# **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*

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**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)**

1. By signing the Memorandum of Understanding (MOU) on the Conservation and Management of the Middle-European Population of the Great Bustard, Signatories endeavour to work closely together to improve the conservation status of the Great Bustard throughout its breeding, migratory and wintering range. The MOU emphasizes the need for exchanging scientific, technical and legal information to co-ordinate conservation measures and for co-operation with other Range States, relevant international organizations and recognized scientists.
2. According to MOU paragraph 8, the Signatory States shall endeavour to adopt a Medium-Term International Work Programme (MTIWP) for the Great Bustard. This should include (1) subjects for co-operative research and monitoring, (2) measures to implement the MOU and its Action Plan, as well as (3) items for which guidelines are needed to further develop and improve the measures listed in the MOU as well as in international and national work programmes.
3. Since the first Meeting of Signatories (MOS1; Illmitz, Austria, 2004), the MTIWP has been reviewed regarding its implementation and further developed at each meeting for the following intersessional period. At MOS4 (Bad Belzig, Germany, 2018), the MTIWP was aligned with the structure of part 4 - *Framework for Action* of the new [MOU-Action Plan](https://www.cms.int/great-bustard/en/document/international-single-species-action-plan-western-palaearctic-population-great-bustard-otis) which was endorsed at that meeting. The previously existing additional ‘*Joint Research Programme*’ was incorporated into the MTIWP 2018-2023.
4. In conjunction with agenda item 6.3, as a basis for developing an updated and (re-)prioritized MTIWP to guide implementation in the next intersessional period, it is recommended to review the current status of implementation of the MTIWP 2018-2023.

Recommended actions

1. The Meeting is recommended to
2. provide update on the status of the measures stated in the MTIWP 2018-2023;
3. assess progress made in the implementation of the MTIWP to inform its update and further development, as appropriate, for the next intersessional period.

