

**Convention on the Conservation of European Wildlife
and Natural Habitats (Bern, 1979)**

**Ministry of Nature Protection
of the Republic of Armenia**

**THE “EMERALD” NETWORK
IN THE REPUBLIC OF ARMENIA**

The book is dedicated to the coverage of activities towards the formation of potential Areas of Special Conservation Interest (ASCI) of the Republic of Armenia – “Emerald” Network – the joint program between the Council of Europe/European Union within the Convention on the Conservation of European Wildlife and Natural Habitats (Bern, 1979).

The “Three dimensional Road Map for achieving a fully operational Emerald Network in 7 countries of Central and Eastern Europe and the South Caucasus” elaborated by the Secretary of the Convention, in which the activities for the Stage III of the program are described, is given in this book.

The book is intended for the workers of environmental area, territorial administration and development, science and education, as well as environmental NGOs.

It was implemented in the frames of “Establishing and description of potential ASCIs in Armenia, EU/EC joint program, Phase II” by SA “Environmental Project Implementation Unit” of the Ministry of Nature protection of RA.

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CONTENTS

INTRODUCTION	5
THE PROCESS FOR THE CREATION OF "EMERALD" NETWORK	5
POTENTIAL "EMERALD" NETWORK SITES IN ARMENIA	6
DESCRIPTION OF THE POTENTIAL "EMERALD" NETWORK SITES IN ARMENIA	7
1. "KHOSROV FOREST" STATE RESERVE	7
2. "SEVAN" NATIONAL PARK	9
3. "KHOR VIRAP – ARMASH" AREA	11
4. "LAKE ARPI" NATIONAL PARK	13
5. "IDJEVAN" AREA	15
6 "DJADJUR" AREA	17
7. "LORI LAKES" AREA	18
8 "IMPASSABLE BRUSHWOOD" AREA	19
9 "DJERMUK" AREA	20
10. "ARAGATS ALPINE" AREA	22
11 "DILIDJAN" NATIONAL PARK	23
12 "GNISHIK" AREA	25
13. "GORHAJK" AREA	27
14. "AREVIK" NATIONAL PARK	28
15. "ZANGEZUR" AREA	30
16. "TATEV" AREA	32
17. "METSAMOR" AREA	34
18. "KHNDZORESK" AREA	36
19. "VANAND" AREA	38
20. "AKHURYAN RESERVOIR" AREA	39
21. "RHODODENDRON CAUCASICUM" SANCTUARY	40
22. "ARAI LER" AREA	41
23. "DEBED GORGE" AREA	42
THREE DIMENSIONAL ROAD MAP	44
ACTIONS IDENTIFIED FROM THE COE/EC JOINT PROGRAMME FINAL CONFERENCE IN 2016	48
CONCLUSION	51
APPENDIX 1	52
APPENDIX 2	54

INTRODUCTION

Biological diversity continues to decline worldwide. Habitat break-up, pollution, overuse of natural areas and creation of artificial landscapes are among the major causes of biodiversity loss. According to the International Union for Conservation of Nature 15% of mammals, 13% of birds, 37% of freshwater fish and 23% of amphibians in Europe are under threat of extinction. Biodiversity constitutes a natural heritage that needs to be preserved and handed on to future generations especially in view of its intrinsic value and the ecosystem services that it provides (for example, provision of food, maintenance of air quality, water purification, pollination or recreation).

The Council of Europe has set up two general tools for the protection of European natural habitats:

1. in 1965, the European diploma for protected areas, which is an international award granted to adequately protected natural or semi-natural areas of exceptional European interest and which are managed in an exemplary way;
2. in 1979, the Convention on the conservation of European wildlife and natural habitats, better known as “the Bern Convention”. The convention is a binding international legal instrument aiming to conserve wild flora and fauna and their natural habitats, as well as to promote interstate co-operation in this field.

In 1989, contracting parties to the Bern Convention launched the creation of a special tool for the protection of European natural habitats: the Emerald Network. As an ecological network, the Emerald Network is made up of areas of special conservation interest (ASCIs).

These are areas of intrinsic value that have the potential to contribute to maintaining or restoring species and habitats to a favourable conservation status, especially:

1. species which are threatened, endemic, migratory and strictly protected under the Bern convention;
2. threatened and exemplary habitat types as well as mosaics of different habitat types;
3. migratory species which are a shared heritage of European countries.

The ASCIs are areas that are scientifically evaluated as meeting the species and habitats conservation objective criteria. This is the case when species and habitats are represented well enough in terms of distribution range, diversity and specific conservation needs and the areas include significant proportions of the overall national resources.

The setting up of Emerald Network is one of the important contributions in the direction of the implementation of the Convention on the Biological Diversity in Europe. It was established to meet the issues of Pan European Ecological Network (PEEN) which in its turn is the first thematic direction of the Pan-European Biological and Landscape Diversity Strategy.

In 2015, the “Emerald” network covers nearly 3 500 candidate or fully certified Emerald Network sites in 16 countries, almost 600 000 km² forming an average of 11-12% of the national territories of the countries involved. Armenia, Azerbaijan, Belarus, Georgia, the Republic of Moldova, the Russian Federation and Ukraine are involved in the setting up of the Emerald Network from Eastern Europe.

THE PROCESS FOR THE CREATION OF "EMERALD" NETWORK

During the “EmeraldNetwork” creation it is necessary to implement following activities:

1. Discovery and data collection of priority species and habitats in all biogeographical areas;
2. Selection of potential ASCIs – “Emerald Network” sites and data base creation;
3. Submission of candidate sites for adoption the Standing committee to the Bern Convention;
4. Approval of national candidate “Emerald Network” sites by the Standing committee to the Bern Convention.

The considered area can serve as a habitat for the priority species, the importance of the area for the protection of the species is determined by the following:

1. The area is important for the protection of the species if the information of the condition of the species corresponds with the already recognized area of international significance. For instance, the important bird areas, wetlands.
2. If the area has the status of specially protected natural area and it has been created for the protection of the ecosystem and there exist species included in the Resolution 6 of the Bern Convention, but are not included in the Red Book of RA.
3. The species is included in the Resolution 6 of the Bern Convention and at the same time in the Red Book of RA.
4. If the area is important for the protection of natural habitat and the information about its condition corresponds with internationally recognized and widely accepted standards (mature forests, wetlands, etc.).
5. If the specially protected natural are was created for the protection of unique and rare ecosystems and there exists habitats included in the Resolution4 of the Bern Convention.

POTENTIAL "EMERALD NETWORK" SITES IN ARMENIA

Only international frameworks can assist in the complete protection and development of the biodiversity and landscapes by supporting the coordinated initiatives of all parties. Such a successful example is a "Natura 2000" in the EU member states and based on this example for non-member states the completely compatible "Emerald Network" was created.

The establishment of "Emerald Network" started during 2007-2008 at the scope of the introduction of pilot "Emerald Network" program in Armenia. Program continued in 2009-2011 and during its triennial work the list of the nine potential sites were identified and drawn up. These areas occupy 206 697,5 ha and form 7% of the total country area. As a program requirement, the electronic database was created of the potential sites, including GIS mapping works.

The "Emerald Network – Phase II" program has started in 2013 aimed at the final formation of that network in Armenia.

At present previously proposed all potential sites were estimated, and new sites were proposed. All natural habitats included in the potential Emerald Network sites of Armenia were adjusted in accordance with the requirements of the Resolution 4 of the Bern Convention (Appendix 1). The same work was done for animal and plant species included in the Resolution 6 (Appendix 2).

As result of all work done now we have 23 potential «Emerald» sites in Armenia:

1. "Khosrov forest" State reserve;
2. "Sevan" National park;
3. "Khor Virap – Ardashir" area;
4. "Lake Arpi" National park;
5. "Idjevan" area;
6. "Dzadzajur" area;
7. "Lori lakes" area;
8. "Impassable brushwood" area;
9. "Djermuk" area;
10. "Aragats alpine" area;
11. "Dilidjan" National park;
12. "Gnishik" area;
13. "Gorhajak" area;
14. "Arevik" National park;
15. "Zangezour" area;
16. "Tatev" area;
17. "Metsamor" area;
18. "Khndzoresk" area;
19. "Vanand" area;
20. "Akhuryan reservoir" area;
21. "Rhododendron caucasicus" sanctuary;
22. "Arai ler" area;
23. "Debed gorge" area.

These sites occupy 1033719,5 ha and consist of of the 34,7% of the country's territory (map 1).

The creation of "Emerald Network" is a precedent and a first step towards the creation of ecological network in Armenia provided by the law "On Specially Protected Nature Areas of RA" and towards joining the international networks such as PEEN.

DESCRIPTION OF POTENTIAL "EMERALD NETWORK" SITES IN ARMENIA

1. "KHOSROV FOREST" STATE RESERVE AM0000001

The site occupy 63794.7 ha, it is located in Ararat and Kotajk marzes, includes “Khosrov forest” State reserve, and neighboring territories – downhill of Urts range, Erah range, “Gorovan sands” sanctuary and area stretching till Azat river basin including Eranos Mountain (map 2, pict. 1).

There are 59 species from the Resolution 6 of the Convention (Table 1).

Table 1

Species group	Number of species	Species
Plants	2	<i>Dactylorhiza chuhensis</i> , <i>Echium russicum</i>
Invertebrates	3	<i>Callimorpha (Euplagia) quadripunctaria</i> , <i>Cerambyx cerdo</i>
Reptiles	2	<i>Testudo graeca</i> , <i>Mauremys caspica</i>
Birds	41	<i>Accipiter brevipes</i> , <i>Aegolius funereus</i> , <i>Aegypius monachus</i> , <i>Alcedo atthis</i> , <i>Anthus campestris</i> , <i>Aquila chrysaetos</i> , <i>Aquila clanga</i> , <i>Aquila heliaca</i> , <i>Aquila nipalensis</i> , <i>Aquila pomarina</i> , <i>Bubo bubo</i> , <i>Bucanetes githagineus</i> , <i>Burhinus oedicephalus</i> , <i>Buteo rufinus</i> , <i>Calandrella brachydactyla</i> , <i>Caprimulgus europaeus</i> , <i>Ciconia ciconia</i> , <i>Circaetus gallicus</i> , <i>Circus aeruginosus</i> , <i>Circus cyaneus</i> , <i>Circus macrourus</i> , <i>Circus pygargus</i> , <i>Coracias garullus</i> , <i>Dendrocopos syriacus</i> , <i>Emberiza hortulana</i> , <i>Falco biarmicus</i> , <i>Falco naumanni</i> , <i>Falco peregrinus</i> , <i>Gypaetus barbatus</i> , <i>Gyps fulvus</i> , <i>Hieraaetus pennatus</i> , <i>Lanius collurio</i> , <i>Lanius minor</i> , <i>Lullula arborea</i> , <i>Luscinia svecica</i> , <i>Melanocorypha calandra</i> , <i>Milvus migrans</i> , <i>Neophron percnopterus</i> , <i>Pernis apivorus</i> , <i>Pyrrhocorax pyrrhocorax</i> , <i>Sylvia nisoria</i>
Mammals	11	<i>Canis lupus</i> , <i>Capra aegagrus</i> , <i>Lutra lutra</i> , <i>Miniopterus schreibersii</i> , <i>Myotis emarginatus</i> , <i>Panthera pardus</i> , <i>Rhinolophus euryale</i> , <i>Rhinolophus ferrumequinum</i> , <i>Rhinolophus mehelyi</i> , <i>Ursus arctos</i> , <i>Vormela peregusna</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Allium schchiana*, *Astragalus holophyllus*, *Centaurea arvensis*, *Polygala urartu*, *Pyrus chosrovica*, *Iris elegantissima*, etc. (28 Armenian endemics and 63 plant species included in the Red Data Book of plants of Armenia (2010) are growing here)
2. **Invertebrates:** *Acmaeoderella pellitula*, *Agapanthia korostelevi*, *Agrilus araxenus*, *Anisoplia reitteriana*, *Cardiophorus araxicola*, *Cyphostetha semenovi*, *Hyles hyppophaes*, *Machimus erevanensis*, *Melitaea vedica*, *Miarus armenus*, *Onthophagus diversicornis*, *Papilio alexanor*, *Pharaonus caucasicus*, *Phytoecia pici*, *Proserpinus proserpina*, *Sphenoptera geghardica*, *Tanyproctus araxidis*, *Tanyproctus vedicus*
3. **Amphibians and Reptiles:** *Eremias pleskei*, *Eumeces schneideri*, *Montivipera raddei*, *Pelobates syriacus*, *Phrynocephalus persicus*, *Rhynchocalamus melanocephalus*, *Trachylepis septemtaeniata*, *Telescopus fallax*, *Vipera (Pelias) eriwanensis*, *Zamenis hohenackeri*

26 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 2).

Table 2

Code	Habitats
C1.32	Free-floating vegetation of eutrophic waterbodies
C1.3411	Water crowfoot communities in shallow water
C1.4	Permanent dystrophic lakes, ponds and pools
C2.18	Acid oligotrophic vegetation of spring
C2.1A	Mesotrophic vegetation of spring brooks
C2.1B	Eutrophic vegetation of spring brooks
C2.25	Acid oligotrophic vegetation of fast-flowing streams
C2.28	Eutrophic vegetation of fast-flowing streams
C3.4	Species-poor beds of low-growing water-fringing or amphibious vegetation
D5.2	Beds of large sedges normally without free-standing water
E1.11	Euro-Siberian rock debris swards
E1.2	Perennial calcareous grassland and basic steppes
E1.3	Mediterranean xeric grassland
E2.3	Mountain hay meadows
E3.4	Moist or wet eutrophic and mesotrophic grassland
F3.245	Eastern Mediterranean deciduous thickets
F5.13	Juniper matorral
F7	Spiny Mediterranean heaths (phrygana, hedgehog-heaths and related coastal cliff vegetation)
F9.1	Riverine scrub
F9.3	Southern riparian galleries and thickets
G1.11	Riverine Salix woodland
G1.3	Mediterranean riparian woodland
G1.A7	Mixed deciduous woodland of the Black and Caspian Seas
G3.9	Coniferous woodland dominated by Cupressaceae or Taxaceae
H2.5	Acid siliceous screes of warm exposures
H3.1	Acid siliceous inland cliffs

2. "SEVAN" NATIONAL PARK AM000002

The site occupy 489839.78 ha, it is located in Geghrkunik marz, and includes "Sevan" National park with its buffer zone (map 3, pict. 2).

There are 91 species from the Resolution 6 of the Convention (table 3).

Table 3

Species group	Number of species	Species
Plants	5	<i>Dactylorhiza chuhensis</i> , <i>Dracocephalum austriacum</i> , <i>Echium russicum</i> , <i>Ligularia sibirica</i> , <i>Saxifraga hirculus</i>
Invertebrates	2	<i>Callimorpha (Euplagia) quadripunctaria</i> , <i>Maculinea nausithous</i>
Birds	77	<i>Accipiter brevipes</i> , <i>Acrocephalus melanopogon</i> , <i>Aegypius monachus</i> , <i>Alcedo atthis</i> , <i>Anthus campestris</i> , <i>Aquila heliaca</i> , <i>Aquila nipalensis</i> , <i>Aquila pomarina</i> , <i>Ardea purpurea</i> , <i>Ardeola ralloides</i> , <i>Aythya nyroca</i> , <i>Botaurus stellaris</i> , <i>Bubo bubo</i> , <i>Burhinus oedicnemus</i> , <i>Buteo rufinus</i> , <i>Calandrella brachydactyla</i> , <i>Charadrius alexandrinus</i> , <i>Chlidonias hybridus</i> , <i>Chlidonias leucopterus</i> , <i>Chlidonias niger</i> , <i>Circaetus gallicus</i> , <i>Circus aeruginosus</i> , <i>Circus cyaneus</i> , <i>Circus macrourus</i> , <i>Circus pygargus</i> , <i>Cygnus bewickii</i> , <i>Cygnus cygnus</i> , <i>Egretta alba</i> , <i>Egretta garzetta</i> , <i>Emberiza hortulana</i> , <i>Falco cherrug</i> , <i>Falco columbarius</i> , <i>Falco naumanni</i> , <i>Falco peregrinus</i> , <i>Falco vespertinus</i> , <i>Ficedula parva</i> , <i>Ficedula semitorquata</i> , <i>Gallinago media</i> , <i>Glareola nordmanni</i> , <i>Glareola pratincola</i> , <i>Grus grus</i> , <i>Gypaetus barbatus</i> , <i>Gyps fulvus</i> , <i>Haliaeetus albicilla</i> , <i>Hieraetus pennatus</i> , <i>Himantopus himantopus</i> , <i>Ixobrychus minutus</i> , <i>Lanius collurio</i> , <i>Lanius minor</i> , <i>Larus genei</i> , <i>Larus minitus</i> , <i>Limosa lapponica</i> , <i>Luscinia svecica</i> , <i>Marmotetta angustirostris</i> , <i>Melanocorypha calandra</i> , <i>Mergus albellus</i> , <i>Milvus migrans</i> , <i>Neophron percnopterus</i> , <i>Nycticorax nycticorax</i> , <i>Pandion haliaetus</i> , <i>Pelecanus crispus</i> , <i>Pelecanus onocratulus</i> , <i>Pernis apivorus</i> , <i>Phalaropus lobatus</i> , <i>Philomachus pugnax</i> , <i>Phoenicopterus ruber</i> , <i>Platalea leucorodia</i> , <i>Plegadis falcinellus</i> , <i>Pluvialis apricaria</i> , <i>Porzana porzana</i> , <i>Pyrrhocorax pyrrhocorax</i> , <i>Recurvirostra avosetta</i> , <i>Sterna caspia</i> , <i>Sterna hirundo</i> , <i>Tadorna ferruginea</i> , <i>Tringa glareola</i> , <i>Xenus cinereus</i>
Mammals	7	<i>Canis lupus</i> , <i>Capra aegagrus</i> , <i>Lutra lutra</i> , <i>Lynx lynx</i> , <i>Myotis emarginatus</i> , <i>Ursus arctos</i> , <i>Vormela peregusna</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Acantholimon gabrielianii*, *Alchemilla sevangensis*, *Astragalus coelestis*, *Cousinia fedorovii*, *Isatis sevangensis*, *Sonchus sosnowskyi*, etc. (29 Armenian endemics and 35 plant species included in the Red Data Book of plants of Armenia (2010) are growing here)
2. **Invertebrates:** *Coccinella alpigrada*, *Dorcadion cineriferum*, *Dorcadion semilucens*, *Dyschirius sevanensis*, *Hesseola solidior*, *Karabaghia bituberosa*, *Maculinea arion*, *Montana armeniaca*, *Otiorrhynchus erivanensis*, *Parnassius apollo*, *Parnassius mnemosyne*, *Ptochus sevanensis*
3. **Fish:** *Barbus goetschaicus*, *Salmo ischchan*, *Varicorhinus capoeta*
4. **Amphibians and Reptiles:** *Darevskia dahli*, *Darevskia praticola*, *Darevskia rostombekowi*, *Darevskia unisexualis*, *Eremias arguta*, *Vipera (Pelias) erivanensis*
5. **Mammals:** *Neomys schelkovnikovi*, *Plecotus macrobularis*, *Suncus etruscus*.

