

Raptors Reintroduction and Reinforcement Programmes:

Experiences from the Field

Panel Discussion Summary 11 June 2026 The Panel discussion took place during a webinar. Video recording of the webinar is available [here](#)

Participants

Moderator

Umberto Gallo-Orsi served as moderator for the panel. He is head of the Coordinating Unit of the CMS Raptors MOU Coordinating Unit.

Panelists

Des Thompson is a Leverhulme Emeritus Fellow at the Environmental Research Institute in the United Kingdom. He has had a long and distinguished career in raptor research and conservation policy, and was at the centre of the process that established the Raptors MOU between 2007 and 2009. He subsequently served on the Technical Advisory Group (TAG) of the Raptors MOU, which he chaired from 2009 to 2023.

Jovan Andevski is the Conservation Director of the Vulture Conservation Foundation (VCF), based in Spain. He has been instrumental in driving key vulture reintroduction projects across the Europe and is the founder and promoter of the Wildlife Crime Academy, which builds the capacity of police forces to address wildlife crime in Europe, the Mediterranean, and Africa.

Munir Virani is the Chief Operating Officer of the Mohamed Bin Zayed Raptor Conservation Fund (MBZRCF), based in Abu Dhabi, UAE. He has a long history of developing and implementing raptor conservation programmes, beginning in his native Africa before expanding his work to Asia - where he addressed the catastrophic vulture collapse of the early 2000s - and subsequently to the Americas, where he worked at The Peregrine Fund headquarters for several years.

Volen Arkumarev is a Project Manager at the Bulgarian Society for the Protection of Birds (BSPB) and the coordinator of the Egyptian Vulture Project in Bulgaria. He was awarded the European Early Career Conservation Award 2025 by the European section of the Society for Conservation Biology.

Munir Virani — Mohamed Bin Zayed Raptor Conservation Fund, UAE

Question from the moderator

When national economic development directly clashes with ongoing or planned reintroduction projects — for example, through the development of wind farms or electric grid infrastructure in areas targeted for reintroduction — what structural or institutional mechanisms can be introduced to ensure that cooperation between ministries prevents environmental goals from being overridden by so-called overriding public interest?

Response

The core problem: biodiversity arrives too late

Virani opened by reframing the question. The real challenge, he argued, is not how to win the argument once it has started, but how to ensure the argument happens at a stage when the outcome can still change. In most countries he has worked in, environmental goals are not overridden in a single dramatic moment - they are overridden quietly, at the planning table, long after routes, permits, and budgets have been decided, and long before conservation has any formal seat at the process.

Mechanism 1: Embedding biodiversity upstream in spatial planning law

The first and most structural mechanism Virani identified is moving biodiversity requirements into the spatial planning law itself, rather than leaving them as advisory considerations. He cited Bulgaria as a concrete example: sensitivity mapping work carried out around Egyptian Vulture and Griffon Vulture corridors was embedded directly in the wind energy permitting process. Under this arrangement, a developer cannot apply for a permit in a designated raptor sensitivity zone without triggering a fundamentally different track of assessment. Crucially, this is not advisory guidance - it is a legal requirement. That single shift, he argued, transforms conservation from a confrontational afterthought into a design constraint.

A parallel lesson emerged from Mongolia, where the MBZRCF worked on electrocution risk to Saker Falcons. Rather than relying on voluntary agreements with energy companies, the Mongolian government

amended its national standard for power distribution lines in September 2021 to explicitly require bird-safety measures. This created a legal floor, and the partnership then delivered the work: as of the time of the panel, 28,016 poles had been insulated under the programme. An important secondary benefit, Virani noted, was that power outages had virtually disappeared, and energy companies had themselves expressed gratitude - because insulating poles reduces fault-response costs and revenue loss. When the business case and the biodiversity case point in the same direction, he said, conservation stops being about trade-offs and starts being about shared wins.

