COUNCIL OF EUROPE CONSEIL DE L'EUROPE

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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE AND NATURAL HABITATS

Group of Experts on Protected Areas and Ecological Networks

4th meeting
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Final data summary of the Joint EU/CoE Programme on the setting-up of the Emerald network

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EUROPEAN UNION

COUNCIL OF EUROPE CONSEIL DE L'EUROPE

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SUPPORT FOR THE IMPLEMENTATION OF THE CONVENTION ON BIOLOGICAL DIVERSITY PROGRAMME OF WORK ON PROTECTED AREAS IN THE EU NEIGHBOURHOOD POLICY EAST AREA AND RUSSIA: EXTENSION OF THE IMPLEMENTATION OF THE EU's NATURA 2000 PRINCIPLES THROUGH THE EMERALD NETWORK

Data delivery
Final Summary Report

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April 2012

Convention de Berne
Bern Convention

Réseau Émeraude
Emerald Network

Introduction

From 2009 to 2011, 7 countries have been delivering yearly interim data in the framework of the setting up of the Emerald Network. By the end of 2011, the final data bases according to the administrative arrangements were delivered, using the Central Data Repository of the European Environment Agency.

This final summary report describes these data sets, as taken from the CDR. It should be stressed that this is a purely technical analysis, and does not include any scientific evaluation.

1. Summary statistics for Emerald Sites data

The general purpose of the project is to produce a data base with approximately 100 % of all possible sites, by the end of 2011. (80 % for Ukraine, 50 % for the Russian Federation and Belarus)

The table named as "cntry-ENPI-201112.mdb" is the result of merging the 7 country sites databases into one single database in MSAccess.

The following statistics illustrate the content of the tables as delivered by the end of 2011, including some amendments which were made during the project prolongation period up to April 2012. Data are shown for all 7 countries together.

The tables are to be considered as final draft data, which might still be amended over the coming year, especially during Phase II of the Emerald Network procedure. They represent the state of the art by the end of 2011.

1.1. General site information

Number of proposed Emerald sites, total area and % coverage for each of the countries:

Number of sites and total area			
Country	**Number**	**Total AREA (ha)**	**% country coverage**
Armenia	9	228 814,28	7,68
Azerbaijan	10	997 015,42	11,46
Belarus	12	912 241,00	4,39
Georgia	20	586 831,50	8,42
Moldova	17	414 230,00	12,24
Russia	740	28 269 014,30	7,13
Ukraine	151	4 329 081,61	7,20
Total:	**959**	**35 737 228,11**	**7,15**

Although the number of sites is rather small it should be stressed that most of the proposed sites are large and represent a fare proportion of the total terrestrial area of the 7 countries, corresponding to the expectations within the three-years program.

The Emerald sites data base is a set of relational tables, containing the information for each thematic layer. The number of data records in each of these tables per country is as follows (04/2012):

Table name	AM	AZ	BY	GE	MD	RU	UA	Total 2011	Total 2010	Total 2009
biotop	9	10	12	20	17	740	151	**959**	**249**	**143**
actvty	77	6	165	61	198	631	2336	**3474**	**2362**	**1412**
amprep	84	8	29	27	37	262	348	**795**	**370**	**250**
bird	626	25	576	529	204	6199	8291	**16450**	**8770**	**5234**
desigc	10	10	19	18	17	885	156	**1115**	**252**	**153**
desigr	6	4	37	3	3	68	189	**310**	**271**	**175**
fishes	7	4	50	11	9	282	811	**1174**	**603**	**348**
habit1	27	17	150	56	55	1828	1716	**3849**	**1224**	**850**
habit1A	8	3		9		205	172	**397**	**436**	**395**
habit2	42	24	97	54	91	374	1250	**1932**	**1149**	**633**
histry					2			**2**	**2**	**2**
invert	12	1	85	101	15	308	732	**1254**	**670**	**357**
mammal	115	42	54	154	32	894	423	**1714**	**851**	**591**
map		0	44		2	1686	44	**1776**	**306**	**128**
photo			6		5		107	**118**	**118**	**118**
plant	4	8	48	26	20	1032	241	**1379**	**298**	**185**
RegCod	9	10	17	17	4	752	161	**970**	**249**	**152**
Resp		1	1	1	1	1	1	**6**	**6**	**1**
Sitrel					7		1	**8**	**2**	**0**
Spec	142	9	27	120	27	1045	4838	**6208**	**3893**	**2528**

The figures indicate a well distributed data collection over the different groups of necessary information and a clear progress during the project period (2009 to 2011), resulting from the multidisciplinary composition of the national Emerald expert teams.

1.2. Ecological information: species and habitat records

The total number of different species and habitats as recorded in the sites data bases for each country is as follows:

country	Amphibians and reptiles	Birds	Fishes	Invertebrates	mammals	plants	Habitats
Armenia	41	243	5	8	41	4	14
Azerbaijan	3	12	3	1	12	5	10
Belarus	3	75	9	20	9	11	31
Georgia	6	137	3	11	18	9	11
Moldova	5	49	4	3	11	8	17
Russia	10	159	17	31	34	63	91
Ukraine	28	399	44	34	25	54	97

Habitats of Resolution nr. 4 (version 2010, using EUNIS habitat codes!)

