



Freshwater Ecosystems and Biodiversity

ATLAS

of Freshwater
Key Biodiversity Areas
In Armenia



Freshwater Ecosystems and Biodiversity: Atlas of Freshwater Key Biodiversity Areas in Armenia

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Preface



The Southern Caucasus, a global biodiversity hotspot, is covered by a freshwater network of more than 43,000 rivers and 7 Ramsar Sites. This ecoregion harbors more than 70 fish species, including at least 14 endemics. However, unsustainable development of dams and hydropower production disrupts the environmental flows at river-basin scales. This causes multiple negative impacts on habitat connectivity and conditions, species interactions, and water quality. As a consequence, biodiversity and ecosystem services degrade.

Armenia has a high potential for hydropower development which, unfortunately, poses a high cumulative threat to biodiversity and ecosystem services. Prevention of such adverse effects and risks is possible exceptionally at river-basin scales.

The project "Promoting Sustainable Dam Development at River-Basin-Scale in the Southern Caucasus" was the pilot phase of the regional initiative on sustainable dam and hydropower development, which was aimed to secure the involvement of stakeholders in promoting the best practices for dams and hydropower production in three countries of the Southern Caucasus. This would safeguard biodiversity and ecosystem services for local people at river-basin scales and establish a regional platform for sustainable development of dams and hydropower plants. Due to this project, the Freshwater Key Biodiversity Areas (FKBAs) are identified and recognized as highly important and valuable areas in need of special protection and management measures.

This study followed the standardized procedures for the identification of FKBA in the Kura-Araks River Basin and the Black Sea Catchment Basin. Methodologically, it included a set of predefined criteria for selection and assessment, the database of freshwater plant and animal species from the national Red Lists and the IUCN Red List, GIS mapping and gap analysis.

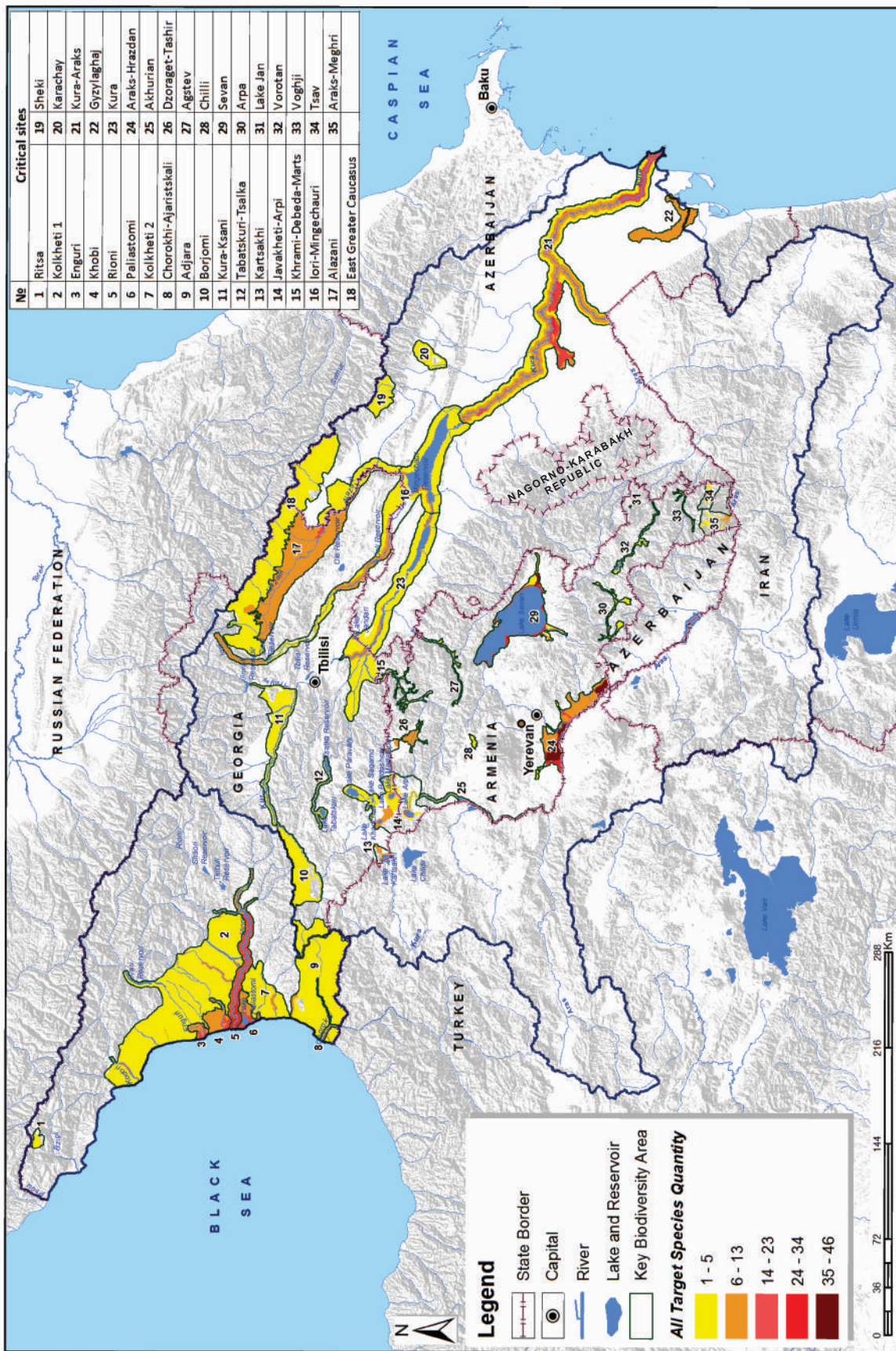
This document — Atlas of Freshwater Key Biodiversity Areas in Armenia — presents the spatial information on freshwater biodiversity and species distribution across different areas of Armenia. The baseline study relied mainly on the collective knowledge, expertise and contribution of leading experts in the country. Implementation of this kind of study would not have been possible without their dedicated work and commitment to the whole process.

We hope that this Atlas will be of immense value to environmental decision-makers, policymakers, water managers, experts, scientists and stakeholders in their attempts to minimize harmful effects of large-scale projects on freshwater biodiversity, which is declining much faster than any other component of global nature. This Atlas, which contains the information about life in our rivers and lakes, will also be interesting to a wide audience of people who care about the future of Armenian water resources and splendid nature.



Dr. Karen Manvelyan
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Freshwater KBA's and species richness

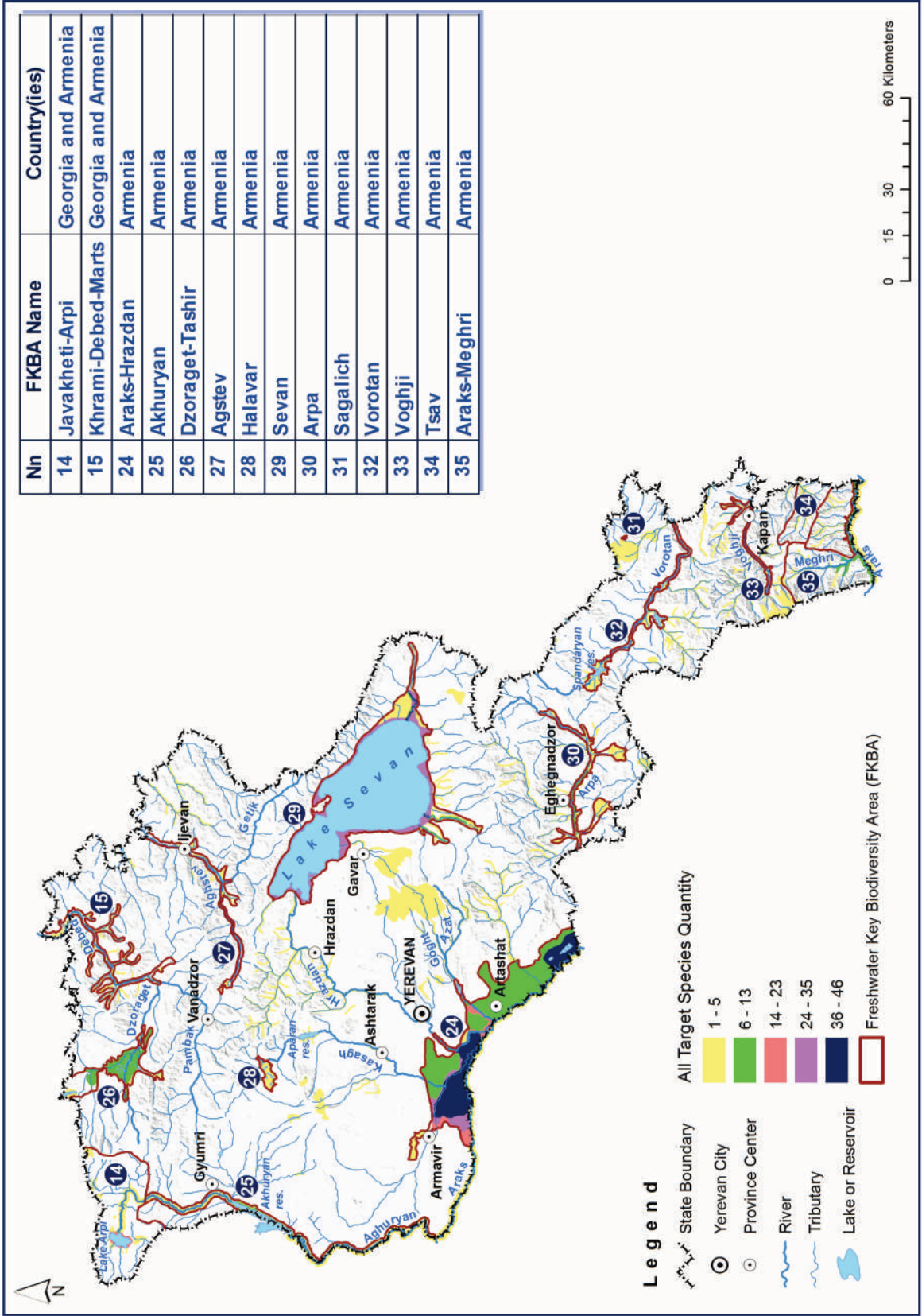


Freshwater KBA's and species richness

#	FKBA Name	Country(ies)	Total number of target species	Number of IUCN Red List species	Number of National Red List species	Number of IUCN and National Red List species	Number of species of additional concern
1	Rits	Georgia	2	2			
2	Kolkheti 1	Georgia	24	5	12	3	4
3	Enguri	Georgia	19	3	8	7	1
4	Khobi	Georgia	25	3	12	7	3
5	Rioni	Georgia	38	5	17	10	6
6	Paliastomi	Georgia	31	6	11	7	7
7	Kolkheti 2	Georgia	15	2	11		2
8	Chorokhi-Ajaristkali	Georgia	21	2	10	6	3
9	Adjara	Georgia	26	4	13	4	5
10	Borjomi	Georgia	9		7	1	1
11	Kura-Ksani	Georgia	7	1	6		
12	Tabatskuri-Tsalka	Georgia	5		4	1	
13	Kartsakhi	Georgia	7		5	2	
14	Javakheti-Arpi	Georgia-Armenia	33	2	27	4	
15	Kinrami-Debeda-Maris	Georgia-Armenia	16		14	2	
16	Iori-Mingechauri	Georgia-Azerbaijan	29		19	7	3
17	Alazani	Georgia-Azerbaijan	24	1	19	3	1
18	East Greater Caucasus	Georgia-Azerbaijan	13	2	10	1	

#	FKBA Name	Country(ies)	Total number of target species	Number of IUCN Red List species	Number of National Red List species	Number of IUCN and National Red List species	Number of species of additional concern
19	Sheki	Azerbaijan	3	1	2		
20	Karachay	Azerbaijan	3	1	2		
21	Kura-Araks	Azerbaijan	33	3	17	9	4
22	Gyzylaghaj	Azerbaijan	10		5	5	
23	Kura	Azerbaijan	11	1	5	2	3
24	Araks-Hrazdan	Armenia	59	2	52	5	
25	Akhuryan	Armenia	12	2	10		
26	Dzoraget-Tashir	Armenia	19		19		
27	Aghstev	Armenia	8		7	1	
28	Halavar	Armenia	2		2		
29	Sevan	Armenia	44		40	4	
30	Arpa	Armenia	15	2	12	1	
31	Sagalich	Armenia	1		1		
32	Vorotan	Armenia	9		9		
33	Voghji	Armenia	5		4	1	
34	Tsav	Armenia	4		4		
35	Araks-Meghri	Armenia	19	2	16	1	

