Poloniny NP Administration, experts on bats, SBCS, scientific institutions, universities focusing on natural sciences.*	*The SNC SR budget.*	*EFA1–EFA14, EFA17*

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A.8.	***Operational Goal: to increase ecological awareness of local population and national park visitors, to improve cooperation in animal species conservation with landowners.***					
	Measurable Fulfilment Indicator: ecological awareness and cooperation.					
A.8.1.	*To organize lectures and discussions, to publish promotional material on animal conservation.*	*Improved awareness.*	*2017–2026*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	
A.8.2.	*To develop the Poloniny NP Red List of Animals.*	*Improved awareness.*	*2017*	*SNC SR – Poloniny NP Administration.*	*Own resources - the SNC SR budget, other resources.*	
A.9.	*Operational Goal: to improve the Maculinea butterflies unfavourable condition by appropriate management of sites containing these species habitat.*					
	Measurable Fulfilment Indicator: habitat size and quality, maintaining or increasing the size of appropriate habitats, maintaining or increasing the number of sites with Maculinea species presence.					
A.9.1.	*To ensure appropriate management of the sites with the Maculinea presence per the needs of the individual species: regular mowing or grazing and removal of self-seeding woody plants and subsequently of biomass and invasive species.*	*Improved assessment of Maculinea genus populations condition.*	*2017–2026*	*Owner, administrator, user.*	*Operational programme Quality of Environment 2014–2020 (OP QE).*	*EFA8. EFA9, EFA10, EFA11, EFA13*
A.9.2.	*Creation of the "stepping stones", i. e. the sites representing portions of habitats connecting the individual Maculinea genus populations.*	*Improved assessment of Maculinea genus populations condition.*	*2017–2026*	*Owner, administrator, user.*	*OP QE*	*EFA8. EFA9, EFA10, EFA11, EFA13*
Forest Management–F						
F.1.	***Operational Goal: to maintain or improve the forest ecosystems condition.***					
	Measurable Fulfilment Indicator: habitats condition, representation of native, non-native and successional woody plants.					
F.1.1.	*To increase the World Natural Heritage core area by 405 ha.*	*2391 ha intervention free area.*	*continuous*	*Local environmental office*	*in compliance with §61 of the Act No. 543/2002 Coll. on Nature and Landscape Protection as amended*	*EFA1*
F.1.2.	*To ensure selective management system in the UNESCO site buffer zone.*	*2110 ha area*	*continuous*	*manager*	*State Budget*	*EFA2*
F.1.3.	*To ensure the selective management system in the NP proper area.*	*22,769 ha area*	*continuous*	*manager*	*Rural Development Programme (RDP)*	*EFA3*

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F.1.4.	*Intensifying of tending to young forest ecosystems.*	*2449 ha unregulated area.*	*continuous*	*manager*	*Regular management.*	*EFA4*
F.1.5.	*Improvement of beech forests condition in their natural area.*	*Improved condition in 4369 ha area.*	*continuous*	*manager*	*Regular management.*	*EFA4*
F.1.6.	*Reduction of pioneer woody plants ratio.*	*Reduction of successional woody plants in 655 ha area.*	*continuous*	*manager*	*Regular management.*	*EFA4*
F.1.7.	*Reduction of non-native woody plants in 557 ha area.*	*Percentage of non-native woody plants in stand compositions.*	*continuous*	*manager*	*Regular management.*	*EFA4*
F.1.8.	*Supporting the presence of valuable broad-leaved trees, the fir and the oak in 80 ha area.*	*Percentage of native woody plants in stand structures.*	*continuous*	*manager*	*OP QE, the Norwegian Financial Mechanism.*	*EFA4*
F.1.9.	*Optimization of unpaved roads and reconstruction of already eroded or unused unpaved roads.*	*10 km*	*continuous*	*manager*	*OP QE, the Norwegian Financial Mechanism.*	*EFA2–EFA9*
Agriculture–Ag						
Ag.1.	***Operational Goal: to maintain or improve the permanent grass stands condition.***					
	Measurable Fulfilment Indicator: condition of habitats, presence of typical meadow habitats types.					
Ag.1.1.	*Regular care about Poloniny meadows (grass mowing with subsequent biomass removal, self-seeding vegetation removal by intermittent clearing).*	*50 ha*	*Once to twice a year.*	*Owner, administrator, user.*	*Regular management.*	*EFA6, EFA7*
Ag.1.2.	*Regular mowing of meadows and pasturelands and subsequent biomass removal.*	*Condition of habitats.*	*Once to twice a year.*	*Owner, administrator, user.*	*Regular management.*	*EFA8 and EFA9*
Ag.1.2.	*Intermittent clearing to maintain the agriculturally used areas structure.*	*500 ha*	*Once to twice a year.*	*Owner, administrator, user.*	*Regular management.*	*EFA8 and EFA9*
Ag.1.4.	*Giving preference to the cultivation of multi-year fodder on arable land.*	*20 ha*	*Yearly.*	*Owner, administrator, user.*	*Own resources.*	*EFA8 and EFA9*
Ag.1.5.	*To divide larger blocks by bio-corridor belts of trees and shrubs in suitable places delimited by the Local Territorial System of Ecological Stability.*	*500 m*	*Yearly.*	*Owner, administrator, user.*	*Own resources.*	*EFA8 and EFA9*
Ag.1.6.	*To maintain extensive grazing.*	*500 ha*	*Yearly.*	*Owner, administrator, user.*	*Payments to the areas facing natural or other specific constraints.*	*EFA8 and EFA9*

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Ag.1.7.	*To remove self-seeding vegetation.*	*369.6 ha*	*Yearly.*	*Owner, administrator, user.*	*Regular management.*	*EFA8 and EFA9*
Ag.1.8.	*To exclude the use of chemical substances and fertilizers (pesticides, herbicides, insecticides, industrial fertilizers) and silage juices.*	*Apart from those approved for use.*	*Yearly.*	*Owner, administrator, user.*	-	*EFA8 and EFA9*
Ag.1.9.	*Liquidation of invasive plants.*	*1 ha*	*Yearly.*	*Poloniny NP Administration.*	*The SNC SR budget.*	*EFA8 and EFA9*
Ag.1.10.	*To analyse ownership forms and develop a land purchase plan.*	*legal and other land ownership related documents*	*Once in 5 years.*	*Poloniny NP Administration.*	*The SNC SR budget.*	*EFA8 and EFA9*
Ag.1.11.	*Ensuring Poloniny NP honey certification in compliance with the Decree of the Ministry of Agriculture and Rural Development of the Slovak Republic No. 41/2012 Coll. on Honey.*	*a finished building*	*Once in 5 years.*	*Slovak Association of Beekeepers*	*OP QE*	*EFA5, EFA8, EFA9, EFA15, and EFA16*
Ag.1.12.	*Building a "regional honey house", a facility intended for honey extraction in the Poloniny NP.*	*a finished building*	*Once in 5 years.*	*Slovak Association of Beekeepers*	*OP QE*	*EFA16*
Ag.1.13.	*Increasing the pollination subsidy for beekeepers.*	*The received support.*	*Yearly.*	*Slovak Association of Beekeepers*	*OP QE*	*EFA5, EFA8, EFA9, EFA15, and EFA16*
Ag.1.14.	*Native fruit trees varieties preservation.*	*500 trees*	*Yearly.*	*SNC SR – Poloniny NP Administration.*	*OP QE*	*EFA5, EFA8, EFA9, EFA15, and EFA16*
Ag.1.15.	*Maintaining fruit trees in national park, especially above the Starina Water Reservoir (under the terms of the Government Regulation No. 36/2015 Coll.).*	*500 trees*	*Yearly.*	*Owner, administrator, user.*	*Support within the coupled direct payments schemes, OP QE.*	*EFA15*
Ag.1.16.	*Creation of orchards of old local varieties.*	*9 orchards, 0.2 ha per orchard*	*Yearly.*	*Owner, administrator, user.*	*OP QE*	*EFA8, EFA9, EFA15, and EFA16*
Ag.1.17.	*Direct sale of fruit.*	*a finished building*	*Yearly.*	*Owner, administrator, user.*	*OP QE*	*EFA16*
Ag.1.18.	*Establishing a "regional distillery".*	*a finished building*	*Yearly.*	*SOMUD: Spoločenstvo obcí mikroregiónu Uličskej doliny [Community of Uličská dolina valley micro-region villages]*	*OP QE*	*EFA16*
Ag.1.19.	*Picking of meadow grass seeds: use of high-quality meadow grass and herbs gene pool to sow non-productive areas.*	*50 ha*	*Yearly.*	*Owner, administrator, user.*	*OP QE*	*EFA6, EFA7, EFA8, and EFA9*

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Ag.1.20.	*Establishing a facility for cleaning and storing seeds.*	*a finished building*	*Yearly.*	*Owner, administrator, user.*	*OP QE*	*EFA16*
Ag.1.21.	*Supporting cattle breeding and grazing to suppress succession on the existing permanent grass stands and to increase biodiversity (under the terms of the Government Regulation No. 36/2015 Coll.).*	*30 sheep*	*Yearly.*	*Owner, administrator, user.*	*Support within the coupled direct payments schemes, OP QE.*	*EFA8 and EFA9*
Water Management – W						
W.1	***Operational Goal: to preserve the natural water accumulation***					
	Measurable Fulfilment Indicator: condition of habitats, presence of typical habitats types.					
W.1.1.	*To not regulate the banks by flowing waters; they are to be left in their natural state.*	*Condition of habitats.*	*permanent*	*Owner, administrator.*		*EFA14*
W.1.2.	*Liquidation of invasive plants.*	*Condition of habitats.*	*Yearly.*	*Water flow administrator.*	*Own resources.*	*EFA14*
W.1.3.	*Waste removal.*	*Condition of habitats.*	*permanent*	*Municipalities.*		*EFA14*
W.1.4.	*Creation of fishpasses and spawning grounds in water flows.*	*Condition of habitats.*	*permanent*	*Water flow administrator.*	*OP QE*	*EFA14*
W.1.5.	*Anti-flood measures.*	*Condition of habitats.*	*permanent*	*Water flow administrator.*	*OP QE*	*EFA14*
Fisheries – Fi						
Fi.1	***Operational Goal: to improve the native fish species populations condition.***					
	Measurable Fulfilment Indicator: condition of habitats; presence, numbers and age composition of typical native fish species.					
Fi. 1.1.	*Supporting the small fish farming facilities.*	*finished fish-ponds*	*permanent*	*Owner, administrator.*	*OP QE*	*EFA5* *EFA8 and EFA9* *EFA15* *EFA16*
Fi. 1.2.	*Support of water flows and fish farming facilities fish stocking by native fish species.*	*Condition of habitats.*	*Yearly.*	*Water flow administrator.*	*Own resources.*	*EFA14*
Hunting – H						
H.1	***Operational Goal: to improve the native game species populations condition.***					
	Measurable Fulfilment Indicator: presence, numbers and age composition of typical native game species.					
H. 1.1.	*Wild game observation experience.*	*Number of visits.*	*permanent*	*Owner, administrator.*	*OP QE*	*EFA5* *EFA8 and EFA9* *EFA15* *EFA16*

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Territorial Development – TD						
TD.1.	***Operational Goal: Creating conditions for the development of ecotourism***					
	Measurable Fulfilment Indicator: Elimination of negative impact on species and habitats.					
TD.1.1.	*Including nature and landscape protection requirements into land-use plan documentation.*	*Number of locations.*	*As needed during the land-use plan documentation creation or amending.*	*SNC SR – Poloniny NP Administration.*	*The SNC SR budget.*	
TD.1.2.	*Updating the Territorial System of Ecological Stability (current gene pool areas, bio-corridors and biocentres).*	*The Territorial System of Ecological Stability (current gene pool areas, bio-corridors and biocentres).*	*2021*	*SNC SR – Poloniny NP Administration and the Slovak Environment Agency.*	*The SNC SR budget, other resources.*	
TD.1.3.	*Removal of illegal objects in the given territory.*	*Number of removed illegal objects.*	*2021*	*Relevant local building authority and government authorities.*	*Other resources.*	*EFA8 and EFA9*
TD.1.4.	*Mapping the significant landscape features (identification, mapping, monitoring and protection).*	*Number of sites.*	*continuous*	*SNC SR – Poloniny NP Administration.*	*The SNC SR budget, other resources.*	
TD.1.5.	*Monitoring of the urbanization impact on natural environment.*	*Condition of habitats.*	*permanent*	*SNC SR – Poloniny NP Administration.*	*The SNC SR budget.*	
Hiking and Tourism – HT						
HT.1.	***Operational Goal: Development of controlled tourism and improvement of infrastructure in the NP areas made accessible to tourists to increase the local population income.***					
	Measurable Fulfilment Indicator: Open the selected areas in the Poloniny NP to the public engaging the local self-governing authorities and land owners/users.					
HT.1.1.	*Sustainably expand the existing network of hiking and bike trails.*	*Infrastructure condition.*	*permanent*	*Local building and government authorities.*		*EFA1–EFA16*
HT.1.2.	*No public and sports events apart from hiking on marked trails.*		*permanent*			*EFA1, EFA2, EFA3*
HT.1.4.	*Reconstruction and repair of educational sites as well as hiking and educational trails. Information equipment (such as panels) installation and maintenance.*	*Infrastructure condition.*	*Yearly.*	*The Club of Slovak Tourists, SNC SR – Poloniny NP Administration.*	*The SNC SR budget, the Club of Slovak Tourists, other resources.*	*EFA1–EFA16*
HT.1.5.	*Camping areas reconstruction, maintenance and cleaning.*	*Infrastructure condition.*	*continuous*	*SNC SR – Poloniny NP Administration.*	*The SNC SR budget, other resources.*	

Operational Goal/Measure Number	*Operational Goal/Measure Description*	*Expected Output/Measurable Fulfilment Indicator*	*Expected Implementation Deadline*	*Implemented by/Responsibility of*	*Expected Source of Funding*	*Ecologically-Functional Area (EFA)**
HT.1.6.	*Creation and improvement of tourism services (such as accommodation, food and beverage services, horseback riding, ski, bike and other rental services).*	*Infrastructure condition.*	*permanent*	*Municipalities, businesses in tourism, tourism associations, SNC SR – Poloniny NP Administration.*	*Other resources.*	
HT.1.7.	*Supervising the adherence to the Poloniny NP Visitors Code.*	*Number of fines and transgressions.*	*permanent*	*SNC SR – Poloniny NP Administration.*	*The SNC SR budget.*	
HT.1.8.	*Monitoring of hiking and sports impact on natural environment.*	*Infrastructure condition.*	*permanent*	*SNC SR – Poloniny NP Administration.*	*The SNC SR budget.*	
HT.1.9.	*Establishing small accommodation units for tourists in villages residential area.*	*Infrastructure condition.*	*permanent*	*Municipalities.*	*Cross Border Cooperation Programme Poland-Slovak Republic*	
HT.1.10.	*Equestrian tourism and equine-assisted therapy.*	*Infrastructure condition.*	*permanent*	*Club of Slovak Tourists, municipalities, owners.*	*Cross Border Cooperation Programme Poland-Slovak Republic*	*EFA3* *EFA4* *EFA5,* *EFA8 and EFA9* *EFA15* *EFA16*
HT.1.11.	*Establishing a bike rental.*	*Infrastructure condition.*	*permanent*	*Municipalities.*	*Cross Border Cooperation Programme Poland-Slovak Republic*	*EFA16*
HT.1.12.	*Establishing an observation post for tourists in the Dark-Sky Park.*	*Infrastructure condition.*	*permanent*	*SNC SR – Poloniny NP Administration.*	*Cross Border Cooperation Programme Poland-Slovak Republic*	*EFA8 and EFA9*

Operational Goal/Measure Number	*Operational Goal/Measure Description*	*Expected Output/Measurable Fulfilment Indicator*	*Expected Implementation Deadline*	*Implemented by/Responsibility of*	*Expected Source of Funding*	*Ecologically-Functional Area (EFA)**
Environmental Education – EE						
EE.1.	***Operational Goal: To increase environmental awareness while conserving the Poloniny NP significant plant and animal species.***					
	Measurable Fulfilment Indicator: Promoting and publishing.					
EE. 1.1.	*Broaden the knowledge about the NP significance and about the conservation activities and subjects in selected target groups (primary schools pupils, secondary schools students, land owners and administrators, visitors etc.)*	*Lectures, publishing, exhibitions, cooperation with the media.*	*permanent*	*SNC SR – Poloniny NP Administration.*	*The SNC SR budget, other resources.*	
EE. 1.2.	*International cooperation, mainly within the International Biosphere Reserve (IBR).*	*Workshops, symposia, exhibitions.*	*permanent*	*SNC SR – Poloniny NP Administration, IBR partners.*	*The SNC SR budget, other resources.*	
EE.1.3.	*Work of the Nová Sedlica Information Centre (renovation works needed as well).*	*Informing visitors, competitions for children.*	*Yearly between 1 April and 31 October.*	*SNC SR – Poloniny NP Administration.*	*The SNC SR budget, other resources.*	
EE.1.4.	*Building more information centres.*	*Informing visitors, competitions for children.*	*By 30 December 2017.*	*SNC SR – Poloniny NP Administration.*	*The SNC SR budget, other resources.*	*EFA16*

Annex No. 4

State Nature Conservancy of the Slovak Republic, Banská Bystrica

Poloniny NP Administration, Stakčín

POLONINY NATIONAL PARK MANAGEMENT PLAN for 2017–2026

Approved by the Government Resolution of the Slovak Republic
No. 293
dated 7 July 2016

INTRODUCTION

Poloniny National Park is one of the 9 officially declared national parks in the Slovak Republic. *The name "Poloniny" comes from mountain "poloniny" meadows having resulted from the Wallachian colonization at the end of the 14th century. Up until that time the area was without human intervention and primeval forests prevailed.*

The Poloniny meadows, natural forests fragments, plant and animal species diversity, and the specific location on the border with Poland and Ukraine are the assets that prevailed and earned international appraisal. The area, together with the adjacent Polish territory, became a part of the transboundary East Carpathian Biosphere Reserve at the end of the 1990s. Two adjacent Ukrainian protected areas were included in the Reserve in 1998 and the first trilateral biosphere reserve in the world was thus created. Poloniny NP is one of the two Slovak sites awarded the ***European Diploma of Protected Areas*** *by the Council of Europe. The territory was included into the European* ***Natura 2000 network of protected areas*** *in 2004. A part of the territory was later included into the UNESCO World Natural and Cultural Heritage List as the* ***Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany*** *international site. The* ***Poloniny Dark-Sky Park*** *was officially declared in 2011.*

There is quite an extensive history of the need for territorial protection in Poloniny. ***The first protected forests were designated in 1660 and the first reserve in 1908. The National Park was established in 1997****, based on a part of the East Carpathians Protected Landscape Area.*

Poloniny area constitutes not only a natural, but also cultural heritage. The remote location is its other important characteristic. The work-related migration of an economically active population, minimal investment into infrastructure, and the price of every workplace in the region. The creation of the Starina reservoir, the important source of drinking water, was an important intervention into the area development. It was preceded by relocating 7 villages. The local population still perceives the relocation, together with the agricultural land collectivisation and with the later declaration of protected areas as an injustice caused by government. Activities within the areas of Community importance designation were perceived in a similar way, especially in cases of insufficient communication with the involved, and opposing, parties.

This is one of the reasons why the Poloniny NP Management Plan preparation was such a challenge. ***It was drafted in 2015 and renegotiated and edited in 2016.*** *The finalized plan reflects, to the maximum possible extent, all the involved parties' comments. It was not possible to implement all of them, though, as some were above the management plan scope. The plan is not a piece of legislation: it does not amend the valid government authorities' decisions and the already approved programmes of territorial use. Its objective is to gather expert material in one place and subsequently set realistic goals and measures fulfilling these goals. Local consensus was an important part of the process.*

The structure of the proposed Poloniny NP Management Plan is in line with valid ***nature conservation legislation****. It does not contain any details about background strategic documents such as the Concept of Nature and Landscape Protection, the Slovak Spatial Development Perspective or other relevant land-use plan documents and management plans for forests, the prioritised action framework Natura 2000 in the Slovak Republic for the 2014-2020 EU programming period or the individual operational programmes. These documents, along with the Poloniny NP Visitor Code from 2006, form the framework for the implementation of measures.*

Goals focus on the nature conservation subject, i. e. habitats and species of Community and national importance *(to broaden knowledge, to preserve or achieve a favourable condition, to prevent urbanization or other kinds of site destruction),* ***on the preservation of the NP functions*** *(potential for sustainable use of forest habitats, grass stands, wetlands, stagnant waters, water flows with bank vegetation, caves and underground biotopes and suitable tourism and recreation forms by means of strict compliance with the goals and the measures in the individual ecologically-functional areas)* ***and on the inclusion of land owners/users and local government authorities into the NP area conservation*** *(inclusion into activities that preserve the natural assets and at the same time bring profit, such as sustainable tourism and the rehabilitation of traditional economical activities, to the local population).*

Measures are broadly described in this document and further explained in the following Appendices: Measures to Fulfil the Poloniny National Park Management Goals and the Poloniny NP Action Plan. The latter was requested by two key land-owners associations, one municipality and civic associations. The ***publication of regulations, decisions, agreements, opinions and other statements of relevant institutions will be needed for the activities not directly related to habitats or species conservation, but still important in the process of achieving goals.***

The management plan approval will constitute a step towards a common nature conservation, meeting the Natura 2000 sites' protection and other international commitments.

THE POLONINY NATIONAL PARK MANAGEMENT PLAN
2017–2026

1. Underlying Information

1.1. Protected Area National List Number, if Assigned

Not assigned.

1.2. Inclusion in the European Network of Protected Areas and Sites of International Importance

The NP territory is **included** in the European **Natura 2000 network of protected areas**.

The following sites of Community importance were included in Decree of the Ministry of Environment of the Slovak Republic No. 3/2004-5.1 of 14 July 2004 publishing the national list of sites of Community importance: **SKUEV0210 Stinská, SKUEV0229 Bukovské vrchy and SKUEV0234 Ulička.** The sites of Community importance were included in the 2008/218/EC Decision adopting, pursuant to Council Directive 92/43/EEC, a first updated list of sites of Community importance for the Alpine biogeographical region. Appendix 6.6.2 contains the designation of SKUEV0210 Stinská, SKUEV0229 Bukovské vrchy and SKUEV0234 sites.

The NP and its buffer zone territory (apart from the residential area of villages) overlaps with the Special Protection Area Bukovské vrchy labelled as **SKCHVÚ 002 Bukovské vrchy** (Regulation 25/2008 Coll. of the Ministry of Environment of the Slovak Republic declaring the Special Protection Area Bukovské vrchy). Appendix 6.6.3 contains the designation of SKCHVÚ002 Bukovské vrchy.

Poloniny NP is also a part of the sites from the international importance network. Its territory has been part of **the East Carpathian Biosphere Reserve** included in the UNESCO World Network of Biosphere Reserves since 1992. It was awarded the **European Diploma for Protected Areas** in 1998. In 2007, a part of the territory was included in the UNESCO World Natural and Cultural Heritage List as the Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany site.

1.3. Protected Area Name and Category

Category: national park
Name: Poloniny

1.4. Valid Legislation on Protected Area Declaration or International Document on Including the Site into the Network of Sites of International Importance

The NP was declared by the **Regulation of the Government of the Slovak Republic No. 258/1997 Coll. declaring the Poloniny NP**.

The **Primeval Beech Forests of the Carpathians** site was inscribed to the **UNESCO World Natural and Cultural Heritage List** as bilateral site No. 1133 by the decision of the World Heritage Committee (Dec.: 31 COM 8B.16) during the 31st session in Christchurch, New Zealand, on 23 June–2 July 2007 (http://whc.unesco.org/en/decisions/1314). It was later extended to include the ancient beech forests of Germany and the site name changed to the Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany, by the decision of the World Heritage Committee (Dec.: 35 COM

8B.13) during the 35th session in Paris, UNESCO Headquarters, on 19-29 June 2011 (http://whc.unesco.org/en/decisions/4284).

The area became part of the at-first bilateral Slovak-Polish East Carpathian Biosphere Reserve (hereinafter referred to as ECBR) included in the UNESCO World Network of Biosphere Reserves by the decision of the Coordinating Council of the Man and Biosphere Programme, on 10 November 1992. It was later, on 11 December 1998, extended and became a trilateral (Slovakia/Poland/Ukraine) site.

The Poloniny NP was awarded the European Diploma for Protected Areas, for the first time by the Council of Europe Committee of Ministers Resolution ResDip(98) 26 on 18 September 1998 and for five years (https://wcd.coe.int/ViewDoc.jsp?id=495629&Site=CM). This was later renewed by the Council of Europe Committee of Ministers Resolution ResDip(2003) on 28 May 2003 (https://wcd.coe.int/ViewDoc.jsp?id=37675&Site=CM) for another five years and subsequently by the Council of Europe Committee of Ministers Resolution CM/ResDip(2008)3 on 2 July 2008 (https://wcd.coe.int/ViewDoc.jsp?id=1319767&Site=CM) for another five years. Then it was renewed again, this time for 10 years (until 2018), by the Council of Europe Committee of Ministers Resolution CM/ResDip(2012)19 on 20 June 2012 (https://wcd.coe.int/ViewDoc.jsp?id=1955933&Site=CM).

1.5. Total Size of the Protected Area and its Buffer Zone

The area of the Poloniny NP comprises 29,805.0514 ha and the area of its buffer zone comprises 10,973.2893 ha.

1.6. Subject of Conservation Status

According to §19 of the Act. No. 543/2002 Coll. on Nature and Landscape Protection as Amended (hereinafter referred to as the Act No. 543/2002 Coll.) only a territory **"predominantly with ecosystems substantially unaffected by human activities, or with unique and natural landscape structures forming national biocentres and the most significant natural heritage"** may be designated a national park. Levels of protection under the terms of this Act are shown in Appendix 6.6.1. The Regulation of the Government of the Slovak Republic No. 258/1997 Coll. declaring Poloniny NP does not define the subject of conservation. The subject is defined in the declaring regulations of small-scale protected areas (national nature reserves, nature reserves, natural landmarks) and of the European protected area network sites containing territory overlapping with the NP territory. Several research activities as well as natural habitats and species of Community importance mapping took place in the area. The results were used as a base for dividing the NP into several Ecologically-Functional Areas (EFA). **The EFAs are the areas with the same species and natural habitat presence, alt. the areas with the potential for the creation of such habitats.** EFAs of the same kind were assigned identical territorial management principles, goals and measures. Species and habitats of Community importance in the Poloniny NP are listed and assessed in Part 1.6.3., Tables 2 and 3 of this document.

1.6.1. Natural Conditions

1.6.1.1. Geography

Poloniny NP is in the northeast part of Slovakia, Prešov Region, Snina District. The northern border is located on the state border with Poland and the eastern border of the area is the state border with Ukraine. Delimitation according to the World Geodetic System 1984 (WGS-94) is presented in the following Table 1:

Table 1: Coordinates of Poloniny NP in the WGS-84:

	Poloniny NP Territory		Poloniny NP Buffer Zone	
Basic Points	**Latitude**	**Longitude**	**Latitude**	**Longitude**
Central Point:	49°00’51.9” N	22°25’12.8” E	49°06’19.0” N	22°17’51.4” E
The Northernmost Point:	49°11’08.1” N	22°12’42.1” E	49°05’21.6” N	22°23’43.1” E
The Southernmost Point:	48°56’35.2” N	22°23’10.7” E	48°54’46.1” N	22°25’09.9” E
The Westernmost Point:	49°09’06.4” N	22°09’45.7” E	49°02’43.4” N	22°12’37.7” E
The Easternmost Point:	49°05’16.8” N	22°33’56.5” E	49°02’40.7” N	22°33’04.2” E

1.6.1.2. Geology

Geologically speaking, **the Poloniny NP territory belongs to the Dukla Unit**. The lithological and stratigraphic profile of the Dukla Unit is an uninterrupted succession of strata of sandstones rhythmically alternating with claystones from the Cenomanian to the lower Oligocene (70–42 million years ago). The thickness of the strata exceeds 5,000 metres. The Dukla Unit is composed of several strata of different age, composition, granularity and colour depending on the changing conditions during rock sedimentation (the movement of the continents, sea level decline). The Lupkow strata are the oldest; they are overlain by Cisna beds. The upper part of the lithological profile is formed by submenilite strata, a 1,000 m thick micro-rhythmic flysch which gradually passes into menilite strata when approaching the overlying bed. The menilite strata are overlain by Cergowa strata. The Quaternary sediments cover small areas and are not very thick; they include Holocene and Pleistocene terraces, proluvial and deluvial sediments and slides.

From a tectonic point of view, the Dukla Unit is an aggregate of NW–SE folds and anticlinal slices. A distinct structure is formed by the flexural bending of strata north of Stakčín, which divides the Unit into an eastern and western part and is considered a surface manifestation of a deep-seated fault. The Poloniny NP territory is in the eastern part of the Unit, which is characterized by brachyanticlinal and brachysynclinal structures. Brachyanticlines predominantly forming mountain ridges (Small and Big Bukovec, Nastaz, Skura) and brachysynclines forming intermountain basins (Ruské, Ulička, Sedlica and Runina Basins), valleys of different width and erosion as well as denudation depressions can be distinguished here.

1.6.1.3. Geomorphology

The Poloniny NP territory is covered by the eastern part of a vast orographic unit in northeastern Slovakia – **the Nízke Beskydy hills**. A part of the Nízke Beskydy, Laborecká vrchovina highlands, extends to the northwestern part of the national park. Bukovské vrchy Hills form the southeastern part and toward the east gradually pass into another unit, **Poloniny.** The relief of the area has upland to highland character. The highest altitude is in **Kremenec (1221 m. a. s. l.) and the lowest is at 198 m. a. s. l.**

1.6.1.4. Climate

All climate zones are represented in the Poloniny NP: warm, moderate and cold. This is caused by the relief diversity. A major part of the territory demonstrates a cold climate; however, the basins have a moderately warm and humid climate. **The average annual temperatures range between 8 and 4 °C and the average annual precipitation is 800–1,000 mm.** Snow cover lasts from November to

April, in the mountaintops for over 160 days. The direction of winds is not influenced by the orography of the region, but by the NW, SW and NE flows prevail.