Number of sites per habitat (only top 10 shown):

Habitat code	Title	Sites
E1.2	Perennial calcareous grassland and basic steppes	266
F9.1	Riverine scrub	192
E3.4	Moist or wet eutrophic and mesotrophic grassland	145
D2.3	Transition mires and quaking bogs	133
X18	Wooded steppe	128
G1.A1	[Quercus] - [Fraxinus] - [Carpinus betulus] woodland on eutrophic and mesotrophic soils	122
X04	Raised bog complexes	120
G1.11	Riverine [Salix] woodland	118
E2.25	Continental meadows	114
G1.8	Acidophilous [Quercus]-dominated woodland	114

Amphibians and Reptiles of Resolution nr. 6

Number of sites for Amphibians and Reptiles (only top 10 shown):

SPECNUM	Species Name	Number of sites
1188	Bombina bombina	197
1166	Triturus cristatus	183
1220	Emys orbicularis	123
1298	Vipera ursinii	81
1279	Elaphe quatuorlineata	35
1219	Testudo graeca	22
1193	Bombina variegata	15
2001	Triturus montandoni	15
1171	Triturus karelinii	15
2008	Vipera kaznakovi	9

Birds of Resolution nr. 6

Number of sites for bird species (only top 10 shown):

SPECNUM	Species Name	Number of Sites
A122	Crex crex	284
A338	Lanius collurio	282
A127	Grus grus	270
A073	Milvus migrans	251
A081	Circus aeruginosus	236
A224	Caprimulgus europaeus	226
A215	Bubo bubo	213
A091	Aquila chrysaetos	197
A084	Circus pygargus	197

SPECNUM	Species Name	Number of Sites
A072	Pernis apivorus	189

Fishes of Resolution nr. 6

Number of sites for fish species (only top 10 shown):

SPECNUM	Species Name	Number of Sites
1149	Cobitis taenia	180
1145	Misgurnus fossilis	174
1134	Rhodeus sericeus amarus	155
1130	Aspius aspius	132
1163	Cottus gobio	72
1124	Gobio albipinnatus	72
1146	Sabanejewia aurata	60
1141	Chalcalburnus chalcoides	42
1160	Zingel streber	28
1124	Gobio albipinnatus(Romanogobio belingi)	27

Invertebrates of Resolution nr. 6

Number of sites for Invertebrates species (only top 10 shown):

SPECNUM	Species Name	Number of Sites
1060	Lycaena dispar	180
1083	Lucanus cervus	143
1078	Callimorpha quadripunctaria	97
1088	Cerambyx cerdo	85
1042	Leucorrhinia pectoralis	71
1082	Graphoderus bilineatus	48
1920	Boros schneideri	48
1059	Maculinea teleius	48
1081	Dytiscus latissimus	46
1087	Rosalia alpina	42

Mammals of Resolution nr. 6

Number of sites for Mammals (only top 10 shown):

SPECNUM	Species Name	Number of Sites
1355	Lutra lutra	257
1352	Canis lupus	237
1337	Castor fiber	223
1354	Ursus arctos	149

SPECNUM	Species Name	Number of Sites
1361	Lynx lynx	145
1356	Mustela lutreola	80
2604	Desmana moschata	61
1303	Rhinolophus hipposideros	51
1304	Rhinolophus ferrumequinum	42
1308	Barbastella barbastellus	42

Plants of Resolution nr. 6

Number of sites for Plants (only top 10 shown):

SPECNUM	Species Name	Number of Sites
1902	Cypripedium calceolus	147
1477	Pulsatilla patens	145
4097	Iris aphylla ssp. Hungarica	88
1939	Agrimonia pilosa	82
1437	Thesium ebracteatum	57
1805	Jurinea cyanoides	48
2098	Paeonia tenuifolia	47
4068	Adenophora lilifolia	46
1955	Diplazium sibiricum	44
1617	Angelica palustris	37

Other species not mentioned in Resolution nr. 6

The following table illustrates the number of other important species listed in one or more sites for the different countries. It illustrates the possible need for amending the Resolution 6 of the Bern Convention:

TAXGROUP	AM	AZ	BY	GE	MD	RU	UA	Total 7 countries
Amphibians			1			5	8	14
Birds	13	2	6	20		77	94	176
Fishes	3	1	3			11	118	128
Invertebrates	48		7			39	253	342
Mammals	7	5	2	21		19	27	66
Plants	47		3		22	172	432	640
Reptiles	11			3		7	9	28

2. Distribution and Population data for species and habitats

The evaluation of the effectiveness for the maintenance of a favourable conservation status for the species and the habitats within the proposed Emerald sites depends largely on the availability of background data, such as distribution and population information for species and habitats. The project teams were asked to collect this type of information in the following way:

- Presence of species within biogeographical regions within country
- Presence of habitats within biogeographical regions within country
- Population data for each species present within the country
- Population data for each habitat present within the country

To be able to collect distribution data and population data at national level in a standard way, a database was constructed by the project coordinator in consultation with ETC/BD and in line with what was done under the N2000 process. This reference data base is regularly updated according to the amendments in the Resolutions. (Last version: "Reference-tables-Emerald-201101.mdb")

Each country received 4 reference tables:

- "habitats-annexI-Reference": habitats as listed in annex I of the habitats directive
- "habitats-res4-Reference": habitats as listed in Resolution 4 of the Bern Convention
- "Species-AnnexII-Res6-Reference": species as listed in annex II of the Habitats Directive and Resolution 6 of the Bern Convention
- "Species-Birds-Reference": Bird species of Annex I of the Birds Directive and Bird species of Resolution 6 of the Bern Convention

In 2011, the country teams were requested to review the information already given in 2009 and 2010, taking in to account the comments and discussion which were made during the national workshops. The following data tables were filled by the project teams:

- habitats-res4-BioReg
- habitats-res4-population
- Species-AnnexII-Res6-BioReg
- Species-AnnexII-Res6-population
- Species-Birds-BioReg
- Species-Birds-population

The number of species and habitats recorded to be present in each of the 7 countries is listed below with reference to the total number of species and habitats in the annexes and resolutions (as taken from the delivered tables described above):

Total*	Taxonomic group	AM	AZ	GE	BY	MD	RU	UA
683	**Plants**	7	10	12	19	10	90	49
29	**Amphibians**	1	1	1	2	3	3	4
208	**Birds**	118	119	112	73	51	146	110
79	**Fish**	5	8	2	12	3	19	17

138	**Invertebrates**	5	8	10	24	3	60	25
63	**Mammals**	15	17	18	12	10	35	23
30	**Reptiles**	4	5	5	1	3	6	4
	Species Total:	**155**	**168**	**160**	**143**	**83**	**359**	**232**
179	**Habitats, Resolution 4**	10	18	16	32	19	93	98

* Total number of species or habitats within the resolutions (version 2011)

3. GIS distribution data at national level for species and habitats

Countries were requested to deliver GIS distribution data for an agreed **selection** of species and habitats in whatever scale and format it is available. All data were built up in the ArcInfo shape files or the compatible MapInfo GIS system. Depending on availability and ecology of the species, point data, line data (river sections) and polygon data were used. In many cases, a grid system for distribution data was used.

