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## **Chapter 1 Introduction**

Pursuant to the projects implemented along the years in the Danube region, with no cross-border link, the partners in the "Plums for junk" project identified the need and opportunity for reinforcing Romanian-Bulgarian cooperation in the Mehedinti - Vidin - Montana - Vratsa region. Thus, besides the already implemented actions for ecologisation, information and education of the young generation and for increasing the awareness of adult decision-making people, "Plums for junk" also envisages a joint strategy to approach the preservation of nature, touristic and eco-touristic promotion and the development of cross-border relations.

A memorandum shall ensure that the strategy is taken up by all stakeholders, and the measures provided in this strategy will be integrated in the future management plans of the protected natural areas targeted by the project, where applicable, as well as implemented by local public authorities, depending on their responsibilities.

The prioritisation of management measures stipulated in this document has obeyed the possibility of implementation in a regional partnership, with effects on the entire cross-border area.

## **Chapter 2 The policies of Romania and Bulgaria for preserving biodiversity. The history of biodiversity preservation in the cross-border area targeted by the project.**

The Natura 2000 network is the largest network of protected natural areas at a European level, covering about 26% of the territory of the European Union. The protected natural areas included in the Natura 2000 network are declared based on 2 European directives, i.e. Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora and Directive 79/409/EU coded by Directive 2009/147/EC on the conservation of wild birds.

The two EU directives are ratified by each EU member state and represent the legal framework for the statement of protected natural areas specific to each individual state.

Thus, with their accession to the European Union, Romania and Bulgaria aligned themselves to the EU legislation, ratifying the 2 directives and declaring protected natural areas to be included in the European network.

The Bulgarian law on environment protection (published in the Official Gazette no. 91/2002, as subsequently amended and supplemented (Official Gazette no. 62 of August 14, 2015) is the framework for all the laws regarding environment and biodiversity protection. This law establishes the basic guidelines on the protection of environmental components, biodiversity, ecological assessment procedures and environmental impact, the certification system, the management and financing of protected natural areas. The main legislative document regulating nature protection is the Law on biological diversity (Official Gazette no. 77/2002), as subsequently amended (Official Gazette no. 101 of 22.12.2015). This Bulgarian law introduces the guidelines of the two main directives regarding wild flora and fauna species, natural habitats and birds. The law on biological diversity also establishes the procedure based on which protected areas are declared in accordance with the two EU directives.

In Romania, the law underlying the statement of protected natural areas of a national interest is Law 5/2000, as the legislative document stipulating limits, surface and maps of many protected natural areas. Another legislative document that is important for protected natural areas was the Ministry Order 552/2003 establishing special preservation areas in forest areas, where management used to be highly restrictive.

The Government Emergency Ordinance 57/2007 was passed in 2007, ratifying the 2 EU directives and regulating internal zoning in the case of protected areas of a national interest. The Ministry Order 1964/2007 and Government Decision 1284/2007 approved Natura 2000 sites of a community interest in Romania. This ordinance was approved by Law 49/2011, but its provisions are not fully observed (e.g. land owners in protected natural areas with a restrictive regime are not compensated).

As for the management plans of protected natural areas, both Romania and Bulgaria are carefully supervised by the European Union in terms of their development and implementation. The custodians/managers of the protected natural area are in charge with developing these documents, following a complex procedure that includes many public consultations, considering the principles of prevention, caution and biodiversity preservation. In Romania, most protected natural areas with a custodian/administrator have approved management plans.

In Bulgaria, management plans should be undertaken by structures of the relevant ministry, following the same procedure regarding public consultations. At least for the time being, the protected natural areas in the target area of the project have no management plans in force.

The following step should be the substantiation of special areas for conservation both in Romania and Bulgaria; however, the process is delayed.

Besides these two directives, both countries have also ratified other international conventions on the preservation of biodiversity, that have effects in all protected areas and not only. They are: The Framework Convention on Water, the RAMSAR Convention, the Bern Convention, the Rio de Janeiro Convention, the AEWA Convention, the CMS Convention.

Table 1. SWOT analysis of the current situation on biodiversity preservation in the Mehedinti-Vidin area

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>- Both countries have signed many international conventions on biodiversity preservation;</li> <li>- Both countries have stated Natura 2000 sites along the Danube, as well as RAMSAR sites.</li> <li>- Both countries are members of various protected area networks at a European level: Natura 2000, Danubeparks, The Green Corridor.</li> <li>- Similar national management on biodiversity conservation.</li> <li>- The protected natural areas declared in the Mehedinti county and the Vidin, Montana and Vratsa districts are highly similar in terms of land forms, natural habitats and protected wild species.</li> <li>- The existence of approved management plans in most protected natural areas targeted by the project.</li> <li>- Some of the protected natural areas targeted by the project have their own custodian/manager.</li> <li>- The existence of a system of compensatory payments in Bulgaria for lands in Natura 2000 sites, as well as a system for agriculture payments in Romania, so that anthropic pressure is less intense.</li> <li>- The implementation of projects in both countries envisaging bird species present in the protected natural areas in the area targeted by the project (pygmy cormorant, ferruginous duck, etc.).</li> <li>- The existence of a system of compensatory payments for forest owners in the protected areas.</li> <li>- The existence of programmes ensuring European funds for cross-border cooperation.</li> <li>- The existence of programmes for large infrastructure, facilitating the access to funds for the rehabilitation/construction of the sewerage system.</li> <li>- The existence of active and strong NGOs in the area, militating for nature conservation and for people's education and awareness raising.</li> <li>- The existence of minimal infrastructure for visits to the protected sights and awareness raising of local communities, in some protected natural areas.</li> </ul>	<ul style="list-style-type: none"> <li>- The failure to fully and properly comply with the conventions ratified by the 2 countries.</li> <li>- The absence of a proper management of RAMSAR sites.</li> <li>- The embankment of the Danube's shores, the drainage of inner ponds have resulted in the destabilisation of wetland ecosystems.</li> <li>- The absence or the improper implementation of domestic waste management.</li> <li>- The absence of an efficient management of waste water and rain water.</li> <li>- Due the low living standard in the two regions, the population and the local public administration are only concerned with nature preservation to a very low extent.</li> <li>- Some of the protected natural areas in this area do not have their own custodian/manager.</li> <li>- Some of the protected natural areas in this area do not have a developed and approved management plan, or a biodiversity monitoring plan.</li> <li>- The specific infrastructure for protected natural areas (thematic paths, visit routes, visit centres, information and documentary panels) is not enough.</li> <li>- The absence of a state budget for the management of protected natural areas in Romania, so that biodiversity protection and conservation is very difficult, and self-financing is not a viable solution for the moment.</li> <li>- The absence of a joint promotion strategy.</li> <li>- The absence of a database on invasive species, their distribution and their social and economic impact.</li> </ul>

<ul style="list-style-type: none"> <li>- The existence of a traditional extensive agricultural system, based on crop rotation and moderate automation. This comes after the intensive agriculture characteristic of the 70s-90s.</li> <li>- Natural reservations have been declared by public authorities on both shores, suggesting minimal attention of political stakeholders regarding environmental issues.</li> <li>- Traffic intensity is not very high in the rural area of the protected natural areas targeted by the project.</li> <li>- No large industrial centres are found in the area targeted by the project.</li> </ul>	
<p>Opportunities</p> <ul style="list-style-type: none"> <li>- Accessing EU funds for the development of cross-border integrated management plans, applicable in the neighbouring protected natural areas, along the Danube.</li> <li>- The designation of RAMSAR sites and/or cross-border biosphere reserves.</li> <li>- Accessing EU funds for the development of joint plans for monitoring bird species.</li> <li>- Identifying, mapping and assessing ecosystemic services, especially in the neighbouring protected natural areas.</li> <li>- Re-establishing natural elements in the Danube lowlands, by continuing the projects implemented by relevant NGOs in the two countries.</li> <li>- Developing a joint strategy for the promotion, information and awareness raising of local communities in protected natural areas.</li> <li>- Developing a joint infrastructure for visit and education.</li> <li>- Developing a joint strategy for the management of invasive species.</li> <li>- The existence of fisheries in the targeted area of the project may result in the development of specific joint Romanian-Bulgarian activities: fishing competitions, fish-based gastronomy, fairs, etc.</li> </ul>	<p>Threats</p> <ul style="list-style-type: none"> <li>- The abandonment of agricultural lands, of extensive grazing favours degradation and loss of biodiversity.</li> <li>- Planting and replanting tree species classified as invasive.</li> <li>- Along the times, forest management has resulted in the development of equiennial, mono-specific forests, also having an impact at the level of shrubs and grass.</li> <li>- Changing the usage category of lands.</li> <li>- Poaching related to fish, hunting, as well as species of herpetofauna (<i>Testudo graeca</i> - the spur-thighed tortoise - is captured and eaten by Vidin locals, species of a hunting interest are captured in Romania through forbidden methods, etc.).</li> <li>- The improper storage of domestic waste, resulting in environmental pollution and landscape degradation.</li> <li>- The use of a large quantity of chemical fertilizers affects both surface water, and the soil and groundwater.</li> </ul>

**Chapter 3 Description of protected natural areas in the Mehedinti - Vidin - Vratsa cross-border area. Limits, internal zoning, abiotic and biotic environment (flora and fauna species of a community interest and natural habitats of a European interest).****3.1. Geographical location, land forms, climate, limits and internal zoning**

The Natura 2000 network became functional in both Romania and Bulgaria in 2007, when the first sites of community importance and the first special protection areas for birds and fauna were declared. Thus, in the cross-border area of Mehedinti - Vidin - Montana-Vratsa, right next to the Danube, the following Natura2000 sites have been declared:

- **Mehedinti:** ROSCI0206 Porțile de Fier, ROSPA0026 Cursul Dunării Baziaș-Porțile de Fier (the course of the Danube Bazias - Portile de Fier), ROSPA0080 Munții Almăjului Locvei (Almajului Locvei Mountains), ROSCI0173 Pădurea Stârmina (Starmina Forest), ROSCI0306 Jiana, ROSCI0299 Dunărea la Gârla Mare - Maglavit (the Danube at Garla Mare - Maglavit), ROSPA 0011 Blahnița, ROSPA0046 Gruia - Gârla Mare.

-**Vidin - Montana-Vratsa:** according to the Habitats Directive - BG0000182 Orsoia, BG000527 Kozloduy, BG0000199 Tsibar, BG0000528 The Steppe Vadin Island, BG0000334 Ostrov, BG0000614 Ogosta, BG0000497 Archar, BG0000533 The Kozloduy Islands, BG0000532 The Gemini Island, BG0000552 The Cutovo Island, and according to the Birds Directive - BG0002009 Zlatiata, BG0002008 The Island at Gorni Tsibar, BG0002006 Orsoia Fisheries, BG0002007 Ibis Island, BG0002104 The Tsibar Lake, BG0002067 Golia Island.

The "Plums for junk" project has envisaged 3 protected natural areas in Romania and 4 protected natural areas in Bulgaria: ROSCI0206 Porțile de Fier, ROSCI0173 Pădurea Stârmina (the Starmina Forest), ROSPA0011 Blahnița, BG0002009 Zlatyata, BG0000199 Tsibar, BG0002067 The Golia Island and BG0000182 Orsoya.

From an administrative point of view, these protected natural areas overlap the land of Mehedinti county (Romania) and of the Vidin, Vratsa and Montana districts.

The Mehedinti county is located in the south-west of Romania, on the left shore of the Danube, bordering Caras-Severin to the west, Gorj to the north Dolj to the east and Serbia and Bulgaria to the south. The settlements included in the territory of the protected areas targeted by the project, as well as the percentages of their surface are found in the table below.

The Vidin district is located in the north-west of Bulgaria, bordering Romania to the north, Serbia to the west, the Sofia district to the south and Vratsa to the east.

The Montana district is located in the north-west of Bulgaria, bordering Romania to the north, Vidin to the west, the Sofia district to the south and Vratsa to the east.

The Vratsa district is located in the north-west of Bulgaria, bordering Romania to the north, Montana to the west, the Sofia district to the south, Pleven to the north-east and Lovech to the south-east.

The settlements in the territory of the protected areas in Bulgaria are found in the table below.

The relevant area includes all forms of land, from mountains to plains. Although the mountain region of Mehedinti does not have very high peaks, mountains have an outstanding value in terms of landscape, thus contributing to Romania's cultural and touristic heritage. A special element, actually characteristic for the entire area targeted by "Plums for junk", is the Danube, whose influence is seen at a geo-morphological level, but also in social, cultural and touristic terms and in biodiversity.

Thus, the mountain area of the Mehedinti county, specific to the protected natural areas targeted by the project, is represented by the Almajului Mountains (about 900 m high) and the Mehedinti Mountains, to a much smaller extent. The Mehedinti Plateau is the following geo-morphological structure in this area, with a very diverse geological structure, which reflects directly upon the biotic environment.

To the downstream of Drobeta Turnu Severin, starting from Hinova, the land mostly includes plains; the Romanian Plain begins from here.

A special place in this geo-morphological succession is occupied by the Danube lowlands, which define all the protected natural areas in the studied territory.

The north-west of Bulgaria includes hills and plain areas.

The region has a temperate-continental **climate**, with strong Mediterranean influences. At a local level, the climate is influenced by the land forms, which is why, for instance, in the north-west of Bulgaria, located between the Danube and the Stara Planina Mountains, winters are very cold, and summers are hot and draughty.

Precipitations range from 550 to 750 ml/year, distributed almost uniformly along the year, but very draughty summers have also been reported.

**The hydrography** of the south-west of Romania and the north-west of Bulgaria is represented by the Danube, as the main river. The two accumulation lakes were built in this segment of the Danube.

The main water courses flowing into the Danube in this region are as follows: Mraconia, Eselnita, Cerna, Bahna, Slatinic, Topolnita, Cosustea, Motru, Blahnita, in Romania. The main water courses flowing into the Danube in Bulgaria are: Timok, Topolovets, Arciar, Vidbol, Lom, Cicilska, Komatitsa, Gramadska, Statevska and Skomplea, in the Vidin district Ogosta, Lom and Tzibritza in Montana, and Leva, Cherna, in Vratsa.

#### **The limits of protected natural areas and internal zoning**

ROSCI0206 Porțile de Fier - the southern limit is the navigable portion of the Danube and the border with Serbia, the western limit is partially the border with Serbia, partially the administrative territory of the Socol commune; to the north, the limit is given by the peaks of the Locvei and Almajului Mountains, and from an administrative point of view by the territory of the communes Carbunari, Sopotu Nou, Bania, Mehadia, Toplet, Ciresu, and the city of Drobeta Turnu Severin to the east.

ROSCI0173 Starmina Forest neighbours the Blahnita site to the south, the Rogova commune to the north and north-east and Hinova to the west.

ROSPA0011 Blahnita is delimited as follows: to the south, by the Danube, to the east by territories belonging to Garla Mare, to the north by Jiana, Patule, Vanju Mare, and to the east by territories belonging to Drobeta Turnu Severin.

BG0002009 Zlatyata is located in the north-west of Bulgaria, in the Danubian Plain, between the Danube and Kozloduy to the north, connecting Valcedram and Heiredin to the south of the road and the rivers Tsibritsa and Ogosta to the west and east. It covers a plateau with open pastures, assimilated to steppes and arable land.

BG0000199 Tsibar is located in the north-west of Bulgaria, in the immediate neighbourhood of Dorni Tsibar, to the south-east. It borders Stanevo to the south-west and the Danube to the south.

BG0002067 Golia Island is a Danubian island located in the north-west of Bulgaria, to the east of Vidin, between river kms 798 and 802, to the south of the Cutovo and Slanotrun villages. The territory of the protected natural area includes the major bed, the river itself and 2/3 of the territory of the island, up to the border with Romania.

BG0000182 Orsoya is a protected natural area in the north-west of Bulgaria, bordering the Danube to the north, Lom to the east, and Orsoya to the south.