1.6.1.5. Soil Composition

The soil formation in the Poloniny NP has been influenced by different soil forming factors, such as the shape of the relief, altitude, climate, biotic factors (vegetation and soil organisms) and anthropogenic factors. This has resulted in **various types of soil**. **Brown earth and unsaturated soil** prevail and are accompanied by **rankers**. Raw to brown **alluvial soil** is found in bigger river alluvial plains. Pararendzinas can be found in the more calcareous parts of the flysch. Specific features of the flysch substrate caused the rise of soils **prone to erosion**. The region is subsequently affected by frequent landslides caused by short torrential rains, elevation differences and man's ill-considered landscape interventions.

1.6.1.6. Hydrography

The Poloniny NP is part of the Black Sea catchment area and its whole territory belongs to **the Laborec river basin** (Laborec → Ondava → Bodrog → Tisza → Danube → Black Sea). The Poloniny NP river system belongs to the **Bodrog river catchment and constitutes a typical fan-shaped system of** water flows with a great number of small tributaries. It includes a part of river source areas: the **Uh River** source area with the right-side tributaries **Uličká** and **Ublianka** as well as the **Laborec** source area with the left-side tributaries **Cirocha** and **Udava**. The main river in the west is the Cirocha River, which drains territory west of the Bukovské vrchy Hills. The biggest part of the NP territory is drained by the Ulička River and its main tributaries: **Zbojský potok, Príslopský potok and Ruský potok.** The mountain ridge on the Slovak-Polish border running across the NP is a natural watershed line between the Baltic and the Black Sea catchment areas. The left-side tributary of Laborec, **Udava,** rises in the north-western tip of Poloniny NP. The Udava creates, thanks to the still active erosion activity at its source, an interesting hydrographic-morphological phenomenon: the river piracy of three neighbouring Polish rivers, named the Solinka, Oslawa and Balnica. This is seen in the slow gradual shift of the watershed line further northwards to the outer side of the Carpathian Arc.

The Cirocha River was dammed in 1987 by the **Starina reservoir** with a 50 metre dam and a total storage capacity of 59.8 million m^3. It covers a total surface area of 240 ha. Starina is a major and irreplaceable surface water source for the Prešov and Košice districts. It supplies drinking water to 9 district towns and numerous smaller cities and villages. Nearly half of the Poloniny NP territory overlaps with the Starina reservoir protection zones (hereinafter referred to as PZ and defined in the Decree of Ministry of Environment of the Slovak Republic No. 29/2005 Coll. setting up details about protection zones of water management sources, water protection measures and technical modifications in the protection zones of water management sources). 7 villages were relocated to improve water quality in the Starina reservoir. Former Košice-vidiek District Environmental Office Decision No. **ŽP-577/1991-Mi** from 17 January 1992 defined the mandatory requirements for economic exploitation in the then sanitary protection zones (current Starina reservoir protection zones).

1.6.1.7. Habitats, Flora, Communities

Poloniny NP constitutes the botanical boundary between the Eastern and Western Carpathians mountain systems. As a result, the NP flora contains a plenitude of species and a presence of some **Eastern Carpathian elements** with the western occurrence boundary in the NP territory: the rambling bellflower (*Campanula abietina*), Waldstein's thistle (*Cirsium waldsteinii*), sweet william (*Dianthus barbatus subsp. compactus*), *Festuca saxatilis*, cow-wheat (*Melampyrum herbichii*),

Ranunculus carpaticus, purple viper's grass (*Scorzonera rosea*), *Silene nutans subsp. dubia* and Dacian violet (*Viola dacica*). Other species, such as French flax (*Linum trigynum*) and traveller's joy (*Clematis vitalba*), reach the northern occurrence boundary in the NP. The presence of nipplewort (*Lapsana communis subsp. intermedia*) or *Hacquetia epipactis* penetrating the area from the northwest is also noteworthy. A detailed stocktaking research of the flora in the NP territory has revealed the presence of **over 1,000 species of vascular plants.** Many of them are rare and endangered. The floristic diversity of the area is further confirmed by the presence of **300 known species of fungi, over 300 species of bryophytes and more than 100 species of lichens.**

There are 5 plant species of Community importance in Poloniny NP: green shield moss (*Buxbaumia viridis*), brittle broom moss (*Dicranum viride*), Scheuchzer's bellflower (*Campanula serrata*), spikerush (*Eleocharis carniolica*) and Carpathian Tozzia *(Tozzia carpatica).* Apart from them there are 20 habitats of Community and national importance (outlined in 1.6.2.).

FOREST ASSOCIATIONS AND SPECIES

Forests are the most widespread vegetation type. The characteristic and dominating woody plant is the **European beech** (*Fagus sylvatica*). Given the more than 1,000 m elevation difference between the highest and the lowest altitude point and the resulting different climatic conditions, the nature of the NP forests changes as well. **Oak-hornbeam forests** *(Carici pilosae–Carpinetum*) occur in the lowest altitude and warmest sites. Besides the main ground-cover woody plants – the English oak (*Quercus robur*), sessile oak (*Quercus petraea*) and European hornbeam (*Carpinus betulus*), also the Norway maple (*Acer platanoides*), hedge maple *(Acer campestre*), large-leaved lime (*Tilia platyphyllos*) and small-leaved lime (*Tilia cordata*) occur. Herbaceous plants are dominated by hairy sedge (*Carex pilosa*) and lowland species, such as wood cow-wheat (*Melampyrum nemorosum*), sweet-scented bedstraw (*Galium odoratum*), and dead nettle (*Galeobdolon luteum*), also the rare alpine squill (*Scilla kladnii*), *Hacquetia epipactis*, Kashubian buttercup (*Ranunculus cassubicus*) and European scopolia (*Scopolia carniolica*). Beech forests dominate the Poloniny NP territory. Typical species, such as the coralroot (*Dentaria bulbifera*), bittercress (*Dentaria glandulosa*), purple lettuce (*Prenanthes purpurea*), wood barley (*Hordelymus europaeum*), fescue (*Festuca drymeya*) and wood speedwell (*Veronica montana*) occur. The occurrence of silver fir (*Abies alba*) starts at a higher altitude and more humid sites. The beech forests are represented by two sub-alliances. The first sub-alliance of herb-rich beech forests (*Eu-Fagenion*) includes associations with the predominant *Carici pilosae-Fagetum* and associations with *Dentario glandulosae-Fagetum*. The latter are found in Stinská and are particularly noteworthy because of **Carpathian buttercup** (*Ranunculus carpaticus),* **a species endemic to the Eastern Carpathians**. Associations of the second sub-alliance **maple forests** (*Acerion*) represented by beech-maple forests (*Aceri-Fagetum*) prevail in higher ground near the timberline. The tree layer, often limited in growth, is dominated by beech and maple. The herbaceous layer is usually poorly represented. However, some distinct or differential species, such as the wood millet (*Milium effusum*), maiden sorrel (*Acetosa alpestris subs. Carpatica*), alpine lady-fern (*Athyrium distentifolium*) and especially the broad buckler fern (*Dryopteris dilatata*) occur here. The forests at the highest (more than 1,000 m. a. s. l.) altitudes, right below the timberline, are influenced by the peak location and therefore lower.

Precious broad-leaved trees belonging to lime-maple forest associations (*Tilio-Acerion*) such as the wych elm (*Ulmus glabra*), common ash (*Fraxinus excelsior*), sycamore maple (*Acer pseudoplatanus*) and small-leaved lime (*Tilia cordata*), occur in more humic soils and rock screes. The herbaceous undergrowth nature changes in such sites. It is dominated by perennial honesty (*Lunaria rediviva*), dog's mercury (*Merculialis perennis*) and white butterbur *(Petasites albus*). Various species of ferns are also common. The most valuable are the associations with hart's-tongue fern (*Phyllitis scolopendrium*) occurring under the Jarabá skala rock formation.

Mountain streams are lined with bank **willow associations** (*Agrosto-Saliceum purpurae*) such as purple willow (*Salix purpurea*), and crack willow (*Salix fragilis*) associations with common butterbur (*Petasites hybridus*), butterbur *Petasites kablikianus*, pendulous sedge (*Carex pendula*), and cow parsley

(*Anthriscus nitida*) in the herbaceous layer. **Grey alder associations** (*Alnetum incanae*) occur in similar environmental conditions. They are dominated by grey alder (*Alnus incana*). The most valuable contain also the ostrich fern (*Matteucia struthiopteris*) and the yellow-flowered heartleaf oxeye (*Telecia speciosa*). Of the associations created by anthropogenic activities, the *Helleboro-Coryletum* is most notable. It is characterized by the Carpathian species of *Helleborus purpurascens.*

NON-FOREST ASSOCIATIONS AND SPECIES

Non-forest associations are also varied. Several types, distinguishable by the environmental conditions to which they are associated, are present: associations of springs, wetlands, peat bogs, meadows and pasturelands, and especially the "poloniny" alpine meadows above the timberline. **Poloniny mountain grasslands above timberline are unique and typical Eastern Carpathians formations.** The majority of them are secondary associations, having resulted from cattle grazing on mountain ridges. Areas containing monk's-rhubarb (*Rumex alpinus*) indicate a higher amount of nutrients in the soil and are the remainder of past grazing. Some grass species typically grow there – the matgrass (*Nardus stricta*), tufted hairgrass (*Deschappsia caespitosa*), white wood-rush (*Luzula luzuloides*), willow gentian (*Gentiana asclepiadea*), maiden sorrel (*Acetosa alpestris subs. carpatica*) and betony (*Betonica officinalis*). Poloniny meadows are known for the presence of some Eastern Carpathians species such as the rambling bellflower (*Campanula abietina*), Waldstein's thistle (*Cirsium waldsteinii*), sweet william (*Dianthus barbatus subsp. compactus*), cow-wheat (*Melampyrum herbichii*), purple viper's grass (*Scorzonera rosea*), and Dacian violet (*Viola dacica*). More acid soils are covered with low bush growth dominated by bilberry (*Vaccinium myrtillus*). At present, when the meadows are no longer used for economic purposes, the species diversity in the area is threatened by the expansion of reed grass (*Calamagrostis arundinacea*).

Meadows and pasturelands at the lower and middle elevations of the NP are typical by the subdominant species of sweet vernal grass (*Anthoxanthum odoratum*) and the occurrence of colonial bentgrass (*Agrostis tenuis*). They are quite rich in flora and apart from grass species contain St. John's-wort *(Hypericum maculatum*), grass-leaved starwort (*Stellaria graminea*), spreading bellflower (*Campanula patula*), brown knapweed (*Jacea pratensis*), oxeye daisy (*Leucanthemum ircutianum*), meadow buttercup (*Ranunculus acris*), bug orchid (*Orchis coriophora*), green-winged orchid (*Orchis morio*), burnt-tip orchid (*Orchis ustulata*), and fragrant orchid (*Gymnadenia conopsea*). Humid meso- to eutrophic meadows have a different species composition. The marsh marigold (*Caltha palustris*), soft rush (*Juncus effusus*), compact rush (*Juncus conglomeratus*), meadowsweet (*Filipendula ulmaria*) and tufted hairgrass (*Deschampsia cespitosa*) often grow there. Wetland communities are typical by cotton-grass (*Eriophorum latifolium*), yellow sedge (*Carex flava*), carnation sedge (*Carex panicea*) and the rare species of the marsh helleborine (*Epipactis palustris*), western marsh orchid (*Dactylorhiza majalis*), early marsh orchid (*Dactylorhiza incarnata*) and elegant orchid (*Orchis elegans*) presence.

In the environmentally specific conditions of spring areas we can find the common bittercress (*Cardamine amara*), alternate-leaved golden saxifrage (*Chrysosplenium alternifolium*), arctic yellow violet (*Viola biflora*), marsh marigold (*Caltha palustris subsp. laetha*), hairy chervil (*Chaerophyllum hirsutum*) and wood stitchwort (*Stellaria nemorum*).

1.6.1.8. Fauna

Zoo-geographically speaking, the Poloniny NP territory is in a Peleartic region with mixed and deciduous forests. It is situated **on the Western and Eastern Carpathians borderline. This is reflected in the representation of animal species and their communities.** Vegetation cover (beech forests, hay meadows, pasturelands and poloniny meadows) is well-preserved and this affects the natural diversity of animal communities. **6,359 animal species** (320 of which are vertebrates) or their groups, were by now detected in the area. Their list as follows:

INVERTEBRATES

Molluscs – *Mollusca:* **91 species of molluscs** (Mollusca) were found in the Poloniny NP territory between 1954 and 2012. The malacocenoses of the area are unparalleled in Slovakia because their nature is purely Eastern Carpathian. This distinguishes them from the West Carpathian fauna. This group includes the species *Carpathica calophana* and *Petasina leucozona bielzi*. The proportion of endemic species is significant. This group includes *Argna bielzi, Macrogastra latestriata, Macrogastra tumida, Pseudalinda stabilis, Vestia gulo, Vestia turgida, Schistophalus orientalis, Vitrea transsylvanica, Carpathica calophana, Monachoides vicinus, Faustina faustina, Perfolratella dibothryon, Petasina leucozona bielzi* and *Acicula parcelineata*. The thick-shelled river mussel (*Unio crassus*) is a species of Community importance.

Earthworms – *Oligochaeta – Lumbricidae*: **6 earthworm species** found on the mountain ridge above Ruské, where a remarkably rich occurrence of *Dendrobaena alpina* was recorded.

Crustaceans – *Acarina*: The presence of **30 crustacean species detected**. The European crayfish (*Astacus astacus*) is among the most known.

Spiders – *Araneae:* **403 spider species** have been detected in the area so far. Spider fauna is relatively diverse in terms of the presence of individual zoogeographical elements. Dominating species spread over the vast area – prevailing by number of species are: Pelearctic spiders (237 species), the less dense presence of Holarctic spiders (65 species), European spiders (53 species), Euro-Siberian spiders (32 species) and Euro-Asian spiders (14 species). Also, two globally widespread species have been recorded (2 species). *Lepthyphantes milleri* is Eastern Carpathians element. The *Taranucnus bihari* is a spider endemic to the Carpathians, and the *Kaestneria torrentum* and *Saloca kulczynskii* might also be considered purely Carpathian.

Pseudoscorpions – *Pseudoscorpiones:* **19 pseudoscorpions species** were detected. This accounts for **38.6% of the pseudoscorpion species found in Slovakia so far.** *Neobisium polonicum* might be considered endemic to the Eastern Carpathians. The Carpathian elements are represented by *Chthonius heterodactylus, Ch. ksenemanni, Ch. pygmaeus, Ch. subterraneus, Neobisium brevidigitatum, N. carpaticum* and *N. crassifemoratum.*

Harvestmen – *Opiliones:* **There are 25 recorded species of harvestmen, accounting for 75.7% of the species known in Slovakia.** The most remarkable species is the only Eastern Carpathian element of our fauna, *Siro carpaticus*, found only in the Bukovské vrchy Hills.

Mites – *Acari* (*Parasitiformes, Uropodina, Ex Uropodina*): **234 species** have been observed in the Bukovské vrchy Hills. The most valuable include the Eastern Carpathian elements – *Trachytes minimasimilis, T. splendida, Urodiaspis stammeri, Uroobovella bocovinesis* and others.

Millipedes – *Diplopoda:* Of the 20 species found in the area, *Polydesmus polonicus, Cylindroiulus luridus burzenlandicus, Polyzonium transsilvanicum,* and *Leptoiulus baconyensis stuzicensis* are endemic to the Eastern Carpathians.

Centipedes – *Chilopoda:* Data on **4 species** are known from the past.

Mayflies – *Ephemeroptera*: In terms of hydrofauna, the territory has been little explored. **71 ephemerid species** have been found. Those specific to the Eastern Carpathians include *Rhitrogenu gorganica*.

Dragonflies – *Odonata*: There is a confirmed presence of **37 species** in the area. 9 of them are endangered and the rarest among them is the *Sympetrum fonscolombii*. The penetration of thermophilic species under the Poloniny mountain ridge is interesting.

Orthoptera: **53 orthoptera species** presence have been confirmed. *Miramella ebneri carpathica* and *Isophya psothumoidalis* are endemic to the area.

Stoneflies – *Plecoptera:* This order has been marginally explored by Kubiček, Brazda et al. **42 species** have been found in the Poloniny NP. The rarest species found in the area include *Arcynopteryx compacta* and *Perla pallida* at the Cirocha River by Ruské.

Caddisflies – *Trichoptera*: **43 species** have been found near the Bukovské vrchy Hills water flows.

True bugs – *Heteroptera:* **138 species of true bugs** have been recorded in the area. The presence of *Panaorus adspersus* is the most significant discovery (the only presence of this species in Slovakia). Another significant finding is the confirmed presence of rare mountain species *Odontoplatys bidentulus*.

Beetles – *Coleoptera:* **1,472 beetle species** are confirmed in the Bukovské vrchy Hills territory. The most numerous is the Staphylinidae family with 417 confirmed species. Bukovské vrchy constitute the western boundary of many Eastern Carpathian species occurrence. Among such species are: *Nebria fuscipes, Pseudanophthalmus pilosellus poloninensis, Duvalius subterraneus subterraneus, Deltomerus carpathicus, Stenus obscuripes Xantholinus azuganus trellai, Othius transsilvanicus, Leptusa coronensis* and *Bryaxis carpathicus.*

Butterflies – *Lepidoptera*: **924 butterfly species** have been observed in Bukovské vrchy area. A new species has been found here – the *Archips betulanus* moth. It does not occur in any other part of Slovakia. Other remarkable findings include, among others, species *Dichomeris latipenella, Eupoecilia cebrana, Apotomis turbidana, Eucosma aemulana, Euchromius ocelleus, Anania funebris, Carcharodus flocciferus.* There are 4 *Maculinea* genus butterflies in Poloniny NP. (NB: *Phengaris* according to the new nomenclature. In the Management Plan texts, however, the old denomination is used, in accordance with Decree of the Ministry of the Environment of the Slovak Republic No. 24/2003 Coll. implementing Act No. 543/2002 Coll. on Nature and Landscape Protection as Amended (hereinafter referred to as the Decree MoE 24/2003 Coll.), a part of Appendix 4, Part B, the list of species to the protection of which the protected areas are declared, namely the large blue butterfly – *Maculinea arion* (Linnaeus, 1758), scarce large blue butterfly – *Maculinea teleius* (Bergsträsser, 1779), alcon blue – *Maculinea alcon* (Denis & Schiffermüller, 1775) and mountain alcon blue – *Maculinea rebeli* (Hirschke, 1904)).

Two-winged insects – *Diptera:* The occurrence of **2,428 species** has been confirmed in the area, 9 of them previously unknown.

VERTEBRATES

Lampreys – *Petromyzontes:* **One species** of Community importance, the **Carpathian brook lamprey** (*Eudontomyzon danfordi*), has been found in the area.

Fish – *Pisces*: The total number of **fish species detected in the Poloniny NP by now is 24.** Several of them are significant in terms of gene pool (spined loach – *Cobitis taenia*, European bullhead – *Cottus gobiol*, grayling – *Thymallus thymallus*, golden spined loach (*Sabanejewia balcanica*), stable populations occurrence (barbel – *Barbus peloponnesius*, golden spined loach – *Sabanejewia balcanica*, greyling – *Thymallus thymallus*) and few occurrence sites in Slovakia (Kessler's gudgeon – *Gobio kessleri*, Danubian gudgeon – *Gobio uranoscopus*). The highest species concentration has been recorded in the Zbojský potok brook and Ulička river confluence and at the Ulička River close to the state border.

Amphibians – *Amphibia*: **13 amphibian species** have been found in the area. The yellow-bellied toad (*Bombina variegate)* and the common frog (*Rana temporaria*) dominate. The fire salamander (*Salamandra salamandra*) and common toad *(Bufo bufo*) are quite abundant as well. Very rare species include the northern crested newt (*Triturus cristatus*), the Carpathian newt (*Triturus montandoni*), the smooth newt (*Triturus vulgaris*), European tree frog (*Hyla arborea*), European green toad (*Bufo viridis*), agile frog (*Rana dalmatina*) and edible frog *(Rana esculenta*). Three species are among the vulnerable species and ten among the lower risk ones.

Reptiles – *Reptilia*: **8 reptile species** have been found in the area. The sand lizard (*Lacerta agilis*) predominates. Other abundant species include the viviparous lizard (*Lacerta vivipara*), slow worm (*Anguis fragilis*) and grass snake (*Natrix natrix*). The smooth snake (*Coronella austriaca*), Aesculapian snake (*Elaphe longissima*) and common European adder (*Vipera berus*) are not as abundant. The dice snake (*Natrix tessellate*) is very rare. One species is vulnerable and seven are at a lower risk.

Birds – *Aves*: **211 bird species** have been detected in the Poloniny NP territory, accounting for **62% of Slovak bird population.** 139 of them are breeding birds (65.9%), 66 are migrant birds (31.3%), 6 are wintering birds (2.8%) and 12 (5.7%) occur only very rarely or accidentally. As for the reproduction trends among breeding birds, 86 species are stable, 20 are on the decrease, 10 on the increase and there are no data on 4 species. Based on this, a relatively high stability as well as good landscape and habitats condition might be concluded. The Poloniny NP avifauna includes 3 critically endangered, 10 endangered, 15 vulnerable and 38 lower-risk species. The Poloniny offers good conditions for several rare bird species breeding, thanks to location and habitats condition. The 18 species specified in Table 3 are subject to Bukovské vrchy Special Protection Area conservation. Starina reservoir construction resulted in favourable conditions for aquatic birds. The reservoir is located on a significant migratory route of birds flying from Poland and Ukraine across the Eastern Carpathians to the south and back. The most common breeding birds with regular occurrence in Poloniny NP (1 couple/100 ha–1 couple/10 ha) include the Eurasian treecreeper (*Certhia familiaris*), European robin (*Erithacus rubecula*), Eurasian blue tit (*Parus caeruleus*), great tit (*Parus major*), common chiffchaff (*Phylloscopus collybita*), Eurasian blackcap (*Sylvia atricapilla*), common blackbird (*Turdus merula*), and song thrush (*Turdus philomelos*). The golden eagle (*Aquila chrysaetos*), boreal owl (*Aegolius funereus*), Eurasian eagle-owl (*Bubo bubo*), short-toed snake eagle (*Circaetus gallicus*), and Eurasian pygmy owl (*Glaucidium passerinum*) are the rarest breeding birds.

Mammals – *Mammalia*: **63 mammal species** occur in this area: 8 of them are insectivores, 20 bats, 16 rodents, 1 leporid, 13 carnivores and 5 artiodactyls. One species is considered endangered, 5 vulnerable and 6 are at a lower risk. The feral population of the European bison (*Bison bonasus*) and the sporadic occurrence of the moose (*Alces alces*) is most certainly worth of attention. 15 observations of the raccoon dog (*Nyctereutes procyonoides*) have been reported. According to Decree MoE 24/2003 Coll., Appendix 2, this species is considered invasive. The presence of the Eurasian beaver (*Castor fiber*) at the Starina reservoir and the Ulička River has been recorded since 2004. Great carnivores in the Poloniny NP are represented by two packs of grey wolf (*Canis lupus*). The brown bear (*Ursus arctos*) population in the NP is on the rise and estimated to 18 individuals in 2000. The Eurasian lynx (*Lynx lynx*) population is estimated to include 12 individuals.

Some of the species were included into national level **rescue programs (RP) in the past**: *Maculinea* butterflies, corncrake (*Crex crex*), golden eagle (*Aquila chrysaetos*), lesser spotted eagle (*Aquila pomarina*), Eurasian beaver (*Castor fiber*), European otter *(Lutra Lutra*), and European bison (*Bison bonasus*). The following activities have been conducted within the RP:

RP European bison:

- tracking the movement of bison, ensuring the preservation of suitable habitats and elimination of non-natural threats to European bison, studying resource availability ("Management of Bison")
- increasing the resource availability for the European bison,
- veterinary care,
- prevention of bison-caused damage,
- purchasing equipment and tracking of selected specimens by means of telemetry,
- provision of material and technical equipment,
- ensuring cooperation at the international level,
- preparing information documents about the European bison and the need for its conservation intended for public.

RP Lesser spotted eagle and Golden eagle:

- tracing couples and their nesting territories,
- locating active nests,
- nesting process monitoring,
- identification of nests endangered by a threat to eliminate this threat,
- installation of perch discouragers on existing 22 kV line poles (in cooperation with VSE - power distribution company in the East of Slovakia).

RP European otter and RP Eurasian beaver:
- monitoring of species on the Poloniny NP water flows.

RP corncrake:
- species monitoring.

RP *Maculinea* butterflies:
- *Maculinea* species mapping and monitoring,
- self-seeding species removal and mowing of areas with *Maculinea* presence.

1.6.1.9. Abiotic Phenomena of Interest

Abiotic phenomena of interest in the Poloniny NP (**geological phenomena, meso- and microrelief forms, sites with protected and important minerals and occurrence of fossils**) include:

1. 6 pseudokarst caves (5 in the Stinská massif, c.a. [cadastral area] Zboj, and 1 at Rypy spot height, c.a. Ruské) formed by simultaneous rock blocks' gravitational indentation and block slides. They resulted from rock weathering and ablation, gravity, suffusion and erosion.
2. 2 paleontological sites with recorded fossil flora presence (Ráztoka brook, c.a. Zboj, Kuzmovský potok brook, c.a. Ruské – Halimeda sp.) and 2 with recorded fossil fauna presence (Ulička water flow, c.a. Runina – *Zoophycos circinnatus*, Hlboký potok brook, c.a. Nová Sedlica – *Inoceramus balticus* and *Inoceramus mülleri*) and 1 new kind of fossil (locus typicus) type site – National Nature Reserve Jarabá skala, c.a. Zboj with fossil flora presence (*Halimeidaites carpaticus*).
3. 3 waterfalls – Oreničov vodopád (12m), c.a. Runina; Medová Baba (10m), c.a. Nová Sedlica – genetically a rubble waterfall; Vodopád pod pílou (3m), c.a. Nová Sedlica – genetically a double waterfall.
4. 4 petrifying springs – tufa formations as an example of the travertinization process initial phase – the spring area below Doliny, c.a. Nová Sedlica, the spring above Topoľanská križovatka, c.a. Topoľa, Krivianske oblazy spring, c.a. Uličské Krivé.
5. 2 mineral springs of underground oil waters genetic type – in Zboj (the NP buffer zone) – calcium carbonate water with a hydrogen sulphide and methane content, and in Starina – natrium carbonate water with hydrogen sulphide and methane content.
6. Deep exploratory borehole Zboj-1 – c.a. Uličské Krivé; borehole site was within oil and natural gas exploration research in the area – research results brought complex data about its bedrock and determined the Zboj strata of the Dukla Unit.
7. 5 stretches of typical natural flysch water flows with significant and interesting examples of fluvial relief and natural hydrological mode (meanders, the rise of an oxbow, stream capture, cut banks and outcrops, a typical example of the geological composition of individual bedrock strata).
8. Sites with significant presence of several geomorphological meso- and microrelief forms with prominent boulders, crags, boulder trains, scree slopes, rubble cones and falling brash associated with certain habitat groups – rock and scree habitats.
9. Dara educational geological site located by the main road above Starina reservoir at the end of the Brezovecká dolina valley. Outcropped rock faces are an excellent example of the Carpathian Flysch Belt. Alternating sandstones and grey to black claystones layers reveal the deposition of sediments in a deep-sea environment. Three information boards explain the consequences of the orogenic process and demonstrate why sedimentary groups are not deposited horizontally and how oil and natural gas arise from source rocks.

1.6.1.10. Landscape Elements

Poloniny NP and its buffer zone contain **many important landscape features**, i.e. parts of the territory that contribute to typical appearance or ecological stability of the landscape. While separating the ecologically important landscape elements and/or segments and based on the current use of land, the following are identified:

- relief mesoforms and microforms - terraces, balks,
- forest stands, hedgerows, shrubs,
- wetlands, riverbank vegetation, aquatic and waterside ecosystems,
- meadow communities,
- parks (in residential area of villages).

Important cultural, historical and landscape features as well as the landscape structure in their original form have been preserved on Príslop c.a. (terraces, fields).

1.6.2. Subject of Conservation: Brief Description

Subject of conservation in Poloniny NP are habitats of Community and national importance as well as plant and animal species of Community and national importance. Those are determined by Decree MoE 24/2003 Coll. Habitats were classified according to the Catalogue of Habitats in Slovakia (Stanová, Valachovič 2002). Habitats and species subject to conservation in the Poloniny NP are listed in Appendix 6.1.

1.6.2.1. Habitats of Community and National Importance

The following habitats of Community and national importance were identified in the Poloniny NP:

- Vo2 Natural eutrophic and mesotrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation (Natura 2000: 3150)
- Br2 Alpine rivers and the herbaceous vegetation along their banks (Natura 2000: 3220)
- Br4 Alpine rivers and their ligneous vegetation with *Salix elaeagnos* (Natura 2000: 3240)
- Br6 Riverbank butterbur communities (Natura 2000: 6430)
- Tr8 Species-rich Nardus grasslands, on silicious substrates in mountain and submountain areas (Natura 2000: 6230*)
- Lk1 Lowland and submountain hay meadows (Natura 2000: 6510)
- Lk2 Mountain hay meadows (Natura 2000: 6520)
- Lk3 Mesophilic pasturelands and grazing meadows (habitat of national importance)
- Lk4 Molinia meadows (Natura 2000: 6410)
- Ra3 Transition mires and quaking bogs (Natura 2000: 7140)
- Ra6 Alkaline fens (Natura 2000: 7230)
- Pr1 Springs of montane and subalpine zones on non-calcite rocks (habitat of national importance)
- Pr3 Petrifying springs with tufa formation (Natura 2000: 7220*)
- Sk2 Siliceous rocky slopes with chasmophytic vegetation (Natura 2000: 8220)
- Ls1.3 Submontane alluvial ash-alder forests (Natura 2000: 91E0*)
- Ls1.4 Montante alluvial alder forests (Natura 2000: 91E0*)
- Ls2.1 Carpathian oak-hornbeam forests (habitat of national importance)
- Ls4 Tilio-Acerion forests of slopes, screes and ravines (Natura 2000: 9180*)
- Ls5.1 Asperulo-Fagetum beech forests (Natura 2000: 9130)
- Ls5.2 Luzulo-Fagetum beech forests (Natura 2000: 9110)
- Ls5.3 Medio-European subalpine beech woods with Acer and Rumex arifolius (Natura 2000: 9140)

Section 1.6.3.1 of this document contains a detailed description.