The following tables illustrate the species and habitats that were suggested during the national and/or regional workshops. The species and habitats delivered in 2009 and 2010 are marked in green and orange. (See the legend below the table). Agreed species for 2011 are marked in purple.

(X) species or habitat proposed but not retained for 2009 delivery

X species or habitat for which distribution data were delivered in 2009

species or habitat for which distribution data were delivered, without being proposed in 2009

species or habitat for which distribution data were delivered in 2010

2 species or habitat proposed in 2010, but already delivered in 2009

Species or habitat proposed but not (yet) delivered

Species or habitat delivered for 2011

: For Habitat translation to EUNIS, the sign “#”, indicates a “one to many” or “many to one” relationship.

species	Code	AM	AZ	GE	BY	MD	RU	UA
Plants:								
Agrimonia pilosa	1939							N/A
Aldrovanda vesiculosa	1560							
Angelica palustre (syn. Ostericum)	1617							
Carex acuta[2]	1897							N/A
Carlina onopordifolia	2249							X
Colchicum fominii	2287					X		
Crambe tataria[2]	4091							N/A
Crambe koktebelica	?							X
Cypripedium calceolus	1902				X	X	X	X
Dactylorhiza chuhensis	2326							N/A
Dicranum viride	1381							
Dracocephalum austriacum	1689	X						
Drepanocladus vernicosus	1393							
Genista tetragona	2139							X

species	Code	AM	AZ	GE	BY	MD	RU	UA
Kosteletzkya pentacarpos	1581							N/A
Ligularia sibirica	1758							
Liparis loeselii	1903							
Luronium natans	1831							N/A
Marsilea quadrifolia	1428							
Meesia longiseta	1389							
Microcnemum coralloides ssp. anatolicum	2068	X						N/A
Moehringia laterifolia	1962							N/A
Najas flexilis	1833							N/A
Ophioglossum polyphyllum	1418							
Paeonia tenuifolia	2098	X						
Pulsatilla grandis	2093							X
Pulsatilla patens	1477							(X)
Rhododendron luteum	4093							N/A
Saxifraga hirculus	1528		X					
Schivereckia podolica	2116					X		X
Serratula lycopifolia	4087							N/A
Steveniella satyrioides	2333	X						
Thesium ebracteatum	1437				X			
Vaccinium arctostaphylos	2172			X				N/A
Birds:								
Accipiter brevipes	A402							
Acrocephalus melanopogon	A293							
Acrocephalus paludicula	A294				X		+	X
Aegolius funereus	A223							
Aegypius monachus	A079			X				X
Alcedo atthis	A229							
Anser erythropus	A042							X
Anser erythropus	A042							
Anthus campestris	A255							
Ardea purpurea	A029							
Ardeola ralloides	A024							X
Aquila chrysaetos	A091							X
Aquila clanga	A090					X		X
Aquila heliaca	A404							X
Aquila nipalensis	A509							
Aquila pomarina	A089							X
Ardea purpurea	A029							
Ardeola ralloides	A024							
Asio flammeus	A222							
Aythya nyroca	A060							
Botaurus stellaris	A021							
Branta ruficollis	A396							
Bubo bubo	A215							X
Bucanetes githagineus	A452							
Burhinus oedicnemus	A133							X
Buteo rufinus	A403							X
Calandrella brachydactyla	A243							
Caprimulgus europaeus	A224							
Charadrius alexandrinus	A138							
Charadrius asiaticus	A417							

species	Code	AM	AZ	GE	BY	MD	RU	UA
Charadrius lesshenaultii	A516							
Charadrius morinellus	A139							
Chlamydotis undulata	A416							
Chlidonias hybridus	A196							
Chlidonias leucopterus	A198							
Chlidonias niger	A197							
Ciconia ciconia	A031							
Ciconia nigra	A030		X		X		X	
Circaetus gallicus	A080							
Circus aeruginosus	A081							
Circus cyaneus	A082							
Circus macrourus	A083							X
Circus pygargus	A084							X
Coracias garrulus	A231							
Crex crex	A122				(X)			
Cygnus bewickii	A037							
Cygnus cygnus	A038							
Dendrocopos medius	A238							
Dendrocopus leucotos	A239							
Dendrocopus syriacus	A429							
Dryocopus martius	A236							
Egretta alba	A027							
Egretta garzetta	A026							
Emberiza hortulana	A379							
Falco biarmicus	A101							
Falco cherrug	A511							X
Falco columbarius	A098							
Falco naumanni	A095							X
Falco peregrinus	A103							X
Falco vespertinus	A097							
Ficedula parva	A320							
Ficedula semitorquata	A442							
Gallinago media	A154							
Gavia arctica	A002							
Gavia stellata	A001							
Gelochelidon nilotica	A189							
Glareola nordmanni	A515							
Glareola pratincola	A135							
Grus grus	A127				X			X
Gypaetus barbatus	A076							
Gyps fulvus	A078			X			+	X
Haliaeetus albicilla	A075							X
Hieraaetus pennatus	A092							
Himantopus himantopus	A131							
Hoplopterus spinosus	A418							
Ixobrychus minutus	A022							
Lanius collurio	A338							
Lanius minor	A339							
Lanius nubicus	A433							
Larus genei	A180							
Larus melanocephalus	A176							
Larus minitus	A177							