32 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 4).

Table 4

Code	Habitats
C1.1	Permanent oligotrophic lakes, ponds and pools
C1.224	Floating <i>Utricularia australis</i> and <i>Utricularia vulgaris</i> colonies
C1.25	Charophyte submerged carpets in mesotrophic waterbodies
C1.32	Free-floating vegetation of eutrophic waterbodies
C1.33	Rooted submerged vegetation of eutrophic waterbodies
C2.12	Hard water springs
C2.18	Acid oligotrophic vegetation of spring
C2.1A	Mesotrophic vegetation of spring brooks
C2.25	Acid oligotrophic vegetation of fast-flowing streams
C2.27	Mesotrophic vegetation of fast-flowing streams
C2.33	Mesotrophic vegetation of slow-flowing rivers
C3.4	Species-poor beds of low-growing water-fringing or amphibious vegetation
C3.51	Euro-Siberian dwarf annual amphibious swards (but excluding C3.5131 Toad-rush swards)
C3.55	Sparsely vegetated river gravel banks
C3.62	Unvegetated river gravel banks
D2.3	Transition mires and quaking bogs
D5.2	Beds of large sedges normally without free-standing water
E1.11	Euro-Siberian rock debris swards
E1.2	Perennial calcareous grassland and basic steppes
E1.3	Mediterranean xeric grassland
E1.83	Mediterraneo-montane <i>Nardus stricta</i> swards
E2.3	Mountain hay meadows
E3.3	Sub-mediterranean humid meadows
E4.3	Acid alpine and subalpine grassland
E5.5	Subalpine moist or wet tall-herb and fern stands
F5.13	Juniper matorral
F7	Spiny Mediterranean heaths (phrygana, hedgehog-heaths and related coastal cliff vegetation)
G1.11	Riverine <i>Salix</i> woodland
G1.A7	Mixed deciduous woodland of the Black and Caspian Seas
G3.9	Coniferous woodland dominated by Cupressaceae or Taxaceae
H2.3	Temperate-montane acid siliceous screes
H3.1	Acid siliceous inland cliffs

3. "KHOR VIRAP-ARMASH" AREA AM 000003

The site occupies 6998.2 ha, it is located in Ararat marz, and combines 3 former sites with neighboring territories: Khor Virap", "Arماش" and "Ararat salt marshes" (map 4, pict. 3).

There are 105 species from the Resolution 6 of the Convention present in the site (table 5).

Table 5

Species group	Number of species	Species
Plants	1	<i>Microcnemum coralloides ssp. anatolicum</i>
Fish	4	<i>Aspius aspius, Barbus capito, Sabanejewia aurata, Rhodeus sericeus amarus</i>
Reptiles	2	<i>Mauremys caspica, Testudo graeca</i>
Birds	89	<i>Accipter brevipes, Acrocephalus melanopogon, Alcedo atthis, Anser erythropus, Anthus campestris, Aquila clanga, Aquila heliaca, Aquila nipalensis, Aquila pomarina, Ardea purpurea, Ardeola ralloides, Asio flammeus, Aythya nyroca, Botaurus stellaris, Burhinus oedicnemus, Buteo rufinus, Calandrella brachydactyla, Charadrius alexandrinus, Charadrius asiaticus, Charadrius lesshenaultii, Charadrius morinellus, Chlidonias hybridus, Chlidonias leucopterus, Chlidonias niger, Ciconia ciconia, Ciconia nigra, Circaetus gallicus, Circus aeruginosus, Circus cyaneus, Circus macrourus, Circus pygargus, Coracias garullus, Crex crex, Cygnus bewickii, Cygnus cygnus, Dendrocopus syriacus, Egretta alba, Egretta garzetta, Falco biarmicus, Falco cherrug, Falco columbarius, Falco naumanni, Falco peregrinus, Falco vespertinus, Gallinago media, Gelocheilidon nilotica, Glareola nordmanni, Glareola pratincola, Grus grus, Haliaeetus albicilla, Hieraaetus pennatus, Himantopus himantopus, Hopplopterus spinosus, Ixobrychus minutus, Lanius minor, Larus genei, Larus melanocephalus, Larus minitus, Limosa lapponica, Luscinia svesica, Marmaronetta angustirostris, Melonocorypha calandra, Mergus albellus, Milvus migrans, Neophron percnopterus, Nycticorax nycticorax, Oxyura leucocephala, Pandion haliaetus, Pelecanus crispus, Pelecanus onocrotalus, Pernis apivorus, Phalacrocorax pygmaeus, Phalaropus lobatus, Philomachus pugnax, Phoenicopterus ruber, Platalea leucorodia, Plegadis falcinellus, Pluvialis apricaria, Porphyrio porphyrio, Porzana porzana, Porzana parva, Porzana pusilla, Recurvirostra avosetta, Sterna albifrons, Sterna caspia, Sterna hirundo, Tadorna ferruginea, Tringa glareola, Xenus cinereus</i>
Mammals	9	<i>Canis lupus, Lutra lutra, Miniopterus schreibersii, Myotis blythi, Myotis emarginatus, Rhinolophus blasii, Rhinolophus euryale, Rhinolophus ferrumequinum, Rhinolophus hipposideros</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Allochrysa takhtajanii, Amberboa sosnovskyi, Amberboa turanica, Astragalus paradoxus, Falcaria falcarioides, Sonchus araraticus, Linum barsegianii*, etc. (59 plant species included in the Red Data Book of plants of Armenia (2010) are growing here)
2. **Invertebrates:** *Adoretus rubenyani, Ctenopus persimilis, Epiphanops dohrni, Hyles hippophaes, Lestes macrostigma, Plebejus transcaucasicus, Sympecma paedisca, Sympecma paedisca*
3. **Amphibians and Reptiles:** *Eumeces schneideri, Rhynchocalamus melanocephalus, Trachylepis septemtaeniata*

20 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 6).

Table 6

Code	Habitats
C1.32	Free-floating vegetation of eutrophic waterbodies
C1.33	Rooted submerged vegetation of eutrophic waterbodies
C1.3411	Water crowfoot communities in shallow water
C1.4	Permanent dystrophic lakes, ponds and pools
C2.34	Eutrophic vegetation of slow-flowing rivers
C3.4	Species-poor beds of low-growing water-fringing or amphibious vegetation
C3.51	Euro-Siberian dwarf annual amphibious swards (but excluding C3.5131 Toad-rush swards)
C3.55	Sparsely vegetated river gravel banks
C3.62	Unvegetated river gravel banks
D2.3	Transition mires and quaking bogs
D6.1	Inland saltmarshes
E1.2	Perennial calcareous grassland and basic steppes
E1.3	Mediterranean xeric grassland
E3.4	Moist or wet eutrophic and mesotrophic grassland
E5.4	Moist or wet tall-herb and fern fringes and meadows
E6.2	Continental inland salt steppes
F6.8	Xero-halophile scrubs
F7	Spiny Mediterranean heaths (phrygana, hedgehog-heaths and related coastal cliff vegetation)
F9.3	Sothern riparian galleries and tickets
G1.11	Riverine Salix woodland

4. «LAKE ARPI» NATIONAL PARK AM0000004

The site occupies 56035.5 ha, it is located in Shirak marz, and includes “Lake Arpi” National park with neighboring territories (map 5, pict. 4).

There are 62 species from the Resolution 6 of the Convention present in the site (table 7).

Table 7

Species group	Number of species	Species
Plants	2	<i>Ligularia sibirica</i> , <i>Echium russicum</i>
Invertebrates	1	<i>Maculinea nausithos</i>
Fish	3	<i>Aspius aspius</i> , <i>Barbus capito</i> , <i>Sabajenewia aurata</i>
Birds	51	<i>Accipter brevipes</i> , <i>Acrocephalus melanopogon</i> , <i>Alcedo atthis</i> , <i>Aquila chrysaetos</i> , <i>Aquila nipalensis</i> , <i>Aquila pomarina</i> , <i>Ardea purpurea</i> , <i>Ardeola ralloides</i> , <i>Asio flammeus</i> , <i>Aythya nyroca</i> , <i>Bubo bubo</i> , <i>Buteo rufinus</i> , <i>Caprimulgus europaeus</i> , <i>Ciconia ciconia</i> , <i>Ciconia nigra</i> , <i>Circus aeruginosus</i> , <i>Circus cyaneus</i> , <i>Circus macrourus</i> , <i>Circus pygargus</i> , <i>Coracias garullus</i> , <i>Crex crex</i> , <i>Egretta garzetta</i> , <i>Emberiza hortulana</i> , <i>Falco cherrug</i> , <i>Falco columbarius</i> , <i>Falco naumanni</i> , <i>Falco peregrinus</i> , <i>Falco vespertinus</i> , <i>Gallinago media</i> , <i>Grus grus</i> , <i>Hieraaetus pennatus</i> , <i>Himantopus himantopus</i> , <i>Ixobrychis minutus</i> , <i>Lanius collurio</i> , <i>Lanius minor</i> , <i>Larus genei</i> , <i>Limosa lapponica</i> , <i>Lullula arborea</i> , <i>Luscinia svecica</i> , <i>Milvus migrans</i> , <i>Neophron percnopterus</i> , <i>Nycticorax nycticorax</i> , <i>Pelecanus crispus</i> , <i>Pelecanus onocratulus</i> , <i>Pernis apivorus</i> , <i>Pyrrocorax pyrrocorax</i> , <i>Recurvirostra avosetta</i> , <i>Sterna hirundo</i> , <i>Tadorna ferruginea</i> , <i>Tringa glareola</i> , <i>Xenus cinereus</i>
Mammals	5	<i>Canis lupus</i> , <i>Lutra lutra</i> , <i>Myotis blythii</i> , <i>Ursus arctos</i> , <i>Vormela peregusna</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants** – *Dianthus gabrielianae*, *Iris sibirica*, *Nuphar luteum*, *Ribes achurjanii*, etc. (17 plant species included in the Red Data Book of plants of Armenia (2010) are growing here)
2. **Invertebrates** - *Gomphocerus armeniacus*, *Lithophilus araxidis*, *Maculinea arion*, *Montana armeniaca*, *Otiorrhynchus erivanensis*, *Parnassius mnemosyne*, *Stenobothrus sviridenkoi*, *Xantholinus armeniacus*
3. **Amphibians and Reptiles** – *Vipera darevskyi*, *Vipera (Pelias) erivanensis*
4. **Mammals** - *Spermophilus xanthopymnus*

19 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 8).

Table 8

Code	Habitats
C1.25	Charophyte submerged carpets in mesotrophic waterbodies
C1.32	Free-floating vegetation of eutrophic waterbodies
C1.3411	Water crowfoot communities in shallow water
C2.18	Acid oligotrophic vegetation of spring
C2.1A	Mesotrophic vegetation of spring brooks
C2.25	Acid oligotrophic vegetation of fast-flowing streams
C2.27	Mesotrophic vegetation of fast-flowing streams
C2.33	Mesotrophic vegetation of slow-flowing rivers
D2.3	Transition mires and quaking bogs
D4.1	Rich fens, including eutrophic tall herb fens and calcareous flushes sand soaks
D5.2	Beds of large sedges normally without free-standing water
E1.11	Euro-Siberian rock debris swards
E1.2	Perennial calcareous grassland and basic steppes
E2.3	Mountain hay meadows
E3.3	Sub-mediterranean humid meadows
E3.4	Moist or wet eutrophic and mesotrophic grassland
E3.5	Moist or wet oligotrophic grassland
E5.5	Subalpine moist or wet tall-herb and fern stands
H2.3	Temperate-montane acid siliceous screes

5. "IDJEVAN" AREA AM0000005

The site occupies 47593.1 ha, it is located in Tavush marz and combines 2 former sites: "Idjevan" and "Lasti Ver" with neighboring territories. It includes "Idjevan" and "Huzel nut" State sanctuaries (map 6, pict. 5).

There are 40 species from the Resolution 6 of the Convention present in the site (table 9).

Table 9

Species group	Number of species	Species
Plants	2	<i>Echium russicum</i> , <i>Steveniella satyrioides</i>
Invertebrates	3	<i>Callimorpha (Euplagia) quadripunctaria</i> , <i>Cerambyx cerdo</i> , <i>Rosalia alpina</i>
Reptiles	2	<i>Emys orbicularis</i> , <i>Testudo graeca</i>
Birds	24	<i>Aquila chrysaetos</i> , <i>Aquila pomarina</i> , <i>Bubo bubo</i> , <i>Buteo rufinus</i> , <i>Caprimulgus europaeus</i> , <i>Ciconia nigra</i> , <i>Circaetus gallicus</i> , <i>Crex crex</i> , <i>Dendrocopos medius</i> , <i>Dryocopus martius</i> , <i>Emberiza hortulana</i> , <i>Falco peregrinus</i> , <i>Ficedula parva</i> , <i>Ficedula semitorquata</i> , <i>Gypaetus barbatus</i> , <i>Gyps fulvus</i> , <i>Hieraaetus pennatus</i> , <i>Lanius collurio</i> , <i>Lullula arborea</i> , <i>Luscinia svecica</i> , <i>Milvus migrans</i> , <i>Neophron percnopterus</i> , <i>Pernis apivorus</i> , <i>Pyrrhocorax pyrrhocorax</i>
Mammals	9	<i>Canis lupus</i> , <i>Lutra lutra</i> , <i>Lynx lynx</i> , <i>Myotis blythii</i> , <i>Myotis bechsteini</i> , <i>Miniopterus schreibersii</i> , <i>Rhinolophus ferrumequinum</i> , <i>Rhinolophus hipposideros</i> , <i>Ursus arctos</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Colchicum goharae*, *Corylus colurna*, *Galanthus artjuschenkoae*, *Hypericum eleonora*, *Merendera mirzoevae* etc. (24 plant species included in the Red Data Book of plants of Armenia (2010) are growing here)
2. **Invertebrates:** *Aeloides figuratus*, *Cardiophorus somcheticus*, *Ctenicera pectinicornis*, *Duvalius yatsenkohmelevskii*, *Isomira armena*, *Maculinea arion*, *Onychogomphus assimilis*, *Parnassius mnemosyne*, *Proserpinus proserpina*
3. **Amphibians and Reptiles:** *Darevskia dahli*, *Darevskia praticola*, *Darevskia rostombekowi*, *Telescopus fallax*
4. **Mammals:** *Capreolus caprelous*, *Felis silvestris*, *Tadarida teniotis*

32 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 10).

Table 10

Code	Habitats
C1.32	Free-floating vegetation of eutrophic waterbodies
C2.1B	Eutrophic vegetation of spring brooks
C2.26	Lime-rich oligotrophic vegetation of fast-flowing streams
C2.27	Mesotrophic vegetation of fast-flowing streams
C2.28	Eutrophic vegetation of fast-flowing streams
C2.33	Mesotrophic vegetation of slow-flowing rivers
C2.34	Eutrophic vegetation of slow-flowing rivers
C3.4	Species-poor beds of low-growing water-fringing or amphibious vegetation
C3.55	Sparsely vegetated river gravel banks
C3.62	Unvegetated river gravel banks
D5.2	Beds of large sedges normally without free-standing water
E1.2	Perennial calcareous grassland and basic steppes
E1.3	Mediterranean xeric grassland
E2.3	Mountain hay meadows
E3.4	Moist or wet eutrophic and mesotrophic grassland
E5.4	Moist or wet tall-herb and fern fringes and meadows
E5.5	Subalpine moist or wet tall-herb and fern stands
F3.245	Eastern Mediterranean deciduous thickets
F3.247	Ponto-Sarmatic deciduous thickets
F5.13	Juniper matorral
F7	Spiny Mediterranean heaths (phrygana, hedgehog-heaths and related coastal cliff vegetation)
F9.1	Riverine scrub
G1.11	Riverine Salix woodland
G1.22	Mixed Quercus - Ulmus - Fraxinus woodland of great rivers
G1.6	Fagus woodland
G1.A1	Quercus - Fraxinus - Carpinus betulus woodland on eutrophic and mesotrophic soils
G1.A4	Ravine and slope woodlan
G1.A7	Mixed deciduous woodland of the Black and Caspian Seas
G3.9	Coniferous woodland dominated by Cupressaceae or Taxaceae
H1	Terrestrial underground caves, cave systems, passages and waterbodies
H2.4	Temperate-montane calcareous and ultra-basic screes
H3.2	Basic and ultra-basic inland cliffs

6. "DJADJUR" AREA AM000006

The site occupies 1711.2 ha, and is located in Shirak marz (map 7, pict. 6).

