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ecoda GbR  
ENVIRONMENTAL  
EXPERT OPINION  
Ruinenstr. 33  
44287 Dortmund  
Germany

Fon +49 231 841697-10  
Fax +49 231 589896-0  
[ecoda@ecoda.de](mailto:ecoda@ecoda.de)  
[www.ecoda.de](http://www.ecoda.de)

- **Additional information on the Expected Impact on Booted Eagle and Saker Falcons**

as Part of the Environmental Impact Assessment  
for the Proposed "Čibuk 1" Wind Farm  
located near the Villages Dolovo and Mramorak  
in the Municipality of Kovin (Autonomous Province of Vojvodina, Republic of Serbia)

Reported to:

Continental Wind Serbia DOO  
Đure Jakšića 6  
11000 Beograd

Prepared by:

Dr. Michael Quest

Checked by:

Dr. Frank Bergen

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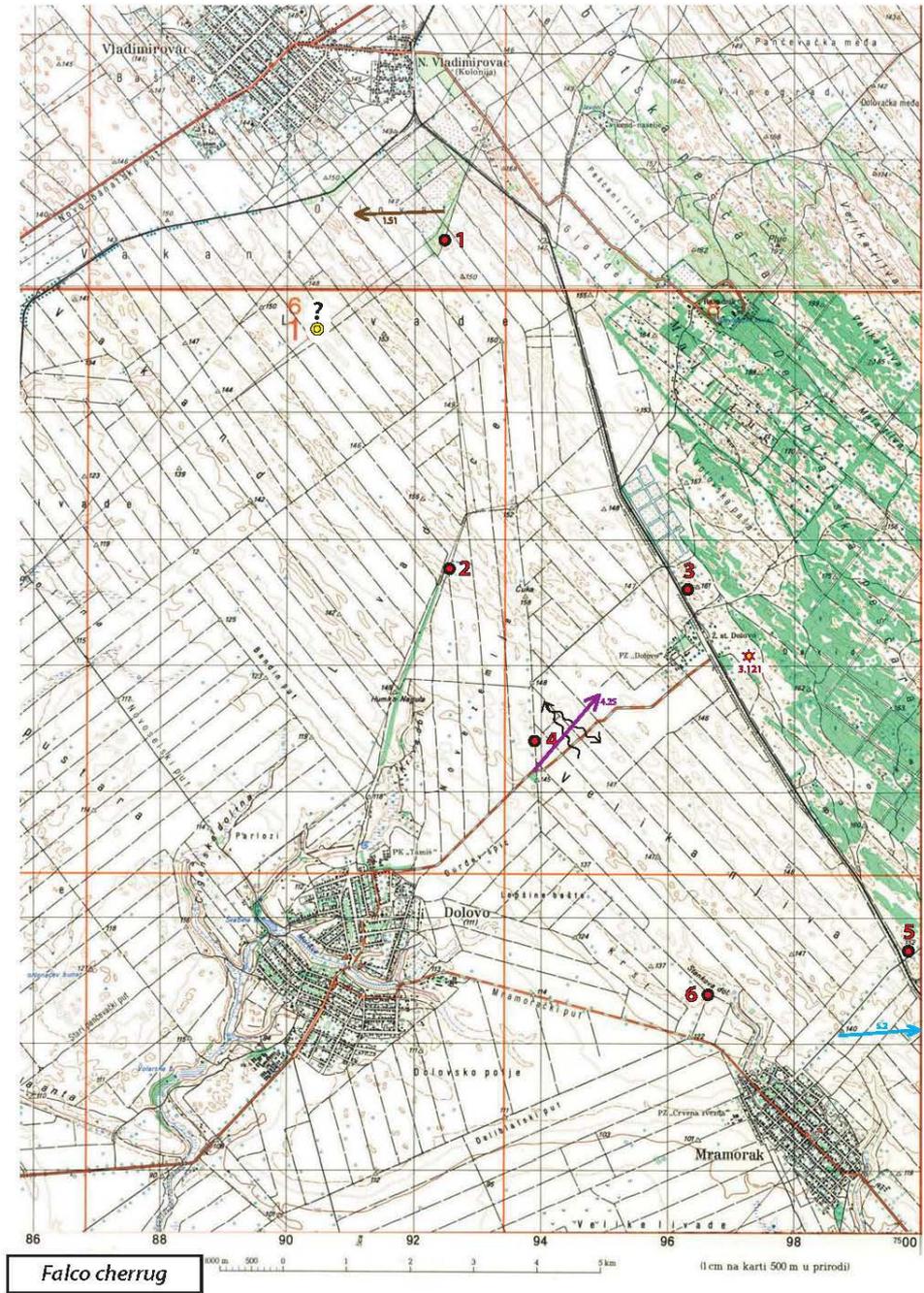
## 1. Introduction