species	Code	AM	AZ	GE	BY	MD	RU	UA
Limosa lapponica	A157							
Lullula arborea	A246							
Luscinia svesica	A272							
Marmaronetta angustirostris	A057							
Melonocorypha calandra	A242							
Mergus albellus	A068							
Milvus migrans	A073							
Neophron percnopterus	A077							
Nycticorax nycticorax	A023							
Oenanthe pleschanka	A533							
Otis tarda	A129							
Oxyura leucocephala	A071							
Pandion haliaetus	A094							
Pelecanus crispus	A020		(X)					X
Pelecanus onocrotalus	A019							X
Pernis apivorus	A072							
Phalaropus lobatus	A170							
Phalocrocorax pygmeus	A393							X
Philomachus pugnax	A151							
Phoenicopterus ruber	A035							
Platalea leucorodia	A034					X		X
Plegadis falcinellus	A032							X
Pluvialis apricaria	A140							
Porphyrio porphyrio	A124							
Porzana parva	A120							
Porzana porzana	A119							
Porzana pusilla	A121							
Pterocles alchata	A205							
Pterocles orientalis	A420							
Pyrrhocorax pyrrhocorax	A346							
Recurvirostra avosetta	A132							
Sterna albifrons	A195							
Sterna caspia	A190							X
Sterna hirundo	A193							
Sylvia nisoria	A307							
Tadorna ferruginea	A397							
Tetrax tetrax	A128							X
Tringa glareola	A166							
Xenus cinereus	A167							
Mammals:								
Barbastella barbastellus	1308							
Bison bonasus	2647				X			
Canis lupus	1352		(X)		X			X
Capra aegagrus	1372			X				N/A
Castor fiber	1337				X			
Cervus elaphus corsicanus	1367				(X)			N/A
Desmana moschata	2604							X
Gazella subgutturosae	2649		X					N/A
Halichoerus grypus	1364							N/A
Lutra lutra	1355			X	X	X		
Lynx lynx	1361							X
Microtus oeconomus arenicola	1340				(X)			N/A

species	Code	AM	AZ	GE	BY	MD	RU	UA
Miniopterus schreibersi	1310							
Mustela eversmannii	2633							X
Mustela lutreola	1356							X
Myotis blythii	1307							
Myotis emarginatus	1321							
Myotis myotis	1318							
Myotis bechsteinii	1323					X		
Ovis orientalis	4005							
Panthera pardus	2023			X				N/A
Phoca caspica	new						+	N/A
Phoca hispida bottnica	1938						+	N/A
Phoca hispida ladogensis	2641						+	N/A
Phocoena phocoena	1351							
Rhinolophus blasii	1306							N/A
Rhinolophus euryale	1305							
Rhinolophus ferrumequinum	1304							
Rhinolophus hipposideros	1303							
Rhinolophus mehelyi	1302							N/A
Spermophilus citellus	1335							X
Tursiops truncatus	1349							
Ursus arctos	1354			X				X
Amphibians								
Bombina bombina	1188				X			
Pelobates fuscus insubricus	1199				(X)			N/A
Triturus cristatus	1166				X			-
Triturus karelinii	1171		X	X				X
Triturus vulgaris ampelensis	4008							N/A
Reptiles:								
Elaphe quatuorlineata	1279							
Emys orbicularis	1220		(X)		2	X	X	
Lacerta clarkorum	2402							
Mauremys caspica	1222							N/A
Natrix natrix cypriaca	4007				(X)			N/A
Testudo graeca	1219		X	X				N/A
Vipera kaznakovi	2008							
Vipera ursinii	1298					X		
Fish:								
Acipenser sturio	1101							X
Alburnus albidus	1120							N/A
Aspius aspius	1130							X
Barbus capito	1143		(X)					N/A
Chalcalburnus chalcoides	1141							(**)
Eudontomyzon mariae	2484						X	X
Hucho hucho	1105							X
Misgurnus fossilis	1145				X			X
Phoxinus percnurus	4009							X
Rutilus frisii meidingeri	1139							N/A
Sabanejewia aurata	1146							X
Salmo salar	1106							N/A
Umbra krameri	2011							X
Invertebrates:								

species	Code	AM	AZ	GE	BY	MD	RU	UA
Callimorpha quadripunctaria	1078							
Cerambyx cerdo	1088	X						X
Dytiscus latissimus	1081							X
Graphoderus bilineatus	1082							X
Leucorrhinia pectoralis	1042	X						-
Lindenia tetraphylla	1043							
Lucanus cervus	1083						X	X
Lycaena dispar	1060							
Maculinea nausithous	1061	X						X
Maculinea teleius	1059							X
Nymphalis vaualbum	4039				X			X
Rosalia alpina	1087	X	X					X
Stephanopachys linearis	1926							
Vertigo angustior	1014	X						
Margaritifera margaritifera s.l.								
Number of species delivered in 2009:		38	6	10	14	9	5	5
Number of species delivered in 2010		56	11	25	16	51	35	14
Number of species agreed for 2011		57	20	48	24	21	35	54
Total number delivered (*):		153	37	83	53	81	75	73

(*) please note, the total number may not correspond to the mathematical sum of deliveries due to deliveries of new versions of the same species.

(**) Ukraine: Based on the last revision, the species Chalcalburnus chalcoides was split for three species: Alburnus mentoides, A. Leobergi and A. Sarmaticus. One map is prepared for the three species.

N/A: "Not Applicable": only Ukraine indicated when a species is not present in the country and as a consequence a distribution map is not needed.

Habitats

Over the 3 years period, the following habitat distribution maps were delivered. During this period, the habitat classification system behind Resolution 4 changed from PalHab to EUNIS, as decided by the Standing Committee of the Bern Convention in 2010. For this reason, both habitat coding systems are present in the table. It should be noted, that in future only the EUNIS codes will be used. Deliveries at a lower level in the classification than the code indicated in the Resolution 4 is not taken into account in this table.