There are 36 species from the Resolution 6 of the Convention present in the site (table 11).

Table 11

Species group	Number of species	Species
Plants	3	<i>Dracocephalum austriacum, Echium russicum, Ligularia sibirica</i>
Invertebrates	1	<i>Callimorpha (Euplagia) quadripunctaria</i>
Birds	26	<i>Accipiter brevipes, Aquila chrysaetos, Aquila heliaca, Aquila nipalensis, Aquila pomarina, Bubo bubo, Buteo rufinus, Caprimulgus europaeus, Circaetus gallicus, Circus aeruginosus, Circus cyaneus, Circus macrourus, Circus pygargus, Crex crex, Emberiza hortulana, Falco naumanni, Falco peregrinus, Falco vespertinus, Hieraaetus pennatus, Lanius collurio, Lullula arborea, Luscinia svesica, Milvus migrans, Pandion haliaetus, Pernis apivorus, Pyrrhocorax pyrrhocorax</i>
Mammals	6	<i>Canis lupus, Miniopterus schreibersii, Myotis blythii, Rhinolophus ferrumequinum, Ursus arctos, Vormela peregusna</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Allium struzlianum, Asphodeline taurica, Asperula affinis, Paracaryum laxiflorum, Rhaponticoides tamaniana* etc. (24 plant species included in the Red Data Book of plants of Armenia (2010) are growing here)
2. **Invertebrates:** *Agrodiaetus ninae, Agrodiaetus turcicus, Maculinea alcon, Parnassius mnemosyne, Proserpinus proserpina*

17 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 12).

Table 12

Code	Habitats
C2.19	Lime-rich oligotrophic vegetation of spring brooks
E1.11	Euro-Siberian rock debris swards
E1.2	Perennial calcareous grassland and basic steppes
E3.4	Moist or wet eutrophic and mesotrophic grassland
E4.4	Calcareous alpine and subalpine grassland
F7	Spiny Mediterranean heaths (phrygana, hedgehog-heaths and related coastal cliff vegetation)
H2.4	Temperate-montane calcareous and ultra-basic screes
H3.2	Basic and ultra-basic inland cliffs

7. "LORI LAKES" AREA AM000007

The site occupies 1596.4 ha, and is located in Lori marz (map 8, pict. 7).

There are 36 species from the Resolution 6 of the Convention present in the site (table 13).

Table13

Species group	Number of species	Species
Plants	1	<i>Echium russicum</i>
Invertebrates	3	<i>Leucorrhinia pectoralis</i> , <i>Maculinea nausithous</i> , <i>Vertigo angustior</i>
Birds	28	<i>Accipiter brevipes</i> , <i>Acrocephalus melanopogon</i> , <i>Asio flammeus</i> , <i>Aquila nipalensis</i> , <i>Aquila pomarina</i> , <i>Botaurus stellaris</i> , <i>Buteo rufinus</i> , <i>Ciconia ciconia</i> , <i>Circus aeruginosus</i> , <i>Circus cyaneus</i> , <i>Circus macrourus</i> , <i>Circus pygargus</i> , <i>Crex crex</i> , <i>Egretta alba</i> , <i>Falco columbarius</i> , <i>Falco naumanni</i> , <i>Falco peregrinus</i> , <i>Falco vespertinus</i> , <i>Gallinago media</i> , <i>Grus grus</i> , <i>Hieraetus pennatus</i> , <i>Himantopus himantopus</i> , <i>Lanius collurio</i> , <i>Milvus migrans</i> , <i>Neophron</i> , <i>percnopterus</i> , <i>Nycticorax nycticorax</i> , <i>Pernis apivorus</i> , <i>Tringa glareola</i>
Mammals	4	<i>Canis lupus</i> , <i>Lutra lutra</i> , <i>Miniopterus schreibersii</i> , <i>Myotis blythii</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Carex bohemica*, *Chamaenerion dodonaei*, *Nymphaea alba*, *Potentilla erecta*, *Ranunculus lingua*, *Sagittaria sagittifolia*, *Sagittaria trifolia*, *Salvinia natans*, *Utricularia intermedia*
2. **Birds:** *Larus armenicus*
3. **Amphibians and Reptiles:** *Darevskia dahli*, *Ommatotriton ophryticus*

15 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 14).

Table 14

Code	Habitats
C1.224	Floating <i>Utricularia australis</i> and <i>Utricularia vulgaris</i> colonies
C1.225	Floating <i>Salvinia natans</i> mats
C1.25	Charophyte submerged carpets in mesotrophic waterbodies
C1.32	Free-floating vegetation of eutrophic waterbodies
C1.33	Rooted submerged vegetation of eutrophic waterbodies
C2.1A	Mesotrophic vegetation of spring brooks
C2.27	Mesotrophic vegetation of fast-flowing streams
C3.4	Species-poor beds of low-growing water-fringing or amphibious vegetation
D2.3	Transition mires and quaking bogs
D4.1	Rich fens, including eutrophic tall herb fens and calcareous flushes and sand soaks
D5.2	Beds of large sedges normally without free-standing water
E2.3	Mountain hay meadows
E3.4	Moist or wet eutrophic and mesotrophic grassland
E3.5	Moist or wet oligotrophic grassland
E5.4	Moist or wet tall-herb and fern fringes and meadows

8. "IMPASSABLE BRUSHWOOD" AREA AM000008

The site occupies 274,4 ha, and is located in Syunik marz (map 9, pict. 8).

There are 25 species from the Resolution 6 of the Convention present in the site (table 15).

Table 15

Species group	Number of species	Species
Plants	1	<i>Paeonia tenuifolia</i>
Invertebrates	2	<i>Callimorpha (Euplagia) quadripunctaria</i> , <i>Cerambyx cerdo</i>
Reptiles	1	<i>Emys orbicularis</i>
Birds	21	<i>Accipiter brevipes</i> , <i>Aquila chrysaetos</i> , <i>Aquila nipalensis</i> , <i>Aquila pomarina</i> , <i>Bubo bubo</i> , <i>Buteo rufinus</i> , <i>Caprimulgus europaeus</i> , <i>Circus cyaneus</i> , <i>Circus macrourus</i> , <i>Circus pygargus</i> , <i>Coracias garullus</i> , <i>Falco peregrinus</i> , <i>Gypaetus barbatus</i> , <i>Gyps fulvus</i> , <i>Hieraaetus pennatus</i> , <i>Lanius collurio</i> , <i>Lullula arborea</i> , <i>Milvus migrans</i> , <i>Neophron percnopterus</i> , <i>Pernis apivorus</i> , <i>Pyrrhocorax pyrrhocorax</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Calendula persica*, *Cousinia gabrieljanae*, *Iris lineolata*, *Ophrys oestrifera*, *Tulipa sosnovskyi*
2. **Invertebrates:** *Hyles hyppophaes*, *Papilio alexanor*, *Parnassius mnemosyne*, *Probatiscus vicinus*, *Proserpinus proserpina*
3. **Amphibians and Reptiles:** *Montivipera raddei*, *Trachylepis septemtaeniata*, *Zamenis hohenackeri*, *Telescopus fallax*
4. **Mammals:** *Felis silvestris*

8 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 16).

Table16

Code	Habitats
E1.11	Euro-Siberian rock debris swards
E1.3	Mediterranean xeric grassland
F3.245	Eastern Mediterranean deciduous thickets
F3.247	Ponto-Sarmatic deciduous thickets
F7	Spiny Mediterranean heaths (phrygana, hedgehog-heaths and related coastal cliff vegetation)
G1.22	Mixed <i>Quercus</i> - <i>Ulmus</i> - <i>Fraxinus</i> woodland of great rivers
G1.A7	Mixed deciduous woodland of the Black and Caspian Seas
H3.1	Acid siliceous inland cliffs

9. "DJERMUK" AREA AM000009

The site occupies 35015,0ha, and is located in Vayots Dzor marz (map 10, pict. 9).
There are 53 species from the Resolution 6 of the Convention present in the site (table 17).

Table 17

Species group	Number of species	Species
Plants	1	<i>Echium russicum</i>
Invertebrates	1	<i>Callimorpha (Euplagia) quadripunctaria</i>
Fish	3	<i>Aspius aspius, Barbus capito, Sabanejewia aurata</i>
Birds	34	<i>Accipter brevipes, Aegyptius monachus, Alcedo atthis, Anthus campestris, Aquila chrysaetos, Aquila nipalensis, Aquila pomarina, Ardea purpurea, Bubo bubo, Buteo rufinus, Caprimulgus europaeus, Circaetus gallicus, Coracias garullus, Crex crex, Dendrocopus syriacus, Emberiza hortulana, Falco cherrug, Falco peregrinus, Gypaetus barbatus, Gyps fulvus, Hieraaetus pennatus, Ixobrychus minutus, Lanius collurio, Lanius minor, Lullula arborea, Luscinia svesica, Milvus migrans, Neophron percnopterus, Pernis apivorus, Porzana porzana, Pyrrhocorax pyrrhocorax, Sterna hirundo, Sylvia nisoria, Tringa glareola</i>
Mammals	14	<i>Canis lupus, Capra aegagrus, Lutra lutra, Lynx lynx, Miniopterus schreibersii, Myotis bechsteini, Myotis blythii, Myotis emarginatus, Rhinolophus euryale, Rhinolophus ferrumequinum, Rhinolophus hipposideros, Rhinolophus mehelyi, Ursus arctos, Vormela peregusna</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Grossheimia caroli-henrici*, *Gladiolus hajastanicus*, *Tomanthea daralaghezica*, *Cephalaria nachiczewanica*, etc. (20 plant species included in the Red Data Book of plants of Armenia (2010) are growing here)
2. **Invertebrates:** *Deltomerus khnzoriani*, *Hyles hippophaes*, *Papilio alexanor*, *Poecilimonella armeniaca*, *Phytoecia pici*, *Proserpinus proserpina*, *Trechus dzhermukensis*, *Sympecma paedisca*
3. **Amphibians and Reptiles:** *Montivipera raddei*, *Telescopus fallax*, *Zamenis hohenackeri*
4. **Mammals:** *Capreolus capreolus*, *Felis sylvestris*, *Histrix indica*

28 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 18).

Table 18

Code	Habitats
C1.1	Permanent oligotrophic lakes, ponds and pools
C2.12	Hard water springs
C2.18	Acid oligotrophic vegetation of spring
C2.19	Lime-rich oligotrophic vegetation of spring brooks
C2.1A	Mesotrophic vegetation of spring brooks
C2.25	Acid oligotrophic vegetation of fast-flowing streams
C3.55	Sparsely vegetated river gravel banks
C3.62	Unvegetated river gravel banks
D2.3	Transition mires and quaking bogs
D4.1	Rich fens, including eutrophic tall herb fens and calcareous flush sand soaks
D5.2	Beds of large sedges normally without free-standing water
E1.11	Euro-Siberian rock debris swards
E1.2	Perennial calcareous grassland and basic steppes
E1.83	Mediterraneo-montane <i>Nardus stricta</i> swards
E2.3	Mountain hay meadow
E3.3	Sub-mediterranean humid meadows
E3.4	Moist or wet eutrophic and mesotrophic grassland
E4.3	Acid alpine and subalpine grassland
E5.4	Moist or wet tall-herb and fern fringes and meadows
F5.13	Juniper matorral
F7	Spiny Mediterranean heaths (phrygana, hedgehog-heaths and related coastal cliff vegetation)
F9.1	Riverine scrub
G1.11	Riverine <i>Salix</i> woodland
G1.A1	<i>Quercus</i> – <i>Fraxinus</i> – <i>Carpinus betulus</i> woodland on eutrophic and mesotrophic soils
G3.9	Coniferous woodland dominated by <i>Cupressaceae</i> or <i>Taxaceae</i>
H1	Terrestrial underground caves, cave systems, passages and waterbodies
H2.3	Temperate-montane acid siliceous screes
H3.1	Acid siliceous inland cliffs

10. "ARAGATS ALPINE" AREA AM0000010

The site occupies 9446.7 ha, and is located in Aragatsotn marz (map 11, pict. 10).
There are 20 species from the Resolution 6 of the Convention present in the site (table 19).

Table 19

Species group	Number of species	Species
Plants	2	<i>Echium russicum</i> , <i>Saxifraga hirculus</i>
Birds	17	<i>Aegypius monachus</i> , <i>Aquila chrysaetos</i> , <i>Aquila pomarina</i> , <i>Buteo rufinus</i> , <i>Circus gallicus</i> , <i>Emberiza hortulana</i> , <i>Falco peregrinus</i> , <i>Gypaetus barbatus</i> , <i>Gyps fulvus</i> , <i>Hieraetus pennatus</i> , <i>Lanius collurio</i> , <i>Lullula arborea</i> , <i>Luscinia svecica</i> , <i>Milvus migrans</i> , <i>Neophron percnopterus</i> , <i>Pernis apivorus</i> , <i>Pyrrhocorax pyrrhocorax</i>
Mammals	1	<i>Canis lupus</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Carex oligantha*, *Delphinium foetidum*, *Draba araratica*, *Draba hispida*, *Didymophsa aucheri*, *Erodium sosnowskyanum*, *Pseudovesicaria digitata*
2. **Invertebrates:** *Artogeia bowdeni*, *Bombus alagesianus*, *Trechus infuscatus*

9 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 20).

Table 20

Code	Habitats
C1.1	Permanent oligotrophic lakes, ponds and pools
C2.18	Acid oligotrophic vegetation of spring
C2.25	Acid oligotrophic vegetation of fast-flowing streams
E1.83	Mediterraneo-montane <i>Nardus stricta</i> swards
E3.4	Moist or wet eutrophic and mesotrophic grassland
E4.3	Acid alpine and subalpine grassland
F5.13	<i>Juniper matorral</i>
H2.3	Temperate-montane acid siliceous screes
H3.1	Acid siliceous inland cliffs

11. "DILIDJAN" NATIONAL PARK AM000011

The site occupies 38634.3 ha, and is located in Tavush marz (map 12, pict. 11).

There are 56 species from the Resolution 6 of the Convention present in the site (table 21).

Table 21

Species group	Number of species	Species
Plants	2	<i>Echium russicum</i> , <i>Ligularia sibirica</i>
Invertebrates	3	<i>Callimorpha (Euplagia) quadripunctaria</i> , <i>Cerambyx cerdo</i> , <i>Rosalia alpina</i>
Fish	1	<i>Sabanejewia aurata</i>
Birds	42	<i>Accipter brevipes</i> , <i>Acrocephalus melanopogon</i> , <i>Aegypius monachus</i> , <i>Alcedo atthis</i> , <i>Aquila clanga</i> , <i>Aquila chrysaetos</i> , <i>Aquila heliaca</i> , <i>Aquila nipalensis</i> , <i>Aquila pomarina</i> , <i>Asio flammeus</i> , <i>Bubo bubo</i> , <i>Buteo rufinus</i> , <i>Caprimulgus europaeus</i> , <i>Ciconia nigra</i> , <i>Circaetus gallicus</i> , <i>Circus aeruginosus</i> , <i>Circus cyaneus</i> , <i>Circus macrourus</i> , <i>Circus pygargus</i> , <i>Crex crex</i> , <i>Dendrocopos medius</i> , <i>Dryocopus martius</i> , <i>Emberiza hortulana</i> , <i>Falco cherrug</i> , <i>Falco columbarius</i> , <i>Falco peregrines</i> , <i>Falco vespertinus</i> , <i>Ficedula parva</i> , <i>Ficedula semitorquata</i> , <i>Grus grus</i> , <i>Gypaetus barbatus</i> , <i>Gyps fulvus</i> , <i>Hieraetus pennatus</i> , <i>Lanius collurio</i> , <i>Lanius minor</i> , <i>Lullula arborea</i> , <i>Luscinia svecica</i> , <i>Melonocorypha calandra</i> , <i>Milvus migrans</i> , <i>Neophron percnopterus</i> , <i>Pernis apivorus</i> , <i>Pyrrhocorax pyrrhocorax</i>
Mammals	8	<i>Canis lupus</i> , <i>Lutra lutra</i> , <i>Lynx lynx</i> , <i>Myotis bechsteinii</i> , <i>Myotis blythii</i> , <i>Rhinolophus ferrumequinum</i> , <i>Rhinolophus hipposideros</i> , <i>Ursus arctos</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Atropa belladonna*, *Epipogium aphyllum*, *Fritillaria collina*, *Muscari pallens*, *Polystichum braunii* etc. (14 plant species included in the Red Data Book of plants of Armenia (2010) are growing here)
2. **Invertebrates:** *Ctenicera pectinicornis*, *Isomira armena*, *Maculineaalcon*, *Parnassius apollo*, *Parnassius mnemosyne*, *Sympecma paedisca*
3. **Amphibians and Reptiles:** *Darevskia praticola*, *Darevskia rostombekowi*, *Vipera (Pelias) eriwanensis*
4. **Mammals:** *Capreolus capreolus*, *Felis silvestris*, *Neomys schelkovnikovii*, *Tadarida teniotis*

29 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 22).