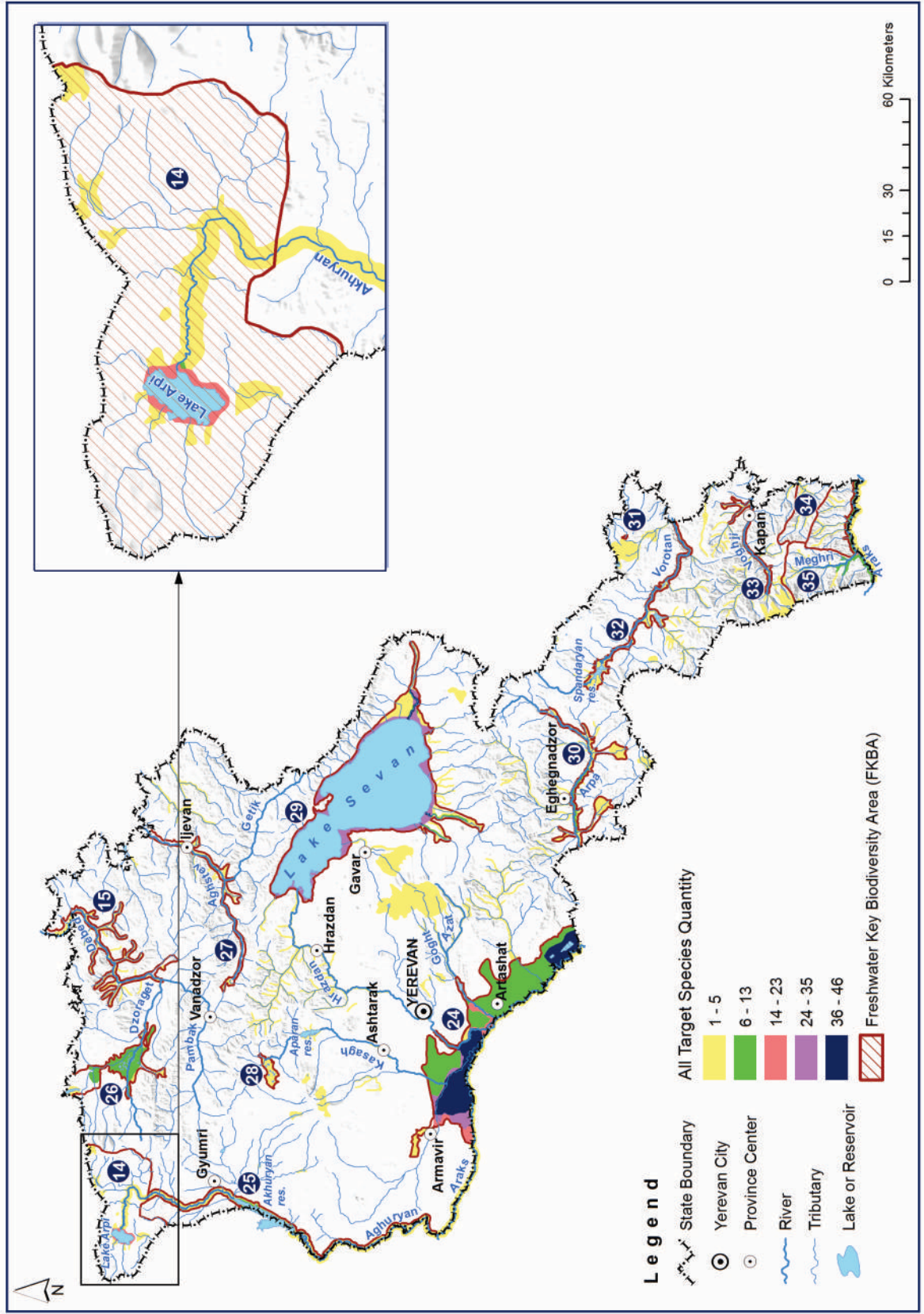
Freshwater KBA's and species richness



Freshwater KBA's and species richness

#	King- dom	Class	Order	Common Name	Latin Name	IUCN Red List Status	National Red List Status
1	Animalia	Amphibia	Caudata	Northern banded newt	<i>Onymodromus oprymion</i>	CR	
2	Animalia	Amphibia	Anura	Eastern spadefoot	<i>Pseudis syriacus</i>	VU	VU
3	Animalia	Aves	Passeriformes	Paddyfield warbler	<i>Acrocephalus agricola</i>	EN	VU
4	Animalia	Aves	Anseriformes	Northern shoveler	<i>Anas clypeata</i>	VU	EN
5	Animalia	Aves	Anseriformes	Greater white-fronted goose	<i>Anser albifrons</i>	VU	EN
6	Animalia	Aves	Anseriformes	Greylag goose	<i>Anser anser</i>	VU	CR
7	Animalia	Aves	Anseriformes	Lesser white-fronted goose	<i>Anser erythropus</i>	VU	VU
8	Animalia	Aves	Anseriformes	Ferruginous duck	<i>Aythya nyroca</i>	VU	VU
9	Animalia	Aves	Anseriformes	Red-breasted goose	<i>Branta ruficollis</i>	EN	VU
10	Animalia	Aves	Charadriiformes	Kentish plover	<i>Charadrius alexandrinus</i>	VU	VU
11	Animalia	Aves	Charadriiformes	White-tailed lapwing	<i>Chelusia leucura</i>	VU	VU
12	Animalia	Aves	Charadriiformes	Whiskered tern	<i>Chlidonias hybrida</i>	VU	VU
13	Animalia	Aves	Anseriformes	Bewick's swan	<i>Cygnus bewickii</i>	VU	VU
14	Animalia	Aves	Anseriformes	Whooper swan	<i>Cygnus cygnus</i>	VU	VU
15	Animalia	Aves	Anseriformes	Mute swan	<i>Cygnus olor</i>	VU	VU
16	Animalia	Aves	Charadriiformes	Black-winged pratincole	<i>Gareola nordmanni</i>	VU	VU
17	Animalia	Aves	Charadriiformes	Collared pratincole	<i>Gareola pratincola</i>	VU	VU
18	Animalia	Aves	Guliformes	Common crane	<i>Grus grus</i>	EN	VU
19	Animalia	Aves	Charadriiformes	Eurasian oystercatcher	<i>Haematopus ostralegus</i>	VU	VU
20	Animalia	Aves	Charadriiformes	Black-winged stilt	<i>Himantopus himantopus</i>	VU	VU
21	Animalia	Aves	Charadriiformes	Armenian gull	<i>Larus armenicus</i>	VU	VU
22	Animalia	Aves	Passeriformes	Savi's warbler	<i>Locustella luscinioides</i>	EN	VU
23	Animalia	Aves	Anseriformes	Marbled teal	<i>Marmarometta angustirostris</i>	VU	EN
24	Animalia	Aves	Anseriformes	Velvet scoter	<i>Melanitta fusca</i>	EN	DD
25	Animalia	Aves	Passeriformes	Chitne wagtail	<i>Motacilla chitrea</i>	VU	VU
26	Animalia	Aves	Anseriformes	White-headed duck	<i>Oxyura leucocephala</i>	EN	EN
27	Animalia	Aves	Accipitriformes	Osprey	<i>Pandion haliaetus</i>	VU	VU
28	Animalia	Aves	Pelecaniformes	Dalmatian pelican	<i>Pelecanus crispus</i>	VU	EN
29	Animalia	Aves	Pelecaniformes	Great white pelican	<i>Pelecanus oncorhynchus</i>	VU	VU
30	Animalia	Aves	Pelecaniformes	Great cormorant	<i>Phalacrocorax carbo</i>	VU	VU
31	Animalia	Aves	Pelecaniformes	Pygmy cormorant	<i>Phalacrocorax pygmaeus</i>	VU	VU
32	Animalia	Aves	Ciconiiformes	Eurasian spoonbill	<i>Plegadis falcinellus</i>	EN	EN
33	Animalia	Aves	Ciconiiformes	Glossy ibis	<i>Plegadis falcinellus</i>	VU	VU
34	Animalia	Aves	Podicipediformes	Red-necked grebe	<i>Podiceps grisegena</i>	VU	VU
35	Animalia	Aves	Charadriiformes	Pied avocet	<i>Recurvirostra avocetta</i>	VU	VU
36	Animalia	Aves	Charadriiformes	Little tern	<i>Sterna albifrons</i>	VU	VU
37	Animalia	Aves	Charadriiformes	Gull-billed tern	<i>Sterna nitida</i>	VU	VU
38	Animalia	Aves	Anseriformes	Ruddy shelduck	<i>Tadorna ferruginea</i>	VU	VU
39	Animalia	Aves	Anseriformes	Common shelduck	<i>Tadorna tadorna</i>	VU	VU
40	Animalia	Insecta	Coleoptera	<i>Aboloboides figuratus</i>		VU	VU
41	Animalia	Insecta	Odonata	<i>Aeshna cyanea</i>		EN	EN
42	Animalia	Insecta	Odonata	<i>Aeshna serrata</i>		EN	EN
43	Animalia	Insecta	Odonata	Norfolk damselfly	<i>Coenagrion armatum</i>	CR	CR
44	Animalia	Insecta	Odonata		<i>Coenagrion scitulum</i>	EN	EN
45	Animalia	Insecta	Odonata	Oriental scarlet	<i>Crocothemis servilla</i>	EN	EN
46	Animalia	Insecta	Coleoptera		<i>Chenopus persimilis</i>	EN	EN
47	Animalia	Insecta	Coleoptera		<i>Drasterius africanus</i>	EN	EN
48	Animalia	Insecta	Coleoptera		<i>Durallius sepanarvanensis</i>	CR	CR
49	Animalia	Insecta	Coleoptera		<i>Durallius yatsenikohimelevskii</i>	EN	EN
50	Animalia	Insecta	Coleoptera		<i>Dyschirius sevanensis</i>	CR	CR
51	Animalia	Insecta	Odonata		<i>Erythronia lindeni</i>	EN	EN
52	Animalia	Insecta	Odonata	Vagrant emperor	<i>Gomphus ubadschii</i>	EN	EN
53	Animalia	Insecta	Odonata		<i>Hemerix ephippiger</i>	EN	EN
54	Animalia	Insecta	Odonata		<i>Lestes macrostigma</i>	VU	VU
55	Animalia	Insecta	Odonata		<i>Leucorrhinus pectoralis</i>	CR	CR
56	Animalia	Insecta	Odonata	Red chaser	<i>Libellula pontica</i>	EN	EN
57	Animalia	Insecta	Odonata	Dark prince	<i>Oryzophanes assimilis</i>	VU	VU
58	Animalia	Insecta	Odonata	Slender skimmer	<i>Orthetrum sabina</i>	EN	EN
59	Animalia	Insecta	Odonata	Blue leatherleg	<i>Platycnemis pennipes</i>	EN	EN
60	Animalia	Insecta	Lepidoptera	Willowherb hawkmoth	<i>Proserpinus proserpina</i>	VU	VU
61	Animalia	Insecta	Odonata		<i>Sympetrum paedisca</i>	VU	VU
62	Animalia	Insecta	Odonata		<i>Sympetrum depressusculum</i>	EN	EN
63	Animalia	Mammalia	Carnivora	Eurasian otter	<i>Lutra lutra</i>	EN	EN
64	Animalia	Mammalia	Eulipotyphla	Transcaucasian water shrew	<i>Neomys schelkovnikovi</i>	EN	EN
65	Animalia	Mollusca	Gastropoda		<i>Bithynia troscheli</i>	CR	CR
66	Animalia	Mollusca	Gastropoda		<i>Gyraulus albus</i>	EN	EN
67	Animalia	Mollusca	Gastropoda	Smooth ram's horn snail	<i>Gyraulus laevis</i>	EN	EN
68	Animalia	Mollusca	Gastropoda		<i>Gyraulus regularis</i>	CR	CR
69	Animalia	Mollusca	Bivalvia		<i>Musculium strictum</i>	CR	CR
70	Animalia	Mollusca	Bivalvia		<i>Ochmerpsidium amandalei</i>	CR	CR
71	Animalia	Mollusca	Gastropoda		<i>Planorbis carinaus</i>	CR	CR
72	Animalia	Mollusca	Gastropoda		<i>Shadnia akranovskii</i>	CR	CR
73	Animalia	Pisces	Cypriniformes	Seven khramulya	<i>Capoeta savangi</i>	VU	VU
74	Animalia	Pisces	Cypriniformes	Seven barbel	<i>Barbus gootschaicus</i>	VU	VU
75	Animalia	Pisces	Cypriniformes		<i>Cyprinus carpio</i>	VU	VU
76	Animalia	Pisces	Cypriniformes	Asp	<i>Leuciscus aspius</i>	VU	VU
77	Animalia	Pisces	Cypriniformes		<i>Luciobarbus capito</i>	EN	EN
78	Animalia	Pisces	Cypriniformes	Armenian roach	<i>Rutilus rutilus schelkovnikovi</i>	CR	CR
79	Animalia	Pisces	Salmoniformes	Summer bakhak	<i>Salmo ischchan aestivalis</i>	CR	CR
80	Animalia	Pisces	Salmoniformes	Gegharkuni	<i>Salmo ischchan gegharkuni</i>	EN	EN
81	Plantae	Liliopsida	Acorales	Sweet flag	<i>Acorus calamus</i>	EN	EN
82	Plantae	Magnoliopsida	Caryophyllales		<i>Anthriscum polygaloides</i>	CR	CR
83	Plantae	Magnoliopsida	Lamiales	Water starwort	<i>Callitriche hermaphrodita</i>	CR	CR
84	Plantae	Liliopsida	Cyperales	Bohemian sedge	<i>Carex bohemica</i>	EN	EN
85	Plantae	Magnoliopsida	Asterales	Nodding starwort	<i>Carpesium abrotanoides</i>	EN	EN
86	Plantae	Magnoliopsida	Myrtales	Dodon's freeweed	<i>Chamaenerion dodonaei</i>	EN	EN
87	Plantae	Magnoliopsida	Caryophyllales	Ragged Robin	<i>Coccygarhnia flo-cuculi</i>	CR	CR
88	Plantae	Liliopsida	Colchicales	Nina's meadow-saffron	<i>Colchicum ninae</i>	EN	EN
89	Plantae	Liliopsida	Poales	Ravenegrass	<i>Eriarhiza ravennae</i>	VU	VU
90	Plantae	Magnoliopsida	Apiales	Sickleweed	<i>Falcaria falcaroides</i>	CR	CR
91	Plantae	Magnoliopsida	Fabales	Liquorice	<i>Glycyrrhiza echinata</i>	VU	VU
92	Plantae	Liliopsida	Potamogetonaceae		<i>Groenlandia densa</i>	EN	EN
93	Plantae	Magnoliopsida	Geraniales		<i>Lomatium carinthiacum</i>	VU	VU
94	Plantae	Magnoliopsida	Geraniales	Bogbean / Buckbean	<i>Menyanthes trifoliata</i>	VU	VU
95	Plantae	Liliopsida	Najadales	Slender naiad	<i>Najas minor</i>	VU	VU
96	Plantae	Magnoliopsida	Nymphaeales	Yellow water-lily	<i>Nuphar lutea</i>	CR	CR
97	Plantae	Magnoliopsida	Nymphaeales	White water-lily	<i>Nymphaea alba</i>	EN	EN
98	Plantae	Magnoliopsida	Apiales	Water dropwort	<i>Oenanthe silaifolia</i>	CR	CR
99	Plantae	Magnoliopsida	Nymphaeales	Oriental plane	<i>Platanum orientalis</i>	EN	EN
100	Plantae	Magnoliopsida	Rosales	Tormentil	<i>Potentilla erecta</i>	CR	CR
101	Plantae	Liliopsida	Poales	Grossheim's alkaligrass	<i>Puccinellia grossheimiana</i>	EN	EN
102	Plantae	Magnoliopsida	Ranunculales	Great spearwort	<i>Ranunculus lingua</i>	EN	EN
103	Plantae	Magnoliopsida	Brassicales	Spaskeya's yellowwort	<i>Rorippa spaskeyae</i>	CR	CR
104	Plantae	Liliopsida	Alismatales	Arrowhead (Duck potato)	<i>Sagittaria sagittifolia</i>	CR	CR
105	Plantae	Liliopsida	Alismatales	Threelobed arrowhead	<i>Sagittaria trifolia</i>	CR	CR
106	Plantae	Penidopsida	Salviniales	Floating fern	<i>Salvinia natans</i>	CR	CR
107	Plantae	Liliopsida	Amaryllidales	Rosen's squill	<i>Scilla rosenii</i>	EN	EN
108	Plantae	Magnoliopsida	Caryophyllales		<i>Tamara octandra</i>	EN	EN
109	Plantae	Penidopsida	Polypodiales	Marsh fern	<i>Thelypteris palustris</i>	CR	CR
110	Plantae	Magnoliopsida	Fabales	Flatleaf bladderwort	<i>Utricularia capitata</i>	EN	EN
111	Plantae	Magnoliopsida	Lamiales		<i>Utricularia intermedia</i>	EN	EN