Habitat	PalHabCode	EUNIS	AM	AZ	GE	BY	MD	RU	UA
Sub-littoral rocky seabeds and kelp forests	11.24	#							
Soft sediment littoral communities	11.27	#							
Estuaries	13.2	X01							X
Continental glasswort swards	15.115	#	X						
Continental salt steppes and saltmarshes	15.A	E6.2							
Dunes	16.2	#							
Shifting coastal dunes	B1.3								
Coastal stable dune grassland (grey dunes)	B1.4								

Coastal dune heaths	B1.5								
Coastal dune scrub	B1.6								
Coastal dune woods	B1.7								
Lime deficient oligotrophic water bodies	22.11	C1.1							
Bladderwort colonies	22.414	C1.224							
[Salvinia] covers	22.415	C1.225							X
[Aldrovanda] communities	22.416	C1.226							X
Sacred lotus beds	22.4316	C1.2416							
Water crowfoot communities	22.4321	C1.3411							
Carpathian Kotschy's alpenrose heaths	31.424	F2.224							(X)
Wet heaths		F4.1							
Hedgehog heaths	31.7	F7							
Phrygana	33	F7							
Riverine scrub		F9.1							
Dense perennial grasslands and middle European steppes	34.3	#							
Perennial calcareous grassland and basic steppes		E1.2							
Mediterranean xeric grasslands	34.5	E1.3			(X)				
Continental steppes	34.9	#					2	X	
Mat-grass swards	35.11	E1.71			(X)				
Mediterraneo-montane mat-grass swards	35.7	E1.83							
Continental meadows		E2.25							
Eutropic humid grasslands	37.2	E3.4							
Oligotrophic humid graslands	37.3	E3.5							
Marsh mallow screens	37.713	E5.4113							
Beech forest	41.1	G1.6		X					X
Thermophilous deciduous woodland		G1.7							
Oak-hornbeam forest	41.2	G1.A1		X		(X)			
Mixed Ravine and slope forest	41.4	G1.A4		(X)		X			
Acidophilous oak forests	41.5	G1.8							
Thermophilous and Supra-Mediterranean oak woods	41.7	#							
Mixed thermophilous forests	41.8	#							
Euxino-Hyrcanian mixed deciduous forest	41.H	G1.A7		(X)					
Oriental spruce forests	42.28	G3.1H				(X)			
Rusty alpenrose mountain pine forest	42.41	G3.31			X				
Ponto-Caucasian Scots pine forests	42.5F	G3.4E			X				
Bannat and Pallas' pine forest	42.66	G3.56							
Aegean pine forest	42.85	G3.75							
Western Palaearctic cypress,	42.A	#							

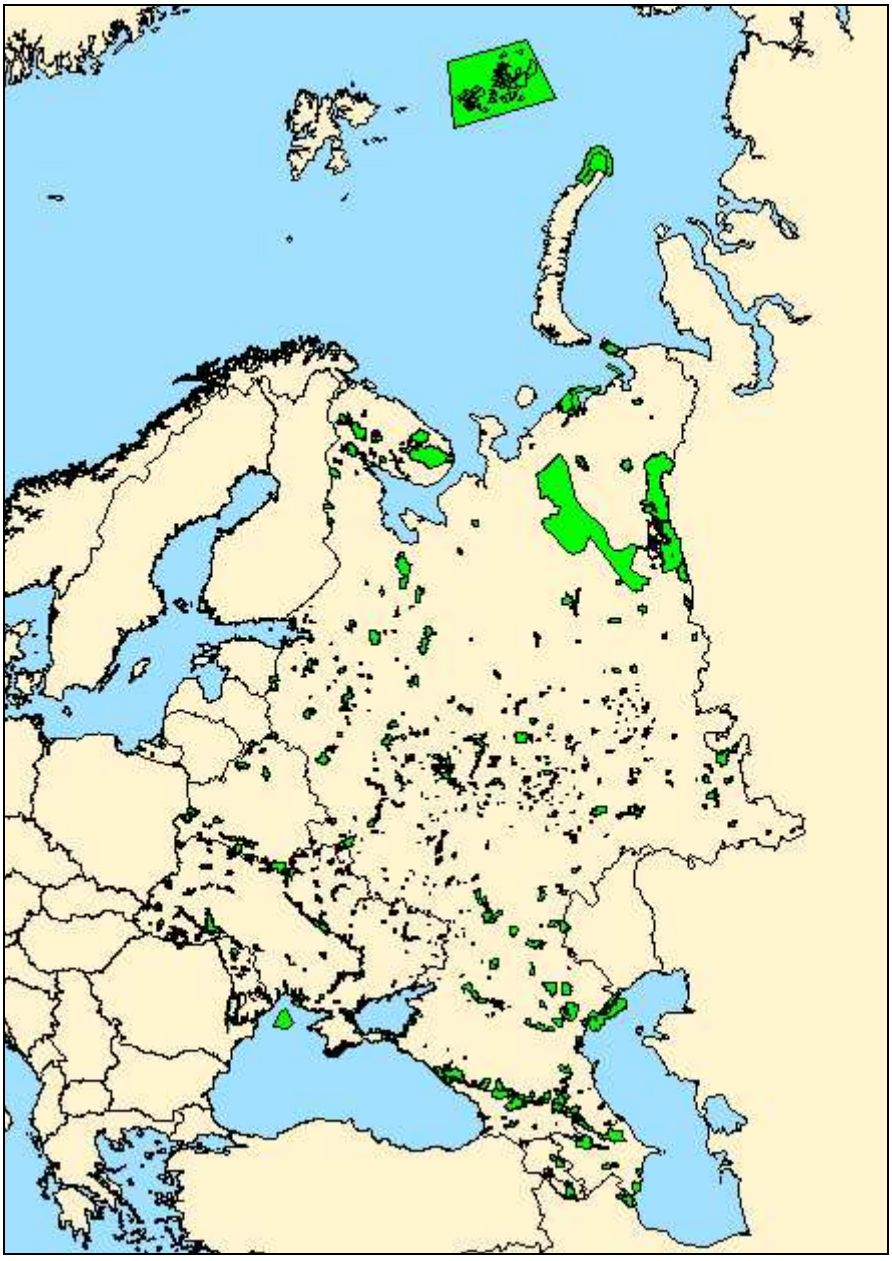
juniperus and yew forest									
Coniferous woodland dominated by [Cupressaceae] or [Taxaceae]		G3.9							
Western Palaearctic [Taxus baccata] woods		G3.97							
Riperian willow formations	44.1	#	(X)		X				
Riverine [Salix] woodland		G1.11							
Middle European stream ash-alder woods	44.3	G1.21							
Great Middle-European fluvial forests	44.41	G1.221							
Southeast European [Fraxinus] - [Quercus] - [Alnus] forests		G1.223							
Ponto-sarmatic mixed poplar riverine forest	44.66	G1.36							
Irano-Anatolian mixed riverine forest	44.69	G1.37	X						
Eastern Carpathian [Alnus glutinosa] swamp woods		G1.4115							
Birch and conifer mire woods	44.A	#				X			X
Boreal bog conifer woodland		G3.D							
Nemoral bog conifer woodland		G3.E							
Sphagnum birch woods		G1.51							
Near-natural raised bogs	51.1	X04				X	X		(X)
Fen-sedge beds	53.3	D5.2							(X)
Rich fens, including eutrophic tall-herb fens and calcareous flushes and soaks	54.2	D4.1				X			
Arctoalpine riverine swards	54.3	D4.2							X
Transition mires	54.5	D2.3							X
Peri-Danubian black-white-star sedge fens		D2.226							
Caves	65.	H1							X
Wooded steppe	93	X18							
Submerged carpets of stoneworts in mesotrophic waterbodies		C1.25							
Submerged carpets of stoneworts in dystrophic waterbodies		C1.44							
Continental river bank tall-herb communities dominated by meadowsweet		E5.414							
Euro-Siberian perennial amphibious communities		C3.41							
Number of habitats delivered in 2009			2	2	5	4	3	2	2
Number of habitats			0	5	5	5	9	18	5

