

**Fifth Meeting of the Signatories
of the Memorandum of Understanding on the Conservation and
Management of the Middle-European Population of the Great Bustard
(*Otis tarda*)**

Bratislava, Slovakia, 18 – 21 September 2023

UNEP/CMS/GB/MOS5/MTIWP 2018-2023 Status Review/Post-session

**STATUS REVIEW OF THE
MEDIUM-TERM INTERNATIONAL WORK PROGRAMME ON THE CONSERVATION AND
MANAGEMENT OF THE MIDDLE-EUROPEAN POPULATION OF THE
GREAT BUSTARD
(2018-2023)**

Status review of the Medium-Term International Work Programme 2018-2023

Expected Result	Action	Measures to be taken	Priority	Time table	Lead Country and collaborators	Status as per 2023
<p>1.1 Average annual adult survival rate is above 90% in each population</p>	<p>1.1.1 Reduce collision with powerlines through avoiding key areas for Great Bustard, through marking and, if necessary, even through removal of existing dangerous sections of powerlines</p>	<p>Systematic data collection on collisions;</p> <p>Approaching energy suppliers;</p> <p>Organizing joint projects with energy suppliers;</p> <p>Planning process to Great Bustard conservation needs when necessary</p> <p>Providing information on effectiveness of particular bird flight diverters</p>	<p>High</p>	<p>Ongoing</p>	<p>National Authorities in collaboration with electric companies</p>	<p>Still high priority. Ongoing activity that needs to be continued. Burial of powerlines is of absolute priority. Other alternatives such as converters to be considered due to costs. Retrofitting guidelines probably not helpful as techniques develop rapidly.</p> <p>Joint project on mitigation activities, planning of new powerlines should be taken into account.</p> <p>Some progress in relevant states mainly in core areas, but margin areas need more work.</p> <p>Need to increase efforts on overhead railway lines</p>

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	1.1.2 Prevent the occurrence of catastrophic winter mortality events through supporting the production of oil-seed rape and alfalfa at suitable undisturbed locations far from existing powerlines within the traditional wintering areas and establish capacity to clear snow from fields in emergency situations	Prepare an information network for circumstances when the breeding populations in Central Europe migrate included in the Guidelines on Successful Wintering.	High	Ongoing	Applicable to: all Range States	The risk of harsh winters has markedly declined in several countries, priority downgrade to medium. Not necessary to plant oil seeds especially for Great Bustard in Hungary, but needed in others e.g. Austria.
	1.1.3 Maintain hunting ban in all Range States and maintain efforts to stop poaching where it still occurs	Update legislation accordingly where necessary Enforcement of existing legislation by anti-poaching measures Promote collaboration with hunting associations	High	Ongoing	National authorities	Legislation is appropriate in all Range States. Enforcement is ongoing. Poisoning is still happening unintentionally (e.g. illegal and inappropriate use of brodifacoum). Situation in Ukraine is unknown. The focus of this item is recommended to be on addressing poaching.
	1.1.4 Prevent collision with wind turbines in key sites and flyways for Great Bustard	Data collection on collision through intensive monitoring	Low	Ongoing	Applicable to: all Range States	Still more data is needed; ongoing process. Tagged birds are needed

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		Adequate planning of wind farms in Great Bustard habitats and flyways				to inform precise reliable data. Habitat loss is to be considered in this context as a major aspect.
1.2 Average productivity exceeds 0.25 chicks per female in each population	1.2.1 Identify and apply adequate compulsory restrictions at breeding sites on agricultural practices that significantly reduce the breeding success of the species, such as mowing of alfalfa or grass according to the local breeding phenology of the species, and provide compensation to farmers	Prepare habitat management plans and/or detailed restrictions on farming and hunting for the breeding habitats of the species where agri-environmental provisions have not been applied yet.	High	Ongoing	Applicable to: all breeding Range States	Management plans exist in many countries, but implementation is lacking due to insufficient resources. Capacity building and training for enforcement authorities is needed.
	1.2.2 Apply nest-safeguarding and egg-rescue measures where necessary and appropriate	Liaise with farmers associations in order to prevent disturbance and damage to breeding birds Organize study visits to Range States where nest-safeguarding and other conservation measures related to the breeding success of the birds (including the methods of	Low	Ongoing	Applicable to: all breeding Range States	Study visits are relevant for some Range States for example Serbia, and probably Romania. Drones are used and recommended to be used. Liaison with farmers directly is important, not only with associations.

