

# Project CB005.1.12.135 :

## Preparation and promotion of the process of development of European ecological network NATURA2000 in Istranca Mountain

Activity1: Demonstration of process for designation of NATURA 2000 sites in Istranca.

### Designation of pilot NATURA 2000 sites in the target area and practical filling in of the SDF

Participating Natura 2000 SDF experts from Bulgaria:

- Simeon Marin – birds, habitats, zoology in general;
- Gergy Dulev – fish, bats and birds;
- Ivaylo Klisurov – amphibians, reptiles and birds.

25 – 26 October 2017, Turkey, Demirkoy

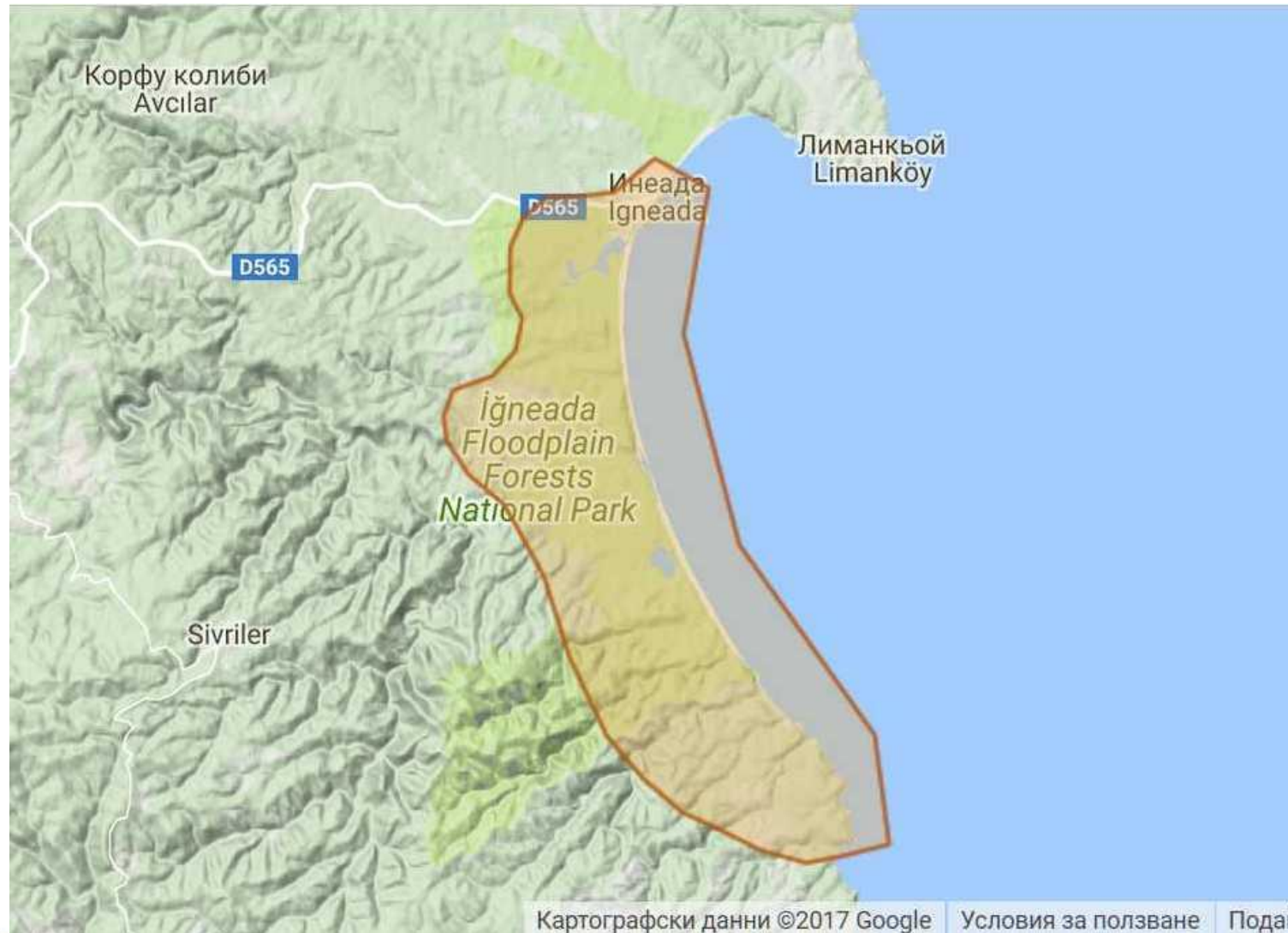


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# SPA Igneada Longoz Orman



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# IBA TR 002 İğneada Forests

- **Area:** 8,255 ha
- **Site description**

A complex of seasonally-flooded forests, swamps, freshwater lakes and sand-dunes on the Black Sea coast near the Turkish-Bulgarian border. Surface water accumulation behind the dunes feeds the largely intact flooded forests, which are below sea-level. The c.10 km long pristine dune and beach system is of high botanical importance. Human activities include cattle- and sheep-grazing, small-scale freshwater fisheries and reed-cutting ('Other' land-use).
- **Key biodiversity**

The site is also a migratory bottleneck, where more than 8,000 *Ciconia ciconia* regularly pass in autumn. Although no comprehensive counts have been undertaken, available data suggest that the IBA is also a bottleneck for migrating raptors.
- **Recommended citation**

BirdLife International (2017) Important Bird Areas factsheet: İğneada Forests. Downloaded from <http://www.birdlife.org> on 19/10/2017.