delivered in 2010									
Number of habitats proposed for 2011			10	3	9	10	18	49	10
Total number delivered::			12	10	16	19	28	59	17

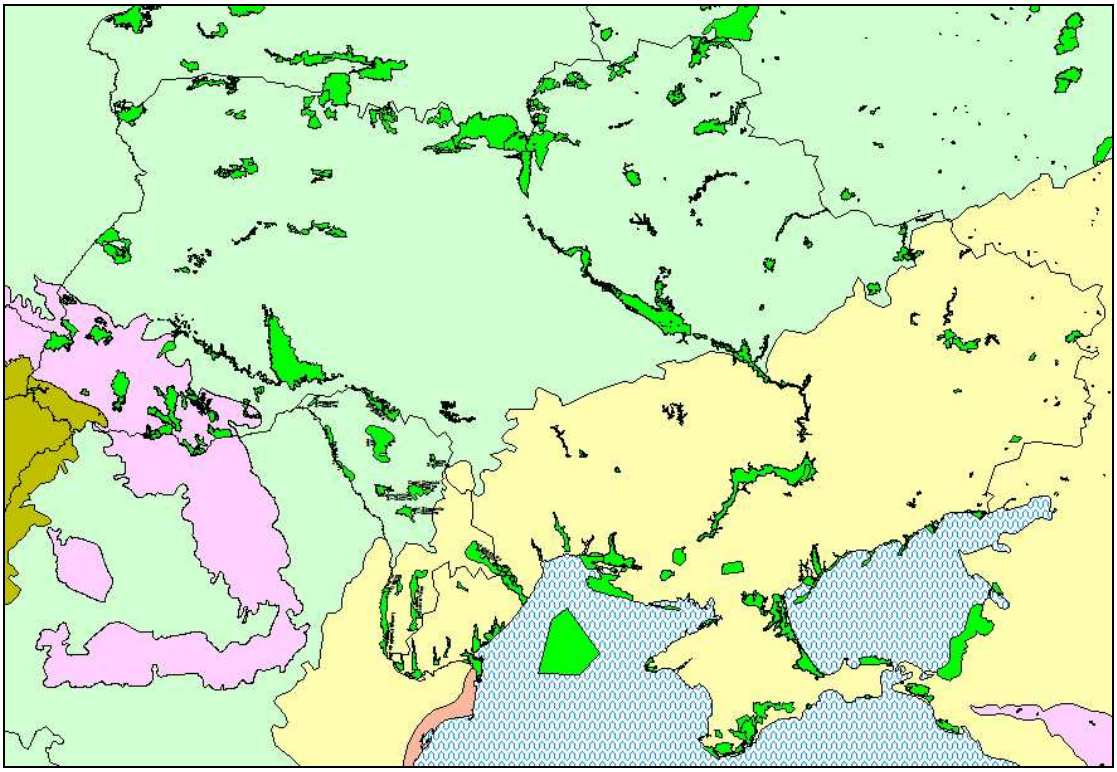
4. GIS boundary data for sites (Geographical Information System)

During each of the yearly workshops, the principles for the collection of site boundary data in a GIS were discussed. At the start of the project in 2009, provisional data could be collected for some sites. During subsequent workshops, a strategy for the creation of the GIS data was discussed to be able to deliver a full data set by the end of 2011.