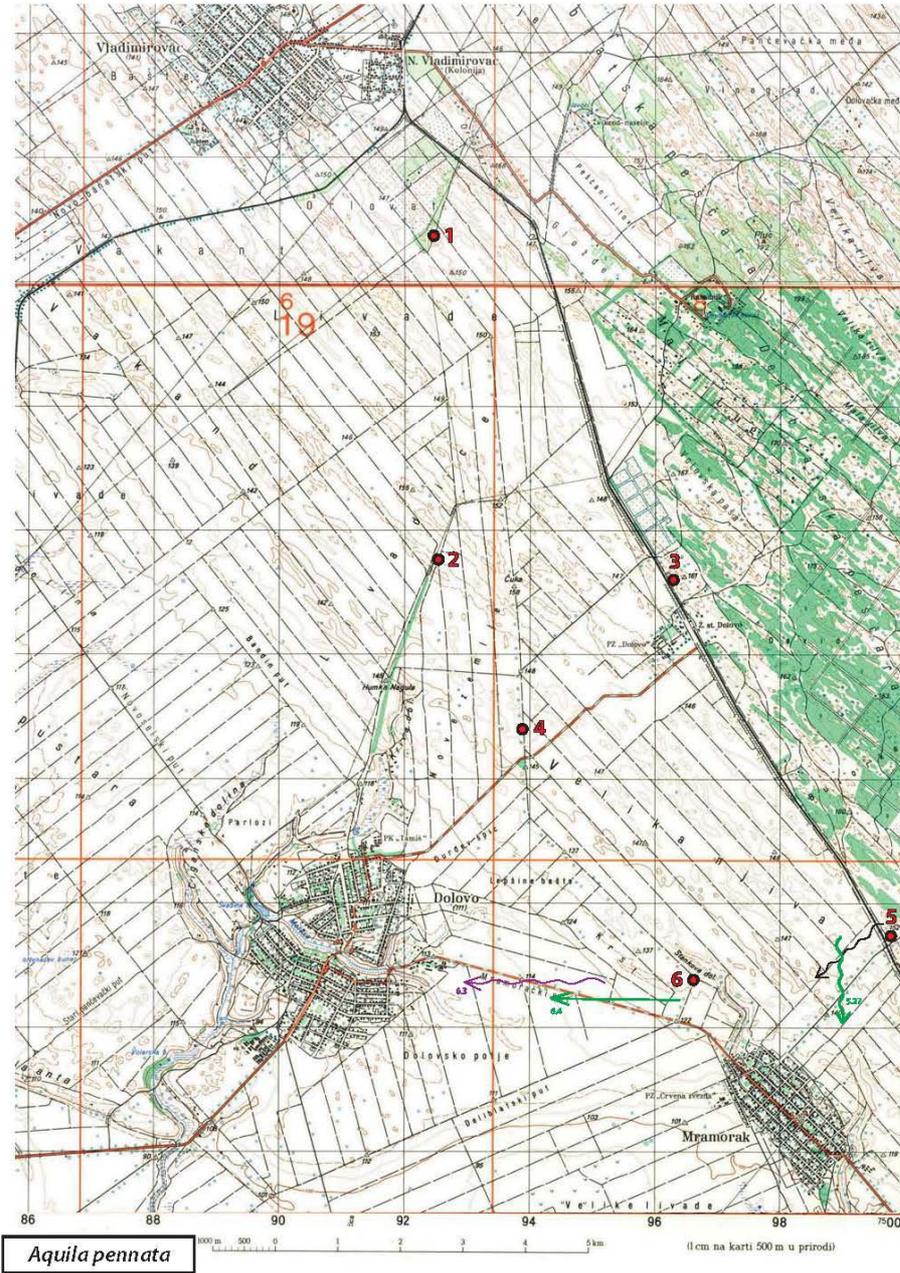
With "Čibuk 1" a wind farm of 57 wind turbines is planned for construction near the villages of Dolovo and Mramorak in the Municipality of Kovin (Autonomous Province of Vojvodina, Republic of Serbia). In addition to the expert opinions on birds (cf. ECODA 2011a) Vojvodina Institute of Environmental Protection asked for further information about spatial distribution of recordings and (potential) hunting areas of Booted Eagle and Saker Falcon and about likely adverse effects (habitat loss and collision risk) on both species caused by Wind Power Plants (WPPs).