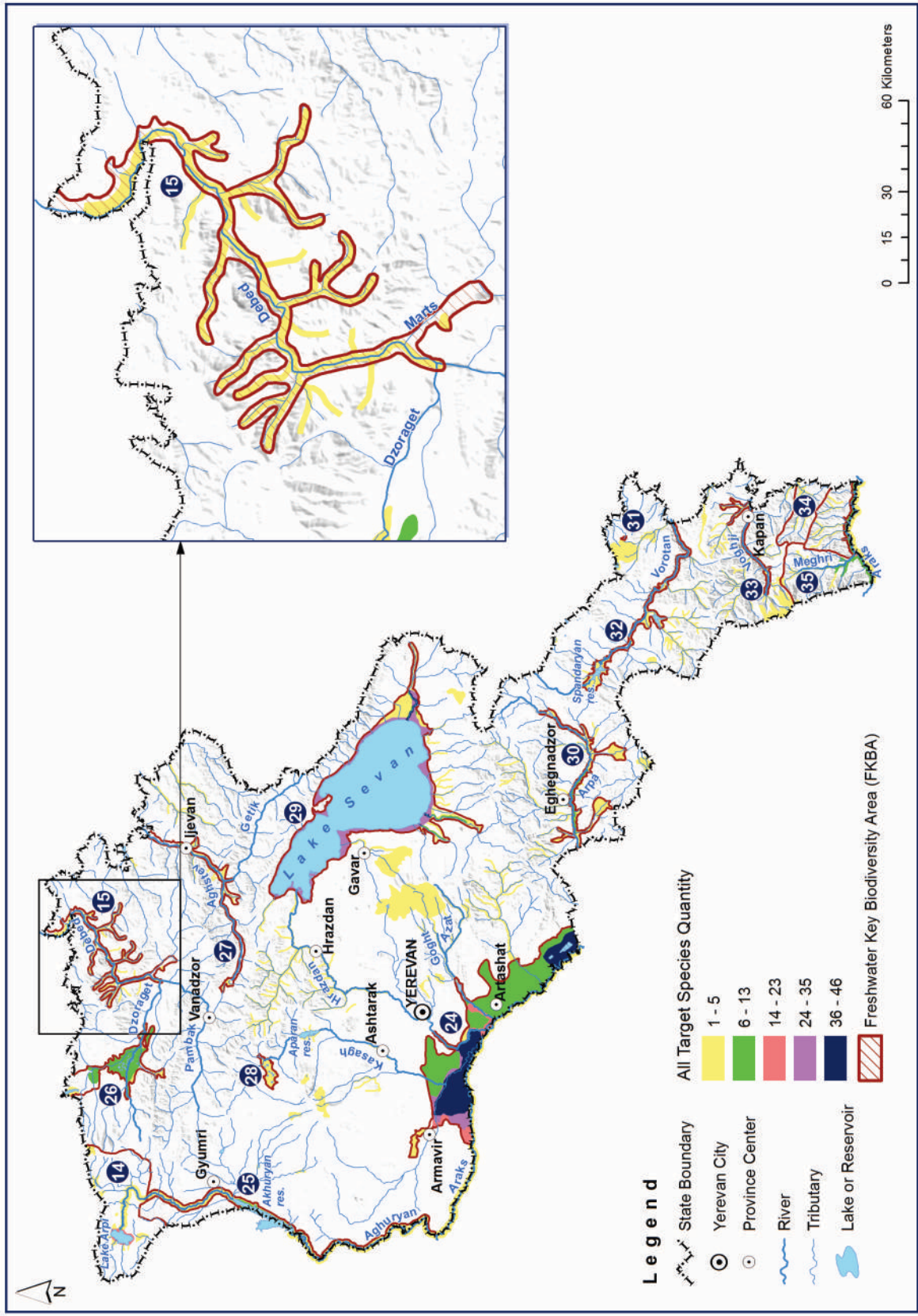
Javakheti-Arpi FKBA



Javakheti-Arpi FKBA

FKBA (ha)	Country(ies)	Species Richness	Species Summary Analysis by Categories	FKBA Overview	FKBA Landscape Subtypes and Water Bodies
153,051	Georgia-Armenia	<p>Georgia</p> <p>Aves: Tadoma ferruginea, Grus grus, Pelecanus crispus, Pelecanus onocrotalus, Melanitta fusca, Podiceps grisegena</p> <p>Insecta: Onychogomphus assimilis</p> <p>Mammalia: Lutra lutra</p> <p>Pisces: Salmo trutta</p> <p>Armenia</p> <p>Aves: Anas clypeata, Anser albifrons, Anser anser, Glareola pratincola, Grus grus, Himantopus himantopus, Larus armenicus, Motacilla citreola, Pelecanus crispus, Pelecanus onocrotalus, Phalacrocorax carbo, Platalea leucordia, Plegadis falcinellus, Podiceps grisegena, Tadorna ferruginea, Tadorna tadorna</p> <p>Insecta: Aeshna serrata, Coenagrion armatum</p> <p>Mammalia: Lutra lutra</p> <p>Pisces: Cyprinus carpio, Leuciscus aspius, Luciobarbus capito</p> <p>Plantae: Nuphar lutea, Scilla rosenii</p>	<p>Totally: 27 species</p> <ul style="list-style-type: none"> - IUCN Red List: 2 species - National Red List: 22 species - IUCN and National Red Lists: 3 species <p>Georgia: 9 species</p> <ul style="list-style-type: none"> - National Red List: 6 species <p>- IUCN and National Red Lists: 3 species</p> <p>Armenia: 24 species</p> <ul style="list-style-type: none"> - IUCN Red List: 2 species - National Red List: 21 species - IUCN and National Red Lists: 1 species 	<p>Georgia: The upland of Javakheti is known as a lake region. Since recent times, attention to this region has been significantly increased because of the global importance of its biodiversity. It has a pine plantation and small fragments of natural forest. The most important natural alpine forest composed of white birch, Caucasian mountain-ash, cotoneaster and raspberry bushes is found near Lake Kartsakhi on the Georgian-Turkish border. The FKBA includes the Javakheti Protected Areas: Kartsakhi Managed Reserve, Sulda Managed Reserve, Khanchali Managed Reserve, Bugdasheni Managed Reserve and Madatapa Managed Reserve. The FKBA's main lakes of Khanchali, Madatapa, Paravani, Sagamo and Bugdasheni are the important Bird Areas (IBA).</p> <p>Armenia: This site includes Lake Arpi and the headwaters of the Akhuryan River. It is part of Lake Arpi National Park, which is a Ramsar Site, and includes the Lake Arpi and Amasia IBAs. It is a reservoir which was established in 1951 by damming of Lake Arpi. The bottom and shorelines are swampy and the landscape is flat. Despite a damming-caused dramatic change in hydrological regime and the loss of riparian vegetation essential for nesting, it still remains a crucial site for breeding of threatened birds. The main threats are water fluctuations, freezing, climate change, poaching and overfishing; for this reason, most of local birds occur here only during migrations and do not nest.</p>	<p>The Javakheti-Armenian Plateau with steppe and meadow-steppe vegetation; High-mountain landscapes with plant micro-communities, mosses and lichens; Delta and floodplain landscapes with wetlands, swamp forests, grasslands and salt marshes; Armenian Highland's volcanic plateau landscapes with steppes and meadow-steppes in combination with wetlands; Caucasian sub-alpine landscapes with a combination of meadows, tall-grass communities, elfin woods and thickets; Caucasian alpine landscapes with grasslands and Rhododendron thickets; Lakes: Bugdasheni, Paravani, Madatapa, Sagamo, Khanchali and Arpi.</p>

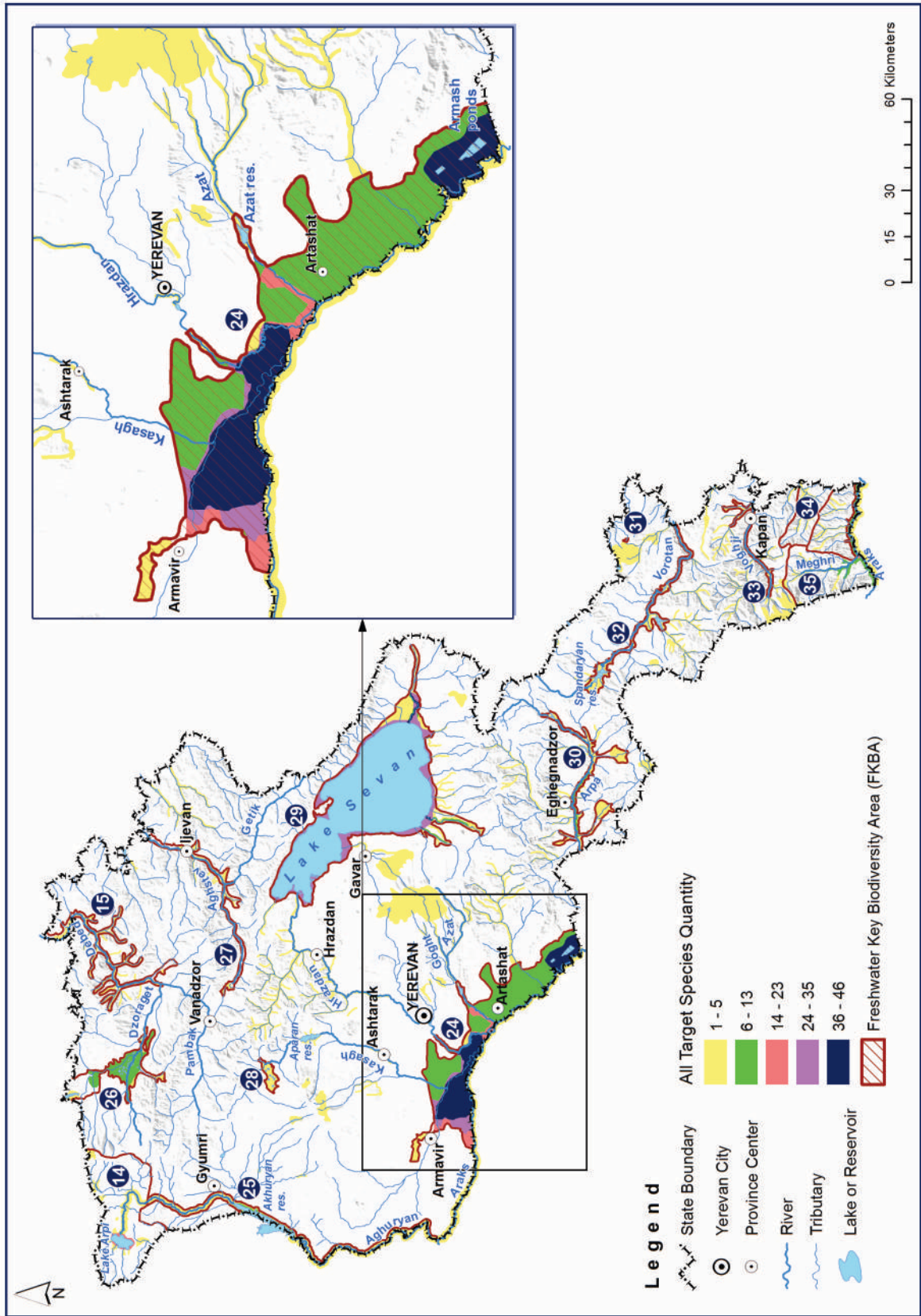
Khrami-Debed-Marts FKBA



Khrami-Debed-Marts FKBA

FKBA (ha)	Country(ies)	Species Richness	Species Summary Analysis by Categories	FKBA Overview	FKBA Landscape Subtypes and Water Bodies
106,872	Georgia-Armenia	<p>Georgia</p> <p>Amphibia: <i>Pelobates syriacus</i></p> <p>Aves: <i>Haliaeetus albicilla</i>, <i>Tadoma ferruginea</i>, <i>Ciconia nigra</i>, <i>Oxyura leucocephala</i>, <i>Grus grus</i>, <i>Pelecanus crispus</i>, <i>Pelecanus onocrotalus</i></p> <p>Crustacea: <i>Pontastacus pylzowi</i></p> <p>Mammalia: <i>Lutra lutra</i></p> <p>Pisces: <i>Salmo trutta</i>, <i>Sabanejewia aurata</i></p> <p>Plantae: <i>Quercus pedunculiflora</i></p> <p>Armenia</p> <p>Insecta: <i>Aeoloides figuratus</i></p> <p>Mammalia: <i>Lutra lutra</i></p> <p>Amphibia: <i>Ommatotriton ophryticus</i></p>	<p>Totally: 15 species</p> <ul style="list-style-type: none"> - National Red List: 13 species - IUCN and National Red Lists: 2 species <p>Georgia: 13 species</p> <ul style="list-style-type: none"> - National Red List: 11 species - IUCN and National Red Lists: 2 species <p>Armenia: 3 species</p> <ul style="list-style-type: none"> - National Red List: 3 species 	<p>Georgia: The Khrami River is a 201 km long river in eastern Georgia and partly in western Azerbaijan, which is a right tributary of the Kura River. Its tributaries are the Debeda and Mashavera. The Tsalka Reservoir and three hydropower plants are constructed on the Khrami River. The FKBA holds the transboundary Lake Jandara, an important IBA in Georgia. The FKBA's landscape is comprised of South East Caucasian low-mountain landscapes with juniper woodlands, dry shrublands and dwarf-shrub vegetation.</p> <p>Armenia: This site covers the middle part of the Debed River which is fast flowing and intensively used for irrigation and hydropower production. This site also includes the Marts River and small lakes in montane forests. Water is used for irrigation. The main threats are poaching, mining, hydropower production, water pollution and eutrophication from land use and deforestation.</p>	<p>South East Caucasian (transitional to semi-humid) low-mountain landscapes with hornbeam-oak or oak forests and secondary dry scrublands; South East Caucasian sub-Mediterranean (transitional to moderate-thermophilic semi-humid) foothill landscapes with hornbeam-oak forests, woodlands and <i>Botriochloa</i> steppes; South East Caucasian middle-mountain landscapes with beech forests alternating with hornbeam-oak forests, partly with pine forests and secondary grasslands; East Georgian hilly and foothill landscapes with <i>Botriochloa</i> and <i>Stipa</i> steppes, dry shrublands (<i>shibljak</i>), dwarf-shrub vegetation (<i>phrygana</i>) and semi-desert; Caucasian sub-alpine landscapes with a combination of meadows, tall-grass communities, elfin woods and thickets; Delta and floodplain landscapes with wetlands, swamp forests, grasslands and salt marshes; Caucasian upper-mountain landscapes with birch and pine forests; South East Caucasian low-mountain landscapes with juniper woodlands, dry shrublands and dwarf-shrub vegetation; Rivers: Khrami and Mtkvari; Lake: Jandara.</p>