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- **Pressure/threats to key biodiversity**

ÝSKÝ plans to divert water from the nearby Istranca mountains by damming the five major streams feeding the flooded forests. Additional threats include the proposed Bulgaria-Turkey coastal highway, tourism development, deforestation to allow replanting with *Populus*, illegal sand extraction and reed-cutting regimes that reduce nesting site availability ('Other' threat).

- **Protected areas**

**National** 1,345 ha of IBA covered by Nature Reserve (Iđneada, 1,345 ha).  
**High** 3,000 ha of IBA covered by Permanent Wildlife Reserve (Iđneada, 5,399 ha).  
**International** 3,000 ha of IBA covered by SYT (Iđneada, 3,000 ha).



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# Populations of IBA trigger species

Species	Current IUCN Red List Category	Season	Year(s) of estimate	Population estimate	IBA Criteria Triggered
<a href="#">Black Stork</a> <i>Ciconia nigra</i>	LC	passage	1991	365 individuals	A4i, B1i
<a href="#">White Stork</a> <i>Ciconia ciconia</i>	LC	passage	1996	8,366 individuals	A4i, B1i
<a href="#">A4iv Species group - soaring birds/cranes</a>	n/a	passage	1996	8,366 individuals	B1iv



# pSCI Igneada Forests



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# pSCI Igneada Longoz Orman

## **Igneada Longoz Forests National Park is a hidden Garden of Eden among the dark green forests.**

- The Longoz forests which are completely covered with water during winter and spring has a floristic composition of mixed forest trees of 8-15 meters tall. Since the alluvial soils have more intensive micro-organism activities, the forests and the other plants in this region start vegetation earlier than the other plants. The protection of the habitat of these forests has crucial importance. Because, these forests are not only a rare natural value for Turkey but also for Europe.
- Preserved on a national scale and the scale of the most important European floodplains (Longoz) forests in the region of the Igneada (İgneada), the region contains many different ecosystems and different habitats for animal species are high quality. Many fish species due to habitat area and fish production potential of hunting tourism, botanical tourism thanks to its biological diversity, bird watching, nature photography and water sports, such as one of the areas that have high potential for many recreational activities.
- The area is defined as a National Park on 2007. The lakes within the borders of Igneada are famous with its multiple species of fishes and oxygen rich atmosphere. Although Igneada Longoz Forests National Park has seven lakes, the most important ones are Mert Lake, Hamam Lake, Erikli Lake and Saka Lake. The first lake "Mert Lake" is just about 12 km far away from the Bulgarian border. It is known that, in the lagoons of Igneada, in the lakes, on the wetlands and on the streams 30 different species of fish live. According to the the Berne Convention 8 species of fish are described as "species in need of protection". These are Chalcalburnus chalcoides, Syngnathus abaster, Neogobius fluviatilis, Aspius aspius, Alburnoides bipunctatus, Rhodeus amarus, Cobitis taenia Chondrostoma nasus. Mert Lake has the highest diversity of fish between those lakes. Hamam and Pedina Lakes can also be defined as an accommodation point for birds, wild ducks and swans coming from Bulgaria, Russia and from the Danube River.



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## pSCI Dupnisa caves

- The Dupnisa Caves are excellent for an adventurous trek. Dupnisa about cave 4 million years since the formation of a large underground system, and continues to 2720 meter-long cave is said to be the second longest in Thrace (Trakya).