Table 22

Code	Habitats
C1.32	Free-floating vegetation of eutrophic waterbodies
C2.12	Hard water springs
C2.18	Acid oligotrophic vegetation of spring
C2.1A	Mesotrophic vegetation of spring brooks
C2.1B	Eutrophic vegetation of spring brooks
C2.25	Acid oligotrophic vegetation of fast-flowing streams
C2.26	Lime-rich oligotrophic vegetation of fast-flowing streams
C2.28	Eutrophic vegetation of fast-flowing streams
C3.55	Sparsely vegetated river gravel banks
C3.62	Unvegetated river gravel banks
D2.3	Transition mires and quaking bogs
D4.1	Rich fens, including eutrophic tall herb fens and calcareous flush sand soaks
E1.2	Perennial calcareous grassland and basic steppes
E1.3	Mediterranean xeric grassland
E2.3	Mountain hay meadows
E3.4	Moist or wet eutrophic and mesotrophic grassland
E3.5	Moist or wet oligotrophic grassland
E5.4	Moist or wet tall-herb and fern fringes and meadows
E5.5	Subalpine moist or wet tall-herb and fern stands
F3.245	Eastern Mediterranean deciduous thickets
F9.1	Riverine scrub
G1.11	Riverine Salix woodland
G1.22	Mixed Quercus - Ulmus - Fraxinus woodland of great rivers
G1.6	Fagus woodland
G1.A1	Quercus - Fraxinus - Carpinus betulus woodland on eutrophic and mesotrophic soils
G1.A4	Ravine and slope woodland
G1.A7	Mixed deciduous woodland of the Black and Caspian Seas
G3.4E	Ponto-Caucasian Pinus sylvestris forests
G3.9	Coniferous woodland dominated by Cupressaceae or Taxaceae

12. "GNISHIK" AREA AM000012

The site occupies 30300.1 ha, and is located in Vayots Dzor marz (map 13, pict. 12).
There are 59 species from the Resolution 6 of the Convention present in the site (table 23).

Table 23

Species group	Number of species	Species
Plants	2	<i>Dactylorhiza chuhensis</i> , <i>Echium russicum</i>
Invertebrates	2	<i>Callimorpha (Euplagia) quadripunctaria</i> , <i>Pseudophilotis bavius</i>
Fish	3	<i>Aspius aspius</i> , <i>Barbus capito</i> , <i>Sabanejewia aurata</i>
Reptiles	1	<i>Mauremys caspica</i>
Birds	37	<i>Accipiter brevipes</i> , <i>Aegypius monachus</i> , <i>Anthus campestris</i> , <i>Aquila chrysaetos</i> , <i>Aquila heliaca</i> , <i>Aquila nipalensis</i> , <i>Aquila pomarina</i> , <i>Bubo bubo</i> , <i>Buteo rufinus</i> , <i>Calandrella brachydactyla</i> , <i>Caprimulgus europaeus</i> , <i>Ciconia ciconia</i> , <i>Circaetus gallicus</i> , <i>Circus aeruginosus</i> , <i>Circus cyaneus</i> , <i>Circus macrourus</i> , <i>Circus pygargus</i> , <i>Coracias garullus</i> , <i>Dendrocopos syriacus</i> , <i>Emberiza hortulana</i> , <i>Falco naumanni</i> , <i>Falco peregrinus</i> , <i>Falco vespertinus</i> , <i>Grus grus</i> , <i>Gypaetus barbatus</i> , <i>Gyps fulvus</i> , <i>Hieraetus pennatus</i> , <i>Lanius collurio</i> , <i>Lanius minor</i> , <i>Lullula arborea</i> , <i>Luscinia svecica</i> , <i>Melocorypha calandra</i> , <i>Milvus migrans</i> , <i>Neophron percnopterus</i> , <i>Pernis apivorus</i> , <i>Pyrhocorax pyrrhocorax</i> , <i>Sylvia nissoria</i>
Mammals	14	<i>Canis lupus</i> , <i>Capra aegagrus</i> , <i>Lutra lutra</i> , <i>Lynx lynx</i> , <i>Miniopterus schreibersii</i> , <i>Myotis blythii</i> , <i>Myotis emarginatus</i> , <i>Panthera pardus</i> , <i>Rhinolophus euryale</i> , <i>Rhinolophus ferrumequinum</i> , <i>Rhinolophus hipposideros</i> , <i>Rhinolophus mehelyi</i> , <i>Ursus arctos</i> , <i>Vormela peregusna</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Astragalus karakuschensis*, *Centranthus longiflorus*, *Echinops ritro*, *Gundelia aragatsi* ssp. *steineri*, *Hypericum formosissimum*, *Onobrychis takhtadjanii*, *Rhaponticoides tamanianae* etc. (50 plant species included in the Red Data Book of plants of Armenia (2010) are growing here)
2. **Invertebrates:** *Armenohelops armeniacus*, *Dorcadion gorbunovi*, *Agrodiaetus eriwanensis*, *Agrodiaetus ninae*, *Agrodiaetus surakovi*, *Orculella ruderalis*, *Poecilimonella armeniaca*, *Turanena scalaris*
3. **Amphibians and Reptiles:** *Eumeces schneideri*, *Montivipera raddei*, *Pelobates syriacus*, *Telescopus fallax*, *Trachylepis septemtaeniata*, *Zamenis hohenackeri*
4. **Mammals:** *Barbastella leucomelas*, *Felis silvestris*, *Hemiechinus auritus*, *Myotis shaubi*

36 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 24).

Table 24

Code	Habitats
C1.32	Free-floating vegetation of eutrophic waterbodies
C1.3411	Water crowfoot communities in shallow water
C2.18	Acid oligotrophic vegetation of spring
C2.19	Lime-rich oligotrophic vegetation of spring brooks
C2.1A	Mesotrophic vegetation of spring brooks
C2.1B	Eutrophic vegetation of spring brooks
C2.25	Acid oligotrophic vegetation of fast-flowing streams
C2.26	Lime-rich oligotrophic vegetation of fast-flowing streams
C2.27	Mesotrophic vegetation of fast-flowing streams
C2.33	Mesotrophic vegetation of slow-flowing rivers
C2.34	Eutrophic vegetation of slow-flowing rivers
C3.55	Sparsely vegetated river gravel banks
C3.62	Unvegetated river gravel banks
D4.1	Rich fens, including eutrophic tall herb fens and calcareous flush sand soaks
E1.11	Euro-Siberian rock debris swards
E1.2	Perennial calcareous grassland and basic steppes
E1.3	Mediterranean xeric grassland
E1.83	Mediterraneo-montane <i>Nardus stricta</i> swards
E2.3	Mountain hay meadows
E3.3	Sub-mediterranean humid meadows
E3.4	Moist or wet eutrophic and mesotrophic grassland
E3.5	Moist or wet oligotrophic grassland
E4.4	Calcareous alpine and subalpine grassland
E5.4	Moist or wet tall-herb and fern fringes and meadows
F5.13	Juniper matorral
F7	Spiny Mediterranean heaths (phrygana, hedgehog-heaths and related coastal cliff vegetation)
F9.1	Riverine scrub
F9.3	Southern riparian galleries and thickets
G1.11	Riverine <i>Salix</i> woodland
G1.A7	Mixed deciduous woodland of the Black and Caspian Seas
G3.9	Coniferous woodland dominated by Cupressaceae or Taxaceae
H1	Terrestrial underground caves, cave systems, passages and waterbodies
H2.4	Temperate-montane calcareous and ultra-basic screes
H2.6	Calcareous and ultra-basic screes of warm exposures
H3.2	Basic and ultra-basic inland cliffs
H3.511	Limestone pavements

13. "GORHAJK" AREA AM0000013

The site occupies 4056.7 ha, and is located in Syunik marz (map 14, pict. 13).
There are 31 species from the Resolution 6 of the Convention present in the site (table 25).

Table 25

Species group	Number of species	Species
Plants	1	<i>Echium russicum</i>
Birds	26	<i>Accipiter brevipes, Alcedo atthis, Aquila chrysaetos, Aquila pomarina, Buteo rufinus, Caprimulgus europaeus, Circaetus gallicus, Circus aeruginosus, Circus macrourus, Circus pygargus, Crex crex, Emberiza hortulana, Falco naumanni, Gypaetus barbatus, Gyps fulvus, Hieraaetus pennatus, Lanius collurio, Lullula arborea, Luscinia svecica, Milvus migrans, Neophron percnopterus, Pernis apivorus, Porzana porzana, Pyrrhocorax pyrrhocorax, Sterna hirundo, Tringa glareola</i>
Mammals	4	<i>Canis lupus, Myotis blythi, Rhinolophus hipposideros, Vormela peregusna</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Gladiolus kotschyanus* ssp. *distichus*, *Lomatogonium carinthiacum*, *Myosotis daralaghezica*, *Rorippa spaskajae*
2. **Invertebrates:** *Dorcadion bistriatum*, *Dorcadion sisianense*, *Parnassius apollo*

9 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 26).

Table 26

Code	Habitats
C2.18	Acid oligotrophic vegetation of spring
C2.25	Acid oligotrophic vegetation of fast-flowing streams
C2.27	Mesotrophic vegetation of fast-flowing streams
C2.33	Mesotrophic vegetation of slow-flowing rivers
C3.55	Sparsely vegetated river gravel banks
D5.2	Beds of large sedges normally without free-standing water
E2.3	Mountain hay meadows
E3.5	Moist or wet oligotrophic grassland
E4.3	Acid alpine and subalpine grassland
H3.1	Acid siliceous inland cliffs

14. "AREVIK" NATIONAL PARK AM000014

The site occupies 60804.7 ha, and is located in Syunik marz. It includes "Arevik" National park with neighboring territories (map 15, pict. 14).

There are 66 species from the Resolution 6 of the Convention present in the site (table 27).

Table 27

Species group	Number of species	Species
Plants	2	<i>Echium russicum</i> , <i>Steveniella satyrioides</i>
Invertebrates	2	<i>Callimorpha (Euplagia) quadripunctaria</i> , <i>Cerambyx cerdo</i>
Fish	4	<i>Aspius aspius</i> , <i>Barbus capito</i> , <i>Rhodeus sericeus amarus</i> , <i>Sabanejewia aurata</i>
Reptiles	2	<i>Mauremys caspica</i> , <i>Testudo graeca</i>
Birds	41	<i>Accipiter brevipes</i> , <i>Acrocephalus melanopogon</i> , <i>Alcedo atthis</i> , <i>Anthus campestris</i> , <i>Aquila chrysaetos</i> , <i>Aquila heliaca</i> , <i>Aquila nipalensis</i> , <i>Aquila pomarina</i> , <i>Ardeola ralloides</i> , <i>Botaurus stellaris</i> , <i>Bubo bubo</i> , <i>Buteo rufinus</i> , <i>Calandrella brachydactyla</i> , <i>Caprimulgus europaeus</i> , <i>Ciconia nigra</i> , <i>Circus aeruginosus</i> , <i>Circus cyaneus</i> , <i>Coracias garullus</i> , <i>Dendrocopos medius</i> , <i>Dendrocopos syriacus</i> , <i>Emberiza hortulana</i> , <i>Falco peregrinus</i> , <i>Ficedula semitorquata</i> , <i>Gypaetus barbatus</i> , <i>Gyps fulvus</i> , <i>Hieraetus pennatus</i> , <i>Ixobrychus minutus</i> , <i>Lanius collurio</i> , <i>Lanius minor</i> , <i>Lullula arborea</i> , <i>Luscinia svecica</i> , <i>Milvus migrans</i> , <i>Neophron percnopterus</i> , <i>Nycticorax nycticorax</i> , <i>Oenanthe pleschanka</i> , <i>Pelecanus onocrotalus</i> , <i>Pernis apivorus</i> , <i>Porphyrio porphyrio</i> , <i>Pyrrhocorax pyrrhocorax</i> , <i>Sylvia nisoria</i>
Mammals	15	<i>Canis lupus</i> , <i>Capra aegagrus</i> , <i>Lutra lutra</i> , <i>Lynx lynx</i> , <i>Miniopterus schreibersii</i> , <i>Myotis blythii</i> , <i>Myotis emarginatus</i> , <i>Panthera pardus</i> , <i>Rhinolophus blasii</i> , <i>Rhinolophus euryale</i> , <i>Rhinolophus ferrumequinum</i> , <i>Rhinolophus hipposideros</i> , <i>Ursus arctos</i> , <i>Vormela peregusna</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Acantholimon festucaceum*, *Allium vasilevskajae*, *Amygdalus nairica*, *Colutea komarovii*, *Scrophularia takhtadjanii*, etc. (94 plant species included in the Red Data Book of plants of Armenia (2010) are growing here)
2. **Invertebrates:** *Acmaeoderella pelltula*, *Agrodiaetus damonides*, *Agrodiaetus neglectus*, *Anthaxia breviformis*, *Anthaxia superba*, *Asias aghababiani*, *Axiopoena karelini*, *Coenagrion scitulum*, *Colias aurorina*, *Entomogonus amandanus*, *Hyles hyppophaes*, *Machimus erevanensis*, *Orthetrum sabina*, *Papilio alexanor*, *Phytodrymadusa armeniaca*, *Plebejus transcaucasicus*, *Proserpinus proserpina*, *Sphaerobothrys aghababiani*, *Tetramorium levigatus*, *Tomares romanovi*
3. **Amphibians and Reptiles:** *Eremias pleskei*, *Eumeces schneideri*, *Montivipera raddei*, *Rhynchocalamus melanocephalus*, *Telescopus fallax*, *Trachylepis septemtaeniata*, *Zamenis hohenackeri*,
4. **Mammals:** *Capreolus capreolus*, *Felis chaus*, *Felis silvestris*, *Hemiechinus auritus*, *Hystrix indica*, *Myotis schaubi*, *Ovis orientalis gmelini*

34 Natural habitats included in the Resolution 4 exist in the site (table 28).

Table 28

Code	Habitats
C2.18	Acid oligotrophic vegetation of spring
C2.1A	Mesotrophic vegetation of spring brooks
C2.1B	Eutrophic vegetation of spring brooks
C2.25	Acid oligotrophic vegetation of fast-flowing streams
C2.27	Mesotrophic vegetation of fast-flowing streams
C2.28	Eutrophic vegetation of fast-flowing streams
C2.33	Mesotrophic vegetation of slow-flowing rivers
C2.34	Eutrophic vegetation of slow-flowing rivers
C3.55	Sparsely vegetated river gravel banks
C3.62	Unvegetated river gravel banks
D4.1	Rich fens, including eutrophic tall herb fens and calcareous flush sand soaks
D5.2	Beds of large sedges normally without free-standing water
E1.11	Euro-Siberian rock debris swards
E1.3	Mediterranean xeric grassland
E2.3	Mountain hay meadows
E3.3	Sub-mediterranean humid meadows
E3.4	Moist or wet eutrophic and mesotrophic grassland
E3.5	Moist or wet oligotrophic grassland
E4.3	Acid alpine and subalpine grassland
E5.4	Moist or wet tall-herb and fern fringes and meadows
F3.245	Eastern Mediterranean deciduous thickets
F3.247	Ponto-Sarmatic deciduous thickets
F5.13	Juniper matorral
F6.8	Xero-halophile scrubs
F7	Spiny Mediterranean heaths (phrygana, hedgehog-heaths and related coastal cliff vegetation)
F9.1	Riverine scrub
F9.3	Southern riparian galleries and thickets
G1.11	Riverine Salix woodland
G1.3	Mediterranean riparian woodland
G1.A7	Mixed deciduous woodland of the Black and Caspian Seas
G3.9	Coniferous woodland dominated by Cupressaceae or Taxaceae
H2.3	Temperate-montane acid siliceous screes
H2.5	Acid siliceous screes of warm exposures
H3.1	Acid siliceous inland cliffs

15. "ZANGEZUR" AREA AM0000015

The site occupies 49066.6 ha, is located in Syunik marz and combines 3 former sites: "Plane grove", "Shikahoh" and "Khustup". As well "Zangezur" sanctuary was added to the site's territory (map 16, pict. 15).

There are 52 species from the Resolution 6 of the Convention present in the site (table 29).