Table 1 Short description of Natura 2000 sites: status, surface, management								
Name of the protected area	Status	Surface (hectares)	Limits	Communities	Manager/custodian	PM	Internal zoning	Overlap
BG0002009 Zlatiata	SPA	43 498, 73		<b>Villages</b> Butan, Glojene, Criva Bara, Harlets, Bazovets, Septemvritsii, Gorni Tsibar, Zlatia, Razgrad, Manastirishte, Mihailovo, Hairedin, Sofronievo <b>Towns</b> Kozloduy	None, on the control territory of the Vratsa and Montana Regional Environmental Inspectorates	No	No	BG000527 Kozloduy Partially BG0000199 Tsibar
BG0002008 Island next to Gorni Tsibar	SPA	218,423	E23°57'25 N43°80'19 4	<b>Village</b> Gorni Tsibar	The control territory of the Montana Regional Environmental and Water Inspectorate	No	No	BG0000199 Tsibar Tsibar Island Reserve
BG0002006 Orsoya fisheries	SPA	475.46	43°79'06" 23°09'03"	<b>Town</b> Lom		No	No	BG0000182 Orsoya Orsoya Reserve
BG02007 Ibisha island	SPA	399.31	43°82'44 " 23°51'86"	<b>Villages</b> Gorni Tsibar and Dolni Tsibar <b>municipality</b> Valcedram.		No	No	Partially overlapping the territory of BG0000119 Tsibar natural reserve "Ibisha Cross-border RAMSAR site Bistret - Ibisha islands
BG0002104 Tsibar pond	SPA	909.77		<b>Villages</b> Dolni Tsibar, Stanevo <b>Municipalities</b> Valcedram and Lom		No	No	BG0000199 Tsibar



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BG0002067 Golia island	SPA	414.56	44°01'44 23°98'83"	<b>Village</b> Cutovo <b>Municipality</b> Vidin	The control territory of the Montana Regional Environmental and Water Inspectorate	No	No	BG0000552 Cutovo island
BG0000182 Orsoya	SCI	2949.41	43°78'5" 23°05'06"	<b>Villages</b> Arcear, Dobri Dol, Orsoya, Slivata <b>Towns</b> Dimovo and Lom		No	No	BG0002006 Orsoya fisheries
BG0000527 Kozloduy	SCI	125.38	23.609700 43.784900	<b>Village</b> Gorni Tsibar <b>Town</b> Kozloduy		No	No	BG0002009 Zlatiata Natural Reserve Kozloduy
BG0000199 Tsibar	SCI	2971.73	23.512222 43.811944	<b>Villages</b> Gorni Tsibar, Dolni Tsibar, Zlatia, Valcedram <b>Municipality</b> Stanevo , <b>Municipality</b> Lom	The control territory of the Montana Regional Environmental and Water Inspectorate	No	No	BG0002008 Island next to Gorni Tsibar
BG0000528 Steppe Vadin island	SCI	301.29	24.157700 43.674000	<b>Villages</b> Gorni Vadin și Ostrov, <b>Municipality</b> Oriahovo	The control territory of the Vratsa Regional Environmental and Water Inspectorate	No	No	
BG0000334 Ostrov	SCI	3918.6	43.690000 24.076389	<b>Villages</b> Galovo, Liascovets, Ostrov, Salanovtsi <b>Town</b> Oriahovo	The control territory of the Vratsa Regional Environmental and Water Inspectorate	No	No	

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BG0000614 Ogosta river	SCI	1365.74	43.727700 23.866100	<b>Villages</b> Butan, Glojene, Criva Bara, Harlets, Saraevo, Sofronievo, Voivodevo <b>Towns</b> Oriahovo amd Mizia		No	No	
BG0000497 Archar	SCI	808.65	43.799444 22.952222	<b>Village</b> Arcear		No	No	
BG0000533 Kozloduy islands	SCI	909.03	43.771800 23.780000	<b>Village</b> Harlets <b>Town</b> Kozloduy	The control territory of the Vratsa Regional Environmental and Water Inspectorate	No	No	
BG0000532 Bliznatzi island	SCI	606.24	43.848500 22.852200	<b>Villages</b> Botevo, Jeglitsa, Simeonovo, Arcear <b>Town</b> Dunavtsi	The control territory of the Montana Regional Environmental and Water Inspectorate	No	No	N.R. Bliznatzi island
BG0000552 Cutovo island	SCI	118.33	44.013800 22.994500	<b>Village</b> Cutovo	The control territory of the Montana Regional Environmental and Water Inspectorate	No	No	BG0002067 "Golia island" N.R. The Kutovo Island
ROSPA0026 The Danube's course Baziaş-Portile de Fier	SPA	9903.70	44.655000 21.838889	<b>Communes:</b> Eselnita, Dubova, Svinita, Berzasca, Sichevita, Coronini, Pojejena, Socol* <b>Towns:</b> Drobeta Turnu Severin, Orsova, Moldova Noua	P.N.R. Romsilva Administratia Parcului Natural Portile de Fier R.A.	Yes	Yes	ROSCI0206 Portile de Fier Portile de Fier Natural Park, N.R. Balta Nera - Danube, Divici Pojejena Wetland, Calinovat Wetland, Ostrovul Moldova Veche Wetland, Ramsar site

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ROSPA0080 Almajului- Locvei Mountains	SPA	118141.60	44.670556 21.983889	<b>Communes:</b> Breznita - Ocol, Ilovita, Eselnita, Dubova, Svinita, Bania, Berzasca, Carunari, Garnic, Naidas, Pojejena, Sfanta Elena, Sichevita, Socol, Sopotu Nou, Toplest. <b>Towns:</b> Drobeta Turnu Severin, Orsova, Moldova Noua	P.N.R. Romsilva Administratia Parcului Natural Portile de Fier R.A.	Yes	Yes	ROSCI0206 Portile de Fier Portile de Fier Natural Park, N.R. Balta Nera - Danube, N.R. Bazias, N.R. Valea Mare, N.R. The Water Cave in the Poleva Valley, Paleontological N.R. Svinita Fossiliferous Lake, N. R. Cazanele Mici si Mari, N. R. Duhovna Hill, Paleontological N. R. Bahna, N. R. Cracul Crucii, N. R. Oglanic, N. R. Cracul Gaioara, Ramsar site
ROSPA0011 Blahnita	SPA	43710.70	44.425278 22.638056	<b>Communes:</b> Hinova - 56%, Burila Mare - 98%, Vanjulet - 4%, Gruia - 27%, Jiana-53%, Gogosu - 99%, Devesel - 95%, Patulele - 1%	WWF Romania and SOR	Yes	No	ROSCI0173 Starmina Forest ROSCI0306 Jiana Ostrovul Corbului-Hinova Wetland, N.R. Bunget Forest, N. R. Starmina Forest, Ramsar site
ROSPA0046 Gruia - Garla Mare	SPA	2963	44.013905 22.015563	<b>Communes:</b> Gruia, Pristol, Garla Mare, Vrata	None	Yes	No	Garla Mare - Salcia Wetland

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ROSCI0206 Porțile de Fier	SCI	125542.60	44.665833 21.979722	<b>Communes:</b> Mehedinți: Breznița - Ocol - 22%, Drobeta Turnu Severin - 51%, Ilovița - 65%, Orșova - 82%, Eșelnița - 58%, Dubova - 93%, Svinița - 99%; in Caraș - Severin: Bănia - < 1%, Berzasca - 93%, Cărbunari - 36%, Gârnic - > 99%, Moldova Nouă - 88%, Naidăș - < 1%, Pojejena - 98%, Sfânta Elena - 98%, Sichevița - 84%, Socol - 19%, Șopotu Nou - 28%, Topleț - 9%.	P.N.R. Romsilva Administratia Parcului Natural Porțile de Fier R.A.	Yes	Yes	ROSPA0026 The Danube course Bazias - Portile de Fier, ROSPA0080 Almajului - Locvei Mountains, Portile de Fier Natural Park N. R. Balta Nera - Danube, Calinovat Wetland, Divici-Pojejena Wetland, Ostrovul Moldova Veche Wetland, N. R. Baziar, N. R. Valea Mare, N.R. The Water Cave in the Poleva Valley, Paleontological N.R. Svinita Fossiliferous Lake, N. R. Cazanele Mici si Mari, N. R. Duhovna Hill, Paleontological N. R. Bahna, N. R. Cracul Crucii, N. R. Oglanic, N. R. Cracul Gaioara, Ramsar site
ROSCI0173 The Starmina Forest	SCI	2768	44.501283 22.763403	<b>Communes:</b> Burila Mare - 2%, Devesel - 7%, Hinova - 23%	D.S. Drobeta Turnu Severin	Yes		ROSPA0011 Blahnita
ROSCI0306 Jiana	SCI	13415.8	44.402283 22.663308		No	Yes*	No	ROSPA0011 Blahnita
ROSCI0299 The Danube at Gârla Mare - Maglavit	SCI	9494.6	44.118725 22.925608	Town Calafat, Communes Cetate, Maglavit, Garla Mare, Pristol, Salcia, Vrata	No	Yes	No	ROSPA0074 Maglavit ROSPA0046 Gruia - Garla Mare N. R. The Cetate Pasture of the Danube Lowlands

\* Only on the site where it overlaps ROSPA0011 Blahnita

### **3.2. Description of local communities in the concerned area**

The protected natural areas targeted by this document mostly overlap rural areas, with an agricultural and pastoral profile.

**The Svinita commune of Mehedinți** - a commune with a single village, on the Danube shore, on the western border of Mehedinți, with mostly Serbian population. As of the 2011 census, it had 925 inhabitants, lower than the 2002 census. From a religious point of view, they are Serbian Orthodoxes (the Julian style). Of the basic activities of the community, we mention animal breeding, fishing, agriculture and tourism.

**The Dubova commune - Mehedinți** - a commune of Cazanele Dunarii, including three villages: Baia Noua, Eibenthal and Dubova - capital. As of the 2011 census, Dubova has 785 inhabitants, much lower than the 2002 census. In terms of nationality, the highest percentage is held by Romanians (55%), along with Roma and Czech people. In terms of religion, the majority is held by Romanian Orthodoxes (Gregorian style), and the Czech population is Catholic.

Of the basic occupations of the community, we mention animal breeding, agriculture and tourism. Tourism has soared in the last 10 years, due to the international recognition of the beauty of the Danube Gorges, as well as the rock sculpture Decebal's Face, at the border with the Eselnita commune.

**The Eselnita commune - Mehedinți** - a commune of Cazanele Dunarii, including one village. From a demographical point of view, Eselnita has 2565 inhabitants, lower than the 2002 census. Out of them, 71% are Romanians, followed by Roma people. From a religious point of view, 90% of the population is Orthodox and almost 4% Catholic.

Major occupations are animal breeding and agricultural tourism. Tourism has soared in the last 10 years, due to the international recognition of the beauty of the Danube Gorges, as well as the rock sculpture Decebal's Face, at the border with the Dubova commune.

**The town of Orsova - Mehedinți** - a municipality, located where the Cerna flows into the Danube. From a demographical point of view, Orsova has 10411 inhabitants, lower than the 2002 census. In terms of ethnicity, Romanians represent 87%, Roma people up to 2% and in terms of religion Orthodoxes are the most numerous, followed by the Greek Catholics.

Basic occupations are fishing, tourism and the boat building industry. Orsova also has a sports facility, where nautic sports are played.

**The Ilovita commune - Mehedinți** - including the villages of Moisesti, Bahna and Ilovita, with 1316 inhabitants, lower than the 2002 census. In terms of ethnicity, most inhabitants are Romanians - 97% and Orthodox.

The major occupation of the inhabitants is animal breeding; they are also renowned for their specific manual sewing and weaving, combining elements of Banat and Oltenia.

**The Breznita-Ocol commune - Mehedinți** - including the villages Breznita-Ocol, Magheru, Jidostita, Susita, with 3803 inhabitants, lower than as of the previous census, mostly Romanian Orthodox. The main occupations of the inhabitants of the commune are growing animals, agriculture, beekeeping, vine growing.

**The city of Drobeta Turnu Severin - the Gura Vaii neighbourhood - Mehedinți county** - a part of Drobeta Turnu Severin, the county capital, Gura Vaii is included in the ROSCI0206 Portile de Fier protected natural area. From a demographical point of view, Gura Vaii has 4711 inhabitants, lower than the 2002 census. In terms of ethnicity, Romanians are a majority - 88%, and the Roma occupy the second place.

**The Hinova commune - Mehedinți** - including the villages Bistrita, Carjei, Hinova and Ostrovul Corbului. From a demographical point of view, Hinova has 2849 inhabitants, lower than the 2002 census. From a demographical point of view, Hinova has mostly Romanian Orthodox inhabitants.

The basic activities of the population are fishing, agriculture and tourism.

**The Burila Mare commune - Mehedinti** - including Burila Mare, Crivina, Vrancea, Tiganasi, Izvoru Frumos, with a population of 2239 inhabitants, mostly Romanian Orthodox. Specific activities are land cultivation with cereals, vegetable growing, fish growing.

**The Devesel commune - Mehedinti** - including Devesel, Batoti, Bistretu, Tismana, Scapau, Dunarea Mica. Its population includes 3710 inhabitants, mostly Romanian Orthodox. The commune mostly deals with agriculture, and the vegetal and animal breeding sector prevail, i.e. the main occupations are: vegetal production, animal breeding, bird breeding, milling, the oil industry.

**The Vanjulet commune - Mehedinti** - including the villages of Hotarani and Vanjulet, 1980 inhabitants, mostly Romanian Orthodox. Inhabitants mostly work in agriculture.

**The Jiana commune - Mehedinti** - with a population of 4698 inhabitants, Jiana includes the following villages: Jiana, Jiana-Mare, Jiana-Vechi, Cioroboreni, Danceu. Inhabitants are mostly Romanian, Orthodox, dedicated to animal breeding and plant growing.

**The Gruia commune - Mehedinti** - including the villages of Izvoarele and Poiana Gruii, with a population of 3216 inhabitants, mostly Romanian Orthodox and dedicated to agriculture and tourism.

**The Gogosu commune - Mehedinti** - including the villages Gogosu, Balta Verde, Burila Mica, Ostrovu Mare, Portile de Fier II. The commune has 5446 inhabitants, most of which are Romanian Orthodox, whose main activities are agriculture, fish growing, beekeeping, milling and bakery.

**The Butan - Vratsa village** is included in the Kozloduy municipality, with a population of 2828 inhabitants. In terms of ethnicity, most inhabitants are Bulgarians, followed by Roma people. Most activities deal with agriculture.

**The Glojene village - Vratsa** - part of the Kozloduy municipality, with a population of 1058 inhabitants, mostly Bulgarians, followed by the Roma. The main activity is agriculture, but animal breeding also occupies a significant place.

**The Kozloduy town - Vratsa** - with 12723 inhabitants, the Kozloduy town has an interesting history, but it has become known after the construction of the nuclear power plant. In terms of ethnicity, most inhabitants are Bulgarian, but also Roma and Romanian. The town is well developed from an economic point of view, with higher living standards than many other Bulgarian settlements. Due to the presence of the nuclear power plant, Kozloduy is a strategic point, important for the country's economy, as well as a touristic attraction.

**The Gorni Tsibar village - Montana** is a small village in the Valcedram municipality, with a population of 164 inhabitants. Most inhabitants are Bulgarian and most people work in agriculture.

**The Dolni Tsibar village - Montana** - a village in the municipality of Valcedram, Montana district, with a population of 1551 inhabitants, mostly Bulgarian Orthodox.

**The Cutovo village - Vidin** - a small village, with 695 inhabitants, mostly Bulgarian, and traditional agricultural activities.

**The Arcear village - Vidin** - a village in the Dimovo municipality, with a population of 2296 inhabitants, mostly Bulgarian. Basic activities are animal breeding and plant growing.

**The Dobri Dol commune - Montana** - a village in the municipality of Lom, very small, with fully Bulgarian population and mostly agricultural activities. The population includes 114 inhabitants.

**The Lom town - Montana** - a town with more than 33000 inhabitants, mostly Bulgarian.

**The Zlatia commune - Montana** - from the Vulchedrum municipality, located between Lom and Kozloduy, with mostly Bulgarian population, including 770 inhabitants.

**3.3. Description of the landscape and cultural heritage of the concerned area**

Ecotourism is a type of tourism quite underdeveloped in the area of the project, even though the concerned territory has an outstanding potential, due to the many protected natural areas, the extremely high biodiversity and the cultural heritage of the area. This very sector should be developed in all the protected natural areas targeted by the project, through specific infrastructure, through the establishment of thematic paths, information and documentation centres, local tradition centres, etc.

Tourism can be developed in this entire area. The Mehedinti county and the Vidin district are best developed in terms of tourism, but Montana and Vratsa also have many sights of a landscaping, cultural and historical interest.

<b>Table 2 The cultural, historical and landscaping heritage in the Mehedinti - Vidin-Vratsa cross-border area</b>				
No.	Protected natural area	Ecotouristic/touristic sight	Location (u.a.t.)	Brief description
1	ROSCI0206	The Svinita fossiliferous reserve	Svinita	Paleontological natural reserve, very important due to the fossils of ammonites.
2	ROSCI0206	The Tricule Fortress	Svinita	A functional fortification in the 11 <sup>th</sup> -16 <sup>th</sup> centuries, with a role of defence, including 3 towers
3	ROSCI0206	The Ethnographical Museum	Svinita	-
4	ROSCI0206	6 archaeological sites	Svinita	-
5	ROSCI0206	The water mills	Svinita	Water mills are traditional gears used by the locals to grind cereals.
6	ROSCI0206	Cioaca Borii	Svinita	A rock mountain, renowned for its spectacular wild landscape and for the presence of the Banat-specific black pine, a spontaneous tree in the Svinita area.
7	ROSCI0206	The Trescovat volcanic neck	Svinita	A spectacular mountain peak, very significant for its specific biodiversity.
8	ROSCI0206	The Trescovat ecotouristic route	Svinita	The route starts from Stariste and covers a succession of natural habitats, reaching the Trescovat peak, where the landscape is formidable, looking down on the entire Danube lowlands, in the Gorges area.
9	ROSCI0206	The Svinita-Tricule ecotouristic route	Svinita	The route starts from Svinita and covers a succession of natural habitats, crossing Cioaca Borii and reaching the Tricule fortress.
10	ROSCI0206	The Svinita Natural Amphitheatre thematic path	Svinita	The thematic path is made for the young generation and is short, but comprehensive. It starts from the village, reaching the area of the geological amphitheatre in Svinita.

