



Workshop on National IKB Action Plans: North Africa

29 Sep - 1 Oct 2026, Tangier, Morocco



Satellite Tracking as a Conservation Tool

What Is Satellite Tracking?



Tag Fitted

PTT or solar GPS–GSM tag attached to the bird

Signal Relayed

Position sent via satellite (Argos) or mobile network

Location Logged

Multiple fixes/day: position, altitude, speed

Pattern Analysed

Sudden tag failure flags possible illegal killing



20+ species

Saker, Egyptian Vulture, Steppe Eagle and more



Near real-time

location data relayed by satellite or GSM



Multiple fixes

recorded per day, for every tagged bird



How Tracking Reveals IKB

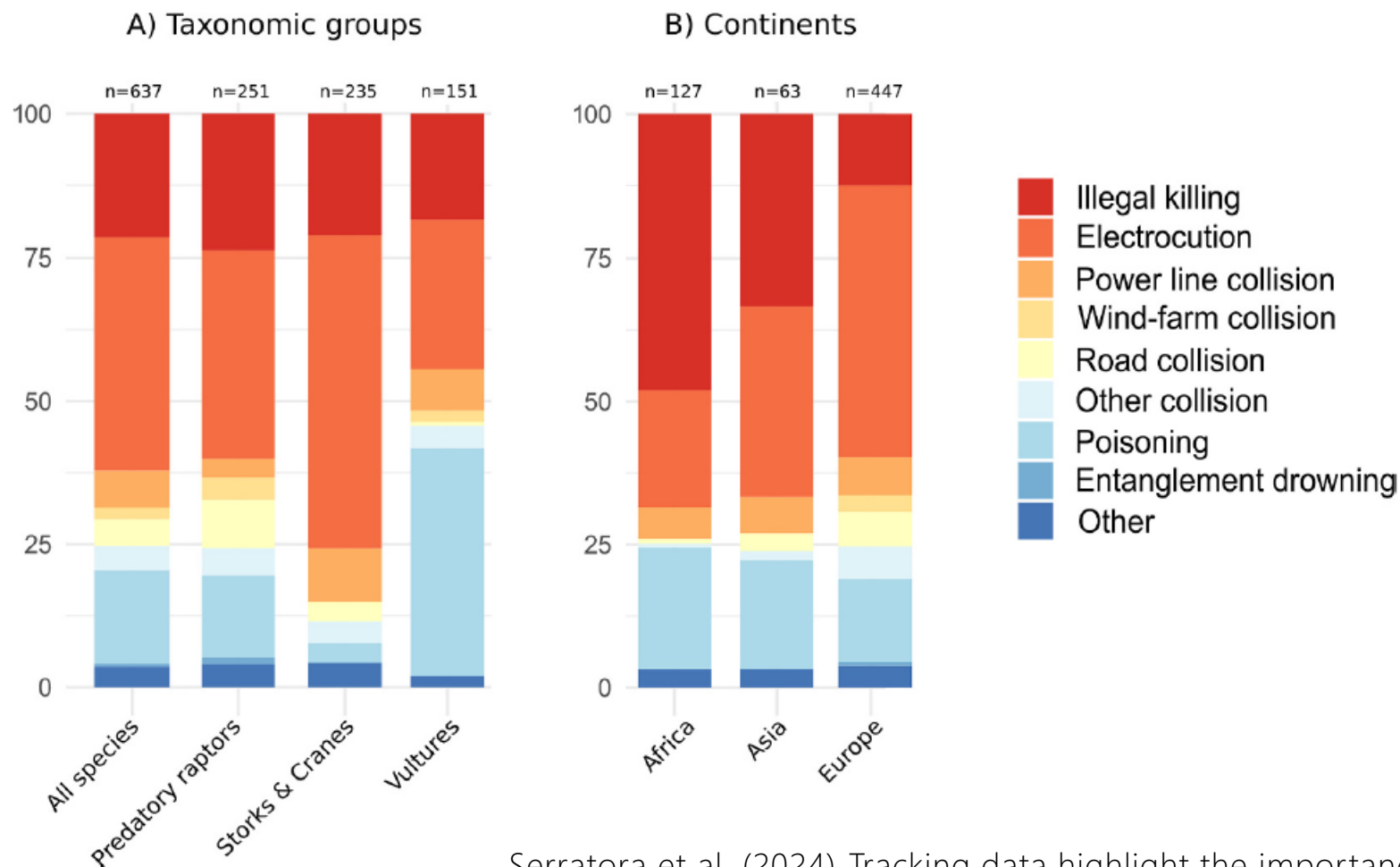
- A natural death usually leaves the tag transmitting from a **fixed location**, allowing the body and tag to be recovered and examined.
- An **abrupt, unexplained stop in transmission** — especially in areas with known trapping or persecution pressure — is treated as a strong indicator of illegal killing or capture.
- Often the tag **sudden moves along roads** and at **unrealistic speeds**
- Analysts compare the location, timing and clustering of “last fixes” against land use (e.g. trapping sites, shooting estates, protected areas) to identify hotspots.
- Recovered carcasses and tags support forensic investigation (toxicology, ballistics) and, in some cases, prosecution.