Table 29

Species group	Number of species	Species
Plants	3	<i>Dactylorhiza chuhensis</i> , <i>Echium russicum</i> , <i>Stevaniella satyrioides</i>
Invertebrates	3	<i>Callimorpha (Euplagia) quadripunctaria</i> , <i>Cerambyx cerdo</i> , <i>Rosalia alpina</i>
Reptiles	2	<i>Emys orbicularis</i> , <i>Mauremys caspica</i>
Birds	33	<i>Accipiter brevipes</i> , <i>Aegypius monachus</i> , <i>Alcedo atthis</i> , <i>Anthus campestris</i> , <i>Aquila chrysaetos</i> , <i>Aquila pomarina</i> , <i>Bubo bubo</i> , <i>Buteo rufinus</i> , <i>Calandrella brachydactyla</i> , <i>Caprimulgus europaeus</i> , <i>Circaetus gallicus</i> , <i>Circus cyaneus</i> , <i>Coracias garrulus</i> , <i>Dendrocopos medius</i> , <i>Dendrocopos syriacus</i> , <i>Dryocopus martius</i> , <i>Emberiza hortulana</i> , <i>Falco peregrinus</i> , <i>Ficedula parva</i> , <i>Ficedula semitorquata</i> , <i>Gypaetus barbatus</i> , <i>Gyps fulvus</i> , <i>Hieraetus pennatus</i> , <i>Lanius collurio</i> , <i>Lanius minor</i> , <i>Lullula arborea</i> , <i>Luscinia svesica</i> , <i>Melonocorypha calandra</i> , <i>Milvus migrans</i> , <i>Neophron percnopterus</i> , <i>Pernis apivorus</i> , <i>Pyrrhocorax pyrrhocorax</i> , <i>Sylvia nisoria</i>
Mammals	12	<i>Canis lupus</i> , <i>Capra aegagrus</i> , <i>Lynx lynx</i> , <i>Miniopterus schreibersii</i> , <i>Myotis blythii</i> , <i>Myotis emarginatus</i> , <i>Panthera pardus</i> , <i>Rhinolophus blasii</i> , <i>Rhinolophus euryale</i> , <i>Rhinolophus ferrumequinum</i> , <i>Rhinolophus hipposideros</i> , <i>Ursus arctos</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Astragalus agassii*, *Dianthus zangezuristicus*, *Physoptychis caspica*, *Silene khustupica*, *Thlaspi zangezuristicum* etc. (86 plant species included in the Red Data Book of plants of Armenia (2010) are growing here)
2. **Invertebrates:** *Agrodiaetus huberti*, *Brenthis ino*, *Columella columella*, *Cortodera kaphanica*, *Lestes macrostigma*, *Probatiscus vicinus*, *Maculineaalcon*, *Maculinea arion*, *Parnassius apollo*
3. **Amphibians and Reptiles:** *Montivipera raddei*, *Telescopus fallax*, *Trachylepis septemtaeniata*, *Vipera (Pelias) eriwanensis*, *Zamenis hohenackeri*
4. **Mammals:** *Felis sylvestris*, *Hystrix indica*, *Ovis orientalis gmelini*

39 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 30).

Table 30

Code	Habitats
C1.1	Permanent oligotrophic lakes, ponds and pools
C1.32	Free-floating vegetation of eutrophic waterbodies
C2.12	Hard water springs
C2.18	Acid oligotrophic vegetation of spring
C2.1A	Mesotrophic vegetation of spring brooks
C2.1B	Eutrophic vegetation of spring brooks
C2.25	Acid oligotrophic vegetation of fast-flowing streams
C2.27	Mesotrophic vegetation of fast-flowing streams
C2.28	Eutrophic vegetation of fast-flowing streams
C2.33	Mesotrophic vegetation of slow-flowing rivers
C3.55	Sparsely vegetated river gravel banks
C3.62	Unvegetated river gravel banks
D4.1	Rich fens, including eutrophic tall herb fens and calcareous flush sand soaks
D5.2	Beds of large sedges normally without free-standing water
E1.11	Euro-Siberian rock debris swards
E1.2	Perennial calcareous grassland and basic steppes
E1.3	Mediterranean xeric grassland
E1.83	Mediterraneo-montane <i>Nardus stricta</i> swards
E2.3	Mountain hay meadows
E3.3	Sub-mediterranean humid meadows
E3.4	Moist or wet eutrophic and mesotrophic grassland
E4.3	Acid alpine and subalpine grassland
E5.4	Moist or wet tall-herb and fern fringes and meadows
E5.5	Subalpine moist or wet tall-herb and fern stands
F3.245	Eastern Mediterranean deciduous thickets
F3.247	Ponto-Sarmatic deciduous thickets
F5.13	Juniper matorral
F7	Spiny Mediterranean heaths (phrygana, hedgehog-heaths and related coastal cliff vegetation)
F9.1	Riverine scrub
G1.11	Riverine <i>Salix</i> woodland
G1.22	Mixed <i>Quercus</i> - <i>Ulmus</i> - <i>Fraxinus</i> woodland of great rivers
G1.3	Mediterranean riparian woodland
G1.A1	<i>Quercus</i> - <i>Fraxinus</i> - <i>Carpinus betulus</i> woodland on eutrophic and mesotrophic soils
G1.A4	Ravine and slope woodland
G1.A7	Mixed deciduous woodland of the Black and Caspian Sea
G3.9	Coniferous woodland dominated by Cupressaceae or Taxaceae
H2.3	Temperate-montane acid siliceous screes
H2.5	Acid siliceous screes of warm exposures
H3.1	Acid siliceous inland cliffs

16. "TATEV" AREA AM0000016

The site occupies 14873.1 ha, and is located in Syunik marz (map 17, pict. 16).

There are 52 species from the Resolution 6 of the Convention present in the site (table 31).

Table 31

Species group	Number of species	Species
Plants	2	<i>Echium russicum</i> , <i>Steveniella satyrioides</i>
Invertebrates	2	<i>Callimorpha (Euplagia) quadripunctaria</i> , <i>Cerambyx cerdo</i>
Fish	3	<i>Aspius aspius</i> , <i>Barbus capito</i> , <i>Sabanejewia aurata</i>
Reptiles	1	<i>Mauremys caspica</i>
Birds	32	<i>Accipiter brevipes</i> , <i>Aegypius monachus</i> , <i>Alcedo atthis</i> , <i>Anthus campestris</i> , <i>Aquila chrysaetos</i> , <i>Aquila pomarina</i> , <i>Bubo bubo</i> , <i>Buteo rufinus</i> , <i>Caprimulgus europaeus</i> , <i>Ciconia nigra</i> , <i>Circaetus gallicus</i> , <i>Coracias garrulus</i> , <i>Dendrocopos medius</i> , <i>Dendrocopos syriacus</i> , <i>Dryocopus martius</i> , <i>Emberiza hortulana</i> , <i>Falco naumanni</i> , <i>Falco peregrinus</i> , <i>Ficedula parva</i> , <i>Ficedula semitorquata</i> , <i>Gypaetus barbatus</i> , <i>Gyps fulvus</i> , <i>Hieraetus pennatus</i> , <i>Lanius collurio</i> , <i>Lanius minor</i> , <i>Lullula arborea</i> , <i>Luscinia svesica</i> , <i>Milvus migrans</i> , <i>Neophron percnopterus</i> , <i>Pernis apivorus</i> , <i>Pyrhcorax pyrrhcorax</i> , <i>Sylvia nisoria</i>
Mammals	12	<i>Canis lupus</i> , <i>Capra aegagrus</i> , <i>Lutra lutra</i> , <i>Lynx lynx</i> , <i>Miniopterus schreibersii</i> , <i>Myotis blythii</i> , <i>Myotis emarginatus</i> , <i>Panthera pardus</i> , <i>Rhinolophus euryale</i> , <i>Rhinolophus ferrumequinum</i> , <i>Rhinolophus hipposideros</i> , <i>Ursus arctos</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Astragalus xiphidium*, *Cousinia takhtadjanii*, *Iris lineolata*, *Tulipa sosnovskyi* etc. (12 plant species included in the Red Data Book of plants of Armenia (2010) are growing here)
2. **Invertebrates:** *Dorcadion gorbunovi*, *Maculinea arion*, *Parnassius mnemosyne*, *Proserpinus proserpina*
3. **Amphibians and Reptiles:** *Telescopus fallax*, *Zamenis hohenackeri*
4. **Mammals:** *Capreolus capreolus*, *Felis sylvestris*, *Hystrix indica*

26 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 8).

Table 32

Code	Habitats
C1.1	Permanent oligotrophic lakes, ponds and pools
C2.12	Hard water springs
C2.18	Acid oligotrophic vegetation of spring
C2.1A	Mesotrophic vegetation of spring brooks
C2.25	Acid oligotrophic vegetation of fast-flowing streams
C3.55	Sparsely vegetated river gravel banks
C3.62	Unvegetated river gravel banks
D4.1	Rich fens, including eutrophic tall herb fens and calcareous flush sand soaks
E1.11	Euro-Siberian rock debris swards
E1.2	Perennial calcareous grassland and basic steppes
E1.83	Mediterraneo-montane <i>Nardus stricta</i> swards
E2.3	Mountain hay meadows
E3.4	Moist or wet eutrophic and mesotrophic grassland
E4.3	Acid alpine and subalpine grassland
E5.4	Moist or wet tall-herb and fern fringes and meadows
F3.245	Eastern Mediterranean deciduous thickets
F3.247	Ponto-Sarmatic deciduous thickets
F5.13	Juniper matorral
F7	Spiny Mediterranean heaths (phrygana, hedgehog-heaths and related coastal cliff vegetation)
F9.1	Riverine scrub
G1.11	Riverine <i>Salix</i> woodland
G1.A1	<i>Quercus</i> - <i>Fraxinus</i> – <i>Carpinus betulus</i> woodland on eutrophic and mesotrophic soils
G1.A7	Mixed deciduous woodland of the Black and Caspian Seas
G3.9	Coniferous woodland dominated by Cupressaceae or Taxaceae
H2.3	Temperate-montane acid siliceous screes
H3.1	Acid siliceous inland cliffs

17. "METSAMOR" AREA AM0000017

The site occupies 26427.3 ha, and is located in Armavir marz (map 18, pict. 17).

There are 88 species from the Resolution 6 of the Convention present in the site (table 33).

Table 33

Species group	Number of species	Species
Fish	4	<i>Aspius aspius</i> , <i>Barbus capito</i> , <i>Rhodeus sericeus amarus</i> , <i>Sabanejewia aurata</i>
Reptiles	2	<i>Mauremys caspica</i> , <i>Testudo graeca</i>
Birds	76	<i>Accipiter brevipes</i> , <i>Acrocephalus melanopogon</i> , <i>Alcedo atthis</i> , <i>Anthus campestris</i> , <i>Aquila nipalensis</i> , <i>Aquila pomarina</i> , <i>Ardea purpurea</i> , <i>Ardeola ralloides</i> , <i>Aythya nyroca</i> , <i>Botaurus stellaris</i> , <i>Burhinus oedicnemus</i> , <i>Calandrella brachydactyla</i> , <i>Charadrius alexandrinus</i> , <i>Chlidonias hybridus</i> , <i>Chlidonias leucopterus</i> , <i>Chlidonias niger</i> , <i>Ciconia ciconia</i> , <i>Circaetus gallicus</i> , <i>Circus aeruginosus</i> , <i>Circus cyaneus</i> , <i>Circus macrourus</i> , <i>Circus pygargus</i> , <i>Coracias garrulus</i> , <i>Cygnus bewickii</i> , <i>Cygnus cygnus</i> , <i>Dendrocopus syriacus</i> , <i>Egretta alba</i> , <i>Egretta garzetta</i> , <i>Emberiza hortulana</i> , <i>Falco biarmicus</i> , <i>Falco columbarius</i> , <i>Falco naumanni</i> , <i>Falco peregrinus</i> , <i>Falco vespertinus</i> , <i>Gallinago media</i> , <i>Gelochelidon nilotica</i> , <i>Glareola pratincola</i> , <i>Grus grus</i> , <i>Hieraaetus pennatus</i> , <i>Himantopus himantopus</i> , <i>Ixobrychus minutus</i> , <i>Lanius collurio</i> , <i>Lanius minor</i> , <i>Larus genei</i> , <i>Larus melanocephalus</i> , <i>Larus minitus</i> , <i>Limosa lapponica</i> , <i>Luscinia svesica</i> , <i>Marmaronetta angustirostris</i> , <i>Melocorypha calandra</i> , <i>Mergus albellus</i> , <i>Milvus migrans</i> , <i>Neophron percnopterus</i> , <i>Nycticorax nycticorax</i> , <i>Pandion haliaetus</i> , <i>Pelecanus crispus</i> , <i>Pelecanus onocrotalus</i> , <i>Pernis apivorus</i> , <i>Phalacrocorax pygmeus</i> , <i>Phalaropus lobatus</i> , <i>Phoenicopterus ruber</i> , <i>Philomachus pugnax</i> , <i>Platalea leucorodia</i> , <i>Plegadis falcinellus</i> , <i>Pluvialis apricaria</i> , <i>Porphyrio porphyrio</i> , <i>Porzana parva</i> , <i>Porzana porzana</i> , <i>Porzana pusilla</i> , <i>Recurvirostra avosetta</i> , <i>Sterna albifrons</i> , <i>Sterna caspia</i> , <i>Sterna hirundo</i> , <i>Tadorna ferruginea</i> , <i>Tringa glareola</i> , <i>Xenus cinereus</i>
Mammals	6	<i>Lutra lutra</i> , <i>Miniopterus schreibersii</i> , <i>Myotis blythii</i> , <i>Rhinolophus ferrumequinum</i> , <i>Rhinolophus hipposideros</i> , <i>Rhinolophus mehelyi</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Bienertia cycloptera*, *Halocnemum strobilaceum*, *Kalidium capsicum*, *Nitraria schoberi*, etc. (21 plant species included in the Red Data Book of plants of Armenia (2010) are growing here).
2. **Invertebrates:** *Ctenopus persimilis*, *Entomogonus clavimanus*, *Hyles hippophaes*, *Plebejus transcausicus*
3. **Amphibians and Reptiles:** *Eumeces schneideri*, *Pelobates syriacus*, *Phrynocephalus persicus*, *Telescopus fallax*, *Trachylepis septemtaeniata*, *Zamenis hohenackeri*
4. **Mammals:** *Hemiechinus auritus*

15 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 34).

Table 34

Code	Habitats
C1.32	Free-floating vegetation of eutrophic waterbodies
C1.3411	Water crowfoot communities in shallow water
C1.4	Permanent dystrophic lakes, ponds and pools
C2.34	Eutrophic vegetation of slow-flowing rivers
C3.51	Euro-Siberian dwarf annual amphibious swards (but excluding C3.5131 Toad-rush swards)
C3.55	Sparsely vegetated river gravel banks
C3.62	Unvegetated river gravel banks
D4.1	Rich fens, including eutrophic tall herb fens and calcareous flushes sand soaks
E1.3	Mediterranean xeric grassland
E6.2	Continental inland salt steppes
F6.8	Xero-halophile scrubs
F7	Spiny Mediterranean heaths (phrygana, hedgehog-heaths and related coastal cliff vegetation)
F9.3	Southern riparian galleries and thickets
G1.11	Riverine Salix woodland
H1	Terrestrial underground caves, cave systems, passages and waterbodies

18. "KHNDZORESK" AREA AM0000018

The site occupies 3425.7 ha, and is located in Syunik marz (map 19, pict. 18).

There are 44 species from the Resolution 6 of the Convention present in the site (table 35).

Table 35

Species group	Number of species	Species
Plants	1	<i>Echium russicum</i>
Invertebrates	2	<i>Callimorpha (Euplagia) quadripunctaria, Cerambyx cerdo</i>
Birds	28	<i>Accipiter brevipes, Anthus campestris, Aquila chrysaetos, Aquila heliaca, Aquila nipalensis, Aquila pomarina, Bubo bubo, Buteo rufinus, Caprimulgus europaeus, Circus caetus gallicus, Circus aeruginosus, Circus cyaneus, Circus macrourus, Circus pygargus, Coracias garrulus, Dendrocopus syriacus, Emberiza hortulana, Falco naumanni, Falco peregrinus, Gyps fulvus, Hieraaetus pennatus, Lanius collurio, Lanius minor, Lullula arborea, Milvus migrans, Neophron percnopterus, Pernis apivorus, Pyrrhocorax pyrrhocorax</i>
Mammals	13	<i>Canis lupus, Lutra lutra, Lynx lynx, Miniopterus schreibersii, Myotis bechsteinii, Myotis blythii, Myotis emarginatus, Rhinolophus blasii, Rhinolophus euryale, Rhinolophus ferrumequinum, Rhinolophus hipposideros, Ursus arctos, Vormela peregusna</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Astragalus bylowae, Crataegus zangezura, Iris lineolata, Sclerochloa woronowii* etc. (11 plant species included in the Red Data Book of plants of Armenia (2010) are growing here)
2. **Invertebrates:** *Carabus scabrosus fallettianus, Parnassius mnemosyne, Proserpinus Proserpina, Proterebia afra, Tomares romanovi*
3. **Amphibians and Reptiles:** *Ablepharus bivittatus, Zamenis hohenackeri*
4. **Mammals:** *Felis sylvestris, Hystrix indica*

20 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 36).

Table 36

Code	Habitats
C2.1A	Mesotrophic vegetation of spring brooks
C2.27	Mesotrophic vegetation of fast-flowing streams;
C2.28	Eutrophic vegetation of fast-flowing streams
C2.33	Mesotrophic vegetation of slow-flowing rivers
C3.55	Sparsely vegetated river gravel banks
C3.62	Unvegetated river gravel banks
E1.11	Euro-Siberian rock debris swards
E1.2	Perennial calcareous grassland and basic steppes
E3.4	Moist or wet eutrophic and mesotrophic grassland
F3.245	Eastern Mediterranean deciduous thickets
F3.247	Ponto-Sarmatic deciduous thickets
F7	Spiny Mediterranean heaths (phrygana, hedgehog-heaths and related coastal cliff vegetation)
G1.11	Riverine Salix woodland
G1.A1	Quercus - Fraxinus – Carpinus betulus woodland on eutrophic and mesotrophic soils
G1.A7	Mixed deciduous woodland of the Black and Caspian Seas
G3.9	Coniferous woodland dominated by Cupressaceae or Taxaceae
H1	Terrestrial underground caves, cave systems, passages and waterbodies
H2.3	Temperate-montane acid siliceous screes
H2.5	Acid siliceous screes of warm exposures
H3.1	Acid siliceous inland cliffs

19. "VANAND" AREA AM0000019

The site occupies 8222.3 ha, and is located in Armavir marz (map 20, pict. 19).