1.6.2.2. Species of Community and National Importance

PLANT SPECIES OF COMMUNITY IMPORTANCE

- mosses: green shield moss (*Buxbaumia viridis*), brittle broom moss (*Dicranum viride*)
- vascular plants: Scheuchzer's bellflower (*Campanula serrata*), spikerush (*Eleocharis carniolica*), Carpathian Tozzia *(Tozzia carpatica)*
- invertebrates: thick-shelled river mussel (*Unio crassus*), Transylvanan bush-cricket (*Pholidoptera transsylvanica*), Stys's bush-cricket (*Isophya stysi*), rugged ground beetle (*Carabus variolosus*), *Carabus zawadszkii*, rosalia longicorn (*Rosalia alpina*)*, large blue butterfly (*Maculinea arion*), scarce large blue butterfly (*Maculinea teleius*), clouded Apollo (*Parnassius mnemosyne*),
- vertebrates: European fire-bellied toad (*Bombina bombina*), yellow-bellied toad (*Bombina variegata*), European green toad (*Bufo viridis*), European tree frog (*Hyla arborea*), moor frog (*Rana arvalis*), agile frog (*Rana dalmatina*), northern crested newt (*Triturus cristatus*), Carpathian newt (*Triturus montandoni*), Aesculapian snake (*Elaphe longissima*), sand lizard (*Lacerta agilis*), dice snake (*Natrix tessellata*), boreal owl (*Aegolius funereus*), common kingfisher (*Alcedo atthis*), tawny pipit (*Anthus campestris*), greater spotted eagle (*Aquila clanga*), eastern imperial eagle (*Aquila heliaca*), golden eagle (*Aquila chrysaetos*), booted eagle (*Hieraetus pennatus*), lesser spotted eagle (*Aquila pomarina*), great egret (*Egretta alba*), Eurasian eagle-owl (*Bubo bubo*), European nightjar (*Caprimulgus europaeus*), white stork (*Ciconia ciconia*), black stork (*Ciconia nigra*), short-toed snake eagle (*Circaetus gallicus*), western marsh harrier (*Circus aeruginosus*), northern harrier (*Circus cyaneus*), Montagu's harrier (*Circus pygargus*), corn crake (*Crex crex*), white-backed woodpecker (*Dendrocopos leucotos*), middle spotted woodpecker (*Dendrocopos medius*), Syrian woodpecker (*Dendrocopos syriacus*), black woodpecker (*Dryocopus martius*), merlin (*Falco columbarius*), saker falcon (*Falco cherrug*), peregrine falcon (*Falco peregrinus*), red-footed falcon (*Falco vespertinus*), collared flycatcher (*Ficedula albicollis*), red-breasted flycatcher (*Ficedula parva*), black-throated loon (*Gavia arctica*), red-throated loon (*Gavia stellata*), Eurasian pygmy owl (*Glaucidium passerinum*), white-tailed eagle (*Haliaeetus albicilla*), whiskered tern (*Chlidonias hybridus*), black tern (*Chlidonias niger*), red-backed shrike (*Lanius collurio*), lesser grey shrike (*Lanius minor*), woodlark (*Lullula arborea*), black kite (*Milvus migrans*), red kite (*Milvus milvus*), osprey (*Pandion haliaetus*), European honey buzzard (*Pernis apivorus*), Eurasian three-toed woodpecker (*Picoides tridactylus*), grey-headed woodpecker (*Picus canus*), Ural owl (*Strix uralensis*), barred warbler (*Sylvia nisoria*), wood grouse (*Tetrao urogallus*), hazel grouse (*Bonasa bonasia*), barbastelle (*Barbastella barbastellus*), European bison (*Bison bonasus*), gray wolf (*Canis lupus*)*, Eurasian beaver (*Castor fiber*), northern bat (*Eptesicus nilssoni*), serotine bat (*Eptesicus serotinus*), wild cat (*Felis sylvestris*), European otter (*Lutra lutra*), Eurasian lynx (*Lynx lynx*), hazel dormouse (*Muscardinus avellanarius*), Bechstein's bat (*Myotis bechsteini*), lesser mouse-eared bat (*Myotis blythi*), Brandt's bat (*Myotis brandti*), pond bat (*Myotis dasycneme*), Daubenton's bat (*Myotis daubentoni*), Geoffroy's bat (*Myotis emarginatus*), greater mouse-eared bat (*Myotis myotis*), whiskered bat (*Myotis mystacinus*), Natterer's bat (*Myotis nattereri*), lesser noctule (*Nyctalus leisleri*), common noctule (*Nyctalus noctula*), common pipistrelle (*Pipistrellus pipistrellus*), brown long-eared bat (*Plecotus auritus*), grey long-eared bat (*Plecotus austriacus*), greater horseshoe bat (*Rhinolophus ferrumequinum*), lesser horseshoe bat (*Rhinolophus hipposideros*), northern birch mouse (*Sicista betulina*), brown bear (*Ursus arctos*)* and parti-coloured bat (*Vespertilio murinus*).

ANIMAL SPECIES OF COMMUNITY IMPORTANCE

- invertebrates: door snail (*Clausilia dubia carpatica*), narrow-mouthed whorl snail (*Vertigo angustior*), wolf spider (*Pardosa proxima*), *Neobisium polonicum, Ischyropsalis manicata, Siro carpaticus*, European crayfish (*Astacus astacus*), *Polyzonium transsilvanicum, Dicellophilus*

carniolensis, Ecdyonurus insignis, azure hawker (*Aeshna caerulea*), emperor dragonfly (*Anax imperator*), *Coenagrion hastulatum, Cordulogaster bidentata*, small pincertail (*Onychogomphus forcipatus*), keeled skimmer (*Orthetrum coerulescens*), emerald dragonfly (genus *Somatochlora*), common winter damselfly (*Sympecma fusca*), banded darter (*Sympetrum pedemontanum*), European mantis (*Mantis religiosa*), golden ground beetle (*Carabus auronitens*), ground beetle (*Carabus irregularis*), *Carabus obsoletus*, darkling beetle (*Laena reitteri*), *Leptura thoracica*, longhorn beetle (*Megopis scabricornis*), oil beetle (*Meloe brevicollis*), rugged oil beetle (*Meloe rugosus*), *Necydalis major*, European rhinoceros beetle (*Oryctes nasicornis*), *Rhopalopus ungaricus*, all species of bumblebee (*Bombus*), caddisfly (*Agrypnia obsoleta*), *Arichanna melanaria*, tufted skipper (*Carcharodus flocciferus*), *Atherix ibis*, alcon blue (*Maculinea alcon*), and mountain alcon blue (*Maculinea rebeli*).

- Vertebrates: Carpathian brook lamprey (*Eudontomyzon danfordi*), Kessler's gudgeon (*Gobio kessleri*), Danubian gudgeon (*Gobio uranoscopus*), golden spined loach (*Sabanejewia balcanica*), common toad (*Bufo bufo*), edible frog (*Rana Esculenta*), common frog (*Rana temporaria*), fire salamander (*Salamandra salamandra*), alpine newt (*Triturus alpestris*), slow worm (*Anguis fragilis*), grass snake (*Natrix natrix*), common European adder (*Vipera berus*), 155 bird species, moose (*Alces alces*), lesser white-toothed shrew (*Crocidura suaveolens*), Southern white-chested hedgehog (*Erinaceus concolor*), edible dormouse (*Glis glis*), stoat (*Mustela erminea*), least weasel (*Mustela nivalis*), Mediterranean water shrew (*Neomys anomalus*), Eurasian water shrew (*Neomys fodiens*), red squirrel (*Sciurus vulgaris*), Alpine shrew (*Sorex alpinus*), common shrew (*Sorex araneus*) and Eurasian pygmy screw (*Sorex minutus*).

Detailed description of plant and animal species can be found in Section 1.6.3.2 of this document.

1.6.3. Assessment of the Conservation Object Status, Setting of Conservation Priorities

Data on status of the biotic element of the conservation object in the Poloniny NP were gathered based on the research and monitoring conducted by research institutions and the SNC SR. Details in this regard can be found in Appendix 6.6.12.

The definitions of conservation status are set forth by Act No. 543/2002 Coll. and covered in more detail in the publication Priaznivý stav biotopov a druhov európskeho významu [Favourable Condition of Habitats and Species of Community Importance] (Polák, Saxa, 2005). Habitats and species of Community importance in Poloniny NP status assessment was conducted based on the Príprava a zavedenie monitoringu biotopov a druhov a zlepšenie sprístupňovania verejnosti [Preparation and Implementation of Habitats and Species Monitoring and Improvement in Informing the Public] SNC SR structural funds project (hereinafter ref. to as SF Monitoring).

1.6.3.1. Habitats of Community Importance

18 habitats of Community importance are the subject of conservation in the Poloniny NP. The list and condition assessment can be found in Table 2 of this document. Poloniny NP habitats can be divided into 2 groups, based on human intervention perspective:

HABITATS SUBSTANTIALLY UNCHANGED BY HUMAN ACTIVITY

Tr8 **Species-rich Nardus grasslands, on silicious substrates in mountain and submountain areas** (Natura 2000: 6230*) are non-forest meadow ecosystems having resulted from Wallachian colonization. They were traditionally managed by grazing and mowing. After the Second World War the way of life of local population changed and the methods of traditional management vanished.

Priorities:

- preserving parts of these meadow ecosystems from a landscaping perspective and

- ensuring the conservation of meadow ecosystems in representative areas and of suitable conditions for Eastern Carpathian plant species.

Vo2 **Natural eutrophic and mesotrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation** (Natura 2000: 3150) are an aquatic ecosystem present in only one Poloniny NP site (in EFA13). It was traditionally used for fisheries.

Priority:

- ensuring the favourable condition of the habitat.

Br2 **Alpine rivers and the herbaceous vegetation along their banks** (Natura 2000: 3220) are grassland communities in alluvial locations waterlogged and undermined by flowing water. They occur by the Poloniny NP water flows in EFA14. Traditionally, they are not used for anything.

Priority:

- ensuring favourable condition of the habitat.

Br4 **Alpine rivers and their ligneous vegetation with *Salix elaeagnos*** (Natura 2000: 3240) are pioneer communities with a developed shrub layer. They occur by the Poloniny NP water flows in EFA14, the *Salix elaeagnos* is not present, though. The shrub stand is created mainly by the purple willow (*Salix purpurea*) or other woody plants. Traditionally, they are used only for basket weaving.

Priority:

- ensuring the favourable condition of the habitat.

Br6 **Riverbank butterbur communities** (Natura 2000: 6430) are pioneer communities with butterbur (in this area mainly *Petasites hybridus*). They occur on Poloniny NP water flows banks in EFA14, less by subslope springs, in wet stands of alluvial meadows and by roads in ditches. Traditionally, they are not used for anything.

Priority:

- ensuring the favourable condition of the habitat.

Pr3 **Petrifying springs with tufa formation** (Natura 2000: 7220*) are rare limestone springs communities with small-scale occurrence. The water is rich in oxygen and dissolved calcium cations that condense and settle on bryophytes leaves and liverworts thallus. Communities develop in cold and fast flowing springs on limestone and quartzite, water pH up to 8, if the water contains enough calcium cations Ca2+. In Poloniny NP they occur only in one site in EFA14. Traditionally, they are not used for anything.

Priority:

- ensuring the favourable condition of the habitat.

Ra3 **Transition mires and quaking bogs** (Natura 2000: 7140) is a rare ecosystem creating the transition between fens and raised bogs located in Poloniny NP EFA11 and EFA12 (Bahno Nature Reserve). Traditionally they were used only for mowing.

Priority:

- ensuring the favourable condition of the habitat.

Ra6 **Alkaline fens** (Natura 2000: 7230) are fen meadows communities rich in minerals. This rare habitat occurs in 1 Poloniny NP site only (EFA12) and is a part of Stinská slatina Nature Reserve. Traditionally it was used only for mowing.

Priority:

- ensuring the favourable condition of the habitat.

Ls5.3 **Medio-European subalpine beech woods with Acer and Rumex arifolius** (Natura 2000: 9140) are exceptionally rare forest ecosystems formed by predominant tree species: sycamore maple and

the Norway maple. They constitute the timberline in Poloniny NP, especially on the main Carpathian ridge. The majority of these ecosystems is currently protected within the small-scale protected areas.

Priority:

- ensuring the favourable condition of habitats by means of targeted management that will support the auto-regulation processes of forest ecosystems.

Ls5.2 **Luzulo-Fagetum beech forests** (Natura 2000: 9110) are forest ecosystems of more acidic sites formed by predominant tree: the European beech. This ecosystem is a less-represented one in Poloniny NP. The majority of these ecosystems is currently protected within the small-scale protected areas.

Priority:

- ensuring the favourable condition of the habitat.

Fir-beech forests (Ls5.1 **Asperulo-Fagetum beech forests** (Natura 2000: 9130) are exceptionally rare forest ecosystems formed by predominant tree species: the silver fir. In Poloniny NP they were preserved mainly on edges of Udava, Zbojský potok and Stužica brooks valleys. The majority of these ecosystems is currently protected within the small-scale protected areas.

Priorities:

- ensuring the favourable condition of habitats by means of targeted management that will support the auto-regulation processes of forest ecosystems and
- native fir-beech forest structure regeneration and strengthening.

Flowery-beech forests (Ls5.1 **Asperulo-Fagetum beech forests** (Natura 2000: 9130) are the most widespread forest ecosystems formed by a predominant tree: the European beech. The best-preserved parts of these ecosystems are currently protected within the small-scale protected areas.

Priorities:

- ensuring the favourable condition of habitats by means of targeted management that will support the auto-regulation processes of forest ecosystems and
- the preservation of their current structure.

Ls1.3 **Submontane alluvial ash-alder forests** (Natura 2000: 91E0*) are rare forest ecosystems formed by predominant tree species: the common ash and grey alder. In Poloniny NP those are forests in alluvial plains of rivers influenced by surface floods or waterlogged by flowing underground water.

Priority:

- ensuring the favourable condition of the habitat.

Ls1.4 **Montante alluvial alder forests** (Natura 2000: 91E0*) are rare forest ecosystems with stands formed by grey alder mixed with other woody plants. They occur on mountain water flows banks in cold valleys.

Priority:

- ensuring the favourable condition of the habitat.

Ls4 **Tilio-Acerion forests of slopes, screes and ravines** (Natura 2000: 9180*) are rare forest ecosystems preserved mainly in the EFA1a, EFA1b, and EFA2. In the priority habitats map (in Appendix 6.6.15) they are designated also in EFA3 and EFA4. However, it is necessary to take into consideration that a forest type is defined by phytocenosis present in a given area, i. e. by the herbal synusia composition. This habitat is in fact not present in the EFA3 and EFA4 from the woody plant composition perspective, the reason being the commercial stands significantly influenced by human activity. That is why it is necessary to ensure their favourable condition in the EFA1a, EFA1b, and EFA2.

Priorities:

- ensuring the favourable condition of habitats by means of targeted management that will support the auto-regulation processes of forest ecosystems and
- preservation of *Tilio-Acerion* forests of slopes, screes and ravines current structure.

Sk2 **Siliceous rocky slopes with chasmophytic vegetation** (Natura 2000: 8220) are rock communities poor in species. Moss and lichen synusia prevail. In Poloniny NP they occur on protruding rocks (such as in Jarabá skala) and are a part of EFA1–4 and EFA14. The majority of these ecosystems is currently protected within the small-scale protected areas. Traditionally, they are not used for anything.

Priority:

- ensuring the auto-regulation processes.

HABITATS SUBSTANTIALLY CHANGED BY HUMAN ACTIVITY

Permanent grass stands above the Starina reservoir.

- Lk1 **Lowland and submountain hay meadows** (Natura 2000: 6510).
- Lk2 **Mountain hay meadows** (Natura 2000: 6520).
- Lk3 **Mesophilic pasturelands and grazing meadows** (habitat of national importance).
- Lk4 **Molinia meadows** (Natura 2000: 6410).

Non-forest ecosystems in the area (after the relocation of the population previously living there) were extensively used in the past. The best-preserved parts of these ecosystems are currently protected within the small-scale protected areas.

Priorities:

- preserving the current extent of these meadow ecosystems from the landscaping perspective and
- ensuring the controlled care about the most precious meadow ecosystems protected within the small-scale protected areas and outside of them,
- ensuring the protection of rare and endangered woody plants gene pool,
- ensuring the protection of endangered plant and animal species as well as their habitats and
- the elimination of invasive plant and animal species spreading.

Table 2: Outline of Habitats of Community importance that are Subject to Conservation of Sites of Community Importance Overlapping with the Poloniny NP Territory and of their Condition Assessment (1 January 2015).

Habitat Name	Habitat Code (Natura 2000)	Habitat Condition
Natural eutrophic and mesotrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation	3150	B
Alpine rivers and the herbaceous vegetation along their banks	3220	C
Alpine rivers and their ligneous vegetation with *Salix elaeagnos*	3240	B
Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels (riverbank butterbur communities in particular)	6430	A
Species-rich *Nardus* grasslands, on silicious substrates in mountain and submountain areas	6230*	C
Lowland and submountain hay meadows	6510	B
Mountain hay meadows	6520	B
Molinia meadows	6410	B
Transition mires and quaking bogs	7140	C

Alkaline fens	7230	C
Petrifying springs with tufa formation	7220*	A
Siliceous rocky slopes with chasmophytic vegetation	8220	A
Alluvial forests with Alnus glutinosa and Fraxinus excelsior (submontane alluvial ash-alder forests in particular)	91E0*	B
Alluvial forests with Alnus glutinosa and Fraxinus excelsior (montane alluvial alder forests in particular)	91E0*	B
Tilio-Acerion forests of slopes, screes and ravines	9180*	B
Asperulo-Fagetum beech forests	9130	B
Luzulo-Fagetum beech forests	9110	A
Medio-European subalpine beech woods with Acer and Rumex arifolius	9140	A

Habitat Condition: *A-favourable, good, B-favourable, average, C-unfavourable*

Priority habitats in forests are shown in the Appendix 6.6.15 map.

1.6.3.2. Species of Community Importance

5 animal and 96 plant species of Community importance are subject to conservation in the Poloniny NP. The list and condition assessment is in Table 3 of this document. Detailed description (text following the table) was drafted for all species of Community and national importance subject to Poloniny NP conservation.

Table 3: Overview of Plant and Animal Species of Community Importance that are Subject to Conservation in Poloniny NP – Categories, Quantity and Assessment (1 January 2015).

Scientific Name	**Common Name**	**Protected Species (§)**	**Red List Category**	**Quantity**	**Nature of Occurrence and Number of Sites**	**Species Condition**
Plants:						
Buxbaumia viridis	green shield moss	§	–	More-less stable, localized on several trunks only.	1 site	B
Dicranum viride	brittle broom moss	§	–	Occurrence recorded on several trees: stable population.	6 sites	A

Campanula serrata	Scheuchzer's bellflower	§	–	unknown	8 sites	B
Eleocharis carniolica	–	§	EN	unknown	2 sites	B
Tozzia carpatica	Carpathian Tozzia	§	LR:nt	unknown	4 sites	B
Animals:						
Unio crassus	thick-shelled river mussel	§	VU	unknown	1 site	N
Pholidoptera transsylvanica	Transylvanian bush-cricket	§	VU	unknown	2 sites	N
Isophya stysi	Stys's bush-cricket	§	DD	unknown	isolated occurrence	N
Carabus variolosus	rugged ground beetle	§	LR: cd	unknown	10 sites	N
Carabus zawadszkii	–	§	–	unknown	13 sites	N
Rosalia alpina	rosalia longicorn	§	VU	unknown	area-wide	N
Maculinea arion	large blue butterfly	§	VU	unknown	20 sites	B
Maculinea teleius	scarce large blue butterfly	§	EN	unknown	2 sites	C
Parnassius mnemosyne	clouded Apollo butterfly	§	VU	unknown	isolated occurrence	N
Bombina variegata	yellow-bellied toad	§	LR: cd	relatively abundant	insular	A
Bombina bombina	European fire-bellied toad	§	LR: cd	unknown	isolated occurrence	C
Bufo viridis	European green toad	§	LR: cd	unknown	isolated occurrence	C
Hyla arborea	European tree frog	§	LR nt	unknown	isolated occurrence	C
Rana arvalis	moor frog	§	VU	unknown	isolated occurrence	N
Rana dalmatina	agile frog	§	LRlc	unknown	isolated occurrence	C

Triturus cristatus	northern crested newt	§	EN	unknown	insular	C
Triturus montandoni	Carpathian newt	§	VU	unknown	insular	B
Elaphe longissima	Aesculapian snake	§	LR: cd	unknown	insular	B
Lacerta agilis	sand lizard	§	–	unknown	isolated	B
Natrix tesselata	dice snake	§	VU	unknown	1 figure	N
Aegolius funereus	boreal owl	§	NE	low	breeding bird - 5 sites	N
Alcedo atthis	common kingfisher	§	LR: nt	5 couples	breeding bird	B
Anthus campestris	tawny pipit	§	EN	isolated occurrence	migrant	–
Aquila clanga	greater spotted eagle	§	–	isolated occurrence	migrant	–
Aquila heliaca	eastern imperial eagle	§	EN	isolated occurrence	migrant	–
Aquila chrysaetos	golden eagle	§	VU	1 couple	breeding bird	C
Hieraetus pennatus	booted eagle	§	CR	isolated occurrence	migrant	–
Aquila pomarina	lesser spotted eagle	§	LR: nt	8 couples	breeding bird	B
Egretta alba	great egret	§	EN	isolated occurrence	migrant	–
Bubo bubo	Eurasian eagle-owl	§	NE	1 couple	breeding bird	N
Caprimulgus europaeus	European nightjar	§	NE	50–100	breeding bird	B
Ciconia ciconia	white stork	§	LR: Ic	3 couples	breeding bird	C
Ciconia nigra	black stork	§	LR: nt	9 couples	breeding bird	B
Circaetus gallicus	short-toed snake eagle	§	EN	2 couples	probably a breeding bird	N

Circus aeruginosus	western marsh harrier	§	LR	isolated occurrence	migrant	–
Circus cyaneus	northern harrier	§	–	isolated occurrence	migrant	–
Circus pygargus	Montagu's harrier	§	–	isolated occurrence	migrant	–
Crex crex	corn crake	§	LR: cd	200	breeding bird	B
Dendrocopos leucotos	white-backed woodpecker	§	LR: nt	150	breeding bird	A
Dendrocopos medius	middle spotted woodpecker	§	–	unknown	breeding bird	N
Dendrocopos syriacus	Syrian woodpecker	§	–	unknown	breeding bird	N
Dryocopus martius	black woodpecker	§	–	100 couples	breeding bird	A
Falco columbarius	merlin	§	–	isolated occurrence	wintering bird	–
Falco cherrug	saker falcon	§	CR	isolated occurrence	migrant	–
Falco peregrinus	peregrine falcon	§	EN	isolated occurrence	migrant	–
Falco vespertinus	red-footed falcon	§	EN	isolated occurrence	migrant	–
Ficedula albicollis	collared flycatcher	§	–	2600 couples	breeding bird	A
Ficedula parva	red-breasted flycatcher	§	NE	1000 couples	breeding bird	A
Gavia arctica	black-throated loon	§	–	isolated occurrence	wintering bird	–
Gavia stellata	red-throated loon	§	–	isolated occurrence	wintering bird	–
Glaucidium passerinum	Eurasian pygmy owl	§	NE	low	breeding bird – 3 sites	N
Haliaeetus albicilla	white-tailed eagle	§	CR	isolated occurrence	migrant	–
Chlidonias	whiskered tern	§	EN	isolated	migrant	–

hybridus				occurrence		
Chlidonias niger	black tern	§	VU	isolated occurrence	migrant	–
Lanius collurio	red-backed shrike	§	–	unknown	insular	N
Lanius minor	lesser grey shrike	§	VU	isolated occurrence	migrant	–
Lullula arborea	woodlark	§	–	unknown	breeding bird	N
Milvus migrans	black kite	§	VU	isolated occurrence	migrant, a breeding bird in the past	N
Milvus milvus	red kite	§	EN	isolated occurrence	migrant, a breeding bird in the past	N
Pandion haliaetus	osprey	§	–	isolated occurrence	migrant	–
Pernis apivorus	European honey buzzard	§	LR: lc	10 couples	breeding bird	B
Picoides tridactylus	Eurasian three-toed woodpecker	§	–	unknown	breeding bird – 6 sites	N
Picus canus	grey-headed woodpecker	§	–	80 couples	breeding bird	A
Strix uralensis	Ural owl	§	LR: lc	50 couples	breeding bird	B
Sylvia nisoria	barred warbler	§	–	200 couples	breeding bird	A
Tetrao urogallus	wood grouse	§	VU	isolated occurrence	migrant	N
Bonasa bonasia	hazel grouse	§	–	700 couples	breeding bird	B
Barbastella barbastellus	barbastelle	§	LR: cd	unknown	isolated occurrence, 4 sites	N
Bison bonasus	European bison	§	NE	30	Starina reservoir flood plain	A
Canis lupus	gray wolf	§	LR: nt	unknown	area-wide	A
Castor fiber	Eurasian beaver	§	LRnt	unknown	8 families	A

Eptesicus nilssoni	northern bat	§	LR: lc	unknown	isolated occurrence, 8 sites	N
Eptesicus serotinus	serotine bat	§	DD	unknown	isolated occurrence, 10 sites	N
Felis sylvestris	wildcat	§	VU	unknown	area-wide	N
Lutra lutra	European otter	§	VU	22 spec.	area-wide: rivers and the Starina reservoir	A
Lynx lynx	Eurasian lynx	§	EN	12 spec.	area-wide	A
Muscardinus avellanarius	hazel dormouse	§	LR: lc	unknown	insular	N
Myotis bechsteini	Bechstein's bat	§	LR: lc	unknown	isolated occurrence, 1 site	N
Myotis blythi	lesser mouse-eared bat	§	LR: cd	unknown	isolated occurrence, 1 site	N
Myotis brandti	Brandt's bat	§	VU	unknown	isolated occurrence, 6 sites	N
Myotis dasycneme	pond bat	§	VU	unknown	isolated occurrence, 1 site	N
Myotis daubentoni	Daubenton's bat	§	LR: lc	unknown	isolated occurrence, 12 sites	N
Myotis emarginatus	Geoffroy's bat	§	VU	unknown	isolated occurrence, 4 sites	N
Myotis myotis	greater mouse-eared bat	§	LR: cd	unknown	isolated occurrence, 4 sites	N
Myotis mystacinus	whiskered bat	§	VU	unknown	isolated occurrence, 11 sites	N
Myotis nattereri	Natterer's bat	§	LR: nt	unknown	isolated occurrence, 1 site	N
Nyctalus	lesser noctule	§	DD	unknown	isolated occurrence, 2	N

leisleri					sites	
Nyctalus noctula	common noctule	§	LR: lc	unknown	isolated occurrence, 6 sites	N
Pipistrellus pipistrellus	common pipistrelle	§	LR: lc	unknown	isolated occurrence, 28 sites	N
Plecotus auritus	brown long-eared bat	§	LR: nt	unknown	isolated occurrence, 8 sites	N
Plecotus austriacus	grey long-eared bat	§	LR: nt	unknown	isolated occurrence, 2 sites	N
Rhinolophus ferrumequinum	greater horseshoe bat	§	CR	unknown	isolated occurrence, 1 site	N
Rhinolophus hipposideros	lesser horseshoe bat	§	LR: cd	unknown	isolated occurrence, 4 sites	N
Sicista betulina	northern birch mouse	§	VU	unknown	insular unknown	N
Ursus arctos	brown bear	§	LR: cd	30	area-wide	B
Vespertilio murinus	parti-coloured bat	§	DD	unknown	isolated occurrence, 2 sites	N

Species overview according to the Slovak Red List 2001:
CR *– Critically Endangered*
EN *– Endangered*
VU *– Vulnerable*
LR *– Lower Risk*
cd *– Conservation Dependent*
nt *– Near Threatened*
lc *– Least Concern*
DD *– Data Deficient*
Species Condition: *A - favourable, good, B - favourable, average, C - unfavourable, N - lack of data on occurrence to assess the condition; migrant or wintering species.*

Plant species of Community Importance

BRYOPHYTES

Green shield moss (*Buxbaumia viridis):* 1 site in Stužický prales primeval forest is currently confirmed. The potential for this species occurrence in the area is, however, very high, as several older forest stands occurring here contain enough of the "dead wood" needed for this species. Brittle broom moss (*Dicranum viride*): the core distribution of this species in Slovakia is in the Poloniny NP territory,

on tree bark in well-preserved forest stands. 6 sites with favourable size of this species population are currently known.

Determining the population size and proposing the conservation measures are two priorities concerning these species.

VASCULAR PLANTS

Scheuchzer's bellflower (*Campanula serrata*): Knowledge about this species is not insufficient for the determination of favourable condition. Determining the population size and proposing the conservation measures is the priority.

Spikerush (*Eleocharis carniolica*): The species was confirmed in 2 Poloniny NP sites. Both were being monitored in 2008–2014 within the SF Monitoring project. Maintaining its favourable status by the proper care of non-forest habitats is the priority.

Carpathian Tozzia (*Tozzia carpatica*): The species was confirmed in 2 Poloniny NP sites. Both were being monitored in 2008–2014 within the SF Monitoring project. Maintaining its favourable status by the proper care of non-forest habitats is the priority.