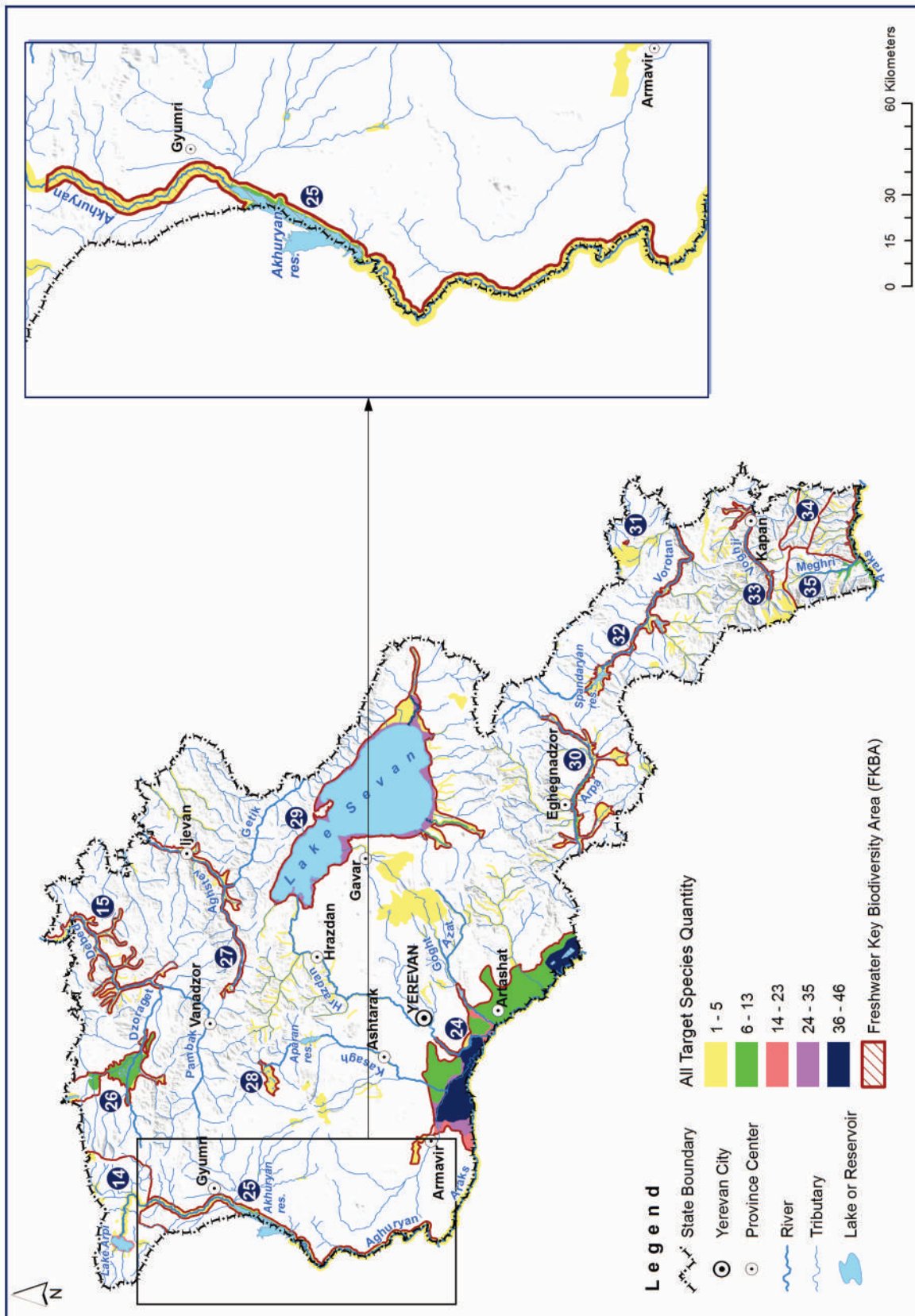
Araks-Hrazdan FKBA



Araks-Hrazdan FKBA

FKBA (ha)	Country(ies)	Species Richness	Species Summary Analysis by Categories	FKBA Overview	FKBA Landscape Subtypes and Water Bodies
89,001	Armenia	<p>Amphibia: <i>Pelobates syriacus</i></p> <p>Aves: <i>Acrocephalus agricola</i>, <i>Anas clypeata</i>, <i>Anser albifrons</i>, <i>Anser anser</i>, <i>Anser erythropus</i>, <i>Aythya nyroca</i>, <i>Branta ruficollis</i>, <i>Charadrius alexandrinus</i>, <i>Chettusia leucura</i>, <i>Chlidonias hybrida</i>, <i>Cygnus bewickii</i>, <i>Cygnus cygnus</i>, <i>Cygnus olor</i>, <i>Glareola nordmanni</i>, <i>Glareola pratincola</i>, <i>Haematopus ostralegus</i>, <i>Himantopus himantopus</i>, <i>Larus armenicus</i>, <i>Locustella luscinioides</i>, <i>Marmaronetta angustirostris</i>, <i>Oxyura leucocephala</i>, <i>Pandion haliaetus</i>, <i>Pelecanus crispus</i>, <i>Pelecanus onocrotalius</i>, <i>Phalacrocorax carbo</i>, <i>Phalacrocorax pygmaeus</i>, <i>Platalea leucordia</i>, <i>Plegadis falcinellus</i>, <i>Podiceps grisegena</i>, <i>Recurvirostra avosetta</i>, <i>Sterna albifrons</i>, <i>Sterna nilotica</i>, <i>Tadorna ferruginea</i>, <i>Tadorna tadoma</i></p> <p>Insecta: <i>Aeoloides figuratus</i>, <i>Ctenioptus persimilis</i>, <i>Erythronma lindenii</i>, <i>Gomphus ubadschii</i>, <i>Hemianax ephippiger</i>, <i>Lestes macrostigma</i>, <i>Libellula pontica</i>, <i>Proserpinus proserpina</i>, <i>Sympecma paedisca</i></p> <p>Mammalia: <i>Lutra lutra</i></p> <p>Mollusca: <i>Shadina akramovskii</i></p> <p>Pisces: <i>Cyprinus carpio</i>, <i>Leuciscus aspius</i>, <i>Luciobarbus capito</i>, <i>Rutilus rutilus schelkownikovi</i></p> <p>Plantae: <i>Acorus calamus</i>, <i>Falcaria falcaoides</i>, <i>Glycyrrhiza echinata</i>, <i>Najas minor</i>, <i>Oenanthe silaifolia</i>, <i>Puccinellia grossheimiana</i>, <i>Tamarix octandra</i>, <i>Trigonella capitata</i>, <i>Carpesium abrotanoides</i></p>	<p>Totally: 59 species</p> <ul style="list-style-type: none"> - IUCN Red List: 2 species - National Red List: 52 species - IUCN and National Red Lists: 5 species 	<p>The site is the stronghold for freshwater species, especially birds, in Armenia due to the plenty of non-freezing and food-rich fish farms, lakes, rivers, canals and associated small wetlands. This site is located in the Ararat Valley along the middle part of the Araks River basin and its junction with the lower Hrazdan River. Armash fish farms play the key role for waterfowl in the country. This site includes the Armash fish farms and Metsamor IBAs. The main threats are urban, agricultural and infrastructure development, aridization from climate change, reebed burning, overgrazing and water overuse for irrigation.</p>	<p>Armenian-Iranian low-mountain landscapes with semi-deserts, dwarf-shrub vegetation and partly with shrublands; South Caucasian (transitional to moderate-thermophilic) middle-mountain landscapes with steppes, dry shrublands and dwarf-shrub vegetation, partly with mountain semi-deserts; Delta and floodplain landscapes with wetlands, swamp forests, grasslands and salt marshes; Mt. Ararat's flat terrain landscapes with stony deserts, semi-deserts and dry dwarf-shrub vegetation; South Caucasian middle-mountain landscapes with meadows, meadow-steppes and steppes, partly with beech and hornbeam-beech forests, dry shrublands and dwarf-shrub vegetation; Armenian Highland's volcanic plateau landscapes with steppes and meadow-steppes in combination with wetlands; Rivers: Araks and Hrazdan; Reservoir: Azat.</p>

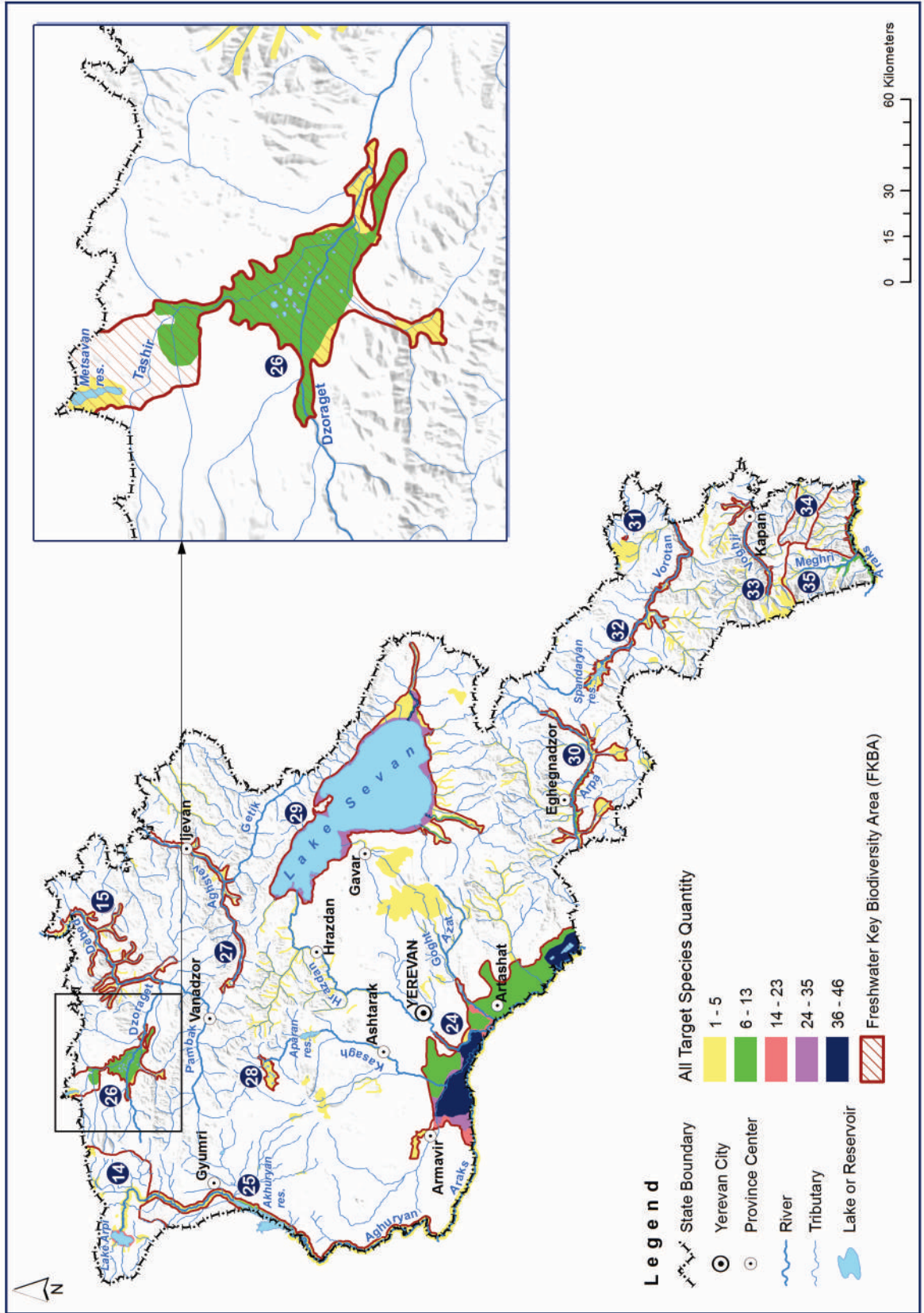
Akhuryan FKBA



Akhuryan FKBA

FKBA (ha)	Country(ies)	Species Richness	Species Summary Analysis by Categories	FKBA Overview	FKBA Landscape Subtypes and Water Bodies
18,908	Armenia	<p>Aves: <i>Anas clypeata</i>, <i>Chlidonias hybrida</i>, <i>Phalacrocorax carbo</i>, <i>Platalea leucordia</i>, <i>Tadorna ferruginea</i>, <i>Tadorna tadorna</i></p> <p>Mammalia: <i>Lutra lutra</i></p> <p>Pisces: <i>Cyprinus carpio</i>, <i>Leuciscus aspius</i>, <i>Luciobarbus capito</i></p> <p>Insecta: <i>Platycnemis pennipes</i>, <i>Sympecma paedisca</i></p>	<p>Totally: 12 species</p> <ul style="list-style-type: none"> - IUCN Red List: 2 species - National Red List: 10 species 	<p>This site encompasses the Akhuryan Reservoir and the adjacent parts of the Akhuryan River. The reservoir is used for the irrigation of 300 km² of arid lands in Shirak and Armavir Provinces, as well as in Turkey. The reservoir freezes in winter. The main threats are water overuse and land degradation.</p>	<p>The Armenian Plateau with steppe and meadow-steppe vegetation; Delta and floodplain landscapes with wetlands, swamp forests, grasslands and salt marshes; Mt. Ararat's flat terrain landscapes with stony deserts, semi-deserts and dry dwarf-shrub vegetation; Armenian Highland's volcanic plateau landscapes with steppes and meadow-steppes in combination with wetlands; Reservoir: Akhuryan.</p>

