

Sundar, K.S.G. and B.C. Choudhury. 2005. Mortality of sarus cranes (*Grus antigone*) due to electricity wires in Uttar Pradesh, India. *Environmental Conservation* 32:260-269

Abstract: Although overhead electrical wires are known to have caused severe declines of bird populations, there are no studies in India that address this danger, even for endangered species. Rates of mortality, factors affecting mortality and population effects of electrical wires on the globally endangered sarus crane (*Grus antigone*) were assessed for breeding and non-breeding cranes in Etawah and Mainpuri districts, Uttar Pradesh, India. Non-breeding cranes were most susceptible to wires and, within territories, mortalities were higher for pre-dispersed young. Similar proportions of non-breeding and breeding cranes were killed, together accounting for nearly 1% of the total sarus crane population annually. Supply wires accounted for the majority of sarus crane deaths, and only non-breeding cranes were killed by both supply and high-tension power lines. Non-breeding crane deaths at roost sites were correlated with numbers of roosting birds and numbers of wires at each site. Over 40% of 251 known sarus crane territories had at least one overhead wire posing a risk to breeding adults and pre-dispersed young. A risk index for wires over territories of cranes was computed; mortality was not affected by increasing the number and therefore risk posed by wires. Most crane deaths in territories occurred as a result of wires at edges of territories. Wires around roosting sites, territoriality and age of sarus cranes appear to be the most important factors affecting their mortality due to wires. Mitigation measures will be most effective around roost sites and for wires that border territories of breeding pairs.