Animal Species of Community Importance

Basic assessment attributes for 24 species of Community importance were defined within several SNC SR projects: "Preparation of data in order to ascertain favourable condition of several bird species and their habitats in Special Protection Area – Stage 1 (SF Birds)"; "Preparation of programs to care about selected Special Protected Areas – Stage 2 (SF Birds 2)"; "Execution of the European bison (*Bison bonasus*) rescue program (SF Bison)"; "SF Monitoring", and "Research and monitoring of large carnivores and the wildcat in Slovakia (SF Large Carnivores)". Species are listed in Table 3. The conservation status cannot be determined for 63 species of Community importance, due to insufficient knowledge, missing data or rarely migrating or wintering species. These are the species in question: shelled river mussel (*Unio crassus*), Transylvanian bush-cricket (*Pholidoptera transsylvanica*), *Isophya stysi*, common black ground beetle (*Carabus variolosus*), *Carabus zawadszkii*, rosalia longicorn (*Rosalia alpina*), Clouded Apollo (*Parnassius mnemosyne)*, moor frog (*Rana arvalis*), dice snake (*Natrix tesselata*), boreal owl (*Aegolius funereus*), tawny pipit (*Anthus campestris*), greater spotted eagle (*Aquila clanga*), eastern imperial eagle (*Aquila heliaca*), booted eagle (*Hieraetus pennatus*), great white egret (*Egretta alba*), Eurasian eagle owl (*Bubo bubo*), short toed eagle (*Circaetus gallicus*), western marsh harrier (*Circus aeruginosus*), hen harrier (*Circus cyaneus*), Montagu's harrier (*Circus pygargus*), middle spotted woodpecker (*Dendrocopos medius*), Syrian woodpecker (*Dendrocopos syriacus*), merlin (*Falco columbarius*), saker falcon (*Falco cherrug*), shaheen falcon (*Falco peregrinus*), red-footed falcon (*Falco vespertinus*), black-throated loon (*Gavia arctica*), red-throated loon (*Gavia stellata*), Eurasian pygmy owl (*Glaucidium passerinum*), white-tailed eagle (*Haliaeetus albicilla*), whiskered tern (*Chlidonias hybridus*), black tern (*Chlidonias niger*), red-backed shrike (*Lanius collurio*), lesser grey shrike (*Lanius minor*), wood lark (*Lullula arborea*), black kite (*Milvus migrans*), red kite (*Milvus milvus*), osprey (*Pandion haliaetus*), western capercaillie (*Tetrao urogallus*), barbastelle (*Barbastella barbastellus*), northern bat (*Eptesicus nilssoni*), serotine bat (*Eptesicus serotinus*), wildcat (*Felis sylvestris*), hazel dormouse (*Muscardinus avellanarius*), Bechstein's bat (*Myotis bechsteini*), lesser mouse-eared myotis (*Myotis blythi*), Brandt's bat (*Myotis brandti*), pond bat (*Myotis dasycneme*), Daubenton's bat (*Myotis daubentoni*), Geoffroy's bat (*Myotis emarginatus*), greater mouse-eared bat (*Myotis myotis*), whiskered bat (*Myotis mystacinus*), Natterer's bat (*Myotis nattereri*), Leisler's bat (*Nyctalus leisleri*), common noctule (*Nyctalus noctula*), common pipistrelle (*Pipistrellus pipistrellus*), brown long-eared bat (*Plecotus auritus*), grey long-eared bat (*Plecotus austriacus*), greater horseshoe bat (*Rhinolophus ferrumequinum*), lesser horseshoe bat (*Rhinolophus hipposideros*), northern birch mouse (*Sicista betulina*) and parti-coloured bat (*Vespertilio murinus*).

Priority: determining the population size and proposing the species conservation measures (measure types in Table 3).

INVERTEBRATES

Thick shelled river mussel (*Unio crassus*) occurs only in mudflats in the Chotinka Stream's lower part. The authentication of occurrence was negative elsewhere. In recent years, only dead shells have been found. Transylvanian bush-cricket (*Pholidoptera transsylvanica*) and ***Isophya stysi*** occur only rarely and only past records of distribution are available. ***Carabus variolosus*** lives in swamps and on mountain streams banks. 10 occurrence sites are known. ***Carabus zawadszkii*** is an Eastern Carpathian species found in 13 Poloniny NP sites. **Rosalia longicorn** (*Rosalia alpina*) occurs in native birch forests. Records of **clouded Apollo butterfly** (*Parnassius mnemosyne*) distribution are rare and occasional.
Priorities: Begin with intervertebrates of Community importance research and continue with their monitoring.

Maculinea butterflies: There are 2 *Maculinea* genus butterflies in Poloniny NP (*Phengaris* according to the new nomenclature. In the Management Plan texts, however, the old denomination is used, in accordance with Decree MoE 24/2003 Coll.) included in the Annex 6A of the Decree MoE 24/2003 Coll. in the list of species of Community importance. **Large blue butterfly** *(Maculinea arion)* is, according to the IUCN classification, included in the Vulnerable Category. In terms of international legislation, it is included in Annex II of the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) and in Annex IV of the Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (The Habitats Directive). **Scarce large blue butterfly** *(Maculinea teleius)* (Bergsträsser, 1779) is, according to the IUCN classification, included in the Endangered Category. In terms of international legislation, it is included in Annex II of the Bern Convention and in Annex II of the Habitats Directive.

Priorities:

- to improve the species of Community importance (subject to conservation in the territory) habitats condition;
- to improve the unfavourable condition of *Maculinea arion* and *Maculinea teleius* by suitable management of sites where these rare species occur, applying the Zásady manažmentu lokalít s výskytom modráčikov z rodu *Maculinea* [Management Principles in Sites with Occurrence of *Maculinea* Butterflies] (SNC SR, 2008).

Amphibians and reptiles: **European fire-bellied toad** (*Bombina bombina*), **yellow-bellied toad** (*Bombina variegata*), **European green toad** (*Bufo viridis*), **European tree frog** (*Hyla arborea*), **moor frog** (*Rana arvalis*), **agile frog** (*Rana dalmatina*), **northern crested newt** (*Triturus cristatus*), **Carpathian newt** (*Triturus montandoni*). Their distribution is limited by the existence of suitable habitats. Landfilling of spring areas limits the population growth in several sites. Vegetation overgrowth contributes to decrease in suitable sites and might therefore be dangerous.

Priorities:

- initiate research of the insufficiently known amphibian species of Community importance and subsequently
- ensure their monitoring and create suitable sites.

Birds: Reported incidence of birds in Poloniny NP is **47 bird species of Community importance (27 nesting and 20 migrating, wintering or with non-breeding occurrence)**. Bukovské vrchy Hills are one of the five most important nesting areas in Slovakia of the following species: **European nightjar** (*Caprimulgus europaeus*), **corn crake** (*Crex crex*) and **hazel grouse** (*Bonasa bonasia*). Over 1% of the national population of the following bird species regularly nests here: **black stork** (*Ciconia nigra*), **lesser spotted eagle** (*Aquila pomarina*), **European honey buzzard** (*Pernis apivorus*), **common kingfisher** (*Alcedo atthis*), **Ural owl** (*Strix uralensis*), **grey-headed woodpecker** (*Picus canus*), **black woodpecker** (*Dryocopus martius*), **white-backed woodpecker** (*Dendrocopos leucotos*), **barred warbler** (*Sylvia nisoria*), **red-breasted flycatcher** (*Ficedula parva*), **collared flycatcher** (*Ficedula albicollis*), **great grey shrike** (*Lanius excubitor*), **common quail** (*Coturnix coturnix*), **Eurasian wryneck** (*Jynx torquilla*) and **common redstart** (*Phoenicurus phoenicurus*).

Priorities:

- to monitor populations size,
- to provide for setting up permanent monitoring areas.

Bats: **Barbastelle** (*Barbastella barbastellus*), **northern bat** (Eptesicus nilssoni), **serotine bat** (*Eptesicus serotinus*), **Bechstein's bat** (*Myotis bechsteini*), **lesser mouse-eared myotis** (*Myotis blythi*), **Brandt's bat** (*Myotis brandti*), **pond bat** (*Myotis dasycneme*), **Daubenton's bat** (*Myotis daubentoni*), **Geoffroy's bat** (*Myotis emarginatus*), **greater mouse-eared bat** (*Myotis myotis*), **whiskered bat** (*Myotis mystacinus*), **Natterer's bat** (*Myotis nattereri*), **Leisler's bat** (*Nyctalus leisleri*), **common noctule** (*Nyctalus noctula*), **common pipistrelle** (*Pipistrellus pipistrellus*), **brown long-eared bat** (*Plecotus auritus*), **grey long-eared bat** (*Plecotus austriacus*), **greater horseshoe bat** (*Rhinolophus ferrumequinum*), **lesser horseshoe bat** (*Rhinolophus hipposideros*), and **parti-coloured bat** (*Vespertilio murinus*). The occurrence of bats depends on underground shelter availability. The lack of it might limit the occurrence. The Poloniny NP territory contains only a few pseudo-caves and the Starina reservoir underground areas. These are a precondition for maintaining species populations. Population size might be improved by better resource availability, e. g. in terms of increased livestock production.

Priorities:

- conducting a more detailed research on bat populations in cooperation with the Slovak Bat Conservation Society,
- ensuring the monitoring of wintering sites and implementing measures for habitat protection.

European bison *(Bison bonasus):* Bison repatriation to Poloniny NP begun in 2004. Since then 11 specimens have been brought in, acclimatized and released into the wild. 12 calves have been born in the wild and 5 specimens have died. Currently, there is a **herd of 18 specimens and 7 specimens** migrate from Poland.

Priority: maintaining the favourable population status via active management (monitoring, veterinary care and feeding during severe winters, preserving suitable habitats, etc.).

Grey wolf (*Canis lupus*), wildcat (*Felis sylvestris*), **Eurasian lynx** (*Lynx lynx*), **brown bear** (*Ursus arctos*): Large carnivores' populations in Poloniny NP are stable. There is no hunting intervention, but poaching is a problem.

Priority: to ensure populations monitoring and keep records of damage caused by wolves.

Eurasian beaver (*Castor fiber*): Beavers in Poloniny NP have been recorded since 2004. Population monitoring was a part of the SF Monitoring project in 2014 and 2015. The species' condition is favourable. 8 families were recorded along the Cirocha River.

Priority: ensure continuation of population monitoring.

European otter (*Lutra lutra*): The population has been closely monitored within the SF Monitoring project since 2014. The species' condition is favourable – good. A quantity of 15 specimens is estimated.

Priority: ensure the continuation of population monitoring.

Hazel dormouse (*Muscardinus avellanarius*): insular occurrence, mainly on successively overgrown pastures.

Priorities:

- ensure population research in suitable habitats and subsequently
- ensure the population monitoring.

Plant Species of National Importance

The conservation status of most species of national importance cannot be determined due to insufficient knowledge and missing data. Determining the population size and subsequent proposal of the conservation measures should be a priority in the case of these species. Maintaining or achieving a favourable condition is another priority for all these species. This will be achieved by suitable care about the occurrence sites. In the case of caring for habitats it is necessary to also consider whether the species in question are endangered or not.

Monk's cap (*Aconitum paniculatum*): An Eastern Carpathian species. It occurs only in one isolated site. Its population is stable and no management is necessary.

Hartman's sedge (*Carex hartmanii*): It occurs only in two sites. Its population is stable.

Waldstein's thistle (*Cirsium waldsteinii*): An Eastern Carpathian species. It occurs in several main Carpathian ridge sites. Its population is stable.

Northern ground cedar (*Diphasiastrum complantum*): It occurs in several sites. Its population is stable.

Hellebores (*Helleborus purpurascens*): An Eastern Carpathian species occurring in several sites. Its population is stable.

Lathyrus laevigatus: An Eastern Carpathian species. It occurs in several sites. Its population is stable.

Ostrich fern (*Matteuccia struthiopteris*): It occurs in several sites. Its population is stable.

Bug orchis (*Orchis coriophora*): It occurs in 1 site. Its population is endangered.

***Orchis elegans*:** It occurs in 1 site. Its population is endangered.

Priorities: Ensure the attaining or maintaining of a favourable status by suitable care of non-forest habitats.

Orchis morio: It occurs in several sites. Its population is stable.

Orchis ustulata: It occurs in 3 sites. Its population is endangered.

Ranunculus carpaticus: an Eastern Carpathian species. It occurs in 1 site. Its population is stable.

Scorzonera rosea: An Eastern Carpathian species. It occurs in 2 localities; its population is endangered.

Swamp ragwort (*Tephroseris papposa*): An Eastern Carpathian species. It occurs in several sites. Its population is endangered.

Tithymalus sojakii: An Eastern Carpathian species. It occurs in several sites. Its population is endangered.

Typha shuttleworthii: It occurs in 1 site. Its population is endangered.

Dacian violet (*Viola dacia*): An Eastern Carpathian species. It occurs in several sites. Its population is endangered.

Animal Species of National Importance

Gastropods: **Door snail** (*Clausilia dubia carpatica*) - past records show rare incidence on limestone rubble. Narrow-mouthed whorl snail (*Vertigo angustior*) is dependent on mesophillic meadows on alluviums. Lack of malacozoological information on the area. The research has so far focused only on Nová Sedlica and Ruské area.

Arachnids: *Pardosa proxima, Neobisium polonicum, Ischyropsalis manicata, and Siro carpaticus* – the only Eastern Carpathian species of arachnids, occurs only in Bukovské vrchy Hills.

Crustaceans: **European crayfish** (*Astacus astacus*) is relatively well represented. However, it seems to be receding, compared to the past. Occurrence was recorded in the Ulička, Zbojský potok, Ublianka, Stružnický potok, Dara, Príslopský potok, Smolnický potok, Chotinka, and Ruský potok brooks, in Stužická River and the Starina reservoir. One of the ways of maintaining or improving the populations is to construct low flow thresholds and to reduce municipal liquid waste amounts.

Millipedes: *Polyzonium transsilvanicum* - endemic to Eastern Carpathians, sporadically recorded in Stužica Nature Reserve in the past.

Centipedes: *Dicellophilus carniolensis* - endemic to Eastern Carpathians, sporadically recorded in Stužica Nature Reserve in the past.

Mayflies: *Ecdyonurus insignis*, a species recorded in only few sites.

Dragonflies: **azure hawker** (*Aeschna coerulea*), **blue emperor** (*Anax imperator*), **northern damselfly** (*Coenagrion hastulatum*), **sombre golden ring** (*Cordulogaster bidentata*), **small pincertail** (*Onychogomphus forcipatus*), **keeled skimmer** (*Orthetrum coerulescens*), *Somatochlora*, **winter damselfly** (*Sympecma fusca*), **banded darter** (*Sympetrum pedemontanum*). Research on dragonflies has intensified only recently. The area is very interesting due to species variety and Mediterranean species occurrence.

European mantis (*Mantis religiosa*): a species spreading very fast in the last decade, recorded area-wide, including the ridge above Ruské.

Beetles: ***Carabus auronitens*** - confirmed in 7 sites, ***Carabus irregularis*** - 2 sites, ***Carabus obsoletus*** - 12 sites, ***Laena reitteri, Leptura thoracica*** - 4 sites, **grain support beetle** (*Megopis scabricornis*) - 1 site, **short-necked oil beetle** (*Meloe brevicollis*) - 2 sites. The following confirmed only in 1 site: **oil beetle** (*Meloe rugosus*), ***Necydalis major***, **rhinoceros beetle** (*Oryctes nasicornis*), and *Rhopalopus ungaricus.*

Bumblebees *(Bombus terestris, Bombus lucorum, Pyrobombus pratorum, Pyrobombus lapidarius, Megabombus pascuorum, Megabombus hortorum, Megabombus ruderarius a Alpigenobombus wurfleini).* Poloniny NP bumblebees are little researched. Only Nová Sedlica and Ruské areas were researched.

Caddisflies: **caddisfly** (*Agrypnia obsoleta*) - a species recorded in a very low number of sites.

Butterflies: **spotted beauty** (*Arichanna melanaria*), **tufted marbled skipper** (*Carcharodus flocciferus*) are both not very well researched butterfly species.

Maculinea butterflies: There are 2 *Maculinea* species of national importance in the Poloniny NP.
Alcon blue (*Maculinea alcon)* - recorded in 4 sites. According to the IUCN, it belongs to the Endangered Category.
Mountain alcon blue (*Maculinea rebeli*) – recorded in 10 sites. According to the new scientific classification based on genetic analysis it is identical to the *Maculinea alcon.* The taxonomic status of this species was debated in the past. Some authors define it as an ecological race, other as subspecies of alcon blue (*Maculinea alcon rebeli).* We maintain the original taxonomic distinction into 2 species in this document, as the originally 2 species differ in their habitat requirements. *Maculinea alcon* is a hygrophilous species, while *Maculinea rebeli* prefers xerothermic habitats.
The priority is to improve the *Maculinea alcon* and/or *Maculinea rebeli* unfavourable status by suitable management of sites where these rare species occur, applying the Zásady manažmentu lokalít s výskytom modráčikov z rodu *Maculinea* [Management Principles in Sites with Occurrence of *Maculinea* Butterflies] (SNC SR, 2008).

Lampreys: **Carpathian brook lamprey** (*Eudontomyzon danfordi*) - a species found in the Zbojský, Ulička, Cirocha and Ublianka streams and their tributaries. Riverbeds regulation leading to organic-rich sediments disappearance is the main threat.

Fish: **Kessler's gudgeon** (*Gobio kessleri*), **Danubian longbarbel** (*Gobio uranoscopus*), **golden-spined loach** (*Sabanejewia balcanica*). Their highest concentration was observed in the following sites: the confluence of the Zbojský and Ulička Brooks, the part of Ulička close to the state border and the part of Ublianka brook close to the state border.
Flow reduction, increased eutrophication and pollution, gravel extraction and poaching seem to be of negative influence.

Amphibians: **common toad** (*Bufo bufo*), **common water frog** (*Rana kl. esculenta*), **European common brown frog** (*Rana temporaria*), **fire salamander** (*Salamandra salamandra*), **alpine newt** (*Triturus alpestris*).

Reptiles: **slow worm** (*Anguis fragilis*), **grass snake** (*Natrix natrix*), **common European adder** (*Vipera berus*).

Birds: **155 bird species** were recorded in Poloniny NP, **95 of them nesting birds and 60 migrating, wintering or non-breeding species.**

Mammals: **moose/elk** (*Alces alces*) – temporarily occurring species, 50 individual specimen or smaller groups observations were recorded. **Lesser white-toothed shrew** (*Crocidura suaveolens*) - 1 occurrence, **southern white-breasted hedgehog** (*Erinaceus concolor*) - common distribution, **edible dormouse** (*Glis glis*) - 30 occurrences, **stoat** (*Mustela erminea*) - rare occurrence, **least weasel** (*Mustela nivalis*) - more rare than the stoat, **mediterranean water shrew** (*Neomys anomalus*) - 2 occurrences, **Eurasian water shrew** (*Neomys fodiens*) - 4 occurrences, **red squirrel** (*Sciurus vulgaris*) - common occurrence, **alpine shrew** (*Sorex alpinus*) - 5 occurrences, **common shrew** (*Sorex araneus*) - 15 occurrences and **Eurasian pygmy shrew** (*Sorex minutus*) – 3 occurrences.

All animal species of national importance priorities:

- carry on with the research of insufficiently researched species of national importance (gastropods, arachnids, mayflies, beetles, bumblebees, caddisflies, butterflies, lampreys, fish, amphibians, reptiles, birds, mammals),
- ensure the insufficiently researched species of national importance research (European crayfish, millipedes, centipedes, dragonflies, European mantis and bumblebees),
- ensure the maintaining or improving their favourable status by suitable care of their habitats.

1.6.4. Other Area Specific Nature and Landscape Conservation Interests Assessment

Various geomorphological forms of meso- and macrorelief with boulders, cliffs, boulder flows, debris flows, scree cones, stone sea and landslides are represented in the Poloniny NP. They are a precondition for a whole habitat type - rock and scree habitats. The following are worth mentioning:

- **6 pseudokarst caves** (5 in the Stinská massif in Zboj, and 1 at Rypy spot height in Ruské) formed by simultaneous rock blocks gravitational indentation and block slides. They are the result of rock weathering and ablation, gravity, suffusion and erosion.
- **Dara educational geological site** located by the main road above Starina reservoir at the end of the Brezovecká dolina Valley. Outcropped rock faces are an excellent example of the Carpathian Flysch Belt. Alternating sandstones and grey to black claystones layers reveal the deposition of sediments in a deep-sea environment. Three information boards explain the consequences of the orogenic process and demonstrate why sedimentary groups are not deposited horizontally and how oil and natural gas arise from source rocks.

There are also sites with protected and important minerals and fossils:

- **paleontological sites with fossil flora** (Roztoka stream in Zboj and Kuzmovský stream in Ruské - *Halimede* sp.),
- type locality (locus typicus) of a fossil flora new species - *Halimeidaites carpaticus* (Jarabá skala National Nature Reserve),
- **paleontological sites with fossil fauna** (Ulička Stream with *Zoophycos circinnatus* in Runina, Hlboký potok Stream with *Inoceramus balticus* and *Inoceramus Mulleri* in Nová Sedlica).

The most prominent hydrological forms are the following:

- **3 natural waterfalls** (Oreničov vodopád waterfall in Runina (12 m), Medová baba waterfall in Nová Sedlica (10 m) - scree genetic type, Vodopád pod pílou waterfall in Nová Sedlica (3 m) - double genetic type),
- **3 petrifying springs** – tufa formations, an example of the travertinization process initial phase (spring below Doliny in Nová Sedlica, spring above the crossroads outside Topoľa, and Krivianske oblazy Spring in Uličské Krivé),
- **2 mineral springs** of underground oil waters genetic type. In Zboj – calcium-carbonate water with a hydrogen sulphide and methane content, and in Starina nad Cirochou – natrium-carbonate water with hydrogen sulphide and methane content.
- **5 stretches of typical natural flysch water flows** with important and interesting examples of fluvial relief forms and a natural hydrological regimen (meanders, the emergence of a dead arm, river piracy, notches revealing a typical example of geological structure of the individual layers of subsoil).

A well-preserved deep structural borehole Zboj 1 in Uličské Krivé remains as a part of the geological field-based research aimed at oil and gas deposits in the area. The evaluation has brought a comprehensive subsoil knowledge and Zboj strata belonging to the Dukla unit determination.

Generally, we conclude that while planning for measures it is necessary to keep in mind the improvement in the condition of the species and habitats subject to conservation in the area. It is in this spirit that potential conflicts (about habitats, plants and animals management requirements) must be

solved. There are cases when, due to varying reasons, it is necessary to prioritize the selected habitats or species conservation measures at the expense of others.

1.7. Comprehensive Forest Condition Survey Results

The main goal of the Comprehensive Forest Condition Survey (CFCS) is **to examine the forest categorization and the accuracy of forest division units (FDU) classification into forest management types (FMT)**. The CFCS is conducted in advance, i. e. before forest management program (FMP) review. It includes a study of natural conditions, a study of forest conservation, a melioration study, and a study of natural environment conservation and development. Typological mapping results are closely related to the categorization of protective forests, while the typological mapping is a result of field measurements. In some cases, a forest type can be classified as both a protective and a commercial forest and this seems to be the biggest problem.

Imissions Threat: In the past, forests were classified as special-purpose forests, forests exposed to air pollutants subcategory. There were 4 distinctive zones of threat: A, B, C, and D. Later, after legislative changes there were only 3 zones: A, B, and C. Forest damage due to air pollution in the area of interest can be considered exaggerated because there are only a few local pollution sources and it is mainly north ridge of the Polish side of Poloniny that captures the remote imissions transfer. However, the still high concentration of the old heavy metals stocks in soil remains the problem. It is necessary to remark on the currently valid Decree of the Ministry of Agriculture of the Slovak Republic No. 453/2006 Coll. on forest management and forest protection not having the immissions-exposed forest sub-category.

Forest Stands Damage Stages: there are four general stages 0–4, 0 corresponds to undamaged trees and vegetation. Stage 4 is not present in the Poloniny NP. Stage 3 is present mainly in intensive logging stands. Poloniny NP stands are mostly Stage 1 (little damaged stands), given the prevailing deciduous trees, mainly beech.

The entire Poloniny NP territory is formed by flysch, which means that the soil is not very firm. Logging technology and period must be adjusted accordingly, i. e. it is necessary to increase the use of the assortment method, avoid using the choker cable winching method, use equipment with low ground pressure and mine preferably during frosts in winter months or during drought periods in summer.

Forest Stands Tending Principles: The main aim of tending should be the species selection, as the competitively stronger hornbeam has been more represented than beech and oak recently. It is also necessary to support fir and precious broad-leaved species. Another goal of tending should be to increase the layering of stands. However, the right timing of the removal of preparatory trees is of the essence, because they create suitable micro-climatic conditions for commercial woody plants. Coppice stands ratio is high in the area of interest. The aim of their tending should be to support the seed specimens at the expense of coppice stands.

Regeneration Principles for Stands: The main goal for the regeneration process should be to ensure sufficient natural regeneration while taking advantage of the seed-bearing years. If stands cannot be restored by the natural regeneration method, artificial regeneration from indigenous sources of forest reproductive material should be utilized. Given the varied natural conditions in the area, it is necessary to respect the natural environment and avoid the unnatural introduction of conifers into beech and oak stands. There is a remarkably high number of deer in the territory, which requires the due protection of stands against damage. Another tool is maintaining the standardized game stock.

Functional Use of Forests: Despite the primary function of commercial forests being the quality timber production, it is necessary that the forest performs the other productive and non-productive functions, too. The special-purpose forests in the Starina reservoir protected zone, where spruce has been planted to meet the need for quality water in the 3rd and 4th forest vegetation layer, are a particularity. The

reconstruction of these stands will be necessary due to bark-stripping by animals, neglected tending and inadequate choice of habitat.

Forests cover more than 90% of the Poloniny NP territory and forest management is one of the activities that have the most significant impact on overall territory condition. It might be concluded that forests create a continuous forest complex (especially above the Starina reservoir), interrupted by islet urban agglomerations and agricultural land.

Poloniny NP forest ownership is diverse. State ownership is decisive: Lesopoľnohospodársky majetok Ulič, š. p. [the Forest Agricultural Estate, Ulič, s. e.] - dominant forest manager, Lesy SR Banská Bystrica, š. p. [Forests of the Slovak Republic Banská Bystrica, s. e.], Odštepný závod Vranov nad Topľou [Branch Plant Vranov nad Topľou] and Slovenský vodohospodársky podnik, š. p. [Slovak Water Management Enterprise, s. e.]. The aforementioned subjects manage 58% of the Poloniny NP forests. 8% of the forests are owned by unknown owners. A significant proportion of forests are owned by landowner associations - associations of land owners with legal status (27%). Furthermore, there is one large private property area (Kredba s. r. o, Runina cadastral area), that, along with the small forest owner's properties irregularly occurring in the Poloniny NP, extends over nearly 6% of the Poloniny NP forests. Less than 1% of forests are owned by the Church.

In terms of the organizational structure of forests there are **16 forest units (FU) designated in the Poloniny NP and its buffer zone.** 2 FUs are in the buffer zone, 5 FUs in the Poloniny NP area proper and 9 FUs are in both the buffer zone and the area proper. They are outlined in Table 4.

Table 4 Poloniny NP Forest Units Outline (1 January 2014)

KPL Plan Code	Forest Unit Name	Area Size in the NP (ha)	Area Size in the Buffer Zone (ha)	Total Area Size (ha)
LA019	Forest Agricultural Estate (FAE) - STAKČÍN	4642.0000	11.5600	4653.5600
LA020	FAE-KLENOVÁ	2405.5800		2405.5800
LA046	Forests Nižná Jablonka	1250.0970	1285.7595	2535.8565
LA047	Non-state forests on Forest Management Unit (FMU) Nižná Jablonka	41.7718	1724.5047	1766.2765
LA071	FAE-ULIČ	4085.6294	2592.5237	6678.1531
LA072	Non-state forests on FMU TOPOĽA	1552.4847	414.4016	1966.8863
LA073	FAE-ZBOJ	5016.4281	673.5196	5689.9477
LA074	Non-state forests on FMU Zboj	556.5327	830.4992	1387.0319
SL026	Veľká Poľana	852.8400		852.8400
SL027	Ruské	1711.2800		1711.2800
SL028	Starina	1122.5300	11.6700	1134.2000

SL029	Smolník	1155.5100		1155.5100
SL030	Zvala	1398.4800		1398.4800
SL031	Non-state forests on FMU Starina	1456.5300	0.7800	1457.3100
SL032	Forest Association (FA) Ubľa		406.4900	406.4900
SL033	Non-state forests on FMU Sobrance		181.0900	181.0900
Total:		27,247.6937	8132.7983	35,380.4920

From the functional perspective, the NP forests are classified into 3 categories – **commercial forests (C) accounting for 64.6%, protective forests (P) for 7.4% and special purpose forests (S) for 28% of the NP forest area.**

Despite the overall commercial forests ratio being high, it has been slightly decreasing since 2014. Details on this can be found in Table 5 and Chart 1.

Table 5: Poloniny NP Forest Categorization (1 January 2015) based on the National Forest Centre in Zvolen data.

Forest Category	**Area Size by 2014**	**Area Size after the Management Program Renewal in 2014**	**Area Size after the Boruskov vrch Nature Reserve designation**
Commercial Forests	17,751.68 ha (65.23%)	17,599.04 ha (64.59%)	17,527.20 ha (64.32%)
Special Purpose Forests	7,330.16 ha (26.94%)	7,630.43 ha (28.00%)	7,702.27 ha (28.27%)
Protective Forests	2,131.17 ha (7.83%)	2,018.22 ha (7.41%)	2,018.22 ha (7.41%)
Total:	**27,213.01 ha (100%)**	**27,247.69 ha (100%)**	**27,247.69 ha (100%)**

2. Socio-Economic Situation (Use of the Territory and its Surroundings, Positive and Negative Factors)

2.1. Historical Background

The Poloniny NP territory was underpopulated until 13th century and formed the early Hungarian state outer border. It was not annexed to Hungary until after Tartars left the territory in 1242. **Primeval forests covered nearly all area until the end of 14th century.** The permanent settlement dates to the late 14th and early 15th centuries, when, under the influence of Wallachian colonization, new settlements were formed as well as sheep farming and shepherding developed. **Population settling here under the Vlach law lived on farming and cattle grazing.** The lack of arable land was compensated by forest land clearing to grow agricultural crops (rye, oats, millet and foxtail). Private farming and livestock breeding were characteristic for the area. After the demise of feudalism and the abolition of serfdom, the common land passed into the former serfs' ownership, part of the feudal land was divided among the people, and parish lands were owned by the parish priest.

Both the Great Depression and the World Wars heavily affected the area. Residential areas started to be developed in the Eastern Slovakia socialist industrialization period after 1950. New industrial centres of nationwide importance were created in the Snina district. Industrial centres of regional importance were established in Ulič and Ubľa. The new centres brought along new jobs that in turn influenced social and economic development in the region and therefore also the settlement structures. The **work-related migration of people** from both Snina district municipalities and other regions into these centres was another consequence. The quality of life increased significantly in this period, mainly due to the comprehensively available public facilities and housing standard. Migration from rural areas to urban centres caused the unchanged character of sub-mountain settlements. The landscape shape remained intact and undestroyed by the new architecture.