He also flagged a practical warning on the economics of retrofitting. Equipment manufactured in China, including transport, can be procured at around \$50 per pole, compared with \$300–500 for US or European suppliers. For a country retrofitting thousands of power lines, this is the difference between a programme that scales and one that stalls after the first hundred poles. Governments therefore need procurement frameworks with verified quality standards to ensure they are not simply funding a recurring conservation problem that benefits a small number of suppliers.

Mechanism 2: Statutory cross-ministerial bodies with real authority

Virani's second mechanism was the creation of statutory cross-ministerial bodies with genuine, binding decision-making authority - not coordination committees that meet once or twice a year and produce a communiqué. He illustrated the stakes with two contrasting wind energy cases in Kenya. The Kipeto Wind Energy Farm had already been allocated for 65 turbines in a site situated just 15 kilometres from the largest and most important breeding colony of the Critically Endangered Rüppell's Vulture in Kenya - a colony of around 250 individuals at any one time. Birds would inevitably have been killed. The conservation outcome in that case depended entirely on a chance encounter on a golf course with the CEO who happened to be conservation-minded. That, Virani said bluntly, cannot be how a country protects its critically endangered species. Contrast this with Lake Turkana Wind Energy in northern Kenya, which operates in complete isolation from the conservation community, in the middle of a major migratory pathway. Nobody knows how many birds die there. The difference between these 2 different models of 2 wind farms came down to the personal behaviour of one executive.

He was careful to be clear about what a cross-ministerial body should do: its first responsibility, where a site threatens a critically endangered species, is to challenge the development through every legal and procedural channel available and to argue for it to be sited elsewhere. He pointed to the Mannar Strait in Sri Lanka - the southernmost point of the Central Asian Flyway and a critical site for migratory raptors - where a proposed 52-turbine project by the Adani Group was withdrawn after the Wildlife and Nature Protection Society challenged it and took it to the Supreme Court. A separate fundamental rights petition challenged the environmental impact assessment, along with public scientific opposition. When the government then pursued a smaller state-run alternative, the EIA process rejected 12 of the 21 proposed turbines on ecological grounds. That, Virani said, is sensitivity mapping doing exactly what it should: scaling a project down rather than destroying a flyway.

Mechanism 3: Regulatory assurance for the private sector

The third mechanism addressed the role of private landowners and developers. Virani cited the Texas Aplomado Falcon Programme as one of the clearest examples. That programme would not have worked without safe harbour agreements, which gave Texan ranchers legal certainty that hosting an endangered species on their land would not constrain their future land use. That single legal instrument unlocked private land at a scale that government land alone could never have provided. A similar dynamic was at work in the Dominican Republic, where a tourism developer was brought in as a formal partner in the Ridgway's Hawk dispersal project in Punta Cana, rather than simply as a goodwill sponsor. When private actors carry development risk, he argued, conservation must offer them a predictable regulatory framework - not just an appeal to do the right thing.

Mechanism 4: Conditionality in infrastructure finance

Virani's fourth mechanism was the use of financing conditionality. Multilateral development banks, sovereign green bonds, and increasingly commercial lenders are attaching biodiversity safeguards to infrastructure financing. When a wind farm's access to capital depends on demonstrating compliance with a national raptor sensitivity protocol, the Ministry of Energy begins to care about raptors very quickly. Virani described this as probably the most underused lever in the conservation toolkit.

Mechanism 5: A stronger CMS Raptors MOU

The fifth and overarching mechanism Virani proposed was institutional: a fundamentally more architectural role for the CMS Raptors MOU. The CMS framework already brings range states to the same table. What it should be doing more forcefully, he argued, is requiring signatories to develop, maintain, and regularly update national raptor sensitivity maps, and to embed those maps in their energy and infrastructure planning processes as a standing obligation of membership - not optional good practice. The migratory nature of

raptors makes flyway-scale governance indispensable: a Saker Falcon bred in Bulgaria might die on a Sudanese power line; an Egyptian Vulture released in Spain might be poisoned in Niger. The MOU has the convening authority to act on this. What is needed now is the political will to use it.

