





## KARKAMIŞ FLOOD PLAIN WETLAND MANAGEMENT PLAN 07.05.2015 - 12.03.2016

#### **PRESENTATION SUMMARY**



- + Introduction
- The aim of the project, scope and the main target
- Project studies
- Data Obtained from Project Study Results

**Ownership status Geological features Topographic features** Meteorological and climatic features Hydrological features Aquatic and terrestrial flora Aquatic fauna **Terrestrial fauna** Amphibian and reptiles Birds Mammals **Environmental Data Historical and Cultural Areas** Landscape Values Land use Sociological studies Issues and proposals identified in the project area

+ Evaluation



#### INTRODUCTION





Wetlands are one of the most important part within the ecosystem of biological diversity,

### natural functions and economic values.

Wetlands have three basic specialties;

Wetlands are not only the most sensitive but also have the most complex relationship in ecosystem. They were formed thousands of years ago.

They are affected by any action in the basin because they are located at **the lowest point** of their location or at the pit site.

Most of the institutions are responsible for the administration of this area







- BERN Convention (The protection of European Wildlife and Natural Habitats Convention on Biological Diversity)
- RAMSAR Convention (Convention for the Protection of Wetlands)
- International obligations arising from The EU Habitats and Birds Directives
- National legislation
- Turkey has committed development and protection of the natural environment and ecological balance of all wetlands found within the border.

#### INTRODUCTION





Turkey is divided into 25 hydrological basins. Karkamış Flood Plain Wetland is in the Tigris-Euphrates basin. It is the biggest one with a rainfall area which is 184.918 square kilometer



INTRODUCTION

#### 135 international wetlands

#### Karkamış flood plain

14 Ramsar sites

This is not the final number of wetlands which have international importance in Turkey also this number can be increased further .



#### At the Flood Plain and surrounding wetlands

#### natural environment facilities,

#### use of natural resources and

#### socio - economic characteristics

were detected. And the evaluations were performed.

Management Plan was aimed to prepare in an economic and ecological integrity taking into account the benefits of the people living in and around the wetland ecosystem.



#### THE AIM OF THE PROJECT, AND THE BASIC OBJECTIVES





- In Gaziantep and at the border of Karkamış county.
- There are 3 county seat and 17 villages. The project workspace is between Karkamış and Nizip county of Gaziantep and Birecik county of Şanlıurfa.
- It is at east of Karkamış county and south of Birecik county of Şanlıurfa.
- It is 75 kilometeraway from Gaziantep.
- Total area is 28 102 hectare and the altitude is 385 meters.
- Euphrates River bed which is between south of Birecik and Syria border and flooded tree communities along the river are at the area.

#### PROJECT STUDIES











#### DATA OBTAINED FROMPROJECT STUDY RESULTS OWNERSHIP STATUS





#### DATA OBTAINED FROM PROJECT STUDY RESULTS OWNERSHIP STATUS













Karkamış Flood Plain is located on Arabian Plate which is the one of the major plate system in Turkey.

Geological formations which are at the project area;

- Gaziantep Formation,
- Ceylanpinar Formation,
- Karacadağ Vulcanite,
- Terraces and alluviums



#### DATA OBTAINED FROM PROJECT STUDY RESULTS TOPOGRAPHIC FEATURES



Project area is between hills which are between 300 meter and 575 meter. The main of these hills; Abdullah Hill (650 m) Abuş Hill (454 m) Algenet Hill (463 m) Babakoyak Hill (381 m) Bağ Hill (483 m) Boz Hill (431 m) Cakmak Hill (403 m) Dağoku Hill (418 m) Düzlekaya Hill (487 m) Günaltıhöyük Hill (416 m) İncirli Hill (449 m) Kale Hill (363 m) Köprü Dağı Hill (439 m) Küçükhöyük Hill (446 m) Küçüknurali Hill (512 m) Paşapınar Hill (365,2 m) Tiladır Hill (371 m) Uzun Hill (467 m)



The region which is between Gaziantep and Şanlıurfa has Mediterranean climate and partly under the influence of continental climate .