Collectivization of agricultural production and the transition to industrial forms of agricultural production had a substantial impact on the landscape. The industrial form of agricultural production manifested in the construction of farmyards, which were insensitively built over the landscape. Also, the inappropriate method of tillage (recultivation) resulted in the deterioration of landscape aesthetic values.

The sparse network of small settlements, minimal use of the area for industrial development, and tourism purposes as well as the the yield of the Cirocha River and its tributaries led to the Starina drinking water reservoir's construction. The Starina reservoir construction (1981 – 1987) caused another important change to the Snina district settlement structure. Because of locating the reservoir in the Starina municipality territory, all 7 villages along the Cirocha River above the reservoir profile had to be relocated. After having completed the reservoir's construction, the arable land was transformed into permanent grass stands.

Agriculture intensity decreased over the 1990s (reduced fertilizing and use of chemicals, reduced livestock numbers), a substantial proportion of arable land left unused, remote areas successively overgrowing and the landscape gradually losing its typical character.

The first mention of a protected oak forest with a logging ban dates to 1660 (Stakčín municipality land register). Protected fir and beech forests under Jarabá skala with a logging ban **were demarcated in 1728 (Zboj municipality land register). Stužica - Jasan** was the first strict forest reserve. It was **declared in 1908** with an area of 331.4 ha. During the 1967–1968 period the projecting works towards the international protected tri-area Kremenec declaration were performed.

2.2. Brief Description of Current Situation

2.2.1 Nature Conservation

The Regulation of the Ministry of Culture of the Slovak Socialist Republic No. 70/1977 Coll. which declares the Východné Karpaty [Eastern Carpathians] a protected land region gave the area a legal protection framework.

Protection in a part of the then Eastern Carpathians Protected Area was increased by **Regulation of the Government of the Slovak Republic No. 258/1997 Coll. declaring the Poloniny NP.** The most valuable parts of the NP are protected in **7 National Nature Reserves** (Stužica, Havešová, Jarabá skala, Rožok, Pľaša, Stinská, Pod Ruským), in **12 Nature Reserves** (Bahno, Borsučiny, Bzaná, Gazdoráň, Hlboké, Grúnik, Ruské, Stinská slatina, Stružnická dolina, Šípková, Udava, Uličská Ostrá) and in **1 Natural Monument** (Ulička).

A part of the then Eastern Carpathians Protected Area was in fact identical to the current Poloniny NP territory and in 1992, within the UNESCO Man and Biosphere Programme, it was, along with the adjacent Polish territory (Bieszczady National Park, Cisniansko–Wetlinský park krajobrazovy and Park krajobrazovy Doliny Sanu), inscribed into the international BR list as the **East Carpathian Biosphere Reserve.** In 1998, Ukrainian protected areas (Užanský national nature park and Nadsjanskyj regional landscape park) were added to this international BR and this is how **the first trilateral biosphere reserve in the world** was created.

The Poloniny NP was awarded the **European Diploma of Protected Areas in 1998.** The Council of Europe grants this diploma via Committee of Ministers resolutions for a period of 5 to 10 years.

The beech primeval forest of Slovakia and Ukraine were included among the 166 sites of the World Natural Heritage list during the World Natural Heritage Committee meeting in Christchurch, on 28 June 2007. This UNESCO World Natural Heritage site consists of 10 individual beech primeval forest sub-sites. 3 of them are in the Poloniny NP territory proper (Havešová, Rožok, Stužica). **In 2011**, by the World Natural Heritage Committee decision, the Slovak-Ukrainian beech primeval forests were extended by a further 5 sub-sites in Germany and this is how the **UNESCO World Natural Heritage trilateral site** was created.

The Poloniny Dark-Sky Park was declared on 3 December **2011** and registered by the International Dark-Sky Association. Its aim is to protect night ecosystems and inform the public about the light pollution problems and about the exceptionally well-preserved night environment in this area as well as to promote and protect the dark night sky. The Poloniny Dark-Sky Park is the first protected area in Slovakia in terms of natural night environment protection. In terms of astronomical observations, it is one of the best European sites. However, this kind of park is not yet protected by any legal instrument.

2.2.2 Agriculture

Total **Poloniny NP agricultural land area is about 1,895 hectares, which accounts for 6.4% of the territory.**

Agricultural land is in fact formed solely by permanent **grass stands**. Small parts of land near settlements, registered as arable land in the land register, have in fact been covered by grass for a long time. **Fields can thus be found only in the NP buffer zone.** Traditional agricultural methods have practically disappeared due to, among others, the decreasing demographic curve. **Many meadows and pasturelands are no longer managed, but unused instead and gradually overgrow.** Less competitive species are being pushed out from many sites, due to the ongoing succession, and the area is thus becoming species-poor. The majority of permanent grass stands is used by the FAE Ulič, s. e. for growing grains, corn, perennial forage or oilseed rape. Livestock numbers used to be higher than today. Currently there are **3 farmyards** (Ulič, Zboj and Runina) **in the Poloniny NP buffer zone.** They are used by the FAE Ulič, s. e. focusing mainly on **cattle grazing.** Apart from that, there are also other rather large subjects farming in the Poloniny NP or its buffer zone territory.

Meadows and pasturelands occur mainly in the wider valleys parts, along the water flows (Cirocha, Ulička) or on the Bukovské vrchy main ridges. It is these **mountain meadows (the "poloniny" meadows) alternating with forests, which are so typical for the Poloniny NP.** Meadows and pasturelands used to occur more in this area in the past, due to unfavourable soil and relief conditions. Permanent meadows were mowed one year and grazed (fertilized by grazing) the following one. After mowing the mown land, and somewhere even the fields were grazed. Fields were turned to aftermath pastures after 10 to 12 years as part of the crop rotation (Buraľ, M. et al., 1994). The higher altitudes meadows in Bukovské vrchy Hills have been alternately mowed and grazed since the Wallachian colonization. Before the end of World War II, they had not been traditionally used anymore. Until then

the land had been grazed by oxen and later by horses, but after the war the pastures were only mown. Sheep farming and penning in the pasturlands had stopped before the WWII. At present, grazing is not present anymore (RUŽIČKOVÁ, H., HALADA, Ľ., 2002). Agricultural production collectivization in the 1960s decisively influenced the grass stands condition, size and method of use. Starina reservoir basin population relocation and agricultural production limiting were the subsequent factors. Radical recultivation created large fields of intensively fertilized cultivated meadows. Original, extensively and semi-intensively farmed, meadows gradually lost their economic importance (less livestock is bred). Remote and poorly accessible meadows use has mostly stopped altogether and they are now overgrowing with woody plants (HALADA, L. et al., 2004). Permanent grass stands are currently being extensively used as hay meadows with scattered non-forest tree and shrub vegetation and as pasturelands. Compliant to Act No. 543/2002 Coll. on Nature and Landscape, agricultural activity and cattle grazing in the area is currently allowed only with a prior consent of a responsible nature conservation authority.

The SNC SR – Poloniny NP Administration is committed to maintaining grassland habitats by informing the involved stakeholders (land owners, administrators and users) about the territory protection possibilities, mainly via taking part in the relevant measures within the Rural Development Program of the Slovak Republic 2014–2020 (hereinafter RDP). Farmers agree with the nature conservation proposals and it should be stressed that the way of farming proposed under **the Agri-environment climate measure (sub-measure semi-natural and natural grasslands habitat protection), payments within the Natura 2000, and the Ecological agriculture is fully in accordance with the requirements of nature protection.** Most agricultural entities active in the Poloniny NP has joined the agri-environmental RDP schemes already in the previous 2007–2013 period. Areas entitled to support within the RDP are outlined in the map 6.6.4.

2.2.3. Forestry

The whole Poloniny NP territory has been used mainly for forestry activities, since forests account for nearly 90% of the area. House Drugeth gentry owned the forests in the 18th and 19th centuries. Later in the 19th century they passed into the possession of the Andrássy family. Afterwards the ownership of individual estates changed frequently. After the demise of serfdom and based on the preserved historical sources, mainly the Andrássy, Winkler and Szirmai families might be identified as owners. At that time this type of ownership turned into common land (land in shared use), especially in the Cirocha river basin.

Between the WWI and the WWII, the interest in using wood from the most accessible areas gradually increased. The first narrow-gauge railways were built and the interest in charcoal also rose. The forests ownership partly passed onto the industrial companies or banks.

Commercial use of forests intensified during the Hungarian occupation period. Wide-scale deforestation (e. g. 100 ha in Stužica) took place. In 1946 the "Forced Fdministration of Confiscated Forests of Ulič and Starina Valley" with a seat in Stakčín was created. It was subordinate to the Directorate of State Forests, Solivar, Prešov. The largest confiscated estates:

- Count Tiele-Winckler's property - Berlin,
- Count Rudolf Serényi's property,
- Kredba and Mudroch's property - Prague
- State Forests property in Žornava,
- Alois Löwenstein's property - Yugoslavia
- Greek-Catholic Church property.

The Directorate of State Forests, Solivar, Prešov confiscated the school forests in Kolbasov and Uličské Krivé in 1950. In 1952 it confiscated the former land owners' forests and in 1955 all military forests in Topoľa (2100 ha).

On January 1, **1956, the Forest Plant Ulič** was established and a distribution warehouse built in Stakčín. The wood processing plant Tvarona Ulič launched its operation in 1967 and as a priority focused on processing wood from Uličská dolina valley. **The Forest Agricultural Estate in Ulič was established in 1972. Delimited low forests and pastures lands of 1,058 ha, as well as agricultural land of 29 municipalities, passed under the administration.**

After the Eastern Carpathians Protected Area declaration **in 1977, commercial activity limiting begun.** The commercial activity was gradually excluded from all nature reserves and logging was also limited in protective forests. Commercial activity was managed according to the agreed upon forest management plans.

1991 was the decisive year based on the differentiation perspective of current owners and managers. **It was then that the process of property restitution to original owners and the Church started.** New landowner associations have been established in the Poloniny NP territory. Private properties in Runina as well as the property of Greek-Catholic Archeparchy in Prešov have been restituted, and to a lesser extent also some properties of small owners. The land ownership settlement process in Poloniny NP is, to a certain extent, still ongoing. More than 60% of land remains under state ownership.

The current forestry organizational structure in the Poloniny NP is based on the current ownership and usage situation and on the forest management legislation. In terms of the Poloniny NP territory management there are **6 distinct forest management units** (FMUs): FMU Zboj, FMU Topoľa, FMU Ulič, FMU Starina, FMU Nižná Jablonka and to a small extent also the FMU Snina. Individual FMUs have their own Forest Management Programmes (FMP) valid in 2010–2019, 2011–2020, 2012–2021 and 2014–2023.

Table 6 FMUs and Approved FMPs in Poloniny NP Overview (2015)

FMU	FMP Validity	KPL Plan Code	Forest Unit Name	Manager
Starina	2010-2019	SL026	Landowner Association (LA) Veľká Poľana	Common Land and Grazing Association (CLGA), LA Veľká Poľana
		SL027	Ruské	Forest Agricultural Common Land Association (FACLA), LA Ruské
		SL028	Starina	FACLA Starina
		SL029	Smolník	Forest Common Land Association (FCLA) LA Smolník
		SL030	Zvala	FCLA Zvala
		LA019	Stakčín	FAE s.e Ulič
		LA020	Klenová	FAE s.e Ulič
		SL031	Non-state forests on FMU Starina	LA Nastas - Stakčínska Roztoka
				LA Dara
				Common Land Association (CLA) LA Pčoliné
				Slovak Water Management Enterprise, s.e., Laborec River Basin Management
				CLA LA Parihuzovce
				CLA and FLA Kalná Roztoka
				Greek-Catholic Archeparchy Prešov
Nižná Jablonka	2012-2021	LA046	Nižná Jablonka Forests	Forests of the Slovak Republic, s. e., Civic Association Vranov nad Topľou
		LA047	Non-state forests on	CLA of Common Forest

			FMU Nižná Jablonka	Landowners and Pasture Owners, LA Hostovice
				Common Forest Landowners and Pasture Owners Association Osadné
Topoľa	2014-2023	LA071	FAE Ulič Forests	FAE s.e Ulič
		LA072	Non-state forests on FMU Topoľa	Greek-Catholic Archeparchy Prešov
				LA Príslop
				FACLA LA Runina
				Kredba and Mudroch Private Forests
Ulič	2014-2023	LA071	FAE Ulič Forests	FAE s.e Ulič
		LA074	Non-state forests on FMU Ulič, Zboj	Greek-Catholic Archeparchy Prešov
				LA Rožok Uličské Krivé
				CFLA LA Kolbasov
				LA CLA Ulič
Zboj	2014-2023	LA073	FAE Zboj Forests	FAE s.e Ulič
		LA074	Non-state forests on FMU Ulič, Zboj	LA Geborová, Nová Sedlica

Forests in the Poloniny NP area proper form a substantial, 27,248 ha, part of the overall forest area. Buffer zone forests area size is 8,133 ha.

Table 7 Categorization of Poloniny NP and the NP Buffer Zone Forests by Conservation Level

Conservation Level	Area Size (ha)
2	8132.80
3	25,047.21
4	21.85
5	2178.63
Total	35,380.49

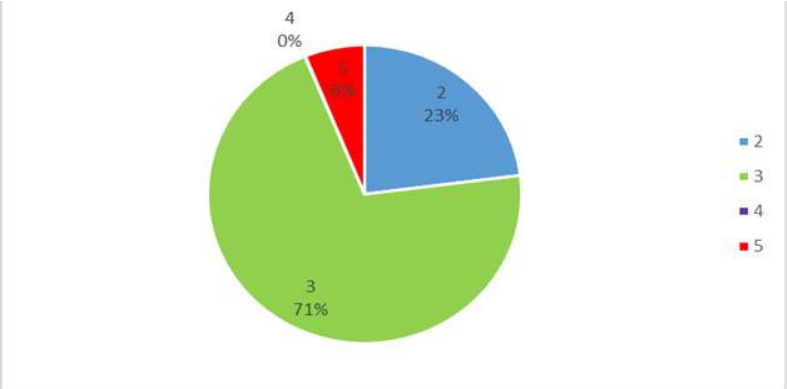


Chart 1: Poloniny NP Forests Distribution by Conservation Level

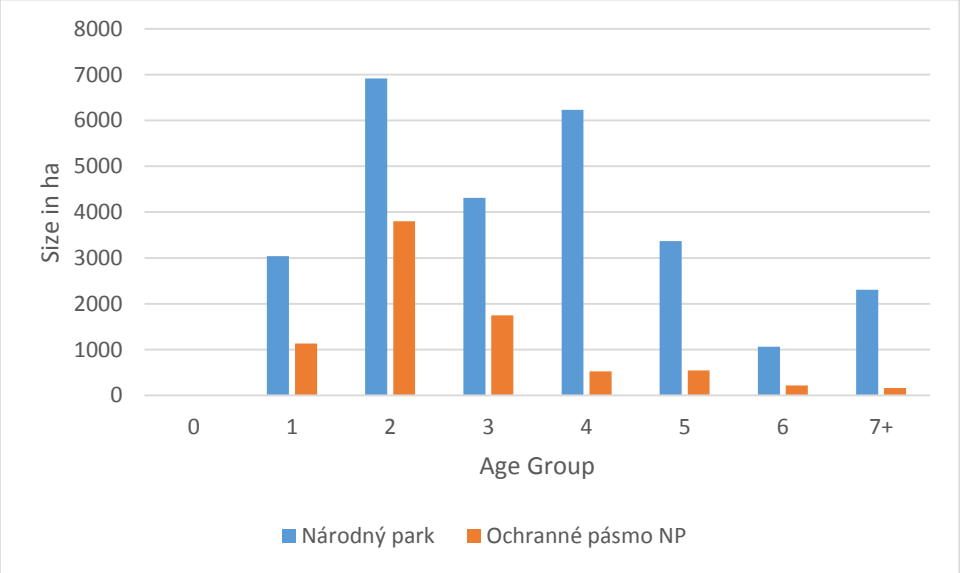
Forests with declared 3rd level of protection predominate (71%). Forests with the 4th level of protection are least represented. 6% of Poloniny NP forests are categorized as the 5th level of protection.

As to forest age composition, **two age groups predominate: 21–40 years old forests (2nd age group) and 61–80 years old forests (4th age group).** 21–60 years old forests predominate in the Poloniny NP buffer zone. The percentage of age groups is confirmed by the younger forest dominant group representation within the overall Poloniny NP and its buffer zone forest distribution. More details are outlined in Table 8 and Charts 2 and 3. The Poloniny NP forest stands age structure is shown in the Appendix 6.6.7 map. The EFA2 age-structure is shown in the Appendix 6.6.8 map.

Table 8 Poloniny NP and its Buffer Zone Forests Age Structure (1 January 2014)

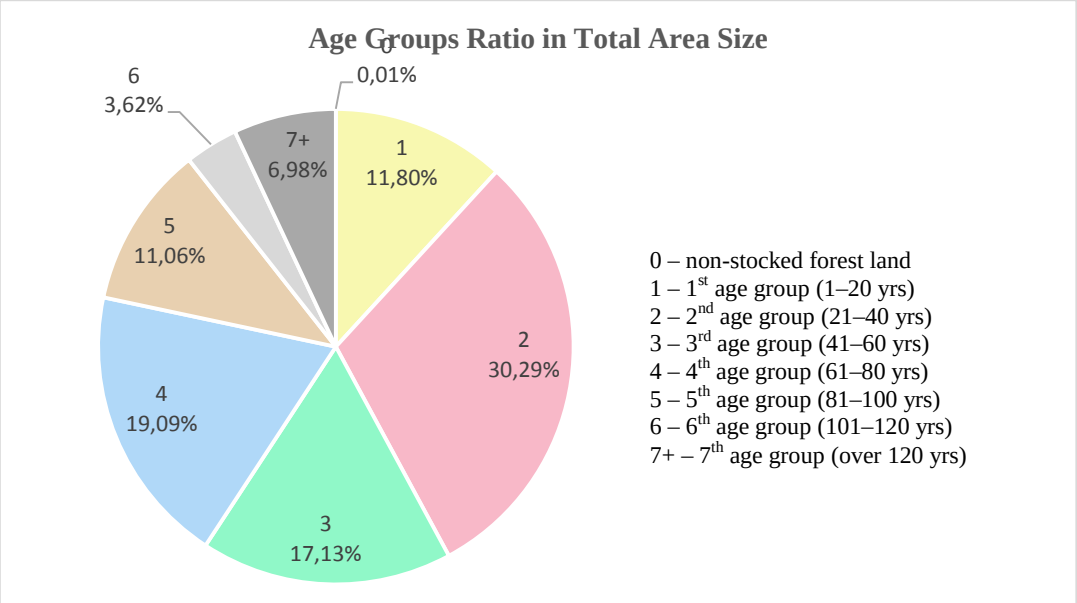
Age Group	NP Area Size (ha)	Buffer Zone Area Size (ha)	Total (ha)
0	3.23	1.5009	4.7309
1	3042.4042	1133.9833	4176.3875
2	6915.7324	3802.3481	10,718.0805
3	4312.1147	1746.8803	6058.995
4	6230.3355	525.4522	6755.7877
5	3368.0254	546.5836	3914.609
6	1066.2618	215.876	1282.1378
7+	2309.5897	160.1739	2469.7636
Total	27,247.6937	8132.7983	35,380.492

Chart 2: Poloniny NP and its Buffer Zone Forests Age Structure



Translator's Note: Národný park = National Park; Ochranné pásmo NP = Buffer Zone

Chart 3: Poloniny NP Forest Age Groups Representation



Poloniny NP forest stands growth stages are included in the Appendix 6.6.9. Poloniny NP forest stands types are in the Appendix 6.6.10 and in the Appendix on core management.

2.2.4 Hunting

The whole Poloniny NP territory is classified as a hunting area under valid legislation relevant to hunting. It is located **mostly in the deer hunting area of the Poloniny Carpathians** (J XXVIII, total area size 93,036 ha). **The Vihorlat JXX hunting area overlaps** with the Poloniny NP territory to the south. Wide-scale hunting management is related to hunting management in the hunting areas (and within them the breeding units with hunting grounds included) level, under the §18 of Act No. 274/2009 on Hunting and on the Amendment of Certain Acts as amended (hereinafter Act. No. 274/2009). Currently, there are **19 hunting grounds** located fully or partly in the Poloniny NP (excluded the buffer zone). Appendix 6.6.4. contains their outline. **The average area size for hunting grounds is 3,184.96 ha.** A SNC SR - Poloniny NP Administration employee has been a member of the **Poloniny Carpathians Hunting Area Advisory Board** since 2010. The Board is responsible for the implementation of expert hunting management, the fulfilment assessment of hunting plans and the adjustment of hunting management criteria for the following year.

The mission of the Poloniny NP and East Carpathian Biosphere Reserve is, among others, the **permanent preservation of animal species populations native to the Carpathians** and the **protection** of this biosphere reserve's **gene pool**.

Five species of ungulates (deer, roe deer, wild boar, elk and bison), large carnivores (bear, wolf and lynx) and small carnivores (badger, wild cat, otter, marten, polecat, weasel and raccoon dog) occur in the Poloniny NP. Although some of them are surviving in small numbers (there is a tendency to create elk and bison micro-populations), it does not lessen the importance of the area for their future conservation.

Hunting management advantages include:
- the supplementary feeding of game, especially in winter,
- the protection of hunting grounds against harmful human interference and poaching,
- the creation of forest shelters and fields for game,
- building feeding racks, hoppers and suitable shelters for game.

Possible disadvantages related to hunting management include:
- incorrect shooting by age groups, especially in case of deer and roe deer,
- shooting of breeding animals,
- deterioration of game populations social and age structure.

2.2.5 Fisheries

Fisheries in the Poloniny NP were regulated under Act No. 139/2002 Coll. on Fishing as amended and the Regulation of the Ministry of Environment of the Slovak Republic No. 185/2006 Coll. implementing Act. No. 139/2002 Coll. on Fishing as amended.

Fishing ground 4–0261–1–1 Cirocha No. 1b (partial Cirocha river basin from the fourth weir – water offtake for Vihorlat plant in Snina to the Starina reservoir body of dam; the Slovak Fishing Association – the Council in Žilina is the user) belongs to Poloniny NP **carp waters**.

Fishing grounds 4–3010–4–1 (Ubľa Brook from the state border with Ukraine to the springs), 4-3081-4-3 (Ulička Stream from the state border with Ukraine to the springs), and 4–4191–4–1 Zbojský potok No. 1 (Zbojský potok Stream from Nová Sedlica to the springs) are among trout **waters**. The Slovak Fishing Association – the Council in Žilina is the user. The Starina reservoir (fishing ground 4-3810-4-3) along with all tributaries is administered by the Slovak Water Management Enterprise, s.e. This fishing ground is intended for specific purpose fisheries.

The total number of the thus far detected cyclostomes and fish in fishing grounds is 25. Several of them are important in terms of gene pool, the occurrence of stable populations in Slovakia and the overall low number of occurrence sites in Slovakia. More details can be found in section 1.6.8. of this document.

Ensuring a **coordinated comprehensive hydrobiological research on all water flows and Starina reservoir**, which would bring proposals for the creation of optimal conditions for this group of animals, is among the current priorities in this respect.

Fishing management advantages include:
- increase in area biodiversity,
- protection and monitoring of fish stocking and water purity (fishing guard) – however, it is necessary to underline that the fishing guard is not responsible for water purity,
- ensuring the protection of fish stocks and species composition,
- restocking and protection of native fish species,
- fish populations research and monitoring.

Possible disadvantages related to fishing management include:
- presence of people and use of fishing equipment,
- introduction of non-native fish species during fish stocking.

2.2.6. Mining and Quarrying

In the past, stone and brick clay for construction were mined with seasonal and local relevance in the Poloniny NP and its buffer zone territory. Small brick factories of local importance used to be in Stakčín, Snina, Ulič and Zvala. Due to the undeveloped economic situation with moderate construction, the rarely and seasonally used quarries of local significance (Príslop, Zboj) along with gravels of the quaternary sediments of rivers were sufficient to satisfy the local needs.

The oil search started in Eastern Slovakia flysch area in the second half of the 19th century (e.g. near Pčolinné, Pichné). Of the several boreholes in the Poloniny NP area, the borehole in Uličské Krivé has been preserved. Poloniny NP area overlaps with the Snina exploration area for oil and flammable natural gas, where geological research is legally permitted. The potential sources of oil could be found in the anticline of Nová Sedlica (indicated by the presence of calcium bicarbonate water near Zboj with a high methane content and fissures in the core of the anticline filled with calcite and strongly smelling of oil).

According to the analysis from 15 October 2015 there is **no mining area, no deposit of non-reserved minerals or protected deposit area located in the Poloniny NP.** Mining and quarrying is currently not being carried out in the Poloniny NP.

2.2.7. Use of Water

The water in the Poloniny NP is mainly used as:
- **drinking water source** (surface source of drinking water - Starina reservoir, underground source of drinking water for Ulič municipality located in Ulič, surface source of drinking water on Čiščovatý potok stream for Runina municipality),
- **wastewater recipients** (sewage from wastewater treatment plants),
- **fishing grounds.**

The Starina reservoir mentioned in Section 1.6.1.6 was built between 1981–1987 and is an important drinking water source for Prešov and Košice regions. It supplies drinking water to a large part of Eastern Slovakia (majority of municipalities in Snina, Humenné, Michalovce, Stropkov, Svidník, Vranov nad Topľou, Prešov, Trebišov and Košice districts). Nearly a half of the Poloniny NP territory overlaps with the Starina reservoir protection zones defined under Decree 29/2005 Coll. setting up details about the protection zones of water management sources, water protection measures and technical modifications in protection zones of water management sources. The former Košice-vidiek

Environmental Office Decision No. ŽP-577/1991-Mi from 17 January 1992 defined the mandatory requirements for economic exploitation in the zones. Rights and duties stemming from the decision will not be influenced by the Poloniny NP Management Plan's approval. Entrance into the 1st degree protective zone is forbidden. In justified cases, it is possible to enter based on a special permit issued by the Slovak Water Management Enterprise, s.e. The 1st degree sanitary protection zone includes the reservoir and the protective belt (width 100 m from the reservoir border line, on tributaries and on the main water flow the width on both sides is 100 m within 300 m from the reservoir inflow). The 2nd degree protection zone is created by the whole catchment area of an important water flow - the Cirocha River with all its tributaries, the catchment areas of Stružnica, Smolník and Dara Rivers. In the Starina reservoir 2nd degree protection zone there are service (or special-purpose) roads, which are used by forest and land owners associations. They therefore serve as forest roads, too. The entry of motor vehicles is monitored (registered). The Slovak Water Management Enterprise, s.e., Košice Branch Plant, has built a guarding facility behind a barrier intended as a check point for vehicles and persons. Such checking and registration is necessary given the possibility of negative impact on the water source quality.

2.2.8. Tourism, Recreation and Sports

From tourism perspective, the Poloniny NP is one of the most attractive parts of Slovakia. The possibilities of using the territory are influenced by close state borders with Poland and Ukraine. Cross-border cooperation with Poland is well-developed in nature conservation, tourism and education. The border zone with Ukraine being the Schengen Area border is closely guarded. Many activities, including free movement, are restricted in its proximity.

Use of Poloniny NP for sport and recreation purposes is governed by Act. No. 543/2002 Coll. as well as by the Decree of the Regional Environmental Office in Prešov No. 2/2006 from 23 March 2006 on the Poloniny NP and its buffer zone Visitors Code.

Individual tourism, recreation and sport related activities have a proven **direct effect on habitats and species** as well as an expected effect in case of the proposed activities and new sites.

2.2.8.1. Tourism

Hiking

The most widespread and most acceptable form of recreation in the Poloniny NP is hiking. There is a **121-km long network of marked trails.** Appendix 6.6.5. contains their outline. The most visited locations include Kremenec, National Nature Reserve Stužica and National Nature Reserve Jarabá Skala. The majority of hikers come in July and August and some locations are completely empty of visitors during winter. Approximately 90% of visitors come from Slovakia, Czech Republic and Poland.

Hikers in Poloniny NP spread across quite a large area and this means that the negative influences are not concentrated in one area only. There is no substantial harm to natural environment in most trails, apart from periods with heavy rainfall. In those periods the ground vegetation gets trampled down on wet parts of the trails. It is gradually damaged and eventually destroyed, the habitats are ruderalized and places with shallow soil undergo erosion. The wildlife gets disturbed by free movement of visitors mainly early in the morning and in the evening. Garbage pollution is proportional to the number of visitors.

Biking

There is **6 bike trails** in the Poloniny NP and its buffer zone territory. Appendix 6.6.6. contains more details. Cycling is not possible on most of the territory because of the rugged relief. Cycling outside of marked routes leads to deterioration of valuable habitats and to disturbance of animals unable to

respond promptly to the rapid and relatively low-noise movement of cyclists. Braking on steep slopes destroys the protective plant cover of the soil, and this speeds up the erosion.

Tenting, Camping and Bivouacking

Tenting and bivouacking is allowed only in designated areas listed in the Poloniny NP Visitors Code. The areas are: **Sedlo pod Čierťažou (Nová Sedlica) and Ruské Sedlo (Ruské)**. Tenting, camping and bivouacking trample and damage habitats as well as disturb the fauna. Other activities forbidden in the Poloniny NP often relate to the previously mentioned ones, e. g. walking outside of the marked trails, setting campfires, and noise disturbance. Although unauthorized tenting, camping, and bivouacking are not mass activities, they have still been detected in many, often very valuable, locations in the national park (e.g. National Nature Reserve Stužica). One of the measures to eliminate such activities is to improve the ecological awareness of NP visitors by e. g. tourist trails marks renewal, educational trails info-boards, new info-boards installation, etc.

Downhill Skiing and Cross-Country Skiing

Cross-country skiing is allowed on all walking routes marked with winter rods. **Downhill skiing and snowboarding** are permitted only in the designated area as specified in the Poloniny NP Visitors Code: the Ruské ski resort. The ski tow in this area, however, has not been working for a couple of years and the resort is not currently used for skiing. The only working ski tow in the Poloniny NP buffer zone is in Ulič. Ski touring is allowed also outside of marked tourist trails. Ski touring does not have an overly disturbing or stressful effect on fauna.

