

Oryx

From fatal power lines to crucial lifelines: saving the white storks of Iran

By Mahmood Kolnegari and Richard Harness, 23rd May 2024

Soaring high above us, gliding on rising air thermals and covering vast distances during its annual migration, the majestic white stork is a captivating species. Often depicted in folklore as the bearer of newborn babies, it is much loved across its range in Europe, North Africa and Asia, featuring in tales and legends and even being used in advertising campaigns and logos. These iconic birds often choose to live among human settlements and are well-known for constructing their huge, messy nests high up on roofs, chimneys and even electricity pylons—especially in areas where tall, solitary trees are scarce. In Iran, the birds are highly regarded and their presence in residential areas is considered a sign of good luck. But unfortunately, the birds' tendency to perch on electricity pylons makes them highly susceptible to electrocution as a result of collision with power lines, with thousands of migrating birds each year falling victim to these human-made structures.



Human-stork coexistence in the Kapar-Joudaki village, beside the Bishe-Dalan Wetland, Lorestan Province, Iran. Photo: Mahmood Kolnegari.

Fueled by their strong emotional attachment to the storks, people across the species' range have initiated numerous efforts to protect the charismatic birds. In Europe, there are several conservation projects focused on saving the species, including The European Stork Villages Network, an initiative that gives local communities an active role to play in the conservation of white stork habitats and feeding areas. Through cooperation with local electricity companies, The European Stork Villages Network has dedicated much of its efforts to reducing stork fatalities by making electricity pylons bird-safe, for example by insulating bare conductors to eliminate the risk of electrocution, and installing safe nesting platforms atop the poles. Similar measures have been successful elsewhere, including to protect ospreys in the USA. In Iran, however, although artificial nesting platforms have been fitted in some places, this had not yet been done on top of operating power pylons—something we were determined to change.

In 2017, we established Iran's Birds and Power Lines Committee' (IBPLC), a national panel under supervision of Iran's Power Ministry. Through the Committee, we contacted environmentalists, ornithologists and wildlife researchers to pitch our conservation project and get them on board. One of these environmentalists, Mahdi Mozhtahedi, provided us with electrocution records of white storks in Kapar-Joudaki village, where 33 pairs of storks breed on low- and medium- voltage power lines and where the local people were worried about the ongoing losses of their beloved birds. They were beginning a long-term project to improve the village and attract tourists to the region, and storks played a key role in their plan; a perfect opportunity to start our first white stork conservation mission.



Village council and members of the local environment agency and power utility at a bird-powerlines workshop held in Kapar-Joudaki mosque, Iran. Photos: Mahmood Kolnegari.

To kick off the project, we held a workshop in the village mosque. Village residents, members of the local environmental agency and employees of the power utility company were all invited. We spoke to them about the dangers power lines pose for storks and other large birds, and outlined ways in which they could help protect the animals from becoming victims of power line collisions and electrocution. Empowered by the workshop and equipped with the knowledge that solutions were available that could save the storks without leading to electrical outages, many local people put pressure on authorities, such as the village council and the governor, to take action.

As the project progressed, we presented the local utility provider with details of the conservation measures that have been successfully implemented in Europe and the USA. After lengthy

discussions about the most practical and reliable measures, the power company agreed to make some changes to an existing medium-voltage pylon, adapting it to a bird-friendly design and relocating a deadly electrical transformer to a new location, outside the storks' breeding area.



This medium-voltage power line was re-configured to make it safe for storks: the wire was moved to run beneath the nest, and the now wire-free insulator remained in place to support the nest structure. Photo: Mahmood Kolnegari.

The next step was for us to construct a 60 × 60 cm metal platform and install this on a low-voltage pylon that had an insulated wire. The platform would not only create a safe separation between conductors and nesting materials, but also protect a nest from falling. This was completed in 2021 and was the first nest platform ever installed on an operational power line in Iran—a huge achievement! We were very excited to spot a pair of white storks building their nest on this novel platform in Spring 2022. The success of this first modified power pylon led to so much enthusiasm in the local community that 23 more platforms were constructed by the following year, all of the which were used by breeding pairs of storks.