Virani's closing message was that the answer to the question posed is not better conversation between ministries. What is needed is a legal architecture in which biodiversity is a procedural requirement of development, not a competing interest to it, increased focus on Sensitivity Mapping, statutory bodies with binding authority, regulatory assurance for private sectors, conditionality in finance and a stronger CMS Raptors MOU. And crucially, none of this requires a country to choose between economic growth and raptors - it only requires that the choice be made before the concrete is poured and not after the first bird is killed..

Jovan Andevski — Vulture Conservation Foundation, North Macedonia / Spain

Question from the moderator

Reintroduction and reinforcement projects are expensive and complex, and financial liquidity can be a significant constraint. Hiring social scientists or funding targeted capacity training can easily fall between the cracks when resources are limited. When a project is trapped in resource limitation, what funding mechanisms can be used to build these capacities without draining the core budget needed for the survival of the raptors themselves?

Response

Setting the scale: reintroduction as a generational commitment

Andevski began by insisting that the framing of the question - treating reintroduction as a project that could in any serious sense be low-budget - was itself a misconception that the conservation community needed to address directly. To illustrate the scale involved, he cited two of Europe's earliest and most significant vulture reintroduction programmes. France lost all its vulture species by the 1960s. A reintroduction programme began in the 1980s, and a further reintroduction of the Cinereous Vulture followed in the 1990s. France now has all four vulture species, all with positive population trends. In the Alps, the Bearded Vulture reintroduction programme - a four-country joint effort - has been running continuously since the 1980s, involving intensive captive breeding and releases for approximately 50 years. There are now over 55 breeding pairs established in the Alps. These programmes, he said, should be understood not as conservation projects but as generational commitments, requiring serious financial investment and genuine institutional resolve.

Government must be the guarantor

Andevski's central argument was that raptors are the natural heritage of the countries where they live, and in a democratic society, governments are ultimately responsible for that heritage. His clear advice was that no reintroduction project should be initiated without formal government backing - and that backing must constitute a guarantee that the project will be supported through to completion, not simply endorsed at the start and abandoned when funding becomes difficult. This is not merely a political desideratum. The IUCN Guidelines for Reintroductions and Other Conservation Translocations explicitly list government commitment and long-term budget security as criteria for proceeding, and Andevski argued that these criteria should be treated as non-negotiable prerequisites, embedded in national regulatory frameworks.

The funding asymmetry problem

One of the most important structural observations Andevski offered was what might be called the funding asymmetry problem. The release of birds is attractive: it generates media coverage, it appeals to politicians, and it tends to produce the kind of visible, photogenic outcomes that donors want to fund. As a result, it is relatively easier to secure budgets for the act of release itself. Threat mitigation, however - without which no release will succeed in the long term - is far harder to fund. Fighting poisoning, resolving conflicts with livestock breeders and hunters, building community acceptance: none of this is attractive to most funders, and none of it produces a photograph of a bird flying free. Yet without it, the programme cannot succeed. Andevski pointed to electricity companies in Spain as a partial exception - they have become generous contributors to electrocution and collision mitigation, in part because there are quantifiable business benefits. But for something like poisoning mitigation, that kind of business case is much harder to construct, and the funding consequently much harder to find.

Animal welfare as a legal risk

Andevski raised an issue that is rarely discussed openly in conservation circles: the animal welfare implications of funding gaps. He had personally witnessed situations where birds were kept in poor conditions for extended periods simply because funding had run out and there was no capacity to care for

them or release them. This creates not just an ethical problem but a legal one, since animal welfare legislation in many jurisdictions applies regardless of conservation intent. This is a concrete liability, not a moral abstraction, and he urged the community to treat it as such.