Horseback Riding

Horse-riding is allowed in two designated areas as specified in the Poloniny NP Visitors Code: roads between Nová Sedlica and Medová baba and between Nová Sedlica and Lipová. Threat potential is low, due to a low interest in this activity. On the other hand, riding outside of authorized trails might disturb animals in peace zones and cause the trampling and destruction of valuable habitats, and is therefore considered a threat. Similarly, riding on steeper slopes with shallow soil might cause erosion.

Low-Flying Aircrafts and Sports Flying Equipment

Paragliding and hang gliding are allowed only in a designated area as specified in the Visitors Code: Malý Bukovec (Topoľa). Low flights by plane, helicopter, glider or balloon represent an important stress factor for many species of mammals, and especially for birds.

Transport

Transport on motor vehicles is possible on public roads of the second and third category: II/558 Stakčín – Ulič, III/558023 kr. II/558 – Jalová, III/558023 kr. Topoľa – Runina, III/558026 kr. II/558 – Ruský Potok, and III/558027 Ulič – Nová Sedlica

2.2.8.2 Accommodation and Other Tourism Facilities

Accommodation in Poloniny NP is provided by FAE Ulič, s.e. - Grófske chyžky. Accommodation in the Poloniny NP buffer zone is provided by several guest houses in the following municipalities: Nová Sedlica (Penzión Kremenec, Penzión Beskyd), Ulič (Turistická ubytovňa Javorník, Penzión Poloniny), Kolbasov (Ubytovanie u Ľubky) and Runina (Chata Krivec, Chalupa Runina, Chata u Mariana).

Also the SNC SR – Poloniny NP Administration provides several services for tourists. It operates the Information Centre in Nová Sedlica (15 beds and 8 extra beds). Their services comprise accommodation and tour guide services.

Tourism development requires an increase in the awareness about the Poloniny NP assets and value. This relates to the infrastructure in the area: information points, centres, places, educational trails, etc. Between 2014–2015 the situation improved slightly, thanks to Swiss Financial Mechanism funding.

2.2.9. Cultural Heritage and Religious Activities

Relocated villages natives hold annual meetings in the Poloniny NP. The Poloniny NP Visitors Code specifies places for such meetings as well as for public religious, cultural and sport events. They are in the former built-up areas of Dara, Ruské, Smolník, Veľká Poľana and Zvala municipalities as well as below the Starina reservoir.

Park pri kaštieli is in Ulič historical centre in the Poloniny NP buffer zone and represents an example of a well-preserved park complex. It is planted by interesting taxa and woody plants species. A solitary wetland oak outside of the Ulič built-up area is another peculiarity of the Poloniny NP buffer zone.

Immovable cultural monuments and archaeological sites are also located in the Poloniny NP and its buffer zone. They are outlined in Table 9.

Table 9 Outline of the Poloniny NP Immovable Cultural Monuments by Cadastral Areas (hereinafter c.a.). (The outline is based on the "Ústredný zoznam nehnuteľných kultúrnych pamiatok" list [Immovable Cultural Monuments Central Register], 2015, available at: http://www.pamiatky.sk/sk/page/register–nkp–tabulkove–zoznamy)

C.a.	No. in CLM (Central List of Monuments Fund of the Slovak	Immovable Cultural Monument Name	Common Name	Established
Jalová	125/1	wooden church	St. George's Greek-Catholic	1792
Kolbasov	11316/1	Jewish cemetery	approx. 10 gravestones	
	10423/1-2	church and bell tower	The All Saints' Greek-	1880
Nová Sedlica	10432/1	barracks	former financial guard	1920s
	10433/1	traditional folk house	log house	
Osadné	141/1-2	church and vault	Ascension of Our Lord	
Runina	2319/1	remembrance place with memorial	Battles and those who fell in the World War 1(1914–	first half of the 20th century
	11317/1	Jewish cemetery	approx. 10 gravestones	
Ruský Potok	144/1-5	church and the surrounding area	St. Michael's Greek-Catholic Church	1740
Ruské	11388	road	stone road – Porta Rusica	1861–1865
Topoľa	1315/1	memorial	A. Duchnovič (1803–1865)	
	11319/1	Jewish cemetery	appr. 40 gravestones	early 20th century
	151/1-2	church and bell tower	St. Michael's Greek-Catholic Church	second half of the 17th century
Ulič	10411/1-5	church	St. Nicolas's Greek-Catholic	1867
Uličské Krivé	2335/1	memorial	Václav Linha (1925–1946), a pyrotechnician	second half of the 20th century
	152/1-2	church and fencing	St. Michael's Greek-Catholic	1718

Table 10 Registered Archaeological Sites Acc. to the Regional Monuments Board Prešov, 2016)

Municipality	C. a.	Description

Stakčín	Dara	former Dara village area – expected archaeological findings Modern Age (1st written mention from 1598)
Stakčín	Ostrožnica	former Ostrožnica village area – expected archaeological findings from Modern Age (1st written mention from 1585)
Stakčín	Ruské	former Ruské village area – expected archaeological findings from Modern Age (1st written mention from 1585)
Stakčín	Smolník nad Cirochou	- former Smolník village area – expected archaeological findings from Modern Age (1st written mention from 1568) - pottery fragments from former Smolník residential area, data date back to the 15th century
Stakčín	Starina nad Cirochou	- former Starina village area currently located below the Starina reservoir – are with registered archaeological findings from the Bronze Age, Medieval Age and Modern Age (1st written mention in 1492) - late Bronze Age bronze axe found in residential area during demolishing works - unique pottery fragments from the 15th century in Roveň area
Stakčín	Veľká Poľana	- former Veľká Poľana village area – expected archaeological findings from Medieval to Modern Age (1st written mention from 1492) - a golden coin from 1555 found in the former residential area
Stakčín	Zvala	former Zvala village area – expected archaeological findings from Medieval to Modern Age (1st written mention from 1588)
Ulič	Ulič	historical village centre – expected archaeological findings from Medieval to Modern Age (1st written mention from 1451) Sporadic unlocalized findings: - Krušina and Hurka areas to the north of the village – stone chopped industria findings from the Stone Age - unlocalized golden wire finding

Poloniny NP and its buffer zone contain also war graves. They are outlined in Table 11.

Table 11 War Graves and Other Related Monuments in Poloniny NP and its Buffer Zone territory (Ministry of Interior of the Slovak Republic, 2015)

Municipality	**Location**	**Event**	**Type**
Dara	municipal cemetery of the former Dara	First World	renovated in 2007 (20 single and 2 mass graves)
Ruské	war cemetery by the former Orthodox church	First World War	In 2007, 22 wooden crosses for graves and a central wooden cross were set in the ground. Two mass graves (14 single graves and 20 mass graves)
Smolník	the old cemetery of the former village	First World	(17 mass graves)
	Smolnický potok stream below the	First World	another remembrance symbol – a stone
Starina	The Starina Reservoir	First World War	A memorial to soldiers fallen in the First World War from the period itself has been preserved in the flooded Starina village. Currently the stone memorial is about seven metres underwater. Only once since the flooding of the area has the water level dropped to such an extent (in 1997 during an extremely dry period) that the memorial was exposed.
	Starina – under the embankment	Second World War	Close to the reservoir embankment there is a memorial to Czechoslovak pyrotechnicians which reads: "Here on 1 August 1945 the Moravian-Silesian engineers Senior Lieutenant Ján Pluhář and Sergeant Josef Konečný were killed while removing mines."

Veľká Poľana	war cemetery by the ruins of the Greek-Catholic	First World War	A stone rotunda with a central wooden cross. This monument was repaired in 2008, and the central wooden cross was affixed (308 individual graves).
	war cemetery on Predný Hodošík peak	First World War	A war cemetery, known as the "Russian cemetery", is situated at an altitude of 851 m a. s. l., and is the most highly located war cemetery commemorating the First World War in Slovakia. There are 395 individual graves arranged in a circular fashion in five rows and four sections. In the middle there is a central cross.
	municipal cemetery	First World	There is a stone memorial which was repaired and had a central wooden cross affixed on it in 2008.
Zvala	war cemetery in the former Zvala village	First World War	The cemetery is located to the north of the chapel built on the site of the Greek-Catholic church. It contains 37 grave crosses (48 mass graves).
Kolbasov	on the municipal council building	Second World	a memorial plaque dedicated to the liberation of the village
	on the municipal council building	Second World	a memorial plaque commemorating a fallen soldier
	on the municipal council building	Second World	a memorial plaque commemorating the victims of the Holocaust
	war cemetery	First World	33 individual graves
Nová Sedlica	Nová Sedlica – No. 24	Second World	a memorial plaque
Príslop	war cemetery	First World	(81 individual graves, a central wooden cross)
	on the municipal council building	Second World	a memorial plaque dedicated to the liberation of the village and a local soldier who died in battle during the Second World War
Runina	Čičovaty war cemetery	First World	(60 individual and seven mass graves)
	near the village	First World	memorial
	on the municipal council building	Second World	a memorial plaque
Ruský Potok	war cemetery in the village	First World	(27 individual and 3 mass graves)
Topoľa	war cemetery in the village cemetery	First World War	(119 individual and 34 mass graves)
	on the municipal council building	Second World War	a memorial plaque dedicated to the liberation of the village
Uličˇ	war cemetery	First World	71 soldiers who fell in the First World War are buried there (62 individual and 3 mass graves)
Uličské Krivé	war cemetery, Jewish cemetery	First World	(2 individual graves)
Zboj	war cemetery – part of the village	First World	203 soldiers are buried here. 187 are Russians, with the others being of unknown origin (115 individual and 27 mass graves).
	on the municipal council building	First World	a memorial plaque dedicated to the liberation of the village

The NP buffer zone also contains the Beskydský Panteon symbolic cemetery commemorating the significant people who were born in the area, lived there, stayed there or travelled through, leaving their mark. It contains important testimonials.

This document does not concern the rights and duties stemming from the generally binding legislation related to the Monument Board activity.

2.3. Proposed Principles and Measures of Using the NP and the Surrounding Areas in Terms of Conservation Objectives

Given the conservation subjects, their condition and based on the analysis of economic activities conducted in the Poloniny NP and its buffer zone, the following **principles** were developed:

Agriculture

- *To manage the soil fund in a differentiated fashion based on what management type is suitable for given natural conditions and at the same time provides for an efficient environmental protection.*
- *To ensure a regular attendance to permanent grass stands in a suitable way, scope and frequency so as to prevent the self-afforestation that might cause the demise of whole communities.*
- *To use light machinery only while managing the permanent grass stands to prevent excessive plant cover damage.*
- *To undertake measures to remove and prevent synantropization and the emergence of invasive and other non-native or ruderal species as well as to renew the already changed communities in a suitable manner.*
- *To maintain the green vegetation patches scattered in the agricultural land and to create conditions favourable for their renewal, especially along roads and agricultural production facilities.*
- *To exclude the use of chemicals on meadows and pasturelands as well as the use of industrial fertilizers, silage juices and other liquid waste use.*
- *To govern the grazing period, herd size and grazing methods by the previously calculated sustainability of grass stands that cannot be exceeded.*
- *To provide for such animal production technique that will not have a negative impact on landscape, especially in terms of water pollution.*
- *Measures for the sites with Maculinea butterflies occurrence:*
  1. *To ensure a regular mosaic mowing regimen or timely regular grazing regimen based on the individual Maculinea species and the needs of their resource plants. They are dependent either on wet meadows (Maculinea alcon, Maculinea teleius) or on xerotermic sites and dry pasturelands (Maculinea arion, Maculinea rebeli). This is to be governed by the Zásady manažmentu lokalít s výskytom modráčikov z rodu Maculinea [*Management Principles in Sites with Occurrence of *Maculinea* Butterflies*] (SNC SR, 2008).*
  2. *To remove invasive species and self-seeding woody plants (successions).*
  3. *To provide for connecting individual populations (metapopulations) within the area by creation of the "stepping stones" in order not to isolate them.*
- *Management principles in sites with occurrence of Maculinea butterflies:*
  1. *To prevent decrease of suitable habitats caused by the unsuitable use of habitats such as construction works, tillage, wood skidding, waste disposal sites, housing and other buildings development, etc.*
  2. *To exclude the use of chemical substances and fertilizers, especially pesticides, herbicides, hormones, toxic substances, industrial fertilizers, and silage juices on agricultural soil while managing the grass habitats in sites with the occurrence of Maculinea butterflies and in their surrounding areas (100 m from the occurrence site border).*
  3. *To prevent changes to habitat use (e. g. afforestation, change to field culture, inappropriate meadow management way, etc.).*
  4. *To prevent other forms of site damage.*
  5. *To prevent the occurrence of non-native plant species, the water regimen alternations, and ground- and landscaping activities in the sites with the Maculinea occurrence.*

Forestry

- *To manage the forest soil fund in a differentiated manner in order to grow healthy and stable forest stands with native woody plants composition and multi-layer structure and in order for the forest to fulfil all the required functions.*
- *To preserve, to a maximum possible extent, the integral portions of the native (natural) stands.*
- *To strongly prefer the small-scale shelterwood management with the use of natural regeneration.*
- *To gradually change the extraction and mining technical equipment in order to lessen the erosion threat in the area.*
- *(Given the young forest stands wide extent and the importance of tending forest management measures) To undertake forest tending measures in a timely manner and in compliance with the functional focus and needs of the stands, and in order to achieve stable and resilient stands as well as supported biodiversity.*
- *To not remove the preparatory (pioneer) woody plants everywhere in the same extent, but to reduce them in areas with a significant occurrence of basic species of the native woody plants structure.*
- *To implement artificial afforestation only exceptionally and to use native and genetically suitable young plants of high quality instead.*
- *To ensure the monitoring of forest ecosystems condition and the natural processes research.*

Use of Water

- *To exclude all activity altering the state of watercourse basins, i. e. modification, filling, draining, extraction of river material, and wood skidding using the watercourse basin (does not apply to the watercourse administrator).*
- *To exclude interfering with bank vegetation (does not apply to the watercourse administrator).*
- *To exclude interfering with geological substrate and relief forms.*
- *To adhere to the management regimen in water resources sanitary protection zone.*
- *To gradually work on issues relating to the water management situation in the area, to drinking water supply for populations and to wastewater processing.*
- *To not build any water polluting substances storage sites, or any animal production facilities close to water flows.*
- *To not stock the fishing grounds with non-native fish species.*

Hunting

- *To subordinate the commercial interests of fishing to the natural values conservation and improvement as well as to provide for considering the Poloniny NP's specific function while practising hunting rights.*
- *To not disturb bird nesting sites and animal breeding sites.*
- *To eliminate negative influences (noise disturbance, campfires, vehicles, motorbikes and scooters entry).*
- *To implement measures needed for the conservation of animals, especially during nesting and breeding periods.*
- *To eliminate the population of the non-native invasive species (raccoon dog).*

Fisheries

- *To regulate stocking the fishing grounds with native fish species.*
- *To not stock the fishing grounds with non-native fish species.*
- *To eliminate negative influences (noise disturbance, campfires, polluting the fishing grounds) and eliminate poaching.*

Territorial Planning and Tourism

- *To fully respect local conditions and nature conservation measures while planning and developing further activities in the area.*
- *To reassess the possibilities and potential of individual municipalities in terms of natural conditions and nature conservation measures and to base the further development framework on this information.*
- *To reassess the applicability of current tourism and recreation interests, to prepare the conceptual framework of the recreational use of the area suitable development relating to the surrounding areas.*
- *To thoroughly consider the Poloniny NP conservation object during geological works, mining and other mining related activity.*

In order to fulfil the conservation measures stated in later parts of this document, the Poloniny NP area was **divided into 17 Ecologically-Functional Areas** (EFA) based on groups of ecologically similar habitats and their identical ecological, social and economic assessment. An EFA is characterized by homogeneous ecological conditions and a common functional focus from the nature conservation perspective while standing for a territorially reproducible unit with detailed and specified basic management type within the area.

EFA outline is specified in Table 12 and Map Appendix 6.4. Forest division units (FDU) inclusion in the individual EFAs is outlined in the Appendix 6.6.14. Size of stand area of individual EFAs by users is outlined in Appendix 6.6.16.

Table 12 Poloniny NP and its Buffer Zone EFAs Outline

EFA Code	**EFA Group Name**	**Habitats in EFA**	**Social and Economical Use**
EFA1	Forest ecosystems with a Category V level of protection (EFA1a) and in the World Natural Heritage core area with a Category III level of protection (EFA1b).	Ls4, Ls5.1, Ls5.2, Ls5.3 and Sk2	non-interference mode
EFA2	Forest ecosystems in the World Natural Heritage buffer zone	Ls4, Ls5.1, Ls5.2, Ls5.3 and Sk2	Active management aimed at achieving the differentiated involved forest ecosystems.
EFA3	Forest ecosystems with a Category III and IV level of protection	Ls2.1, Ls4, Ls5.1, Ls5.2, Ls5.3, Ls1.3, Ls1.4 and Sk2	Active management with management ways close to nature.
EFA4	Permanently managed forest ecosystems with a Category II level of protection	Ls2.1, Ls4, Ls5.1, Ls5.2, Ls5.3, Ls1.3, Ls1.4 and Sk2	Management under the Forest Management Programmes
EFA5	Bushes and groups of trees outside the forest	Kr7	Without specific use.
EFA6	Mountain “poloniny” meadows above the timberline outside the Register of Agricultural Production Areas (RAPA).	Tr8	Regulatory interventions.
EFA7	Mountain “poloniny” meadows above the timberline included in the RAPA production blocks.	Tr8	Regulatory interventions.
EFA8	Meadows, pastureland and fields, tree farms	Lk1, Lk2, Lk3, Lk4	Mowing, grazing, tillage.

	outside the RAPA.		
EFA9	Meadows, pastureland and fields, tree farms included in the RAPA production blocks.	Lk1, Lk2, Lk3, Lk4	Mowing, grazing, tillage.
EFA10	*Maculinea* butterfly sites.	Lk3	Regulatory interventions.
EFA11	Wetlands and moors included in the RAPA production blocks.	Lk4, Ra3	Regulatory interventions.
EFA12	Alkaline fens and transition mires outside the RAPA.	Ra3, Ra6	Regulatory interventions.
EFA13	Wetlands outside the RAPA and stagnant water.	Vo2	Without specific use.
EFA14	Flowing water with bank vegetation	Br2, Br4, Br6, Ls1.3, Ls1.4, Pr1	Without specific use.
EFA15	Former residential areas of relocated villages above the Starina reservoir.	Former gardens, orchards, yards.	Tending to fruit trees or important garden woody plants.
EFA16	Urban and suburban habitats, technical infrastructure.	Built-up areas in towns and villages, gardens, orchards and parks, roads, forest roads, forest storage sites, power lines.	Usage according to land type.
EFA17	Caves and underground habitats		Without specific use.

3. Management Objectives and Measures to Fulfil them

3.1. Setting of Long-Term Objectives Under the Ecological-Functional Areas and Zones Framework

The long-term (strategic) conservation objectives in the Poloniny NP are as follows:

- **To improve knowledge of habitats and species of Community and national importance** (species included in Sections 1.6.2 and 1.6.3), especially those subject to conservation in the Poloniny NP and to assess their condition by monitoring.
- **To preserve and/or achieve the favourable condition of habitats and species of Community and national importance** (species included in sections 1.6.2 and 1.6.3) subject to conservation in the Poloniny NP.
- **To prevent urbanization and other ways of destroying** sites containing habitats of Community importance and species of Community and national importance.
- **To preserve the NP functions, especially the potential for sustainable use of forest habitats, grass stands, wetlands and stagnant waters, flowing waters with bank vegetation, caves and underground habitats as well as suitable tourism and recreation forms via due adherence to the objectives and measures** in the individual EFAs.
- **To involve land owners and users, local population and local self-governing authorities in the NP conservation as well as in the activities preserving the natural assets and at the same time providing local population with economic advantages, such as sustainable tourism and the renewal of traditional economical activities.**

The above-defined objectives apply to all EFAs and are further developed for a 10-year period by the operational objectives that follow.

3.2. Setting of Operational Objectives Under the Ecological-Functional Areas Framework

EFA1a Forest ecosystems with a Category V level of protection

Objective 1.1: to ensure research and monitoring of the habitats and species of Community and national importance subject to conservation in the Poloniny NP.

Objective 1.2: to maintain or achieve the favourable condition of 2 habitats and 4 species of Community and national importance subject to conservation as well as to improve the condition of 1 habitat and 2 species.

EFA1b Forest ecosystems in the World Natural Heritage core area with a Category III level of protection

Objective 1.3: to ensure research and monitoring of the habitats and species of Community and national importance subject to conservation in the Poloniny NP.

Objective 1.4: to maintain or achieve the favourable condition of 2 habitats and 4 species of Community and national importance subject to conservation as well as to improve the condition of 1 habitat and 2 species.

EFA2 Forest ecosystems in the World Natural Heritage buffer zone

Objective 2.1: to make the involved forest ecosystems ecologically stable and able to autoregulate by means of temporary active management.

Objective 2.2: to ensure research and monitoring of 2 habitats and 4 species of Community and national importance subject to conservation.

Objective 2.3: to maintain or achieve the favourable condition of 2 habitats and 4 species of Community and national importance subject to conservation in the Poloniny NP.

EFA3 Forest ecosystems with a Category III and IV level of protection

Objective 3.1: to ensure research and monitoring of habitats and species of Community and national importance subject to conservation in the Poloniny NP.

Objective 3.2: to maintain or achieve the favourable condition of 2 habitats and 3 species of Community and national importance subject to conservation.

EFA4 Permanently managed forest ecosystems with a Category II level of protection

Objective 4.1: to ensure research and monitoring of habitats and species of Community and national importance subject to conservation in the Poloniny NP.

Objective 4.2: to maintain or achieve the favourable condition of 2 habitats and 2 species of Community and national importance subject to conservation.

EFA5 Bushes and groups of trees outside the forest

Objective 5.1: to ensure research and monitoring of habitats and species of Community and national importance subject to conservation as well as dependent on the given EFA.

EFA6 Mountain "poloniny" meadows above the timberline outside the RAPA.

Objective 6.1: to ensure research and monitoring of habitats and species of Community and national importance subject to conservation in the Poloniny NP.

Objective 6.2: to maintain or achieve the favourable condition of 1 habitat and 2 species of Community and national importance subject to conservation.

EFA7 Mountain "poloniny" meadows above the timberline included in the RAPA production blocks.

Objective 7.1: to ensure research and monitoring of habitats and species of Community and national importance subject to conservation in the Poloniny NP.

Objective 7.2: to maintain or achieve the favourable condition of 1 habitat and 2 species of Community and national importance subject to conservation.

EFA8 Meadows, pastureland and fields, tree farms outside the RAPA

Objective 8.1: to ensure research and monitoring of habitats and species of Community and national importance subject to conservation in the Poloniny NP.

Objective 8.2: to maintain or achieve the favourable condition of 3 habitats and species of Community and national importance that are subject to conservation.

EFA9 Meadows, pastureland and fields, tree farms included in the RAPA production blocks

Objective 9.1: to ensure research and monitoring of habitats and species of Community and national importance subject to conservation in the Poloniny NP.

Objective 9.2: to maintain and/or achieve the current condition of 3 habitats and species of Community and national importance subject to conservation.

EFA 10 *Maculinea* butterflies sites

Objective 10.1: to ensure research and monitoring of habitats and species of Community and national importance subject to conservation in the Poloniny NP.

Objective 10.2: to maintain or achieve the current condition of 3 habitats and species of Community and national importance subject to conservation.

EFA11 Wetlands and moors included in the RAPA production blocks

Objective 11.1: to ensure research and monitoring of habitats and species of Community and national importance subject to conservation in the Poloniny NP.

Objective 11.2: to maintain and/or achieve the current condition of habitats and species of Community and national importance subject to Poloniny NP conservation.

EFA12 Alkaline fens outside the RAPA

Objective 12.1: to ensure research and monitoring of habitats and species of Community and national importance subject to Poloniny NP conservation.

Objective 12.2: to maintain or achieve the current condition of habitats and species of Community and national importance subject to Poloniny NP conservation.

EFA13 Wetlands outside the RAPA and stagnant water

Objective 13.1: to ensure research and monitoring of habitats and species of Community and national importance subject to Poloniny NP conservation.

Objective 13.2: to maintain and/or achieve the current condition of habitats and species of Community and national importance subject to Poloniny NP conservation.

EFA14 Flowing water with bank vegetation

Objective 14.1: to ensure research and monitoring of habitats and species of Community and national importance subject to Poloniny NP conservation.

Objective 14.2: to maintain or achieve the current condition of habitats and species of Community and national importance subject to Poloniny NP conservation.

EFA15 Former residential areas of relocated villages above the Starina reservoir

Objective 15.1: to ensure research and monitoring of habitats and species of Community and national importance subject to Poloniny NP conservation.

Objective 15.2: to maintain and/or achieve the current condition of species of Community and national importance subject to Poloniny NP conservation.

Objective 15.3: to ensure the pomological inventory of the fruit woody plants and subsequent care and gene pool reproduction.

EFA16 Urban and suburban habitats

Objective 16.1: to ensure research and monitoring of species of Community and national importance that are subject to Poloniny NP conservation.

Objective 16.2: to maintain and/or achieve the current condition of species of Community and national importance subject to Poloniny NP conservation.

EFA17 Caves and underground habitats

Objective 17.1: to ensure research and monitoring of habitats and species of Community and national importance subject to Poloniny NP conservation.

Objective 17.2: to maintain and/or achieve the current condition of habitats and species of Community and national importance subject to Poloniny NP conservation.

EFA 1–17 Common objective

Objective 18.1: to increase ecological awareness of local population and national park visitors, to improve cooperation with land owners and users while protecting the subjects of conservation.

Individual EFAs management measures, measures aiming for regional development, tourism development, preservation of cultural and traditional values and scientific activities are detailed in the **Poloniny NP Action Plan** (Appendix 6.6.17). This document was developed based on negotiations with the involved stakeholders.

3.3. Framework Planning and Management Models for Forest Habitats

Framework planning addresses methods of forest management to ensure that forest objectives and roles in a particular forest area are met. With respect to the development of the NP Management Plan this concerns the NP and its buffer zone.

Details on the inclusion of forest division units into EFAs and the proposed measures are included in the Appendix 6.6.14. **Size of stand area of individual EFAs** by users is outlined in the Appendix 6.6.16.

During the existence of the Poloniny NP, a general picture of the role of forest ecosystems and a conception on how to care for these ecosystems have been formed.

As it has already been stated, the forest habitats constitute a significant part of the Poloniny NP (approx. 90%). The Forest Management Programmes and all their components, along with the proposed Poloniny NP Management Plan 2017–2026, are therefore the starting point for forest ecosystems care. Their objective is to ensure, by protective and corrective measures, a natural development of forest habitats, to preserve their biodiversity and stability, and to improve the overall nature condition by caring for forests. This basic strategy is an essential condition for the role and conservation of forest ecosystems in the Poloniny NP as well as for the fulfilment of their ecological, environmental and productive functions.

While evaluating the condition and structure of the Poloniny NP forest ecosystems in relation to existing management frameworks, including the Development and State of Forest Management (FM), **the negative factors cannot be omitted, such as the biotic and abiotic phenomena (e. g. drought, sudden frost episodes) alongside the more modern phenomena such as acidic precipitation or the acidification of the environment.** These negative factors directly or indirectly affect the development and condition of forest ecosystems, lead to the damaging of woody plants and have a negative impact on soil processes. Deer and roe deer in sub-mountain and mountain forests form the forests woody plants structure (initial stages of forest development) with dominating beech, as they selectively graze on precious broad-leaved and fir trees. As a result, attempts to established mixed forests with adequate representation of fir and precious broad-leaved trees have not been successful so far.

Based on the information obtained via a concise assessment of forest stands condition focusing on the role and importance of the Poloniny NP forest habitats as well as on the important plant and animal species protection, the following general and detailed forest ecosystems management principles were developed:

General Management Principles

Management Principles in EFA1a and EFA1b Forest Stands

These are the stands in the existing nature reserves with the protection level 5 (EFA1a, size 2325 ha) as well as the stands with Protection Level 3 (EFA1b, size 170.99 ha) that create the three-core UNESCO World Natural Heritage site “Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany” – subsites Havešová, Rožok and Stužica-Bukovské vrchy (hereinafter UNESCO site). They will be without intervention, meaning that they will be left to self-development and self-

regulation. The proposed measures in the EFA1b of the "no intervention" type will be implemented by the managers after the approval of the Poloniny NP Management Plan if the no-intervention measures are transposed into the FMP or if the responsible nature and landscape protection authority decides so in a decision. FMP with limiting conditions defined by the nature protection authority or a decision by nature protection authority on the definition of limiting conditions will be a foundation for financial compensation for the restraint of regular management according to §61e of Act No. 543/2002 Coll.

Management Principles in EFA2 Forest Stands

These are the 2049.84 ha forest stands included in the UNESCO site buffer zone. Their objective is the biological control of the core zone. The 3rd protection level applies to them and currently it is not necessary to increase it. Management of these forest ecosystems must be based on the current condition of stands, their age and woody plants composition and especially on the fact that timber production is not the primary function here – management must focus on the support of the additional forest functions and respect international conventions. An integrated management complying to the nominating project and the primary need to protect the UNESCO site core area must be applied in the EFA2 stands. The buffer zone stands closely relate to the core zone. Basic decisions for the currently valid FMP were based on the approved forest categorization (Chart 3). As can be seen in the buffer zone forest categorization chart, commercial forests prevail in the area (69%). Special purpose forests are represented in the Starina reservoir sanitary protection zone and the protective forests, especially the alpine forests below the timberline, account for 8%. The proposed EFA2 measures will serve to ensure the favourable condition of the habitats of Community importance. After the Poloniny NP Management Plan approval, they will be implemented by managers, provided that the measures are financially compensated by the State, as those are the measures above the regular forest management framework (i. e. above the FMP defined measures).

Table 13 offers an outline of EFA2 woody plant representation as the representation is one of the basic characteristics of the area in question. The representation is based on the formed stand compositions – the stand types that better show the interaction in real environment. Chart 4 outlines the forest age classes and the Chart 5 outlines the EFA2 forest categorization.