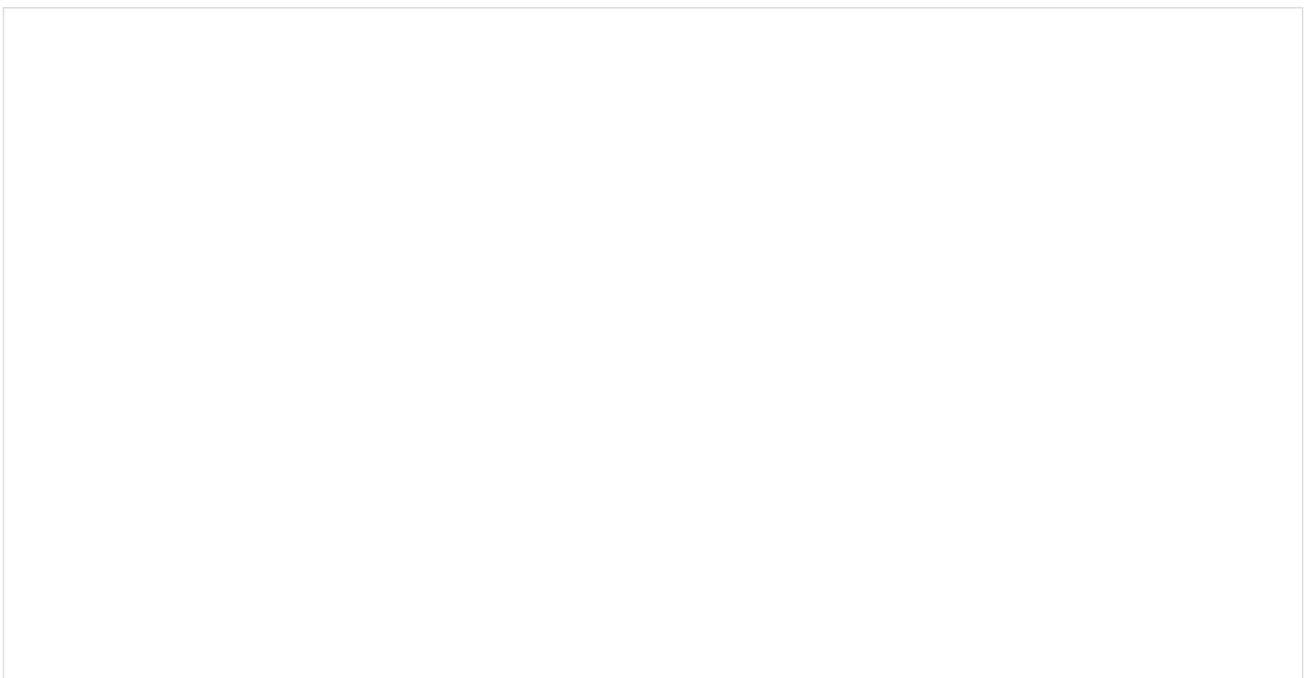


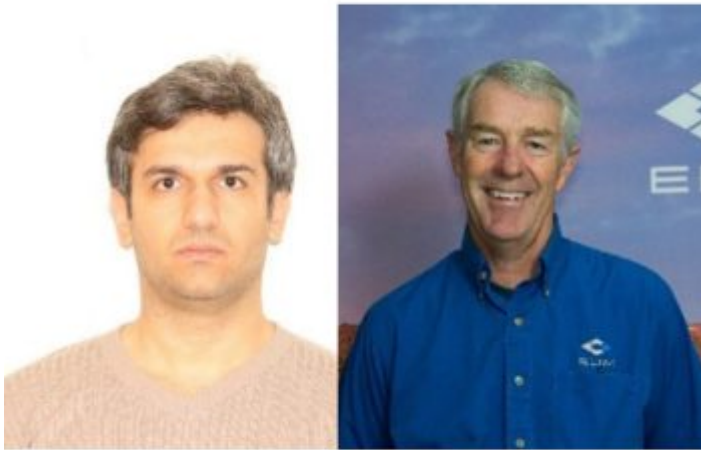
Left: nest platform installation. Right: white storks perching on the nest platforms. Photos: Mahmood Kolnegari.

Thanks to these pioneering efforts, one of the most important stork colonies in west-central Iran is now safely thriving on power pylons. In 2 years of monitoring there have been no electrocutions and no nests have blown off the new platforms. Changing the role of power lines from a threat to an asset has been pivotal for the storks of Iran, and this could not have happened without the remarkable participation of local people and the collaboration of the utility company, who made this a conservation success story. We hope that our project inspires others to implement similar efforts in other parts of the country so that these beautiful birds can also flourish elsewhere.

This project could not have been carried out without the tireless efforts of Mohammad Allahdad, Mandana Hazrati, Mohammad Ali Khosravi and the hardworking linemen of Lorestan Province.

The Conservation News item '[White Stork conservation using overhead power lines: First use of nest platforms on power poles in Iran](#)' is available open access in *Oryx—The International Journal of Conservation*.





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Richard Harness is a certified Wildlife Biologist at the consulting firm EDM International, located in Fort Collins, Colorado, USA. He holds an MSc in Fishery and Wildlife Biology from Colorado State University where his thesis was conducted on raptor electrocutions, looking at the problem from an engineering viewpoint. His specific area of interest is wildlife-utility interactions, including bird collisions and electrocutions on power lines. He works both nationally and internationally with a variety of utility companies, has developed over 100 Avian Protection Plans and Avian Risk Assessments, and has authored or co-authored over 100 papers on the topic.