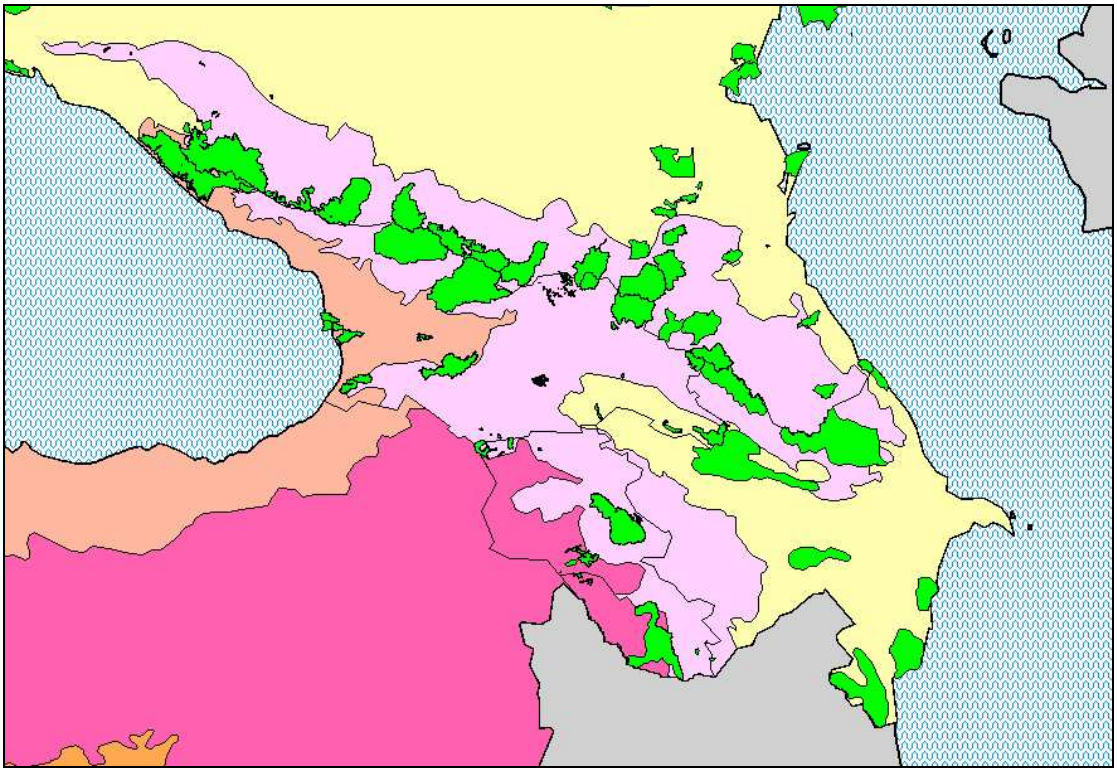
The map below, illustrates the sites boundaries for all 7 countries as delivered by the end of the project (all 959 sites mapped).



To be able to better distinguish the areas, the following two maps illustrate the site boundaries on a larger scale at the background of the Biogeographical Regions Map. (Zoom on Ukraine and Moldova, and a zoom on the Caucasus region)



Zoom on Ukraine and Moldova



Zoom on the Caucasus Region (Armenia, Azerbaijan, Georgia)

5. Examples of possible Data Presentations

The tables below illustrate how the ecological data can be visualized in the light of possible evaluation of completeness. These are just a few examples to cross-query the data bases.

Forest Habitat types: number of sites per habitat per country								
Habitat code	**Title**	**AM**	**AZ**	**BY**	**GE**	**MD**	**RU**	**UA**
G1.11	Riverine [Salix] woodland			2		8	55	53
G1.12	Boreo-alpine riparian galleries			5			35	19
G1.21	Riverine [Fraxinus] - [Alnus] woodland, wet at high but not at low water			6			31	39
G1.221	Great medio-European fluvial forests					4		2
G1.223	Southeast European [Fraxinus] - [Quercus] - [Alnus] forests					2		1
G1.36	Ponto-Sarmatic mixed [Populus] riverine forests					5	15	33
G1.37	Irano-Anatolian mixed riverine forests		1					
G1.4115	Eastern Carpathian [Alnus glutinosa] swamp woods					1		3
G1.414	Steppe swamp [Alnus glutinosa] woods						12	8
G1.44	Wet-ground woodland of the Black and Caspian Seas						1	
G1.51	Sphagnum [Betula] woods			6			59	29
G1.6	[Fagus] woodland		3		11	4	8	31
G1.7	Thermophilous deciduous woodland						5	52
G1.8	Acidophilous [Quercus]-dominated woodland						65	49
G1.A1	[Quercus] - [Fraxinus] - [Carpinus betulus] woodland on eutrophic and mesotrophic soils		3	6		6	41	66
G1.A4	Ravine and slope woodland		1	1		5	40	20
G1.A7	Mixed deciduous woodland of the Black and Caspian Seas		1				7	
G3.17	Balkano-Pontic [Abies] forests						1	
G3.1B	Alpine and Carpathian subalpine [Picea] forests							9
G3.1C	Inner range montane [Picea] forests							12
G3.1H	[Picea orientalis] forests						2	
G3.25	Carpathian [Larix] and [Pinus cembra] forests							3
G3.4232	Sarmatic steppe [Pinus sylvestris] forests						21	52
G3.4E	Ponto-Caucasian [Pinus sylvestris] forests						9	2
G3.56	[Pinus pallasiana] and [Pinus banatica] forests							3
G3.75	[Pinus brutia] forests							1
G3.9	Coniferous woodland dominated by [Cupressaceae] or [Taxaceae]						6	5
G3.D	Boreal bog conifer woodland			2			100	
G3.E	Nemoral bog conifer woodland			6			15	28

(only first 20 records):

Birds: number of sites per species per country								
SPECNAME	SPECNUM	AM	AZ	BY	GE	MD	RU	UA
Acanthis cannabina	A366							10
Accipiter brevipes	A402	3	1		3		27	2
Accipiter gentilis	A085	3			1			25
Accipiter gentilis arrigonii	A400					1		
Accipiter nisus	A086	4						31
Acrocephalus arundinaceus	A298	3						51
Acrocephalus melanopogon	A293	2			1		9	
Acrocephalus paludicola	A294			7			8	10
Acrocephalus palustris	A296	3					1	33
Acrocephalus schoenobaenus	A295	2						22
Acrocephalus schoenobaenus	A381							1
Acrocephalus schoenobaunus	A295							5
Acrocephalus scirpaceus	A297	1						24
Actitis hypoleucos	A168	2						26
Adsio otus	A221							1
Aegithalos caudatus	A324	2			1			3
Aegolius funereus	A223	1	1	9	5		24	9
Aegypius monachus	A079	3			8		31	6
Alauda arvensis	A233							1
Alauda arvensis	A247	3						58