11	ROSCI0206	Decebal's Statue	Dubova	The biggest rock sculpture of Europe, attracting thousands of tourists every year.
12	ROSCI0206	The Cazanele Mari ecotouristic route	Dubova	The route starts from Dubova and reaches the Ciucarul Mare plateau, where one can see the most spectacular gorges in Europe, towards Eselnita.
13	ROSCI0206	The Cazanele Mari Ponicoval ecotouristic route	Dubova	The route starts from Dubova and reaches the Ciucarul Mare plateau, where one can see the most spectacular gorges in Europe, towards Svinita.
14	ROSCI0206	The Dubova-Cazanele Mici ecotouristic route	Dubova	The route starts from Dubova, crosses a succession of natural habitats, goes along specific constructions of the area and reaches the point where the landscape covers Ciucaru Mare and the Dubova Gulf.
15	ROSCI0206	The Cazanele Mici ecotouristic route	Dubova	The route starts from Dubova, at the entry from Orsova, and reaches the Ciucarul Mare plateau, where one can spectacularly see Ciucaru Mare, the Dubova Gulf and Cazanele Mari.
16	ROSCI0206	The Cazanele Mari and Cazanele Mici complex reserve	Dubova	The reserve is extremely important in terms of biodiversity, as the place where the yellow tulip - <i>Tulipa hungarica</i> has become known.
17	ROSCI0206	The Mraconia Monastery	Dubova	The Mraconia Monastery was erected on the site of a former point of observation and guidance of ships on the Danube.
18	ROSCI0206	The Ponicoval Cave	Dubova	The largest cave in the Danube Gorges, with 3 galleries: an active one and 2 fossil ones, one of them being known due to speleothems, the other one for a significant colony of bats.
19	ROSCI0206	The Veterani Cave	Dubova	The first mapped cave, standing out in terms of how it is accessed, only from the Danube.
20	ROSCI0206	Information-documentation centre	Dubova	An information-documentation centre for local communities regarding protected natural areas, protected biodiversity.
21	ROSCI0206	Information-documentation centre, information point	Orsova	Specific infrastructure for ecotourism and tourism.
22	ROSCI0206	Sf. Ana Monastery,	Orsova	Important monasteries in the Mehedinti county.
La. /	ROSCI0206	The Catholic Cathedral	Orsova	The construction of the Catholic church was a curiosity, both through its non-conformist shape, and its year of construction, 1972-1976, as the only Catholic church constructed during the communist regime.
24	ROSCI0206	The Coniferous Forests thematic path	Orsova	A thematic path to educate the young generation regarding the species of deciduous and coniferous trees within the park.



25	ROSCI0206	The Bahna Paleontological Reserve	Ilovita	A paleontological reserve known at a European level for its fossils of gastropods, belemnites.
26	ROSCI0206	The Duhovna Hill natural reserve	Ilovita	A forest natural area, for the protection of "osiac" forests, i.e. dried out hazelnut tree trunks.
27	ROSCI0206	The Racovat-Baldovin ecotouristic route	Ilovita	The route crosses a succession of natural habitats, reaching the Baldovin peak, where a beautiful landscape over Ilovita can be seen.
28	ROSCI0206	The Duhovna Hill-Vodita ecotouristic route	Ilovita	The route crosses the Duhovna Hill natural reserve and reaches the area of the Vodita Monastery, on the Vodita Valley.
29	ROSCI0206	The Museum of the Portile de Fier I Power Plant	Drobeta Turnu Severin - Gura Văii	A major touristic point, providing information on when the water power plant was built.
30	ROSCI0206	The St. Peter's Cross ecotouristic route	Drobeta Turnu Severin - Gura Văii	The route starts from Gura Văii and reaches the Crucii area, above the Cracu Crucii reserve, very important for its endemic flower biodiversity.
31	ROSCI0206	The Cracul Crucii natural reserve	Drobeta Turnu Severin - Gura Văii	A botanic natural reserve, small in surface, but extremely important due to the presence of endemic species.
32	ROSCI0206	The Fata Virului natural reserve	Drobeta Turnu Severin - Gura Văii	A forest natural reserve, important for the vegetal associations specific to Mediterranean areas.
33	ROSCI0206	The Cracul Gaioara natural reserve	Drobeta Turnu Severin - Gura Văii	A botanic natural reserve, small in surface, but extremely important due to the presence of endemic species.
34	ROSCI0206	The Valea Oglanicului natural reserve	Drobeta Turnu Severin - Gura Văii	A botanic natural reserve, small in surface, but extremely important due to the presence of endemic species.
35	ROSCI0206	The Varanic natural reserve	Breznita-Ocol	A botanic natural reserve, small in surface, but extremely important due to the presence of endemic species.
36	ROSCI0173	The Starmina Forest natural reserve	Hinova	Declared reserve for the protection of the butcher's broom - <i>Ruscus aculeatus</i> .
37	ROSPA0011	The Roman Castrum in Hinova	Hinova	-
38	ROSPA0011	The Crivina archaeological site	Burila Mare	Settlement from the 10 <sup>th</sup> -12 <sup>th</sup> centuries
39	ROSPA0011	The Izvoru Frumos archaeological site	Burila Mare	Settlement from the 11 <sup>th</sup> -14 <sup>th</sup> centuries
40	ROSPA0011	The Tiganasi "La pompe" archaeological site	Burila Mare	Necropolis from the Roman ages, settlement from the 3 <sup>rd</sup> - 1 <sup>st</sup> centuries B.C.
41	ROSPA0011	The Vrancea archaeological	Burila Mare	Settlement from the 2 <sup>nd</sup> -3 <sup>rd</sup> centuries

		site		
42	ROSPA0011	The church from Dunarea Mica	Deveselu	-
43	ROSPA0011	The Ostrovul Mare Island - the Portile de Fier II Water Power Plant	Gogosu	-
44	BG0002067	The Baba Vida Fortress	Vidin, close to ANP	It is a cultural monument of national importance, one of the top 100 Bulgarian touristic sights. It is one of the best preserved medieval fortresses in Bulgaria. The sight includes many attractions, a small collection museum, it is used as a setting for movies, theatre stage, concertos, etc.
45	BG0002067 BG0000182	Ancient Ratsiaria	Vidin, close to ANP	An old town from the Ulpia Traiana Ratiaria (Rastiaria) colony, the most important Roman and Byzantine centre of north-west Bulgaria.
46	BG0000182	The Borunska Church	Lom	-
47	BG0000182	The Asparuh bridge	Lom	-
48	BG0000182	The Historical Museum of Lom	Lom	-
49	BG0002009	The Church of St. Peter and Paul	Vidin	A monument dedicated to the victims of the First World War in Cutovo was also built inside the monastery, which dates back to 1873.
50	BG0002009	The Popova Inn	Vratsa	The inn is famous because the revolutionary Hristo Botev is said to have stopped here.
51	BG0002009	The St. Georgi Pobedonosets Monastery	Vratsa	-
52	BG0002009	The Radetsky Museum	Kozloduy	An Austrian-Hungarian steam-powered passenger ship, built in 1851 and used for transportation on the Danube. Famous due to the revolutionary Hristo Botev.
53	BG0002009	The Hristo Botev monument	Kozloduy	The monument is located next to the museum, it is a 20 m high obelisk, a part of the "Botev's Road" historical and cultural complex.
54	BG0002009	The Asparuhov val monument	Kozloduy	A historical and cultural site, Khan Asparuh, the founder of the Bulgarian state, is said to have erected this temporary fortress in the 7 <sup>th</sup> century.

### **3.4. General description of the biotic environment**

The biodiversity in the protected natural areas in the concerned territory covers all fauna groups whose species are protected at a community level, as well as species of flora and specific vegetal associations for habitats of a community interest and priority habitats. In the analysis of the biotic environment, it should be considered that, out of the protected natural areas envisaged by the project, 4 are declared for wild bird protection and 3 are declared for the protection of flora, wild fauna (other than birds) and natural habitats. As shown in the table below, these sites totally or partially overlap other protected natural areas, some of a national interest, some of a community and international interest.

Thus, the interest area of the project includes, upon consultation of the official reports of Natura 2000 sites, 17 species of mammals, 5 species of reptiles, 18 species of fish, 17 species of non-vertebrates, 13 species of plants and 86 species of birds. 33 types of habitats with a community interest were identified in the concerned area.

However, biodiversity has no limits, which is why the conservation measures to be applied in a certain area should be integrated, meet ecosystemic requirements, help maintain or improve habitats, as they directly reflect in the populational state of a certain species.

Non-vertebrates are the group that is perhaps best represented, but also least studied. However, standard forms may show that many species of a community interest are present in the protected natural areas in the project territory. The ecological study of these species provides extremely significant information for the quality of ecosystems in protected natural areas, especially since a very high percentage is represented by wetland and aquatic ecosystems.

Since one of the limits of the protected natural areas, depending on their geographical position, is traced by the Danube, these protected natural areas are very important for fish species, both of a community and of a national interest. Fish growing is one of the traditional activities specific to the entire area envisaged by the project.

Amphibians and reptiles are very well represented in this area in terms of quality; many species of a community interest are known, whose populations are viable in the territory, but are not included in the standard forms of Natura 2000 sites. These species may be used as bioindicators, considering the lifestyle of amphibians.

The targeted area is renowned for the significant amounts of ferruginous duck, pygmy cormorant, great bustard, lesser white-fronted goose, Dalmatian pelican, corn crake, white-tailed eagle. The fact that two of the protected natural areas targeted by the project are declared RAMSAR sites underlines their importance for an impressive number of birds, in terms of both quality and quantity, in all biological and ecological phases (nesting, reproduction, chicken growing, feeding, rest). The Danube, the common factor of all protected natural areas targeted by the project, is the main way of migration of relevant animals (micro mammals, birds).

Of mammal species, due to the varied land forms and geographical position, the protected natural area ROSCI0206 Portile de Fier includes all large carnivore species specific to the Carpathian chain, species of large herbivores, as well as micro mammals.

In terms of micro mammals (rodents, chiroptera), important populations of suslik are known from the natural areas of Starmina (fully overlapping ROSPA0011 Blahnita) and BG000182 Zlatyata.

In the target area of the project, many species shown in the standard forms of Natura 2000 sites are endemic, rare or endangered, so that their protection is imperative, either autonomously or through the protection of the relevant vegetal association.

Many of these protected natural areas are fish growing facilities with extensive fishing, which allows the development of specific hydro and hygrophilic vegetation. This aspect is very important from the viewpoint of habitats for nesting and growing chicken of water bird species. At the same time, this vegetation is the ideal place for the hibernacles of amphibian and reptile species.

## **Chapter 4 Purpose, general objectives and preservation actions in order to improve the preservation status of protected natural areas.**

### **4.1. The purpose of the strategy**

The implementation of joint actions with a view to increasing the protection, conservation of biodiversity and the specific landscape and increasing the awareness, education and promotion of the Vratsa-Vidin-Mehedinti region. This purpose will be reached as stakeholders sign a memorandum.

### **4.2. The objectives of the strategy**

#### **The objectives of the strategy:**

- A.) Implementing actions aimed at enhancing knowledge on specific biodiversity and landscape in the project targeted area.
- B.) Increasing the awareness, information and education of local communities, as well as enhancing the touristic and ecotouristic promotion of the project targeted area.
- C.) Developing joint projects with a view to enhancing the administrative and institutional capacity of managers/custodians of protected areas, as well as administrative territorial units within the protected areas.

**4.3. The plan of measures for the preservation of wild flora and fauna species and natural habitats of a community interest.****4.3.1. ) General management actions to improve the preservation status and the protection of protected items**

<b>Table 3 General management actions to improve the preservation status and the protection of protected items</b>				
<b>No.</b>	<b>Identified general action</b>	<b>Protected natural area</b>	<b>Targeted species/habitats</b>	<b>Implementation officer</b>
1.	Drawing up and enforcing specific and integrated management plans	BG0002009, BG0000199, BG0002067, BG000198	All	Manager/custodian
2.	Drawing up and enforcing a monitoring plan	All	Optimally all; critically those holding priority	Manager/custodian Research institutions NGOs
3.	Identifying and mapping the distribution of species and habitats with priority and a community interest	All	All	Manager/custodian Research institutions NGOs
4.	Mapping and assessing the state of preservation of ecosystems and ecosystemic services	All	All	Manager/custodian Research institutions NGOs
5.	Drawing up and enforcing a communication strategy	All	All	Manager/custodian Education institutions Local and regional media
6.	Ecologisation/hygienisation of protected areas	All	All	Manager/custodian Territorial administrative units NGOs
7.	Establishing ecological networks and restoring river and wetland connectivity	All	All	The relevant ministry NGOs, Manager/custodian
8.	Improving cross-sectoral professional training for the managers and partner groups of wetlands	All	Indirectly, all	Manager/custodian NGOs The relevant ministry
9.	Preventing and limiting the dispersion of invasive, allochthonous and indigenous species	All	All	Local public authorities Manager/custodian NGOs

**4.3.2.) Description of general management actions, prioritisation, recommendations for joint programmes.****General action 1 - Drawing up and enforcing specific and integrated management plans**

Management plans are the essential documents based on which any protected natural area must function. Management plans in Romania are approved either by a government decision or by a ministry order, and custodians or managers are in charge with drawing them up. In Bulgaria, the Ministry of Environment and Water assigns management plans to public bodies and their relevant divisions, to municipalities and their associations, to scientific or academic institutions or non-governmental environmental organisations.

Of the protected natural areas envisaged by this project, all the 3 protected areas in Mehedinti have an approved or a pending management plan, 2 of which are integrated management plans, considering their overlap with several protected areas. None of the protected areas in Vidin has a custodian or a management plan, which is a great danger for biodiversity, as this document can actually regulate the economic activities that may be undertaken within or in the neighbourhood of the protected areas.

**Priority: 1**

**Recommendations:** drawing up integrated management plans for the overlapping sites, as well as a joint management plan for restoring the natural environment of the Danube Lowlands. Meetings of stakeholders in the two areas in order to implement joint management measures, especially for the waters of the Danube river.

**General action 2 - Drawing up and enforcing a monitoring plan**

The biodiversity monitoring plan is strictly and imperatively required in each protected natural area, especially for the wild flora and fauna species and the natural habitats such areas were declared for. Even though the protected areas targeted by the project are not adjacent or equivalent, joint monitoring protocols may be implemented in common species, especially since the Danube is a shared environmental factor.

**Priority: 1**

**Recommendations:** drawing up a joint work plan, establishing common species, common parameters, periodicity. This recommendation would result in stronger relations between stakeholders, along with a joint exercise in the protection and conservation of Natura 2000 sites.

**General action 3 - Identifying and mapping the distribution of species and habitats with priority and a community interest**

The distribution of wild flora and fauna, as well as natural habitats may be mapped along monitoring activities. Mapping provides concrete data on the distribution of biodiversity elements of a community interest, and it is especially relevant in terms of priority species and habitats. Such an activity results in maps which may be used by all stakeholders.

**Priority: 1**

**Recommendations:** The activity may be undertaken pursuant to a joint work plan, but one cannot talk of dependent results in terms of habitats and most terrestrial species. However, in terms of fish species and bird species, this activity can be jointly approached.

**General action 4 - Mapping and assessing the state of preservation of ecosystems and ecosystemic services**

The mapping of natural ecosystems and ecosystemic services is one of the major outcomes of projects in the new financing period, according to EU programmes. Whether Romanian and Bulgarian experts have enough experience on ecosystemic services and their quantification, in order to map natural ecosystems.

**Priority: 1**

**Recommendations.** The assessment, quantification and mapping of ecosystemic services may be undertaken based on a joint work plan, considering the Danube, that joins the two regions.

**General action 5 - Drawing up and enforcing a communication strategy**

A communication strategy is useful and necessary for any manager/custodian of a protected natural area, since protected areas are likely to be considered an obstacle for economic development. Thus, a communication strategy is a highly useful device establishing communication ways and methods, as well as target groups and favourable periods for communication.

**Priority: 2**

**Recommendations.** A joint communication strategy should be drawn up and implemented, with specific activities for the areas of interest, considering that most of the territory is highly similar in terms of land forms, biodiversity, the status of protected natural areas and social and economic aspects.

**General action 6 - Ecologisation/hygienisation of protected areas**

This recurrent activity for every manager/custodian of a protected natural area has also been a basic activity within this project. The issue is far from being solved; national policies should be implemented for each individual partner. Besides the visual impact of domestic waste upon visitors, its impact on public health and biodiversity is significant as well. Such activities must be undertaken on a regular basis, along with concrete actions taken by each individual authority.