International coordination of priorities

On the broader question of how to ensure that reintroduction efforts go where they are most needed, Andevski acknowledged that there is currently no international mechanism for controlling where projects are initiated. He was careful to say that he was not advocating for restriction - rather, for collective alignment. The Vulture Multi-Species Action Plan provides an excellent coordinating document: from it, one can clearly identify the priorities for each vulture species and where the focus should be directed. He also highlighted that the guidelines set by the IUCN should not only be used by the project teams but also be implemented by the governmental authorities as well. The most effective approach is to work through networks and build a common understanding of species priorities, so that the availability of birds, funding, and institutional capacity can be guided toward the places where intervention is genuinely necessary. Coordination, in short, should emerge from shared conviction, not from imposed control.

Des Thompson — Environmental Research Institute, UK

Question from the moderator

Relying on ecotourism revenues to fund long-term monitoring is an attractive model, but it exposes projects to the vulnerabilities of the global economy - shocks like the COVID-19 pandemic, or shifting travel trends - in ways that can be difficult to anticipate. How can projects diversify their funding to ensure that baseline activities such as veterinary care and satellite tracking do not collapse when tourism revenues fall?

Response

The three-legged stool

Thompson began with a framing metaphor that he said he found useful for thinking about financial sustainability in reintroduction programmes: the three-legged stool. Success rests on three legs - ecotourism, diversification, and resilience - and a stool with only two legs cannot stand. The third leg, resilience, is the most critical of the three and the most consistently neglected in programme design. The COVID-19 pandemic, he said, demonstrated the utter importance of resilience with brutal clarity: programmes that had built resilience into their structures survived the shock. He highlighted that we need to anticipate what lies ahead and develop a risk register in order to properly deal with these shocks.

What resilience actually requires

Thompson was direct about what resilience means in practice. It is not simply having a contingency fund, though that matters. Real resilience requires strong institutional governance; structures that hold even when individual champions leave or revenues fall. It requires robust and independently funded monitoring, because baseline data cannot be treated as a luxury to be cut in lean times: it is the foundation on which all future management decisions rest. It requires clear communications strategies, because stakeholder and public engagement must be maintained continuously to preserve the political will and broad-based support that underpins multi-source funding. And it requires an explicit commitment to the health of the animal populations, which cannot be allowed to deteriorate as a consequence of financial pressure.

Community engagement as a structural funding mechanism

Perhaps the most important practical point Thompson made was that deep community engagement is not simply a communications activity - it is a structural funding mechanism. He drew directly on his experience with the reinforcement of the Golden Eagle population in southern Scotland. Sustained, genuine investment in community engagement - working with farmers, foresters, gamekeepers, and local schools - generated local, regional, and national support for the project that translated directly into diverse funding streams. It was this community foundation that enabled the project to secure backing from both the Scottish Government and the UK Government, creating the kind of stable, multi-source funding base that ecotourism revenues alone could never guarantee. The lesson he drew from this was straightforward: community engagement should not be treated as an optional add-on or a risk management measure. It is one of the primary mechanisms through which long-term financial security is built.

Thompson noted that there is strong academic evidence for this approach, pointing participants to a paper by Natanya Meyer and colleagues published in 2026 in the journal *Tourism Planning and Development*, which addresses precisely this intersection of resilience and community engagement in wildlife tourism contexts.

Volen Arkumarev — Bulgarian Society for the Protection of Birds, Bulgaria

Question from the moderator

The Netherlands case study in the report illustrates how a careful analysis of the situation led to a decision not to pursue formal reintroduction, since natural recolonisation from neighbouring populations was anticipated and has since occurred. What elements informed the decision to proceed with reinforcement for the Egyptian Vulture in Bulgaria, and what were the key differences from the Dutch context?

Response

The fundamental prerequisite: understanding why the population declined

Arkumarev opened by making a point he described as the most important decision criterion in the whole reintroduction process: before any release programme is initiated, it is absolutely essential to understand in depth why the population reached the state it did - why it went extinct from an area, or why it is in such a poor condition that supplementation is being considered. This matters not just for scientific completeness but for practical success: if the causes of decline have not been identified and addressed, released birds will face exactly the same mortality drivers that depleted the original population. This connects directly to what Andevski had said earlier - reintroduction is an expensive and long-term commitment, and the only way to be confident it will succeed is to understand and mitigate the root causes first.