There are 48 species from the Resolution 6 of the Convention present in the site (table 37).

Table 37

Species group	Number of species	Species
Fish	4	<i>Aspius aspius</i> , <i>Barbus capito</i> , <i>Rhodeus sericeus amarus</i> , <i>Sabanejewia aurata</i>
Reptiles	2	<i>Mauremys caspica</i> , <i>Testudo graeca</i>
Birds	38	<i>Accipiter brevipes</i> , <i>Anthus campestris</i> , <i>Aquila heliaca</i> , <i>Aquila nipalensis</i> , <i>Aquila pomarina</i> , <i>Bubo bubo</i> , <i>Burhinus oedicnemus</i> , <i>Buteo rufinus</i> , <i>Calandrella brachydactyla</i> , <i>Caprimulgus europaeus</i> , <i>Ciconia ciconia</i> , <i>Ciconia nigra</i> , <i>Circus aeruginosus</i> , <i>Circus cyaneus</i> , <i>Circus macrourus</i> , <i>Circus pygargus</i> , <i>Coracias garrulus</i> , <i>Dendrocopos syriacus</i> , <i>Falco columbarius</i> , <i>Falco naumanni</i> , <i>Falco peregrinus</i> , <i>Falco vespertinus</i> , <i>Gyps fulvus</i> , <i>Hieraetus pennatus</i> , <i>Lanius collurio</i> , <i>Lanius minor</i> , <i>Luscinia svecica</i> , <i>Melanocorypha calandra</i> , <i>Milvus migrans</i> , <i>Milvus milvus</i> , <i>Neophron percnopterus</i> , <i>Otis tarda</i> , <i>Pandion haliaetus</i> , <i>Pernis apivorus</i> , <i>Pluvialis apricaria</i> , <i>Pterocles orientalis</i> , <i>Pyrrhocorax pyrrhocorax</i> , <i>Tetrax tetrax</i>
Mammals	4	<i>Canis lupus</i> , <i>Myotis blythi</i> , <i>Rhinolophus ferrumequinum</i> , <i>Rhinolophus mehelyi</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. Plants: *Alcea sophiae*, *Ferula szovitsiana*, *Iris elegantissima*, *Kalidium caspicum*, *Psephellus cronquistii*, *Verbascum nudicaule*
2. Invertebrates: *Anisoplia reitteriana*, *Entomogonus clavimanus*
3. Amphibians and Reptiles: *Eumeces schneideri*, *Phrynocephalus persicus*, *Telescopus fallax*, *Trachylepis septemtaeniata*, *Zamenis hohenackeri*

13 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 38).

Table 38

Code	Habitats
C1.32	Free-floating vegetation of eutrophic waterbodies
C1.3411	Water crowfoot communities in shallow water
C1.4	Permanent dystrophic lakes, ponds and pools
C2.34	Eutrophic vegetation of slow-flowing rivers
C3.51	Euro-Siberian dwarf annual amphibious swards (but excluding C3.5131 - Toad-rush swards)
C3.55	Sparsely vegetated river gravel banks
C3.62	Unvegetated river gravel banks
D6.1	Inland saltmarshes
E1.3	Mediterranean xeric grassland
E6.2	Continental inland salt steppes
F6.8	Xero-halophile scrubs
F7	Spiny Mediterranean heaths (phrygana, hedgehog-heaths and related coastal cliff vegetation)
F9.3	Southern riparian galleries and thickets

20. "AKHURYAN RESERVOIR" AREA AM0000020

The site occupies 8389.7 ha, and is located in Shirak marz (map 21, pict. 20).

There are 68 species from the Resolution 6 of the Convention present in the site (table 39).

Table 39

Species group	Number of species	Species
Plants	1	<i>Echium russicum</i>
Invertebrates	1	<i>Callimorpha (Euplagia) quadripunctaria</i>
Fish	4	<i>Aspius aspius, Barbus capito, Rhodeus sericeus amarus, Sabanejewia aurata</i>
Reptiles	1	<i>Mauremys caspica</i>
Birds	57	<i>Accipiter brevipes, Alcedo atthis, Anthus campestris, Aquila clanga, Aquila heliaca, Aquila nipalensis, Aquila pomarina, Ardea purpurea, Ardeola ralloides, Botaurus stellaris, Bubo bubo, Buteo rufinus, Calandrella brachydactyla, Caprimulgus europaeus, Charadrius alexandrinus, Chlidonias leucopterus, Ciconia ciconia, Ciconia nigra, Circaetus gallicus, Circus aeruginosus, Circus cyaneus, Circus macrourus, Circus pygargus, Coracias garrulus, Crex crex, Egretta alba, Egretta garzetta, Emberiza hortulana, Falco cherrug, Falco naumanni, Falco peregrinus, Falco vespertinus, Gallinago media, Grus grus, Hieraaetus pennatus, Himantopus himantopus, Ixobrychus minuses, Lanius collurio, Larus genei, Lullula arborea, Milvus migrans, Neophron percnopterus, Nycticorax nycticorax, Otis tarda, Pandion haliaetus, Pelecanus crispus, Pelecanus onocrotalus, Pernis apivorus, Philomachus pugnax, Pluvialis apricaria, Porzana parva, Recurvirostra avosetta, Sterna hirundo, Tadorna ferruginea, Tetrax tetrax, Tringa glareola, Xenus cinereus</i>
Mammals	4	<i>Canis lupus, Lutra lutra, Myotis blythi, Vormela peregusna</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Alcea karsiana, Astragalus massalskyi, Centaurea takhtadjanii, Rhaponticoides hajastana* etc. (14 plant species included in the Red Data Book of plants of Armenia (2010) are growing here)
2. **Invertebrates:** *Anisoplia reitteriana, Polyommatus ninae*
3. **Amphibians and Reptiles:** *Pelobates syriacus*
4. **Mammals:** *Spermophilus xanthoprimum*

7 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 40).

Table 40

Code	Habitats
C2.33	Mesotrophic vegetation of slow-flowing rivers
C2.34	Eutrophic vegetation of slow-flowing rivers
C3.55	Sparsely vegetated river gravel banks
C3.62	Unvegetated river gravel banks
E1.2	Perennial calcareous grassland and basic steppes;
E1.3	Mediterranean xeric grassland;
E6.2	Continental inland salt steppes

21. "RHODODENDRON CAUCASICUM" SANCTUARY AM000021

The site occupies 16191.1 ha, and is located in Lori marz (map 22, pict. 21).

There are 32 species from the Resolution 6 of the Convention present in the site (table 41).

Table 41

Species group	Number of species	Species
Plants	2	<i>Echium russicum, Ligularia sibirica</i>
Birds	22	<i>Aegypius monachus, Aquila chrysaetos, Aquila pomarina, Buteo rufinus, Caprimulgus europaeus, Circaetus gallicus, Crex crex, Dendrocopus medius, Emberiza hortulana, Falco peregrinus, Ficedula parva, Ficedula semitorquata, Gypaetus barbatus, Gyps fulvus, Hieraaetus pennatus, Lanius collurio, Lullula arborea, Luscinia svecica, Milvus migrans, Neophron percnopterus, Pernis apivorus, Pyrrhocorax pyrrhocorax</i>
Mammals	8	<i>Canis lupus, Lutra lutra, Lynx lynx, Myotis blythii, Rhinolophus ferrumequinum, Rhinolophus hipposideros, Ursus arctos, Vormela peregusna</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Fritillaria collina*
2. **Invertebrates:** *Armenohelops armeniacus, Cyndronotus erivanus, Mylabris sedilithorax*
3. **Reptiles:** *Vipera (Pelias) eriwanensis*
4. **Mammals:** *Felis silvestris*

14 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 42).

Table 42

Code	Habitats
C2.12	Hard water springs
C2.19	Lime-rich oligotrophic vegetation of spring brooks
C2.1A	Mesotrophic vegetation of spring brooks
C2.26	Lime-rich oligotrophic vegetation of fast-flowing streams
E1.2	Perennial calcareous grassland and basic steppes
E2.3	Mountain hay meadows
E3.4	Moist or wet eutrophic and mesotrophic grassland
E4.4	Calcareous alpine and subalpine grassland
E5.4	Moist or wet tall-herb and fern fringes and meadows
F2.22	Alpide acidocline alpenrose heaths
F3.247	Ponto-Sarmatic deciduous thickets
G1.A1	<i>Quercus - Fraxinus - Carpinus betulus</i> woodland on eutrophic and mesotrophic soils
H2.3	Temperate-montane acid siliceous screes
H3.2	Basic and ultra-basic inland cliffs

22. "ARAI LER" AREA AM000022

The site occupies 4676,7 ha, and is located in Kotajk marz (map 23, pict. 22).
There are 46 species from the Resolution 6 of the Convention present in the site (table 43).

Table 43

Species group	Number of species	Species
Plants	1	<i>Echium russicum</i>
Reptiles	1	<i>Testudo graeca</i>
Birds	37	<i>Accipiter brevipes, Alcedo atthis, Anthus campestris, Aquila chrysaetos, Aquila heliaca, Aquila nipalensis, Aquila pomarina, Bubo bubo, Buteo rufinus, Caprimulgus europaeus, Circaetus gallicus, Circus aeruginosus, Circus cyaneus, Circus macrourus, Circus pygargus, Coracias garrulus, Crex crex, Dendrocopos medius, Dendrocopos syriacus, Emberiza hortulana, Falco naumanni, Falco peregrinus, Falco vespertinus, Grus grus, Hieraaetus pennatus, Lanius collurio, Lanius minor, Lullula arborea, Luscinia svecica, Melanocorypha calandra, Milvus migrans, Neophron percnopterus, Pernis apivorus, Porphyrio porphyrio, Pyrrhocorax pyrrhocorax, Sylvia nisoria</i>
Mammals	7	<i>Canis lupus, Lutra lutra, Lynx lynx, Myotis blythii, Rhinolophus blasii, Rhinolophus ferrumequinum, Ursus arctos</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Alcea grossheimii, Erysimum eginense, Iris elegantissima, Linaria pyramidata, Myosotis daralaghezica, Sorbus hajastana*
2. **Invertebrates:** *Armenohelops armeniacus, Colias aurorina, Conizonia kalashiani, Cylindronotus erivanus, Papilio alexanor, Parnassius mnemosyne, Proterebia afra, Sympecma paedisca*
3. **Amphibians and reptiles:** *Ablepharus chernovi, Telescopus fallax, Zamenis hohenackeri, Montivipera raddei, Vipera (Pelias) eriwanensis*
4. **Mammals:** *Neomys schelkovnikovii, Pipistrellus pipistrellus*

15 Natural habitats included in the Resolution 4 of the Convention existg in the site (table 44).

Table 44

Code	Habitats
C2.1A	Mesotrophic vegetation of spring brooks
C3.55	Sparsely vegetated river gravel banks
E1.11	Euro-Siberian rock debris swards
E1.2	Perennial calcareous grassland and basic steppes
E1.3	Mediterranean xeric grassland
E2.3	Mountain hay meadows
E4.3	Acid alpine and subalpine grassland
E5.4	Moist or wet tall-herb and fern fringes and meadows
E5.5	Subalpine moist or wet tall-herb and fern stands
F3.245	Eastern Mediterranean deciduous thickets
F3.247	Ponto-Sarmatic deciduous thickets
F7	Spiny Mediterranean heaths (phrygana, hedgehog-heaths and related coastal cliff vegetation)
G1.A7	Mixed deciduous woodland of the Black and Caspian Seas
H2.3	Temperate-montane acid siliceous screes
H3.2	Basic and ultra-basic inland cliffs

23. "DEBEDI GORGE" AREA AM000023

The site occupies 56346,4 ha, and is located in Lori marz (map 24, pict. 23).

There are 50 species from the Resolution 6 of the Convention present in the site (table 45).

Table 45

Species group	Number of species	Species
Plants	2	<i>Echium russicum, Ligularia sibirica</i>
Reptiles	2	<i>Mauremys caspica, Testudo graeca</i>
Birds	39	<i>Accipiter brevipes, Aegypius monachus, Alcedo atthis, Anthus campestris, Aquila chrysaetos, Aquila heliaca, Aquila pomarina, Bubo bubo, Buteo rufinus, Caprimulgus europaeus, Ciconia nigra, Circaetus gallicus, Circus aeruginosus, Circus cyaneus, Circus macrourus, Circus pygargus, Coracias garrulus, Crex crex, Dendrocopos medius, Dryocopus martius, Dendrocopos syriacus, Emberiza hortulana, Falco naumanni, Falco peregrinus, Ficedula parva, Ficedula semitorquata, Grus grus, Gypaetus barbatus, Gyps fulvus, Hieraaetus pennatus, Lanius collurio, Lanius minor, Lullula arborea, Luscinia svecica, Milvus migrans, Neophron percnopterus, Pernis apivorus, Pyrrhocorax pyrrhocorax, Sylvia nisoria</i>
Mammals	8	<i>Canis lupus, Lutra lutra, Lynx lynx, Myotis blythii, Myotis emarginatus, Rhinolophus ferrumequinum, Rhinolophus hipposideros, Ursus arctos</i>

Together with the above-mentioned species the following flora and fauna species of national importance are also widespread on the site.

1. **Plants:** *Anemone ranunculoides, Aristolochia iberica, Atropa belladonna, Bupleurum koso-poljanskyi, Jurinea praetermissa, Psephellus debedicus, Smilax excels, Verbascum atrovioleaceum* և այլն
2. **Invertebrates:** *Parnassius mnemosyne*
3. **Mammals:** *Capreolus capreolus, Felis sylvestris, Neomys schelkovnikovii, Pipistrellus pipistrellus, Plecotus auritus, Tadarida teniotis*

22 Natural habitats included in the Resolution 4 of the Convention exist in the site (table 46).

Table 46

Code	Habitat
C2.1A	Mesotrophic vegetation of spring brooks
C2.27	Mesotrophic vegetation of fast-flowing streams
C2.33	Mesotrophic vegetation of slow-flowing rivers
C3.55	Sparsely vegetated river gravel banks
C3.62	Unvegetated river gravel banks
E1.11	Euro-Siberian rock debris swards
E1.2	Perennial calcareous grassland and basic steppes
E2.3	Mountain hay meadows
E4.4	Calcareous alpine and subalpine grassland
E5.5	Subalpine moist or wet tall-herb and fern stands
F2.22	Alpide acidocline alpenrose heaths
F3.245	Eastern Mediterranean deciduous thickets
F3.247	Ponto-Sarmatic deciduous thickets
F9.1	Riverine scrub
G1.11	Riverine Salix woodland
G1.22	Mixed Quercus - Ulmus - Fraxinus woodland of great rivers
G1.6	Fagus woodland
G1.A1	Quercus-Fraxinus-Carpinus betulus woodland on eutrophic and mesotrophic soils
G1.A4	Ravine and slope woodland
G1.A7	Mixed deciduous woodland of the Black and Caspian Seas
G3.9	Coniferous woodland dominated by Cupressaceae or Taxaceae
H3.2	Basic and ultra-basic inland cliffs

**Three dimensional Road Map
for achieving a fully operational Emerald Network
in 7 countries of Central and Eastern Europe and the South Caucasus
(October 2016, Developed by Dave Pritchard)**

1. The purpose of this Road Map

- 1.1 This Road Map identifies the key steps to be undertaken by relevant national authorities and others between 2016 and 2019 to conclude the establishment by 2020 of a complete and fully operational Network of Areas of Special Conservation Interest (Emerald Network) in four countries of Central & Eastern Europe (Belarus, the Republic of Moldova, the Russian Federation and Ukraine) and three countries in the South Caucasus (Armenia, Azerbaijan and Georgia).
- 1.2 The Road Map expands on the milestones already agreed in the revised “Emerald Calendar” for 2011-2020¹. The aim of the Emerald Network is to ensure, on a common basis shared by all European countries, the long-term survival of internationally important species of wild fauna and flora and their habitats.

2. Introduction and background

- 2.1 According to Article 4.1 of the Bern Convention, each Contracting Party shall take appropriate measures to ensure the conservation of (i) natural habitats that are endangered and (ii) the habitats of wild flora and fauna, especially species listed in Appendices I and II of the Convention. Under Article 4.2, Parties are to use their planning and development policies to avoid or minimise deterioration of the areas they protect for the purposes of Article 4.1. Articles 4.3 and 10.1 require coordinated special efforts in respect of areas of importance for migratory species.
- 2.2 In 1989 the Standing Committee to the Bern Convention adopted a Resolution and three Recommendations on habitat conservation, including Recommendation No. 16 (hereinafter Recommendation) on the development of a network of “Areas of Special Conservation Interest” (ASCIs). The process of setting up this network then paused for a few years while the European Community (now the European Union) brought into operation its “Natura 2000” network, so that coherence between the two networks could be assured.
- 2.3 In due course the Bern Standing Committee agreed Resolution No. 3 of 1996 (hereinafter Resolution), which effectively re-launched the ASCI network with the new short-form name of “Emerald Network”. Resolution No. 5 of 1998 subsequently confirmed that in the case of Member States of the EU (all of which are Contracting Parties to the Bern Convention) their Natura 2000 sites constitute their contribution to the Emerald Network. By the same token, thanks to harmonisation of the two processes, the Emerald Network effectively constitutes an extension of the Natura 2000 network to European non-EU countries. Hence a coherent pan-European system has been created.
- 2.4 Moreover, by virtue of Resolutions No. 3 of 1996 and No. 5 of 1998, participation in the Emerald Network has been invited from European countries which are not yet Parties to the Convention, and from Parties to the Convention lying outside Europe. As a non-Party observer State the Russian Federation has participated actively in the process since 2000, and its contribution is reflected in the present Road Map.
- 2.5 All the relevant countries have, through the Convention on Biological Diversity and other international fora, also committed themselves to Target 11 in the Strategic Plan for Biodiversity 2011-2020, which provides that *“By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes”*.