**Priority: 1**

**Recommendations.** Territorial administrative authorities must undertake a joint waste management plan and make sure that they meet their duties in terms of waste water management, sewerage, sustainable management of water catchment and use. Moreover, they may mark days in their ecological calendar through simultaneous activities of ecologisation/hygienisation of adjacent wetlands.

**General action 7 - Establishing ecological networks and restoring river and wetland connectivity**

This measure may have a regional impact, which can be initiated by the managers/custodians of protected natural areas and undertaken in partnership with administrative and environmental authorities in the Vidin-Mehedinti region.

**Priority: 2**

**Recommendation.** Developing a strategic partnership between Romanian-Bulgarian administrative authorities and managers/custodians and NGOs, in order to set up an association that may help access EU funds on different axes and programmes.

**General action 8 - Improving cross-sectoral professional training for the managers and partner groups of wetlands**

The experts, whether they are from the staff of the managers/custodians of protected natural areas, the staff of environmental authorities or NGOs, still face difficult situations in the management of protected areas due to the absence of specific knowledge. Integrated water management, regulated by the Framework Water Directive and ratified by each European state, is not fully accepted by each individual stakeholder, so that the objectives of this directive have not been reached yet. To this purpose, and as an addition to the previous action, each sector would have benefits from an active partnership.

**Priority: 2**

**Recommendation.** NGOs play a significant part in enhancing the comprehension level, organising many seminars, workshops and meetings to promote integrated wetland management and the objectives of the Framework Water Directive, which is why a partnership with at least one NGO in each country is proposed.

**General action 9 - Preventing and limiting the dispersion of invasive, allochthonous and indigenous species**

It is an urgent action, which should begin with identifying and mapping invasive species, and then with enforcing measures for the mitigation and prevention of the dispersion of invasive species. The best known and, at the same time, easiest to fight are invasive plant species such as *Ailanthus altissima* - the tree of heaven, *Ambrosia artemisiifolia* - ambrosia, *Amorpha fruticosa*. The easy prevention lies in the fact that methods are already known which are used in other protected natural areas for prevention, prevention

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measures are known, only a joint work plan should be established between local public authorities, managers/custodians, NGOs, forest facilities, water managers in both countries, etc. As for invasive animal species, prevention actions are known, but they should be applied at the level of the entire Danube's basin, so that they may have the desired effects. In these cases, prevention measures should be at least applied.

Priority: 1

**Recommendation.** The persons in charge with the management/custody of the protected natural areas targeted by the project should undertake a work meeting with all stakeholders (local public administrations, forest facilities, sanitary facilities, locals, etc.) so as to establish a work plan, valid for at least 5 years, in order to apply manual and mechanical prevention actions for these species. Chemical mitigation with locally applied herbicides in the tree trunk may be attempted in some cases.



### 4.3.3. Specific measures for the preservation of wild flora and fauna species and natural habitats of a community interest.

Table 4 Specific measures for the preservation of wild flora and fauna species and natural habitats of a community interest.			
Code	Name	SCI/SPA	Identified actions
MAMMALS SPECIFIC TO CAVERN AREAS/SHELTERS/FORESTS (BATS)			
1304	<i>Rhinolophus ferrumequinum</i>	ROSCI0206	<b>M1.</b> Minimizing disturbance in sensitive periods, especially in winter (November-March) and during the formation of birth colonies (May-August). <b>M2.</b> Avoiding the illumination of shelter entrances. <b>M3.</b> Keeping vegetation at the shelter entrances. <b>M4.</b> Limiting sound pollution at the shelter and nearby. <b>M5.</b> Proper management of the waste to the downstream, upstream and inside of underground cavities <b>M6.</b> Maintaining mature deciduous forests, steppe areas and pastures. <b>M7.</b> Limiting sound and light pollution along flight routes and in feeding habitats. <b>M8.</b> Protecting the original aspects of feeding habitats on a perimeter of 4-5 km around birth shelters. <b>M9.</b> Maintaining vegetation elements (rows of trees, shrubs, vegetal fences) used as flight routes between the shelter and feeding habitats. <b>M10.</b> Preventing water source pollution. <b>M11.</b> Reducing the use of pesticides. <b>Specific actions for the visited shelters</b> <b>M12.</b> Locating warning panels in the visited places (caves, churches, etc.) with information on the significance of bat species. <b>M13.</b> Changing artificial illumination conditions: using cold light, movement sensor-based LED system.
1303	<i>Rhinolophulus hipposideros</i>	ROSCI0206	
1305	<i>Rhinolophulus euryale</i>	ROSCI0206	
1302	<i>Rhinolophulus mehelyi</i>	ROSCI0206	
1324	<i>Myotis myotis</i>	ROSCI0206	
1307	<i>Myothis blythii</i>	ROSCI0206	
1323	<i>Myothis bechsteinii</i>	ROSCI0206	
1316	<i>Myotis capacinii</i>	ROSCI0206	
1310	<i>Miniopterus schreibersii</i>	ROSCI0206	
1308	<i>Barbastella barbastellus</i>	ROSCI0206	
1318	<i>Myotis dasycneme</i>	ROSCI0206	
1321	<i>Myotis emarginatus</i>	ROSCI0206	
All specified actions result in the improvement of the preservation status of bat species, which may be done immediately after their distribution area and the hibernation/maternity colonies are known. Once applied, some of the measures may bring actual improvements to the status of habitats in general and other species of flora and fauna. Some of the mentioned measures may be taken jointly, so as to provide benefits to the cross-border region; others may be implemented differently, without needing or requiring a joint work plan. Likewise, the protected natural areas targeted by this strategy partially or fully overlap other protected areas of a national or a community interest, as shown in table 1. Thus, the bat species mentioned in the previous table may also be present in the area of other			

Natura 2000 sites.

Of the management actions listed for this group of species, we shall detail those which may be subject to cross-border agreements/plans/projects.

**M1. Minimizing disturbance in sensitive periods, especially in winter (November-March) and during the formation of birth colonies (May-August).**

The action has local effects and its implementation has no cross-border effects.

**Priority: 3**

**M2. Avoiding the illumination of shelter entrances.**

The action has local effects and its implementation has no cross-border effects.

**Priority: 3**

**M3. Keeping vegetation at the shelter entrances.**

The action has local effects and its implementation has no cross-border effects.

**Priority: 3**

**M4. Limiting sound pollution at the shelter and nearby.**

The action has local effects and its implementation has no cross-border effects.

**Priority: 3**

**M5. Proper management of the waste to the downstream, upstream and inside of underground cavities**

This action may be planned at a regional level and decision makers may reach an agreement for sustainable waste management. The action results in the improvement of the conservation status not only for bats, but also for fish, for the aquatic environment in general, for the locals' health.

Both in Mehedinti and in Vidin, Montana and Vratsa (and probably in the remaining territory of the two countries as well), domestic waste management is an actual issue. Much of the waste is thrown by the locals into riverbeds. The area ROSCI0206 Portile de Fier is characterized by the presence of endokarst land forms, so that one can see that the waste is carried by water in rainy periods and taken into the caves. Along the entire course of the Danube, deposits of domestic waste brought by the upstream waters of the Danube may be seen in river forests. For this reason, the measure may be jointly planned and implemented by regional decision makers.

Besides the actual measure, activities of education, awareness and information of local populations may be implemented regarding proper waste storage (after having created the specific infrastructure), as well as the corrective actions that may be taken due to the infringement of legal provisions.

**Priority: 1**

**M6. Maintaining mature deciduous forests, steppe areas and pastures.**

An action aimed at maintaining the quality of habitats where bats hunt, one of the integrated management actions that may

provide benefits to various protected areas and may be planned to produce regional effects. The action cannot actually take effect at a cross-border level, but it can be used as a good practice example for other regions, if properly implemented.

**Priority: 2**

**M7. Limiting sound and light pollution along flight routes and in feeding habitats.**

The action has local effects and its implementation has no cross-border effects.

**Priority: 3**

**M8. Protecting the original aspects of feeding habitats on a perimeter of 4-5 km around birth shelters.**

The action has local effects and its implementation has no cross-border effects.

**Priority: 3**

**M9. Maintaining vegetation elements (rows of trees, shrubs, vegetal fences) used as flight routes between the shelter and feeding habitats.**

An action aimed at maintaining the quality of habitats used for finding food, as well as during seasonal migration. The action may have effects at a regional level and may help improve the preservation of other fauna species as well, as it is also stated for other groups. Likewise, maintaining forest curtains and tree rows between agricultural land plots or at their side has positive effects during winter, diminishing the effects of strong snow accumulations, as well as in agriculture (pests may be removed by maintaining such rows of trees and shrubs or non-cultivated land).

Even though the action does not have major cross-border effects, it may be implemented within a joint plan/agreement by the managers/custodians of protected natural areas, land owners, forest facilities.

**Priority: 1**

**M10. Preventing water source pollution.**

The cross-border implementation of this action is imperative, and action can be taken by the central environmental authorities in the two countries, Romania and Bulgaria. At a regional level as well, environmental and administrative authorities may implement activities supporting the principle of prevention and caution in biodiversity and not only.

The action may be indirectly managed by the managers/custodians of protected natural areas, but it involves a very good cooperation between them and other public institutions.

This prevention can be done by: properly managing domestic waste, properly managing waste water, managing river transport, managing agricultural activities. Considering the diversity of activities which may result in water pollution, actions for preventing water source pollutions must be planned by involving all decision makers.

**Priority: 1, but undertaken along several years.**

**M11. Reducing the use of pesticides.**

This action may imply cross-border cooperation of agricultural associations, generating, besides positive effects on the soil and subsoil, peer-to-peer connectivity, exchange of experience and the possibility to use the best examples in agricultural management. Thus, even though it is regulated in the management plans of protected natural areas, the use of pesticides in agriculture is still significant, with a harmful effect on human health as well. This does not mean that it is not useful in certain situations; in other parts of the European Union it has been shown that chemical methods are most effective in fighting invasive species.

**Priority:** 1, especially in the context of new EU-funded programmes.

**M12. Locating warning panels in the visited places (caves, churches, etc.) with information on the significance of bat species.**

The action has local effects and its implementation has no cross-border effects.

**Priority:** 3

**M13. Changing artificial illumination conditions: using cold light, movement sensor-based LED system.**

The action has local effects and its implementation has no cross-border effects.

**Priority:** 3

#### SPECIFIC MAMMALS IN FOREST HABITATS/LARGE CARNIVORES

1352	<i>Canis lupus</i>	ROSCI0206	<b>M1.</b> Matching management plans for hunting animal funds to the management plan of the protected natural area. <b>M2.</b> Maintaining the silence area and observing legal provisions on forest management around such areas. <b>M3.</b> Maintaining the category of use of lands. <b>M4.</b> Avoiding the fragmentation of habitats by building roads, especially national roads or highways, if no passage tunnels are designed. <b>M5.</b> Control of off-road activities with ATVs, motorcross or enduro and placing barriers on forest roads. <b>M6.</b> Avoiding over-grazing, by establishing the number and species that may graze, as well as forbidding intensive swine and goat grazing. <b>M7.</b> Removing stray dogs from hunting areas and limiting dogs to ranches, according to legal provisions.
1361	<i>Lynx lynx</i>	ROSCI0206	

Considering the specificities of the cross-border region targeted by the "Plums for junk" project, such measures target species which are present in a single protected natural area, i.e. they cannot be subject to joint Romanian-Bulgarian agreements or plans.

#### SPECIFIC MAMMALS IN AQUATIC HABITATS

1355	<i>Lutra lutra</i>	ROSCI0206, ROSCI0173, BG0000199	<b>M1.</b> Maintaining an optimal otter population, as well as the specific habitats of this species. <b>M2.</b> Assessing any intervention on water courses: micro water power plants, sloping, embankment, drainage, forest management. <b>M3.</b> Doing away with poaching for this species.
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			<b>M4.</b> Proper waste management, so that it is no longer landfilled on minor and major riverbeds. <b>M5.</b> Creating natural "banks" by partially blocking internal water courses with local materials (wood, stone).
<p>The protected natural areas targeted by this strategy partially or fully overlap other protected areas of a national or a community interest, as shown in table 1. Thus, otters are also present in other protected natural areas, whose objective is not to protect otters (SPAs).</p> <p>All above mentioned actions may be included in cross-border plans/agreements/projects.</p> <p><b>M1. Maintaining an optimal otter population, as well as the specific habitats of this species.</b></p> <p>This action deals especially with the work of the manager/custodian of the protected natural area and implies drawing up a proper management plan, monitoring and land-mapping actions, awareness raising and education actions. The action is much more needed in the south and south-east of Mehedinti, as well as in protected natural areas of Bulgaria, since protected natural areas in these zones overlap private ponds. The managers of these ponds consider the otters to be, like some species of birds, genuine pests for the fish fauna. The action may be direct, by restoring the natural environment of the Danube Lowland and other water course, which had been embanked in the 70s-80s, and their major riverbed had been draned. Restoring the natural environment of the Danube Lowland has already been the scope of projects implemented both in Romania and in Bulgaria to the downstream of the focus area, but it can be a good practice model and it can be initiated in this region as well. This measure can be implemented by the custodians of protected natural areas, in partnership with relevant institutions or NGOs.</p> <p>However, an action with an indirect effect on the improvement of the preservation of otters in this area can also be taken, i.e. educating, increasing awareness and informing the wide audience on the importance of the species for the ecosystem and the need to protect it. This can also be implemented by NGOs interested in educating local communities in terms of environment protection.</p> <p>It may be implemented in partnership between the two countries, through EU-funded programmes, as well as nationally supported actions.</p> <p><b>Priority: 1</b></p> <p><b>M2. Assessing any intervention on water courses: micro water power plants, sloping, embankment, drainage, forest management.</b></p> <p>This action does not have concrete effects in itself in the cross-border area, but, applied at least at a regional level in each of the two countries, it results in an improved conservation of the species. The assessment of investments in terms of regional impact is desirable, especially since any intervention on water courses brings along changes for their entire length.</p> <p><b>Priority: 2</b></p> <p><b>M3. Doing away with poaching for this species.</b></p> <p>This action may be jointly planned, so that it improves the status of the species in all protected natural areas in the project region. It may be jointly implemented, through activities of patrolling, of prevention of illegal deeds, as well as awareness raising and information.</p> <p><b>Priority: 1</b></p> <p><b>M4. Proper waste management, so that it is no longer landfilled on minor and major riverbeds.</b></p> <p>This action may be planned at a regional level and decision makers may reach an agreement for sustainable waste management.</p>			

The action results in the improvement of the conservation status not only for otters, but also for fish, for the aquatic environment in general, for the locals' health.

Both in Mehedinți and in Vidin, Montana and Vratsa (and probably in the remaining territory of the two countries as well), domestic waste management is an actual issue.

Along the entire course of the Danube, deposits of domestic waste brought by the upstream waters of the Danube may be seen in river forests. For this reason, the measure may be jointly planned and implemented by regional decision makers.

Besides the actual measure, activities of education, awareness and information of local populations may be implemented regarding proper waste storage (after having created the specific infrastructure), as well as the corrective actions that may be taken due to the infringement of legal provisions.

**Priority: 1**

**MAMMALS SPECIFIC TO AGRICULTURAL LAND/PASTURES/HAYFIELDS**

1335	<i>Spermophilus citellus</i>	ROSCI0173, BG0000182, BG0000199	<b>M1.</b> Establishing the period when grazing is allowed, with what species, in what number of animals, along with compliance control. <b>M2.</b> Informing and then controlling the compliance with legal provisions on burning vegetation on the pastures.
2609	<i>Mesocricetus newtoni</i>	BG0000182, BG0000199	<b>M3.</b> Prohibiting the use of pesticides and herbicides on arable land within sites, but especially around the area where the species lives and its neighbourhood. <b>M4.</b> Suitable management for pastures and grasslands, through regular mowing, when established, through the control of shrub species and the control of invasive species. <b>M5.</b> Maintaining or restoring the connectivity of populations by creating specific ecological corridors. <b>M6.</b> Avoiding changes in the usage category of lands. <b>M7.</b> Avoiding the fragmentation of specific habitats by building new ways of access.

The protected natural areas targeted by this strategy partially or fully overlap other protected areas of a national or a community interest, as shown in table 1. Thus, the species is signalled from other protected natural areas than those targeted by the "Plums for junk" project; however, due to the overlap, they may benefit from joint management measures.

The ecology of the species, as well as its distribution in the protected natural areas, makes it possible for management measures to be applied locally and regionally, but without generating cross-border effects in the improvement of the preservation status.

**M1. Establishing the period when grazing is allowed, with what species, in what number of animals, along with compliance control.**

This action may be applied after the worthiness of each grassland is established. These species depend on grasslands with low vegetation, and the abandon of grasslands is a more and more significant threat, as the locals no longer are encouraged to grow animals in an extensive system, or population in certain areas is old and is no longer classified as workforce.

Analysing the lists of pressures and threats specified in the standard forms of Natura 2000 sites, one can see that over-grazing is a danger for the vegetation of grasslands in some areas, while other areas are affected by under-grazing.

The period when grazing is allowed must be observed in order to avoid soil subsiding, as well as to ensure the regenerating material of

annual vegetation.