Summers are hot and dry, winters are mild, rainy and rarely goes cold.

Rainfall varies according to the year.

the annual average rainfall is 341,5 millimeter The daily maximum rainfall is 60 millimeter The wettest month is january At least wettest month is July.

Dominant wind direction is northwest (NW).

The lowest temperature is -12,4 celcius degree/December The highest temperature is 47,2 celcius degree/July The annual average temperature is 17,9 celcius degree.





#### DATA OBTAINED FROM PROJECT STUDY RESULTS HYDROLOGICAL FEATURES







**Potable water, tap water and agricultural purposes water** are used in the borders of Karkamış Flood Plain Wetland. It is benefiting from the **Euphrates River and groundwater** for potable water and tap water.

According to the hydrogeologic features, **Gaziantep formation** shows **impermeable features** because of **chalky limestone and marl content**.

Groundwater level changes depending on the rising of the Euphrates River and groundwater. The Euphrates River water level seems to be the same as the static level.



Karkamış Flood Plain is on **Iran - Turan** Plant Geography and **depending on the Mesopotamian area**. The main vegetation types have been found in Karkamış and around it.



**Step vegetation** (Astragalus sp., Acantholimon sp.-dominant)



Macrophyte vegetation (Phragmites australis –dominant)



Segetal vegetation



The project area is in C 6-7 frames according to the P. H. Davis'in Grid system and in the Lower Euphrates basin.

# 1500 plant examples

359 species belongingto 79 families810 species and taxa



35 endemic 12 rare threatened and with extinction endemizm rate is % 4,33 2 CR(critically endangered) 4 DD (data deficient) 3 EN (en-endangered) 16 VU (vulnerable) 4 NT (near threatened) 17 LC (least concern)

1 CD (conservation dependent)



		Familya	Cins	Tür
Pteridophyta		2	2	3
Spermatophyta				
Gymnospermae		1	1	2
Angiospermae				
	Dicotyledonae	65	297	684
	Monocotyledonae	10	59	121
Toplam		79	359	810

#### Distribution by major plant groups

Cins	Tür Adedi
Trifolium	19
Astragalus	14
Euphorbia	13
Medicago	12
Centaurea	11
Ranunculus	11
Vicia	11
Allium	11
Anthemis	10
Convolvulus	10
Salvia	10
Bromus	10
Diğer	668
Toplam	810

Familya	Tür sayısı	Oran (%)
Asteraceae	124	15,31
Fabaceae	92	11,36
Poaceae	66	8,15
Lamiaceae	45	5,55
Brassicaceae	43	5,31
Apiaceae	36	4,44
Caryophyllaceae	33	4,07
Liliaceae	28	3,46
Boraginaceae	24	2,96
Scrophulariaceae	22	2,72
Ranunculaceae	22	2,72
Diğer	275	33,51
Toplam	810	100

Fitocoğrafik Bölge	Takson Sayısı	Oran (%)
Iran-Turan	202	24,94
Akdeniz	54	6,66
Doğu Akdeniz	54	6,66
Avrupa-Sibirya	18	2,22
Öksin	1	0,12
Karadeniz	2	0,25
Endemik	35	4,33
Bilinmeyen	444	54,82
Toplam	810	100

Distributions by phytogeographic regions of species

Distributions of Species by Family

Distrubutions by genus







Alcea acaulis (Cav.) Alef. (rare-CR- critically endangered)

Cousinia birecikensis Hub.-Mor. (endemic-CR- critically endangered)





Verbascum alepense Bentham (rare)



#### Artedia squamata (endemic)



Asphodelus aestivus (endemic)





Cirsium alatum Bobrov subsp. pseudocreticum (LC – least concern)



Scutellaria orientalis L. subsp. porphytostegia Edmondston (VUvulnerable)