## 2. Recordings of Booted Eagle and Saker Falcons

In comparison to other projects dealing with potential effects of WPPs on bird in Serbia, the intensity and quality of the investigation (study period, amount of observations, man power) was very high. As a consequence, compared to other field studies the probability to observe rare bird species was much higher in this investigation.

Recordings of Saker Falcon (*Falco cherrug*) and Booted Eagle (*Aquila pennata*) were presented in PAUNOVIĆ & KARAPANDŽA (2011, p. 83 and p. 84: see below):





### 3. Effects on possible hunting areas

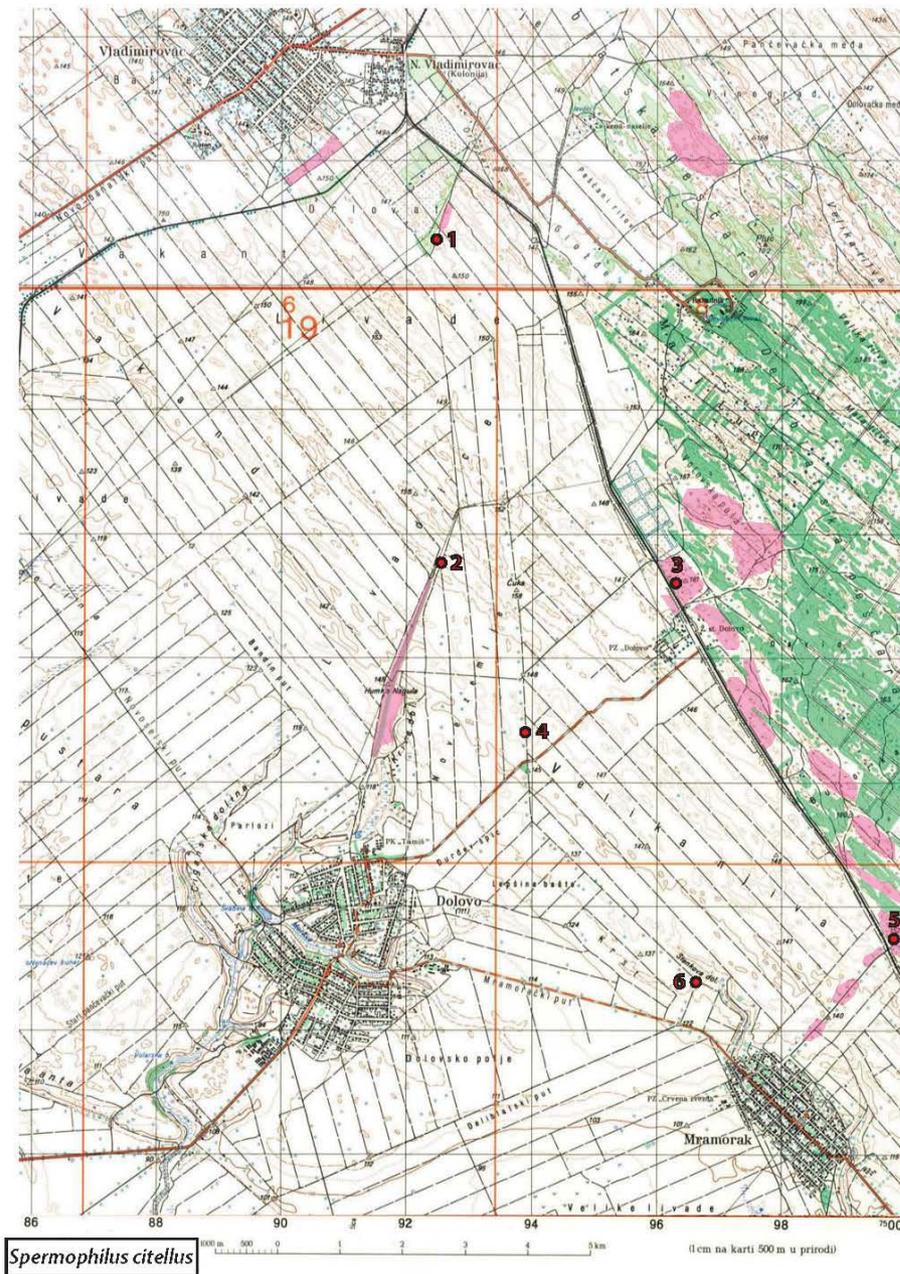
Both species (Saker Falcon as well as Booted Eagle) predominantly hunt on European Ground Squirrels (*Spermophilus citellus*). Thus important hunting areas for Saker Falcon and Booted Eagle are directly linked with occurrence and abundance of European Ground Squirrels. PAUNOVIĆ & KARAPANDŽA (2011) presented a map indicating the occurrence of this small mammal in the study area and in its vicinity (see below). The map clearly shows that most areas of European Ground Squirrels are located outside the proposed wind farm area. In fact there are only very few sites within the proposed wind farm area inhabited by European Ground Squirrels (located along the road in the south of the study area near VP 5 and 6). This might account for single observations of Booted Eagle in this part of study area. As the majority of appropriate hunting areas for both species are located outside the proposed wind farm area it can be assumed that operational wind turbines within the project area will not cause a significant loss of hunting habitat – if turbines have a disturbance effect on both species at all. Summing up, operation of WPPs within wind farm area will not lead to a significant effect of the local population.