**Priority: 2**

**M2. Informing and then controlling the compliance with legal provisions on burning vegetation on the pastures.**

This action can also be applied locally and regionally, with no cross-border effects on the status of the two species of micro-mammals. The threat appears especially in spring, when locals in rural areas burn vegetation on pastures, hayfields and agricultural land.

**Priority: 2**

**M3. Prohibiting the use of pesticides and herbicides on arable land within sites, but especially around the area where the species lives and its neighbourhood.**

In the area targeted by the "Plums for Junk" project, agriculture is one of the most important economic activities. Based on our visits in the protected areas, we may say that the south and south east part of Mehedinti (plain area) is mostly agricultural, like the entire north-west of Bulgaria.

This action may imply cross-border cooperation of agricultural associations, generating, besides positive effects on the soil and subsoil, peer-to-peer connectivity, exchange of experience and the possibility to use the best examples in agricultural management. Thus, even though it is regulated in the management plans of protected natural areas, the use of pesticides in agriculture is still significant, with a harmful effect on human health as well. This does not mean that it is not useful in certain situations; in other parts of the European Union it has been shown that chemical methods are most effective in fighting invasive species.

**Priority: 1**, especially in the context of new EU-funded programmes.

**M4. Suitable management for pastures and grasslands, through regular mowing, when established, through the control of shrub species and the control of invasive species.**

Combined with measures M1 and M2, this action is highly efficient for the control of allochthonous or domestic invasive species, especially for shrubs. The action may be implemented locally and regionally.

**Priority: 2**

**M5. Maintaining or restoring the connectivity of populations by creating specific ecological corridors.**

Considering the ecology of the species, this action may be undertaken locally and regionally, in the south-east of Mehedinti and in all protected areas in the north-west of Bulgaria. Representative parts of the species-specific habitat must be maintained; this should be remembered when drawing up general urban plans and when considering changes in the usage category of fields. The measure should be enforced in correlation with the two following measures: **M6**. Avoiding changes in the usage category of lands and **M7**. Avoiding the fragmentation of specific habitats by building new ways of access.

Even though it is not a measure likely to fall under the scope of an agreement/plan for joint enforcement, it may be considered a good practice example if implemented and it may be promoted through awareness raising and education activities within other joint projects.

Priority: 2			
AMPHIBIANS AND REPTILES (SPECIFIC TO WET/AQUATIC HABITATS)			
1188	<i>Bombina bombina</i>	ROSCI0206, ROSCI0173, BG0000182, BG0000199	M1. Creating new reproduction habitats in areas identified with a non-favourable-improper/bad preservation status. M2. Monitoring temporary and permanent ponds in protected natural areas of interest. M3. Preventing the coverage of water by cane and reed.
1193	<i>Bombina variegata</i>	ROSCI0206	M4. Preventing the pollution of temporary and permanent water by various substances resulting from agricultural and/or forestry activities.
1993	<i>Triturus dobrogicus</i>	BG0000182, BG0000199	M5. Proper domestic waste management, as well as forbidding the landfilling of manure into major riverbeds.
1220	<i>Emys orbicularis</i>	ROSCI0206, ROSCI0173, BG0000182, BG0000199	M6. Preventing road traffic mortality by posting roadside caution panels, as well as better regulation when building new roads. M7. Regulating anthropic activities in major and minor riverbeds, around permanent ponds and around temporary ponds with significant populations. M8. Regulating enduro, motocross, off road activities. M9. Avoiding changes in the usage category, by changing the favourable habitats of species in areas where constructions can be made. M10. Controlling illegal trading and preventing invasion with allochthonous species. M11. Placing logs, piles of branches, stones, tree trunks next to reproduction sites.
<p><b>M1. Creating new reproduction habitats in areas identified with a non-favourable-improper/bad preservation status.</b>                      The action actively deals with conservation and its enforcement may improve/maintain the conservation of amphibian species. Even though it is not a jointly enforceable action, it may fall under the scope of a joint work plan, by establishing joint monitoring periods, by creating new reproduction habitats for such species in similar protected natural areas (for instance, 5 m long, 40-50 cm deep trenches may be made in floodable lowland areas, so that water is kept in them as much as possible, and there is no danger of drainage).</p> <p><b>Priority: 2</b></p> <p><b>M2. Monitoring temporary and permanent ponds in protected natural areas of interest.</b>                      Activities for monitoring species and their habitats are recurrent and specific to each manager/custodian of a protected natural area. Even if the action itself does not fall under the scope of a joint work plan, it may be the driving force of a volunteering programme in schools in protected natural areas, so that they may help perform this activity, and then an experience exchange may be undertaken between volunteers.</p> <p><b>Priority: 1, provided that Romanian-Bulgarian volunteer groups are created.</b></p> <p><b>M3. Preventing the coverage of water by cane and reed.</b>                      The action has local effects and it is exclusively implemented in areas where such problems might be found.</p> <p><b>Priority: 3</b></p>			



**M4. Preventing the pollution of temporary and permanent water by various substances resulting from agricultural and/or forestry activities.**

In the area targeted by the "Plums for Junk" project, agriculture is one of the most important economic activities. Based on our visits in the protected areas, we may say that the south and south east part of Mehedinti (plain area) is mostly agricultural, like the entire north-west of Bulgaria.

This action may imply cross-border cooperation of agricultural associations, generating, besides positive effects on the soil and subsoil, peer-to-peer connectivity, exchange of experience and the possibility to use the best examples in agricultural management. Thus, even though it is regulated in the management plans of protected natural areas, the use of pesticides in agriculture is still significant, with a harmful effect on human health as well.

**Priority:** 1, especially in the context of new EU-funded programmes.

**M5. Proper domestic waste management, as well as forbidding the landfilling of manure into major riverbeds.**

This action may be planned at a regional level and decision makers may reach an agreement for sustainable waste management. The action results in the improvement of the conservation status not only for amphibians, but also for fish, aquatic mammals, for the aquatic environment in general, for the locals' health.

Both in Mehedinti and in Vidin, Montana and Vratsa (and probably in the remaining territory of the two countries as well), domestic waste management is an actual issue.

Along the entire course of the Danube, deposits of domestic waste brought by the upstream waters of the Danube may be seen in river forests. For this reason, the measure may be jointly planned and implemented by regional decision makers.

Besides the actual measure, activities of education, awareness and information of local populations may be implemented regarding proper waste storage (after having created the specific infrastructure), as well as the corrective actions that may be taken due to the infringement of legal provisions.

**Priority:** 1

**M6. Preventing road traffic mortality by posting roadside caution panels, as well as better regulation when building new roads.**

The action has local effects and it is exclusively implemented in areas where such problems might be found. Wildlife crossings must be designed when building new roads.

**Priority:** 3

**M7. Regulating anthropic activities in major and minor riverbeds, around permanent ponds and around temporary ponds with significant populations.**

The action has local effects and it is exclusively implemented in areas where such problems might be found. Buildings should not be erected in major riverbeds and/or in the close neighbourhood of minor riverbeds, forestry works should not affect water courses, embankments should be avoided.

<b>Priority: 2</b>			
<b>M8. Regulating enduro, motocross, off road activities.</b>			
The action has local effects and it is exclusively implemented in areas where such problems might be found.			
<b>Priority: 3</b>			
<b>M9. Avoiding changes in the usage category, by changing the favourable habitats of species in areas where constructions can be made.</b>			
The action has local effects and it is exclusively implemented in areas where such problems might be found. It may be correlated with action M7.			
<b>Priority: 3</b>			
<b>M10. Controlling illegal trading and preventing invasion with allochthonous species.</b>			
The action may fall under the scope of a joint work plan, by establishing partnerships with the Border Police, the Local Polics, so that controls are more rigorous and undertaken both in fairs and markets, as well as online, on relevant websites.			
As for the invasion with allochthonous species, joint activities with combined teams of the staff of the administrations of protected natural areas must be planned, so as to increase awareness and inform, especially in schools.			
<b>Priority: 1</b>			
<b>M11. Placing logs, piles of branches, stones, tree trunks next to reproduction sites.</b>			
An active conservation measure, it has local effects in improving the conservation status of European pond turtles.			
<b>Priority: 3</b>			
<b>REPTILES SPECIFIC TO grasslandS/PASTURES/CLEARINGS</b>			
1217	<i>Testudo hermanni</i>	ROSCI0206, ROSCI0173, BG0000199	<b>M1.</b> Establishing and complying with the period of mowing hayfields, regulating grazing periods, species and number of animals. <b>M2.</b> Removing shrubs covering clearings in deciduous forests. <b>M3.</b> Regulating motor access on forest roads. <b>M4.</b> Avoiding the fragmentation of habitat by building new ways of access. <b>M5.</b> Forbidding the access of dogs on visit routes. <b>M6.</b> Avoiding changes in the usage category of lands. <b>M7.</b> Prohibiting the burn of vegetation next to grasslands/pastures. <b>M8.</b> Controlling poaching and illegal trading.
<b>M1. Establishing and complying with the period of mowing hayfields, regulating grazing periods, species and number of animals.</b>			
The measure does not provide essential benefits at a cross-border level, but it has a positive impact in the regional area. Complying			

with the mowing period, as well as traditional mowing methods (manual mowing, from the middle of the hayfield to the sides) would bring a positive impact to the specific habitats of this species. Regulating the grazing period, so as to avoid stepping over hibernacles and egg nesting sites, also brings a positive impact on the local populations of the species. Likewise, the fact that animal swarms and herds do not cross hibernation and reproduction sites during winter and in early spring also helps avoid the hazard of domestic dogs chasing turtles. The action may be implemented based on a regional joint work plan, for genuine benefits.

**Priority: 2**

**M2. Removing shrubs covering clearings in deciduous forests.**

The measure does not provide essential benefits at a cross-border level, but it has a local impact.

**Priority: 3**

**M3. Regulating motor access on forest roads.**

The measure does not provide essential benefits at a cross-border level, but it has a local impact.

**Priority: 3**

**M4. Avoiding the fragmentation of habitat by building new ways of access.**

The measure does not provide essential benefits at a cross-border level, but it has a local impact.

**Priority: 3**

**M5. Forbidding the access of dogs on visit routes.**

The measure does not provide essential benefits at a cross-border level, but it has a local impact.

**Priority: 3**

**M6. Avoiding changes in the usage category of lands.**

The measure does not provide essential benefits at a cross-border level, but it has a local impact.

**Priority: 3**

**M7. Prohibiting the burn of vegetation next to grasslands/pastures.**

The measure does not provide essential benefits at a cross-border level, but it has a local impact.

**Priority: 3**

**M8 may be jointly implemented. Controlling poaching and illegal trading**, even when it does not refer to the same species.

The action may fall under the scope of a joint work plan, by establishing partnerships with the Border Police, the Local Polices, so that controls are more rigorous and undertaken both in fairs and markets, as well as online, on relevant websites.

**Priority: 1**

**FISH**

# ***J SPATIU CONS SRI***

Planning a Joint Strategy for the Management of Protected Areas along the Danube, from the Cross-Border Area of the Mehedinti County in Romania and the Vidin-Oryahovo Municipalities in Bulgaria

1159	<i>Zingel zingel</i>	ROSCI0206, BG0000182, BG0000199	M1. Forbidding commercial fishing in protected natural areas at the mouths of rivers, as well as in bay areas.
1138	<i>Barbus meridionalis</i>	ROSCI0206, BG0000199	M2. Preventing and fighting poaching and excessive fishing.
1163	<i>Cottus gobio</i>	ROSCI0206	M3. Releasing captured or intentionally or accidentally taken protected fish species.
1157	<i>Gymnocephalus schraetzer</i>	ROSCI0206, BG0000182, BG0000199	M4. Forbidding arrangement and adjustment works on the shores of inner water courses, as well as forbidding constructions that may create barriers on water courses.
1146	<i>Sabanejewia aurata</i>	ROSCI0206, BG0000182, BG0000199	M5. Forbidding the operation of mineral resources and the placement of ballast carriers on water courses.
2522	<i>Pelecus cultratus</i>	ROSCI0206, BG0000182, BG0000199	M6. Regulating water catchment on internal rivers.
1124	<i>Gobio albipinnatus</i>	ROSCI0206, BG0000199	M7. Regulating forest management along water courses.
2555	<i>Gymnocephalus baloni</i>	ROSCI0206, BG0000182, BG0000199	M8. Controlling forest operations with a view to avoiding the traction of wood in rivers/forests.
2011	<i>Umbra krameri</i>	ROSCI0206	M9. Enhancing control on inner rivers in order to prevent fish poaching.
1145	<i>Misgurnus fossilis</i>	ROSCI0206, ROSCI0173, BG0000182	M10. Forbidding the use of chemical substances on lands ashore water courses.
1130	<i>Aspius aspius</i>	ROSCI0206, BG0000182, BG0000199	M11. Proper domestic waste management, as well as forbidding the landfilling of manure into minor and major riverbeds.
1134	<i>Rhodeus sericeus amarus</i>	ROSCI0206, ROSCI0173 BG0000182, BG0000199	M12. Planting groups of willow trees and white poplars in the major riverbed, next to the water course, with a view to improving fish reproduction habitats.
1160	<i>Zingel streber</i>	ROSCI0206, BG0000182, BG0000199	M13. Maintaining roots and dried-out/old willow trees and poplars in order to avoid the degradation of fish species reproduction habitats.

4125	<i>Alosa immaculata</i>	ROSCI0206, BG0000182, BG0000199	
2533	<i>Cobitis elongata</i>	ROSCI0206, BG0000182, BG0000199	
1149	<i>Cobitis taenia</i>	ROSCI0206, BG0000182, BG0000199	
2484	<i>Eudontomyzon mariae</i>	ROSCI0206, BG0000182, BG0000199	
1146	<i>Sabanejewia aurata</i>	ROSCI0206, BG0000182, BG0000199	

**M1. Forbidding commercial fishing in protected natural areas at the mouths of rivers, as well as in bay areas.**

The action may be taken at a regional level, but have effects on the entire course of the Danube. Bays and inner water mouths are quiet places where fish retire to lay eggs or to avoid strong currents. Likewise, the action may fall under the scope of a joint work plan between fishermen associations, the managers of protected natural areas and local public administrations.

**Priority: 1**

**M2. Preventing and fighting poaching and excessive fishing.**

The action may fall under the scope of a joint work plan, by establishing partnerships with the Border Police, fishermen associations and the managers of protected natural areas. It may be done through joint patrolling, conventions with fishermen associations and by imposing coercing actions after an infringement of laws is found out. Likewise, besides the actual measures, population may be informed on the effect of poaching on the community's economy.

**Priority: 1**

**M3. Releasing captured or intentionally or accidentally taken protected fish species**

The action has local effects and it is exclusively implemented in areas where such problems might be found. However, joint patrols with the Border Police and capture checks may be performed, as well as releasing protected species. Likewise, the action may be more successful if information campaigns on protected species are periodically undertaken, as fish species are probably the least known from this point of view. The action may be implemented through the collaboration between fishermen associations, the managers of protected natural areas and the Border Police.

**Priority: 1**

**M4. Forbidding arrangement and adjustment works on the shores of inner water courses, as well as forbidding constructions that may create barriers on water courses.**

This action does not have concrete effects in itself in the cross-border area, but, applied at least at a regional level in each of the two countries, it results in an improved conservation of the species. The assessment of investments in terms of regional impact is desirable, especially since any intervention on water courses brings along changes for their entire length. Interventions affecting the ecological connectivity of the Danube are not foreseen in the short run; however, projects for restoring the natural environment of the Danube Lowlands may be expected, as such activities are already implemented in a Romanian-Bulgarian partnership, to the downstream of our target area. Opening the old meandering / dead mouths of the Danube would increase the surface of habitats favourable for reproduction and alevin breeding.

**Priority: 1**

**M5. Forbidding the operation of mineral resources and the placement of ballast carriers on water courses.**

The action has local effects and it is exclusively implemented in areas where such problems might be found.

**Priority: 3**

**M6. Regulating water catchment on internal rivers.**

The action has local effects and it is exclusively implemented in areas where such problems might be found.

**Priority: 3**

**M7. Regulating forest management along water courses.**

The action has local effects and it is exclusively implemented in areas where such problems might be found.

**Priority: 3**

**M8. Controlling forest operations with a view to avoiding the traction of wood in rivers/forests.**

The action has local effects and it is exclusively implemented in areas where such problems might be found.

**Priority: 3**

**M9. Enhancing control on inner rivers in order to prevent fish poaching.**

The action has local effects and it is exclusively implemented in areas where such problems might be found.

**Priority: 3**

**M10. Forbidding the use of chemical substances on lands ashore water courses.**

In the area targeted by the "Plums for Junk" project, agriculture is one of the most important economic activities. Based on our visits in the protected areas, we may say that the south and south east part of Mehedinti (plain area) is mostly agricultural, like the entire

north-west of Bulgaria.

This action may imply cross-border cooperation of agricultural associations, generating, besides positive effects on the soil and subsoil, peer-to-peer connectivity, exchange of experience and the possibility to use the best examples in agricultural management. Thus, even though it is regulated in the management plans of protected natural areas, the use of pesticides in agriculture is still significant, with a harmful effect on human health as well.