Flyway-Scale Evidence Across Africa and Eurasia

- Serratos et al. (2024, Biological Conservation) compiled 1,704 tracking-derived mortality records for 45 raptor, stork and crane species across the African-Eurasian flyway (2003–2021).
- Of human-induced deaths with a known cause: 40.5% electrocution, 21.7% illegal killing, 16.3% poisoning.
- Eagles and vultures showed the highest probability of human-induced mortality among the species examined.
- The study was presented to the CMS Intergovernmental Task Force on IKB in the Mediterranean (MIKT), directly informing the Task Force's priorities.

Flyway-Scale Evidence Across Africa and Eurasia



Serratora et al. (2024) Tracking data highlight the importance of human-induced mortality for large migratory birds at a flyway scale





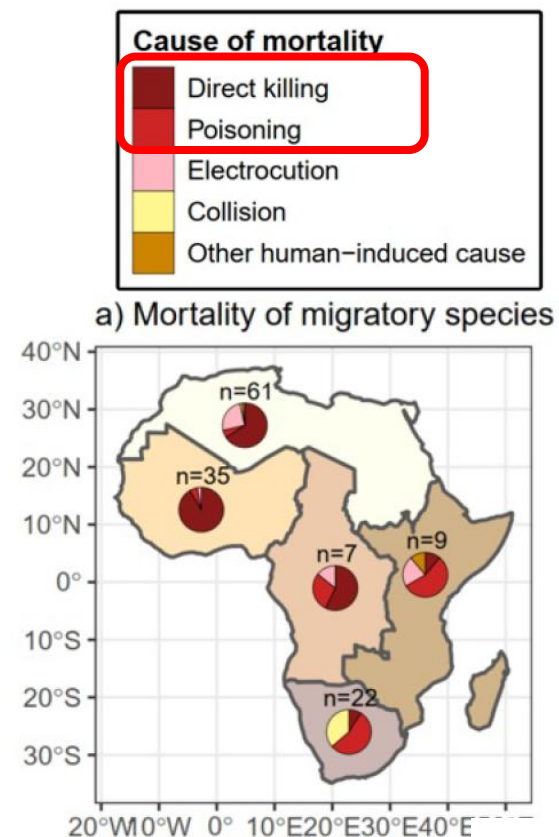
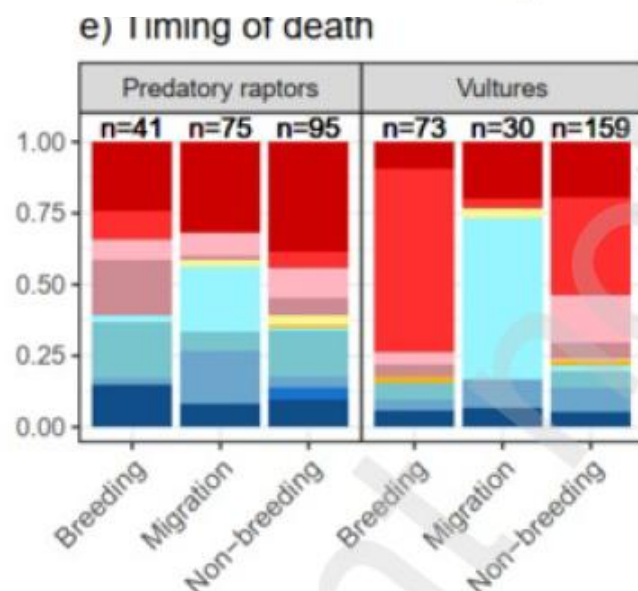
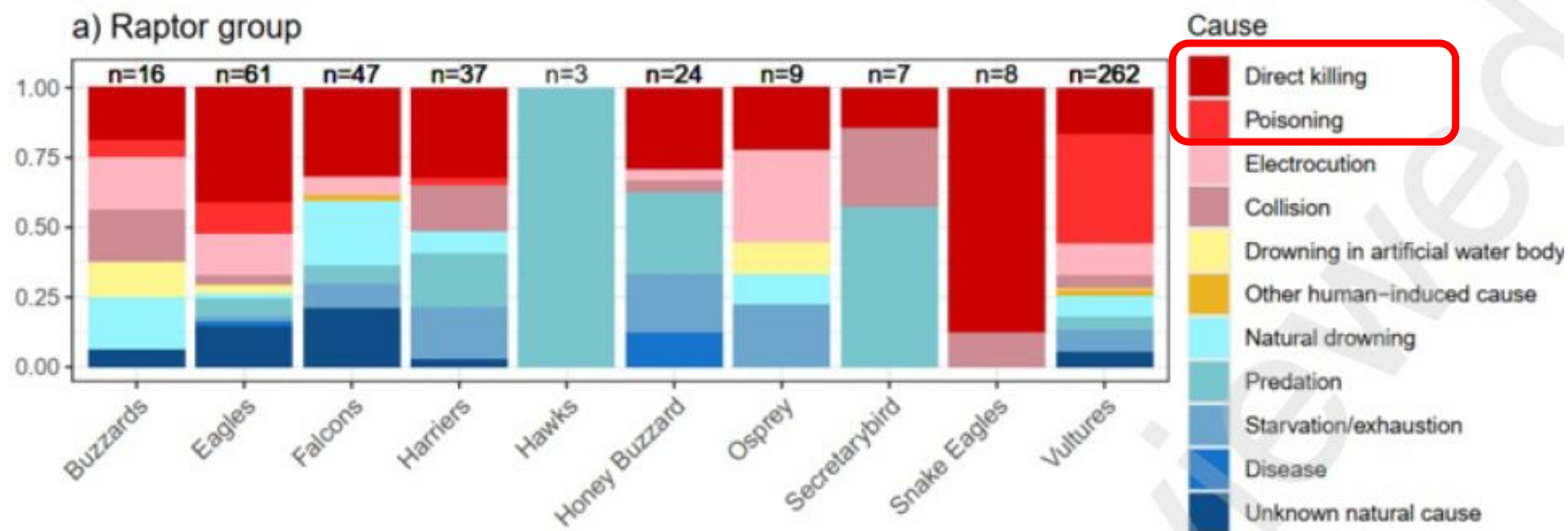
Case Studies: Tracking Data Exposing IKB

Strengths and Limitations of the Method

- Strength: reveals mortality that would otherwise go completely undetected, especially in remote areas with little monitoring.
- Strength: pinpoints hotspots and corridors, enabling targeted enforcement and outreach rather than blanket measures.
- Limitation: only tagged individuals are observed — sample sizes are small relative to total populations, and tagging is costly.
- Limitation: cause of death can rarely be confirmed without body/tag recovery; “suspicious disappearance” is inferred, not proven, in many cases.