Scabiosa argenta L. (endemic)



#### Capparis spinosa



Gundelia tornefortii (endemic)



DATA OBTAINED FROM PROJECT STUDY RESULTS AQUATIC FAUNA

Phyoplancton

47 genus 67 taxa

Zooplankton

Plankton

Rotifera 19 species Kladosera 12 species Kopepoda 10 species

### Fish Fauna I 16 fish species

Barbus rajanorum Chalchalburnus mossulensis Capoeta trutta Carasobarbus luteus Mugil abu Chondrostoma regium Tor grypus Acanthobrama marmid Cyprinion macrostomus Nemacheilus tigris Aspius vorax **Glyptothorax firaticus** Cyprinus carpio Silurus glanis Mastacembelus mastacembelus **Oncorhynchus mykiss** 



Cyanophyceae	Bacillariophyceae Order Centrales	
Anabeana sp.	Cyclotella spp.	
Chroococcus spp.	<i>Melosira</i> spp.	
Gloeocapsa sp.	Order Pennales	
Merismopedia spp.	Amphora spp.	
Microcystis sp.	Asterionella sp.	
Nostoc sp.	Bacillaria sp.	
Oscillatoria spp.	Caloneis spp.	
Spirulina sp.	Cocconeis spp.	
Chlorophyceae	Cymatopleura sp.	
Actinostrum sp.	Cymbella spp.	
Ankistrodesmus sp.	Diatoma sp.	
Carteria sp.	Diploneis spp.	
Chlamydomonas sp.	Eutonia spp.	
Chlorella sp.	Flagilaria spp.	
<i>Oedogonium</i> sp.	Gomphonema spp.	
Pediastrum spp.	Gyrosigma sp.	
Scenedesmus spp.	Mastogloia sp.	
Spirogera spp.	Navicula spp.	
Staurastrum spp.	<i>Neidium</i> sp.	
Tetraedron spp.	Nitiazschia spp.	
Ulothrix sp.	Pinnularia sp.	
Euglenophyceae	Rhoicosphenia sp.	
Euglena spp.	Surirella spp.	
Trachelomonas sp.	Synedra sp.	
Dinophyceae		
Ceratium sp.		

Rotifera	Ceriodaphnia pulchella	
Asplanchna priodonta	Daphnia cucullata	
Cephalodella gibba	Daphnia longispina	
Colurella colurus	Diaphanosoma birgei	
Dichranophorus epicharis	Simocephalus expinosus	
Euchlanis dilatata	Alona guttata	
Keratella cochlearis	Camptocercus uncinatus	
Keratella tropica	Chydorus sphaericus	
Lecane closterocerca	Eucercus lamellatus	
Lecane luna	Grabtoleberis testudinaria	
Lecane quadridentata	Pleuroxus laevis	
Lepadella ovalis	Kopepoda	
Lepadella patella	Acanthocyclops robustus	
l epadella quadricarinata		
Lopadona quadnoannata	Cyclops vicinus	
Lophocharis salpina	Cyclops vicinus Diacyclops bicuspidatus	
Lophocharis salpina Polyarthra dolichoptera	Diacyclops vicinus Diacyclops bicuspidatus Eucyclops serrulatus	
Lophocharis salpina Polyarthra dolichoptera Synchaeta stylata	Diacyclops vicinus Diacyclops bicuspidatus Eucyclops serrulatus Macrocyclops albidus	
Lophocharis salpina Polyarthra dolichoptera Synchaeta stylata Testudinella patina	Cyclops vicinus         Diacyclops bicuspidatus         Eucyclops serrulatus         Macrocyclops albidus         Megacyclops viridis	
Lophocharis salpina Polyarthra dolichoptera Synchaeta stylata Testudinella patina Trichocerca capucina	Cyclops vicinus Diacyclops bicuspidatus Eucyclops serrulatus Macrocyclops albidus Megacyclops viridis Thermocyclops dybowskii	
Lophocharis salpina Polyarthra dolichoptera Synchaeta stylata Testudinella patina Trichocerca capucina Trichocerca elongata	Cyclops vicinus         Diacyclops bicuspidatus         Eucyclops serrulatus         Macrocyclops albidus         Megacyclops viridis         Thermocyclops dybowskii         Acanthodiaptomus denticornis	
Lophocharis salpina Polyarthra dolichoptera Synchaeta stylata Testudinella patina Trichocerca capucina Trichocerca elongata Kladosera	Cyclops vicinus         Diacyclops bicuspidatus         Eucyclops serrulatus         Macrocyclops albidus         Megacyclops viridis         Thermocyclops dybowskii         Acanthodiaptomus denticornis         Bryocamptus zschokkei	