Chart 4: EFA2 Forest Age Groups Representation

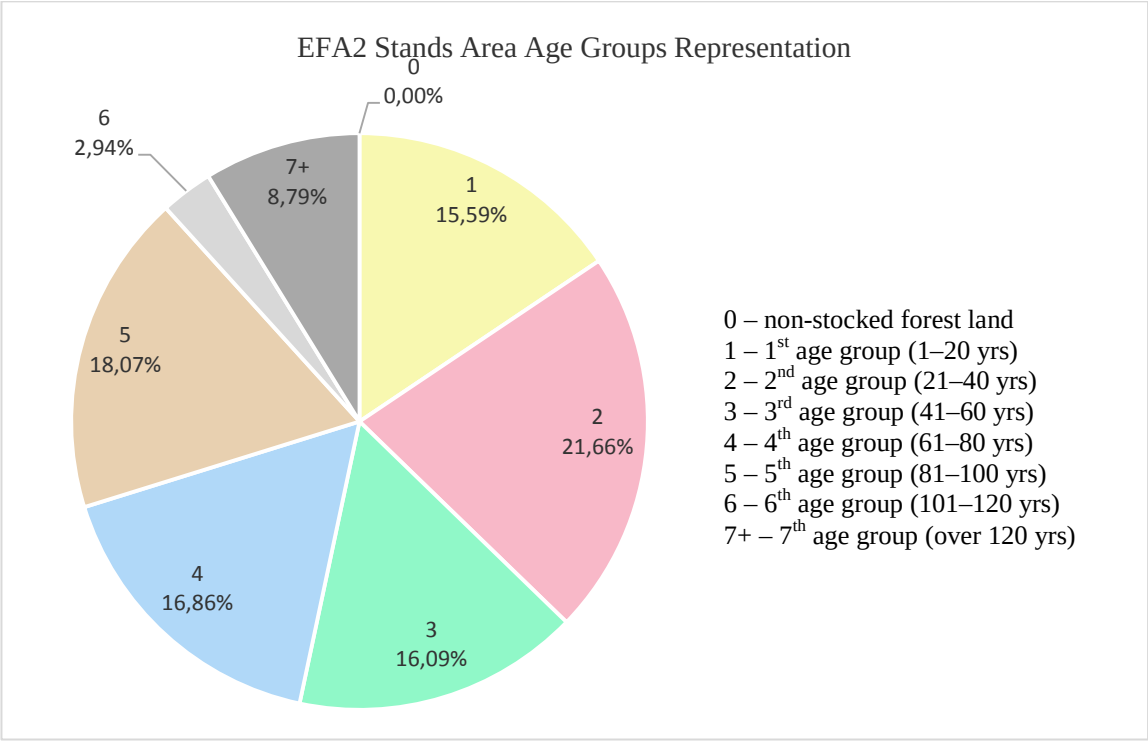
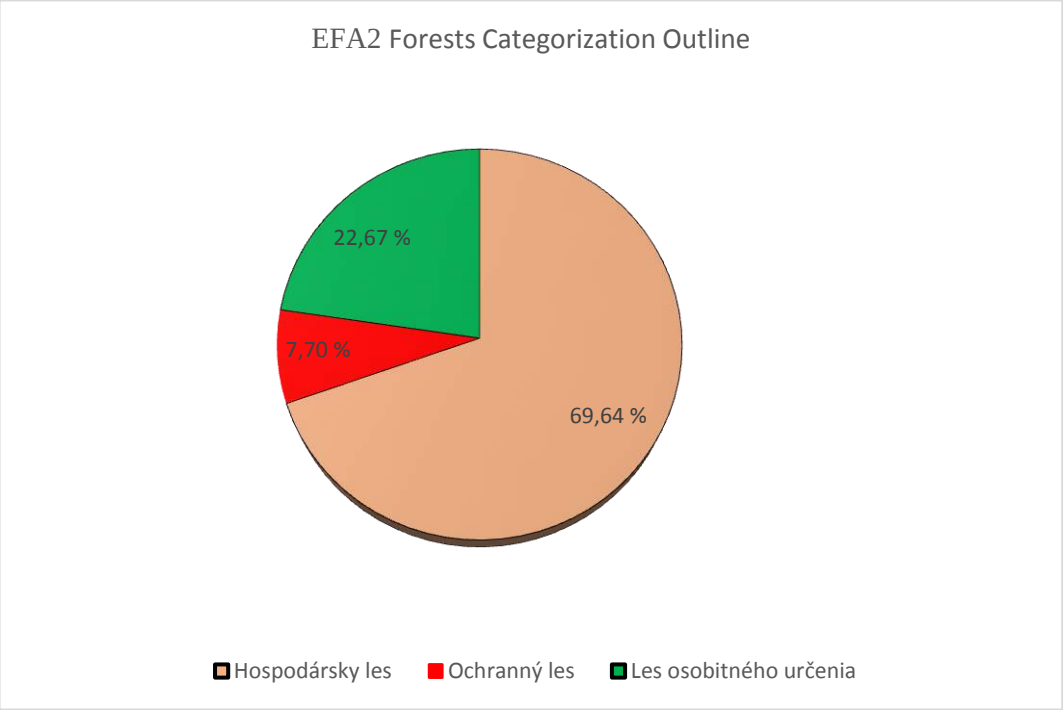


Chart 5 EFA2 Forest Categorization Outline



Translator's note: hospodársky les = commercial forest, ochranný les = protective forest, les osobitného určenia = special purpose forest

Table 13 EFA2 Woody Species Representation

Stand Type	Area Size (ha)	Percentage (%)
Beech forests	1,874.73	91.46
Precious broad-leaved species	0.09	0.00
Fir forests	11.53	0.56
Alder forests	2.43	0.12
Larch stands	2.55	0.12
Spruce forests	79.24	3.87
Pioneer woody plants mixture	79.27	3.87
Total	2049.84	100

Beech stands are the dominant stand type of the area and given their vitality and regeneration abilities, the long-term increase of their representation at the expense of pioneer woody plants as well as spruce and larch is assumed. The buffer zone forest composition is as follows: 90% of native woody species, native forest ecosystems from the 4th (beech) and 5th (fir-beech) forest vegetation stage. This is the basic precondition for the use of ecologically oriented forest growing principles. However, it must be said the to-date management type (strip regeneration forms) significantly influenced the structure of the originally natural forest complexes. **Forests younger than 80 years therefore dominate** in a large part of the buffer zone.

The **cultivation measures,** which will be used for these stands, will be varied and respect the fact that this EFA is created by stands of various transition structure ranging from the one-layer (height

levelled) stands, through moderately height levelled to strongly uneven-aged stands with a structure close to a natural forest.

Given the permanently sheltered lower layer, some time is needed until the regeneration is established and specimens become viable and start to grow. The initial natural regeneration phase is established with a great difficulty in the stands levelled-out from the tree crown and height perspective, especially if they are even-aged and of homogeneous nature. In case of tree crown and height levelled homogeneous even-aged stands in the middle stem-wood growth phase, the fast **achieving of height differentiation of the stands** is necessary in sites that make this possible. It is necessary to speed up the slow growth and development of the natural regeneration currently in the advanced growth phase by opening the canopy, i. e. lowering the sheltering degree in order to achieve the clustered mixture. However, this often leads to the emergence of more blanket regeneration, which is undesirable from the perspective of stand differentiation.

A small part (less than 5%) of the EFA2 is created by **forests with allochthonous species non-native to the Poloniny NP area representation (spruce, larch, etc.).** Management focusing on their elimination and on autochthonous species support is needed in such stands. If this is not possible due to the disruption of stands, milder solutions must be applied, i. e. the necessity of avoiding clear cutting (apply only in extreme cases) applies also in this case as well as the preference for the gradual elimination of the allochthonous woody species while tending or regenerating these stands by singular selection or in clusters or groups. Where autochtonous woody species, which might be supported by tending, are not present, the brightening of the allochthonous species stands is needed, as well as the planting of native woody species – these later replace the non-native species.

It is necessary to speed up the slow growth and development of the natural regeneration currently in the advanced growth phase by opening the canopy, i. e. lowering the sheltering degree in order to achieve the clustered mixture. However, this often leads to the emergence of more blanket regeneration, which is undesirable from the stand differentiation perspective.

If the stand shows at least a layered canopy and some differentiation signs (condition - natural regeneration), it can be a good starting point for height- and age-differentiated stands.

It is necessary to carefully consider the brightening of the stand (decrease in the sheltering and canopy thickness) relating to the establishment of natural regeneration (germination, taking roots, sprouting) and to lower layer growth dynamics.

The result of the long-term efforts in transformation of the stands based on age groups to the close to natural management will be the stands fulfilling standards in core zone protection.

A specific nature of the territory in question in our opinion requires specific management procedures. It is necessary to apply the **differentiated procedure and especially consider the condition and structure of the larger, mutually influencing units** during regeneration. The cooperation of neighbouring managers is welcome when needed.

We propose the following cultivation measures for individual growth phases:

1. Management Principles in Thicket Growth Phase (Age 0–20 years)

In the first phase, we try to give all regenerating woody plants the same chance to achieve the co-dominant position and assert themselves later. Management should focus on supporting rare and endangered woody species planned to be a part of the target woody plants composition, on individual or area-based (small-scale fencing in stands) protection of the plants in the advanced growth phase against animals and weeds.

In this phase, we can also replenish target woody plants by artificial afforestation in places that have not regenerated and protect them on an individual basis against bites. This is the phase when the

woody plants representation can be best influenced. The attention is therefore focused on the support of target woody plants in cases with low representation: we try to increase representation to a desirable level. Woody plant structure is adjusted so that the native woody plants prevail. In beech forests the fir and precious broad-leaved species ratio is to be increased. The high numbers of naturally regenerated specimens and good growth dynamics therefore require necessary interventions starting at the thicket growth phase (starting from 2 m average height).

Cleansing operations should be conducted in a moderate way, every 3–5 years and include a thorough negative selection to reduce excess specimens, improve the stand quality and structure (dominant, doubled, crooked, fork-shaped growths), increase its stability as well as remove weak and unhealthy specimens. The cutting of low quality tree crown tops suffices in the initial phases. Clearing in beech stands is reduced to removing the dominant and spreading growths. Clearing operations also presuppose the non-area-wide interventions, i. e. leaving parts of the stand intervention free. Upper layer interventions provide for the height differentiation of stands.

2. Management Principles in Sapling and Pole Growth Phase (Age 21–80 years)

Tending thinning in beech and other hardwood woody plants will be conducted in the co-dominant and dominant layer. Overtopped (suppressed) trees will be left intervention-free. Intensive intervention is to be done during tending to hardwood stands with the objective of support, i. e. freeing future target trees from the competitive pressure of neighbouring specimens in the crown area.

Target beech and other hardwood trees number is 150–200. In spruce and fir it is 200–300, in some cases even 400. The sheltering problem will be solved by the removal of 1–3 competing co-dominant trees while leaving the overtopped specimens with sheltering or tending function in the stand. The aim is to ensure the stability of target specimens already in the younger growth phase.

First interventions include the preferred health- and maturity-related negative selection. The adjustment of woody plant composition favouring the native woody species, especially beech, fir and precious broad-leaved species, is important. Individual brightened groups remain isolated from one another by thicker stand parts without intervention. Biodiversity support and intense attention given to less represented woody plants are important, too. Intervention intensity also depends on the stand's overall health condition. In this phase, we focus on the cultivation of stand stock in order to provide for a sufficient influx of light and nutrients. This is based on the overall philosophy of creating enough space for all quality specimens in the stand for them to create sufficiently large crowns receiving enough light and thus accumulating maximal light gain.

Tending operations through the thinning of trees above 50 yrs. in coniferous stands are therefore of a maximum intensity in order to maintain a sufficiently large green part of the crown (starting from 1/3 of the tree height), optimal slenderness coefficient (70–100). The principle is for the such created crown to remain green, lightened and thus producing timber on quality stemwood.

3. Management Principles in Stemwood Growth Phase (Age over 80 years)

Durable forest in the whole area is the main principle. Final cutting is assumed only above natural regeneration. The 50% regenerated area principle that is adhered to during regular shelterwood management is not sufficient and acceptable only as an exception.

Joint influence during natural regeneration: It is implemented by creation of conditions for natural regeneration via soil surface adjustments under seeding trees in the stand, either by the manual digging of small areas, the removal of raked parts or disruption by machinery. Protection of the already existing natural regeneration is needed against the competing weeds and weed woody plants or in too thick growths (in this case by clipping).

Artificial regeneration is to be used only to an unavoidable extent. The provoking of natural regeneration is the main principle of the close-to-nature forest regeneration. If the desired composition of woody plants is not achieved in the overall area, artificial regeneration by sowing or planting might be

used in an unavoidable extent. Reproductive material from local resources cultivated in tree farms or taken from natural self-seeded areas is used. Artificial regeneration is also desired during the adjustment of woody plants composition while creating mixed forests; it is often the only way of introducing fir and precious broad-leaved species to stands.

The sporadic purpose selection on the whole area applied by health and cultivating cutting helps start the natural regeneration process in the whole area through milder interventions as well as a substitute for more intensive strip brightening cutting. At the same time, it allows for better production quality by increasing the gain in the remaining quality specimens.

The creation of a mosaic durable forest structure through purpose management (tree- or group-based) is based on group creation (by preparatory or brightening cutting operations) of 0.03–0.20 ha, which are inserted into the stand more or less randomly according to the stand development – i. e. in places where the natural regeneration is either existing or expected as well as where groups of high quality seeding trees at the time of seed harvest are present, etc. In the insertion process the distance corresponding to the regeneration period must be kept and that is how the prominent height and age differentiation of the regenerated stand is achieved. Group regeneration is done, in principle, by applying at least three phases of shelterwood cutting, dependent on stocking in the area being regenerated. The mother stand is, as the natural regeneration develops, gradually reduced so as to provide enough light for the young stand development. Such groups of varying size and form are not to be connected, though, but exist separately and this provides for the creation of mosaic, non-homogeneous stand structure with the long-term (and in future continuous) regeneration period.

Felling by the target tree diameter is done by individual trees selection with the aim of creating a selection forest. The stand management and care focus on the individual trees. It involves the selection management system's application by interventions at a co-dominant level during the whole stand development period. The stand is tended to over a long period, by positive interventions at the co-dominant level and gradually tending changes to felling with a continuous regeneration period. Felling operations are focused on regulating the further development of the secondary stand and help in the process of natural regeneration development as well as support the growth of remaining specimens. The necessity of tending interventions is limited by the creation of multi-layer uneven-aged stands; the secondary stand is thinned and of higher quality thanks to the sheltering. This management system is suitable for stands with a satisfactory composition of (native) woody plants, a sufficient number of quality co-dominant trees, stable forest and a sufficient natural regeneration of target woody plants. The individually labelled trees are felled; selection criteria are the stand stability and quality production support.

4. Other Principles

Mild felling and skidding methods are preferred: this means using methods and machinery adjusted to stand structure of a close to nature forest, which will lower the damage to soil and to the remaining upper and lower stand layer. It also means using the sorting method, de-branching at the tree-stump, the creation of skidding routes and machinery moving only on these routes.

Management is oriented also on the increase of fauna and flora biodiversity, in order to ensure and increase the social function of the forest. This means the protection and support of the endangered and rare woody plant species occurring in the given area, leaving the lying down or standing old and dead wood in the stand and the protection of rare habitats, such as springs and their surrounding area or rock overhangs with specific flora.

Management Principles in EFA3 and EFA4 Forest Stands

These are the forest stands in the majority of Poloniny NP area. Their size is 22,706.16 ha (EFA3) and 5,099.40 (EFA4).

When regenerating and establishing forest stands, the method of mixing the different woody plants is also determined - more so with artificial regeneration than natural. The method of mixing is listed in every management model according to the woody plant. Blanket mixing to a wider extent can only be recommended for beech trees. Other main tree species ought to be distributed in small islands, groups and clusters and in the case of small representation even as individual plants.

The highest quality specimens from natural regeneration and planting need to be intensely **protected from animals causing damage**.

Brushcutting in regenerated areas should be done with caution. It is important to do this activity around planted areas in such a way so that the plants will not become overheated and so the top soil does not become too dry. During the second brushcutting the herbaceous and grass cover can be cut only where the planted area terminates or around individual tree specimens which have emerged as a result of natural regeneration. In winter, the cover offers a strong form of protection against freezing temperatures caused by the flow of the slope winds, particularly on long strips of land. If the regenerated area contains birch trees, willows, alders and aspens, their favourable effect against freezing temperatures and the drying up of the habitat is to be exploited. They should only gradually and appropriately be removed by pruning (so as to allow the other target woody plants to get enough light), with the best specimens being left until they reach maturity (according to set objectives).

Pruning should be done in principle in spring months and at the start of summer at the latest, given the damage done to annual shoots by frost in the winter (aggressive pruning in the autumn only exposes young stems and one-year-old shoots to frost and subsequently rot, and then spheroids form, which require reconstruction). When pruning, it is advisable to use one's own expert opinion to ensure there is enough open space created among birches, hornbeams, aspens and alders (to ensure that other woody plants get adequate light) and that the trees can still serve as a protective climatic environment for young plants. The intensity of pruning should be determined by the forest sites plant richness.

Effective intervention and the conservation of young forest stands should result in the optional woody plant composition and forest structure with healthy specimens of the highest quality depending on habitat conditions.

The main aim of **tending to forest stands** is the creation of stable and durable stands, which should also involve tending interventions and the protection of planted areas of natural regeneration and young forest stands from animal damage.

Forest tending must support native and stabilizing woody plants, especially deep-rooted precious board-leaved trees and firs, which are the most capable among the Carpathian Arc flysh area species in terms of stopping erosion, landslides and the climatic phenomenon of very cold air gathering in the basins.

Only trees undesirable for the development of quality target woody plants should be selected for **clearing operations**. The intensity of the clearing should be moderate and interventions should take place more often in spring so that younger stands can close before winter. Excessively thinned-out thickets are damaged by decay and become prone to deer antler rubbing, which significantly damages the stem-wood of young trees.

Due to the significant extent of forest stands in 1st to 3rd age groups, the main focus of cultivation activities in the upcoming decades will be on silviculture. The faster and safer achieving of the set objectives, i.e. improving production and achieving a functionally effective structure, is possible via applied methods, intensity and systematic approach. The past results and practical experience in terms of tending to beech and beech-fir stands have confirmed the harmony of principles and requirements (parameters) of tending methods for saplings and thinning methods, which can be harmonized with production and functional requirements without difficulty.

The other principles and recommendations are primarily aimed at dominant stand types, i. e. premature stands composed either completely or mostly of beech trees. Even though the regenerative felling mostly took place in "old beech forests" on a one-off basis (through the clear-cutting principle), a certain part of the natural forest regeneration phase emerged in advance under shelterwood conditions. Thus in the clear-cut areas there are clusters and more coherent beech groups (with a partial addition of maple, ash and occasionally fir trees) from natural regeneration in the advanced growth phase (0.5 to 1.5 metres tall) and thickets (over 1.5 metres tall). Due to damage caused by animals and the rapid growth of high and thick weeds, most clear-cut areas are regenerated or supplemented artificially. The preparatory tree species then spontaneously, and on a large scale, seed in the uninvolved cultures. In this case, the

preparatory tree species are a natural component as an expression of natural succession. Therefore, in the Poloniny NP context, it is not possible to view these plants as being noxious or undesirable. While an intended reduction in their number would be desirable so as to benefit the native climax tree species, their general removal is not advised. The preparatory tree species typical for this habitat are a more suitable component among thickets and pole-stage stands than foreign, non-native tree species. Due to the notable growth and competitive potential of beech trees, there is an urgent need (while the trees are in the advanced growth phase) to apply tending interventions guiding the species composition and mix form through the spatial separation of weaker tree species (firs, maples, elms and similar). Timely and intensive principles must be a necessary part of tending process. The emphasis on tending to trees even during initial growth phase is an embodiment of the principle of acting in a timely manner. The necessary financial, working and organizational conditions need to be created in this respect. Only through timely forest tending starting at the initial growth stage can forest stands be properly directed to the highest degree of biodiversity, both from the habitat and ecosystem viewpoint.

The fundamental method of tending operations to thickets should be cleansing, even though the condition of thickets differs greatly in terms of woody plant representation, their area and spatial distribution, thickness and quality. A major factor complicating forest regeneration and tending is the significant damage done to mixed (incidental) concomitant broad-leaved tree species (maples, ashes and elms) and firs by animal bites. Another, albeit less complicating, factor is the heightened and sometimes concentrated ratio of preparatory (pioneer) woody plants (willows, birches, aspens and hazel trees).

In principle, this will mean intervening at the upper layer where a positive or negative selection alternates depending on the species composition. Positive selection should take preference. It is essential to exclude any interventions to the lower layer where the aim is on merely reducing the number of plants with the intended focus not on helping the lagging specimens of the minority, but desirable woody plant species (e.g. firs, elms, maples and similar).

The most common cases will be homogenous groups and "islands" of beech trees. As a rule, the negative selection is applied here - at the upper layer with a partial reduction in the number of unstable specimens growing between the crowns of distinctive co-dominant trees and thus weaken their stability and deform the crowns. All individual specimens of incidental broad-leaved trees (maples, ash trees and elms) need to receive focused help through positive selection in the face of the pressure brought by beech trees and preparatory tree species (competition for growing space). Firs often need help not only through the reduction of individual plants at the upper layer, but also at the middle layer (i.e. already the lower layer).

Height differentiation leads to higher biodiversity. A dominant position within a thicket is thus not seen as such a negative sign as it is with stands specifically focused on production; from the upper layer of the beech thicket it is only necessary to remove those spreading growths which pose a threat to their surroundings and have a suitable substitute among the shaded individual specimens of the upper or middle layer. It is recommended to leave the dominant growths of beech trees with a suitable crown (a crown index of 1.5–2) in the thicket. It is needed to avoid removing dominant specimens of incidental (minority) broad-leaved trees and firs (also larch trees). It is preferable to get rid of dominant and co-dominant specimens of woody plants foreign to the given habitat.

Of the thinning methods available, it is recommended to thoroughly apply variants of thinning co-dominant trees upon the basis of positive selection, so as to benefit the stable specimens of mixed (incidental) co-dominant and subdominant native tree species present in the community. When helping the emergence of quality co-dominant beeches (through the candidate and target trees method) it is essential to start in the small pole phase of growth (when the co-dominant trees have a diameter of 7 cm) when applying intervention operations of such force that the natural stocking level after the intervention is between critical and optimal (i.e. 0.65–0.8). After using such a method on thickets which are entirely or mostly composed of beech trees, a significantly differentiated structure in terms of diameter and height will be achieved, as can be seen from the attached stand profile and photographs. Additionally, the beech pole-stage stands and mature stands, which are relatively even-aged, also experience their own strongly differentiated secondary growth, influencing the whole growing area to an advanced age. A highly noticeable reduction in the number of subdominant trees is to be avoided. However, through a negative selection method some very weak and unstable trees can be removed. This systematic application of forest tending operations already at the sapling phase of growth will ensure the emergence of stable forest stands with an optimal production in terms of value, a highly functioning ecological structure, a timely

and rich fructification as well as a very good and rapid disposition for natural regeneration after shelterwood cutting.

The application of less than 10% of available resources even at five-year intervals in beech stands in the 2nd age group brings about a rapid and significant levelling-up of structure in terms of height, which at the end of the 4th age group leads to a single-layer structural development with a strong horizontal canopy and a significant decline of in-mixed woody plants.

Every individually in-mixed (incidental) stable tree of native woody plant species of at least average quality must become the subject of focused assistance by being given more growing space; such a plant should have the status of being a candidate tree or a target tree. Even from the sapling phase of growth, having a dominant position is welcome and such specimens should benefit from thinning operations.

The situation and previous method of tending to stands will be complicated in the near future by the exploited (regenerated) stands of a natural forest character, where a number of parts (trees) of the lower and middle layer were left for the purposes of biodiversity. Such stands (stand groups) will significantly differ by area. Groups will undergo the phases of advance growth, thickets and pole-stage stands at irregular intervals; they will significantly differ in terms of height and will have various degrees of disconnected (mostly two-layer) remnants of natural forest left as a result of incomplete shelterwood cutting. Depending on growth maturity and structural characteristics, and within narrow area frameworks, there will be an alternation of forest tending measures dealing with advance growth and thickets (selective clearing).

There will be no application of thinning at the sub-dominant level in premature stands of native tree species, because this would lead to height levelling-up, which is against the NP conservation objectives.

With a greater intensity and to a greater extent than has been the case to date, and, unfortunately than is common practice in Slovakia regarding beech trees, it is essential to undertake thinning operations (i. e. "brightening"). In this way the differentiation in structure in terms of height and diameter will be preserved, and the accumulated capacity from exposure to light will be exploited (stimulated) for a long period by the best quality trees; a more regular and richer fructification will be achieved, and favourable conditions for germination and sprouting will be permanently maintained. This will make small-area shelterwood regeneration both flexible and effective in terms of time and space.

Given the mission, significance and roles of the Poloniny NP, it is absolutely essential to **preserve the integral parts of the native (natural) beech forests while deliberately exploiting the diffuse remnants of natural groupings of beech trees which have been broken up by strip clearcutting.** A key task of this important objective is selecting forest stands for selective management type, for the outlining of suitable and more ecological regeneration methods, for their integration into the FMP regulations, and for their appropriate and considerate application in forest operations. The required technical and economic conditions are assumed to be provided for this to occur. Given the difficult economic situation, it will be difficult to apply the forms of management, regeneration methods and their variants, which would be the most optimal for the given natural conditions and objectives of the Poloniny NP to entirely satisfy the desired level of biodiversity, functional requirements and nature conservation principles. This is why our proposed regeneration methods will be differentiated depending on the conservation level. Particularly in the areas with a complicated transport situation, they will constitute a certain compromise in terms of transport-exploitation as well as the cultivation-production relationships. Given the stated objectives and general purpose of the process, it would be effective and beneficial to delay the regenerative felling of some compact natural beech stands for further decades until better technical and economic conditions are created and by that time substitute it for tending operations and intensive care for the altered stands currently unsuitable in terms of the woody plants composition.

Beech is the most typical woody plant in terms of shelterwood management and regeneration. This is why shelterwood cutting should be the basis of appropriate regeneration methods for beech trees, either on its own and in various areas and times, or in combination with an "edge" clearing procedure while bound to an inner and usually prepared (two-phase) edge. The fundamental deviation from strip forms of regeneration in these cases does not stem merely from nature conservation demands and the better fulfilment of functions outside of production; it also stems from production requirements and the needs to rationalize the whole system of cultivation measures primarily via biological rationalization. From that it follows that the preferred methods are to be the small-area shelterwood management and

individual or group selection. The methods most worth considering, given the nature conservation as well as the NP objectives and conceptions, are those based on shelterwood regeneration as they preserve the needed level of biodiversity. Such methods are typical by spatial (both area and height) differentiation, uneven-aged specimens over a longer overall regeneration period (more than 40 years), and small scale and irregularity via differentiated periods of partial regeneration without an abruptly forming regeneration element schematics.

Given the above facts and the considerably inconsistent representation of age groups, there is a need to preserve the native and natural beech as well as mixed-beech stands remnants along with the genetic value of the local woody plant population by means of natural regeneration. There is an urgent need to revise the need for quickly getting rid of natural forests as they are old or "unproductive" – forests which have the highest urgency of being extracted. This requires a fundamental change in the extraction order criteria. In our forestry operations, natural forests with a primeval character have been judged from a one-sided economic and production point of view as ballast and even an obstacle. This approach must be completely changed because under the new objectives these very forests are among the most valuable assets currently existing in the Poloniny NP. The international recognition and awards underline the unquestionable value of the natural forests and their contribution.

The fulfilment of the above-mentioned objectives and the optimal use (transformation) of natural forests would allow for the application of the selective management method principles. For the selective form of management on a group level, it is possible to use some intact and more accessible natural forest stands through the diffuse extraction of very thick, weak, unhealthy and unmanageable trees, which would gradually reduce the tree stock to around 350 m3/ha. The extent of diameter variance would be narrowed, the share of the middle and upper layers trees would increase, and there would be a more regular distribution of regeneration elements and finally a durable regeneration.

The need to speedily **improve the representation of age** groups requires the beginning of regeneration in beech and mixed-beech stands having been formed by focused management activity with the aid of small-scale shelterwood procedures with a long overall regeneration period (more than 40 years). More accessible stands with a gradient below 30% will be subject to various forms of group shelterwood regeneration operations. Steeper slopes may require the alternating application of regeneration methods based on a combination of shelterwood and edge cutting methods for extended regeneration elements in the shape of a strip or a wedge and in the elimination (or exclusion) of long straight edges. More intensive thinning operations are needed already in the 4th age group stands in order to create the preconditions for the successful shelterwood regeneration.

3.4. The Proposed Measures, Setting of Fulfilment Timetable, Determination of Entity Responsible for the Fulfilment, Definition of Measurable Fulfilment Indicators

The measures are detailed in the table forming Appendix 6.6.12.
They are the **framework measures for:**

selected species:
- gene pool areas for amphibians: *support possible in EFA8, 10, 16*
- reintroduction of the wood grouse populations in the Poloniny NP: *support in the EFA1–EFA7*

UNESCO site (Carpathian beech primeval forests)
- ensuring the no-intervention mode in the World Heritage areas: *support possible in the EFA1*
- ensuring the management close to nature in the World Heritage sites buffer zone: *support possible in the EFA2*

habitats needing active management
- Lk2 Mountain hay meadows (Natura 2000: 6520) (Poloniny meadows): *support possible in the EFA6*

- Lk3 Mesophilic pasturelands and grazing meadows (habitat of national importance): *support possible in the EFA8*
- Ra6 Alkaline fens (Natura 2000: 7230): *support possible in the EFA12*

cultural values
- traditional handicrafts: *support possible in the EFA16*
- traditional products: *support possible in the EFA16*
- horticulture: *support possible in the v EFA 8,15,16*

work in both all society and nature conservation interest
- revitalization of roads that are no longer needed and reconstruction of roads needed for habitat management: *support possible in the EFA16*
- anti-flood measures in river basins: *support possible in EFA14 and EFA16*
- Poloniny NP infrastructure inventory: *support possible in EFA16*
- non-forest woody element and the habitats of Community importance in need of a specialized management inventory: *support possible in EFA5–EFA15*
- waste water treatment plant: *support possible in EFA16*

tourism and biking
- domestic animal species park: *support possible in the EFA9 and EFA16*
- tourism and biking infrastructure maintenance and development: *support possible in EFA16*
- low-capacity cabins opening: *support possible in EFA8,9,16*
- building observation posts: support possible in EFA3–EFA10
- campsites creation: support possible in EFA3,*4,5,8,9,10 and16*
- creation of relaxation zones: support possible in EFA*3,4,5,8,9,10 and 16*
- building sauna: *support possible in the EFA16*

preservation of livestock traditional breeds: support possible in EFA8–EFA10, EFA16

contributing to regional economic development of the involved Poloniny NP locations
- setting up hay and straw pellets production facility: *support possible in EFA16*
- biogas plant opening: *support possible in the EFA16*
- distillery opening: *support possible in the EFA16*
- fish-farming facilities: *support possible in the EFA16*
- a regional seed facility: *support possible in the EFA15 and 16*
- medicinal herbs, fruit and mushroom drying facility: *support possible in the EFA16*

4. Management Plan Fulfilment Assessment

The Poloniny NP Management Plan 2017–2026 fulfilment assessment (including the assessment of the implemented measures) will be performed by the SNC SR within the assessment of main tasks set for fulfilment in individual years. This process comprises the factual deduction of the tasks under the SNC SR responsibility or the tasks performed in cooperation with the SNC SR. Overview of the planned and real financial expenditure (including the compensation for regular management restraints and other forms of financial support) will be performed, too. Estimates of funding and funding resources are stated in Table 14.