(Only part of data base shown)

Mammals: number of sites per species per country								
SPECNAME	SPECNUM	AM	AZ	BY	GE	MD	RU	UA
Gulo gulo	1912						22	
Halichoerus grypus	1364						4	
Lutra lutra	1355	5	8	10	15	6	109	104
Lynx lynx	1361	2	6	10	16		89	22
Martes foina	2630	4						
Meles meles	2631	3						
Miniopterus schreibersi	1310	1			7		1	1
Monachus monachus	1366							3
Mustela eversmannii	2633					4	34	
Mustela lutreola	1356			1	1	5	49	24
Mustela nivalis	2634	4						
Myotis bechsteini	1323		1		2	2	2	6
Myotis blythii	1307		1		15		6	6
Myotis dasycneme	1318			5		4	23	5

6. Data on proposed new species for Resolution 6

During the development of the project, team members indicated that the species list of Resolution 6 is not fully adapted to typical central and eastern European species conservation lists. It was decided to start a process of developing a common list of proposed species. The first proposals from all 7 countries were merged in one data base. Subsequently, the teams were asked to indicate their opinion on the proposals from the other countries.

It should be stressed that this is an extra result of the project, not forseen in the administrative agreements signed by the countries.

The table below illustrates the data bank (species in alphabeticle order, only top page shown). In total, 640 species have been suggested.

group	species name	AM	AZ	GE	BY	MD	RU	UA
R	Ablepharus bivittatus men.	PA	yes	NV	NP	NP	np	PA
P	Acantholimon festucaceum (Jaub.et Spach) Boiss.	yes	PA	NP	NP	NP	np	NP
P	Acanthus dioscoridys L.	yes	PA	NP	NP	NP	np	NP
B	Accipiter gentilis (Linnaeus, 1758)	yes						
F	Acipenser gueldenstaedtii	NP	PA		NP	PA	yes	Yes
F	Acipenser nudiventris	NP	PA	yes	NP	NP	yes	PA
F	Acipenser ruthenus	NP	PA		PA	PA	yes	PA
F	Acipenser stellatus	NP	PA		NP	PA	yes	PA
P	Aconitum besserianum Andrz. ex Trautv.	NP	PA	NP	NP	NP	np	yes
P	Aconitum flerovii Steinb.	NP	PA	NP	NP	NP	yes	NP
P	Aconitum jacquinii Rchb.	NP	PA	NP	NP	NP	np	yes
P	Aconitum lasiostomum	NP	PA	NP	yes	PA	pa	PA
P	Aconitum pseudanthora Blocki ex Pacz.	NP	PA	NP	NP	NP	np	yes
P	Adenophora taurica (Sukacz.) Juz.	NP	PA	NP	NP	NP	np	yes
P	Adonis wolgensis Stev.	yes	PA	NP	NP	PA	pa	PA
I	Aenyctus dlusskyi Arnoldi, 1968	yes	PA	NV	NV	NP	np	NV
I	Aeshna isoceles	NP	PA	NV	NV	NP	yes	PA
I	Aeshna juncea (Linnaeus, 1758)	NP	PA	NV	PA	PA	pd	yes
I	Aeshna viridis Eversmann, 1836	PA	PA	NV	PA	PA	yes	PA
I	Alaus parreyssi Steven, 1830	NP	PA	NV	NP	NP	yes	PA
P	Albizia julibrissin	PD	yes	NP	NP	NP	np	PA
M	Allactaga jaculus	NP	PA	NP	NP	NP	pd	yes
P	Allium grande Lipsky	NP	PA	NP	NP	NP	yes	NP
P	Allium gunibicum Miscz. ex Grossh.	NP	PA	NP	NP	NP	yes	NP
P	Allium paradoxum (Bieb.) G. Don fil.	PD	PA	NP	NP	NP	yes	NP
P	Allium pervestitum Klokov	NP	PA	NP	NP	NP	nv	yes
P	Allium savranicum Bess.	NP	PA	NP	NP	NP	pa	yes
P	Allium scythicum Zoz	NP	PA	NP	NP	NP	np	yes
P	Allium sphaeropodum Klokov	NP	PA	NP	NP	PA	np	yes
P	Allium struzlianum Ogan.	yes	PA	NP	NP	NP	np	NP
P	Allochrusa takhtajanii Gabr. et Dittr.	yes	PA	NP	NP	NP	np	NP
F	Alosa immaculata	NP	PA	yes	NP	NP	pa	PD

group	species name	AM	AZ	GE	BY	MD	RU	UA
P	Alyssum gymnopodum P. Smirn.	NP	PA	NP	NP	NP	np	yes
P	Alyssum savranicum Andrz. ex Bess.	NP	PA	NP	NP	NP	pa	yes
P	Amberboa moschata (L.) DC.	yes	PA	PA	NP	NP	np	NP
P	Amberboa turanica Iljin	yes	PA	NP	NP	NP	np	NP
P	Amblyopyrum muticum (Boiss.) Eig	yes	PA	NP	NP	NP	np	NP
P	Anacamptis pyramidalis (L.) Rich.	PD	PA	PA	NP	NP	yes	PA

…..

Codes used in the table:

code	definition
CA	cancelation of proposal
NP	Not Present in country
NV	Not Validated
PA	Present in country and Agree with proposal
PD	Present in country, Desagree with proposal
yes	country who proposed the species

7. Data delivery using the Central Data Repository of the EEA (CDR)

In 2011, all data have been delivered by all 7 countries using the CDR of the EEA. For this purpose, a Bern Convention -> Emerald" folder was added to each countries CDR-page and each team has identified a responsible person for uploading the data in this folder.