



**CONVENTION ON  
MIGRATORY  
SPECIES**

UNEP/CMS/Concerted Action 13.10

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**CONCERTED ACTION FOR  
THE GREAT INDIAN BUSTARD (*Ardeotis nigriceps*)<sup>1</sup>**

Adopted by the Conference of the Parties at its 13<sup>th</sup> Meeting (Gandhinagar, February 2020)

**(i). Proponent:**

The Government of India (Ministry of Environment, Forest and Climate Change)

**(ii). Target species, lower taxon or population, or group of taxa with needs in common:**

Great Indian Bustard *Ardeotis nigriceps* (Vigors)  
(Sibley and Ahlquist 1990)

[NB: *Ardeotis nigriceps* was added to CMS Appendix I by COP13 in 2020.]

**(iii). Geographical range:**

Historically, the species was distributed throughout half of India, from Punjab and Haryana in the north to Tamil Nadu in the south, and from Gujarat and Rajasthan in the west to Orissa in the east, spanning eleven states (Rahmani 1989) along with eastern Pakistan (Cholistan) and Sindh regions. The current distribution is restricted to six states of India: Rajasthan, Gujarat, Maharashtra, Karnataka and Andhra Pradesh along with sporadic sightings from Pakistan (Khan *et al.* 2008, Dutta *et al.* 2013). Within Rajasthan it is found in three main pockets namely the Desert National Park (DNP), Mohangarh and the Pokhran-Ramdevra area. The species' distribution has currently been reduced by 90 per cent from its former range.

The species is under tremendous threat from anthropogenic activities such as land use changes. The proposed Concerted Action under CMS will strengthen the conservation coordinated action required between range States and concerned agencies.

**(iv). Summary of Activities and expected outcomes:**

1. Understanding seasonal variation and habitat use by the species
2. Review existing and upcoming developmental projects that may impact the Great Indian Bustard (GIB) to inform the advocacy strategy using which agencies such as the Bombay Natural History Society (BNHS) and the Wildlife Institute of India (WII) will engage relevant organisations to develop mitigation measures
3. Under a long-term vision, engage the Indian army for saving the Bustard population in Thar desert, especially Pokhran Field Firing Range
4. Conservation of the species through community involvement in non-protected areas
5. GIB focused grassland management
6. Promotion of bustard-friendly agricultural practices on farmlands within its range

<sup>1</sup> The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CMS Secretariat (or the United Nations Environment Programme) concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.

7. Identification and mitigation of major threats to the species, at site as well as the landscape level.
8. Pressure from cattle grazing - Tremendous grazing pressure resulting in depletion of the required resources for the habitat specialist GIB.

### Activities

Following activities are proposed:

- Understand movement patterns, home range and habitat use of GIB using ringing and satellite/GPS-GSM tracking during breeding and non-breeding seasons
- Mapping of the existing and proposed new renewable energy projects in GIB landscape
- Sensitization of the Indian Army about conservation of the species and its preferred habitat
- Conservation of the species through establishing Community Conserved Areas (CCAs) in non-protected areas.
- Restoration of suitable grasslands and control of invasive plant species such as *Prosopis juliflora* (in Western India) or *Gliricidia sp.* (Deccan peninsula)
- Promotion of traditional crops and organic farming
- Introduce appropriate mitigation measures such as installing bird diverters/reflectors on existing power lines and undergrounding the new transmission lines proposed adjacent to breeding sites of the GIB
- Pilot programmes for rotational cattle grazing to deal with cattle grazing issue

### Expected Outcomes

Following outcomes are expected from the above activities:

- Spreading awareness among stakeholders will be helpful in gaining support of the local people for conservation of the species and its habitats
- Developing non-protected sites of the GIB as Community Conserved Area (CCA) (or any such appropriate designation) with help of local communities like Bishnoi will be crucial for survival of the species in Thar desert.
- GIB will be able to safely use farmlands or common grazing lands, at least during the non-breeding season.

#### (v). Associated benefits:

Conservation of GIB in arid region will also benefit other species such as Indian spiny-tailed Lizard *Saara hardwickii*, Chinkara *Gazella bennettii*, Desert Fox or White-footed Fox *Vulpes vulpes pusilla*, Indian Fox *Vulpes bengalensis*, Desert Cat etc. as well as native desert flora

#### (vi). Timeframe:

1. Proposing CCAs will be initiated after selection of sites and understanding the interest of the local communities in Pokhran-Ramdevra area – one year.
2. Awareness programmes need to be scaled up under long-term programme – Continuous.
3. Develop tools / guidance for stakeholder outreach particularly to inform the financial risk associated with impacts of renewable energy on species, and to improve capacity-building of regulators and consultants – One year (urgent need).
4. Guidance for local communities about impacts on local biodiversity and how to avoid/mitigate them – five years.
5. Sensitization of stakeholders, especially the Indian Army and local communities .