Zooplankton Taxa

Phytoplankton Taxa



## DATA OBTAINED FROM PROJECT STUDY RESULTS AQUATIC FAUNA

#### Phytoplancton



Surirella spp.



Staurastrum spp.



Flagilaria spp.

#### Zooplankton



#### Rotifera/Pleuroxus laevis



Kladosera/Bosmina longirostris



Kopepoda/Nitocra hibernica





BALIKLAR						
Latince ismi	Türkçe ismi	Yetiştiricilik	Ekonomik Değer	Habitat Tipi	IUCN	BERN
Barbus grypus	Şabut	+	+	Akarsu ve Göller	VU	-
Barbus rajanorum	Bıyıklı Balık	-	+	Akarsu ve Göller	NE	-
Alburnus mossulensis	Musul Kolyozu	-	+	Akarsu ve Göller	NE	-
Capoeta trutta	İnbalığı	-	+	Akarsu ve Göller	LC	-
Carasobarbus luteus	Sarı Benli	-	+	Akarsu ve Göller	LC	-
Liza abu	Kefal	-	+	Akarsu ve Göller	LC	-
Chondrostoma regium	Karaburun	-	+	Akarsu ve Göller	LC	-
Acanthobrama marmid	Marmid	-	+	Akarsu ve Göller	LC	-
Cyprinion macrostomus	Benekli Sazan	-	+	Akarsu ve Göller	LC	-
Oxynoemacheilus tigris	Dicle Çöpçü Balığı	-	-	Akarsu ve Göller	CR	-
Aspius vorax	Sis Balığı	-	+	Akarsu ve Göller	LC	-
Glyptothorax fıraticus	Vantuzlu Yayın	-	-	Akarsu ve Göller	NE	-
Cyprinus carpio	Aynalı Sazan	+	+	Akarsu ve Göller	VU	-
Silurus glanis	Yayın	-	+	Akarsu ve Göller	LC	EK-III
Mastacembelus mastacembelus	Dikenli Yılan Balığı	-	+	Akarsu ve Göller	LC	-
Oncorhynchus mykiss	Alabalık	+	+	Akarsu ve Göller	NE	-
Alburnoides emineae	-	-	-	Akarsu ve Göller	NE	-
Alburnoides recepi	-	-	-	Akarsu ve Göller	NE	-
Alburnoides velioglui	-	-	-	Akarsu ve Göller	NE	-



Barbus grypus (Vulnerable-VU)



Oxynoemacheilus tigris (Critically endangered-CR)

1 (Critically Endangered/CR)", 2 (Vulnerable/VU)", 9 (Least concern/LC)" and 6 (Not evaluated/NE)



#### DATA OBTAINED FROM PROJECT STUDY RESULTS AQUATIC FAUNA



Oncorhynchus mykiss (Not Evalueted)



#### Silurus glanis (Least concern)



Capoeta trutta (Least concern)

Acanthobrama marmid (Least concern)



#### DATA OBTAINED FROM PROJECT STUDY RESULTS TERRESTRIAL FAUNA

#### Amphibian and reptiles

38 different species *Eirenis eiselti (*endemic)