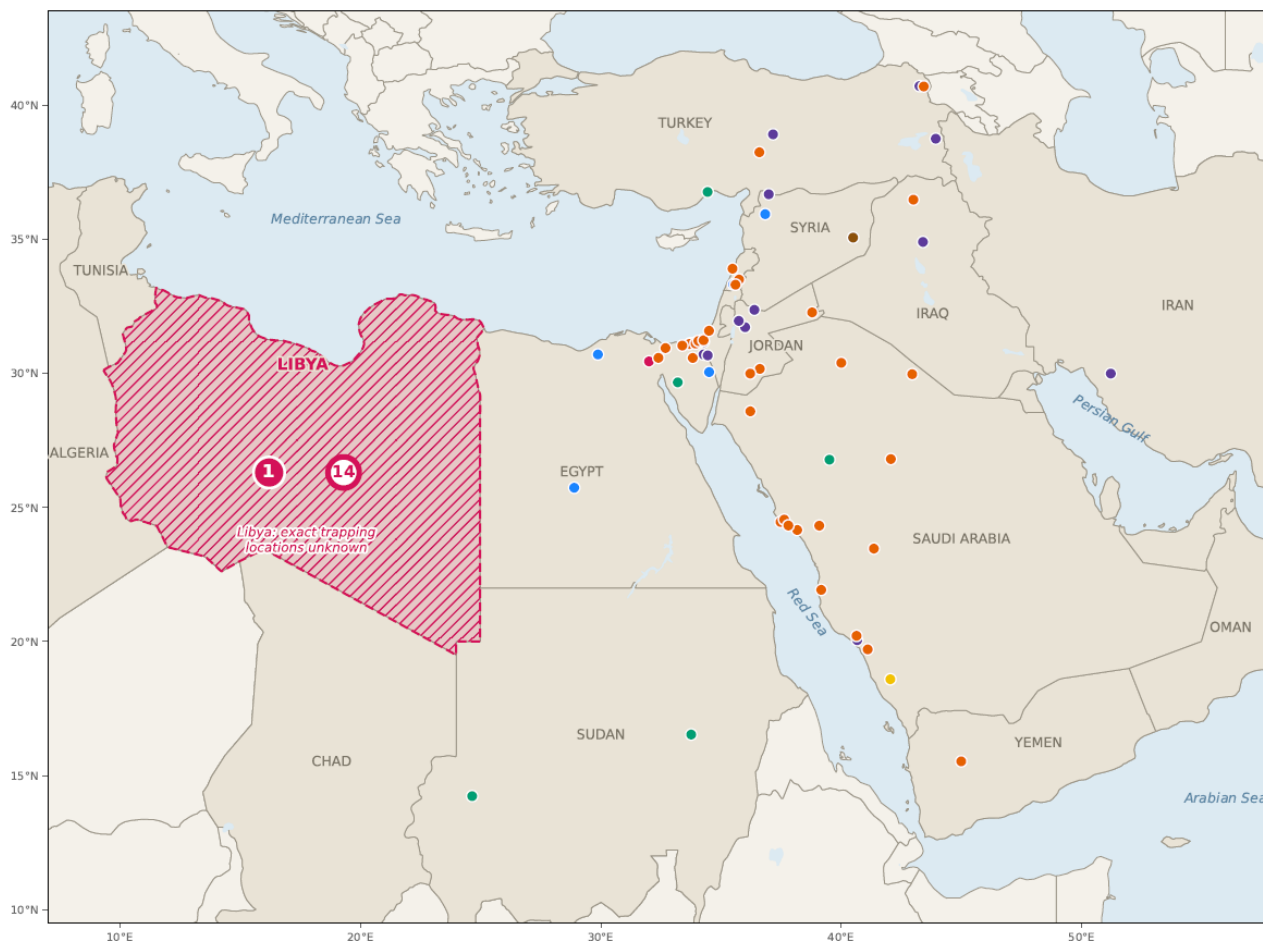
Trapping & Persecution: A Common Threat



Ginel, Saffiya D. et al Direct Killing, Poisoning, and Electrocutation Drive High Human-induced Mortality of Raptors in Africa.
Available at SSRN: <https://ssrn.com/abstract=6955305> or <http://dx.doi.org/10.2139/ssrn.6955305>



Migratory Falcon Trapping Events 2016-2026 in Africa and West Asia (Birds tagged within the region and in Hungary)



Each dot is one satellite-tagged bird (64 birds with coordinates; transmitter 210857 was entered twice and is plotted once). Includes birds recorded as trapped or shot.