**(vii). Relationship to other CMS actions and mandates:**

Following actions under Great Indian Bustard CMS proposal can be linked with various resolutions and initiatives

1. Resolution 10.03 *The Role of Ecological Networks in the Conservation of Migratory Species*<sup>2</sup>
2. Resolution 11.25 *Advancing Ecological Networks to Address the Needs of Migratory Species*<sup>2</sup>
3. Resolution 10.23 *Concerted and Cooperative Actions*<sup>3</sup>
4. Resolution 11.10 (Rev.COP13) *Synergies and Partnerships*

**(viii). Conservation priority:**

The species is listed as Critically Endangered by the IUCN (IUCN 2019).

The species has disappeared from 90 per cent of its range; its population has reduced by 90 per cent within 50 years (six generations); and their threats are expected to increase in future (Collar *et al.* 2017).

The Guidelines for state action plan for resident bustards' recovery programme developed by Ministry of Environment, Forest and Climate Change (MoEF&CC) through consultative meetings of scientists, managers and decision-makers recommends a multi-pronged approach comprising: a) protection to breeding habitats by creating predator-proof enclosures that are seasonally inviolate of consumptive human uses, b) mitigation of threats particularly power-lines and detrimental infrastructure at the landscape scale, c) incorporation of local livelihood concerns in conservation planning by incentivizing bustard-friendly agricultural practices, and d) adopting a conservation breeding program including release of the captive bred population in wild secure an insurance population against total extinction (Dutta *et al.* 2013).

**(ix). Relevance:**

Hunting has been reported from Pakistan (Khan *et al.* 2008) in past and even recently in social media. Given the critically low number of the species, such additional human induced mortality is unsustainable for the species' survival (Dutta *et al.* 2011) and is the major threat to the species' conservation. Power-line density in Rajasthan, India is also increasing because of renewable energy production and is an important threat associated with migration. In India, habitat loss and power lines are the major threats while in Pakistan, extensive habitats are still available, but hunting and lack of awareness about the species remain the major threats.

This CMS proposal can help as a guiding framework to convince the concerned agencies to take up the proposed actions.

**(x). Absence of better remedies:**

In lieu of remedies such as adequate funding, community support, impediments in technology usage and it is rather difficult to secure the future survival of the species (Dolman *et al.* 2015).

Habitat destruction and habitat deterioration: disturbance during breeding season of the birds, conversion of grasslands and so-called wastelands into crop fields, developmental projects, and increase in renewable energy such as wind turbines and solar power plants.

<sup>2</sup> All consolidated in and superseded by Resolution 12.7 (Rev.COP13) *The Role of Ecological Networks in the Conservation of Migratory Species*

<sup>3</sup> Superseded by Resolution 12.28 (Rev.COP13) *Concerted Actions*

**(xi). Readiness and feasibility:**

The following significant issues exist for practical feasibility:

- Restoration of grasslands needs large amount of funds or special provisions under management plans
- Bringing the renewable energy projects under the umbrella of strict environmental impact assessment (EIA), and minimize the collision and electrocution of bustards by relocating, realigning or redesigning the infrastructures of power lines, windmills and solar panels to minimize the collision impacts on bustards
- Grassland management plan for Protected Areas already exists but majority birds found in non-protected areas.
- Collaboration with community and NGOs – Concerted transboundary actions with help of and WWF-Pakistan will help in the species' recovery. Institutions such as the BNHS which has long association with bustard conservation and as a BirdLife International partner in India can play important role in bridging gap between government and communities

**(xii). Likelihood of success:**

A large team of researchers and ample funds will be required to implement the proposed action with support from respective state forest departments.

The risk factors include non-participation of communities in conservation of the species outside protected areas.

**(xiii). Magnitude of likely impact:**

The proposed actions will help the population of GIB in India and Pakistan. GIB can act as flagship species for conservation of many other desert dependent species. The species is a grassland specialist and shares its preferred grassland habitat with many unique desert fauna such as the Indian Spiny-tailed Lizard *Saara hardwickii*, Chinkara *Gazella bennettii*, Desert Fox or White-footed Fox *Vulpes vulpes pusilla*, Indian Fox *Vulpes bengalensis*, Desert Cat, etc.

**(xiv). Cost-effectiveness:**

A set of guidelines towards formulating state-specific species recovery plan is available for three resident bustard species of India viz. Great Indian Bustard, Lesser Florican and Bengal Florican which has been endorsed by MoEF&CC (Dutta *et al.* 2013). WII, Dehradun has received substantial funding under CAMPA for the recovery of Great Indian Bustard and Lesser Florican with a focus on ex-situ conservation.

Activities such as developing CCAs will be cost effective. Concerted Action will help to engage the community and avoid duplication of work among concerned agencies. Success of GIB conservation is depend on involvement of various agencies, local communities and NGOs.

**Consultations-Planned/Undertaken:**

The Government of India has launched a national-level programme to protect the Great Indian Bustard which includes its conservation breeding and the establishment of an emergency national expert panel through its Supreme Court to provide recommendations for population recovery.

WII, Dehradun, the Rajasthan Forest Department and MoEF&CC formed a committee to oversee the progress of ex-situ and in-situ conservation programmes with CAMPA funding.

BNHS and other organizations are to liaise with the Indian Army and local communities to develop a plan to manage the species populations outside Protected Areas (PAs). At local level, the BNHS has carried out consultation meetings with local communities in the Pokhran area of Rajasthan, where some relevant measures have been piloted.

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