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		detecting breeding females, timing and location of monitoring, methods of in situ protection, etc.) are in practice in order to share experiences.				
		Organize international action to rescue eggs and chicks from emergencies, where necessary and feasible and transport them to the Rescue Centre in Dévaványa, Hungary	Medium	Ongoing	Applicable to Austria, Hungary, Romania, Serbia	The center is prepared, if necessary.
	1.2.3 Restrict/Control grazing on key breeding areas where trampling significantly reduces the breeding success	Finalize and implement the Guidelines on agri-environmental schemes	High	2018 (Guideline’s finalizations); otherwise Ongoing	Applicable to: all breeding Range States	To be maintained. A section is contained in the guidelines.
	1.2.4 Support extensification of agricultural practices in areas inhabited by Great Bustards, including the promotion of set-aside schemes and organic farming	Lobbying of policy makers Focusing also on small populations or satellite populations	High	Ongoing	Applicable to: all breeding Range States	Successful implementation, but needs continuation.

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	1.2.5 Monitor impact of predators on breeding success and apply predator control measures if necessary	Finalize and implement the Guidelines on Predator Control Strategies on Great Bustard habitat, including the methodology on monitoring the potential impacts of the predators (trap cameras etc.).	High	2018 (Guideline's finalizations); otherwise: Ongoing	Applicable to: all breeding Range States	Action needs to be urgently improved and extended. Evidence of increasing impact of White-tailed Eagle on breeding success.
	1.2.6 Create enclosures in the breeding areas of populations if the main reason of breeding failure is predation	Predation monitoring Finalize and implement the Guidelines on Predator Control Strategies on Great Bustard habitat	Locally high	Ongoing	Applicable to: all breeding Range States	New enclosure established in Serbia, and increase from 6 to 7 enclosures in Germany, and quality improved.
	1.2.7 Reduce human disturbance by restricting movements at display and breeding grounds as necessary	Evaluate the impact of disturbance Implementation of regulations in conservation areas Guiding systems for the public, including observation towers	Medium	2022	Applicable to: all breeding Range States	LIFE projects produced progress in guiding visitors. Visitor guidance has been prepared as part of management plan (Austria, in German language; planned to be made available in other languages in the frame of

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		Implementation of CMS Resolution 12.23 on Sustainable Tourism and Migratory Species				a new LIFE project). Data support the success of the measures taken.
1.3 Extent of suitable habitat maintained across the range of the species	1.3.1 Designate all sites holding populations of Great Bustards as Special Protection Areas in the EU Member States or under national legislation in other countries	Expert's visits to small populations to evaluate the situation and to propose actions locally implemented	High	Ongoing	Applicable to: Czech Republic, Romania, Russian Federation, Serbia, Ukraine	In the Czech Republic, there is currently no population present, and therefore sites cannot be designated; but there are single observations of birds, and it can be considered realistic that birds from Austria move there regularly. It cannot be excluded that breeding takes place in the Czech Republic. The site where it would occur is currently not protected.
	1.3.2 Introduce, or continue where they already exist, agri-environmental schemes or similar incentive measures to promote farming techniques compatible with the species' requirements and monitor the effectiveness of such measures	Liaise with farmers associations and with authorities responsible for agriculture to promote such schemes CMS Secretariat to liaise with European	High	Ongoing	Applicable to: all Range States	Schemes under the CAP in the EU Member States need to be extended.

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		<p>Commission regarding the negotiations on Common Agricultural Policy (via CMS Focal Point of EU)</p> <p>Utilizing the Great Bustard as an umbrella species for biodiversity in farmlands and as an indicator species</p>				
	1.3.3 Ensure that power lines, afforestation, irrigation, wind energy, transport and other projects which can negatively affect the Great Bustard's habitat do not take place.	<p>Include Great Bustards and their habitats, including flyways, into planning processes and environmental impact assessments</p>	High	Ongoing	Applicable to: all Range States	Implemented in the regulations of environmental impact assessments in the core areas, but not in all areas where Great Bustards occur such as flyways.
1.4 Knowledge gaps filled	1.4.1 Identify all areas for Great Bustard across its European range	<p>Systematic monitoring and elaboration of a detailed distribution map showing all areas regularly used</p>	High	2021	Applicable to: Russian Federation, Ukraine	Significant progress in GPS tracking data collection and analysis, with several satellite tagging actions taking place in several countries.