**Annex**

**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** |
| --- | --- | --- | --- | --- | --- | --- |
| ***1.1 Average annual adult survival rate is above 90% in each population*** | 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 | **Systematic data collection on collisions;**  **Approaching energy suppliers;**  **Organizing joint projects with energy suppliers;**  **Planning process to Great Bustard conservation needs when necessary**  **Providing information on effectiveness of particular bird flight diverters** | **High** | **Ongoing** | **National Authorities in collaboration with electric companies** | Still high priority. Ongoing activity that needs to be continued. Burial of powerlines very important, but other alternatives such as converters to be considered due to costs.  Retrofitting guidelines probably not helpful as techniques develop rapidly,  Joint project on mitigation activities, planning of new powerlines should be taken into account.  Some progress in relevant states mainly in core areas, but margin areas need more work.  Need to increase efforts on overhead railway lines |
| 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.** | **Medium** | **Ongoing** | **Applicable to: all Range States** | No harsh winters in several countries anymore, 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, taking into account guidelines on predator control, connect to IKB work and platforms-guidance under CMS | **Update legislation accordingly where necessary**  **Enforcement of existing legislation by anti-poaching measures**  **Promote collaboration with hunting associations** | **High** | **Ongoing** | **National authorities** | Poisoning is still happening unintentionally.  Situation in Ukraine is unknown,  Focus item on addressing poaching. |
| 1.1.4 Prevent collision with wind turbines in key sites and flyways for Great Bustard  Include tagging data to inform precise results  Connect actions to the Energy Task Force and existing guidance | **Data collection on collision through intensive monitoring**  **Adequate planning of wind farms in Great Bustard habitats and flyways** | **Medium** | **Ongoing** | **Applicable to: all Range States** | Still more data are needed, ongoing process.  Tagged birds are needed to inform precise second reliable data |
| ***1.2 Average productivity exceeds 0.25 fledged chicks per adult female in each population as of start of October , UPDATE ACTION PLAN*** | 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  Implement guidelines on agri-environmental schemes | **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 detecting breeding females, timing and location of monitoring, methods of in situ protection, etc.) are in practice in order to share experiences.** | **Medium**  **Medium** | **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. |
| **Organize international action to rescue eggs and chicks from emergencies, where necessary and feasible and transport them to the Rescue Centre in Dévaványa, Hungary ,** | **High**  **Low-Medium for Non-EU due to import regulations** | **Ongoing** | **Austria, Hungary, Romania, Serbia, Slovakia** |  |
|  | **Safeguarding of nests and rescue eggs, not only in small populations.** | **High** | **Ongoing** | **Applicable to**  **All Range States** |  |
| 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** | **2023 (Guideline’s finalizations); otherwise Ongoing** | **Applicable to: all breeding Range States** | To maintain |
| 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 |
| 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** | **2023 (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 from 6 to 7 in Germany and quality improved. |
| 1.2.7 Reduce human disturbance by restricting access to 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**  **Implementation of CMS Resolution 12.23 on Sustainable Tourism and Migratory Species** | **Medium** | **Ongoing** | **Applicable to: all breeding Range States** |  |
| ***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 non-EU countries | **Expert’s visits to small populations to evaluate the situation and to propose actions locally implemented**  **Evaluate the habitats and to produce a proposal for SPA designation or enlargement** | **High** | **Ongoing** | **Applicable to: Czech Republic,**  **Germany,**  **Romania, Russian Federation, Serbia, Ukraine** |  |
| 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**  **Adapt the management according to new developments in agricultural practices and techniques for example mowing machines**  **Bring the new management into the regulations for the farmers**  **CMS Secretariat to liaise with European Commission regarding the negotiations on Common Agricultural Policy (via CMS Focal Point of EU)**  **Utilizing the Great Bustard as an umbrella species for biodiversity in farmlands and as an indicator species** | **High** | **Ongoing** | **Applicable to: all Range States** |  |
| 1.3.3 Ensure that power lines, afforestation, irrigation, wind energy, solar power panels , transport (roads and railways) and other projects including enlargement of cities, settlements, orchards, vinyards and related agricultural changes which can negatively affect the Great Bustard’s habitat do not take place. | **Include Great Bustards and their habitats, including flyways, into planning processes and environmental impact assessments**  **Produce precise habitat and flyways maps and models informing about most suitable areas for Great Bustard** | **High** | **Ongoing** | **Applicable to: all Range States** |  |
| ***1.4 Knowledge gaps filled*** | 1.4.1 Identify all areas for Great Bustard across its European range | **Systematic monitoring including GPS tracking, and elaboration of a detailed distribution map showing all areas regularly used**  **Modeling of suitable habitats for the species** | **High** | **2021TBD** | **Applicable to: All Range States** |  |
| 1.4.2 Monitor the size, sex and age composition and productivity of each population, based on standardized counts in winter, spring and autumn | **Approaching all available stakeholder groups and capacities that are able to monitor**  **Organize coordinated counts nationally and between neighboring countries where common populations exist:**  **Austria-Hungary-Slovakia;**  **Hungary-Serbia-Romania**  **-Ukraine-Russian Federation** | **High** | **Ongoing** | **Applicable to: all Range States and transboundary populations** | Monitoring 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, similarly White-tailed Eagle in Germany and Austria |
| 1.4.3 Monitor and improve the effectiveness of captive breeding, and rearing and release programmes | **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.** | **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 | **Conduct ecological studies regarding the movement of individuals between leks or breeding centres, respectively (telemetry, re-sightings etc.)**  **Extend the genetic studies to museum specimens or extinct populations to identify suitable populations for re-introduction** | **Medium** | **Ongoing** | **Applicable to: all Range States** | Level of GPS tracking has significantly been improved and needs to be continued;  a publication (Eisenberg et al.) has been published in 2019  Germany is planning to conduct genetic studies in the next term |
| **Study the impact of new developments (energy crops, wind farms, irrigation, photovoltaic/solar parks) on populations** | **High** | **Ongoing** | **Applicable to: all Range States** | A study on irrigation at the Austrian-Hungarian border published (Spakovszky and Raab 2020)  Increasing relevance of infrastructure impacts in the future |
| **Identify space use of non-migrating populations during the year to further understand habitat requirements and promote Great Bustard-friendly management.** | **Medium** | **2022** | **Applicable to: all Range States** | Publication from Sona Nuhlíčková is planned for 2024 |
| **Identify the most effective high (and medium) voltage power line markings** | **High** | **Ongoing** | **Lead: Austria; Applicable to: all Range States** | 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 and survival, 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 the factors**  **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**  **Continue GPS satellite tracking data collection and analysis** | **High** | **2021** | **Applicable to: all breeding Range States** |  |
| 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** | Needs to be continued; 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** | **High** | **Ongoing** | **Applicable to: all Range States** | 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**  **Liaise with competent persons to investigate the detrimental diseases relevant to Great Bustards and identify potential pathways and precautionary measures to be applied** | **Medium** | **Ongoing** | **Applicable to: all Range States** | To be maintained, in the connection to new poultry farms which are planned or under construction; important aspect because of the increasing number of birds globally affected; overlap of Great Bustard habitat with those of species proven to be affected |
| ***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 \* [edit after discussing EU restoration law; check country lists if Great Bustard included] | **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** |  |
| **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** |  |
| 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** |  |
| 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 Bustards 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 was translated into German and English; tbc by Polish experts) |
|  | 2.1.4 Harmonize national restoration plans for the Great Bustard under the EU Nature Restoration Law | **Exchange draft plans among MOU Range States in the EU**  **Organize an (online) workshop for EU Range States**  **Harmonize habitat management plans among Range States** | **High** | **2026** | **Applicable to: all MOU Range States in the EU and Spain and Portugal** |  |
| ***2.2 Public awareness raised*** | 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 | **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.**  **Monitor the impact of eco-tourism** | **Medium** | **2023** | **Applicable to: all Range States** | Education center and observation towers built in Hungary; in Austria additional observation towers |
|  | 2.2.2 Promote Great Bustard conservation among stakeholders (e.g. authorities, land owners, farmers and hunters) | **Produce leaflets, and organize meetings and campaigns, and social media work** | **High** |  | **Applicable to: all Range States** | Cooperation agreements with hunting associations in Hungary; many meetings with farmers 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; Social media activities in Austria |
|  | 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 in Lower Austria; in Kiskunsag, Hungary, large scale education programmes |