# Important Caves in Turkish Thrace for Bats: Dupnisa Cave System and Koyunbaba Cave

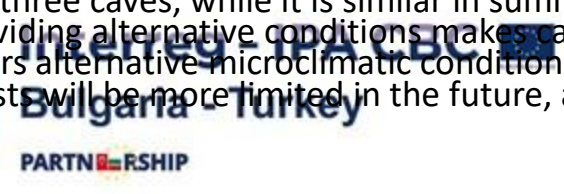
## Serbülent Paksuz

### • 3.2. Bats of Dupnisa Cave System

Up to now, 17 species of bats have been recorded in Dupnisa Cave System, which is the most studied cave in Turkey in terms of bats. Five of these species belong to Rhinolophidae family (*Rhinolophus ferrumequinum*, *R. hipposideros*, *R. euryale*, *R. mehelyi*, and *R. blasii*) and 12 of them belong to Vespertilionidae family (*Myotis myotis*, *M. blythii*, *M. bechsteinii*, *M. emarginatus*, *M. nattereri*, *M. mystacinus*, *M. capaccinii*, *M. daubentonii*, *Miniopterus schreibersii*, *Barbastella barbastellus*, *Plecotus austriacus*, and *P. auritus*) [34–36, 38]. *M. alcaethoe*, recorded in this study, has been newly registered for Dupnisa Cave System. The maximum number of bats recorded in Dupnisa Cave System is 54,600 in hibernation, while 11,000 in nursery. Dupnisa Cave System is used for hibernating by the majority (83%) of the total number of bats recorded, while it is used for breeding and nursing by the minority (17%). The three parts of the cave system were used by different species to varying degrees according to the season. Sulu Cave is used only for hibernating, while Kız Cave and Kuru Cave are used for both hibernating and nursery. In Dupnisa Cave System, 99% of bat colonies are composed of six species, *M. schreibersii* (78%), *M. myotis/blythii* (8%), *R. euryale* (6%), *R. ferrumequinum* (4%), and *M. capaccinii* (3%). high for wintering. Although the winter temperature is higher in Kız Cave than in Kuru Cave, Kız Cave is used for hibernating by the bats.

The two entrances of Kuru Cave and its connection with Sulu Cave indicate that it may be more affected by temperature fluctuations and airflows, which may be the reason why the cave is preferred less than the other caves for hibernating. The humidity in winter is variable in all the three caves, while it is similar in summer. The specific roost requirements of bat species limit the use of many caves by bats. Thus, providing alternative conditions makes caves pretty appropriate roost for bats throughout the year. Therefore, Dupnisa Cave System, which offers alternative microclimatic conditions in the different parts, may be an important opportunity for many bats because the appropriate roosts will be more limited in the future, as global warming will become increasingly prevalent.

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In Dupnisa Cave System, a conservation plan is applied for the protection of the bats and the cave system according to the seasonal use of the cave system by bats. This protection plan includes an appropriate visitor schedule and gate construction. The visitor schedule was arranged according to the seasonal use of Dupnisa Cave System by bats. The entrances of cave system where tourist circuits placed in were closed with horizontal angle iron gates to control the human disturbance. The other entrances of the cave system, outside of the tourist area, have been left to the natural state to minimize the negative effects of the two doors that can disturb the bats. In addition to these, some arrangements have been made for visitors and the use of lighting system. The protection of the caves and the bats will be possible only if the precautions that are taken and the suggestion that have been made are applied carefully [38].

Paksuz and Özkan [38] stated that the seasonal usage patterns of the parts in Dupnisa Cave System by the bats are completely preserved in periods of before and after tourist mobility (**Figure 8**). The authors also emphasized that there is no decrease in the total number of the bats in Dupnisa Cave System following the opening period tourist mobility. Moreover, they found a statistically significant increase after the tourist mobility only in Kız Cave, which is closed to tourism and ungated. This increase may indicate that the bats prefer to use the caves which are not visited by humans and tourist mobility. It seems as if Kız Cave, which is closed to tourism and ungated in Dupnisa Cave System, is a good opportunity to minimize the potential negative effects of the tourism activities in Sulu Cave and Kuru Cave on the bats. These results show that the protection program prepared for the protection of Dupnisa Cave System and bats is sustainable and must be applied meticulously.



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# The protection of the bat community in the Dupnisa Cave System, Turkey, following opening for tourism

[Serbüent Paksuz](#) <sup>(a1)</sup> and [Beytullah Özkan](#) <sup>(a2)</sup>

## • Abstract

The aim of this study was to protect the bat community and roosting sites in the Dupnisa Cave System in the Yıldız (Istranca) Mountains in Thrace, the European part of Turkey, following the opening of the caves to tourism. We investigated the seasonal population dynamics and use of the cave system by bats, carrying out 15 surveys before (2002–2003) and 38 surveys after (2004–2008) the cave system was opened to tourism. We recorded 15 species of bats; the highest numbers recorded in a single survey were 54,600 hibernating and 11,000 breeding/nursing. Different parts of the cave system are used by bats to various degrees according to season. To protect the bats and the cave system the visitor schedule took into consideration the differences in seasonal use of the caves by bats. There was a significant increase in the total number of bats recorded in the cave system after opening for tourism, possibly because the gating of two entrances helped to control visitation. The results of our surveys of this cave system show that gating of entrances and visits by tourists are not necessarily incompatible with the use of caves by bats for both hibernating and nursing. Understanding how the three caves are used seasonally by the bat community, and for what purposes (hibernation vs nursing), was critical for the establishment of an appropriate management plan for tourism.



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