**Priority: 1**, especially in the context of new EU-funded programmes.

**M11. Proper domestic waste management, as well as forbidding the landfilling of manure into minor and major riverbeds.**

This action may be planned at a regional level and decision makers may reach an agreement for sustainable waste management. The action results in the improvement of the conservation status not only for fish, but also for amphibians, aquatic mammals, for the aquatic environment in general, for the locals' health.

Both in Mehedinti and in Vidin, Montana and Vratsa (and probably in the remaining territory of the two countries as well), domestic waste management is an actual issue.

Along the entire course of the Danube, deposits of domestic waste brought by the upstream waters of the Danube may be seen in river forests. For this reason, the measure may be jointly planned and implemented by regional decision makers.

Besides the actual measure, activities of education, awareness and information of local populations may be implemented regarding proper waste storage (after having created the specific infrastructure), as well as the corrective actions that may be taken due to the infringement of legal provisions.

**Priority: 1**

**M12. Planting groups of willow trees and white poplars in the major riverbed, next to the water course, with a view to improving fish reproduction habitats.**

The action has local and regional effects, consisting in the planting of such species, whose root system may create micro-habitats for egg laying. The measure should be correlated with **M13. Maintaining roots and dried-out/old willow trees and poplars in order to avoid the degradation of fish species reproduction habitats.**

**Priority: 2**

**NON-VERTEBRATES SPECIFIC TO FOREST HABITATS**

1088	<i>Cerambyx cerdo</i>	ROSCI0206, ROSCI0173	<b>M1.</b> Maintaining a suitable number of old trees, including dead wood, either in position or on the ground, as well as hollow trees and roots of beech trees and quercus trees that have been used.
1083	<i>Lucanus cervus</i>	ROSCI0206, BG0000199	<b>M2.</b> Observing forest management plans, in correlation with the management plan of the protected natural areas.
1089	<i>Morimus funereus</i>	ROSCI0206, ROSCI0173	<b>M3.</b> Using domestic species, specific to the operated area, in natural regenerations.
1087	<i>Rosalia alpina</i>	ROSCI0206, BG0000199	<b>M4.</b> Maintaining the pluriennial specificities of forests. <b>M5.</b> Controlling forest management activities in river lowlands, valleys and wetlands.

1084	<i>Osmoderma eremita</i>	ROSCI0206	M6. Placing logs, piles of branches next to tree-lined roadways, in the areas where the presence of saproxylic beetles.
4020	<i>Pilemia tigrina</i>	ROSCI0206	M7. Control on the observance of forest management rules, in lots and in storage ramps. M8. Preventing vegetation burns around forests. M9. Identifying, maintaining and protecting ecological corridors along water courses. M10. Keeping isolated trees in pastures and grasslands. M11. Keeping or installing forest curtains, as the case may be, along ways of access and agricultural areas.
Considering the specificities of the cross-border region targeted by the "Plums for junk" project, these measures target species which are present on the territory of two protected natural areas, i.e. they cannot be subject to joint Romanian-Bulgarian agreements or plans.			
<b>NON-VERTEBRATES SPECIFIC TO WET/AQUATIC HABITATS</b>			
4046	<i>Cordulegaster heros</i>	ROSCI0206	M1. Regulating forest management activities in river lowlands.
4014	<i>Carabus variolosus</i>	ROSCI0206	M2. Proper waste management in water-shore local communities, as well as forbidding the landfilling of domestic waste and manure into minor and major riverbeds.
4064	<i>Theodoxus transversalis</i>	ROSCI0206, BG0000182, BG0000199	M3. Identifying and closing ways of access through water courses and regulating the construction of bridges and platforms over water courses.
1032	<i>Unio crassus</i>	ROSCI0206, BG0000182, BG0000199	M4. Forbidding the operation of mineral resources in minor riverbeds. M5. Changing fishing tools and boots used in the Danube for fishing in other water (avoiding the spreading of the crawfish's pest)
1093	<i>Austropotamobius torrentium</i>	ROSCI0206	M6. Forbidding the release of non-native crawfish (crawfish in aquariums) into rivers/streams.
<b>M1. Regulating forest management activities in river lowlands.</b> The action has local effects and it is exclusively implemented in areas where such problems might be found. <b>Priority: 3</b>  <b>M2. Proper waste management in water-shore local communities, as well as forbidding the landfilling of domestic waste and manure into minor and major riverbeds.</b> This action may be planned at a regional level and decision makers may reach an agreement for sustainable waste management. The action results in the improvement of the conservation status not only for aquatic non-vertebrates, fish, but also for amphibians, aquatic mammals, for the aquatic environment in general, for the locals' health. Both in Mehedinti and in Vidin, Montana and Vratsa (and probably in the remaining territory of the two countries as well), domestic waste management is an actual issue.			



Along the entire course of the Danube, deposits of domestic waste brought by the upstream waters of the Danube may be seen in river forests. For this reason, the measure may be jointly planned and implemented by regional decision makers. Besides the actual measure, activities of education, awareness and information of local populations may be implemented regarding proper waste storage (after having created the specific infrastructure), as well as the corrective actions that may be taken due to the infringement of legal provisions.

**Priority: 1**

**M3. Identifying and closing ways of access through water courses and regulating the construction of bridges and platforms over water courses.**

The action has local effects and it is exclusively implemented in areas where such problems might be found.

**Priority: 3**

**M4. Forbidding the operation of mineral resources in minor riverbeds.**

The action has local effects and it is exclusively implemented in areas where such problems might be found.

**Priority: 3**

**M5. Changing fishing tools and boots used in the Danube for fishing in other water (avoiding the spreading of the crawfish's pest)**

The measure has local effects, but it is highly important and could be enforced pursuant to a prior information campaign especially among recreational fishermen, who fish both in the Danube and internal water courses. The information campaign may be the outcome of an agreement/joint work plan.

**Priority: 2**

**M6. Forbidding the release of non-native crawfish (crawfish in aquariums) into rivers/streams.**

The measure falls under the scope of a prior information campaign, especially within the young generation. Even though it is enforced punctually, it may have effects at the level of the basin of the Danube/internal rivers.

**Priority: 2**

#### NON-VERTEBRATES SPECIFIC TO grasslandS/PASTURES/HAYFIELDS

1074	<i>Eriogaster catax</i>	ROSCI0206	<b>M1.</b> Maintaining traditional mowing and grazing practices with a view to preserving the specific diversity of pastures, their structure, as well as their surface. <b>M2.</b> Avoiding the foresting of pastures, as well as interventions in case of natural foresting. <b>M3.</b> Taking actions specific to hayfields, through mowing in certain periods and at a certain frequency. <b>M4.</b> Ensuring the hydrological status of pastures. <b>M5.</b> Maintaining protective curtains for pastures, for shrub groups, as well as preserving host plants for non-vertebrate species.
1052	<i>Euphydryas maturna</i>	ROSCI0206	
1060	<i>Lycaena dispar</i>	ROSCI0206	
1078	<i>Callimorpha quadripunctaria</i>	ROSCI0206	
1061	<i>Maculinea nausithous</i>	ROSCI0206	

1059	<i>Maculinea teleius</i>	ROSCI0206	M6. Forbidding/limiting changes in the usage category of lands.
Considering the specificities of the cross-border region targeted by the "Plums for junk" project, such measures target species which are present in a single protected natural area, i.e. they cannot be subject to joint Romanian-Bulgarian agreements or plans.			
PLANTS			
2327	<i>Himantoglossum caprinum</i>	ROSCI0206	M1. Preventing natural pasture foresting, through traditional mowing and grazing practices.  M2. Forbidding/limiting changes in the usage category of lands. M3. Regulating species, headcounts and periods in order to maintain sustainable grazing.  M4. Regulating the use of chemical substances specific to agriculture, as well as the use of manure.  M5. Controlling invasive species and ruderal communities around abandoned sheepfolds/shelters.  M6. Forbidding the burning of vegetation.  M7. Regulating the harvesting of medicinal plants and deciding that individuals should be accompanied by a representative of the protected natural area so as to avoid the harvesting of specimens from protected species.  M8. Regulating touristic activities, by avoiding the creation of fire hearths, of new paths.
2097	<i>Paeonia officinalis ssp. banatica</i>	ROSCI0206	
1939	<i>Agrimonia pilosa</i>	ROSCI0206	
1898	<i>Eleocharis carniolica</i>	ROSCI0206	
2285	<i>Colchicum arenarium</i>	ROSCI0206	
2300	<i>Tulipa hungarica</i>	ROSCI0206	
2318	<i>Stipa danubialis</i>	ROSCI0206	
2093	<i>Pulsatilla grandis</i>	ROSCI0206	
2120	<i>Thlaspi jankae</i>	ROSCI0206	
4066	<i>Asplenium adulterinum</i>	ROSCI0206	
1428	<i>Marsilea quadrifolia</i>	ROSCI0206	
4067	<i>Echium russicum</i>	ROSCI0206	
4096	<i>Gladiolus palustris</i>	ROSCI0206	
Considering the specificities of the cross-border region targeted by the "Plums for junk" project, such measures target species which are present in a single protected natural area, i.e. they cannot be subject to joint Romanian-Bulgarian agreements or plans.			
BIRDS DEPENDING FROM AQUATIC/WET HABITATS			
A027	<i>Egretta alba</i>	BG0002009, BG0002067, ROSPA0011	M1. Forbidding the abandoning of fishing meshes in the Danube.
A026	<i>Egretta garzetta</i>	BG0002009, BG0002067,	

# **J SPATIU CONS SRI**

Planning a Joint Strategy for the Management of Protected Areas along the Danube, from the Cross-Border Area of the Mehedinti County in Romania and the Vidin-Oryahovo Municipalities in Bulgaria

		ROSPA0011	<b>M2.</b> Regulating the use of chemical substances specific to agriculture, as well as the use of manure.
A131	<i>Himantopus himantopus</i>	ROSPA0011	
A022	<i>Ixobrychus minutus</i>	BG0002009, ROSPA0011	<b>M3.</b> Forbidding embankments through concrete laying, drainage/use of water in wetlands for irrigation systems.
A023	<i>Nycticorax nycticorax</i>	BG0002067, ROSPA0011	
A393	<i>Phalacrocorax pygmeus</i>	BG0002067, ROSPA0011	<b>M4.</b> Forbidding the burning of reed.
A120	<i>Porzana parva</i>	ROSPA0011	
A193	<i>Sterna hirundo</i>	ROSAP0011	<b>M5.</b> Preventing wood harvesting in nesting areas, as well as the extraction of dried-out trees.
A029	<i>Ardea purpurea</i>	BG0002009, BG0002067, ROSPA0011	
A024	<i>Ardeola ralloides</i>	ROSAP0011	<b>M6.</b> Establishing wooden platforms for species of cormorants, terns and black terns.
A021	<i>Botaurus stellaris</i>	BG0002009, ROSPA0011	
A196	<i>Chlidonias hybridus</i>	ROSPA0011	<b>M7.</b> Regulating the access of domestic animals in the nesting period and sites of birds.
A053	<i>Anas platyrhynchos</i>	BG0002009, BG0002067, ROSPA0011	
A038	<i>Cygnus cygnus</i>	BG0002009	<b>M8.</b> Preventing the coverage of water by cane and reed, by harvesting vegetation in these areas.
A036	<i>Cygnus olor</i>	BG0002009	
A125	<i>Fulica atra</i>	BG0002009, ROSPA0011	
A123	<i>Gallinula chloropus</i>	BG0002009, ROSPA0011	
A127	<i>Grus grus</i>	BG0002009	
A020	<i>Pelecanus crispus</i>	BG0002009	
A017	<i>Phalacrocorax carbo</i>	BG0002009, BG0002067, ROSPA0011	
A140	<i>Pluvialis</i>	BG0002009	

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	<i>apricaria</i>		
A005	<i>Podiceps cristatus</i>	BG0002009, ROSPA0011	
A008	<i>Podiceps nigricollis</i>	BG0002009, ROSPA0011	
A118	<i>Rallus aquaticus</i>	BG0002009, ROSPA0011	
A004	<i>Tachybaptus ruficollis</i>	BG0002009, ROSPA0011	
A142	<i>Vanellus vanellus</i>	BG0002009, ROSPA0011	
A059	<i>Aythya ferina</i>	ROSPA0011	
A060	<i>Aythya nyroca</i>	BG0002009, ROSPA0011	
A034	<i>Platalea leucorodia</i>	BG0002067, ROSPA0011	
A054	<i>Anas acuta</i>	BG0002067, ROSPA0011	
A052	<i>Anas crecca</i>	BG0002067, ROSPA0011	
A050	<i>Anas penelope</i>	BG0002067, ROSPA0011	
A051	<i>Anas strepera</i>	BG0002067, ROSPA0011	
A043	<i>Anser anser</i>	BG0002067	
A028	<i>Ardea cinerea</i>	BG0002009, BG0002067, ROSPA0011	
A061	<i>Aythya fuligula</i>	BG0002067, ROSPA0011	
A068	<i>Mergus albellus</i>	ROSPA0011	
A067	<i>Bucephala clangula</i>	BG0002067, ROSPA0011	
A123	<i>Gallinula</i>	BG0002009,	

	<i>chloropus</i>	BG0002067, ROSPA0011	
A179	<i>Larus ridibundus</i>	BG0002067, ROSAP0011	
<p><b>M1. Forbidding the abandoning of fishing meshes in the Danube.</b>  The action may be enforced based on a joint work plan, in partnership with the Border Police or with fishermen associations, the activity may be led by the managers/custodians of protected natural areas. Though applied locally and punctually, the measure has positive effects among bird populations, reducing bird mortality.  <b>Priority: 1</b></p> <p><b>M2. Regulating the use of chemical substances specific to agriculture, as well as the use of manure.</b>  In the area targeted by the "Plums for Junk" project, agriculture is one of the most important economic activities. Based on our visits in the protected areas, we may say that the south and south east part of Mehedinti (plain area) is mostly agricultural, like the entire north-west of Bulgaria.  This action may imply cross-border cooperation of agricultural associations, generating, besides positive effects on the soil and subsoil, peer-to-peer connectivity, exchange of experience and the possibility to use the best examples in agricultural management. Thus, even though it is regulated in the management plans of protected natural areas, the use of pesticides in agriculture is still significant, with a harmful effect on human health as well.  <b>Priority: 1</b>, especially in the context of new EU-funded programmes.</p> <p><b>M3. Forbidding embankments through concrete laying, drainage/use of water in wetlands for irrigation systems.</b>  Though these activities are not very intensely used at this time, water shores were strongly modified in the 70s-80s, and major floodable riverbeds were drained so that lands could be used in agriculture. Such practices no longer are actual, but a different threat is felt nowadays: buildings being erected on river shores, in the immediate neighbourhood of the minor riverbed, which technically implies a reinforcement and embankment of shores.  The action may be implemented through a regional joint work plan.  <b>Priority: 2</b></p> <p><b>M4. Forbidding the burning of reed.</b>  This action has local, punctual effects and is only valid in areas where such problems might be found.  <b>Priority: 3</b></p> <p><b>M5. Preventing wood harvesting in nesting areas, as well as the extraction of dried-out trees.</b>  This action may be enforced at a regional level, in cooperation with forest management authorities. The action should be included in the management plans of protected natural areas, as well as forest-specific management plans.</p>			

**Priority: 2**
**M6. Establishing wooden platforms for species of cormorants, terns and black terns.**

This measure may be the objective of a joint plan/project, implemented in all protected natural areas in the project territory, helping create favourable nesting conditions for the mentioned species.

**Priority: 1**
**M7. Regulating the access of domestic animals in the nesting period and sites of birds.**

This action has local, punctual effects and is only valid in areas where such problems might be found.

**Priority: 3**
**M8. Preventing the coverage of water by cane and reed, by harvesting vegetation in these areas.**

This action has local, punctual effects and is only valid in areas where such problems might be found.