12 BERN Convention/additional II 26 BERN Convention/additional III

> 1 (Endangered/EN) 1 (Vulnerable/VU) 2 (Datadeficient/DD) 23 (Least concern/LC) 11 (not listed)

# Rafetus euphraticus is the most important species of fauna ((Endangered/EN).

197 species 17 ordo

Birds

49 family

138 BERN Convention/additional II 51 BERN Convention/additional III 8 (not listed)

#### The most important types

Geronticus eremita (CR) Neophron percnopterus (EN) Aythya nyroca (NT) Limosa limosa (NT) Coracias garrulus (NT)

# Mammals

14 different species

4 BERN Convention/additional II 1 BERN Convention/additional III

1 (Near Threatened/NT) 1 (Data deficient/DD) 12 (Least concern/LC)



#### DATA OBTAINED FROM PROJECT STUDY RESULTS TERRESTRIAL FAUNA - AMPHIBIAN REPTILES



Hyla savignyi



Trachylepis aurata)



Eublepharis angramainyu



Walterinnesia morgani





Rafetus euphraticus is endangered according to the IUCN Red List. It intensely lives in Saray ve Kumla.



#### DATA OBTAINED FROM PROJECT STUDY RESULTS TERRESTRIAL FAUNA - BIRDS



Upupa epops



Galerida cristata



Ceryle rudis



Bubulcus ibis



#### DATA OBTAINED FROM PROJECT STUDY RESULTS TERRESTRIAL FAUNA - BIRDS



Tringa ochoropus



Podiceps cristatus



Egretta garzetta



Garrulus glandarius





Geronticus eremita CR(Critically endangered)

Gallinula chloropus



Familya / Türkçe Adı	Bilimsel Adı	IUCN
	Carnivora	
Canidae		
Çakal	<i>Canis aureus</i> Linnaeus, 1758	LC
Kurt	<i>Canis lupus</i> Linnaeus, 1758	LC
Kızıl Tilki	Vulpes vulpes (Linnaeus, 1758)	LC
Felidae		
Karakulak	Caracal caracal (Schreber, 1776)	LC
Saz Kedisi	Felis chaus Schreber, 1777	LC
Hyaenidae		
Çizgili Sırtlan	Hyaena hyaena (Linnaeus, 1758)	NT
	Chiroptera	
Molossidae		
Buldog Yarasa	Tadarida teniotis (Rafinesque, 1814)	LC
	Eulipotyphla	•
Erinaceidae		
Kirpi	Erinaceus concolor Martin, 1837	LC
Uzunkulaklı Çöl Kirpisi	<i>Hemiechinus auritus</i> (Gmelin, 1770)	LC
Talpidae		
Köstebek	Talpa caeca Savi, 1822	LC
	Lagomorpha	
Leporidae		
Yabani Tavşan	Lepus europaeus Pallas, 1778	LC
	Rodentia	
Hystricidae		
Oklu Kirpi	Hystrix indica Kerr,1792	LC
Muridae		
Sarı Evfaresi	Mus macedonicus Petrov & Ruzic, 1983	LC
Spalacidae		·
Kör Fare	Spalax leucodon Nordmann, 1840	DD



- Solid wastes of unsanitary disposal.
- Qualified domestic solid wastes are disposed to riversides and empty fields.
- Excavation wastes
- In the scope of studies done in water quality, examples are examined from 5 different points and It's been found out that there are seasonal differences are based parameter.
- When examples water parameters are analized it has been approved to be the best quality of water according to the superficial water quality administration and regulation.



#### DATA OBTAINED FROM PROJECT STUDY RESULTS ENVIRONMENTAL DATA





There are 12 mound in the project area at the border of Karkamış and Nizip.