¹ Bern Convention (2015a). Revised calendar for the implementation of the Emerald network of Areas of Special Conservation Interest 2011-2020. Document T-PVS/PA (2015) 16 agreed by the 35th meeting of the Standing Committee, Strasbourg, December 2015.

- 2.6 In order to progress the establishment of the Emerald Network in the seven countries named above, a programme of work known as “Emerald Network of Nature Protection Sites, Phase II” has been undertaken on a joint basis by the Council of Europe and the European Commission (DG NEAR) in the period 2012-2016. The present Road Map was produced as an output of the Final Conference of this joint programme, held in Minsk, Belarus, on 4-5 October 2016.

3. Actions for identifying and designating sites

- 3.1 Standing Committee Resolution No. 3 (1996), Recommendation No. 16 (1989) and Resolution No. 5 (1998) have provided guidance on the process of identifying and designating ASCIs for the Emerald Network in countries other than EU Member States (in the latter it is taken care of by the compatible process for identifying and designating SPAs and SACs for the Natura 2000 network, under the EU Directives on Birds and Habitats). The process consists of three phases (which are pursued iteratively rather than necessarily in a linear sequence).

Phase I

- 3.2 The first step in Phase I is for participating countries to identify species and habitats that require specific conservation measures, in the terms of Recommendation No. 14 of 1989. Lists of these have been compiled by the Standing Committee (habitats in Resolution No. 4 of 1996 and species in Resolution No. 6 of 1998²). The lists were revised (species in 2011 and habitats in 2014), mainly to harmonise with changes in the Annexes of the EU Directives resulting from successive EU enlargements.
- 3.3 The second step is for countries to select potential ASCIs according to the criteria in Recommendation No. 16. A site will qualify if it:
- contributes substantially to the survival of threatened species, endemic species, or any species listed in Appendix I or II of the Convention; or
 - supports significant numbers of species in an area of high species diversity or supports important populations of one or more species; or
 - contains an important and/or representative sample of endangered habitat types; or
 - contains an outstanding example of a particular habitat type or a mosaic of different habitat types; or
 - represents an important area for one or more migratory species; or
 - otherwise contributes substantially to the achievement of the objectives of the Convention.
- 3.4 Countries then complete standard data forms for each selected site, using the template appended to Resolution No. 5 of 1998 (the version updated in 2013), and they submit these electronically to the Bern Secretariat. Following preliminary verification by the Secretariat of the quality and completeness of the data⁴, the sites become officially accepted by the Standing Committee as “candidate Emerald sites”.

Phase II

- 3.5 Phase II involves an evaluation of the proposed sites on a biogeographical basis, by means of regional scientific seminars which assess the adequacy of the relevant country site lists, species by species and habitat by habitat, according to guidance adopted by the Standing Committee⁴ and the relevant Group of Experts⁵. An adequate list is one deemed sufficient to enable a favourable conservation status for a given species or habitat type in the biogeographical region concerned, and which:

² The habitats list applies universally, whereas the species list indicates some species which do not necessarily require special conservation measures in every country, owing to their relative abundance in certain parts of Europe.

³ As described in the Appendix to Recommendation No. 157 (2011).

⁴ Bern Convention (2013). Criteria for assessing the national lists of proposed Areas of Special Conservation Interest (ASCIs) at biogeographical level and procedure for examining and approving Emerald candidate sites. Revised version of initial guidance from 2010, adopted as Document T-PVS/PA (2013) 13 by the 33rd meeting of the Standing Committee, Strasbourg, December 2013.

⁵ Bern Convention (2015b). Emerald Network sufficiency evaluation (Phase II): methodology, practical organisation and outcomes. Document T-PVS/PA (2015) 2 prepared for the 7th meeting of the Group of Experts on Protected Areas And Ecological Networks, Strasbourg, September 2015.

- represents sites from the entire distribution range of every Emerald species and habitat at the national level (and at the biogeographical level if the country concerned straddles more than one region);
 - reflects the ecological variation of the habitat and the genetic variation of the species within the biogeographic region concerned; and (for species) includes the full range of habitats required over the different stages of its life-cycle;
 - is well adapted to specific conservation needs, in particular to those related to distribution patterns and to the threats and pressures affecting the species and habitats concerned;
 - includes significant proportions of the total national area of the habitats and populations of the species concerned.
- 3.6 The seminars may conclude that a site list is sufficient, or may identify gaps needing to be filled, and/or may specify other work required. Once a country's list emerges from this process it is subject to final scrutiny and approval by the Group of Experts before being transmitted to the Standing Committee for formal adoption as part of the Emerald Network.
- 3.7 The biogeographical evaluation process is an iterative process, and the organisation of several successive assessments might be necessary (experience in practice shows that they are) if the initial proposals are not considered sufficient for all features to be protected.

Phase III

- 3.8 Phase III consists of the national designation of the adopted Emerald Network sites (ASCIs) and the implementation of management, monitoring and reporting measures (see sections 4 and 5 below) in line with Resolution No. 8 of 2012.

Actions identified from the CoE/EC Joint Programme Final Conference in 2016

<i>Organisation of the process</i>
<ul style="list-style-type: none"> • Timeframes to be constructed for the action steps and milestones required to ensure that completion of each national network is achieved by the target date of 2020.
<ul style="list-style-type: none"> • Full participation in the Bern Convention by all participating countries to be assured, meaning conclusion of all steps towards formal accession by the remaining non-Party (Russian Federation) to be completed within the 2020 timeframe.
<ul style="list-style-type: none"> • National authorities to identify and make arrangements for fully involving all relevant stakeholder groups who may be able to contribute to the site identification and designation process, including sub-national authorities and civil society as well as the full range of scientists with relevant competences (bearing in mind for example the need to avoid biased emphasis on the more well-studied taxa and habitats). Consideration to be given to the need to organise special multi-stakeholder sub-regional seminars, especially to progress site identification and designation work in the larger countries.
<ul style="list-style-type: none"> • Explanatory and guidance materials on the Emerald Network site identification and designation process to be widely disseminated in relevant languages, to support the fullest possible involvement of all those who may be able to contribute. Newly summarised guidance on the processes (for example on sufficiency evaluations) may also be necessary to assist stakeholders who have lower levels of familiarity.
<i>Data gathering and site identification</i>
<ul style="list-style-type: none"> • Investigations to be undertaken into the potential contribution of additional sources of data from beyond the nature conservation field, for example forest inventories, agricultural land use classifications and water resources management data.

<ul style="list-style-type: none"> • Good use to be made of reputable “grey literature” and other reputable data and information sources in addition to peer-reviewed scientific publications, especially in situations where published research to date is limited and where conservation needs are urgent.
<ul style="list-style-type: none"> • In transboundary situations, data, consultation and evaluation to encompass inputs from both/all sides of the border/s concerned, including between EU countries and non-EU countries where applicable. Attention to be given to shared ecological systems, migration routes and corridors on an ecologically functional basis, and a Eurasian perspective to be born in mind where this is biogeographically appropriate.
<ul style="list-style-type: none"> • Areas regarded as “wilderness” to be included in consideration of possible sites, since lack of use/occupation does not equate to an absence of threat.
<ul style="list-style-type: none"> • Careful negotiation efforts to be planned where particular interest groups (e.g. landowners, hunters) may have a history of concerns or antagonism towards nature conservation designations.
<ul style="list-style-type: none"> • Attention to be given where relevant to marine sites as well as terrestrial ones. The Bern Secretariat and Standing Committee to consider the establishment of a Group of Experts on marine conservation.
<p><i>Constructing a sufficient Network</i></p>
<ul style="list-style-type: none"> • Each country to specify a programme of specific action steps (with timeframes) required to address the “sufficiency” conclusions relating to its own habitats and species, as produced by the relevant biogeographical seminars that have been undertaken so far.
<ul style="list-style-type: none"> • Sufficiency of national lists of sites to be assessed not only in relation to the Emerald criteria but also in relation to Aichi Biodiversity Target 11 (which seeks effective conservation by 2020 of at least 17 per cent of each country’s terrestrial and inland water areas and 10 per cent of its coastal and marine areas).
<ul style="list-style-type: none"> • In countries/biogeographic regions where good progress has been made towards sufficiency of coverage of species and habitats following initial evaluation seminars, options to be explored for convening second-round seminars in 2017 (notably in relation to non-avian species in the Caucasus and Boreal regions, involving Armenia, Azerbaijan, Belarus, Georgia, and Russian Federation). The Bern Standing Committee in November 2016 to make the requisite provision for this in its forward planning decisions. Bilateral meetings (as opposed to multi-country seminars) may be an appropriate solution in some cases.
<ul style="list-style-type: none"> • Recommendations to be progressed for updating the lists of species and habitats protected through the Emerald Network (Resolution No. 4 of 1996 and Resolution No. 6 of 1998) to represent more completely the ecology of the seven countries. National authorities to complete the proposal pro-formas for this as required, and to consider indicating priorities in respect of the deficiencies that are perceived to be the most urgent. Regard to be had in this, where appropriate, to compatibility with comparable listings under other biodiversity-related Conventions.
<ul style="list-style-type: none"> • Attention to be given to sufficiency of the Network on an on-going basis beyond the initial evaluation conclusions, since any loss or degradation of habitats or species populations later may require further additions to the Network, in order to ensure that sufficiency is maintained.
<p><i>Capacity and resources</i></p>
<ul style="list-style-type: none"> • A variety of potential sources of financial and other support to be explored, including LIFE+, INTERREG and Eastern Partnership tools. The Bern Standing Committee to assist the seven countries in their efforts in this regard by providing high-level encouragement to governments and others in a position to offer such support. Options also to be explored for providing central guidance and advice on identifying and accessing potential sources of funding support.

4. Actions for protection and management

- 4.1 Success of the Emerald Network cannot be achieved by designations alone, but depends on securing defined conservation outcomes for the relevant species and habitats.
- 4.2 According to Recommendation No. 16 (1989), once ASCIs have been designated by the States, the States are asked to ensure wherever possible that:
- the sites are subject to an appropriate regime designed to conserve the factors that are the basis for their inclusion in the Network (reference to “an appropriate regime” means that legal protection is not necessarily expected);
 - the agencies responsible for management and/or conservation of the sites have sufficient training, equipment and resources (both human and financial) to enable them to fulfil their role;
 - appropriate and coordinated research is conducted to further the understanding of critical elements in the management of ASCIs and the monitoring of their status; and
 - activities adjacent to or in the vicinity of the sites do not adversely affect them.
- 4.3 The States are further recommended in respect of ASCIs to:
- draw up and implement management plans with short- and long-term objectives;
 - regularly review the management plans in light of changing knowledge or other conditions;
 - clearly mark the boundaries of ASCIs on maps and as far as possible also on the ground;
 - advise landowners and relevant authorities about the location and important features of the sites; and
 - provide for monitoring of the sites.
- 4.4 Further elaboration of these various core measures and of additional options (such as acquisition and incentives) is provided in Recommendation No. 25 (1991) and Resolution No. 8 (2012) and in a guidance document produced in 2014⁶. The Group of Experts on Protected Areas and Ecological Networks has also prepared draft guidelines on managing Emerald sites with particular reference to climate change adaptation and mitigation, which can be consulted on the Convention website⁷.

Actions identified from the CoE/EC Joint Programme Final Conference in 2016

<i>Protection</i>
<ul style="list-style-type: none"> • Options to be clearly established in each individual case for the eventual appropriate regime to be used to conserve the designated areas (in the terms of Bern Recommendation No. 16 of 1989); whether this is to be full legal protection or some other suitably effective conservation measures.
<ul style="list-style-type: none"> • Examples of different approaches to legal site protection measures to be shared among the countries so that effort is not wasted in re-originating good models. Experience of transposition into national legislation of the nature Directives in EU countries to be included in this.
<ul style="list-style-type: none"> • The location and significance of candidate Emerald Sites to be reflected in relevant policy and planning instruments in non-conservation sectors as well as in conservation plans, for example in regional development strategies.
<ul style="list-style-type: none"> • Countries which have incorporated aspects of Emerald Network provisions into national legislation to document their approach and experiences of this, as case examples to assist others who may be considering doing likewise.

⁶ Bern Convention (2014). Towards management of Emerald sites. Document T-PVS/PA(2014) 8 prepared for the meeting of the Group of Experts on Protected Areas And Ecological Networks, Strasbourg, September 2014.

⁷ Bern Convention (2015c). Draft guidelines on managing the Emerald sites, including climate change adaptation and mitigation. Document T-PVS/PA (2015) 10 prepared for the 7th meeting of the Group of Experts on Protected Areas And Ecological Networks, Strasbourg, September 2015. Available at <https://wcd.coe.int/com.instranet.InstraServlet?command=com.instranet.CmdBlobGet&InstranetImage=2792842&SecMode=1&DocId=2298568&Usage=2>.

<i>Management</i>
<ul style="list-style-type: none"> • Each country to define realistic and prioritised action steps for achieving eventual full coverage of its Emerald sites by suitable management plans, having regard to existing good practice guidance and experience where applicable (see below), and including inter alia attention to influences on the site from its surrounding landscape, and provisions for monitoring and reporting.
<ul style="list-style-type: none"> • Channels of knowledge transfer and capacity-building from EU countries to be explored so that the seven E European/S Caucasus countries can benefit to the maximum extent from experience gained in the EU in establishing management measures and good practices for sites in the Natura 2000 network, particularly in respect of semi-natural habitats.
<ul style="list-style-type: none"> • Channels of experience-exchange and joint problem-solving to be explored between all the countries involved, and with their transboundary neighbours, so that successful methods and lessons learned can be shared.
<ul style="list-style-type: none"> • Steps to be taken to secure sources of external funding support for the development of site management plans.
<ul style="list-style-type: none"> • National Focal Points for the Emerald Network to coordinate with the Focal Points for other Conventions in each country to ensure experience-sharing and harmonised approaches to management planning, taking full advantage of methodologies and good practice standards which may already exist in these other frameworks (e.g. for wetland sites, the management planning guidelines adopted under the Ramsar Convention).
<ul style="list-style-type: none"> • To accommodate a variety of systems and mechanisms for delivering effective management of the sites, including those based on regulations and mandatory standards and those based on incentives and voluntary measures. To accommodate also a variety of levels of ambition concerning objectives and outcomes, provided that the minimum expectations agreed in Recommendation 16 (1989), Recommendation 25 (1991) and Resolution No. 8 (2012) are met.
<ul style="list-style-type: none"> • To make arrangements for fully involving all relevant stakeholder groups who may be able to contribute to the planning and implementation of site management, including the NGO sector as well as resource management agencies and competent scientists. Involvement may include, inter alia, sharing of information and data, direct delivery of management measures, participation in decision-making, and representation on relevant bodies having responsibility for the governance or oversight of management regimes.
<i>Monitoring and effectiveness assessment</i>
<ul style="list-style-type: none"> • Each country to make arrangements for monitoring of all of its Emerald Network sites, sufficient at least to ensure that any changes likely to have substantial negative effects on the ecological character of the site can be detected and reported to the Bern Secretariat (as agreed in Resolution No. 5 of 1998) and so that appropriate conservation responses to threats and changes can be initiated when required.
<ul style="list-style-type: none"> • Each country to define the mechanisms it will employ to monitor and assess the ecological effectiveness of the management of its Emerald Network sites, by reference to the conservation and management objectives defined for each site.
<ul style="list-style-type: none"> • Monitoring and effectiveness assessment of Emerald Network implementation to be integrated with monitoring of the implementation of the national biodiversity strategy and/or action plan for each country, as appropriate.

5. Actions for communication

- 5.1 To be fully effective, the Emerald Network will need to maintain high levels of public, political and institutional support. This in turn will depend on prominent (and positive) visibility, easy access to information, inter-sectoral cooperation and good engagement by civil society. Actions defined on this topic in this Road Map may in due course be developed further and separately into a distinct “Communications Plan” for the Network.
- 5.2 In 2012, an Action Plan on the strategic development of the Pan-European Ecological Network (PEEN, which includes Emerald sites) for 2012-2020 was prepared by the Bern Group of Experts. It contains proposals for raising awareness about the benefits of ecological networks (including Emerald) by means of short publications aimed at decision-makers and other stakeholders in various sectors. Sharing experiences with those who have undertaken communication activities to promote the Natura 2000 Network in the EU will also be important.
- 5.3 As well as maintaining the case for support, the credibility and efficient functioning of the Network will be aided by transparent access to information and efficient sharing of data. Recommendation No. 5 (1998) stipulates that a database of information on ASCIs shall be public (except for anything classed as confidential), and that the Group of Experts will regularly publish lists of designated ASCIs. The Standing Committee also, in the guidance it agreed in 2013, decided that final detailed conclusions of the biogeographic seminars (see section 3 above) should be published on the Council of Europe website.
- 5.4 Monitoring and evaluation, as referred to in section 4 above, are only meaningful when associated with processes for reporting, and this is considered here as a further aspect of communication. Resolution No. 5 (1998) asks governments to inform the Secretariat of any changes likely to have substantial negative effects on the ecological character of a designated ASCI. Resolution No. 8 (2012) asks governments to report every six years on the implementation of the management measures they have planned and put in place for their Emerald sites, and the first of these reporting exercises is due in 2018. (The Group of Experts has been charged with developing a format to be used for this).