Satellite-tagged birds: trapping locations

- Lanner Falcon (*Falco biarmicus*) n = 35
- Barbary Falcon (*Falco pelegrinoides*) n = 13
- Bonelli's Eagle (*Aquila fasciata*) n = 8
- Egyptian Vulture (*Neophron percnopterus*) n = 5
- Saker Falcon (*Falco cherrug*) n = 1 (Egypt)
- Honey Buzzard (*Pernis apivorus*) n = 1
- Golden Eagle (*Aquila chrysaetos*) n = 1
- Satellite-tagged Saker Falcon trapped in Libya (1)
- Ringed Saker Falcons recovered in Libya, most likely trapped (14)
- Libya: records without precise location (symbols placed at country centre)

Gulf Falcon Auction Records: Most Expensive Falcons Sold (2021–2026)

Year	Price	Falcon	Venue
2026	AED 2.1M (~\$572,000)	Purchased by Khalid Bin Saifan Al Muhairi	ADIHEX, Abu Dhabi
2021	SAR 1.75M (~\$466,700)	Gyr "Qarmousha" Ultra White chick — IFBA record	IFBA, Saudi Arabia
2026	AED 1.5M (~\$408,000)	"Qarmousha" Pure Ultra White Gyrfalcon	ADIHEX, Abu Dhabi
2026	SAR 1.3M (~\$346,000)	Pure "Mathlouth" Gyrfalcon	IFBA, Saudi Arabia
2025	SAR 1.2M (~\$320,000)	Top-priced falcon of the 2025 auction	IFBA, Saudi Arabia
2022	AED 1.01M (~\$275,000)	Pure Gyr American "Ultra White"	ADIHEX, Abu Dhabi
2023	AED 600,000 (~\$163,000)	Top-priced falcon of the 2023 auction	ADIHEX, Abu Dhabi
2024	SAR 400,000 (~\$106,700)	"Ultra White" chick	IFBA, Saudi Arabia

All confirmed sales above are captive-bred / farm-bred falcons sold through official auctions (legal international trade requires CITES captive breeding documentation). No comparable, verified sale-price data exists for wild-caught falcons in the Gulf.

'Exceptionally rare' falcon sells for record-setting Dh2.1 million at Abu Dhabi auction

Coveted bird of prey was final blockbuster sale of this year's Abu Dhabi International Hunting and Equestrian Exhibition

The National
7 September, 2026



An "exceptionally rare" falcon has soared into the history books after...

What This Means for North Africa

Tracking data point to three practical priorities for National IKB Action Plans in North Africa:

Target Hotspots

- Use tracking-identified trapping corridors (e.g. Libya, Egypt) to focus enforcement and patrols
- Prioritise known migration bottlenecks and stopover sites
- Share tracking data across borders through the Raptors MOU network

Strengthen Evidence

- Support satellite tagging programmes for priority species (Saker, Sooty Falcon, Steppe Eagle, vultures)
- Use tag-failure and recovery data to build wildlife-crime case files
- Contribute confirmed incidents to national and regional poisoning/IKB databases

Engage & Report

- Work with falconers, trappers and local communities identified through tracking
- Feed findings into MIKT and the Saker Falcon Task Force
- Align monitoring with SakerGAP, Vulture MsAP, the Sooty Falcon ISSAP and the Steppe Eagle GAP

Looking Ahead: Tracking in the Raptors MOU Process



- Continued expansion of tagging will sharpen the evidence base for IKB hotspots.
- Findings feed directly into CMS Task Forces (MIKT, SWA ITB TF) and the Saker Falcon Task Force's Adaptive Management Framework.
- MOS4 (30 November – 2 December 2026, Victoria Falls, Zimbabwe) will review progress across these Action Plans, including tracking-based evidence on IKB.
- National IKB Action Plans for are an opportunity to formally embed tracking data into enforcement and monitoring strategies.

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THANK YOU!