#### These are;

Şara Mound Karkamış Archaeological Site (The ancient city) Günaltı Mound Elifoğlu Mound Kefre Mound Kirkiz Mound Yarımtepe Mound Aşağıbayındır Mound Belkis Archaeological Site (Zeugma -The ancient city) Suboyu Mosaic Village Area Suboyu Necropolis ve Suboyu Bronze Age



Belkis Archaeological Site (Zeugma -The ancient city)



Karkamış Archaeological Site (The ancient city)

#### DATA OBTAINED FROM PROJECT STUDY RESULTS HISTORICAL AND CULTURAL AREAS







- In this field studies, it is observed that most part of the project are formed on flat or close to the flat lands, especially, if you get close to the near of Birecik Dam there are medium sloppy hills in some parts and steep hills on the other parts.
- In this land field studies, it is observed that county, rural settlements and agricultural landscapes caused by these settlements create a lot of pressure especially on the commercial activities such as sandpits, fishing farms etc. in Karkamış Flood Plain.
- In this context, in order to protect and sustain the landscape, "Landscape Restoration Aims" and Recomended land Usage" have been developed benefiting from the results of landscape analysis obtained from environmental, social and economical aspects related to the field.



Karkamış Flood Plain Birecik Environmental geomorphology and vegetation Relations

Karkamış Flood Plain , Belkis village Around **Farmland** 

Karkamış Flood Plain , Kelekli village located around **Sand Quarries** 

#### DATA OBTAINED FROM PROJECT STUDY RESULTS LANDSCAPE VALUES







- Due to the general source of living is agriculture in the region, rural settlements and **its agricultural fields** have been observed along the Euphrates River coastline.
- Although there are induced effects of intensive agricultural activities on the region, the main source of the negative effects of agricultural activities are on some commercial fishing farms which have been built on streams and rivers (IR) and river floodplains (IY) and the sand and gravel quarries.
- Karkamış Dam which is included into the project and Birecik Dam is located on the northern border of Karkamış Dam are facilities serving **the energy sector**.



#### The direct users of the lake

- engaged in fishing
- engaged in pruning of the reed plant
- engaged in seafood
- engaged in Livestock and Pasturage
- > Hunters
- engaged in to draw water from the lake

#### The indirect users of the lake

- Aqueous and dry agricultural structures
- Irrigation Associations
- Municipalities
- Factories
- Livestock

#### The institutions that have a right to say about the lake

- > Governorship
- Special provincial directorate of administration
- State hydraulic works
- Protection Institutions
- Ministry of Fisheries, Food, Agriculture and Livestock
- Ministry of Forestry and Water Management



institutions	The most important environmental	Solution proposals
	problems in the area	
Gaziantep Metropolitan Municipality	<ul> <li>Sand Quarry</li> <li>Uncontrolled hunting</li> <li>Agriculture</li> </ul>	The preparation of the management plan
Gaziantep Branch of Nature Protection and National Parks	<ul> <li>Sand Quarry</li> <li>Uncontrolled hunting at land and water</li> </ul>	The preparation of the management plan
Şanlıurfa Branch of Nature Protection and National Parks	<ul> <li>Sand Quarry</li> <li>Uncontrolled hunting at land and water</li> </ul>	The preparation of the management plan
Gaziantep Branch of State Hydraulic Works	<ul> <li>Ignorance of the people</li> <li>Fishing</li> <li>Removing warning signs by local people</li> </ul>	intensify the awareness-raising and supervision
Municipalities	<ul> <li>Indifferent - running unlicensed boat in the reservoir</li> <li>Giving the untreated waste water to the Euphrates River</li> </ul>	the increment should be established for wastewater plants
Civil society organizations	<ul> <li>Sand Quarry</li> <li>Uncontrolled hunting at land and water</li> <li>Fish farms</li> </ul>	<ul> <li>The preparation of the management plan</li> <li>The control of land use</li> </ul>
Fish Farms	<ul> <li>The absence of water in the fluid</li> <li>messing of household waste to the Euphrates River</li> <li>Unconscious hunting by hunters</li> </ul>	<ul> <li>audit should be to control the dam water</li> <li>intensify control</li> <li>the prohibition of hunting in certain areas</li> </ul>
Sand Quarry	Uncontrolled hunting at land and water	-

Most Important Environmental Problems and Solutions in the field by stakeholders





Images of Sociological Studies

Images of Sociological Studies



- The most significant problem is that field owners and stakeholders have lack of adequate knowledge about wetlands,
- The importance of the areas is not known enough
- Hunting and agricultural activities
- Impacts on water quality
- Sand **quarry** and **fishing farms** which are located in the field of absolute protection zones are seen as outstanding main problems.