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	1.4.2 Monitor the size, sex and age composition and productivity of each population, based on standardized counts in winter, spring and autumn	<p>Approaching all available stakeholder groups and capacities that are able to monitor</p> <p>Organize coordinated counts nationally and between neighboring countries where common populations exist: Austria-Hungary-Slovakia; Hungary-Serbia-Romania -Ukraine-Russian Federation</p>	High	Ongoing	Applicable to: all Range States and transboundary populations	Monitoring has been overall successful except for Ukraine-Russian Federation overlapping population.
		Investigate the limiting parameters for population stability and/or growth to better understand key factors making conservation projects successful	High	Ongoing	Applicable to: all Range States	Importance of predation by mammals has been investigated, and determined in Hungary, and Slovakia, and similarly predation by White-tailed Eagle in Germany and Austria.

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	1.4.3 Monitor and improve the effectiveness of captive breeding, rearing and release programmes	<p>Implement the Guidelines for Monitoring of Population Parameters of Great Bustard and Effects of Management Measures on the monitoring the survival rate and breeding success of released birds.</p>	Low	2021	Applicable to: Hungary, Germany	Monitoring data in Germany and Hungary successfully collected; monitoring activities, colour ringing and satellite tracking have been undertaken.
	1.4.4 Carry out comparative ecological studies on the population dynamics and the genetic structure of populations, on habitat requirements and on the effects of habitat changes and infrastructure on the populations	<p>Conduct ecological studies regarding the movement of individuals between leks or breeding centres, respectively (telemetry, re-sightings etc.)</p> <p>Extend the genetic studies to museum specimens or extinct populations to identify suitable populations for re-introduction</p>	Medium	Ongoing	Applicable to: all Range States	<p>Level of GPS tracking has significantly been improved and needs to be continued.</p> <p>Germany is planning to conduct genetic studies in the next term.</p> <p>Some genetic studies on museum specimens have been carried out.</p>

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		<p>Study the impact of new developments (energy crops, wind farms, irrigation) on populations</p>	High	2021	Applicable to: all Range States	<p>A study on irrigation at the Austrian-Hungarian border was published (Spakovszky and Raab 2020).</p> <p>Increasing relevance of infrastructure impacts in the future is presumed.</p> <p>Ecological studies are conducted in Slovakia on invertebrates and vertebrates in Great Bustard habitats, with preliminary results produced.</p>
		<p>Identify space use of non-migrating populations during the year to further understand habitat requirements and promote Great Bustard-friendly management.</p>	Medium	2022	Applicable to: all Range States	<p>Publication from Soňa Nuhlíčková is planned for 2024.</p>

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		Identify the most effective high and medium voltage power line markings	High	2022	Lead: Austria; Applicable to: all Range States	See publication from Spakovszky et al. 2019 (conference paper).
	1.4.5 Expand studies to improve the understanding of survival and mortality factors, and promote telemetry studies thereof	Further investigate mortality factors including power line collision, agricultural practices, wind turbine collision etc.	High	Ongoing	Applicable to: all Range States	Activities are ongoing in Austria, Germany, Hungary and Slovakia.
	1.4.6 Investigate the factors influencing breeding success, including predation, and study key parameters, such as habitat availability and choice, home range and dispersal patterns to explain the difference in breeding success between the different populations Dedicate attention to the insect biomass as necessary food supply in the breeding area	Investigate the causes of increases in predator populations and means to prevent it Dedicate attention to the insect biomass availability for breeding Include long-term monitoring in existing or forthcoming key parameter programs and improve the food situation by appropriate measures if needed	High	2021	Applicable to: all breeding Range States	Overlap with measures described above; studies on invertebrates including insects.

