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Vegetation Index (EVI) as the main indicator for the changes in habitat structure. 20 16-days composites for years 2000 and 2008 with the spatial resolution of 250 m were obtained from the NASA server. Downloading, re-projection and analysis of images was implemented using the open-source software MRTool, R, SAGA. This software combo enables data processing automation and thus can be used to process large volume of data. MODIS images are especially attractive for analysing habitat in cross-border areas where the availability of GIS layers is limited or the layers are not harmonized. The results of the analysis revealed places with significant changes in EVI index along important habitat types for feeding of the spoonbills. The probability value of for t-test (difference in EVI distributions for two periods per pixel) has been produced. The resulting grid was further exported to 'kml' format for visualization in Google Earth i.e. free exchange of results. For the Croatian part of the research area, the resulting grid was overlaid with layers presenting important habitats for spoonbills (pastures, rivers, river edges, fishponds and pastures along highest wetness potential) and analyzed to detect which land cover types are most viable to habitat changes.

THE WINTER MIGRATION OF STORKS AND CRANES FORM NORTHERN HEMISPHERE TO SOUTH-EAST OF INDIA

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A very least known about distant migration and their mechanism. The birds are indicators of different habitats: for example Ibis indicator of marshy wetland, Cormorant indicator of freshwater cat fishes, Little Cormorant indicator of freshwater confined aquatic reservoir.
The ashy purple Demoiselle Crane (*Anthropoides virgo*) indicator of rainfall, therefore people from western Rajasthan eagerly await the first arrival of Demoiselle Crane. The Demoiselle Cranes radiates in Indian continent for foraging on oil seed and nut plants.
The fascinating seasonal migration in the storks has been observed for last two-three decades along the western coast of India and hill ranges of the Western Ghats. The recently built several freshwater systems in hill range of Western Ghat have attracted the Painted Storks (*Mycteria leucocephala*), White Necked Storks (*Ciconia episcopus*), White Storks (*Ciconia ciconia*), Demoiselle Crane (*Anthropoids virgo*), Siberian Crane (*Grus leucogeranus*), etc. The birds from subtropical temperate region after snowfall migrate in thousands up to northwest corner of India and then they radiating in local aquatic network of reservoirs according to foraging sustainability of habitat. The seasonal migration of storks and cranes had not observed in Western Ghat, which is reach spot of biodiversity, therefore the present work has been extensively undertaken.

MONITORING OF THE WHITE STORK (*CICONIA CICONIA*) NUMBER DYNAMICS IN UKRAINE IN 1994-2009

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Ukraine has one of the largest populations of the White Stork (*Ciconia ciconia*) in the world. The actual number makes about 30,000-35,000 breeding pairs. Control of the population by means of yearly full censuses is impossible in our conditions because of its large size. We went by the other way: obtaining of monitoring data on the net of constant study plots. This work has started in 1992. Ornithologists and voluntary helpers take part in observations. The net of study plots lets control breeding success and number dynamics in the country. In total, till the autumn of 2009 the information from 256 plots in 24 from 25 regions of Ukraine has obtained. On 95 of them observations were carried out during 3 and more years, on 16 ones during 10-15 years, and on 13 ones during 16-18 years. The net of plots covers the main breeding grounds of the stork in Ukraine. Since

1994 the obtained data are sufficient for the analysis of number dynamics. For this aim we used the average increment of numbers on study plots in percents (figure 1). The diagram shows that since 1994 the increase of number permanently rose. Maximum of increasing was registered in 1996 and 1998. In 1997 number of the White Stork has sharply decreased. It was so called catastrophic year for the species almost in whole Europe caused by bad conditions during wintering and spring migration. Already the next year population was completely restored and number increasing continued. Later the rate of growth began to decrease and population was stabilized. In 2001-2003 the average percentage fluctuated around zero. Since 2004 the number of storks began to increase again. Several years the increasing rate remained stable in about 6-8%, but this period of number increasing was also interrupted by the new catastrophic years in 2005 and 2009. The drastic decline of population was attended by late arrival and low breeding success. At the graph we can see two variants of number increasing: wave-like (1994-2001) and linear (since 2004). There are regional differences in number dynamics of the White Stork. The largest fluctuations take place in eastern part of the country (eastwards from the Dnieper river). This area is located not far from the east border of the breeding range. The population in western and central Ukraine is more stable.

Figure 1. *Evolution of White Stork numbers in Ukraine.*

CHANGES OF WHITE STORK NUMBERS IN UKRAINE IN 1931, 1987 & 2004

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White Stork censuses in 1931, 1987 and 2004 in Ukraine give a good data for comparison of their numbers. So in general it was recorded the decreasing of bird numbers between 1931 and 1987 years and increasing between 1987 and 2004. However, in different administrative districts there were different trends in both periods (increasing, decreasing and permanent numbers). So in compared censuses in 1931 and 1987 the decreasing was recorded in 64% of districts, increasing - in 32% and permanent numbers - in 4%. But in compared censuses in 1987 and 2004 the increasing of bird numbers was recorded in 75% of districts, decreasing - in 49% and permanent numbers - in 4% of total districts. Distribution of these districts where increasing, decreasing and permanent bird numbers were recorded is different in both periods. The positive attitude of the local people to White Stork is the same everywhere in Ukraine. Climate changes are characterized with uneven distribution of heat and moisture on large territories. So it could be the reason of such uneven trends of bird numbers changes.