**Priority: 3**
**BIRDS SPECIFIC TO FOREST HABITATS/WOOD SPECIES**

A402	<i>Accipiter brevipes</i>	BG0002009	M1. Identifying nests and areas used for feeding, used by daytime and night raptor species.
A082	<i>Circus cyaneus</i>	BG0002009	M2. Maintaining a pluriennial structure of deciduous and combined forests, with trees at least 80 years old, to an extent of 25-30%.
A083	<i>Circus macrourus</i>	BG0002009	
A084	<i>Circus pygargus</i>	BG0002009	M3. Maintaining a buffer area around nests and limiting/controlling forest management activities in the area, as well as during the nesting period of the mentioned species.
A429	<i>Dendrocopos syriacus</i>	BG0002009	
A092	<i>Hieraaetus pennatus</i>	BG0002009	M4. Keeping dead wood, especially already existing trees, in order to ensure the proper ecological conditions for woodpecker populations and some raptor species.
A073	<i>Milvus migrans</i>	BG0002009	
A094	<i>Pandion haliaetus</i>	BG0002009	M5. Regulating the use of chemical substances in fighting defoliator invasion.
A072	<i>Pernis apivorus</i>	BG0002009	
A234	<i>Picus canus</i>	BG0002009	M6. Avoiding the electrocution of bird species on average voltage lines.
A085	<i>Accipiter gentilis</i>	BG0002009	
A086	<i>Accipiter nisus</i>	BG0002009, ROSPA0011	M7. Avoiding changes in the usage category, especially from pasture areas to construction areas, as well as preventing the erection of buildings along valleys, in rivershore areas.
A075	<i>Haliaeetus albicilla</i>	BG0002009, ROSPA0011	
A088	<i>Buteo lagopus</i>	ROSPA0011	M8. Regulating mowing activities in areas used for feeding, as well as the use of heterogeneous

A224	<i>Caprimulgus europaeus</i>	BG0002009	cultures in farming.  <b>M9.</b> Avoiding the use of chemical fertilizers in agricultural practice.
A030	<i>Ciconia nigra</i>	BG0002009	
A511	<i>Falco cherrug</i>	BG0002009	
A098	<i>Falco columbarius</i>	BG0002067	
A103	<i>Falco peregrinus</i>	BG0002009	
A099	<i>Falco subbuteo</i>	BG0002009, ROSPA0011	
A096	<i>Falco tinnunculus</i>	BG0002009, ROSPA0011	
A097	<i>Falco vespertinus</i>	BG0002009	
A080	<i>Circaetus gallicus</i>	BG0002009	
A081	<i>Circus aeruginosus</i>	BG0002009, BG0002067, ROSPA0011	
A403	<i>Buteo rufinus</i>	BG0002009	
A087	<i>Buteo buteo</i>	BG0002009, BG0002067, ROSPA0011	
A089	<i>Aquila pomarina</i>	BG0002009	
A509	<i>Aquila nipalensis</i>	BG0002009	
<b>M1. Identifying nests and areas used for feeding, used by daytime and night raptor species.</b> The measure is specific to each protected natural area and must be implemented as such. It cannot be the objective of a joint work plan in itself, but it can be included in the activities of a Romanian-Bulgarian joint project so that, in correlation with other activities, it may produce cross-border effects. <b>Priority: 2</b>			
<b>M2. Maintaining a pluriennial structure of deciduous and combined forests, with trees at least 80 years old, to an extent of 25-30%.</b> The measure actually represents proper forest management and may have a regional effect. <b>Priority: 2</b>			
<b>M3. Maintaining a buffer area around nests and limiting/controlling forest management activities in the area, as well as during the nesting period of the mentioned species.</b>			

**M4. Keeping dead wood, especially already existing trees, in order to ensure the proper ecological conditions for woodpecker populations and some raptor species.**

The measure actually represents proper forest management and may have a regional effect.

**Priority: 2**

**M5. Regulating the use of chemical substances in fighting defoliator invasion.**

The measure should be applied at a regional level, since fight actions are air-based in Romania. Considering the experience of Bulgarians in biologically fighting defoliators (e.g. *Lymantria dispar*), an agreement may be entered by relevant bodies with a view to applying the same methods. The measure should be undertaken by specialised institutions and bodies.

**Priority: 1**

**M6. Avoiding the electrocution of bird species on average voltage lines.**

The measure is applied regionally, as one of the most efficient active measures in decreasing the mortality of bird species, caused by the electrocution thereof. It may be the object of an intervention plan between the managers/custodians of protected natural areas and electricity companies. The enforcement of this action helps improve ecological connectivity and, thus, has a cross-border effect.

**Priority: 1**

**M7. Avoiding changes in the usage category, especially from pasture areas to construction areas, as well as preventing the erection of buildings along valleys, in rivershore areas.**

This action has local, punctual effects and is only valid in areas where such problems might be found.

**Priority: 3**

**M8. Regulating mowing activities in areas used for feeding, as well as the use of heterogeneous cultures in farming.**

The measure may be enforced regionally, with positive effects on the status of several species of flora and fauna, not only on bird species. The compliance with mowing periods is very important for raptor bird species, in direct correlation with the availability of food on the concerned hayfields. Likewise, traditional agricultural management based on the rotation and use of several types of cultures also helps maintain a specific wide diversity among micro-mammals, passerines, reptiles, fauna groups representing food for raptor birds.

**Priority: 2**

**M9. Avoiding the use of chemical fertilizers in agricultural practice.**

In the area targeted by the "Plums for Junk" project, agriculture is one of the most important economic activities. Based on our visits in the protected areas, we may say that the south and south east part of Mehedinti (plain area) is mostly agricultural, like the entire north-west of Bulgaria.

This action may imply cross-border cooperation of agricultural associations, generating, besides positive effects on the soil and



subsoil, peer-to-peer connectivity, exchange of experience and the possibility to use the best examples in agricultural management. Thus, even though it is regulated in the management plans of protected natural areas, the use of pesticides in agriculture is still significant, with a harmful effect on human health as well.

**Priority:** 1, especially in the context of new EU-funded programmes.

#### SPECIFIC BIRDS FOR RIVER SHORES

A229	<i>Alcedo atthis</i>	BG0002009	<b>M1.</b> Maintaining shores in a natural state, avoiding their embankment, except for landslide areas. <b>M2.</b> Maintaining waters and rivershore areas in their natural state, providing the required ecological conditions for feeding the mentioned species. <b>M3.</b> Prohibiting the landfilling of domestic waste in minor and major riverbeds, as well as prohibiting waste water disposal into running water. <b>M4.</b> Forbidding the extraction of dried-out willow branches from river banks. <b>M5.</b> Applying proper management for wood species on river shores. <b>M6.</b> Restoring the natural environment of the Danube Lowlands by opening dead branches or meandering.
A230	<i>Merops apiaster</i>	BG0002009, ROSPA0011	
A136	<i>Charadrius dubius</i>	BG0002009, ROSPA0011	
A249	<i>Riparia riparia</i>	BG0002009, ROSPA0011	

**M1. Maintaining shores in a natural state, avoiding their embankment, except for landslide areas.**

This action has local, punctual effects and is only valid in areas where such problems might be found.

**Priority:** 3

**M2. Maintaining waters and rivershore areas in their natural state, providing the required ecological conditions for feeding the mentioned species.**

The measure may be implemented regionally, in correlation with M1, as such activities may fall under the scope of a joint project in the target area of this document.

**Priority:** 2, in the context of correlation with M1.

**M3. Prohibiting the landfilling of domestic waste in minor and major riverbeds, as well as prohibiting waste water disposal into running water.**

This action may be planned at a regional level and decision makers may reach an agreement for sustainable waste management. The action results in the improvement of the conservation status not only for aquatic non-vertebrates, fish, but also for amphibians, aquatic mammals, for the aquatic environment in general, for the locals' health.

Both in Mehedinti and in Vidin, Montana and Vratsa (and probably in the remaining territory of the two countries as well), domestic

waste management is an actual issue.

Along the entire course of the Danube, deposits of domestic waste brought by the upstream waters of the Danube may be seen in river forests. For this reason, the measure may be jointly planned and implemented by regional decision makers. Besides the actual measure, activities of education, awareness and information of local populations may be implemented regarding proper waste storage (after having created the specific infrastructure), as well as the corrective actions that may be taken due to the infringement of legal provisions.

**Priority: 1**

**M4. Forbidding the extraction of dried-out willow branches from river banks.**

This action has local, punctual effects and is only valid in areas where such problems might be found.

**Priority: 3**

**M5. Applying proper management for wood species on river shores.**

This action has local, punctual effects and is only valid in areas where such problems might be found.

**Priority: 3**

**M6. Restoring the natural environment of the Danube Lowlands by opening dead branches or meandering.**

The measure may be dealt with by a cross-border project, managed by the managers/custodians of protected natural areas, with the support of relevant institutions/bodies/experts, with positive effects both for bird species and for the biodiversity of wetlands and lowlands in a broad meaning, as well as among communities in the target area. This activity already has a precedent to the upstream of the target area, which can be used as a good practice example.

**Priority: 1**

**SPECIFIC BIRDS FOR PASTURES**

A338	<i>Lanius collurio</i>	BG0002009	<b>M1.</b> Maintaining shrub groups in pasture areas
A255	<i>Anthus pratensis</i>	ROSPA0011	<b>M2.</b> Maintaining abandoned orchards and vineyards.
A256	<i>Anthus trivialis</i>	ROSPA0011	<b>M3.</b> Maintaining landscape elements - solitary trees, shrubs, grass treelines, on pastures and arable land
A231	<i>Coracias garrulus</i>	BG0002009, ROSPA0011	<b>M4.</b> Regulating manually performed mowing activities in hayfield areas.
A379	<i>Emberiza hortulana</i>	BG0002009	<b>M5.</b> Forbidding the burning of hayfields, pastures, agricultural areas.
A339	<i>Lanius minor</i>	BG0002009	<b>M6.</b> Avoiding changes in the usage category of pastures, especially on lands where constructions can be erected.
A307	<i>Sylvia nisoria</i>	BG0002009	<b>M7.</b> Maintaining traditional farming activities, by avoiding monoculture.
A246	<i>Lullula arborea</i>	BG0002009	<b>M8.</b> Avoiding the use of chemical fertilizers in agricultural practice.
A242	<i>Melanocorypha</i>	BG0002009	

	<i>calandra</i>		
A243	<i>Calandrella brachydactyla</i>	BG0002009	
<p><b>M1. Maintaining shrub groups in pasture areas</b>  An action aimed at maintaining the quality of habitats used for finding food, as well as shelter and rest. The action may have effects at a regional level and may help improve the preservation of other fauna species as well, as it is also stated for other groups. Likewise, maintaining forest curtains and tree rows between agricultural land plots or at their side has positive effects during winter, diminishing the effects of strong snow accumulations, as well as in agriculture.  Even though the action does not have major cross-border effects, it may be implemented within a joint plan/agreement by the managers/custodians of protected natural areas, land owners, forest facilities. It may be correlated with the implementation of <b>M2. Maintaining abandoned orchards and vineyards</b> and <b>M3. Maintaining landscape elements - solitary trees, shrubs, grass treelines, on pastures and arable land.</b>  <b>Priority: 1</b></p> <p><b>M4. Regulating manually performed mowing activities in hayfield areas.</b>  The measure may be enforced regionally, with positive effects on the status of several species of flora and fauna, not only on bird species. By observing these periods, specific vegetation reaches maturity and insects are highly diversified. Thus, biological diversity among passerines is abundant, since food is diverse.  <b>Priority: 2</b></p> <p><b>M5. Forbidding the burning of hayfields, pastures, agricultural areas.</b>  This action can also be applied locally and regionally, with no cross-border effects on the status of the aforementioned species. The threat appears especially in spring, when locals in rural areas burn vegetation on pastures, hayfields and agricultural land.  <b>Priority: 2</b></p> <p><b>M6. Avoiding changes in the usage category of pastures, especially on lands where constructions can be erected.</b>  This action has local, punctual effects and is only valid in areas where such problems might be found.  <b>Priority: 3</b></p> <p><b>M7. Maintaining traditional farming activities, by avoiding monoculture.</b>  A regional measure, that may be enforced by agricultural associations in cooperation with local public authorities, ensuring a richer specific biodiversity and sustainable land use.  <b>Priority: 2</b></p>			

**M8. Avoiding the use of chemical fertilizers in agricultural practice.**

In the area targeted by the "Plums for Junk" project, agriculture is one of the most important economic activities. Based on our visits in the protected areas, we may say that the south and south east part of Mehedinți (plain area) is mostly agricultural, like the entire north-west of Bulgaria.

This action may imply cross-border cooperation of agricultural associations, generating, besides positive effects on the soil and subsoil, peer-to-peer connectivity, exchange of experience and the possibility to use the best examples in agricultural management. Thus, even though it is regulated in the management plans of protected natural areas, the use of pesticides in agriculture is still significant, with a harmful effect on human health as well.

**Priority: 1**, especially in the context of new EU-funded programmes.

**SPECIFIC BIRDS FOR POPULATED AREAS/AGRICULTURAL LAND**

A214	<i>Otus scops</i>	ROSPA0011	<b>M1.</b> Avoiding the electrocution of bird species on average voltage lines, by insulating them. <b>M2.</b> Forbidding the destruction of nests and locating artificial nests where power lines are affected. <b>M3.</b> Maintaining traditional farming activities, by avoiding monoculture.
A031	<i>Ciconia ciconia</i>	BG0002009	<b>M4.</b> Forbidding the burning of hayfields, pastures, agricultural areas. <b>M5.</b> Regulating grazing in floodable areas.
A129	<i>Otis tarda</i>	BG0002009	<b>M6.</b> Avoiding the use of chemical fertilizers in agricultural practice.

**M1.** Avoiding the electrocution of bird species on average voltage lines, by insulating them.

The measure is applied regionally, as one of the most efficient active measures in decreasing the mortality of bird species, caused by the electrocution thereof. It may be the object of an intervention plan between the managers/custodians of protected natural areas and electricity companies. The enforcement of this action helps improve ecological connectivity and, thus, has a cross-border effect. It may be correlated with **M2.** Forbidding the destruction of nests and locating artificial nests where power lines are affected.

**Priority: 1**

**M3.** Maintaining traditional farming activities, by avoiding monoculture.

A regional measure, that may be enforced by agricultural associations in cooperation with local public authorities, ensuring a richer specific biodiversity and sustainable land use.

**Priority: 2**

**M4.** Forbidding the burning of hayfields, pastures, agricultural areas.

This action can also be applied locally and regionally, with no cross-border effects on the status of the aforementioned species. The threat appears especially in spring, when locals in rural areas burn vegetation on pastures, hayfields and agricultural land.

**Priority: 2**

**M5. Regulating grazing in floodable areas.**

This action may be applied after the worthiness of each grassland is established. These species depend on grasslands with low vegetation, and the abandon of grasslands is a more and more significant threat, as the locals no longer are encouraged to grow animals in an extensive system, or population in certain areas is old and is no longer classified as workforce.

Analysing the lists of pressures and threats specified in the standard forms of Natura 2000 sites, one can see that over-grazing is a danger for the vegetation of grasslands in some areas, while other areas are affected by under-grazing.

The period when grazing is allowed must be observed in order to avoid soil subsiding, as well as to ensure the regenerating material of annual vegetation.

**Priority: 2**

**M6. Avoiding the use of chemical fertilizers in agricultural practice.**

In the area targeted by the "Plums for Junk" project, agriculture is one of the most important economic activities. Based on our visits in the protected areas, we may say that the south and south east part of Mehedinți (plain area) is mostly agricultural, like the entire north-west of Bulgaria.

This action may imply cross-border cooperation of agricultural associations, generating, besides positive effects on the soil and subsoil, peer-to-peer connectivity, exchange of experience and the possibility to use the best examples in agricultural management. Thus, even though it is regulated in the management plans of protected natural areas, the use of pesticides in agriculture is still significant, with a harmful effect on human health as well.

**Priority: 1**, especially in the context of new EU-funded programmes.

**Habitats**

Code	Name	SCI	Identified action
2340	Pannonic dunes	BG0000182, BG0000199	<b>M1.</b> Avoiding changes in the dynamic structure of plant communities (maintaining specific surfaces and diversity) and avoiding changes in abiotic factors. <b>M2.</b> Avoiding the use of lands in intensive agriculture, in terms of either cultures or intensive grazing. <b>M3.</b> Going back to traditional farming practice. <b>M4.</b> Controlling the spread of invasive species.
1530	Pannonic salt steppes and salt marshes	BG0000199	

This action has local, punctual effects and is only valid in areas where such habitats might be found.