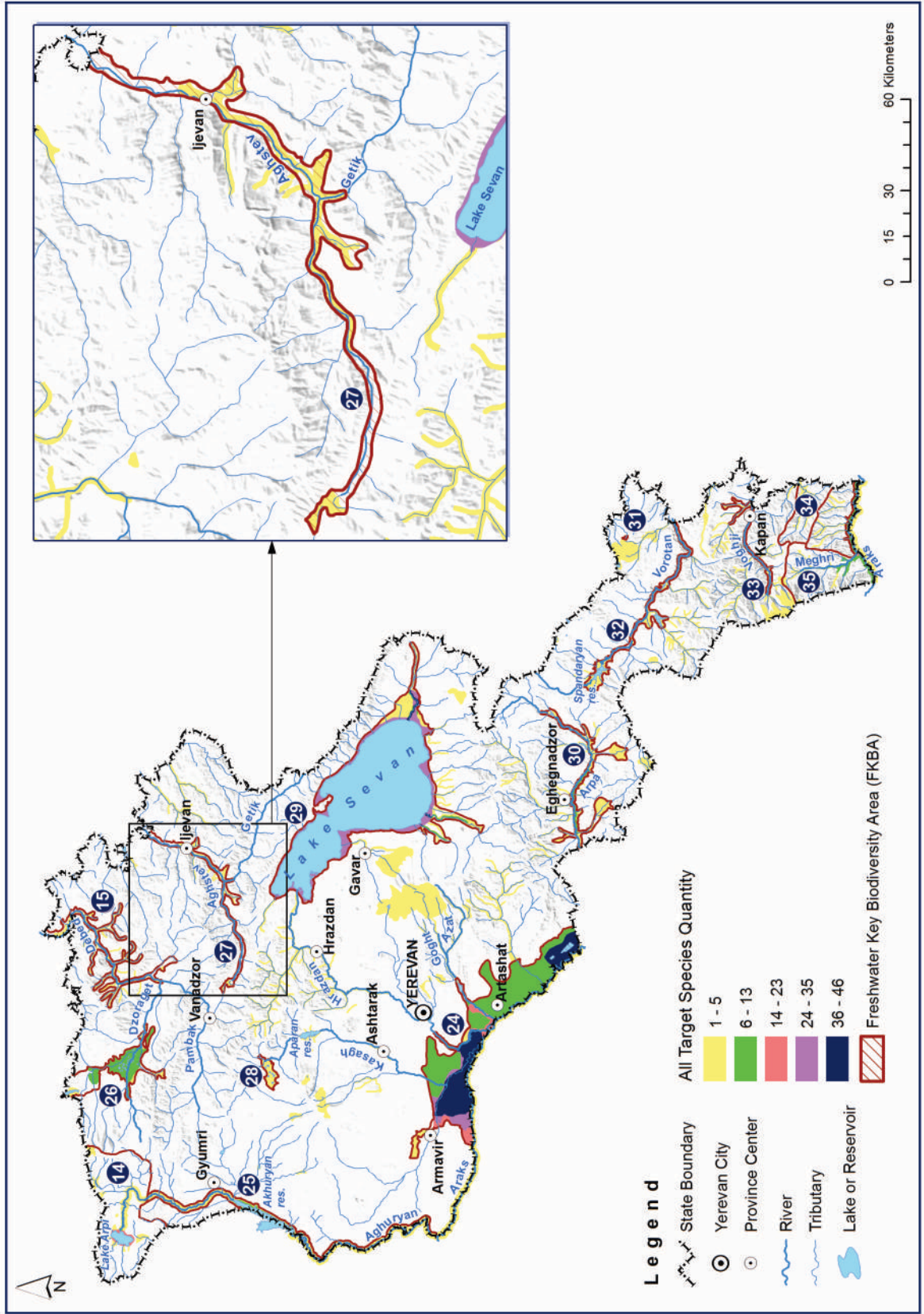
Dzoraget-Tashir FKBA



Dzoraget-Tashir FKBA

FKBA (ha)	Country(ies)	Species Richness	Species Summary Analysis by Categories	FKBA Overview	FKBA Landscape Subtypes and Water Bodies
20,811	Armenia	<p>Aves: <i>Aythya nyroca</i>, <i>Grus grus</i>, <i>Platalea leucordia</i>, <i>Podiceps griseogena</i>, <i>Tadorna ferruginea</i></p> <p>Insecta: <i>Duvallius stepanavanensis</i>, <i>Leucorrhinia pectoralis</i></p> <p>Mammalia: <i>Lutra lutra</i>, <i>Neomys schelkovnikovi</i></p> <p>Mollusca: <i>Gyraulus albus</i></p> <p>Plantae: <i>Carex bohemica</i>, <i>Chamaenerion dodonaei</i>, <i>Nymphaea alba</i>, <i>Potentilla erecta</i>, <i>Ranunculus lingua</i>, <i>Sagittaria sagittifolia</i>, <i>Sagittaria trifolia</i>, <i>Salvinia natans</i>, <i>Utricularia intermedia</i></p>	<p>Totally: 19 species</p> <p>- National Red List: 19 species</p>	<p>This site covers the middle part of the Dzoraget River, springs and small lakes on the Lori Plateau. Water is swampy and slow flowing in lakes and streams, but rapid in the Dzoraget. This river has been used for irrigation and hydropower production (Dzoraget Hydropower Plant). It makes part of the Tashir IBA and represents an important stopover site for migrating birds. The site needs urgent establishment of a protected area. The main threats are hydropower production, water pollution and overgrazing.</p>	<p>South East Caucasian middle-mountain landscapes with beech forests alternating with hornbeam-oak forests, partly with pine forests and secondary grasslands; the Armenian Plateau with steppe and meadow-steppe vegetation; Armenian Highland's volcanic plateau landscapes with steppes and meadow-steppes in combination with wetlands; Caucasian upper-mountain landscapes with birch and pine forests; Caucasian sub-alpine landscapes with a combination of meadows, tall-grass communities, elfin woods and thickets.</p>

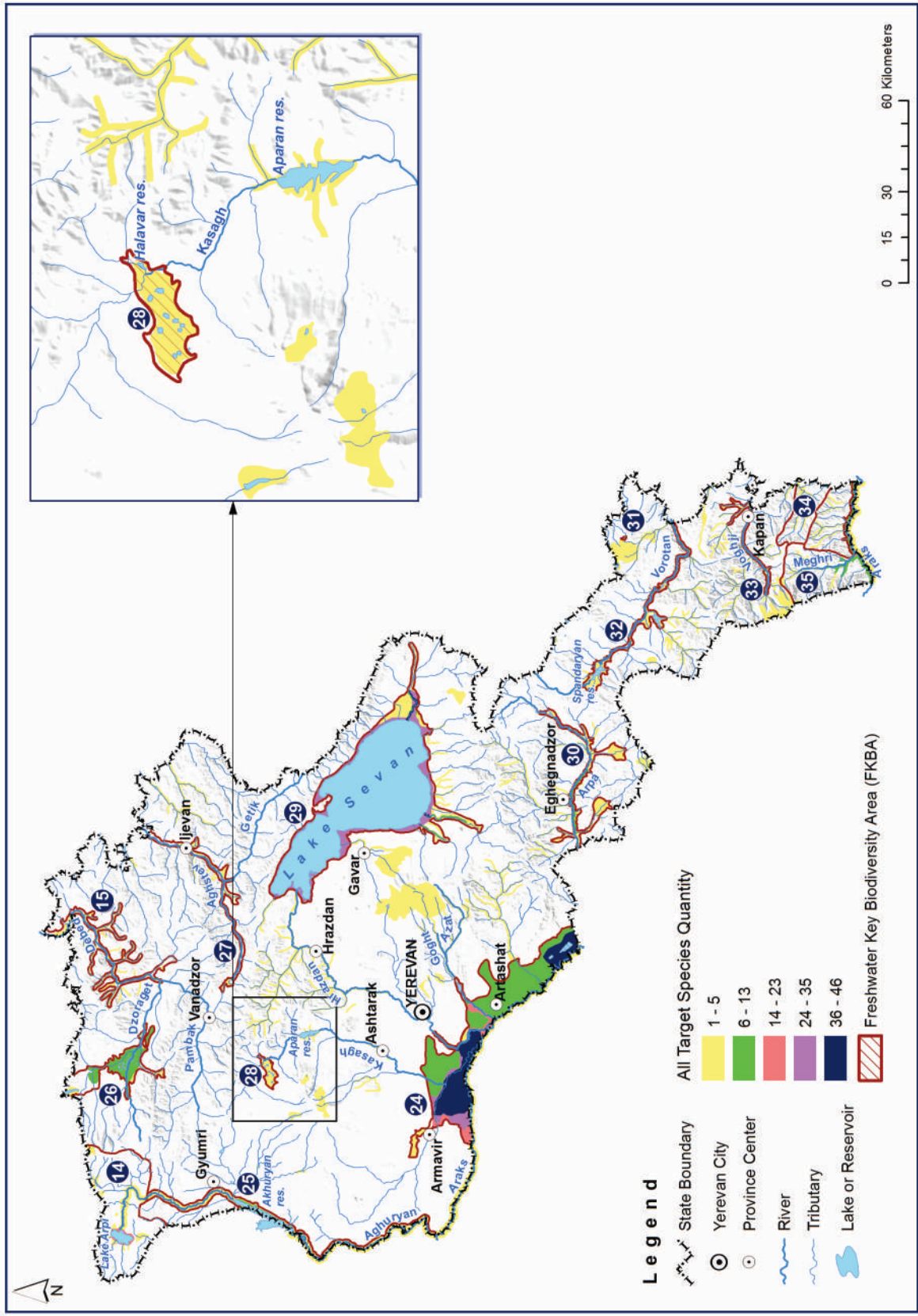
Aghstev FKBA



Aghstev FKBA

FKBA (ha)	Country(ies)	Species Richness	Species Summary Analysis by Categories	FKBA Overview	FKBA Landscape Subtypes and Water Bodies
11,619	Armenia	<p>Insecta: <i>Aeoloides figuratus</i>, <i>Aeshna cyanea</i>, <i>Duvallius yatsenkokhmelevskii</i>, <i>Onychogomphus assimilis</i>, <i>Sympecma paedisca</i></p> <p>Mammalia: <i>Neomys schelkovnikovi</i></p> <p>Plantae: <i>Coccyanthe flos-cuculi</i>, <i>Potentilla erecta</i></p>	<p>Totally: 8 species</p> <ul style="list-style-type: none"> - National Red List: 7 species - IUCN and National Red Lists: 1 species 	<p>This site is located along the Aghstev River which is rapid and narrow in its headwaters, but widening in the downstream section. This area is rich in forest streams, small wetlands and lakes, including Lake Parz. It makes part of Dilijan National Park and Ijevan Sanctuary and includes the Pambak and Haghartsin IBAs. The main threat is recreational development.</p>	<p>South East Caucasian sub-Mediterranean (transitional to moderate-thermophilic semi-humid) foothill landscapes with hornbeam-oak forests, woodlands and <i>Botriochloa</i> steppes; Caucasian sub-alpine landscapes with a combination of meadows, tall-grass communities, elfin woods and thickets; South East Caucasian (transitional to semi-humid) low-mountain landscapes with hornbeam-oak or oak forests and secondary dry scrublands; Armenian transitional to mountain meadows, high-mountain steppes and meadow-steppes; South East Caucasian middle-mountain landscapes with beech forests alternating with hornbeam-oak forests, partly with pine forests and secondary grasslands.</p>

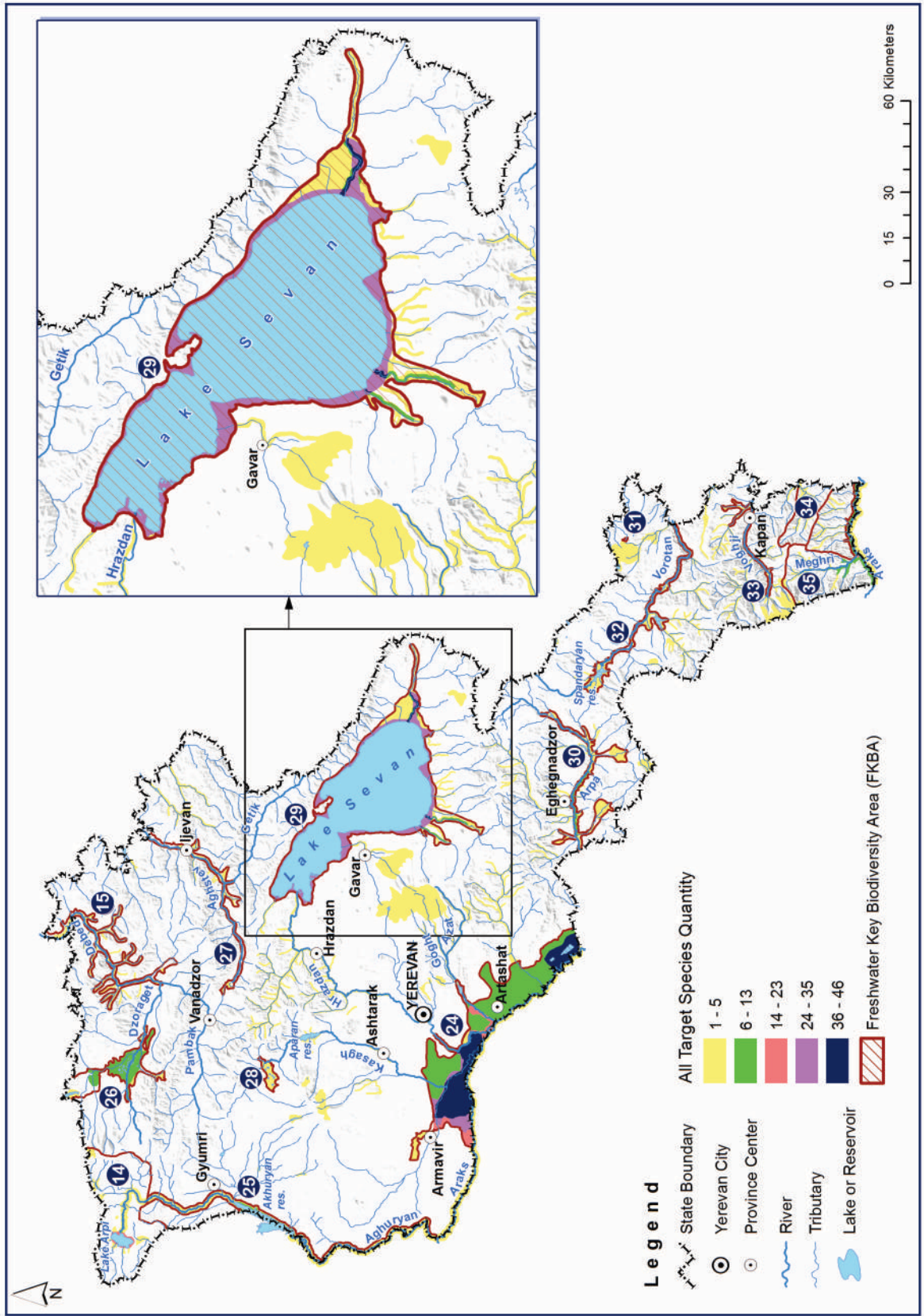
Halavar FKBA



Halavar FKBA

FKBA (ha)	Country(ies)	Species Richness	Species Summary Analysis by Categories	FKBA Overview	FKBA Landscape Subtypes and Water Bodies
3,198	Armenia	<p>Aves: <i>Tadorna ferruginea</i></p> <p>Plantae: <i>Callitriche hermaphroditica</i></p>	<p>Totally: 2 species</p> <p>- National Red List: 2 species</p>	<p>This is a small highland glacial lake. The threats are overgrazing and climate change.</p>	<p>The Armenian Plateau with steppe and meadow-steppe vegetation; Armenian transitional to mountain meadows, high-mountain steppes and meadow-steppes.</p>