#### Main Target 1

Birecik-Karkamış Flood Plain Wetlands are protected by the improvements of the natural, cultural, socio economic resources and by the means of balance of the protection and the use resources are sustained and also Birecik Karkamış is seen as a place that have high environmental consciousness.

#### **Ideal Target1**

Improvement of Birecik-Karkamış Flood Plain waterland, protection of current biodiversity and sustainability

#### Ideal Target 2

Development of eco tourism by increasing the awareness of Birecik-Karkamış Flood Plain Waterland.

#### **Ideal Target 3**

Development of a integrated management mechanism of Birecik-Karkamış Flood Plain Waterland.









#### Management Plan Workshop from Images







#### **Ideal Taget 1**

- Ensuring the improvement of living space of Euphrates turtles by 2020 (Rafetus euphraticus) which are seen in Birecik-Karkamış Flood Plain Wetland.
- Ensuring to increase the population of bald Ibis (*Geronticus eremita*) upto 300 by 2020 in Birecik-Karkamış Flood Plain Wetlands.
- Expending the living spaces of Pallid Scopes Owl (Otus brucei).
- Increasing the population of Shabbout Fish (Barbus grypus).
- Increasing the population of Bosk' fringe-toed Lizard (Acanthodactylus boskianus).
- Under controlling the hunting during the management plans in Birecik-Karkamış Flood Plain Wetland.
- Ensuring the control of water quality and quantity in the wetlands in Birecik-Karkamış Flood Plain Wetland.

#### Ideal Taget 2

- > Developing the infrastructure towards Eco tourism in Birecik-Karkamış Flood Plain Wetlands.
- Increasing the popularity of in Birecik-Karkamış Flood Plain Wetland.

#### Ideal Taget 3

Ensuring the implementation of the management plan by working together with related institutions and organizations that located in Şanlıurfa and Gaziantep cities.

#### KARKAMIS FLOOD PLAIN WETLANDS PROJECT MANAGEMENT PLAN PROJECT TEAM

Project Owner T.C. GAZİANTEP BÜYÜKŞEHİR BELEDİYESİ Park Bahçe ve Yeşil Alanlar Daire Başkanlığı

T.C. Orman ve Su İşleri Bakanlığı Doğa Koruma ve Milli Parklar Müdürlüğü

#### Project Coordinator

Kadir Arslan (Park Head Garden and Green Areas) Dr. Banu Gökçek (Agricultural engineer) Pelin Okkıran (Botanist) Levent BİLER (Scientist biologist) Bora ERDEM (Landscape Architect)

> Hydrogeology Engineer Eren GERMEÇ

Biologists (Botanist) Prof. Dr. Latif KURT

Biologist (Ornithologist) Doç. Dr. Özdemir ADIZEL

Biologist (Zoologist) Dr. Bahadır AKMAN

Geographic Information System and Database Specialist Serkan MURATLI (Msc. Geological Engineer)

Agricultural Engineer Selahattin HACIÖMEROĞLU (Msc. Agricultural engineer)

> Aquaculture Engineer Doç. Dr. Ahmet BOZKURT

> > Forest Engineer Tekin BAYRAK

Environmental Engineer Meriç BÜTÜN (Msc. Environmental engineer) Egemen ÖZMEN (Msc. Environmental engineer)

> Sociologist Ercan ÖZBULUT Ebru DEMİR

Karkamış is in the border of Syria which is influenced by civil war. We hope that the peace arrives soon to the region for all the species.