Table 14 Indicative Estimate of Funding and of the Resources Needed for Financing the Measures

Total Public Administration Expenditure	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
Total	**671,885**	**687,587**	**687,587**	**687,587**	**687,587**	**687,587**	**687,587**	**687,587**	**687,587**	**687,587**
incl. **the Ministry of Environment**	**671,885**	**671,885**	**671,885**	**671,885**	**671,885**	**671,885**	**671,885**	**671,885**	**671,885**	**671,885**
incl.:										
- impact on the SB	671,885	671,885	671,885	671,885	671,885	671,885	671,885	671,885	671,885	671,885
Appropriations	150,285	150,285	150,285	150,285	150,285	150,285	150,285	150,285	150,285	150,285
OP QE 2014–2020	521,600	521,600	521,600	521,600	521,600	521,600	521,600	521,600	521,600	521,600
Co-financing										
incl. **THE MINISTRY OF INTERIOR**	**0**	**15,702**	**15,702**	**15,702**	**15,702**	**15,702**	**15,702**	**15,702**	**15,702**	**15,702**
incl.:										
- impact on the SB	0	15,702	15,702	15,702	15,702	15,702	15,702	15,702	15,702	15,702
Appropriations	0	15,702	15,702	15,702	15,702	15,702	15,702	15,702	15,702	15,702
EU Resources	0	0	0	0	0	0	0	0	0	0

The control of financial resources use will be conducted under the relevant resource control mechanism (such as the 2014–2020 Operational Programme Quality of Environment: primary use of this resource in terms of measures implementation is expected). This also holds for the activities conducted by the owners and managers of land intended for nature, habitats and species conservation purposes.

Fulfilment efficiency indicator within the programme is the surveillance of objectives stated in 3.4.

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6. Appendices

6.1. Poloniny NP Subjects of Conservation Map
6.2. Identification of Ownership-Use Relationships (in Forest Stands) in the Poloniny NP Map
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MINISTRY OF ENVIRONMENT
OF THE SLOVAK REPUBLIC

JÁN ILAVSKÝ
STATE SECRETARY

Bratislava, January 05, 2016

Dear Excellency,

we have received request of State Party of Austria, regarding the nomination process to the World heritage list, to nominate the property „Primeval Beech Forests of the Carpathians and other regions of Europe" as extension of „Primeval Beech Forest of the Carpathians and Ancient Beech Forests of Germany" (as a trilateral property Slovakia, Ukraine and Germany).

Slovak republic as a State party responsible for the Slovak components of the existing property was in 2015 involved in the preparation process of the extension of the property and discussed with other State parties (Germany and Ukraine) this proposal during the meeting of the Joint Management Committee (JMC) of the World Heritage Property "Primeval Beech forests of the Carpathians (Slovak Republic and Ukraine) and the Ancient Beech forests of Germany (Germany)".

We warmly welcome intent to extend existing trilateral property and adding into the World heritage list more components with important high-value ancient and primeval beech forests in 11 countries of Europe.

In the name of State party of the Slovak republic I confirm the consent to the extension nomination with the name „Primeval Beech Forests of the Carpathians and other regions of Europe".

Mrs. Mechtild Rössler
Director
World Heritage Centre
UNESCO
7, Place de Fontenoy
75007 Paris, France

In copy to:

1. Klara Novotna, Ambassadeur, Permanent Delegation of Slovakia to UNESCO
2. Slovak National Commission of Slovakia for UNESCO
3. Mag. Viktoria Hasler, Department I/8 of National Parks, Nature and Species Protection, Federal Ministry of Agriculture, Forestry, Environment and Water Management, Stubenring 1, A-1010 Vienna, Austria
4. H.E. Harald Stranzl, Ambassador, Permanent delegation of Austria to UNESCO

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NOTICE
of the National Bank of Slovakia

of 25 November 2014

of the issuance of silver collector euro coins at a nominal value of € 10 with the motif of World Natural Heritage – Primeval Beech Forests of the Carpathians

1. Introductory provisions

a) Pursuant to Article 17h (1) of Act of the National Council of the Slovak Republic No. 566/1992 Coll. on the National Bank of Slovakia as amended and pursuant to Article 1 (2) (d) of Act of the National Council of the Slovak Republic No. 1/1993 Coll. on the Collection of Laws of the Slovak Republic as amended by Act No. 275/2002 Coll., the National Bank of Slovakia notifies that it issues silver collector euro coins at a nominal value of € 10 with the motif of World Natural Heritage – Primeval Beech Forests of the Carpathians (hereinafter the "collector euro coin").

b) The collector euro coin has a legal tender statute only in the Slovak Republic.

c) The collector euro coin is minted from an alloy containing 900 portions of silver and 100 portions of copper; it weighs 18 g and has a diameter of 34 mm. At the mintage of the collector euro coin, the average upper and lower deviation permitted is 0.1 mm; the permitted upper weight deviation is 0.4 g and the permitted upper silver content deviation is 10/1000.

2. The appearance of the collector euro coin

a) The obverse side of the collector euro coin depicts a Eurasian lynx in the setting of a primeval beech forest. At the bottom of the collector euro coin is the coat of arms of the Slovak Republic, and to the left of it is the name of the country "SLOVENSKO" above the year 2015. The denomination of the collector euro coin "10 EURO" appears at the top of the coin's field.

b) The reverse side of the collector euro coin shows trunks of European beech, the composition is supplemented with a trunk of silver fir. The left side of the coin's field contains the inscriptions "SVETOVÉ PRÍRODNÉ DEDIČSTVO" and "KARPATSKÉ BUKOVÉ PRALESY". The mint mark of Kremnica, state enterprise consisting of the abbreviation "MK" placed between two dies, and the stylized initials of the name and surname of collector euro coin art design author Karol Ličko "KL" are situated in the right lower part of the collector euro coin.

c) The edge of the coin displays incuse lettering in English "WORLD HERITAGE" and in French "PATRIMOINE MONDIAL". The inscriptions are separated by dash.

State of issue: Slovak Republic

Issue commencement: March 2015

Jozef Makúch m. p.

258/2015 Coll.

NOTICE
of the National Bank of Slovakia

of 29 September 2015

of the issuance of gold collector euro coins at a nominal value of € 100 with the motif of World Natural Heritage – Primeval Beech Forests of the Carpathians

1. Introductory provisions

a) Pursuant to Article 17h (1) of Act of the National Council of the Slovak Republic No. 566/1992 Coll. on the National Bank of Slovakia as amended and pursuant to Article 1 (2) (d) of Act of the National Council of the Slovak Republic No. 1/1993 Coll. on the Collection of Laws of the Slovak Republic as amended by Act No. 275/2002 Coll., the National Bank of Slovakia notifies that it issues gold collector euro coins at a nominal value of € 100 with the motif of World Natural Heritage – Primeval Beech Forests of the Carpathians (hereinafter the "collector euro coin").

b) The collector euro coin has a legal tender statute only in the Slovak Republic.

c) The collector euro coin is minted from an alloy containing 900 portions of gold, 75 portions of silver and 25 portions of copper; it weighs 9.5 g and has a diameter of 26 mm. At the mintage of the collector euro coin, the average upper and lower deviation permitted is 0.1 mm; the permitted upper weight deviation is 0.08 g and the permitted upper gold content deviation is 10/1000.

2. The appearance of the collector euro coin

a) Prominent on the obverse of the collector euro coin, in a circular frame, is rosalia longicorn, one of the characteristic species of the Carpathian primeval beech forests. In the upper part of the coin's field are flowers and leaves of Carpathian toothwort. Close to the upper edge of the collector euro coin is the coat of arms of the Slovak Republic and below it the denomination and currency of the collector euro coin "100 EURO". The name of issuing country "SLOVENSKO" is inscribed in the lower part of the coin's field. To the left of the rosalia longicorn is the year "2015".

b) The reverse of the collector euro coin shows the primeval beech forest habitat with leaves and nuts of the European beech to the right. Along the left-hand edge of the collector euro coin runs the inscription "SVETOVÉ PRÍRODNÉ DEDIČSTVO" and opposite to it, along the right-hand edge, is the text "KARPATSKÉ BUKOVÉ PRALESY". The stylized initials of the name and surname of collector euro coin art design author Mária Poldaufová "MP" and the mint mark of Kremnica, state enterprise consisting of the abbreviation "MK" placed between two dies are placed in the upper left part of the collector euro coin.

c) The edge of the collector euro coin is milled.

State of issue: Slovak Republic
Issue commencement: December 2015

per pro Ján Tóth m. p.

GOVERNMENT OF THE SLOVAK REPUBLIC

GOVERNMENT RESOLUTION OF THE SLOVAK REPUBLIC

No. 568

dated 12 November 2014

to the Analysis of the Social and Financial Situation of the Districts of Prešov, Humenné, Medzilaborce, Snina and Stropkov and the Proposals for Social and Economic Improvement

Document No.: 40882/2014

Submitted by: Deputy Prime Minister and Minister of Finance

The Government

A. hereby acknowledges

A.1. the analysis of the social and financial situation of the districts of Prešov, Humenné, Medzilaborce, Snina and Stropkov and the proposals for social and economic improvement

B. orders

the Deputy Prime Minister and the Minister of Finance

B.1. to release € 2,200,000 from the chapter entitled General Treasury Management for Activities Improving the Social and Economic Situation of the Districts of Prešov, Humenné, Medzilaborce, Snina and Stropkov, as stated in the annex hereto, in accordance with Art. 3 of Decree No. 26825/2005–441 of the Ministry of Finance of the Slovak Republic

By 28 November 2014

B.2. to present information concerning the fulfilment of tasks resulting from the resolution approved at the external government meeting held on 12 November 2014, in cooperation with the Chairman of the Prešov Self-Governing Region

By 31 March 2016

the Minister of Transport, Construction and Regional Development

B.3. to provide financial coverage from EU resources and start the construction of the D1 motorway: sections Prešov west - Prešov south and Budimír - Bidovce

By 31 December 2015

B.4. to obtain a building permit for the R4 motorway - the northern bypass of Prešov

By 31 October 2015

B.5. to start the public procurement procedure for the delivery of the documentation required for the EIA and the land-use decision pertaining to motorway R4, in the segment Kapušany - Slovak/Polish border

By 31 March 2015

B.6. to include elaboration of the documentation required for the application for building permit for road segment I/74 Brekov - Humenné in the Slovak Road Administration investment plan

By 30 June 2015

B.7. to include elaboration of the documentation required for the application for the building permit for road segment I/74 Snina - Kolonica relocation in the Slovak Road Administration investment plan

By 30 June 2015

B.8. to ensure the commencement of the following constructions

a) construction and safety measures to reduce the accident rate on the European route E371, road segment I/73 Šarišský Štiavnik – Hunkovce,
b) I/77 Smilno - Svidník road segment reconstruction,
c) construction and safety measureson first-class roads in the Prešov Self-Governing Region on the I/73 Lipníky – Giraltovce road segment,
d) I/18 Prešov, Levočská - Obrancov mieru road junction, bridge,
e) I/68 Prešov Východná, road junction,
f) I/18 Prešov, road junction Ľubotice,
g) I/68 Prešov, Solivarská roundabout junction,
h) I/77 Bardejov, south-western bypass

By 31 December 2015

the Minister of Labour, Social Affairs and Family

B.9. to improve the position of young people in the employment market - employment seekers in the competence of the District Offices of Labour, Social Affairs and Family in Prešov, Humenné and Stropkov - through the project "Through Experience to Employment" and provide financial resources amounting to at least € 3.7 million for its implementation to cover the expenses of

employers creating new positions in order to perform mentored employment and provide employment experience to young people up to 29 years of age in the Prešov Self-Governing Region

By 31 March 201 and continuously

the Deputy Prime Minister and Minister of Foreign and European Affairs
the Deputy Prime Minister and Minister of Interior
the Minister of Economy

B.10. to use the stimuli from the representatives of the district of Snina concerning specific forms of cooperation and joint projects with Ukraine in the region when preparing the sessions of the following: the Slovak-Ukrainian Intergovernmental Commission for Economic, Industrial, Scientific and Technical Cooperation, the Slovak-Ukrainian Intergovernmental Commission for Cross-Border Cooperation and the Slovak-Ukrainian Intergovernmental Commission for National Minorities, Education and Culture

By 31 December 2015

the Deputy Prime Minister and Minister of Foreign and European Affairs
the Minister of Transport, Construction and Regional Development
the Minister of Economy

B.11. to intensify the promotion of attractive tourist destinations of the Prešov Self-Governing Region and their investment potential in the field of economic diplomacy and promotion of the Slovak Republic abroad

By 31 December 2015

the Minister of Environment

B.12. to cooperate in solving the supplies of drinking water to the citizens of the Prešov Self-Governing Region and sewage system in the region, in accordance with the requirements of the respective municipalities, depending on the amount of finances available in this chapter and in accordance with the specified rules for the provision of support

By 31 December 2015

the Minister of Economy

B.13. to initiate the seeking of strategic investors through the Slovak Investment and Trade Development Agency and seek support possibilities for the existing manufacturing plants located in the Prešov Self-Governing Region districts

By 31 December 2015

B.14. to cooperate in creating conditions required for investments in the power distribution network of the company Východoslovenská distribučná a.s. in the Prešov Self-Governing Region to increase the reliability and quality of power distribution and to provide sufficient power capacity for the development of small and medium enterprises, infrastructure of civic amenities and housing

By 31 December 2015

the Deputy Prime Minister and the Minister of Interior

B.15. to earmark € 5 million for the Prešov Self-Governing Region as part of the project increasing the intervention capacities of the Slovak Republic in cases of catastrophic situations

and the project of modernisation of the Slovak Volunteer Fire-Fighting Forces

By 31 December 2015

the Minister of Health

B.16. to support the replacement of windows on the main pavilion of the Prešov University Hospital to cut down energy losses and the refurbishment of the barrier-free entry at the main hospital building in accordance with the Annex hereto

By 31 December 2015

the Minister of Education, Science, Research and Sport

B.17. to support the utilisation of the scientific, research, and educational potential of the University of Prešov in the region to implement social and economic improvement proposals in the Prešov Self-Governing Region

By 31 December 2015

B.18. to cooperate with the Prešov Self-Governing Region, city of Prešov and University of Prešov in preparing a study of a sports and congress centre for the needs of the region, the city and the university

By 31 December 2015

the Minister of Culture

B.19. to support the implementation of the project entitled "Refurbishment of the Salt Warehouse in the Prešov Solivar salt production facility“ in corporation with the Slovak Technical Museum in Košice

By 30 September 2015

the Minister of Agriculture and Rural Development

B.20. to ensure the reconstruction of the forest road segments Starina water reservoir - Ruské (18 km) and Ruské - Ruské sedlo mountain pass (6 km)

By 31 December 2015

B.21. to create conditions for employment rate increases in the field of agriculture in the region by supporting small farms, young farmers and family farms

By 30 September 2015

the Head of the Government Office of the Slovak Republic

B.22. to support organisations and municipalities of the Prešov Self-Governing Region financially in the field of conserving, expressing, protecting, and developing the identity and the cultural values of national minorities, national minority rights education, promotion of inter-ethnic and inter-cultural dialogue and understanding between the majority and the national minorities and ethnic groups in accordance with Act No. 524/2010 Coll. on provision of subventions in the competence of the Government Office of the Slovak Republic as amended

continuously

C. recommends

the Chairman of the Prešov Self-Governing Region

C.1. to co-operate with the Deputy Prime Minister and the Minister of Finance in preparing information in accordance with Item B.2 hereof

By 31 March 2016

the Rector of the Prešov University

C.2. to cooperate with the Minister of Education, Science, Research and Sports in fulfilling the tasks specified in Items B.17 and B.18 hereof

By 31 December 2015.

To be executed by: Deputy Prime Minister and Minister of Finance
Deputy Prime Minister and Minister of Interior
Deputy Prime Minister and Minister of Foreign and European Affairs
Minister of Transport, Construction and Regional Development
Minister of Environment
Minister of Economy
Minister of Labour, Social Affairs and Family
Minister of Culture
Minister of Agriculture and Rural Development
Minister of Education, Science, Research and Sport
Minister of Health
Head of the Government Office of the Slovak Republic

For information: Chairman of the Prešov Self-Governing Region
Rector of the Prešov University
Mayor of Prešov

Annex
to Government Resolution

of the Slovak Republic

No. 568/2014

Town/city/higher territorial unit/other recipient as the owner	**Purpose**	**€**
Brekov	Replacement of the windows of the community centre	7,100
Gruzovce	Replacement of windows, doors, floors + façade of the community centre	6,400
Humenné	Construction of a barrier-free entry into the pedestrian underpass at the railway and bus station	14,000
Humenné	Replacement of windows on the building of the kindergarten on Lesná Street	20,400
Košarovce	Erection of bus stops	2,300
Koškovce	Refurbishment of the car park in front of the health centre	10,500
Myslina	Refurbishment of the floor in the front part and in the kitchen of the community centre	9,500
Nižná Sitnica	Refurbishment of the fire house	10,000
Slovenská Volová	Drainage in the community centre	6,700
Turcovce	Construction of an access road to the funeral home	7,900
Udavské	Erection of bus stops	6,500
Závada	Refurbishment of the municipal public address system	5,000
J.A. Reiman University Hospital and Health Care Centre, Hollého 14, 081 81 Prešov, Comp. ID No.: 00610577	Replacement of windows and construction of a barrier-free entry in the main pavilion building	350,000
Higher Territorial Unit Prešov	Erection of a training and sports hall with an ice skating rink for primary and secondary school students as well as the general public, as a joint effort of the Higher Territorial Unit Prešov and a private legal entity	200,000
Belá nad Cirochou	Erection of a street lighting system	5,000
Brezovec	Repair of the façade and plastering of the community centre	7,500
Čukalovce	Refurbishment of the funeral home	3,000
Dlhé nad Cirochou	Renovation of the obsolete heating system in the community centre	8,000
Dúbrava, District of Snina, 067 73 Dúbrava No. 46, Comp. ID No.: 00322946	Refurbishment of the municipal public address system	5,500
Hrabová Roztoka	Refurbishment of the interior of the community centre	4,800
Kalná Roztoka	Final construction stage of the thermal	9,400

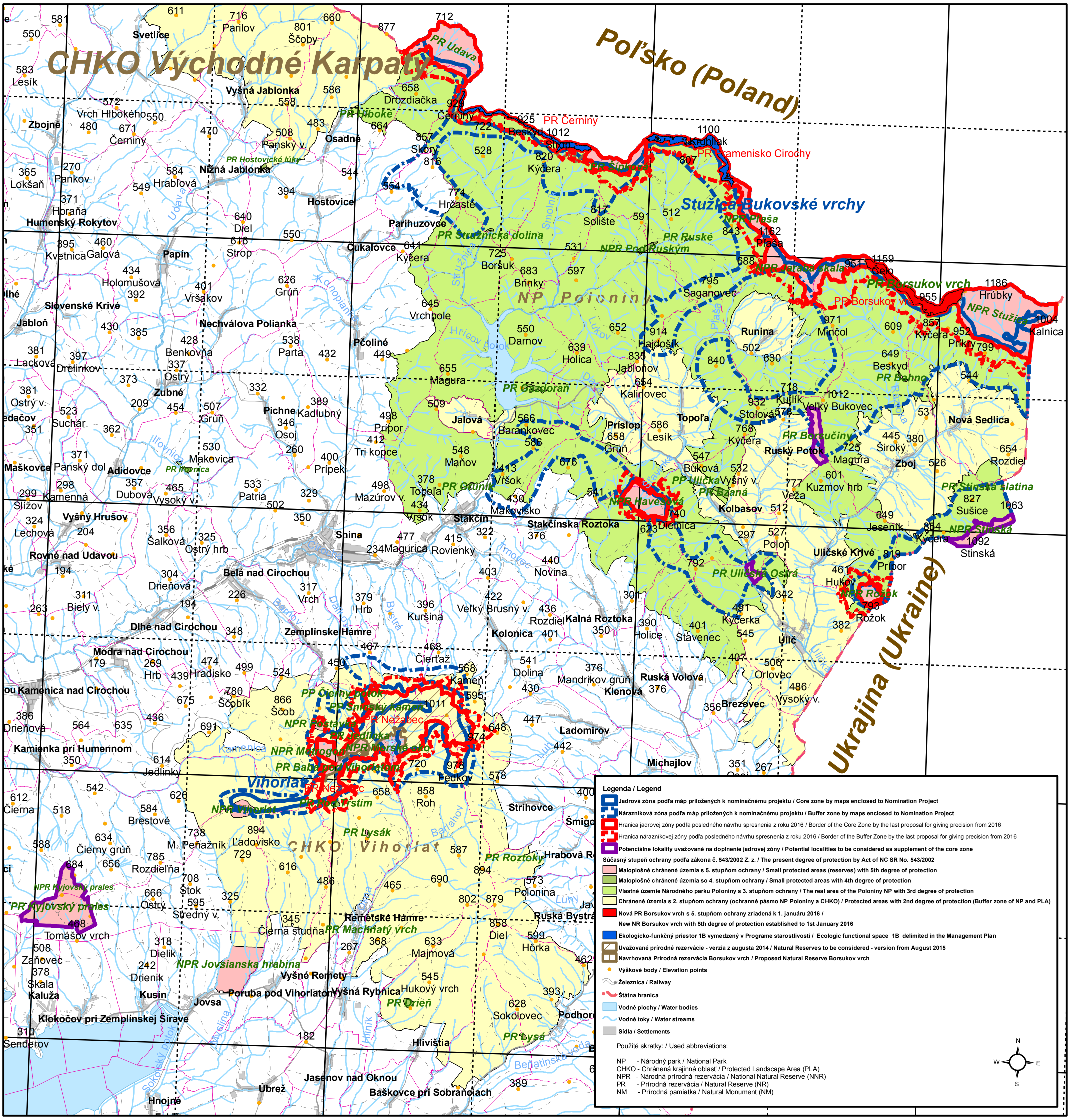
	insulation of the primary school building	
Greek Catholic Church, parish of Klenová No. 101 Comp. ID No.: 31994822	Refurbishment of a national monument - repair of the roof, façade and fencing around the temple of St. John the Baptist in the village of Kalná Roztoka (the seat of the parish is in Klenová, the village of Kalná Roztoka belongs to the parish of Klenová)	14,550
Klenová	Replacement of windows and entrance doors of the community centre	9,000
Kolbasov	Refurbishment of the community centre	7,000
Kolonica	Refurbishment of the municipal public address system	7,000
Michajlov	Refurbishment of the interior of the community centre	8,000
Nová Sedlica	Refurbishment of the historical primary school building	7,800
Osadné	Erecti on of a funeral home	8,500
Parihuzovce	Refurbishment of the access road to the cemetery	6,000
Pichne	Refurbishment of the kindergarten building	8,500
Príslop	Maintenance and repairs of the community centre building	7,000
Runina	Refurbishment of the municipal public address system	5,500
Ruská Volová	Thermal insulation, repair of the façade and replacement of doors on the community centre	6,500
Ruský Potok	Replacement of windows and doors of the community centre	8,000
Greek Catholic Church, parish of Snina-town, Pčolinská 2714/42, 069 01 Snina Comp. ID No.: 31951210	Repair and refurbishment of the fence of the Greek Catholic parish at the Greek Catholic temple of the Mother of Constant Help, the parish office building and the pastoral premises - Snina-town	3,000
Professional in-college secondary school in Snina, Palárikova 1602/1, 069 01 Snina Comp. ID No.: 00520624	Erection of a corridor	23,000
Russian Church municipality Snina, Sládkovičová 366/70, 069 01 Snina Comp. ID No.: 31987761	Erection of the fence around the orthodox temple of Ascension of Jesus Christ, construction of access walkways and pavement around the building	4,000
Snina	Refurbishment of the city sports hall, Vihorlatská No. 1426	443,000

Greek Catholic Church, parish Snina-Brehy, Komenského 2658/8, 069 01 Snina Comp. ID No.: 42076145	Finalization of the construction work on the Greek Catholic temple consecrated to the martyr Vasiľ Hopko in Snina-Brehy	5,000
Stakčín	Thermal insulation of the gym and corridor at the Joint Primary School and Kindergarten in Stakčín, SNP Street No.412, 067 61 Stakčín	54,000
Stakčín	Renovation of the community centre kitchen	12,000
Stakčínska Roztoka	Erection of bus stop waiting rooms	7,000
Strihovce	Repair of the façade and plastering of the community centre	4,000
Šmigovec	Erection of bus stop waiting rooms	6,000
Greek Catholic Church, parish Ubľa No.175 Comp. ID No.: 31994580	Refurbishment of the national monument Greek Catholic Temple of St. Michael in Ubľa	10,000
Ubľa	Refurbishment of the Joint Primary School and Kindergarten in Ubľa No. 120, 067 73 Ubľa, pavilions SO01, SO03, SO04 and SO05, walkways and concrete surfaces	100,000
Ubľa	Refurbishment of the District Health Centre building, 067 73 Ubľa No. 119	60,000
Ubľa	Public active outdoor activity centre – erection of an easily accessible sports centre with training machines, in a public area, for pensioners and people of all ages. It will be situated at a publicly accessible place, on lot no. CKN 429/12 owned by the municipality of Ubľa	15,000
Uličˇ	Refurbishment and energy-efficiency improvement of the District Health Centre, 067 67 Uličˇ No. 134	40,000
Russian Church - parish Zboj No. 260 Comp. ID No.: 31987869	Repair of the vaulted wooden double entry door, construction of the interlocking pavement around the temple of the Holy Ghost/Holy Trinity in Zboj	15,000
Association of Municipalities of Uličˇ Valley Micro Region in Zboj (067 67 Zboj No. 98) Comp. ID No.: 36163015	Rescue of the monuments of Ruthenians related to the cult of St. Cyril and St. Method in the district of Snina, refurbishment of precious 17th - 19th century episcopal books written in Old Church Slavonic language and orthodox icons located in wooden orthodox temples, creation of a replica of the Ostrožnica parchment rolls	50,000

Zboj	Flood protection by modifying the Bigovský brook flowing through the municipality of Zboj, construction stage I (the existing landslide on the road)	177,000
Zboj	Refurbishment of the wiring system in the community centre, in accordance with the applicable Slovak technical standards	14,000
Radvaň nad Laborcom	Refurbishment of the municipal health centre	5,150
Volica	Repair works of the local water supply system	350,000

Karpatské bukové pralesy a staré bukové lesy Nemecka - slovenská časť
Beech Primeval Forests of Carpathians and Ancient Beech Forests of Germany - Slovakian Part

Súčasné stupne ochrany podľa zákona č. 543/2002 Z.z. o ochrane prírody a krajiny
The present-day degrees od protection by Act. of NC SR No 543/2002 Col. on Nature and Landscape Protection



2 1 0 2 4 6 8 10 Kilometre/Kilometers

Legenda / Legend

Jadrová zóna podľa máp priložených k nominačnému projektu / Core zone by maps enclosed to Nomination Project

Nárazníková zóna podľa máp priložených k nominačnému projektu / Buffer zone by maps enclosed to Nomination Project

Hranica jadrovej zóny podľa posledného návrhu spresnenia z roku 2016 / Border of the Core Zone by the last proposal for giving precision from 2016

Hranica nárazníkovej zóny podľa posledného návrhu spresnenia z roku 2016 / Border of the Buffer Zone by the last proposal for giving precision from 2016

Potenciálne lokality uvažované na doplnenie jadrovej zóny / Potential localities to be considered as supplement of the core zone

Súčasný stupeň ochrany podľa zákona č. 543/2002 Z. z. / The present degree of protection by Act of NC SR No. 543/2002

Maloplošné chránené územia s 5. stupňom ochrany / Small protected areas (reserves) with 5th degree of protection

Maloplošné chránené územia so 4. stupňom ochrany / Small protected areas with 4th degree of protection

Vlastné územie Národného parku Poloniny s 3. stupňom ochrany / The real area of the Poloniny NP with 3rd degree of protection

Chránené územia s 2. stupňom ochrany (ochranné pásmo NP Poloniny a CHKO) / Protected areas with 2nd degree of protection (Buffer zone of NP and PLA)

Nová PR Borsukov vrch s 5. stupňom ochrany zriadená k 1. januáru 2016 /

New NR Borsukov vrch with 5th degree of protection established to 1st January 2016

Ekologicko-funkčný priestor 1B vymedzený v Programe starostlivosti / Ecologic functional space 1B delimited in the Management Plan

Uvažované prírodné rezervácie - verzia z augusta 2014 / Natural Reserves to be considered - version from August 2015

Navrhovaná Prírodná rezervácia Borsukov vrch / Proposed Natural Reserve Borsukov vrch

Výškové body / Elevation points

Železnica / Railway

Štátna hranica

Vodné plochy / Water bodies

Vodné toky / Water streams

Sídla / Settlements

Použité skratky: / Used abbreviations:

NP - Národný park / National Park

CHKO - Chránená krajinná oblasť / Protected Landscape Area (PLA)

NPR - Národná prírodná rezervácia / National Natural Reserve (NNR)

PR - Prírodná rezervácia / Natural Reserve (NR)

NM - Prírodná pamiatka / Natural Monument (NM)