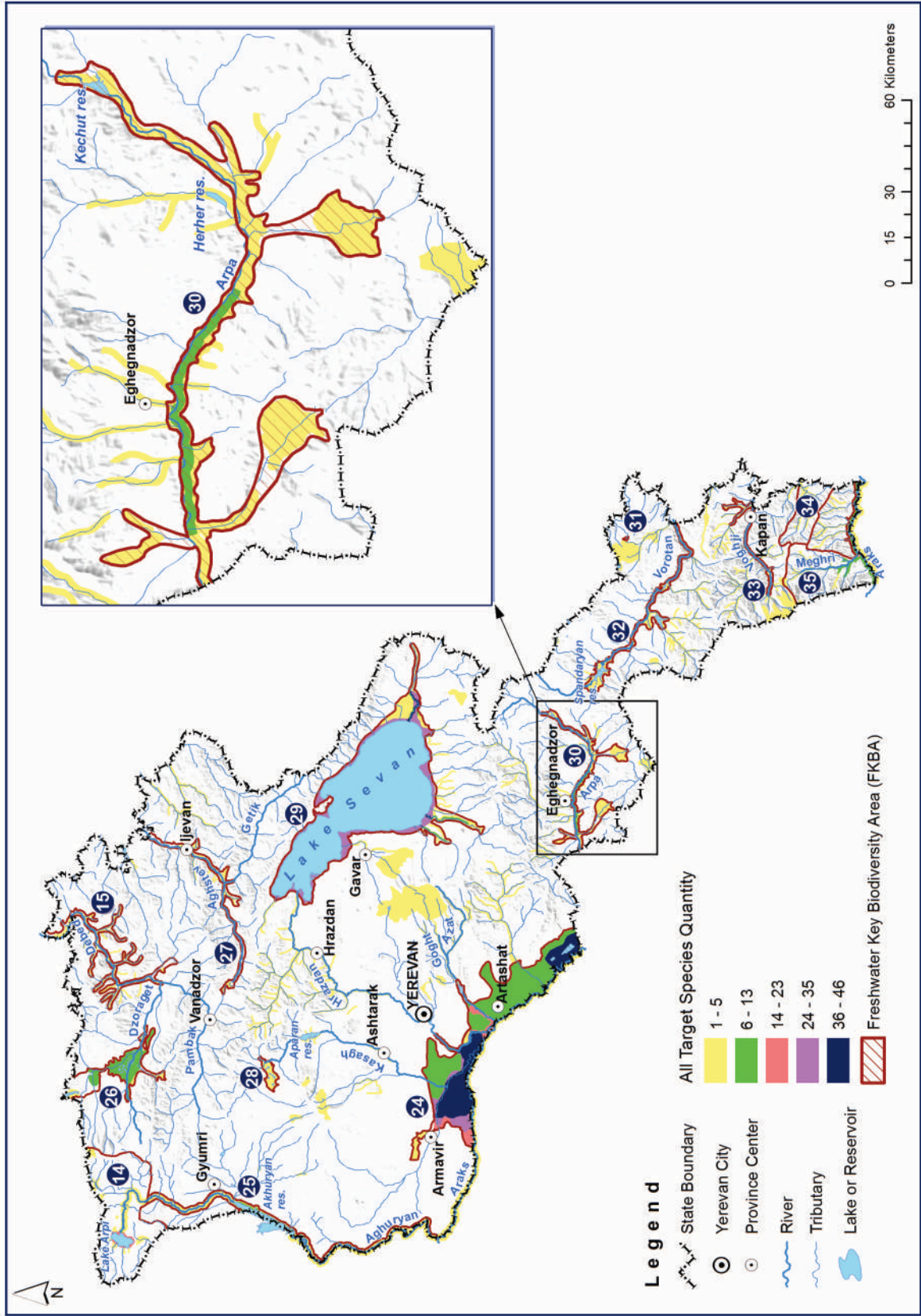
Sevan FKBA



Sevan FKBA

FKBA (ha)	Country(ies)	Species Richness	Species Summary Analysis by Categories	FKBA Overview	FKBA Landscape Subtypes and Water Bodies
164,475	Armenia	<p>Aves: <i>Anas clypeata</i>, <i>Anser albifrons</i>, <i>Anser anser</i>, <i>Anser erythropus</i>, <i>Aythya nyroca</i>, <i>Branta ruficollis</i>, <i>Chlidonias hybrida</i>, <i>Cygnus bewickii</i>, <i>Cygnus cygnus</i>, <i>Cygnus olor</i>, <i>Glareola nordmanni</i>, <i>Glareola pratincola</i>, <i>Haematopus ostralegus</i>, <i>Larus armenicus</i>, <i>Melanitta fusca</i>, <i>Motacilla citreola</i>, <i>Oxyura leucocephala</i>, <i>Pandion haliaetus</i>, <i>Pelecanus crispus</i>, <i>Pelecanus onocrotalus</i>, <i>Phalacrocorax carbo</i>, <i>Phalacrocorax pygmeus</i>, <i>Platalea leucordia</i>, <i>Plegadis falcinellus</i>, <i>Podiceps grisegena</i>, <i>Recurvirostra avosetta</i>, <i>Sterna nilotica</i>, <i>Tadorna ferruginea</i>, <i>Tadorna tadorna</i></p> <p>Insecta: <i>Dyschirius sevanensis</i></p> <p>Mammalia: <i>Lutra lutra</i>, <i>Neomys schelkovnikovi</i></p> <p>Mollusca: <i>Bithynia troscheli</i>, <i>Gyraulus albus</i>, <i>Gyraulus laevis</i>, <i>Planorbis carinatus</i></p> <p>Pisces: <i>Barbus gotschaicus</i>, <i>Capoeta sevangi</i>, <i>Salmo ischchan aestivalis</i>, <i>Salmo ischchan gegarkuni</i></p> <p>Plantae: <i>Falcaria falcaroides</i>, <i>Groenlandia densa</i>, <i>Menyanthes trifoliata</i>, <i>Puccinellia grossheimiana</i></p>	<p>Totally: 44 species</p> <ul style="list-style-type: none"> - National Red List: 40 species - IUCN and National Red Lists: 4 species 	<p>This site covers Lake Sevan, lower parts of its inflowing tributaries and the headwaters of the only outflowing tributary Hrazdan. Lake Sevan is the largest freshwater lake in the Caucasus. The site is completely covered by Lake Sevan National Park, Ramsar Site and the Lake Sevan IBA. Artificial drainage of the lake in the mid-1950s for irrigation and energetic needs had caused irreversible changes in biodiversity status and ecosystem functioning. The drainage of water level, gold mining, uncontrolled fishing and recreational pressure led to a dramatic decline in breeding grounds, diversity and abundance of species, first of all birds and endemic fish. Implementation of governmental projects (fishery and drainage control, cleaning) made the water level increase in recent years, which gives hope for a slow recovery of local biodiversity and ecosystem. Because of the disappearance of riparian vegetation from lake drainage, most birds occur here only during migrations and/or wintering, but do not nest. The main threats are uncontrolled recreation, eutrophication, changes in hydrological regime, pollution and gold mining.</p>	<p>South Caucasian (transitional to moderate-thermophilic) middle-mountain landscapes with steppes, dry shrublands and dwarf-shrub vegetation, partly with mountain semi-deserts; South Caucasian middle-mountain landscapes with meadows, meadow-steppes and steppes, partly with beech and hornbeam-beech forests, dry shrublands and dwarf-shrub vegetation; Armenian transitional to mountain meadows, high-mountain steppes and meadow-steppes; Lake: Sevan.</p>

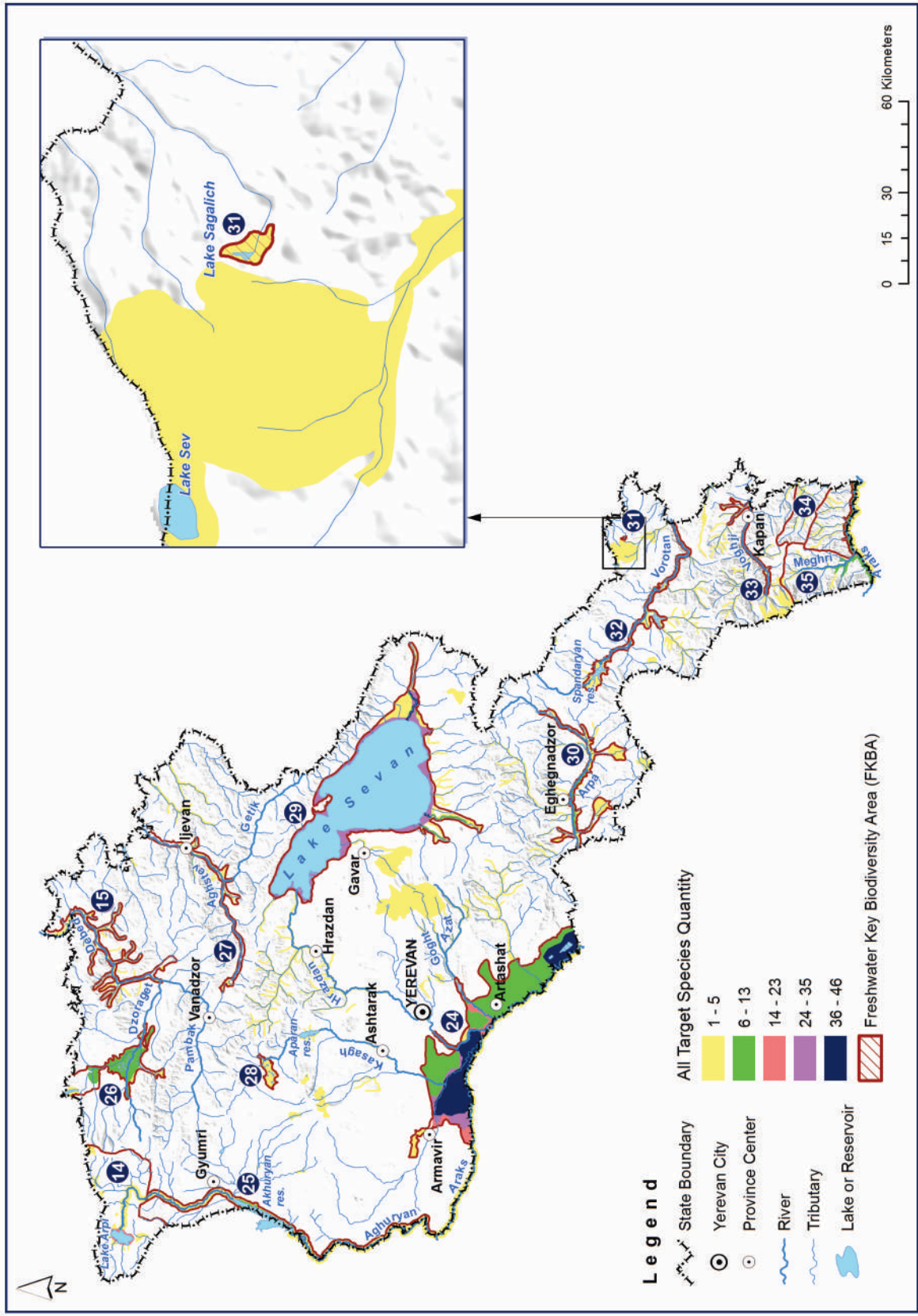
Arpa FKBA



Arpa FKBA

FKBA (ha)	Country(ies)	Species Richness	Species Summary Analysis by Categories	FKBA Overview	FKBA Landscape Subtypes and Water Bodies
15,748	Armenia	<p>Aves: <i>Tadorna ferruginea</i></p> <p>Insecta: <i>Coenagrion scitulum</i>, <i>Onychogomphus assimilis</i>, <i>Proserpinus proserpina</i>, <i>Sympecma paedisca</i></p> <p>Mammalia: <i>Lutra lutra</i>, <i>Neomys schelkownikovi</i></p> <p>Pisces: <i>Cyprinus carpio</i>, <i>Leuciscus aspius</i>, <i>Luciobarbus capito</i></p> <p>Plantae: <i>Colchicum ninae</i>, <i>Menyanthes trifoliata</i>, <i>Tamarix octandra</i>, <i>Thelypteris palustris</i></p> <p>Amphibia: <i>Pelobates syriacus</i></p>	<p>Totally: 15 species</p> <ul style="list-style-type: none"> - IUCN Red List: 2 species - National Red List: 12 species - IUCN and National Red Lists: 1 species 	<p>This site is stretched along the Arpa River, but also contains some highland lakes and riparian wetlands. The landscape is comprised of steep rocky slopes and canyons with xerophytic vegetation. It is part of the Noravank IBA. The river is intensively used for irrigation, hydropower production and replenishment of Lake Sevan water level through the Arpa-Sevan Tunnel. Due to these factors, Arpa is very vulnerable to ecosystem degradation and biodiversity loss. Apart from these threats, its water is polluted by municipal and mining waste.</p>	<p>Armenian transitional to mountain meadows, high-mountain steppes and meadow-steppes; South Caucasian middle-mountain landscapes with meadows, meadow-steppes and steppes, partly with beech and hornbeam-beech forests, dry shrublands and dwarf-shrub vegetation; Caucasian alpine landscapes with grasslands and Rhododendron thickets; Armenian-Iranian low-mountain landscapes with semi-deserts, dwarf-shrub vegetation and partly with shrublands; Delta and floodplain landscapes with wetlands, swamp forests, grasslands and salt marshes; Armenian highland volcanic plateau landscapes with steppes and meadows-steppes in combination with wetlands; Caucasian sub-alpine landscapes with a combination of meadows, tall-grass communities, elfin woods and thickets.</p>