<i>Taking a strategic approach to communication</i>	
•	To the extent that capacity permits, and with external assistance where possible, strategies/programmes for Emerald Network communication activities (possibly including public information campaigns) to be drawn up at national level in each participating country, on a joint basis between governments and NGOs.
•	Bilateral and multilateral channels of communication to be developed and enhanced at both formal and informal levels between the seven countries, and between each of them and their neighbours, for increasing awareness about the setting up and operation of the Emerald Network.
•	The Bern Secretariat to exchange information about the Emerald Network with other MEA Secretariats, seeking joint or harmonised approaches where appropriate on communication, education, participation and awareness work in relation to site networks in the Emerald area. The Bern Standing Committee to support this by giving encouragement to governments to ensure close liaison between the respective Focal Points of the different Conventions at national level.
•	Examples of successful communication initiatives to be shared among the countries, and between NGOs and governments, so that lessons can be learned, existing materials can be adapted for wider use, and different approaches can be considered for different target audiences (schools, tourists, etc).

<i>Enhancing dissemination and impact</i>
<ul style="list-style-type: none"> Articles and other communication and awareness-raising materials to be disseminated through available outlets not only of the primary implementing organisations but also through the websites, publications, social media platforms and other publicity channels of all relevant collaborators.
<ul style="list-style-type: none"> The Bern Secretariat to enhance provision of guidance and other materials in user-friendly formats on the Emerald Network pages of the Convention’s website.
<ul style="list-style-type: none"> Potential sources of financial support to be explored in particular for additional translation of communication materials into relevant local languages, and for employment of skilled communication professionals to convert scientific and technical materials into attractive products for the public.

6. Conclusion

- 6.1 The “Emerald Network of Nature Protection Sites, Phase II” Joint Programme represents a landmark in co-operation between the Council of Europe and the European Union. It has led already to impressive results, and to a remarkable degree of cooperation not only between the seven countries of Eastern Europe and the South Caucasus covered by the programme, but also between the governments, civil society and scientific institutions within those countries. Their shared sense of purpose and strong collaborative spirit was a key feature of the final conference which produced this Road Map.
- 6.2 The Road Map therefore emerges as a powerful consensus agreement about the way forward. It should however not be seen merely as a report, but as a practical working tool, with the signposts and routes that are mapped out here being subsequently converted into individual action steps and greater operational detail. In many cases this will involve capitalising on and intensifying existing efforts rather than necessarily embarking on new activities; and the technical foundations have been well built already by the substantial results of Phases I and II of the joint programme.
- 6.3 All three “dimensions” of the Road Map are equally important and indivisible. Taken together, they provide a strong triangle of stability for achieving a complete and fully operational Emerald Network by 2020, and for ensuring its sustainability thereafter. The future of Europe’s wildlife and habitats depends on this.

List of habitats included in the Resolution 4 of the Bern Convention existing in Armenia

NN	Code	Habitat*
1	C1.1	Permanent oligotrophic lakes, ponds and pools
2	C1.224	Floating <i>Utricularia australis</i> and <i>Utricularia vulgaris</i> colonies
3	C1.225	Floating <i>Salvinia natans</i> mats
4	C1.25	Charophyte submerged carpets in mesotrophic waterbodies
5	C1.32	Free-floating vegetation of eutrophic waterbodies
6	C1.33	Rooted submerged vegetation of eutrophic waterbodies
7	C1.3411	Water crowfoot communities in shallow water
8	C1.4	Permanent dystrophic lakes, ponds and pools
9	C2.12	Hard water springs
10	C2.18	Acid oligotrophic vegetation of spring
11	C2.19	Lime-rich oligotrophic vegetation of spring brooks
12	C2.1A	Mesotrophic vegetation of spring brooks
13	C2.1B	Eutrophic vegetation of spring brooks
14	C2.25	Acid oligotrophic vegetation of fast-flowing streams
15	C2.26	Lime-rich oligotrophic vegetation of fast-flowing streams
16	C2.27	Mesotrophic vegetation of fast-flowing streams
17	C2.28	Eutrophic vegetation of fast-flowing streams
18	C2.33	Mesotrophic vegetation of slow-flowing rivers
19	C2.34	Eutrophic vegetation of slow-flowing rivers
20	C3.4	Species-poor beds of low-growing water-fringing or amphibious vegetation
21	C3.51	Euro-Siberian dwarf annual amphibious swards (but excluding C3.5131 Toad-rush swards)
22	C3.55	Sparsely vegetated river gravel banks
23	C3.62	Unvegetated river gravel banks
24	D2.3	Transition mires and quaking bogs
25	D4.1	Rich fens, including eutrophic tall herb fens and calcareous flushes and soaks
26	D5.2	Beds of large sedges normally without free-standing water
27	D6.1	Inland saltmarshes
28	E1.11	Euro-Siberian rock debris swards
29	E1.2	Perennial calcareous grassland and basic steppes
30	E1.3	Mediterranean xeric grassland

31	E1.83	Mediterraneo-montane <i>Nardus stricta</i> swards
32	E2.3	Mountain hay meadows
33	E3.3	Sub-mediterranean humid meadows
34	E3.4	Moist or wet eutrophic and mesotrophic grassland
35	E3.5	Moist or wet oligotrophic grassland
36	E4.3	Acid alpine and subalpine grassland
37	E4.4	Calcareous alpine and subalpine grassland
38	E5.4	Moist or wet tall-herb and fern fringes and meadows
39	E5.5	Subalpine moist or wet tall-herb and fern stands
40	E6.2	Continental inland salt steppes
41	F2.22	Alpide acidocline alpenrose heaths
42	F3.245	Eastern Mediterranean deciduous thickets
43	F3.247	Ponto-Sarmatic deciduous thickets
44	F5.13	Juniper matorral
45	F6.8	Xero-halophile scrubs
46	F7	Spiny Mediterranean heaths (phrygana, hedgehog-heaths and related coastal cliff vegetation)
47	F9.1	Riverine scrub
48	F9.3	Southern riparian galleries and thickets
49	G1.11	Riverine <i>Salix</i> woodland
50	G1.22	Mixed <i>Quercus</i> - <i>Ulmus</i> - <i>Fraxinus</i> woodland of great rivers
51	G1.3	Mediterranean riparian woodland
52	G1.6	<i>Fagus</i> woodland
53	G1.A1	<i>Quercus</i> - <i>Fraxinus</i> - <i>Carpinus betulus</i> woodland on eutrophic and mesotrophic soils
54	G1.A4	Ravine and slope woodland
55	G1.A7	Mixed deciduous woodland of the Black and Caspian Seas
56	G3.4E	Ponto-Caucasian <i>Pinus sylvestris</i> forests
57	G3.9	Coniferous woodland dominated by Cupressaceae or Taxaceae
58	H1	Terrestrial underground caves, cave systems, passages and waterbodies
59	H2.3	Temperate-montane acid siliceous scree
60	H2.4	Temperate-montane calcareous and ultra-basic scree
61	H2.5	Acid siliceous scree of warm exposures
62	H2.6	Calcareous and ultra-basic scree of warm exposures
63	H3.1	Acid siliceous inland cliffs
64	H3.2	Basic and ultra-basic inland cliffs
65	H3.511	Limestone pavements

*It is possible to find habitats' description in the EUNIS official site or in the book: Fayvush G.M., Aleksanyan A.S. Habitats of Armenia. Yerevan: Institute of Botany, 2016, 360 p.

List of species included in the Resolution 6 of the Convention existing in Armenia

Vascular plants			
NN	Code	Species	Red Data Book of Armenia
1	1689	<i>Dracocephalum austriacum</i>	EN
2	1758	<i>Ligularia sibirica</i>	-
3	2068	<i>Microcnemum coralloides ssp. anatolicum</i>	EN
4	2098	<i>Paeonia tenuifolia</i>	CR
5	2326	<i>Dactylorhiza chuhensis</i>	-
6	2333	<i>Steveniella satyrioides</i>	EN
7	4067	<i>Echium russicum</i>	-
8	1528	<i>Saxifraga hirculus</i>	-
Invertebrate animals			
NN	Code	Species	Red Data Book of Armenia
1	1014	<i>Vertigo angustior</i>	CR
2	1016	<i>Vertigo moulinsiana*</i>	-
3	1042	<i>Leucorhina pectoralis</i>	EN
4	1061	<i>Maculinea nausithous</i>	VU
5	1078 (6199)	<i>Callimorpha (Euplagia) quadripunctaria</i>	-
6	1087	<i>Rosalia alpina</i>	EN
7	1088	<i>Cerambyx cerdo</i>	VU
8	4043	<i>Pseudophilotes bavius</i>	-
Vertebrate animals			
Fish			
NN	Code	Species	Red Data Book of Armenia
1	1130	<i>Aspius aspius</i>	VU
2	1143	<i>Barbus capito</i>	-
3	1146	<i>Sabanejewia aurata</i>	DD
4	5339	<i>Rhodeus sericeus amarus</i>	-
Reptiles			
NN	Code	Species	Red Data Book of Armenia
1	1219	<i>Testudo graeca</i>	VU
2	1220	<i>Emys orbicularis</i>	-
3	1222	<i>Mauremys caspica</i>	-
Birds			
NN	Code	Species	Red Data Book of Armenia
1	A019	<i>Pelecanus onocrotalus</i>	VU
2	A020	<i>Pelecanus crispus</i>	EN

3	A021	<i>Botaurus stellaris</i>	-
4	A022	<i>Ixobrychus minutus</i>	-
5	A023	<i>Nycticorax nycticorax</i>	-
6	A024	<i>Ardeola ralloides</i>	-
7	A026	<i>Egretta garzetta</i>	-
8	A027	<i>Egretta alba</i>	-
9	A029	<i>Ardea purpurea</i>	-
10	A030	<i>Ciconia nigra</i>	VU
11	A031	<i>Ciconia ciconia</i>	-
12	A032	<i>Plegadis falcinellus</i>	VU
13	A034	<i>Platalea leucorodia</i>	EN
14	A035	<i>Phoenicopus ruber</i>	DD
15	A037	<i>Cygnus bewickii</i>	VU
16	A038	<i>Cygnus cygnus</i>	VU
17	A042	<i>Anser erythropus</i>	VU
18	A057	<i>Marmaronetta angustirostris</i>	EN
19	A060	<i>Aythya nyroca</i>	VU
20	A068	<i>Mergus albellus</i>	-
21	A071	<i>Oxyura leucocephala</i>	EN
22	A072	<i>Pernis apivorus</i>	-
23	A075	<i>Haliaeetus albicilla</i>	EN
24	A076	<i>Gypaetus barbatus</i>	VU
25	A077	<i>Neophron percnopterus</i>	EN
26	A078	<i>Gyps fulvus</i>	VU
27	A079	<i>Aegypius monachus</i>	EN
28	A080	<i>Circaetus gallicus</i>	VU
29	A081	<i>Circus aeruginosus</i>	-
30	A082	<i>Circus cyaneus</i>	-
31	A083	<i>Circus macrourus</i>	EN
32	A084	<i>Circus pygargus</i>	VU
33	A089	<i>Aquila pomarina</i>	VU
34	A090	<i>Aquila clanga</i>	VU
35	A091	<i>Aquila chrysaetos</i>	VU
36	A092	<i>Hieraaetus pennatus</i>	VU
37	A094	<i>Pandion haliaetus</i>	VU
38	A095	<i>Falco naumanni</i>	VU
39	A097	<i>Falco vespertinus</i>	VU
40	A098	<i>Falco columbarius</i>	DD
41	A101	<i>Falco biarmicus</i>	DD
42	A103	<i>Falco peregrinus</i>	VU
43	A119	<i>Porzana porzana</i>	-
44	A120	<i>Porzana parva</i>	-
45	A121	<i>Porzana pusilla</i>	-
46	A122	<i>Crex crex</i>	VU
47	A124	<i>Porphyrio porphyrio</i>	DD
48	A127	<i>Grus grus</i>	EN

49	A128	<i>Tetrax tetrax</i>	VU
50	A129	<i>Otis tarda</i>	VU
51	A131	<i>Himantopus himantopus</i>	VU
52	A132	<i>Recurvirostra avosetta</i>	VU
53	A133	<i>Burhinus oedicnemus</i>	-
54	A135	<i>Glareola pratincola</i>	VU
55	A138	<i>Charadrius alexandrinus</i>	VU
56	A139	<i>Charadrius morinellus</i>	-
57	A140	<i>Pluvialis apricaria</i>	-
58	A151	<i>Philomachus pugnax</i>	-
59	A154	<i>Gallinago media</i>	VU
60	A157	<i>Limosa lapponica</i>	-
61	A166	<i>Tringa glareola</i>	-
62	A167	<i>Xenus cinereus</i>	-
63	A170	<i>Phalaropus lobatus</i>	-
64	A176	<i>Larus melanocephalus</i>	-
65	A177	<i>Larus minitus</i>	-
66	A180	<i>Larus genei</i>	-
67	A189	<i>Gelochelidon nilotica</i>	VU
68	A190	<i>Sterna caspia</i>	-
69	A193	<i>Sterna hirundo</i>	-
70	A195	<i>Sterna albifrons</i>	VU
71	A196	<i>Chlidonias hybridus</i>	VU
72	A197	<i>Chlidonias niger</i>	-
73	A198	<i>Chlidonias leucopterus</i>	-
74	A215	<i>Bubo bubo</i>	VU
75	A222	<i>Asio flammeus</i>	-
76	A223	<i>Aegolius funereus</i>	VU
77	A224	<i>Caprimulgus europaeus</i>	-
78	A229	<i>Alcedo atthis</i>	-
79	A231	<i>Coracias garrulus</i>	VU
80	A236	<i>Dryocopus martius</i>	VU
81	A238	<i>Dendrocopos medius</i>	-
82	A242	<i>Melonocorypha calandra</i>	-
83	A243	<i>Calandrella brachydactyla</i>	-
84	A246	<i>Lullula arborea</i>	-
85	A255	<i>Anthus campestris</i>	-
86	A272	<i>Luscinia svesica</i>	-
87	A293	<i>Acrocephalus melanopogon</i>	-
88	A307	<i>Sylvia nisoria</i>	-
89	A320	<i>Ficedula parva</i>	-
90	A338	<i>Lanius collurio</i>	-
91	A339	<i>Lanius minor</i>	-
92	A346	<i>Pyrrhocorax pyrrhocorax</i>	-
93	A379	<i>Emberiza hortulana</i>	-

94	A393	<i>Phalacrocorax pygmeus</i>	VU
95	A397	<i>Tadorna ferruginea</i>	VU
96	A402	<i>Accipiter brevipes</i>	VU
97	A403	<i>Buteo rufinus</i>	-
98	A404	<i>Aquila heliaca</i>	VU
99	A417	<i>Charadrius asiaticus</i>	-
10	A418	<i>Hoplopterus spinosus</i>	-
10	A420	<i>Pterocles orientalis</i>	VU
10	A429	<i>Dendrocopus syriacus</i>	-
10	A442	<i>Ficedula semitorquata</i>	DD
10	A452	<i>Bucanetes githagineus</i>	DD
10	A509	<i>Aquila nipalensis</i>	VU
10	A511	<i>Falco cherrug</i>	EN
10	A515	<i>Glareola nordmanni</i>	VU
10	A516	<i>Charadrius lesshenaultii</i>	EN
10	A533	<i>Oenanthe pleschanka</i>	-
Mammals			
NN	Code	Species	Red Data Book of Armenia
1	1302	<i>Rhinolophus mehelyi</i>	VU
2	1303	<i>Rhinolophus hipposideros</i>	-
3	1304	<i>Rhinolophus ferrumequinum</i>	-
4	1305	<i>Rhinolophus euryale</i>	NT
5	1306	<i>Rhinolophus blasii</i>	EN
6	1307	<i>Myotis blythii</i>	-
7	1310	<i>Miniopterus schreibersii</i>	VU
8	1321	<i>Myotis emarginatus</i>	-
9	1323	<i>Myotis bechsteinii</i>	VU
10	1352	<i>Canis lupus</i>	-
11	1354	<i>Ursus arctos</i>	VU
12	1355	<i>Lutra lutra</i>	EN
13	1361	<i>Lynx lynx</i>	-
14	1372	<i>Capra aegagrus</i>	VU
15	2023	<i>Panthera pardus</i>	CR
16	2635	<i>Vormela peregusna</i>	VU

* The species is known from vicinities of Vanadzor and Meghri, but current data on its populations are absent. There is necessity for future investigations with the aim to include its habitats into „Emerald“ Network

Notes

Notes

**Convention on the Conservation of European Wildlife
and Natural Habitats (Bern, 1979)**

**Ministry of Nature Protection
of the Republic of Armenia**

**THE "EMERALD" NETWORK
IN THE REPUBLIC OF ARMENIA**

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