### 4. Collision risk

Booted Eagle and Saker Falcon were observed for 39 min. and 50 min. within 850 hours of observation (i.e. 51,000 min. of observation: total time spent by team 1 and 2), respectively. Hence, both species rarely appear in the study area. It can be assumed that a comparable – if not higher - frequency of occurrence can be found in wide areas of Vojvodina (if observations in other areas are done in same intensity). Breeding sites of Saker Falcon or potential breeding sites of Booted Eagle in Deliblato Sands as well as hunting areas of significance are located at distances of more than 1,000 m from the proposed wind farm. Taken all information at hand into account, there is no reason to assume that collision risk might be significantly higher at certain WPPs of the proposed wind farm. Consequently, a significant collision risk (and thus, the deliberate killing in the sense of article 5 of the Birds Directive) for Saker Falcon or Booted Eagle at WPPs of the proposed wind farm “Čibuk 1” wind farm can be excluded.

### 5. Conclusion

The construction and operation of the proposed wind farm will not lead to significant negative effects on Saker Falcon and Booted Eagle (and will not violate article 5 of the Birds Directive or article 6 of the Bern Convention).



## Literature

PAUNOVIĆ M. & B. KARAPANDŽA (2011): Monitoring the Condition of the Ornithofauna in the Area of the Potential "Čibuk 1" and "Čibuk 2" Wind-farms Period March – November 2010.