The Bulgarian case: thirty years of decline and two pillars of strategy

The Egyptian Vulture population in Bulgaria had been declining for over 30 years at the time the reinforcement programme was designed. The BSPB and its partners had accumulated substantial long-term monitoring data and understood the population dynamics well. Despite conservation efforts being implemented to address threats at the local level - insulating power lines, working against poaching and poison use — the population continued to decline. This demonstrated that local action, however well-executed, was insufficient on its own.

When the broader Flyway Project for the Egyptian Vulture was initiated, one of its central objectives was to address survival at a larger scale: not just at the breeding sites in Bulgaria, but along the entire migratory route. To determine whether and how supplementation with released birds was appropriate, the project commissioned a formal Scientific Analysis and Population Viability Analysis. The results were unambiguous: without a release programme, the Bulgarian Egyptian Vulture population would be lost within the next 20 years. This provided the objective, science-based justification for active intervention.

The resulting conservation strategy rested on two pillars operating in parallel. The first was continued and expanded threat mitigation - not only at the local level but along the full flyway, addressing electrocution, poisoning, and persecution at each point along the migratory route. The second was captive-bred supplementation: releasing birds to provide a demographic buffer that would sustain the population long enough for the threat mitigation measures to take effect and for the population to begin recovering under its own momentum.

Why the Netherlands reached a different conclusion

The contrast with the Netherlands is instructive precisely because the biological species involved - the White-tailed Sea Eagle - is not in a fundamentally different ecological situation globally. What differed entirely was the population context. In the Netherlands, the species was not in long-term decline; it was growing in neighbouring countries. Conservationists correctly anticipated that natural dispersal from expanding German and Polish populations would lead to recolonisation without active intervention, and this prediction proved accurate. The first breeding pair was recorded in the Netherlands in 2006, and the population has since grown to over 45 pairs. There was no long-term population collapse, no evidence of inadequate habitat, and no case for the kind of urgent supplementation that the Bulgarian Egyptian Vulture situation required.

Arkumarev's conclusion was clear: the decision to reintroduce or reinforce must always rest on solid, long-term data and on formal modelling of population viability. It is not a decision that can be made on precautionary grounds or because a species is generally considered to be in trouble. It requires specific evidence about the trajectory of the specific population in question, a clear understanding of the threats driving that trajectory, and crucially a realistic plan for mitigating those threats before and alongside any release. Long-term monitoring programmes, some of which in the case of Bulgarian vultures extend back over 40 years, are what make that kind of evidence-based decision-making possible.

Closing Observations — Umberto Gallo-Orsi

Closing the panel, Umberto Gallo-Orsi drew out several threads that connected the four contributions. He noted that the CMS Raptors MOU is already working in the direction Virani outlined, through the Energy Task Force and its work on AviStep sensitivity mapping, and that the 7,000 Internationally Important Raptor Areas identified under the MOU have been formally recognised by CMS Parties at COP15 as areas requiring protection across Africa and Eurasia. However, he acknowledged that much work remains and that the direction set by the panel's analysis was clear.

He also highlighted the value of the Bulgaria - Netherlands contrast as a teaching tool for the wider raptor conservation community: the Bulgarian situation involved a species in long-term, documented decline despite local conservation effort - a completely different starting condition from the NL and the relevant species that were abundant and growing in the surrounding region. These are not comparable situations, and they call for fundamentally different responses. The discipline to make that distinction, grounded in long-term data and formal population modelling, is one of the most important capacities the conservation community needs to build and maintain.

*This document summarises the panel discussion held on 11 June 2026 as part of the webinar **Raptors Reintroduction and Reinforcement Programmes: Experiences from the Field**, convened by the CMS Raptors MOU Coordinating Unit, Abu Dhabi, UAE.*