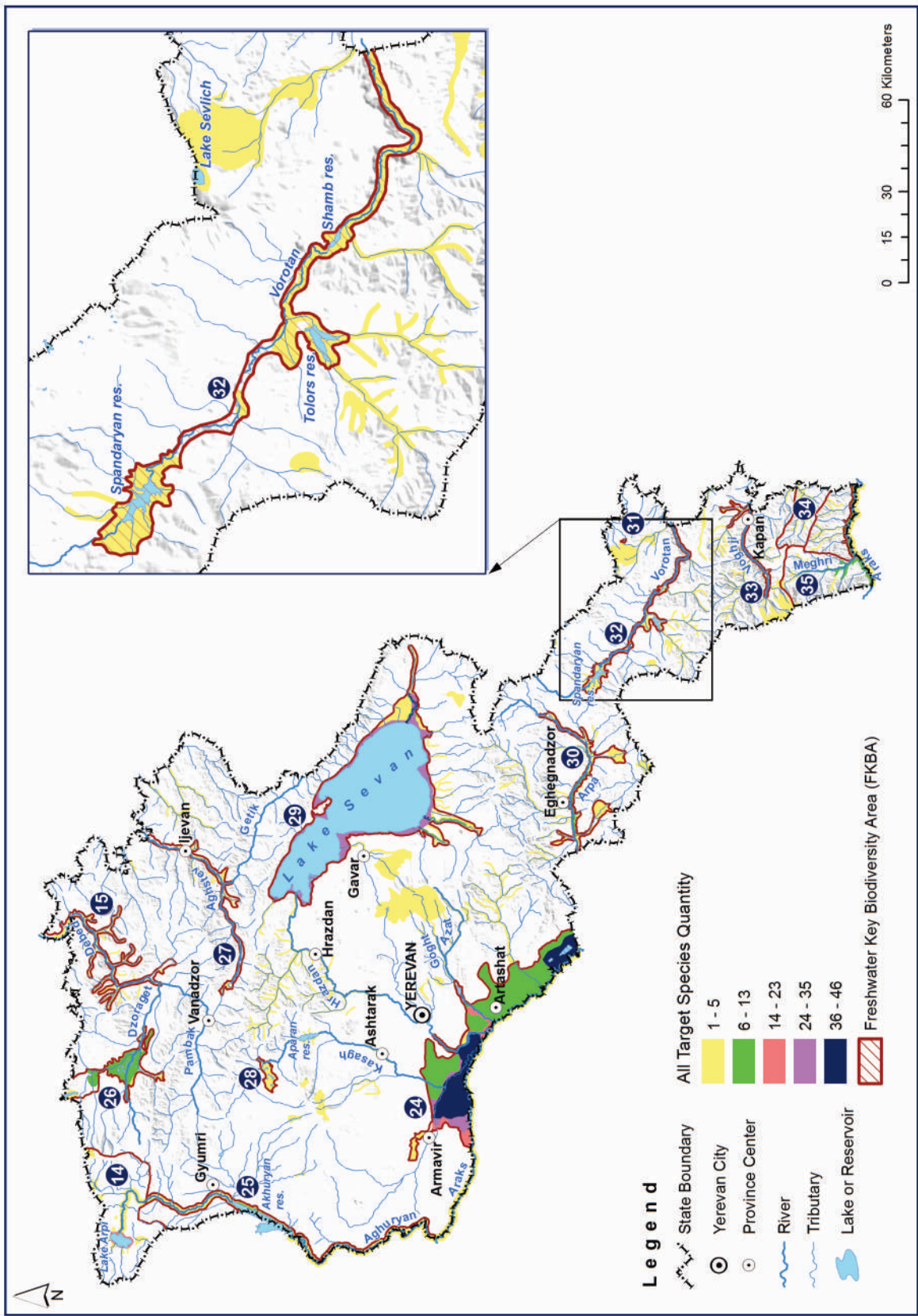
Sagalich FKBA



Sagalich FKBA

FKBA (ha)	Country(ies)	Species Richness	Species Summary Analysis by Categories	FKBA Overview	FKBA Landscape Subtypes and Water Bodies
115	Armenia	Mollusca: Musculium strictum	Totally: 1 species - National Red List: 1 species	This is a small glacial lake on the Syunik Highland. The main threats are overgrazing and climate change.	Armenian transitional to mountain meadows, high-mountain steppes and meadow-steppes; Caucasian sub-alpine landscapes with a combination of meadows, tall-grass communities, elfin woods and thickets.

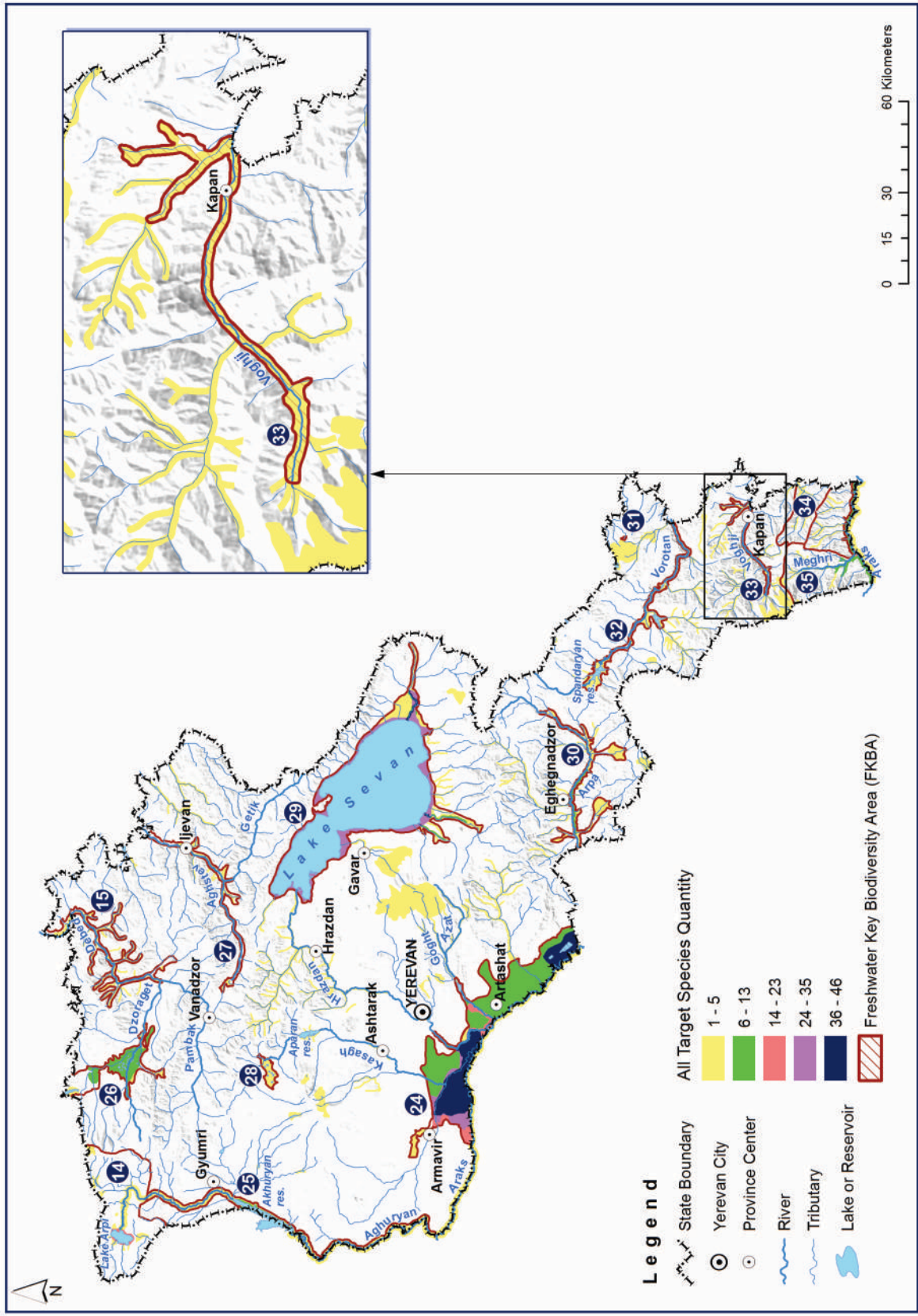
Vorotan FKBA



Vorotan FKBA

FKBA (ha)	Country(ies)	Species Richness	Species Summary Analysis by Categories	FKBA Overview	FKBA Landscape Subtypes and Water Bodies
13,873	Armenia	<p>Amphibia: <i>Pelobates syriacus</i></p> <p>Aves: <i>Anas clypeata</i>, <i>Tadorna ferruginea</i></p> <p>Insecta: <i>Proserpinus proserpina</i></p> <p>Mammalia: <i>Lutra lutra</i>; <i>Neomys schelkovnikovi</i></p> <p>Pisces: <i>Leuciscus aspius</i></p> <p>Plantae: <i>Lomatogonium carinthiacum</i>, <i>Rorippa spaskajae</i></p>	<p>Totally: 9 species</p> <p>- National Red List: 9 species</p>	<p>This site covers the headwaters and the middle part of the Vorotan River, Spandarian and Shamb Reservoirs. The headwaters and the reservoirs are situated on the plateau, but the lower Vorotan becomes a powerful mountainous river running through a deep canyon. The plateau is in the Gorayk IBA. The reservoirs and the river are intensively used for energy supply (Vorotan Cascade) and irrigation (Vorotan Canal). This is the only occurrence site of the Armenian endemic <i>Rorippa spaskajae</i>. The main threats are recreation (Jermuk) and mining (Amulsar) in the headwaters and hydropower production along the river.</p>	<p>South East Caucasian (transitional to semi-humid) low-mountain landscapes with hornbeam-oak or oak forests and secondary dry scrublands; Armenian transitional to mountain meadows, high-mountain steppes and meadow-steppes; South East Caucasian middle-mountain landscapes with beech forests alternating with hornbeam-oak forests, partly with pine forests and secondary grasslands; Caucasian sub-alpine landscapes with a combination of meadows, tall-grass communities, elfin woods and thickets; South Caucasian middle-mountain landscapes with meadows, meadow-steppes and steppes, partly with beech and hornbeam-beech forests, dry shrublands and dwarf-shrub vegetation; Reservoirs: Shamb, Spandarian and Tolors.</p>

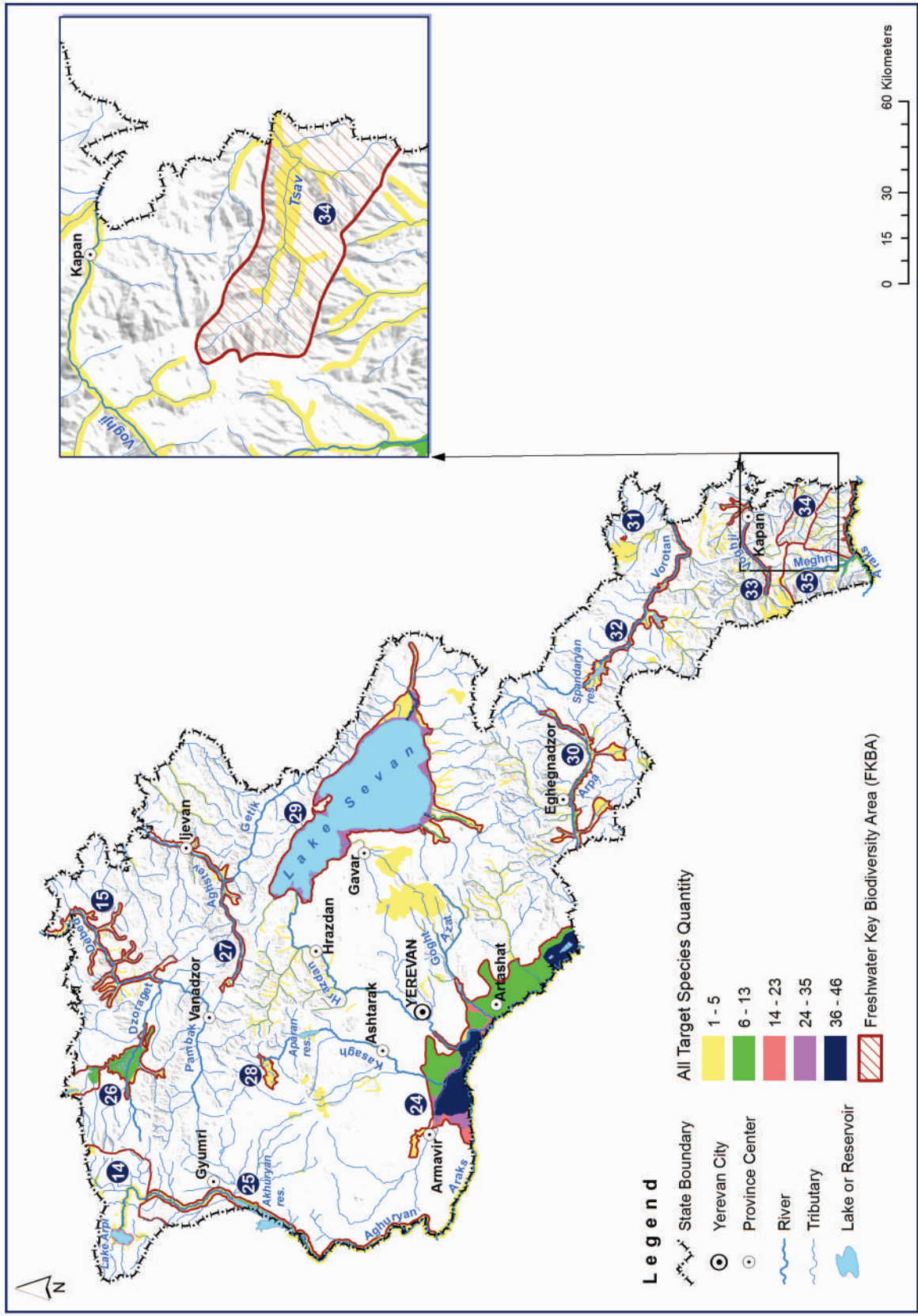
Voghji FKBA



Voghji FKBA

FKBA (ha)	Country(ies)	Species Richness	Species Summary Analysis by Categories	FKBA Overview	FKBA Landscape Subtypes and Water Bodies
5,227	Armenia	<p>Insecta: <i>Onychogomphus assimilis</i>, <i>Proserpinus proserpina</i>, <i>Sympetrum depressiusculum</i></p> <p>Mammalia: <i>Lutra lutra</i>, <i>Neomys schelkovnikovi</i></p>	<p>Totally: 5 species</p> <ul style="list-style-type: none"> - National Red List: 4 species - IUCN and National Red Lists: 1 species 	<p>This site covers the Voghji River with its riparian vegetation. The main threats are hydropower production, mining, climate change, poaching and pollution.</p>	<p>South East Caucasian (transitional to semi-humid) low-mountain landscapes with hornbeam-oak or oak forests and secondary dry scrublands; South East Caucasian middle-mountain landscapes with beech forests alternating with hornbeam-oak forests, partly with pine forests and secondary grasslands; South Caucasian middle-mountain landscapes with meadows, meadow-steppes and steppes, partly with beech and hornbeam-beech forests, dry shrublands and dwarf-shrub vegetation; Caucasian subalpine landscapes with a combination of meadows, tall-grass communities, elfin woods and thickets.</p>