3130	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea	ROSCI0206, BG0000182, BG0000199	<b>M1.</b> Avoiding the use of chemical fertilizers in agricultural practice. <b>M2.</b> Restoring the natural environment of the Danube Lowlands by opening dead branches or meandering. <b>M3.</b> Controlling invasive species.
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3150	Natural eutrophic lakes with Magnopotamion or Hydrocharition -type vegetation	ROSCI0206, BG0000182, BG0000199	<b>M4.</b> Waste and waste water management.  <i>*** all management measures provided for species of aquatic mammals, amphibians, fish, aquatic non-vertebrates and water birds are applicable, resulting in an improved preservation of the specified natural habitats.</i>
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation	ROSCI0206	
3140	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.	ROSCI0206	
3270	Near-natural watercourses with annual nitrophilous vegetation on muddy banks (Chenopodion rubri p.p. and Bidention p.p. alliances)	ROSCI0206, BG0000182, BG0000199	
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	ROSCI0206, BG0000182	
40A0*	Subcontinental peri-Pannonic scrub	ROSCI0206	<b>M1.</b> Control of invasive flora species. <b>M2.</b> Regulating grazing activities in the area.
6210*	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia)	ROSCI0206	<b>M1.</b> Maintaining traditional farming practice on culture rotation, keeping heterogeneous cultures, using light equipment. <b>M2.</b> Mowing periods should take into account the vegetative stages of hayfield-specific plants, in terms of flowering and fructification. <b>M3.</b> Regulating grazing in terms of species, headcount of domestic animals, as well as the grazing period. <b>M4.</b> Avoiding the use of chemical fertilizers in agricultural practice. <i>*** all management measures proposed for non-vertebrate species specific to grasslands/pastures/hayfields and specific birds are applicable.</i>
6120*	Xeric sand calcareous grasslands	ROSCI0206	
6110*	Rupicolous calcareous or basophilic grasslands of the Alysso-Sedion albi	ROSCI0206	
6190	Rupicolous pannonic grasslands (Stipo-Festucetalia pallentis)	ROSCI0206	
6250	Pannonic loess steppic grasslands	BG0000182, BG0000199	
8310	Caves not open to the public	ROSCI0206	<b>M1.</b> Regulating agricultural activities in the overground area of caves. <b>M2.</b> Waste and waste water management.
8220	Siliceous rocky slopes with chasmophytic vegetation	ROSCI0206	<b>M1.</b> Limiting grazing in adjacent areas. <b>M2.</b> Controlling invasive species.
8210	Calcareous rocky slopes with chasmophytic	ROSCI0206	

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Planning a Joint Strategy for the Management of Protected Areas along the Danube, from the Cross-Border Area of the Mehedinti County in Romania and the Vidin-Oryahovo Municipalities in Bulgaria

	vegetation		<p><b>M1.</b> Maintaining a pluriennial structure of deciduous and combined forests, with trees at least 80 years old, to an extent of 25-30%.</p> <p><b>M2.</b> Keeping dead wood, especially already existing trees, in order to ensure the proper ecological conditions for woodpecker populations and some raptor species.</p> <p><b>M3.</b> Regulating the use of chemical substances in fighting defoliator invasion.</p> <p><b>M4.</b> Avoiding changes in the usage category, especially from pasture areas to construction areas, as well as preventing the erection of buildings along valleys, in rivershore areas.</p>
8230	Siliceous rock with pioneer vegetation of the Sedo-Scleranthion or of the Sedo albi-Veronicion dillenii	ROSCI0206	
8120	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii)	ROSCI0206	
9110	Luzulo-Fagetum beech forests	ROSCI0206	
9130	Asperulo-Fagetum beech forests	ROSCI0206	
9170	Galio-Carpinetum oak-hornbeam forests	ROSCI0206	
91E0*	91E0* Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	ROSCI0206, BG0000182, BG0000199	
9150	Medio-European limestone beech forests of the Cephalanthero-Fagion	ROSCI0206	
92A0	Salix alba and Populus alba galleries	ROSCI0173	
91M0	Pannonic-balkan forests of Turkey oak and common oak	ROSCI0173	
91F0	Riparian mixed forests of Quercus robur, Ulmus laevis and Ulmus minor, Fraxinus excelsior or Fraxinus angustifolia	ROSCI0173, BG0000182	
91Y0	Dacian forests of oak and beech	ROSCI0206	
9530*	(Sub-)Mediterranean pine forests with endemic black pines	ROSCI0206	
91K0	Illyric woods of the Fagus sylvatica Aremonio-Fagion)	ROSCI0206	
91AA	Pontic-Sarmatian forest vegetation with downy oak	ROSCI0206	
9180*	Tilio-Acerion forests of slopes, screes and ravines	ROSCI0206	
91L0	Illyric woods of the oak and beech (Erythronio-Carpinion)	ROSCI0206	
<p>Since most natural habitats in the targeted area are only found in a protected natural area, joint agreements/plans are not applicable; the specified measures are valid for the sustainability and viability of the aforementioned wild flora and fauna species.</p>			

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## **Chapter 5 Presentation of European good practice examples for the management of protected natural areas**

The management of a protected area implies legislation, material resources and human resources. Very large areas were identified in European developing countries such as Romania, Bulgaria, Ukraine, Serbia, etc., where nature is excellently preserved, practically just due to the absent or weak development of industries: subsistence agriculture, heavy industry, average urbanisation.

As they accessed the European Union, Romania and Bulgaria aligned their national legislation to EU legislation; one of the most important achievements of these states, from the viewpoint of biodiversity protection and preservation, is the declaration of Natura 2000 sites. The other components working towards proper management of a protected area appear here: material resources and human resources.

Protected natural areas in Romania are not funded by the state; thus, if the situation is quite stable in natural and national parks, as they are financed by the Romsilva National Forest Company, the budget must be provided by the custodian for most Natura 2000 sites, either from their own resources or from EU-funded projects.

National parks in Bulgaria are exclusively owned, managed and financed by the state, while natural parks, as the case may be, can also be managed by private legal entities.

Human resources have the same importance, both those actually involved in the management of the protected natural area, and those who benefit from such management; the communication between the two categories is critical.

Many good practice guides have been written along the times on this dedication and effort, regarding specific components of protected areas management; these examples are also listed here.

### **a.) Good practice examples in environmental policies**

#### **a.1) The Natura2000 network**

The Natura2000 network is a good practice example in itself, through the high number of protected areas included, covering 18% of the land area and 6% of the marine area of Europe. It is practically an ecological network of protected areas, designated to ensure the long term survival of wild flora and fauna species, natural and semi-natural habitats in Europe. It covers all 28 EU member states, and its legal basis is made up of the two directives: the Birds Directive, declaring special protection areas for birds and fauna (SPA) and the Habitats Directive, declaring sites of community importance (SCI).

The declaration of Natura2000 sites does not mean that investments in an area stop; the Natura2000 approach follows the spirit of sustainable development, centred on environmentally-friendly people.

#### **a.2) Danubeparks - the Network of Protected Areas along the Danube River**

Danubeparks, the Danube network of protected areas, includes 20 protected areas in 6 European countries, implementing activities for the preservation and restoration of some of the most valuable habitats of the Danube, with a focus on cross-border cooperation. The main objectives of Danubeparks are: improving nature preservation, suitable management of protected areas along the Danube, management experience exchange, etc. The basin of the Danube includes many Natura 2000 sites, national and natural parks, Ramsar sites, natural and biosphere reserves.

#### **a.3) The Carpathian Network of Protected Areas - CNPA**

CNPA was established in 2006, it covers 7 European countries and it meets the need for cooperation and coordination of joint integrated management measures for protected areas, created joint work tools in protected areas. It is a means of enforcement of the Carpathian Convention, enhancing cooperation potential in this mountain area, as well as cooperation with neighbouring mountain areas.

**a.4) The Alpine Network of Protected Areas - ALPARC**

ALPARC is a network of protected alpine areas, established in 6 countries, joining hundreds of protected areas, with various protection levels, from Slovenia to France, under the same objectives. As of 1995, the network has undertaken activities in protected areas in the Alps, overcoming cultural, linguistic and legislative barriers. The Alpine Network of Protected Areas is the means of enforcement of the Alpine Convention signed in 1991. The activities of the network help achieve ecological connectivity and biodiversity goals, enhance life quality and regional development, communication and mountain-related education, the sustainable management of protected areas and research involvement, as well as cross-country cooperation and collaboration.

**a.5) GREENBELT**

GREENBELT covers the continent from the East to the West, representing an outstanding ecological network through its characteristic landscape, practically drawing the old Iron Curtain. The network reunites 24 countries, as a genuine vertebral column of the pan-European ecological network. It is a very important step in the development of cross-border projects and activities. The ecological importance of this belt is given by the fact that it crosses 40 national and natural parks, as well as the more than 3200 protected natural areas located in the buffer area covering the 50 km on the one and other side of the Green Belt, extending over all bio-geographical areas.

**b) Good practice examples in financial tools****b.1) LIFE Nature**

The LIFE Programme is the major financing programme implementing European Union policies on environment conservation and protection. It was established by the European Union in 1992, and it helped finance more than 1400 projects, allocating more than 1.2 billion EUR. (Rozyłowicz, 2016). Such projects promote innovative ideas, partnership between public institutions and the civil society.

The European Commission, through the Directorate General Environment and Directorate General Climate Action, manages the LIFE programme.

During 1992-1995, LIFE promoted projects aimed at: promoting sustainable development and environmental quality (new monitoring techniques, clean technologies, waste management, restoration of degraded areas, rational use of lands, water pollution), protecting habitats and endangered species or species on the brink of extinction, fighting desertification, erosion, education, training and information.

LIFE Nature was the major tool of enforcement of the two directives and of the Natura 2000 network implicitly, promoting the conservation of natural and semi-natural habitats and wild flora and fauna species, considering social, economic, cultural aspects, regional and/or local particularities of each member state. Thus, during the programme implementation period, projects were funded for nature conservation and protection, resulting in the maintenance or restoration of degraded habitats, from the improved status of conservation of wild flora and fauna species.

The third part of the programme, LIFE III, pursued the implementation of measures activated in the previous years, developing the Natura 2000 network at an administrative and management level. This third part helped lay the bases for the regional development of this programme, by including new EU member states.

**c.) Good practice examples in the management of protected areas****c.1) Forest management**

**c.1.1) Protection of rare species (European yew and western capercaillie) by the Municipal Forests of Banska Bystrica**

More than 7000 ha of forest land belonging to the Banska Bystrica Municipality, partially included in the Vel'ka Fatra National Park, are recognized for the highest density of European yew, *Taxus baccata*. Forest managers ensure the regeneration, the conservation and the protection of the tree against the negative effects of red deer. The protection and conservation of these forests also extends in the mating period of western capercaillies.

**c.1.2) High Conservation Value Forests (HCVF)**

The certification of forest management (or forest certification) is the current trend of forest managers and a way to extend the markets of forest products obtained by implementing sustainable forest management. The Forest Stewardship Council was established in 1993, an NGO aiming at promoting, developing and enforcing the concept of sustainable forest management, considering forest protection, preservation of species and socio-economic aspects. The FSC mark certifies that wood products come from properly managed forests.

Forests with high conservative value have one or more of the following features:

- forest areas including significant biodiversity values at a global, regional or national level (e.g. rare, endemic, endangered or vulnerable species) and/or vast forests with high landscaping importance;
- forest areas with rare, endemic or endangered habitats;
- forest areas providing important ecosystemic services for local communities and for the environment;
- forest areas with significance for the cultural identity of local communities.

**c.2) Pasture management****c.2.1) Traditional activities for the preservation and protection of the natural and semi-natural habitats of pastures**

The half-dried pastures of the White Carpathians, lying at the border between the Czech Republic and Slovakia, have been considered the richest in the world in terms of specific diversity (Merunskova et al., 2012). Regular mowing on such pastures has been recognized as an efficient and sustainable management style.

Dried and half-dried hayfields and pastures of Transylvania are some of the last regions with a high ecological importance in Europe. Non-invasive agricultural practice, still undertaken with traditional tools, as well as the rotation of cultures, minimal (or not at all) use of chemical fertilizers and rational grazing have allowed for the survival of a very high diversity of wild flora and fauna. Such pastures have been declared High Nature Value pastures at a European level. Besides the many species of the Romanian wild flora and fauna that can be found here, pastures also provide a landscape with an outstanding value.

The Romanian foundation ADEPT has implemented projects resulting in the rural development of the Transylvanian area, where scientific studies and practice have intertwined. Due to such projects, High Nature Value pastures can also be declared in other areas; based on them, the members of local communities may receive compensations from competent bodies (APIA, Natura 2000 compensations).

**c.2.2) Restoration of wet pastures and introduction of agro-environment schemes in the Slovak Republic.**

The Belianske Luky hayfields, located at the feet of the High Tatras, are some of the largest wet pastures, very well conserved, with a calcareous land, including rare types of pastures, with high ecological value. With a surface of more than 100 hectares, they have been awarded a protection status as of 1983, when they were declared a natural reserve; as of 2004, they have been declared a site of community importance. Traditional mowing and hay gathering practice (manually performed along the times), as well as the

periodicity and moment when such practices were undertaken, have provided proper management for such fields.

However, as the pastures were designated a natural reserve, the locals no longer undertook farming activities, and trees began to grow on pastures, which inevitably resulted in the decision of ecologically restoring them. Thus, besides the fact that mowing was resumed, trees and shrubs were done away with and mulching was undertaken; proper agricultural tools were used in each phase, so as to avoid soil subsidence or the creation of deep ditches.

Farmers supported the restoration measures applied by the local authorities; they were actively involved in the activity and could benefit from agro-environmental subsidies for permanent pastures.

### **c.3) Wetland management**

#### **c.3.1) Buffer areas for cave protection in Slovakia**

Cavern systems are a special category of wet areas, highly sensitive both to internal cave factors and to external factors. Agricultural activities, chaotic tourism and intensive forestry activities may have a very strong negative impact on the conservation of a cavern system, because of permeable calcareous rocks. Thus, all chemical residuals from fertilizers or fuels may be easily "carried" to the inside of caves. Thus, a kind of buffer area was created above the caves and around them in Slovakia, with agricultural and forestry practice being forbidden. 17 such buffer areas were established in the calcareous Slovak Carpathians; the limits of such areas have also helped design RAMSAR sites and underground karst wet areas.

#### **c.3.2) Hydrological and ecological rehabilitation of wet areas**

Peat bogs are very significant habitats, both due to their rarity, to the endemic species providing ecological support, and to the old marshes including them. Peat bogs were deeply affected by drainage almost in all European countries, also causing a very high decrease of groundwater. A system of gateways was built on former ditches in the Bieszczady National Park of Poland, allowing for the increase of water level in the ditches, with a direct influence on the increase of groundwater, so important for maintaining the specificities of peat bog marshes.

In Romania, in the basin of the Dorman river, two places were ecologically rehabilitated, by building three types of embankments, with rock, stone and wood. The positive effects of these works were: river-side habitats were rehabilitated, an increase in specific diversity was found, water level grew in draughty times and water quality was improved (Banaduc et al., not published).

### **d.4) The management of invasive species**

#### **d.4.1) Delivering Alien Invasive Species Inventories for Europe - DAISIE**

Within a project funded by the European Union, this early information and warning system gathers data on invasive species. The project website provides valuable information on more than 10,000 allopathic species invading abandoned agricultural lands, rural areas, areas with road and railway infrastructure. The data is provided by an international team, including more than 1600 specialists, who permanently update the database with new information regarding either other discovered invasive species, or other invasion points of already known species.

Thus, maps could be designed for the 100 most harmful species, which are always up-to-date. Besides the fact that it can be known precisely where the invasion takes place, new possible intervention points may be estimated and certain preventive actions may be taken. (<http://www.europe-aliens.org/> )

#### **d.4.2) Assessing large scale risks for biodiversity with tested Methods - ALARM**

Research was done on how habitats are affected by invasions within this project. Likewise, the 6 most important ways how alloigenous species enter natural and semi-natural habitats were identified: free release/breakout, involuntary contamination, "clandestine" trip, corridors or routes, and natural spreading.

#### **d.4.3) The removal of wooded invasive species - *Ailanthus altissima***

Many methods were used in Europe and the USA to remove wooded invasive species, especially for the tree of heaven - *Ailanthus altissima*. Both chemical and mechanical methods were applied in several protected natural areas in Hungary, with a positive effect and a very slight impact on biodiversity. The best known method consists of cutting tree trunks with a circumference of more than 8 cm. Sponges were introduced into cuts, where the chemical substance had been inoculated. The treatment had to be applied twice in some places. After it was fully dried, the tree was removed mechanically.

### **Chapter 6 Presenting European examples of innovations in the protection and preservation of ecosystems in the cross-border area.**

#### **Technological innovations**

Technology has soared as of the last century, but its ascension is very quick nowadays. Thus, it was just a matter of time until this technology would have a positive impact in conserving biodiversity. Five examples of innovation in technology seem to provide very large benefits for the conservation of species: *Ornilux glass*, with a UV reflecting layer, visible for birds' eyes, invisible for human eyes, so that birds may avoid direct collision with windows (airport control towers, very high buildings with large windows, etc. are monitored in various parts of the world, with very high mortality among small birds, pursuant to collision with normal windows); for *synthetic rhinoceros horns*, bioengineering aims at creating, by using keratine and rhinoceros DNAs, replicas of rhinoceros horns, in order to replace illegal trade, since traffic with wild animals (or parts thereof) is the fourth in intensity after the drug market, the weapons market and traffic of human beings; *emitters of acoustic impulses* attached to fishing nets in order to avoid cetaceans being caught in fishing nets, successfully used at a global scale; *drones or UAV* have various functionalities in protected area management, including in Romania, being used to map habitats, index vegetation and, in some parts of the world, they have also proven to be efficient in fighting poaching; *radio emitters* are already used at a wide scale in order to monitor various animal species, to send data on bird migration, to locate various wild animals (for instance, European bison reintroduced in Romania are monitored on site by means of radio emitters).

Other examples are photo and video cameras used to monitor fauna from fixed points, GPS devices and related software, online platforms, etc.

#### **Innovations in the development of green infrastructure**

New EU funded programmes, as well as new environmental policies, place significant focus on the development of green infrastructure: from investments in ecological agriculture, tunnels and wildlife crossings, insulation of power lines, building houses with green roofs, investments in parks in cities, up to developing transnational ecological networks, all these are included in the European strategy on green infrastructure.

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