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	1.4.7 Analyze regular and irregular migratory movements, and seasonal movements of birds, promote telemetry and other marking methods thereof to better understand the meta-population structure	Improve marking systems techniques to and application of these techniques	Medium	2022	Applicable to: all Range States	Significant progress made under existing LIFE projects. A publication (Eisenberg et al.) has been published in 2019. Action needs to be continued; item to be maintained
	1.4.8 Study the impact of climatic change on the productivity and survival of the Great Bustard and on its habitat. If necessary, develop habitat management techniques for mitigating the impacts of climate change	Improve monitoring by additional indicators for the impacts of climate change	Medium	Ongoing	Applicable to: all Range States	Item to be maintained; it has increasing relevance.
	1.4.9 Investigate diseases as a risk factor for the Great Bustard. Consider infectious, metabolic and other diseases and the possibility of a spill-over from other species.	Systematic collection of dead individuals and post-mortem findings by veterinarians following a systematic protocol Liase with competent persons to investigate the detrimental diseases relevant to Great Bustards and identify potential pathways and precautionary	Medium	Ongoing	Applicable to: all Range States	Item to be maintained, in the connection to new poultry farms which are planned or under construction; it is an important aspect because of the increasing number of bird species globally affected by Avian Influenza in the years 2021-2023. See also statement from 2023 of the FAO-CMS convened Scientific Task Force on Avian Influenza ; overlap

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		measures to be applied				of Great Bustard habitat with those of species proven to be affected. Several Great Bustards were tested on avian influenza in Hungary and Germany, without positive results so far.
2.1 Effective habitat management and repatriation methods available to assist restoration of Great Bustard populations	2.1.1 Improve habitat for Great Bustard in formerly occupied sites, where feasible	Review historical record and elaborate a detailed distribution map on the most suitable areas and potential sites of Great Bustard habitats within its range, considering the reasons of extinctions	Medium	2020	Applicable to: all Range States	It has been done in the UK, Poland and Germany (regarding year of abandonment, number of individuals, habitat characteristics, willingness of farmers).
		Use monitor and telemetry data to better understand the Central-European metapopulation. Identify possible source/sink dynamics to improve future decision making for conservation measures	Medium	2022	Applicable to: all Range States	-

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	2.1.2 Develop feasibility studies and management plans to restore transboundary populations and expanding the habitats in these regions	Prepare transboundary projects for the restoration of the previously occupied and potential habitats for the shared Great Bustard populations. Promote the implementation of the CMS Guidelines on Re-introduction and Reinforcement of Great Bustards	Medium	2023	Applicable to: Bulgaria, Romania, Hungary, Serbia, Slovakia, Austria, Poland	Poland, Romania, Slovakia and Hungary have conducted it; Czech Republic will undertake this in the next intersessional period.
	2.1.3 Promote reintroduction projects on the basis of adequate research and feasibility studies and the respective IUCN Guidelines for Reintroductions and Other Conservation Translocations	Promote implementation of the CMS Guidelines on Re-introduction and Reinforcement of Great Bustards	Low		Applicable to: all Range States	In Germany, Great Bustard introduction started in a fourth area SPA Zerbster Land (feasibility study in 2019 and start of reintroduction in 2022); Poland presented a feasibility study, and it was translated into German and English.

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<p>2.2 Public awareness raised</p>	<p>2.2.1 Promote eco-tourism and bird watching in Great Bustard areas, under the appropriate regulatory framework to improve economic viability of Great Bustard areas</p>	<p>Carry out awareness activities for the Great Bustard as a flagship species for biodiversity conservation and elaborate education tools and/or modules for both adult and child target audience.</p> <p>Monitor the impact of eco-tourism</p>	<p>Medium</p>	<p>2023</p>	<p>Applicable to: all Range States</p>	<p>Education center and observation towers built in Hungary; in Austria additional observation towers built.</p>
	<p>2.2.2 Promote Great Bustard conservation among stakeholders (e.g. authorities, land owners, farmers and hunters)</p>		<p>High</p>		<p>Applicable to: all Range States</p>	<p>Cooperation agreements with hunting associations established in Hungary; many meetings with farmers took place in Austria; in Germany promotion is an ongoing process; weakening of process due to financial cuts and lack of staff in Germany, Hungary, but also in others.</p> <p>Social media activities in Austria.</p>

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	2.2.3 Use the Great Bustard as flagship species throughout education in raising the profile of nature conservation	See 2.2.1			Applicable to: all Range States	Workshops for general public and schools organized in Lower Austria; in Kiskunsag, Hungary, large scale education programmes implemented.