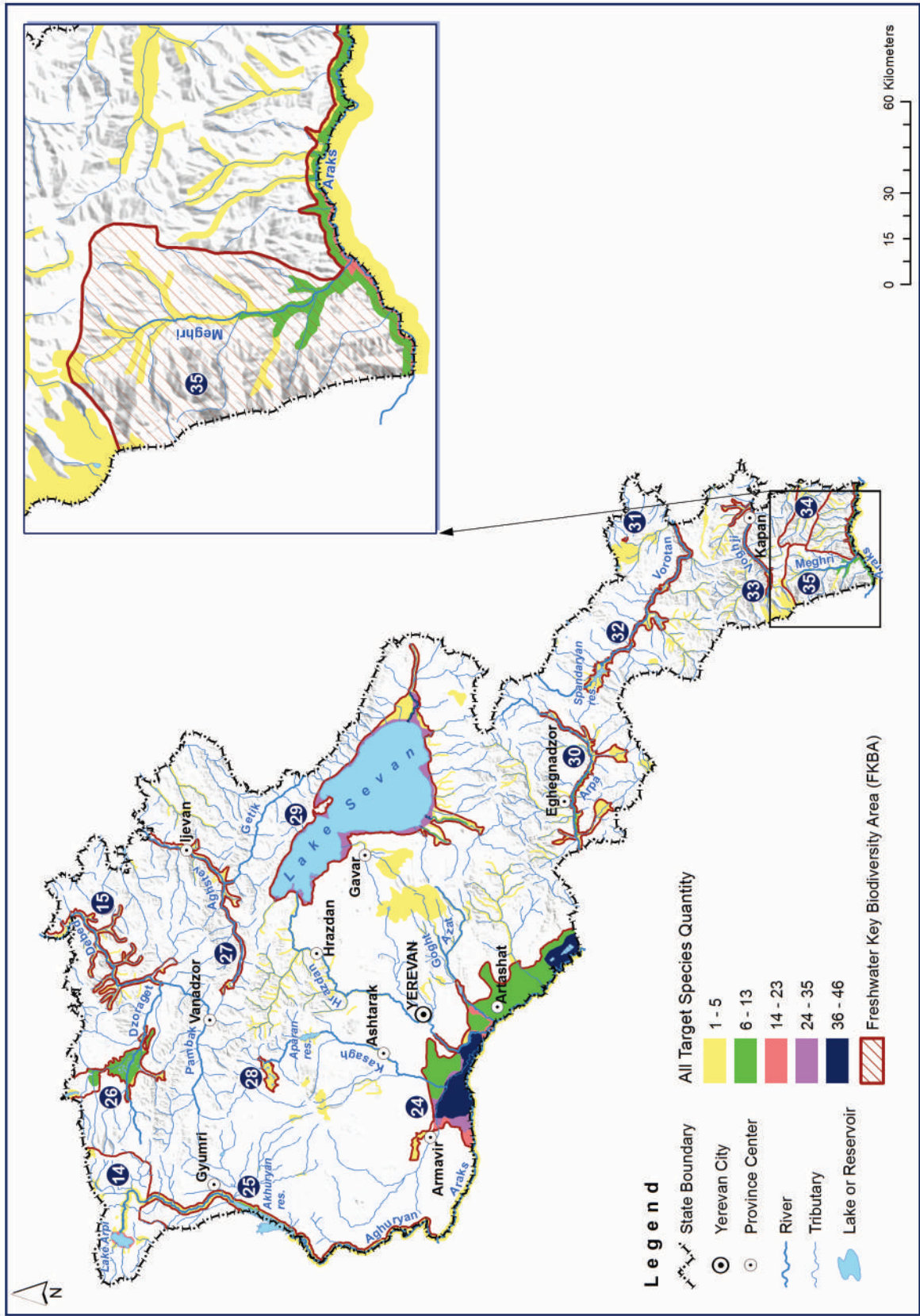
Tsav FKBA



Tsav FKBA

FKBA (ha)	Country(ies)	Species Richness	Species Summary Analysis by Categories	FKBA Overview	FKBA Landscape Subtypes and Water Bodies
18,690	Armenia	Insecta: <i>Lestes macrostigma</i> Mammalia: <i>Lutra lutra</i> , <i>Neomys schelkovnikovi</i> Plantae: <i>Platanus orientalis</i>	Totally: 4 species - National Red List: 4 species	This site covers the Tsav riverside in Shikahogh State Reserve and Plane Grove Sanctuary. It partly covers the Meghri IBA and contains a network of rivers and streams in mountain forests. The main threats are water pollution and overuse.	Armenian transitional to mountain meadows, high-mountain steppes and meadow-steppes; South East Caucasian middle-mountain landscapes with beech forests alternating with hornbeam-oak forests, partly with pine forests and secondary grasslands; Caucasian alpine landscapes with grasslands and Rhododendron thickets; South East Caucasian (transitional to semi-humid) low-mountain landscapes with hornbeam-oak or oak forests and secondary dry scrublands; South Caucasian middle-mountain landscapes with meadows, meadow-steppes and steppes, partly with beech and hornbeam-beech forests, dry shrublands and dwarf-shrub vegetation; Caucasian sub-alpine landscapes with a combination of meadows, tall-grass communities, elfin woods and thickets.

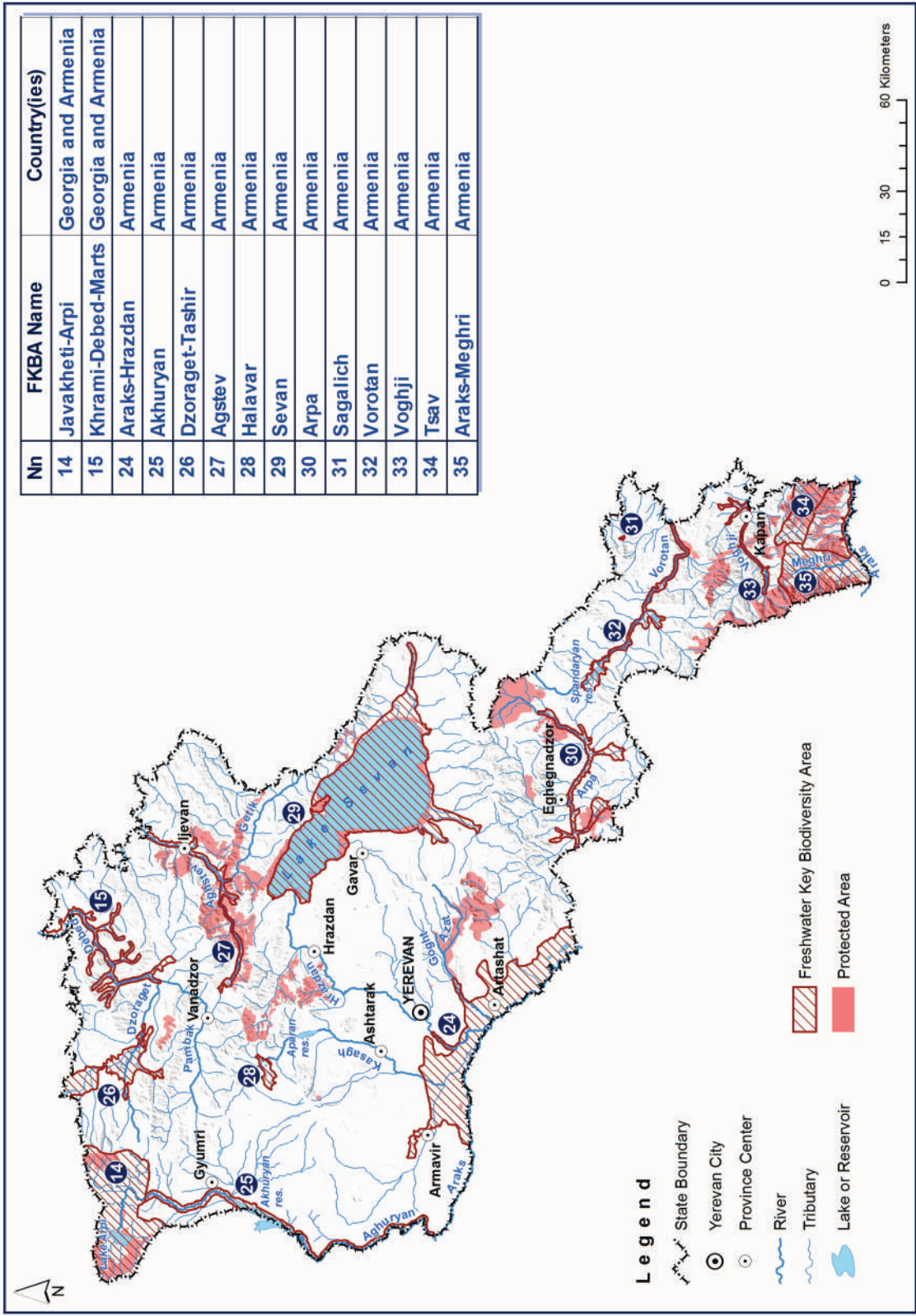
Araks-Meghri FKBA



Araks-Meghri FKBA

FKBA (ha)	Country(ies)	Species Richness	Species Summary Analysis by Categories	FKBA Overview	FKBA Landscape Subtypes and Water Bodies
41,268	Armenia	<p>Aves: <i>Tadorna ferruginea</i></p> <p>Insecta: <i>Aeoloides figuratus</i>, <i>Coenagrion scitulum</i>, <i>Crocothemis servilla</i>, <i>Drasterius atricapillus</i>, <i>Onychogomphus assimilis</i>, <i>Orthetrum sabina</i>, <i>Proserpinus proserpina</i></p> <p>Mammalia: <i>Lutra lutra</i>, <i>Neomys schelkovnikovi</i></p> <p>Mollusca: <i>Gyraulus regularis</i>, <i>Odhneripisidium amandalei</i></p> <p>Pisces: <i>Leuciscus aspius</i>, <i>Cyprinus carpio</i>, <i>Luciobarbus capito</i></p> <p>Plantae: <i>Anthochlamys polygaboides</i>, <i>Colchicum ninae</i>, <i>Erianthus ravennae</i>, <i>Glycyrrhiza echinata</i></p>	<p>Totally: 19 species</p> <ul style="list-style-type: none"> - IUCN Red List: 2 species - National Red List: 16 species - IUCN and National Red Lists: 1 species 	<p>This site covers the middle and lower parts of the Meghri River, semi-desert ponds and streams with stagnant water and the Araks River basin along the Armenian-Iranian state border. In the eastern part, this site overlaps with the Meghri and Zangezur IBAs. The Meghri watershed is narrow in the headwaters, then widening towards the Araks. Water of this river is used for irrigation. Contrary to other parts, here the Araks flows along the narrow and steep canyon. The main threats are water overuse for irrigation, mining, pollution and aridization from climate change.</p>	<p>Armenian transitional to mountain meadows, high-mountain steppes and meadow-steppes; South East Caucasian middle-mountain landscapes with beech forests alternating with hornbeam-oak forests, partly with pine forests and secondary grasslands; Caucasian alpine landscapes with grasslands and Rhododendron thickets; Armenian-Iranian low-mountain landscapes with semi-deserts, dwarf-shrub vegetation and partly with shrublands; Delta and floodplain landscapes with wetlands, swamp forests, grasslands and salt marshes; Caucasian alpine landscapes with grasslands and Rhododendron thickets; Caucasian sub-alpine landscapes with a combination of meadows, tall-grass communities, elfin woods and thickets; Glacio-nival landscapes; River: Araks.</p>

CONGRUENCE BETWEEN FRESHWATER KEY BIODIVERSITY AREAS AND PROTECTED AREAS



CONGRUENCE BETWEEN FRESHWATER KEY BIODIVERSITY AREAS AND PROTECTED AREAS

#	Freshwater KBA Name	Area of Freshwater KBA (ha)	Country of FKBA	Area of Protected Freshwater KBA (ha)	Percentage of Protected Freshwater KBA	Protected Area Name	Country of Protected Area	Protected Area National Category	Protected Area IUCN Category
14	Javakheti-Arpi	153,051	Georgia-Armenia	26,187	17.1%	Khanchali	Georgia	Managed Reserve	IV
				727		Bugdashi	Georgia	Managed Reserve	IV
				1,398		Madatapa	Georgia	Managed Reserve	IV
				2,846		Javakheti	Georgia	National Park	II
				20,829		Arpi Lake	Armenia	National Park	II
				134		Javakheti	Georgia	National Park	II
				134		Arpi Lake	Armenia	National Park	II
15	Khrami-Debeda-Marts	106,872	Georgia-Armenia	3,474	3.3%	Gardabani	Georgia	Managed Reserve	IV
24	Araks-Hrazdan	89,001	Armenia	354	0.4%				
				50		Khor Virap	Armenia	Sanctuary	IV
				13		Goravan Sands	Armenia	Sanctuary	IV
				213		Ararat Vordan Kamir	Armenia	Sanctuary	IV
				77		Khosrov Forest	Armenia	Strict Nature Reserve	I
25	Akhuryan	18,908	Armenia	0	0.0%				
26	Dzoraget-Tashir	20,811	Armenia	0	0.0%				
27	Aghstev	11,619	Armenia	3,312	28.5%	Margahovit	Armenia	Sanctuary	IV
				154		Gandzakar-Upper Aghdan	Armenia	Sanctuary	IV
				2,888		Dilijan	Armenia	National Park	II
28	Halavar	3,198	Armenia	0	0.0%				

#	Freshwater KBA Name	Area of Freshwater KBA (ha)	Country of FKBA	Area of Protected Freshwater KBA (ha)	Percentage of Protected Freshwater KBA	Protected Area Name	Country of Protected Area	Protected Area National Category	Protected Area IUCN Category
29	Sevan	164,475	Armenia	141,060	85.8%				
				185		Juniper Open Woodland	Armenia	Sanctuary	IV
				140,875		Sevan	Armenia	National Park	II
30	Arpa	15,748	Armenia	1,662	10.6%				
				117		Herher Open Woodland	Armenia	Sanctuary	IV
				143		Jermuk Forest	Armenia	Sanctuary	IV
				1,402		Gnshik	Armenia	Protected Landscape	IV
31	Sagalich	115	Armenia	0	0.0%				
32	Vorotan	13,873	Armenia	406	2.9%				
				17		Gubadly	Azerbaijan	Sanctuary	IV
				390		Goris	Armenia	Sanctuary	IV
33	Voghji	5,227	Armenia	0	0.0%				
34	Tsav	18,690	Armenia	10,101	54.0%				
				63		Plane Grove	Armenia	Sanctuary	IV
				26		Khustup	Armenia	Sanctuary	IV
				9,946		Shikahogh	Armenia	Strict Nature Reserve	I
				66		Arevik	Armenia	National Park	II
35	Araks-Meghri	41,268	Armenia	19,187	46.5%				
				21		Zangezur	Azerbaijan	National Park	II
				2,678		Boghaqar	Armenia	Sanctuary	IV
				16,208		Arevik	Armenia	National Park	II
				11		Arazboyu	Azerbaijan	Sanctuary	IV
				135		Zangezur	Azerbaijan	National Park	II
				135		Arevik	Armenia	National Park	II

**Freshwater Ecosystems and Biodiversity:
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