

International Wildlife Consultants



هيئة البيئة - أبوظبي
Environment Agency - ABU DHABI

Mongolian Artificial Nest Project



2012 field research involved:

- Monitoring artificial nests in 20 districts to record levels of occupancy and breeding success of Sakers and other raptors.
- 5 monitoring visits to each Saker Falcon nest over the period 1st May to 15th July
- Transect counts of rodents and passerine birds to assess prey availability at each of the 22 artificial nest grids.
- Collecting pellets and prey remains at Saker nests to assess the diet of Sakers at each of the 22 artificial nest grids.
- Collecting feather samples from adults and chicks at all Saker nests in the artificial nest grids.
- Implanting microchips in all Saker chicks at the artificial nest grids.

In 2010, 5000 artificial nests were erected in the steppes of Central Mongolia, which are distributed in grids across 20 districts (soums), with 250 nests spaced at 1.5 km intervals in each district.

In 2012, the second year of the "5000 Artificial Nests Project", we recorded 347 Saker Falcon nests, with a further 33 nests in our pre-existing experimental areas of 250 artificial nests. In total we monitored the breeding success of **380 pairs of Sakers** occupying our artificial nests. However, this is a minimum estimate because nests that had failed prior to our first monitoring visit (between 1st and 15th May) are not counted; the calculated average laying date was 5th April.

We estimate that the **380 pairs fledged 1,298 chicks** (range 1,246 to 1,319). We implanted 1,315 chicks with microchips in 348 broods during this monitoring process.

Breeding density of Sakers varied among grids, ranging from 0.9 to 9.6 breeding pairs/100 km² (average 1.8 breeding pairs/100 km²). We are funding three MSc studentships at the National University of Mongolia to investigate the underlying causes of this variation.

In 2011, we recorded 200 breeding pairs of Sakers in our artificial nests, and the 90% increase in breeding Sakers in 2012 is a significant step towards meeting our predicted target of 500 breeding pairs by 2015.

We further recorded the breeding of 905 pairs of Common Kestrels (*Falco tinnunculus*), 298 pairs of Upland Buzzards (*Buteo hemilasius*) and 269 pairs of Ravens (*Corvus corax*). Again, these are minimum estimates as birds that laid and failed between the first (1st-15th May) and last monitoring visits (25th June to 9th July) were not counted.

Sustainable Development

For artificial nests to provide a long-term benefit for Saker Falcons in Mongolia they need to generate an income to pay for their maintenance, replacement and for nest monitoring. To achieve this aim we are currently looking at a range of 'services' provided by the artificial nests and developing ways of obtaining a financial income in return.

Service	Potential Income
Provide a managed & monitored supply of Saker Falcons to support a sustainable harvest for the falconry trade	Levy on the fees paid by falcon buyers to support the programme of maintenance, replacement and monitoring of artificial nests
Potential value in controlling rodent pest species that damage grasslands	'Payment for Ecosystem Services (PES)' from Government at national/regional level or external, international PES funders
Provide a resource for environmental education and research	Payment by research teams wishing to use the artificial nests in their studies. Sponsorship of nests by supporters wishing to promote education, conservation and/or falconry
Provide a focal point for eco-tourism	Charge for guided tours of artificial nests
Provide a resource for monitoring heavy metal pollutants at a landscape scale using eggs and/or feathers. Expansion of mining can increase releases of harmful heavy metals to the terrestrial ecosystem	Payment for monitoring by mining companies and/or national/regional government

Our 5000 artificial nests are distributed in grids across 20 districts (soums), with 250 nests originally erected in each district. Since they were established, we have lost approximately 15% of the artificial nests, mostly through deliberate removal but also through nests falling over. There are currently (July 2012) 4,276 artificial nests still standing from the 5000 erected in 2010. We are working on increasing awareness and value of the artificial nests project with locals through the "School Links Project" and through meetings and distribution of promotional materials (calendars). We have found that in districts where there is a greater awareness of the project amongst local people, the level of nest losses through deliberate removal is lower.



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